

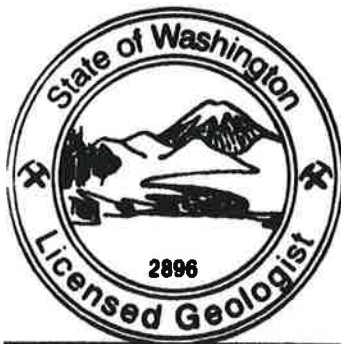
# SCS ENGINEERS



## 2011 Annual Monitoring Report **Olympic View Sanitary Landfill (OVSL)**

Presented to:

Olympic View Sanitary Landfill, Inc.  
10015 SW Barney White Road  
Port Orchard, WA 98366  
(925) 456-5369



**Emily M. Smart**

Presented by:

**SCS ENGINEERS**  
2405 140<sup>th</sup> Ave NE, Ste 107  
Bellevue, Washington 98005  
(425) 746-4600

March 2, 2012  
File No. 04204027.15

**Offices Nationwide**  
[www.scsengineers.com](http://www.scsengineers.com)

---

Emily Smart, LG  
Staff Geologist  
**SCS ENGINEERS**

---

Daniel A Venchiarutti, LG, LHG  
Project Director  
**SCS ENGINEERS**



**Table of Contents**

Table of Contents ..... I  
List of Appendices ..... II  
List of Figures..... II  
List of Tables..... III

1 Introduction..... 1  
2 Site Description and Background..... 4  
    Site Location and Description .....4  
    Topography and Climate.....4  
    Local and Regional Hydrogeology .....5  
3 2011 Monitoring Activities..... 6  
    Summary of Current Groundwater Monitoring Program .....6  
        Groundwater Monitoring Network.....6  
        Monitoring Schedule.....7  
        Groundwater Parameters and Analytical Methods .....7  
        Monitoring Well Purging and Sampling Procedures.....7  
    Summary of Current Leachate Monitoring Program .....8  
        Leachate Monitoring Locations .....8  
        Monitoring Schedule.....9  
        Parameters and Analytical Methods.....9  
        Leachate Monitoring Field Procedures .....9  
    Summary of Current Landfill Gas Monitoring Program ..... 10  
        Landfill Gas Monitoring Locations ..... 10  
        Monitoring Schedule..... 10  
        Parameters..... 11  
        Landfill Gas Monitoring Field Procedures and Instrumentation ..... 11  
        Field Conditions..... 11  
4 2011 Monitoring Results..... 12  
    Groundwater Elevation Results ..... 12  
    Groundwater Quality Monitoring Results..... 12  
        Data QA/QC ..... 13  
        Comparison of Detected Groundwater Sampling Results to MTCA Groundwater  
        Cleanup Standards..... 13  
        Comparison of Detected Groundwater Sampling Results to WAC 173-200, Federal  
        Drinking Water Standards and MTCA Cleanup Levels..... 14  
        Major Ion Geochemistry ..... 15  
        Spatial Patterns in Groundwater Quality ..... 16  
        Time Series Graphs and Statistical Trend Analysis ..... 17  
        Statistical Prediction Limit Evaluations..... 18

	Leachate Monitoring Results .....	19
	Leachate Generation Rates .....	19
	Leachate Quality .....	19
	Landfill Gas Monitoring Results.....	20
	Perimeter Gas Probe Results .....	20
	Structure Monitoring Results .....	21
	Barometric Pressure Conditions .....	21
5	2011 Monitoring Conclusions .....	22
	Groundwater Monitoring .....	22
	Groundwater Flow.....	22
	Groundwater Quality .....	22
	Evidence for Natural Attenuation .....	22
	Landfill Gas Monitoring.....	23
	Leachate Monitoring.....	24
6	References.....	25

**Appendices** *(Included on Attached Data CD)*

Appendix A	December 2011 Groundwater Field Records: Groundwater Sampling Instrument Calibration Documentation Forms and Records of Water Level Readings
	December 2011 Landfill Field Information Forms and Instrument Calibration Documentation Forms
Appendix B	December 2011 Groundwater Geochemical Results (Cation/Anion Balances and Piper Diagrams)
Appendix C	Statistical Evaluation Summary Data
Appendix D	December 2011 Groundwater Data Validation Report and Analytical Laboratory Data Reports
Appendix E	Historical Landfill Gas Monitoring Results

### List of Figures

- Figure 1 Site Vicinity Map, OVSL
- Figure 2 Groundwater Monitoring Well and Leachate Monitoring Locations, OVSL
- Figure 3 Subsurface Landfill Gas Probe and Building Monitoring Locations, OVSL
- Figure 4 Groundwater Elevation Map, March 2011, OVSL
- Figure 5 Groundwater Elevation Map, June 2011, OVSL
- Figure 6 Groundwater Elevation Map, September 2011, OVSL
- Figure 7 Groundwater Elevation Map, December 2011, OVSL
- Figure 8 Arsenic Concentration Map, December 2011, OVSL
- Figure 9 Iron Concentration Map, December 2011, OVSL
- Figure 10 Manganese Concentration Map, December 2011, OVSL
- Figure 11 Vinyl Chloride Concentration Map, December 2011, OVSL
- Figure 12 2011 Groundwater Elevations, OVSL
- Figure 13 Leachate Generation at OVSL, 2007 through 2011
- Figure 14 Barometric Pressure Trend for December 2011, OVSL

### List of Tables

- Table 1 Groundwater Well Construction Data, OVSL
- Table 2 Summary of 2011 Analytical Parameters, OVSL
- Table 3 2011 Water level Elevations, Groundwater Monitoring Wells, OVSL
- Table 4 2011 Groundwater, Leachate Influent (L-INF) and Leak Detection (LP-LCD) Analytical Results and Field Parameters, OVSL
- Table 5 2011 Groundwater and Leachate Influent (L-INF) Volatile Organic Compound (ug/L) Detections, OVSL
- Table 6 2011 MTCA Parameter Exceedances in Groundwater for Compliance and Downgradient Wells, OVSL
- Table 7 2011 WAC 173-200, Federal MCL and MTCA Exceedances in Groundwater, OVSL
- Table 8 2011 Fourth Quarter Prediction Limit Exceedances in Groundwater, OVSL
- Table 9 Summary of 2011 Increasing and Decreasing Parameter Trends in Groundwater: January 2005 – December 2011, OVSL
- Table 10 2011 Leachate Leak Detection System Volumes, OVSL
- Table 11 Results of Landfill Gas Monitoring, OVSL
- Table 12 Summary of 2011 Landfill Gas Monitoring Results, OVSL

*This page intentionally blank.*

## 1 INTRODUCTION

The results of the 2011 quarterly post-closure environmental monitoring conducted at the Olympic View Sanitary Landfill (OVSL) are summarized in this annual report. The OVSL is located in Port Orchard, Washington. Monitoring events for the current reporting period were performed during March, June, September and December of the calendar year. Quarterly environmental monitoring at the OVSL includes sampling and analysis of groundwater, leachate pond leak detection liquid and landfill gas.

The current OVSL monitoring program meets the regulatory requirements for both corrective action and post-closure detection and assessment monitoring. Quarterly groundwater and landfill gas monitoring was performed at the facility in accordance with the OVSL Environmental Monitoring Plan (EMP, Engineering Management Support, Inc., 2009) and the site-specific Sampling and Analysis Plan (SCS Engineers, 2009). The plans were developed in consultation with the Washington Department of Ecology (Ecology) and reflect a refined understanding of the site conditions based on the results of a Remedial Investigation/Feasibility Study (RI/FS) per WAC 173-340 (the Model Toxics Control Act, MTCA). The OVSL monitoring program also meets the requirements of the Criteria for Municipal Solid Waste Landfills (WAC 173-351-430) which is administered by the Kitsap County Health District (KCHD). Leachate influent monitoring is also performed at the OVSL on an annual basis.

Quarterly environmental sampling at the OVSL was conducted by SCS Engineers (SCS) and SCS Field Services during March 2011 through December 2011. The following detailed information for the quarterly monitoring activities is included in this report:

- Measurement of groundwater elevation at between 50 and 53 groundwater monitoring wells (discussed in detail in Section 3) at the OVSL;
- Collection of groundwater samples from between 19 and 22 monitoring wells (discussed in detail in Section 3);
- Collection of a leachate influent sample (during the second quarter, 2011 event);
- Quarterly collection of a leachate pond leak detection system sample (with the exception of the first quarter 2011);
- Laboratory analysis of groundwater, leachate influent, and leak detection samples; and
- Measurement of landfill gas concentrations at 10 perimeter gas monitoring probes and at 4 building monitoring locations.

This report provides:

- A brief site description and background section.
- A figure presenting the site location.

- A discussion of groundwater monitoring (including water level measurements), leachate monitoring and landfill gas monitoring activities. This section includes a presentation of sample collection techniques. A site plan showing the groundwater monitoring well network and leachate monitoring stations is presented for reference. A second site plan illustrates the landfill gas probe and building monitoring locations. A groundwater well construction table and a summary of the analytical parameters included in the groundwater and leachate influent monitoring program are also presented.
- A discussion of the year's groundwater elevation data and a presentation of the year's groundwater and leachate analytical results and field parameters. This section includes a discussion of data quality assurance/quality control, summary tables (including a comparison of the reporting period's detected groundwater results to regulatory standards), contour maps depicting groundwater elevations and flow directions, and a hydrograph of the groundwater elevations at the OVSL for the 2011 reporting period. Groundwater flow rates are also calculated for the reporting period.
- Results of the December 2011 landfill gas monitoring and a brief discussion of the 2011 landfill gas monitoring is included.
- 2011 groundwater and leachate monitoring field records including: December 2011 Groundwater Sampling Forms, Instrument Calibration Documentation Forms, and Records of Water Level Readings. December 2011 landfill gas monitoring: GEM Calibration and data forms. These documents are provided in Appendix A.
- Geochemical results are provided in Appendix B. This includes Cation/anion balance and Piper diagrams displaying the December 2011 results. Chemical concentration plots for selected analytes (arsenic, dissolved iron, dissolved manganese and vinyl chloride) are included for reference.
- A statistical evaluation of the 2011 reporting period groundwater monitoring results is provided along with times series graphs (presented in Appendix C). The statistical evaluation includes a comparison with background prediction limits, a comparison of monitoring results to cleanup levels for wells identified in the EMP for compliance and downgradient monitoring, and an analysis for significant increasing or decreasing parameter trends in all wells.
- December 2011 groundwater validation report and analytical laboratory reports (including Field Information Forms) are provided in Appendix D.
- Conclusions based on the data collected during the monitoring period, including a summary of the groundwater, leachate influent and leak detection and landfill gas results.

Groundwater geochemical results, groundwater and leachate influent data validation reports and analytical laboratory data reports (including Field Information Forms) for the first three quarters of the 2011 reporting year can be found in the respective quarterly monitoring reports for the OVSL. Similarly, landfill gas migration monitoring results for the first three quarters of the 2011 reporting year are reported separately in respective quarterly monitoring reports.



In order to conserve paper resources, the appendixes for the 2011 annual report are presented on a data CD attached to the rear cover of the document. However, for the convenience of the reviewer, hard copies of all the parameter time series diagrams showing statistically significant increasing or decreasing trends have been included under Appendix C.

## 2 SITE DESCRIPTION AND BACKGROUND

### SITE LOCATION AND DESCRIPTION

The closed OVSL facility is located on approximately 436 acres in Sections 3 and 10, Township 23N, Range 1W of the Willamette Meridian, in Kitsap County, Washington. The facility is situated on an upland area approximately 10 miles southwest of the city of Bremerton. The facility address is 10015 SW Barney White Road, Port Orchard, Washington. The closed refuse fill area covers approximately 65 acres of the site. A site location map is shown on Figure 1. A site plan is presented on Figure 2.

The OVSL facility accepted municipal solid waste between 1967 and 2003. Landfill closure was completed in 2004, in accordance with Washington Administrative Code (WAC) 173-351. Landfill closure included construction of a landfill gas monitoring system, an active landfill gas collection and treatment system, a leachate collection and treatment system, a storm water drainage control system, and a final cover. The final cover consists of:

- 6-inch thick, low permeability soil,
- Geonet composite,
- 60-mil flexible membrane liner,
- 12-inch drainage layer,
- geotextile fabric, and
- 12-inches of vegetative topsoil and cover soil.

The active landfill gas collection system consists of a total of 81 well heads (69 vertical wells, 4 horizontal wells and 8 interconnections to the leachate collection system) connected to a gas treatment flare station. The leachate collection system consists of subgrade collection piping and a leachate collection lagoon. A storm water drainage control system controls storm water erosion and minimizes off-site migration of sediment-laden water. Drainage and erosion protection improvements include vegetation, a landfill toe under drain, down chutes, culverts, and drainage ditches.

### TOPOGRAPHY AND CLIMATE

The site is located in the Southern Upland of the Kitsap Peninsula adjacent to the Union River-Gorst Creek trough. The site topography ranges from approximately 150 to 360 feet above mean sea level (msl). The land surface generally slopes to the west-southwest towards the Union River, which is located approximately a half mile west of the site.

Kitsap County's climate is characterized as maritime, with long, mild, wet winters and short, cool, dry summers. Climatically, and due to the local relief, there can be significant variations in total annual precipitation and average temperatures over short distances.

---

## LOCAL AND REGIONAL HYDROGEOLOGY

The regional near-surface geology in the vicinity of the OVSL is dominated by glacio-fluvial and glacio-lacustrine deposits associated with the Vashon glaciation. The Remedial Investigation Report (Parametrix, 2007) identified the following main stratigraphic units at the Site: Organic Soils and Peat (Qw), Alluvium (Qal), Vashon Recessional Outwash (Qvr), Vashon Lacustrine Recessional Outwash (Qvrl), Vashon Till (Qvt), Vashon Advance Outwash (Qva), Vashon Advance Lacustrine Deposits (Qval), and Pre-Vashon Deposits (Qpvu). With the exception of the Vashon Till (which has not been confirmed to be present at the site), all of these units appear to be present beneath the OVSL.

Information provided in the site conceptual model indicates that organic soils/peat, alluvium, outwash, glacio-fluvial, glacio-lacustrine, and flood plain deposits outcrop along the west-central portions of the OVSL facility. Groundwater is present beneath the site at depths ranging between near-surface and approximately 80 feet below ground surface (bgs), or at elevations ranging between approximately 140 and 260 feet above msl. The groundwater flow direction beneath the landfill is generally toward the west.

### 3 2011 MONITORING ACTIVITIES

#### SUMMARY OF CURRENT GROUNDWATER MONITORING PROGRAM

##### **Groundwater Monitoring Network**

Quarterly groundwater monitoring is performed at the OVSL in accordance with the January 2001 Agreed Order and EMP as modified through recent technical discussions with Ecology. The monitoring also meets the post-closure landfill monitoring requirements under WAC 173-351-430. A sampling and analysis plan (SAP) describes the field monitoring program that is conducted at the OVSL. The current SAP (SCS, December 2009) reflects a refined understanding of the site conditions based on the results of the remedial investigation, and addresses future monitoring objectives (e.g. corrective action monitoring).

The groundwater monitoring network at the OVSL includes monitoring wells that are sampled quarterly or semi-annually, as well as those that are only used for water level measurement. The locations of the groundwater monitoring wells are illustrated on Figure 2. Completion details for the monitoring wells are provided on Table 1.

Of the 22 monitoring wells that were routinely sampled in 2011, four are upgradient wells (MW-13A, MW-13B, MW-16 and MW-35), and six are downgradient wells (MW-9, MW-29A, MW-32, MW-33A, MW-33C and MW-36A). Six wells are compliance monitoring wells (MW-15R, MW-34A, MW-34C, MW-39, MW-42 and MW-43). Six are performance monitoring wells (MW-2B1, MW-4, MW-19C, MW-20, MW-23A and MW-24). The 2009 SAP provides detailed information regarding each of the different categories of monitoring wells that are routinely sampled for water quality at the OVSL.

Well completion depths range from approximately 9 to 230 feet below ground surface. Screen lengths vary from 5 to 20 feet, with most of the well screens being 10 feet in length. The “A” designations in these well names indicate relatively shallow monitoring well completions. The “C” designations indicate relatively deep monitoring well completions. The “B” designations are in-between (depth-wise).

Each of the groundwater monitoring wells designated for routine sampling is outfitted with a dedicated sampling pump (QED Well Wizard) suitable for low-flow purging and sampling. Use of this type of pumping apparatus helps minimize sampling artifacts as well as the potential for cross contamination between wells, and eliminates the need for decontamination of sampling pumps. Each dedicated bladder pump is positioned with its inlet located within the screened interval of the well. Well construction, development, and pump installation are reported in detail in the *Report of 2005 Gas Probe and Monitoring Well Installations at OVSL* (SCS Engineers, June 2006), the *Remedial Investigation Report, OVSL, Kitsap County* (Parametrix, 2007) and the *Groundwater Monitoring Well Installation Report, OVSL* (SCS Engineers, April 2009).

## Monitoring Schedule

Groundwater monitoring was conducted on a quarterly basis. The quarterly events were completed in March, June, September, and December 2011. In accordance with the SAP, monitoring wells MW-29A, MW-9 and MW-33A were sampled on a semi-annual basis during March and September 2011.

## Groundwater Parameters and Analytical Methods

Table 2 summarizes the analytical parameters tested for during the 2011 groundwater monitoring period. The analytical parameters tested for during quarterly groundwater monitoring at the OVSL include the following Appendix I and II parameters:

**Field Measurements:** temperature, specific conductivity, pH, dissolved oxygen, turbidity, and static water level

**Dissolved Metals:** antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc

**Volatile Organic Compounds:** (VOCs) as listed in WAC 173-351 Appendix I

**Geochemical Indicator Parameters:** chloride, sulfate, nitrate, calcium, sodium, bicarbonate, alkalinity, magnesium, potassium, iron, and manganese

**Leachate Indicator Parameters:** ammonia, total organic carbon (TOC), and total dissolved solids (TDS)

Laboratory methods are those described in EPA publication number SW-846, Test Methods for Evaluating Solid Waste Physical/Chemical Methods. All laboratory analyses were completed by TestAmerica labs in Denver, Colorado and Buffalo, New York; and by Analytical Resources Incorporated (ARI) in Tukwila, Washington. The laboratories are accredited in accordance with WAC 173-50, Accreditation of Environmental Laboratories.

## Monitoring Well Purging and Sampling Procedures

Per the 2009 SAP, field activities consisted of: surveying well conditions; obtaining field measurements for water level elevation, pH, specific conductance, turbidity, temperature, and dissolved oxygen; collecting groundwater samples for laboratory analysis; and packaging and shipping the samples to the laboratories.

Prior to initiating well purge, static water level was measured and documented. Static groundwater level measurements were collected from the monitoring wells at the OVSL each quarter during the reporting period. Depth to water measurements (to the nearest 0.01 ft) were collected using an electronic water level indicator.

Wells P-1 and P-9 have been omitted during the past two monitoring years because these wells could not be found due to overgrown conditions. These wells are located in areas of dense foliage with no reference points and cannot be located on a regular basis. Eleven wells (including, MW-12, MW-13, MW-14, MW-17, MW-18, MW-23C, MW-27, MW-28, MW-37, MW-38 and MW-40C) could not be accessed for at least one quarter of 2011 due to access and safety limitations. Residual affects from previous onsite logging activities, downed trees due to storms, dense foliage, and road blockages may prevent water level measurements. All of the wells listed above are only used for water level measurements in order to supplement the quarterly determination of groundwater flow direction at the site. New access issues are reported to Waste Management (WM) following each sampling event as SCS and WM continue to work together to identify and address access issues. If some of these wells cannot be located or properly accessed, the facility may request to have these wells removed from the quarterly water level elevation monitoring program.

Purging and sampling of the monitoring wells at the site was conducted using low-flow/low-volume well sampling techniques. Once the pumping was initiated, flow rate was confirmed by volumetric discharge measurement (by measuring the total volume discharged per cycle using a graduated cylinder and verifying the number of pump cycles per minute specified by the controller). Field instruments were calibrated in accordance with manufacturer's guidelines. Field measurements for pH, temperature, conductivity, dissolved oxygen, and turbidity were conducted using a closed, in-line flow-through cell and a turbidity meter. When water quality parameters stabilized and there had been no change in the pumping water level, sample collection began. Field information obtained during groundwater sampling was recorded on Field Information Forms included in Appendix A (for December 2011).

Non-disposable sampling equipment that was exposed to well water (water level probe) was decontaminated between wells. Decontamination of equipment was completed before leaving each well, therefore eliminating cross contamination. Disposable nitrile gloves were doffed after each use and prior to leaving each well.

## SUMMARY OF CURRENT LEACHATE MONITORING PROGRAM

Leachate generated from three separate closed municipal waste storage cells at the OVSL is collected and pumped to an arterial force main that discharges to a one-acre leachate pond located near the western end of the landfill. The force main outfalls on the north end of the leachate lagoon. Accumulated leachate was treated by aeration. When leachate elevation in the pond approaches the elevation of the former outlet to ponds that once existed west of current pond, leachate is removed via pumping and hauled to nearby wastewater treatment plants.

### **Leachate Monitoring Locations**

Per the EMP and SAP, leachate monitoring is to be performed at three locations at the facility, including sampling stations L-INF, OBWL-TD, and LP-LCD. Influent leachate sampling station L-INF is located immediately downstream of the force main outfall on the north end of the leachate collection pond. The OBWL-TD sampling station is situated at the Old Barney White

Landfill Toe Drain collection sump, which subsequently connects to the leachate pond. Sampling station LP-LCD is located at the pump discharge outlet which periodically returns any accumulated liquids that collect beneath the leachate pond liner system back into the main lagoon. The locations of the leachate monitoring stations are illustrated on Figure 2.

### **Monitoring Schedule**

The current SAP provides for annual monitoring of the L-INF and OBWL-TD stations and quarterly monitoring of the LP-LCD station. Leachate influent was sampled at L-INF during the second quarter of 2011. Sampleable volumes of liquid did not occur at the OBWL-TD station during the 2011 reporting period.

### **Parameters and Analytical Methods**

A summary of the analytical parameters tested for during leachate influent monitoring at the OVSL is provided in Table 2. The leachate influent (L-INF) sample collected during the second quarter 2011 was analyzed for the same Appendix I and II parameters as the groundwater monitoring wells, as well as for the following analytes:

**Metals:** antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc.

#### **Total Coliform**

**WAC 173-351 Appendix IV Parameters:** nitrite, COD, BOD, and total cyanide.

**WAC 173-351 Appendix III Parameters:** VOCs, SVOCs, PCBs, Pest/Herb, Hg, Sn

The LP-LCD samples were analyzed for selected Appendix II parameters including field parameters (pH, specific conductance, temperature and dissolved oxygen), geochemical indicators (chloride, sulfate, bicarbonate and alkalinity), and leachate indicators (ammonia, TOC and TDS).

Laboratory methods are those described in EPA publication number SW-846, Test Methods for Evaluating Solid Waste Physical/Chemical Methods. All laboratory analyses were completed by TestAmerica, Denver, Colorado and Buffalo, New York. The laboratories are accredited in accordance with WAC 173-50, Accreditation of Environmental Laboratories.

### **Leachate Monitoring Field Procedures**

Field activities consisted of obtaining field parameter measurements, collecting leachate samples for laboratory analysis, and packaging and shipping the sample to the laboratory.

The leachate influent samples consisted of individual grab samples. Field personnel immersed sample tubing from the peristaltic pump into the discharge to obtain the leachate influent sample. The LP-LCD sample was collected from an inline sampling port attached to the liquid return

line that drains back into the leachate pond. All the leachate samples were collected directly into pre-labeled laboratory containers suitable for the chemical parameters being analyzed. Field instruments were calibrated in accordance with manufacturer's guidelines.

Field-measured parameters including temperature, specific conductivity, pH, and dissolved oxygen were measured as described in Standard Methods for the Examination of Water and Wastewater. Field information obtained during leachate sampling was recorded on Field Information Forms included in Appendix A (December 2011).

## SUMMARY OF CURRENT LANDFILL GAS MONITORING PROGRAM

Landfill gas monitoring activities at the OVSL consists of obtaining field measurements of primary gas composition (methane, carbon dioxide, and oxygen) at between 12 and 17 monitoring locations on a quarterly basis. In 2011, the landfill gas monitoring network included 10 subsurface gas detection probes and 2 onsite structures on and immediately adjacent to the landfill.

Landfill gas monitoring is conducted to provide an assessment of the subsurface landfill gas conditions at the OVSL and compliance with regulatory criteria for subsurface methane concentrations. At the subsurface gas detection probes (gas probes) relative soil gas pressure was also measured in the field. Landfill gas monitoring procedures are detailed in the 2009 SAP.

### **Landfill Gas Monitoring Locations**

Landfill gas monitoring was conducted at 10 perimeter gas probes (GP-7 through GP-16) and 2 onsite structures as illustrated on Figure 3 and tabulated on Table 11. Five of the gas probes (GP-9 through GP-13) consist of multiple, vertically discrete monitoring zones. Gas probes with dual monitoring zones are designated with an "S" for the shallow zone, and a "D" for the deep zone. Gas probes with triple monitoring zones are designated with an "S" for the shallow zone, "M" for the middle zone, and "D" for the deep zone. Data are not reported for probes where the screened interval is found to be submerged. Details of all the gas probes and boring logs can be found in *Report of 2005 Gas Probe and Monitoring Well Installations at OVSL (SCS Engineers, June, 2006)*.

### **Monitoring Schedule**

Monitoring at the landfill gas probes and facility structures was conducted during March, June, September and December 2011. The landfill gas monitoring results reported in Section 4 of this report (December 2011/Fourth Quarter) were collected on December 20, 2011 and December 21, 2011.



## **Parameters**

Field measurements of methane, carbon dioxide, and oxygen were obtained from each of the gas probes and within the facility structures. In addition, subsurface soil gas pressure and liquid levels were measured in the gas probes during the sampling events.

## **Landfill Gas Monitoring Field Procedures and Instrumentation**

Field monitoring was conducted in accordance with Section 6.4 of the 2009 SAP. The landfill gas probes and building locations were sampled and analyzed in the field (for all parameters) using a GEM-2000 portable multi-gas analyzer. This portable gas analyzer measures methane and carbon dioxide with a dual wavelength infrared cell with a reference channel. Oxygen is measured with an electro-chemical cell. Pressure was measured with a transducer.

The gas analyzer was calibrated prior to each monitoring event. Landfill gas monitoring activities are documented in the Field and Calibration Logs included in Appendix A.

## **Field Conditions**

General weather conditions were noted during and preceding each quarterly landfill gas monitoring event. Atmospheric pressure fluctuations can influence gas concentrations and pressure in gas probes. To assist in interpreting data, barometric conditions were recorded during and prior to monitoring. The barometric trends for December 2011 are illustrated on Figure 14 and discussed in Section 4.

## 4 2011 MONITORING RESULTS

### GROUNDWATER ELEVATION RESULTS

Water level data including depths to water and calculated water level elevations from the OVSL monitoring wells for 2011 are presented in Table 3. Water level contour maps of groundwater elevations (derived from measured static depths to water at the OVSL wells) for each quarter during the reporting period are also presented in Figures 4 through 7. A hydrograph of the groundwater elevations at the OVSL is provided on Figure 12. Groundwater elevations ranged from approximately 142 to 260 feet-msl at the OVSL over the reporting period. Groundwater elevations remained relatively stable over the entire reporting period. The potentiometric surface across the OVSL does not show significant seasonal fluctuations. This is consistent with results from previous reporting years.

Very little change was seen in groundwater flow direction during the reporting period. Locally, the groundwater flow direction is from the east toward the west. The average hydraulic gradient across the site remained fairly consistent from quarter to quarter.

The hydraulic gradient beneath the eastern portion of the site (between wells MW-35 and MW-23A) ranged from 0.050 to 0.052 ft/ft. A horizontal hydraulic conductivity of 26 ft/day and an effective porosity of 30 percent were used to calculate average groundwater velocity on the eastern portion of the site. The horizontal hydraulic conductivity of 26 ft/day is the average of the values reported at MW-13A, MW-13B, and P-1. These values were derived from an aquifer test conducted at TW-1, reported in the *Draft Final Remedial Investigation Report, Olympic View Sanitary Landfill* (Parametrix, Inc. 2007). Groundwater flow velocities across the eastern portion of the site were estimated to range from 4.34 to 4.51 ft/day.

The average hydraulic gradient beneath the western portion of the site (between wells MW-20 and MW-37) ranged from 0.020 to 0.022 ft/ft. A horizontal hydraulic conductivity of 154 ft/day and an effective porosity of 30% were used to calculate average groundwater velocity on the western portion of the site. The horizontal hydraulic conductivity of 154 ft/day is the average of the values reported at MW-29A, MW-29B, and MW-29C. These values were derived from an aquifer test conducted at MW-29B, reported in the RI. The groundwater flow velocity was estimated to range from 10.27 to 11.08 ft/day.

### GROUNDWATER QUALITY MONITORING RESULTS

Detected groundwater analytes and field parameters for 2011 are detailed in Table 4. Laboratory results for detected volatile organic compounds for the year 2011 are also presented in Table 5. Table 6 summarizes the 2011 exceedances for a suite of ten MTCA regulated parameters monitored at the OVSL's compliance and downgradient groundwater wells. Table 7 lists all exceedances of WAC 173-200 Groundwater Quality Protection Standards, federal Maximum Contaminant Levels and MTCA cleanup goals established for OVSL have also been included. Contaminant concentration maps for the results from the December 2011 monitoring event are presented for four analytes on Figures 8 through 11.

Cation/anion balances and Piper plots for December 2011 are presented in Appendix B. Statistical evaluation documentation, including time series graphs for detection monitoring analytes, are included in Appendix C.

### **Data QA/QC**

All analytical data from TestAmerica and ARI were subjected to QA/QC evaluations. The QA/QC evaluations consisted of collection and analysis of field duplicates and matrix spike/matrix spike duplicate volume. The QA/QC evaluation also included a detailed review of the laboratory data, including sample handling, holding times, and laboratory performance analyses including duplicates, blanks, matrix spikes, matrix spike duplicates and surrogate recoveries. The data were determined to be acceptable for the intended purposes. Appendix D contains the data validation report and the analytical laboratory data reports for December 2011.

### **Comparison of Detected Groundwater Sampling Results to MTCA Groundwater Cleanup Standards**

Select parameter results for six OVSL compliance wells (MW-15R, MW-34A, MW-34C, MW-39, MW-42 and MW-43) and six downgradient wells (MW-9, MW-29A, MW-32, MW-33A, MW-33C and MW-36A) are compared to MTCA groundwater cleanup levels on Table 6. The groundwater cleanup levels are derived from Table 3 of the October 2010 Cleanup Action Plan. Specifically, the calculated upper confidence limit (UCL) of the mean concentration of each parameter for each well is used to assess compliance with their respective cleanup levels. The UCLs are calculated using three-year moving data sets (per MTCASat guidance) for ten chemicals of concern (dissolved arsenic, dissolved iron, dissolved manganese, cis-1,2-dichloroethene, ethyl ether, trichloroethene, 1,4-dichlorobenzene, 1,1-dichloroethane, vinyl chloride and ammonia). The UCLs are calculated using MTCASat; calculation details are presented in Appendix C.

Statistically significant trends are also noted on Table 6 in order to provide additional information on the status of the UCL relative to the cleanup standard. Trend information may be particularly useful if the calculated UCL value is very close to the cleanup standard (e.g., within 10%). In such cases, trend information may be useful in predicting a change in status of the UCL versus the cleanup level in the relative near term. For example, if a UCL is slightly above its cleanup level and the data are trending downward, then the UCL may be expected to fall below the cleanup standard in the near future. Presently, examination of Table 6 does not indicate any cases where a trend is associated with a UCL that very close to its cleanup standard; specific UCL exceedances and trends are reviewed below.

As shown on Table 6, for the OVSL compliance monitoring wells, MTCA exceedances were reported in all six locations as follows: MW-15R (vinyl chloride); MW-34A (arsenic); MW-34C (arsenic, iron, manganese, vinyl chloride); MW-39 (arsenic, iron, manganese, ammonia); MW-42 (arsenic, iron, manganese, vinyl chloride, ammonia); and MW-43 (iron, manganese,

ammonia). In 2011, as in 2010, a significant decreasing trend was reported for arsenic in MW-34C, and a significant decreasing trend was reported for manganese in MW-15R.

MTCA exceedances were reported in all six downgradient wells (Table 6) monitoring wells as follows: MW-9 (iron); MW-29A (arsenic, iron, manganese); MW-32 (arsenic, iron, manganese, vinyl chloride); MW-33A (iron, ammonia); MW-33C (arsenic, manganese); and MW-36A (arsenic). One significant decreasing trend was identified in the downgradient well MW-9 for iron. Significant decreasing trends for iron and vinyl chloride were identified in well MW-32.

### **Comparison of Detected Groundwater Sampling Results to WAC 173-200, Federal Drinking Water Standards and MTCA Cleanup Levels**

All analytical results were compared to the water quality standards for ground waters of the state of Washington (Chapter 173-200 WAC) to State/Federal primary and secondary Maximum Contaminant Levels (MCLs) and to MTCA cleanup goals for the OVSL. Table 7 presents all WAC 173-200 and MCL exceedances for the reporting period. Standards for seven analytes were exceeded:

- pH
- dissolved arsenic
- dissolved iron
- dissolved manganese
- ammonia
- trichlorethene
- vinyl chloride

During 2011, **pH** readings were generally mildly acidic to neutral. pH values ranged between 5.50 pH units (MW-43 in September 2011) and 7.98 pH units (MW-33C in June 2011). The WAC 173-200 standard and secondary MCL for pH (6.5 to 8.5 units) was exceeded at least once during the reporting period in each of the following monitoring wells MW-15R, MW-16, MW-20, MW-23A, MW-24, MW-29A, MW-2B1, MW-34A, MW-34C, MW-36A, MW-39, MW-4, MW-42, MW-43 and MW-9.

The MTCA and WAC 173-200 groundwater standard of 0.00005 mg/L for **dissolved arsenic** was exceeded at least once during the reporting period in all 22 wells monitored at the OVSL, except for well MW-43. The primary MCL of 0.01 mg/L was slightly exceeded in downgradient monitoring well MW-32 (0.01040 mg/L) in March 2011. Dissolved arsenic was also detected at least once at relatively high levels in downgradient wells MW-19C (0.00330 mg/L to 0.00400 mg/L) and MW-33C (0.00250 mg/L to 0.00260 mg/L) during the reporting period. The arsenic concentrations in the remaining wells at the OVSL were less than 0.002 mg/L during the reporting period with the exception of MW-39 in June of 2011, where arsenic was detected at 0.00210 mg/L.

**Dissolved iron** was detected at least once at relatively high levels in downgradient wells MW-39 (13 mg/L to 36 mg/L) and MW-42 (21 mg/L to 27 mg/L) during the reporting period. The iron concentrations in the remaining OVSL wells were less than or equal to 4.2 mg/L during the reporting period. Iron concentrations exceeded the MTCA, WAC 173-200 standard and secondary MCL of 0.3 mg/L at least once during the 2011 reporting year in 10 monitoring wells at the OVSL.

Relatively high levels of **dissolved manganese** were detected at least once at in wells MW-19C (0.99 to 1.3 mg/L) MW-23A (0.77 to 1.7 mg/L), MW-24 (1.1 to 1.7 mg/L), MW-29A (1.2 to 1.4 mg/L), MW-32 (2.0 mg/L to 2.2 mg/L), MW-2B1 (3.0 to 3.4 mg/L), MW-4 (0.41 to 1.2 mg/L) and MW-42 (4.7 mg/L to 5.4 mg/L) during 2011. The manganese concentrations in the other OVSL wells remained less than or equal to 0.8 mg/L during the reporting period. Manganese concentrations exceeded the MTCA, WAC 173-200 standard and secondary MCL of 0.05 mg/L at least once during the reporting year in 12 monitoring wells at the OVSL.

**Ammonia** levels at 6 wells exceeded the MTCA cleanup level of 0.19 mg/L in 2011. MW-19C, MW-2B1, MW-33A, MW-39, MW-4 and MW-42 returned values ranging from 0.21 to 5.5 mg/L.

The highest **vinyl chloride** concentration (0.38 ug/L) detected during the reporting period occurred in December 2011 in downgradient well MW-32. Vinyl chloride was also detected in wells MW-15R, MW-19C, MW-20, MW-23A, MW-2B1, MW-34C, MW-4 and MW-42. Upgradient wells MW-13A and MW-13B each had one anomalous detection of vinyl chloride in 2011. The WAC 173-200 groundwater standard (0.02 ug/L) for vinyl chloride was exceeded at least once in all of the 11 wells where the compound was detected at the OVSL, except at well MW-13B, where in December 2011, vinyl chloride was detected at 0.02 ug/L. This was the only detection at MW-13B during 2011. The MTCA cleanup level (0.2 ug/L) was exceeded during all four quarters at MW-32. The primary MCL (2 ug/L) for vinyl chloride was not exceeded during 2011.

**Trichlorethene** was detected at 1.4 ug/L during each quarter of 2011 in well MW-19C. This value exceeded the MTCA cleanup level of 1.0 ug/L.

### **Major Ion Geochemistry**

Piper plots and Cation/anion balance calculations were completed on the data collected at the OVSL during the December 2011 quarterly monitoring event. The Piper diagram plots the fourth quarter groundwater samples and is a graphical means of identifying water quality similarities between samples from different wells. The LP-LCD sample is also plotted for comparison. Cation/anion balances on major ions are performed to assess accuracy of the laboratory results and evaluate the potential for additional ions in the samples that were not included in the analyses. Cation/anion balance calculations and the Piper plot for December 2011 are presented in Appendix B.

### **Cation/anion Balance Calculations**

When all the major anions and cations have been determined, the sum of the cations in milliequivalents per liter (meq/L) should approximately equal the sum of the anions expressed in the same units (Hem 1986). As stated in WAC 173-351-430-5(a), a relative percent difference (RPD) in the charge-balance of greater than five to ten percent could potentially indicate error in the laboratory measurements, and/or that significant concentrations of additional ions are present that were not included in the testing program. Negative values indicate that the sum of the cations is greater than the sum of the anions.

The RPDs, or charge-balance differences, for the December 2011 groundwater samples were within ten percent.

### **Piper Diagram**

The Piper diagram presents the major ion geochemistry of groundwater at each well. This diagram is useful for representing the relative percentage of cations and anions in groundwater samples.

The upgradient and downgradient groundwater samples collected during December 2011 were of similar water type. The positions of samples on the diagram indicate that the dominant anion in groundwater samples continues to be bicarbonate, while the cations are still dominated by calcium and magnesium. The LP-LCD sample has higher sodium and potassium levels than groundwater, as well as higher chloride levels.

### **Spatial Patterns in Groundwater Quality**

The influence of the waste disposal activities on groundwater quality at the OVSL is apparent in the groundwater VOC detections, general chemistry, inorganics, and field parameters. The elevated concentrations of parameters adjacent to the landfill are typical of a low-level influence from the landfill, due to either leaching from the landfill, landfill gas, or simply mobilization of naturally occurring constituents as a result of the landfill's presence.

The December 2011 chemical concentration maps for dissolved arsenic, dissolved iron, dissolved manganese, and vinyl chloride are presented in Figures 8 through 11. Each map separately highlights the selected parameter results for both shallow and deeper aquifer monitoring wells.

As illustrated on Figure 8, dissolved arsenic concentrations were relatively high in wells MW-34C, MW-42, MW-33C, MW-19C and MW-32 (in order of increasing dissolved arsenic). Arsenic levels in these five wells ranged from 0.0012 to 0.0099 mg/L in December 2011.

Dissolved iron levels (Figure 9) for December 2011 were highest in wells MW-39 and MW-42 at 16 and 25 mg/L, respectively.

Dissolved manganese (Figure 10) was relatively high in wells MW-33C, MW-43, MW-39, MW-4, MW-34C, MW-19C, MW-24, MW-23A, MW-32, MW-2B1 and MW-42 (in order of increasing dissolved manganese). The values in December 2011 ranged from 0.14 to 5.4 mg/L in these eleven wells.

Vinyl chloride (Figure 11) was detected in eight wells in December 2011, including MW-13B, MW-23A, MW-15R, MW-42, MW-20, MW-19C, MW-34C and MW-32 (in order of increasing vinyl chloride). The reported values ranged from 0.02 ug/L to 0.38 ug/L in these five wells. Shallow aquifer well MW-32, located approximately 400 feet west of the landfill, has historically contained the highest vinyl chloride levels at the site. However, shallow and deeper aquifers wells located further west (downgradient well MW-33A and MW-33C) did not report detectable vinyl chloride during the 2011 monitoring period.

Groundwater impacts from the parameters that were spatially mapped are found primarily at wells MW-32, MW-42, MW-19C, MW-34C, MW-24, MW-33C, MW-15R, MW-23A, MW-2B1 and MW-43 (in decreasing order of water quality impact). These ten wells are all located north and/or west of the landfill, in the downgradient groundwater flow direction. The most impacted wells (MW-32 and MW-42) are situated between 200 and 400 feet west of the western edge of the landfill. However, since the OVSL's downgradient property border is situated at least 600 to 800 feet beyond these wells, potential impacts from these parameter exceedances are thought to be mitigated through natural attenuation, advection and dispersion as groundwater moves beyond the immediate vicinity of the landfill.

### **Time Series Graphs and Statistical Trend Analysis**

Time series graphs with statistical trend analysis were produced using the DUMPStat software package for all compliance, performance, downgradient, and upgradient monitoring wells. Beginning with the 2009 Annual Report statistical analyses were conducted beginning with data from 2005 because a 5-year look back provides information on more recent trends and a moving 5-year window may be considered at some point in the future if it appears that relatively older data begin to exhibit too much control on the presence or absence of statistically significant trends. Therefore, graphs are based on groundwater monitoring data from 2005 through 2011 and depict the chemical parameters listed in Appendices I and II of WAC 173-351-990 -- organized into two groups, as follows: "Trend Test A" graphs and "Trend Test B" graphs. The Trend Test A graphs include all organic parameters in Appendices I and II that have been detected above the PQL during at least one sampling event in any of the wells since 2005 (this currently reflects 25 VOCs). The Trend Test B graphs include all Appendix I and II inorganic detection monitoring and ground water quality parameters (this includes 32 parameters). To facilitate review of the statistically significant trends, graph sets were developed to just show those well/parameter combinations exhibiting either increasing or decreasing trends. These time series graphs are presented in Appendix C along with the other statistical evaluation results. A summary of those wells/parameters showing significant increasing or decreasing concentration trends is provided in Table 9.

As shown on Table 9, six inorganic parameters exhibit significant increasing trends in at least one well, including bicarbonate alkalinity, sulfate, total alkalinity, dissolved barium, dissolved chromium, and pH. In addition, sixteen inorganic parameters exhibit significant decreasing trends, including dissolved arsenic, dissolved barium, specific conductivity, temperature, dissolved calcium, bicarbonate alkalinity, dissolved magnesium, sulfate, dissolved sodium, chloride, dissolved potassium, total alkalinity, dissolved iron, dissolved manganese, ammonia and TDS.

Performance monitoring wells, with the exception of MW-19C, MW-23A and MW-24, exhibited very few significant trends relative to the number of parameters tested, indicating general geochemical system stability. The following significant trends were observed for inorganic/water quality parameters and VOCs in performance wells: MW-19C decreasing dissolved arsenic, specific conductivity, sulfate, sodium and dissolved iron; MW-20 increasing dissolved barium and sulfate; MW-24 decreasing dissolved arsenic, dissolved barium, specific conductivity, temperature, dissolved calcium, bicarbonate alkalinity, dissolved iron, dissolved manganese, total dissolved solids and vinyl chloride; MW-23A decreasing specific conductivity, dissolved calcium, dissolved sodium and vinyl chloride.

### **Statistical Prediction Limit Evaluations**

Statistical prediction limits using data from the upgradient monitoring wells are calculated at the end of each monitoring year to provide updated background concentrations for all Appendix I and II inorganic detection monitoring and ground water quality parameters (a total of 32 parameters). These updated background concentrations are used for detection monitoring purposes via comparison to the most recent parameter concentration for compliance and downgradient monitoring wells.

Table 8 provides a summary of the latest prediction limit exceedances reported at the OVSL groundwater monitoring as of the end of the 2011 reporting period for the compliance and downgradient wells. Prediction limits for inorganic parameters were exceeded at least once during 2011 in twelve of the groundwater monitoring wells. Wells MW-32, MW-34C and MW-42 reported the largest number of prediction limit exceedances. Prediction limit calculations are presented in Appendix C.

As noted in the above section and as shown on Table 9, the following upgradient monitoring wells exhibited statistically significant increasing or decreasing trends over the period for which background prediction limits are calculated: MW-13A, MW-13B and MW-35 (increasing trends for both bicarbonate and total alkalinity). Trends in upgradient monitoring wells are noted because they can impart a bias on the calculated prediction limit for the affected monitoring parameters which, in turn, can affect the number of exceedances identified for those monitoring parameters in compliance and downgradient wells. In the case of bicarbonate and total alkalinity, the increasing trend could impart a positive bias on the calculated prediction limit. However, examination of the time series graphs presented in Appendix C indicates that the noted increasing trends for these parameters in these wells is relatively slight. Therefore, any bias to



the prediction limit would be expected to be nominal and not significantly change the number of bicarbonate and total alkalinity exceedances listed on Table 8.

## LEACHATE MONITORING RESULTS

### Leachate Generation Rates

Leachate volumes generated at the OVSL have been recorded on a weekly basis by SCS Engineers Field Services since 2008. During the 2011 reporting period, approximately 1,883,603 gallons of leachate were reported to have been pumped into the leachate collection pond. Locally, 46.84 inches of precipitation was reported during 2011. As noted during 2010, this volume is approximately 1,000,000 gallons less than that generated at the site in 2009 (2,658,033 gallons), during which local precipitation totaled 53 inches. These data indicate that ongoing improvements to site maintenance and existing infrastructure have significantly reduced leachate generation rates (per inch precipitation) at the OVSL. In 2010, Waste Management directed a repair of the upper liner in order to divert a larger portion of rainwater away from the landfill. The amounts of leachate produced on a quarterly and annual basis over the last five years is presented on Figure 13.

In addition, the liner leak collection/detection system is checked regularly for the presence of any accumulated liquids beneath the OVSL leachate pond. If liquids are present, they are pumped out of the collection system, pass through the LP-LCD monitoring station, and are returned to the leachate pond. The volumes of liquid pumped out of the liner leakage collection system during 2011 are presented on Table 10. As shown on Table 10, approximately 360 gallons of liquid were removed from the collection system during 2011.

### Leachate Quality

The results of the second quarter 2011 leachate influent sample (L-INF) analysis are presented along with the groundwater sampling results on Tables 4 and 5. Where the leachate influent and groundwater sample were analyzed for the same Appendix I and II parameters, a comparison was made. The following parameters were found in relatively elevated concentrations in the leachate influent sample:

- Field Parameters: specific conductivity (3.750 uS) and temperature (14.0 °C).
- General Chemistry Parameters: alkalinity (1,300 mg/L), ammonia (150 mg/L), total calcium (130 mg/L), total magnesium (78 mg/L), total potassium (100 mg/L), total sodium (820 mg/L), chloride (530 mg/L), sulfate (160 mg/L), total dissolved solids (2,000 mg/L), and total organic carbon (87 mg/L).
- Metals: barium (0.3 mg/L), chromium (0.014 mg/L), cobalt (0.012 mg/L) and vanadium (0.016 mg/L).
- Detected VOCs: butyl alcohol, tert (270 ug/L), tetrahydrofuran (89 ug/L) and vinyl chloride (0.54 ug/L).

The leachate influent sample also reported Appendix IV parameter concentrations for BOD (19 mg/L) and COD (260 mg/L). Total coliform were too numerous to count (TNTC), nitrite and total cyanide were not detected above their respective analytical reporting limits

Sample volume was obtained from the LP-LCD monitoring station and submitted for selected Appendix II parameter and total metals analysis during all the last three quarters of 2011 (Table 4). Insufficient liquid was present during the first quarter sampling event.

## LANDFILL GAS MONITORING RESULTS

Table 11 summarizes the landfill gas monitoring results from December 2011 for both perimeter gas probe and surface structure monitoring locations.

The following discussion identifies areas of subsurface landfill gas in terms of detected methane and/or carbon dioxide (greater than 0.3 percent by volume) and depressed oxygen (less than 20.3 percent by volume). Concentrations of methane and/or carbon dioxide less than 0.4 percent by volume and oxygen greater than 20.3 percent by volume are not considered significant given the sensitivity of the field instrument. These conditions, as well as elevated pressures within the gas probes, represent the potential presence of landfill gas. The values reported are measurements from stabilized sampling conditions after purging at least one probe volume of gas from each sampling zone. It should also be noted that the monitoring results are discussed in terms of gas probe locations, not sampling zones. For example, if methane is detected in the shallow or deep monitoring zone (or both) of one gas probe, the reference is to one probe location. The screened interval in Middle and Deep monitoring zones is sometimes submerged by the shallow water table. Where this occurs, gas results are not discussed.

Gas concentrations and pressures are also influenced by fluctuating barometric pressure. To assist in interpreting data, barometric conditions were recorded prior to and during monitoring. Barometric trends for December 2011 are presented on Figure 14.

### Perimeter Gas Probe Results

Methane was not detected above the regulatory standards in any of the gas monitoring probes (the LEL which is equal to 5% methane by volume for gas probes) or in any of the landfill buildings (25% of the LEL for methane in any structures).

Carbon dioxide was detected at all gas probes ranging from 1.0 (GP-12M) to 5.5 percent by volume (GP-8). Carbon dioxide levels appear to be declining in probe GP-13M. Depressed oxygen levels were reported at all gas probes, ranging from 5.7 (GP-8) to 20.0 percent by volume (GP-7). Oxygen levels appear to be increasing in probes GP-12S and GP-13M. Relative (static) pressure in the perimeter gas probes ranged from -0.34 to -0.05 inches of water column.

Declines in methane and carbon dioxide levels in the various gas probes as well as the increases in oxygen levels likely reflect changes in the landfill gas extraction system components (e.g., replacement of landfill gas flare and blower station and the installation of six new gas wells in

October of 2011 in the Barney White area) and changes to landfill gas extraction system operations implemented by Waste Management. Appendix E includes tables of historical concentrations of methane, carbon dioxide, and oxygen in the currently monitored gas probes, from March 2007 through the end of the 2011 monitoring year.

Groundwater seepage during the rainy season can submerge the perforated portion of the gas probe pipes and inhibit collection of soil gas in the vadose zone. To determine whether the perforated portion of the gas probes were blocked by water, water level measurements were taken in the deepest sampling zone for each gas probe. The percentage of exposed perforation for each gas probe is shown on Table 11. During the December 2011 event, water was found above the perforated zone at GP-7, GP-8, GP-14, GP-15 and GP-16. These water levels inhibited the collection/measurement of soil gas concentrations at these locations.

### **Structure Monitoring Results**

In December 2011, monitoring showed no presence of methane or carbon dioxide in either the South Slope Well House or the Scale House. Oxygen concentrations at both structures were not depressed.

### **Barometric Pressure Conditions**

Gas concentrations and pressures are influenced by fluctuating barometric pressure. Relative to time, the highest landfill gas concentrations and depressed oxygen concentrations tend to occur shortly after a significantly falling barometric trend. This is due to the affects of the landfill pressures trying to stabilize with the fluctuation in atmospheric (barometric) pressure and the associated lag time for stabilization.

To assist in interpreting data, barometric conditions were recorded prior to and during landfill gas monitoring. The trends for December 2011 are presented on Figure 14. On December 20 and 21, landfill gas monitoring was conducted during a period of stable barometric pressure.

## 5 2011 MONITORING CONCLUSIONS

### GROUNDWATER MONITORING

#### **Groundwater Flow**

Regional groundwater flow is generally to the west, with hydraulic gradients ranging between 0.020 and 0.052 ft/ft. Groundwater flow velocities across the eastern portion of the OVSL site are estimated to be less (4.34 ft/day to 4.51 ft/day) than those in the western portion of the site (10.27 ft/day to 11.08 ft/day). These velocities measured in 2011 are consistent with the ranges reported during 2010.

#### **Groundwater Quality**

Results from the 2011 monitoring period are generally consistent with those reported for previous years. Elevated concentrations of certain volatile organic compounds (VOCs), general chemistry parameters, inorganic analytes, and field parameters continue to be detected in the monitoring wells adjacent to the OVSL. Water quality standards were exceeded for seven analytes: pH, dissolved arsenic, dissolved iron, dissolved manganese, ammonia, trichloroethene and vinyl chloride.

The only primary federal MCL exceedance at the OVSL for the 2011 reporting period was arsenic in well MW-32 during March. The primary MCL for vinyl chloride was not exceeded during the reporting period and has not been exceeded since 2006.

MTCA corrective action monitoring during 2011 reported groundwater cleanup goal exceedances at all 12 compliance and downgradient wells at the OVSL. The most parameter exceedances were reported in compliance wells MW-34C and MW-42 and downgradient well MW-32. Performance wells exhibited a larger number of significant trends than in 2010, most of them decreasing.

The groundwater analytical data, statistical and graphical analyses, and comparison to water quality standards continue to indicate similar conditions to those previously documented during 2005 through 2010, with possible natural attenuation affecting the groundwater quality at the site. Prediction limits for inorganic parameters were exceeded in twelve groundwater monitoring wells. Significantly increasing concentrations trends were reported for some inorganic parameters at eight well locations, and significantly decreasing trends also occurred at twelve well locations. Vinyl chloride reported significantly decreasing trends in performance wells MW-23A, MW-24 and MW-32.

#### **Evidence for Natural Attenuation**

Natural attention refers to naturally occurring physical, chemical and biological processes that can reduce concentrations of contaminants. At solid waste landfills, natural attention processes are typically associated with changes in groundwater geochemistry (for example, toward

increasingly anaerobic or reducing conditions) related to the decomposition of waste. These conditions in turn, can promote the microbial degradation of major contaminant groups (such as the reduction of chlorinated VOCs through reductive dechlorination).

The 2011 groundwater monitoring results continue to support the conclusion that natural attenuation is occurring at the OVSL. Significant areas across and immediately downgradient of the waste cells exhibit an anaerobic and/or reducing geochemistry, especially at those wells showing most elevated contaminant concentration (for example: MW-20 and MW-19C with elevated dissolved iron, vinyl chloride, etc.). The presence of vinyl chloride beneath the west-central portions of the site is consistent with the ongoing reductive dechlorination of precursor compounds (PCE, TCE and DCE isomers). However, further downgradient, along the far western margins of the site, groundwater geochemistry begins to revert towards background conditions (i.e., more aerobic, less reductive) which are more conducive for the microbial degradation of vinyl chloride. This is demonstrated by the absence of VOCs, including vinyl chloride, in downgradient wells MW-33 and MW-36A.

Additional evidence for ongoing natural attenuation at the OVSL is provided by the numerous parameter trends that are decreasing over time. As previously discussed, twelve groundwater wells (over half of those monitored), show significant decreasing trends in at least one analytical parameter. For example, vinyl chloride exhibits a significantly decreasing trend in performance wells MW-23A and MW-24 and downgradient well MW-32. Given these current and historical trends, natural attenuation at the OVSL can be anticipated to continue throughout the post-closure period.

## LANDFILL GAS MONITORING

Methane was not detected above state regulatory standards in any of the gas monitoring probes or in any of the landfill structures during 2011. The perimeter probe monitoring results indicate that the facility is in compliance with respect to subsurface landfill gas migration criteria (less than 5% by volume of methane in soil at the property boundary). During recent years, both carbon dioxide and depressed oxygen concentrations in the perimeter probes have been declining, which is consistent with attenuating landfill gas levels at these locations.

Methane was not detected at any of the structural gas monitoring locations during the 2011 reporting period. It should be noted that due to the demolition of on-site buildings during the latter half of 2009, only the South Slope Well House and the Scale House remain present at the OVSL. Going forward, structural landfill gas monitoring will continue for these buildings.

Ongoing improvements (discussed above and in previous reports) to the OVSL landfill gas extraction system and associated infrastructure, which commenced in 2007, have reduced landfill gas levels (as measured by methane, carbon dioxide and depressed oxygen levels) at both perimeter probe and structural monitoring locations. The gas collection system will continue to be monitored and optimized to enhance its performance and to gauge the effect of the installation of the six new gas extraction wells which were installed on the Barney White Cell in October of 2011.

## LEACHATE MONITORING

A reduction on the order of 1,000,000 gallons in leachate volume generated at the OVSL was realized in 2010 and in 2011. This demonstrates that infrastructure improvements at the site have had a significant beneficial impact. Liquid volumes recorded at the LP-LCD monitoring station for the leachate pond leakage collection system indicate that approximately 360 gallons of liquid were returned to the pond in 2011. The low LP-LCD volumes reported during 2011 continue to suggest that leakage through the leachate pond liner system is minimal.

Comparison of the 2011 groundwater results for the facility against the L-INF parameter data confirms the presence of elevated specific conductivity, alkalinity, ammonia, dissolved calcium, dissolved magnesium, dissolved potassium, dissolved sodium, chloride, sulfate, TDS, TOC, COD, total barium, total chromium, total cobalt, total nickel and total vanadium, in the L-INF. Total coliform was also elevated (at too numerous to count (TNTC)). Tert-butyl alcohol and tetrahydrofuran were also reported in the L-INF sample, as they were in 2010. Vinyl chloride was also reported in 2011. Nitrite and total cyanide were not detected in the L-INF above their respective analytical reporting limits.

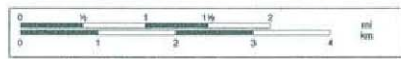
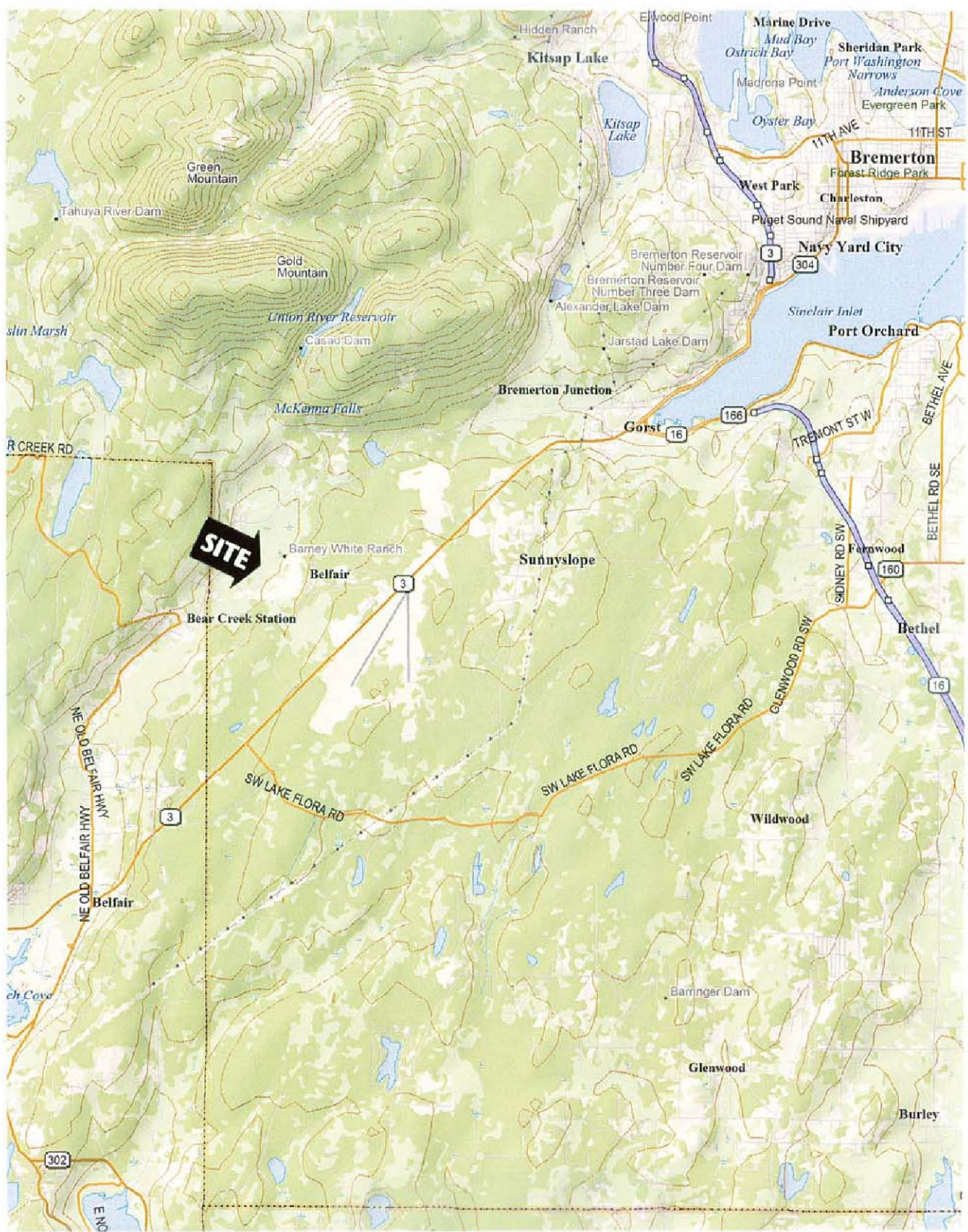
The LP-LCD monitoring station was sampled in the final three quarters of 2011. These samples reported elevated specific conductivity, alkalinity, ammonia, calcium, chloride, iron, manganese, sodium, sulfate, TDS and TOC compared to the 2011 groundwater results. However, with the exception of occasional sulfate, TOC, TDS, the LP-LCD parameter concentrations were lower than those reported for the leachate influent.

## 6 REFERENCES

- Engineering Management Support, December 2010, *Environmental Monitoring Plan, Olympic View Sanitary Landfill, Port Orchard, WA.*
- Gibbons, Robert D., and Discerning Systems, Inc. Copyright 1994-2005. *DUMPStat Version 2.1.8.*
- Hem, J.D. 1986. *Study and Interpretation of the Chemical Characteristics of Natural Water.* U.S. Geological Survey Water-Supply Paper 2254. Third edition.
- Kerfoot, H.B., J.A. Baker, and D.M. Burt, 2004. *Geochemical Changes in Groundwater Due to Landfill Gas Effects.* Groundwater Monitoring and Remediation, vol. 24, no. 1. Winter 2004. Pages 60-65.
- MFG, Inc. February 2005. *2004 Annual Report, Environmental Monitoring Supplement, Olympic View Sanitary Landfill.*
- Parametrix, Inc. 1996. *Olympic View Sanitary Landfill, Third Quarter 1996 Groundwater and Landfill Gas Monitoring Results.*
- Parametrix, Inc. 2007 *Draft Final Remedial Investigation Report, Olympic View Sanitary Landfill.*
- SCS Engineers. December 2005. *Report of the 2005 Gas Probe and Groundwater Monitoring Well Installation at the Olympic View Sanitary Landfill.*
- SCS Engineers. February 2006. *Report of 2005 Gas Probe and Monitoring Well Installations at OVSL.*
- SCS Engineers. March 2007. *2006 Annual Groundwater, Leachate and Storm Water Monitoring Report, Olympic View Sanitary Landfill, Port Orchard, Washington.*
- SCS Engineers. April 2008. *2007 Annual Monitoring Report, Olympic View Sanitary Landfill.*
- SCS Engineers. March 2009. *2009 Annual Monitoring Report, Olympic View Sanitary Landfill.*
- SCS Engineers. April 2009. *Groundwater Monitoring Well Installation Report, Olympic View Sanitary Landfill.*
- SCS Engineers. December 2009. *Olympic View Sanitary Landfill (OVSL) Sampling and Analysis Plan.*
- Washington Department of Ecology October 2010. *Cleanup Action Plan, Olympic View Sanitary Landfill, Kitsap County, Washington.*
- Washington, Attorney General. January 31, 2001. *Agreed Order No. DE 00SWFAPNR-1729.*
- Waste Management of Washington. Modification 8, October 15, 2008. *Storm Water Pollution Prevention Plan.*

## FIGURES





1" = 1.58 mi

© 2004 DeLorme. Topo USA® 5.0.

# SCS ENGINEERS

Environmental Consultants and Contractors

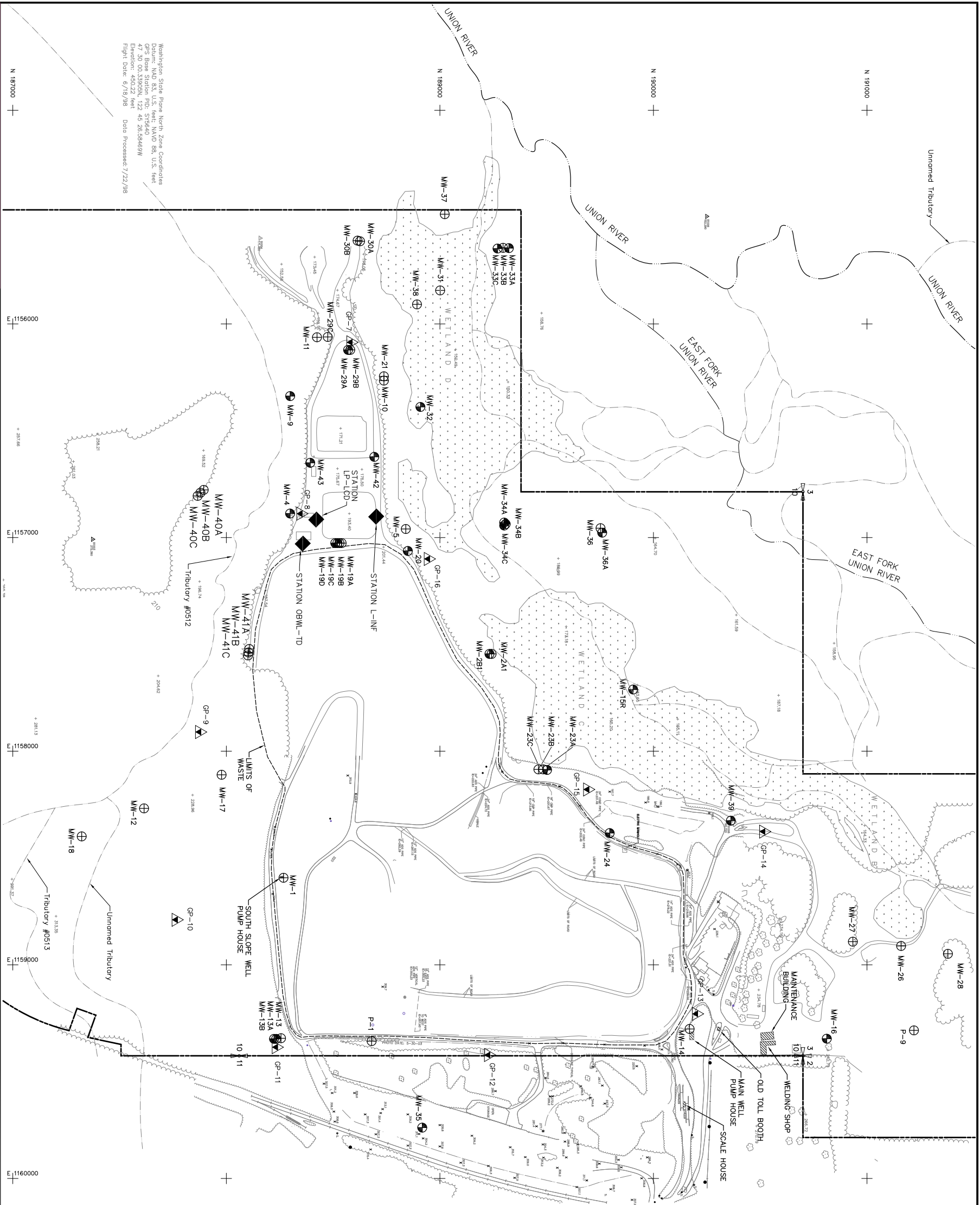
2405 140th Avenue NE, Suite 107  
 Bellevue, Washington 98005  
 (425) 746-4600 FAX: (425) 746-6747

PROJECT NO. 04204027.15	DES BY L.L.
SCALE 1:100,000	CHK BY E.S.
CAD FILE FIGURE 1	APP BY D.V.

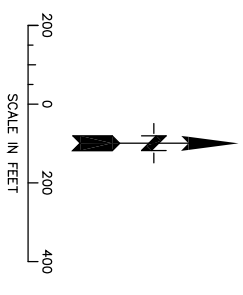
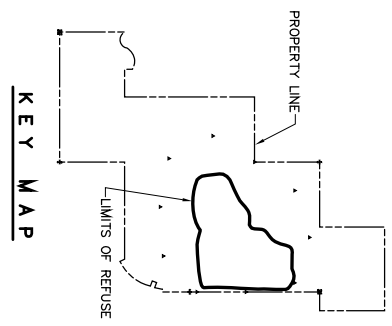
## SITE LOCATION MAP OLYMPIC VIEW SANITARY LANDFILL PORT ORCHARD, WASHINGTON

DATE  
FEBRUARY 2012

FIGURE  
**1**



LEGEND	
	GROUNDWATER MONITORING WELL
	GROUNDWATER MONITORING WELL - WATER LEVEL ONLY
	LEACHATE INFLUENT MONITORING STATION
	GAS PROBE
	PROPERTY LINE (ASSUMED)
	SECTION CENTER (ASSUMED - NOT FOUND)



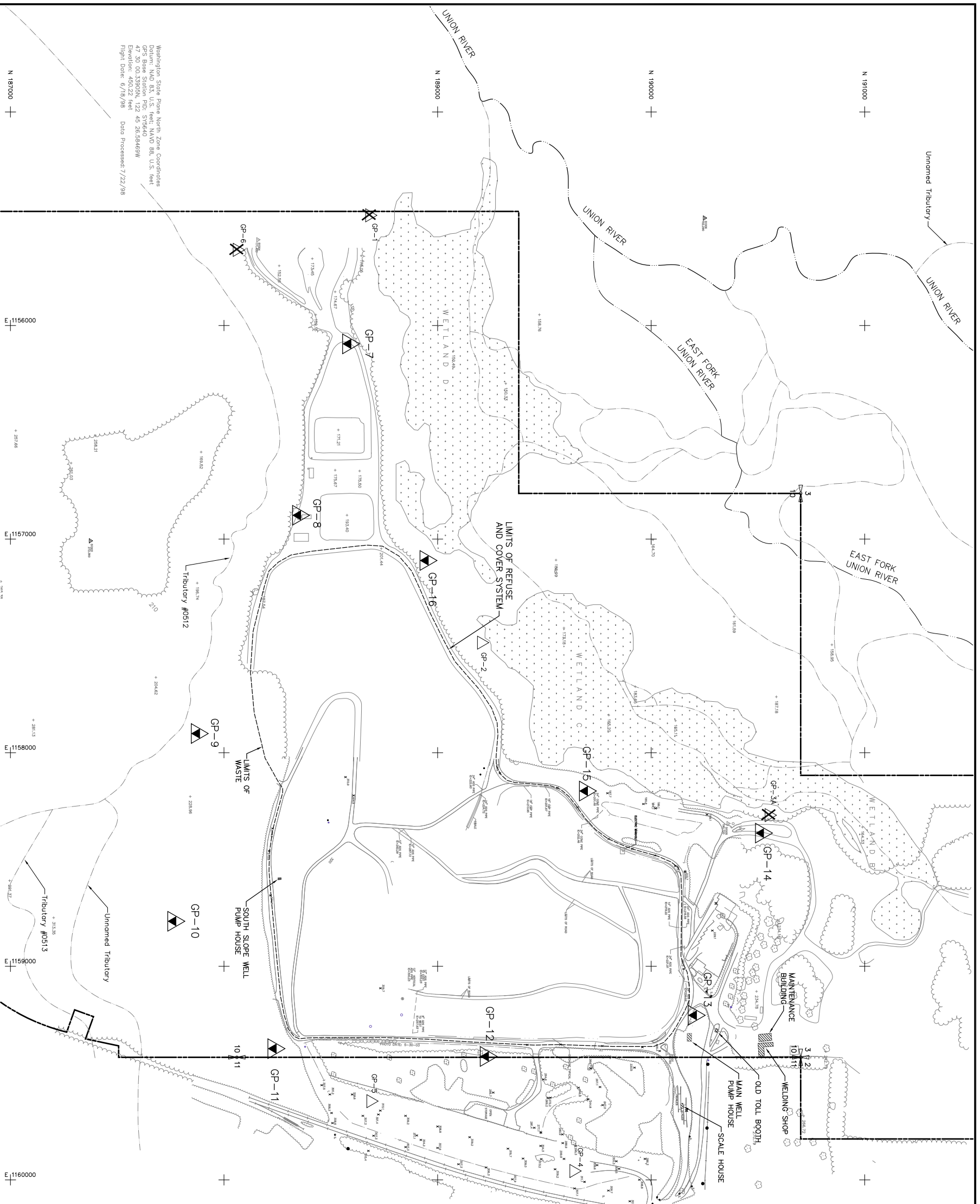
**SCS ENGINEERS**  
 Environmental Consultants and Contractors  
 2405 140th Avenue NE, Suite 107  
 Bellevue, Washington 98005  
 (425) 746-4600 FAX: (425) 746-6747

Washington State Plane North Zone Coordinates  
 Datum: NAD 83, U.S. feet, NAD 83, U.S. feet  
 GPS Base Station PID: S79640  
 47 30 00.33925N, 122 45 26.58489W  
 Elevation: 122.45  
 Flight Date: 6/19/98 Data Processed: 7/22/98

PROJECT NO.	04204027.15	DES BY	L.L.
SCALE	AS SHOWN	CHK BY	E.S.
CAD FILE	FIGURE 7	APP BY	D.V.

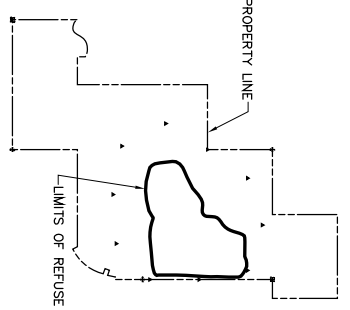
GROUNDWATER MONITORING WELL  
 AND LEACHATE MONITORING LOCATIONS  
 OLYMPIC VIEW SANITARY LANDFILL  
 PORT ORCHARD, WASHINGTON

DATE	FEBRUARY 2012
FIGURE	2



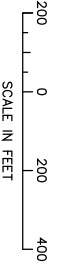
Washington State Plane North Zone Coordinates  
 Datum: NAD 83, U.S. Feet; NAVD 88, U.S. Feet  
 GPS Base Station PID: ST5640  
 EPC: 00, 00, 45, 22, 49, 26, 58, 46, 8W  
 Elevation: 451.22, Feet  
 Flight Date: 6/19/98 Date Processed: 7/22/98

**KEY MAP**



**LEGEND**

- GP-1 ABANDON GAS PROBE
- GP-2 EXISTING GAS PROBE (NOT PART OF MONITORING PROGRAM)
- GP-7 NEW GAS PROBE
- PROPERTY LINE (ASSUMED)
- SECTION CORNER (ASSUMED - NOT FOUND)
- QUARTER SECTION CORNER (ASSUMED - NOT FOUND)
- SECTION CENTER (ASSUMED - NOT FOUND)



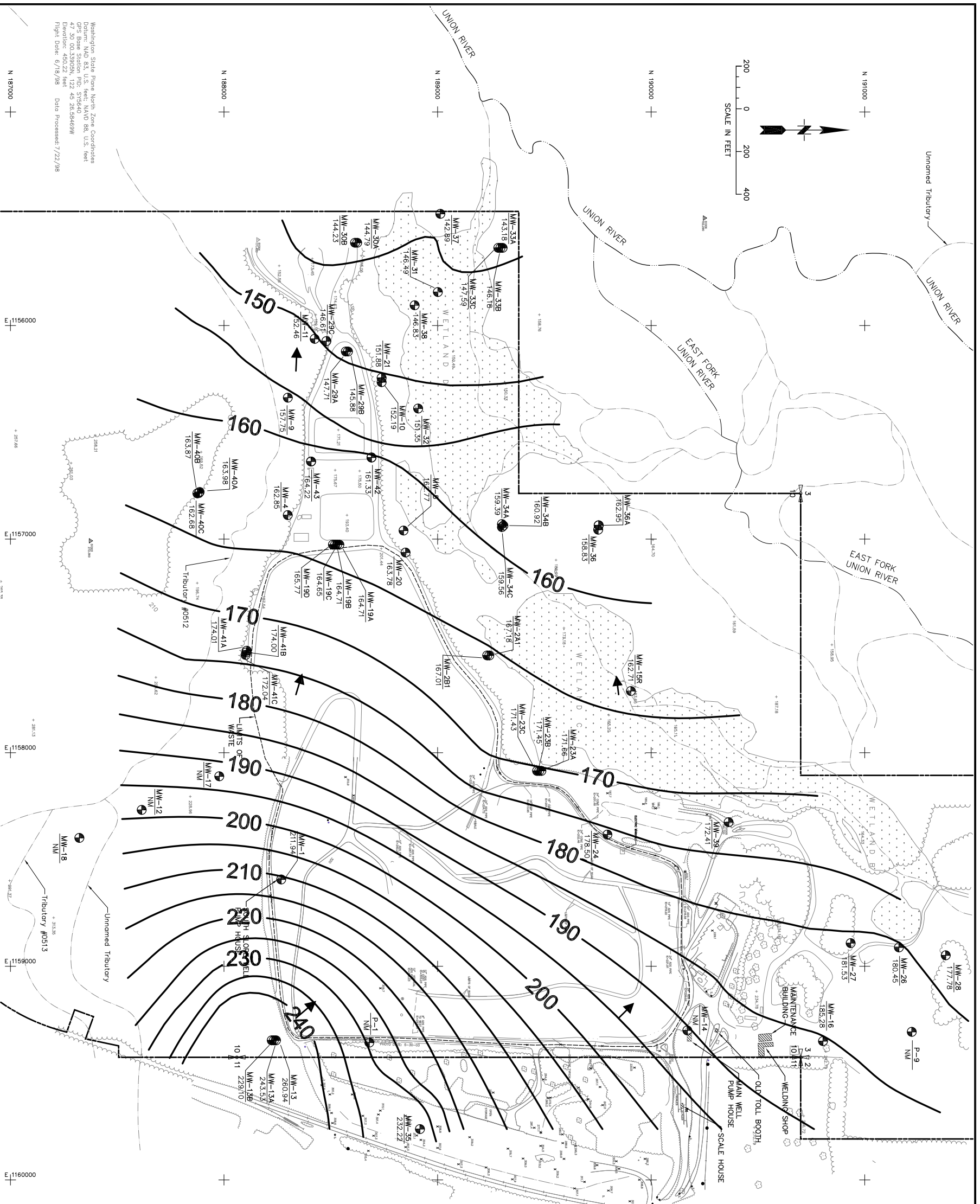
**SCS ENGINEERS**

Environmental Consultants and Contractors  
 2405 140th Avenue NE, Suite 107  
 Bellevue, Washington 98005  
 (425) 746-4600 FAX: (425) 746-6747

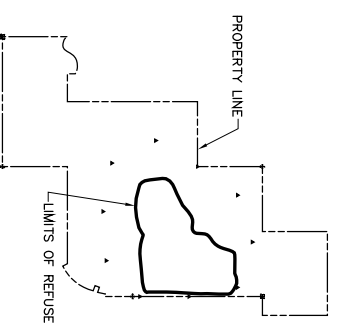
PROJECT NO.	04204027.15	DES BY	T.M.
SCALE	AS SHOWN	CHK BY	E.S.
CAD FILE	FIGURE 3	APP BY	D.V.

SUBSURFACE GAS MIGRATION MONITORING PROBES  
 AND BUILDING MONITORING LOCATIONS  
 OLYMPIC VIEW SANITARY LANDFILL  
 PORT ORCHARD, WASHINGTON

DATE	FEBRUARY 2012
FIGURE	3



**Note:**  
 Water level contours were generated using depth to water and measuring point elevation data from wells screened between 89 and 200 ft-msl and one stream gauge. The water level elevations for fourteen wells and one stream gauge have not been used to generate contours for the following reasons:  
 • Wells MW-13, MW-13B, MW-19D, MW-23C, MW-30B, MW-33C, MW-34B, MW-40C, MW-41C, and P-1 have screen elevations outside the 89 to 200 ft-msl range.  
 • Water levels was not measured at P-9.



LEGEND	
	MONITORING WELL MW-35 232.22 WATER LEVEL ELEVATION, FT-MSL, MARCH 2011
	ESTIMATED GROUNDWATER ELEVATION CONTOUR IN FEET-MSL CONTOUR INTERVAL = 5 FT
	GROUNDWATER FLOW DIRECTION

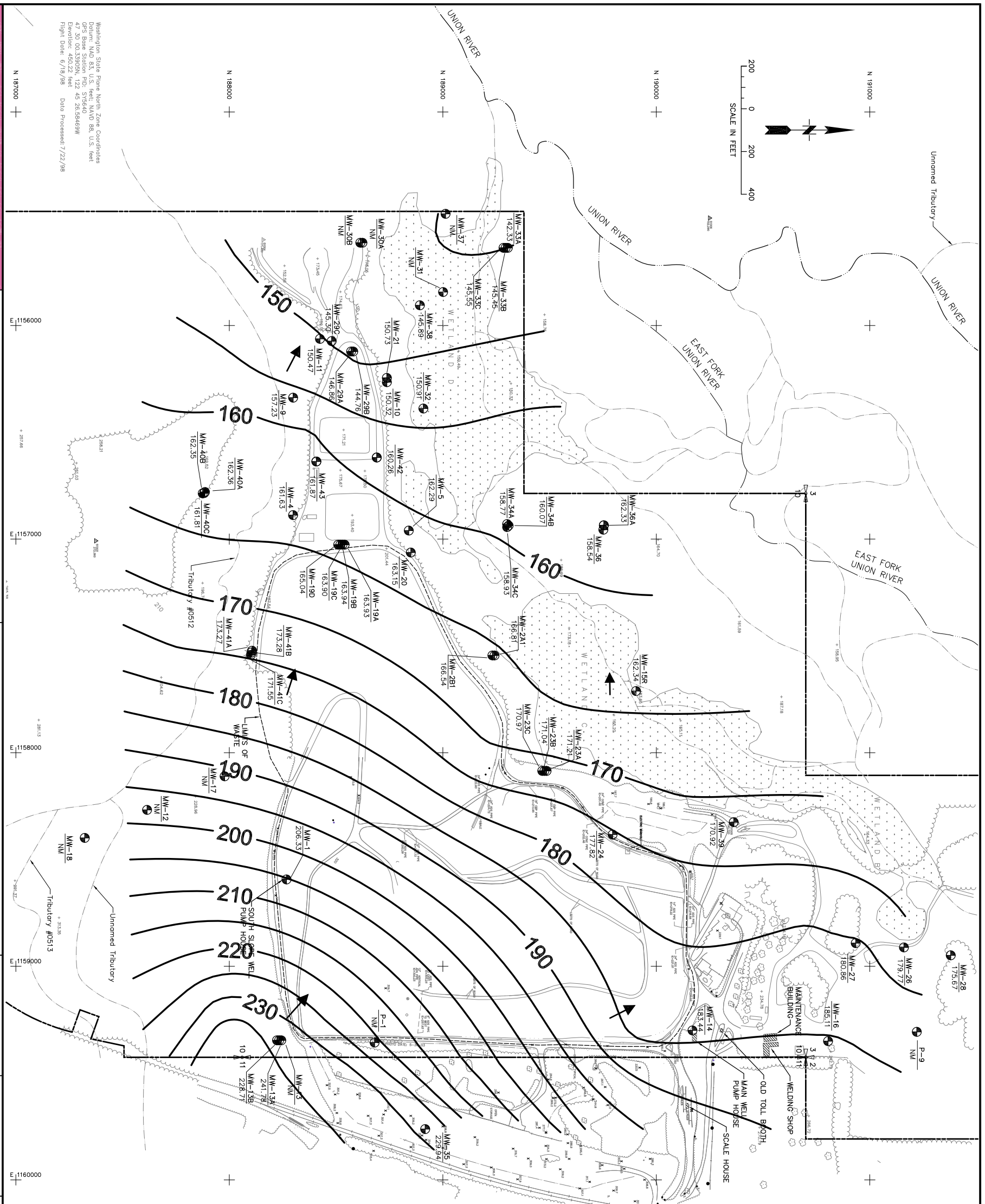
**SCS ENGINEERS**  
 Environmental Consultants and Contractors  
 2405 140th Avenue NE, Suite 107  
 Bellevue, Washington 98005  
 (425) 746-4600 FAX: (425) 746-6747

Washington State Plane North Zone Coordinates  
 Datum: NAD 83, U.S. feet; NAVD 88, U.S. feet  
 GCS Base Station Pk: 575640  
 47 30 00.339925N, 122 45 26.94669W  
 Elevation: 462.22 Feet  
 Flight Date: 6/16/98 Date Processed: 7/22/98

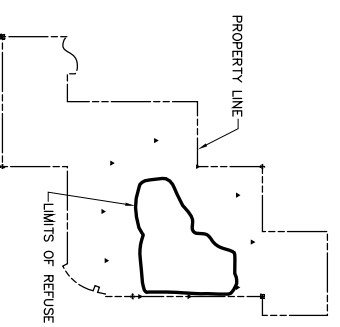
PROJECT NO.	04204027.15
SCALE	AS SHOWN
CAD FILE	FIGURE 4

DES BY	S.A.
CHK BY	E.S.
APP BY	D.V.

WATER LEVEL CONTOUR MAP		DATE	FEBRUARY 2012
MARCH 2011		FIGURE	4
OLYMPIC VIEW SANITARY LANDFILL PORT ORCHARD, WASHINGTON			



**Note:**  
 Water level contours were generated using depth to water and measuring point elevation data from wells screened between 89 and 200 ft-msl and one stream gauge. The water level elevations for fourteen wells and one stream gauge have not been used to generate contours for the following reasons:  
 • Wells MW-13, MW-13B, MW-19D, MW-23C, MW-30B, MW-33C, MW-34B, MW-40C, MW-41C, and P-1 have screen elevations outside the 89 to 200 ft-msl range.  
 • Water levels was not measured at P-9.



LEGEND	
	MONITORING WELL MW-35 229.94 WATER LEVEL ELEVATION, FT-MSL, JUNE 2011
	ESTIMATED GROUNDWATER ELEVATION CONTOUR IN FEET-MSL CONTOUR INTERVAL = 5 FT
	GROUNDWATER FLOW DIRECTION

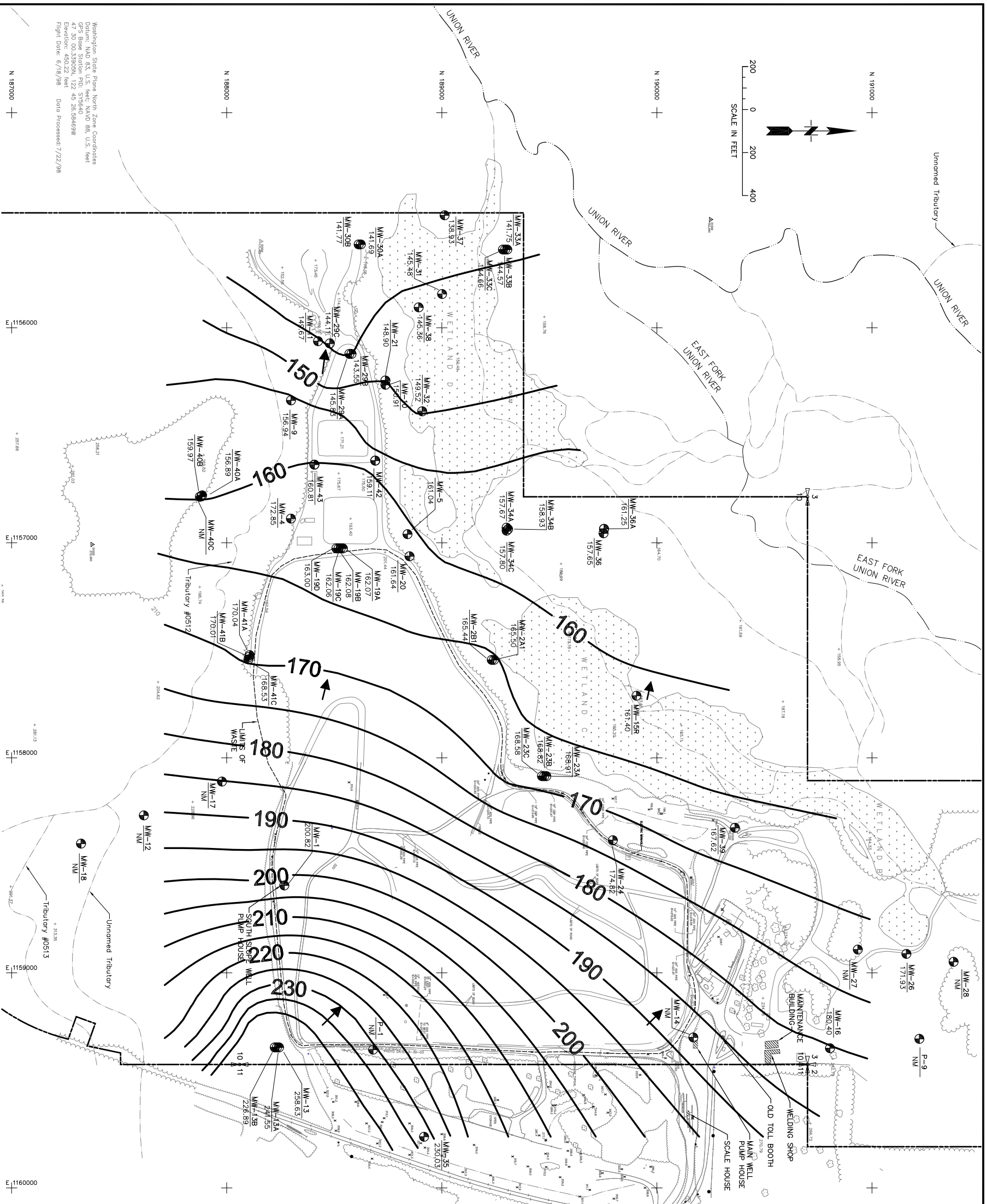
**SCS ENGINEERS**  
 Environmental Consultants and Contractors  
 2405 140th Avenue NE, Suite 107  
 Bellevue, Washington 98005  
 (425) 746-4600 FAX: (425) 746-6747

Washington State Plane North Zone Coordinates  
 Datum: NAD 83, U.S. feet; NAVD 88, U.S. feet  
 GCS Base Station PIP: 575640  
 47 30 00.339925N, 122 45 26.94669W  
 Elevation: 450.22 Meter  
 Flight Date: 6/16/09 Date Processed: 7/22/09

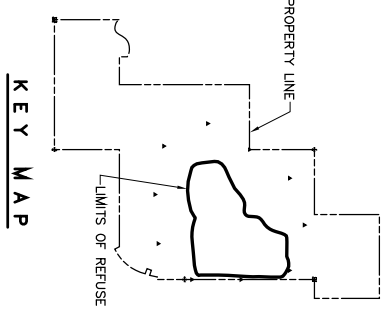
PROJECT NO.	04204027.15
SCALE	AS SHOWN
CAD FILE	FIGURE 5

DES BY	S.A.
CHK BY	E.S.
APP BY	D.V.

WATER LEVEL CONTOUR MAP		DATE	FEBRUARY 2012
JUNE 2011		FIGURE	5
OLYMPIC VIEW SANITARY LANDFILL PORT ORCHARD, WASHINGTON			



**Note:**  
 Water level contours were generated using depth to water and measuring point elevation data from wells screened between 89 and 200 ft-msl and one stream gauge. The water level elevations for fourteen wells and one stream gauge have not been used to generate contours for the following reasons:  
 • Wells MW-13, MW-13B, MW-19D, MW-23C, MW-30B, MW-33C, MW-34B, MW-40C, MW-41C, and P-1 have screen elevations outside the 89 to 200 ft-msl range.  
 • Water levels was not measured at P-9.



LEGEND	
	MONITORING WELL
	WATER LEVEL ELEVATION, FT-MSL, SEPTEMBER 2011
	ESTIMATED GROUNDWATER ELEVATION CONTOUR IN FEET-MSL ELEVATION INTERVAL = 5 FT
	GROUNDWATER FLOW DIRECTION

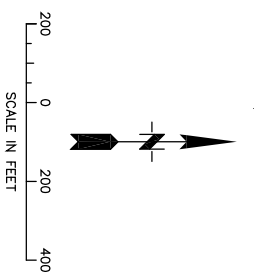
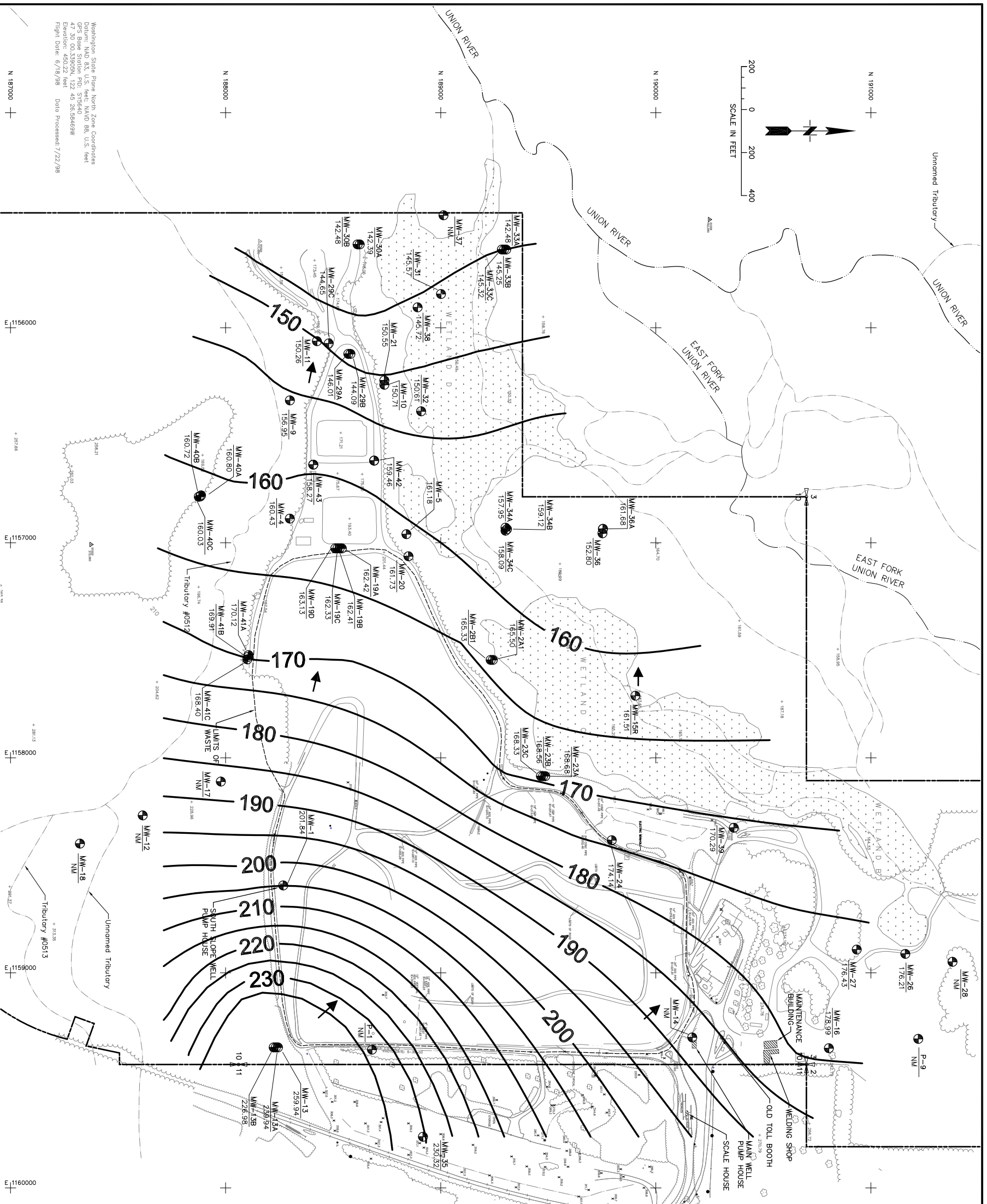
**SCS ENGINEERS**  
 Environmental Consultants and Contractors  
 2405 140th Avenue NE, Suite 107  
 Bellevue, Washington 98005  
 (425) 746-4600 FAX: (425) 746-6747

Washington State Plane North Zone Coordinates  
 Datum: NAD 83, U.S. feet; NAVD 88, U.S. feet  
 GCS Base Station PIP: 575640  
 47 30 00.339925N, 122 45 26.94669W  
 Elevation: 462.22 Meter  
 Flight Date: 6/16/09 Date Processed: 7/22/09

PROJECT NO.	04204027.15
SCALE	AS SHOWN
CAD FILE	FIGURE 6

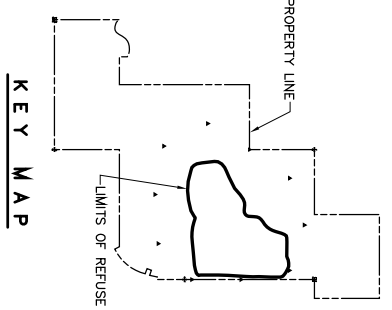
DES BY	S.A.
CHK BY	E.S.
APP BY	D.V.

WATER LEVEL CONTOUR MAP	
SEPTEMBER 2011	
OLYMPIC VIEW SANITARY LANDFILL	
PORT ORCHARD, WASHINGTON	
DATE	FEBRUARY 2012
FIGURE	6



Washington State Plane North Zone Coordinates  
 Datum: NAD 83, U.S. feet; NAVD 88, U.S. feet  
 GCS: Bease Station P10; 575640  
 47 30 00.339925N, 122 45 26.94669W  
 Elevation: 450.22 Feet  
 Flight Date: 6/16/09 Date Processed: 7/22/09

**Note:**  
 Water level contours were generated using depth to water and measuring point elevation data from wells screened between 89 and 200 ft-msl and one stream gauge. The water level elevations for fourteen wells and one stream gauge have not been used to generate contours for the following reasons:  
 • Wells MW-13, MW-13B, MW-19D, MW-23C, MW-30B, MW-33C, MW-34B, MW-40C, MW-41C, and P-1 have screen elevations outside the 89 to 200 ft-msl range.  
 • Water levels was not measured at P-9.

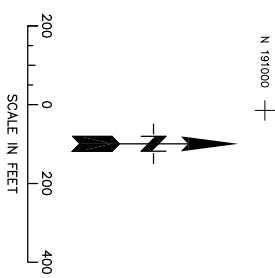
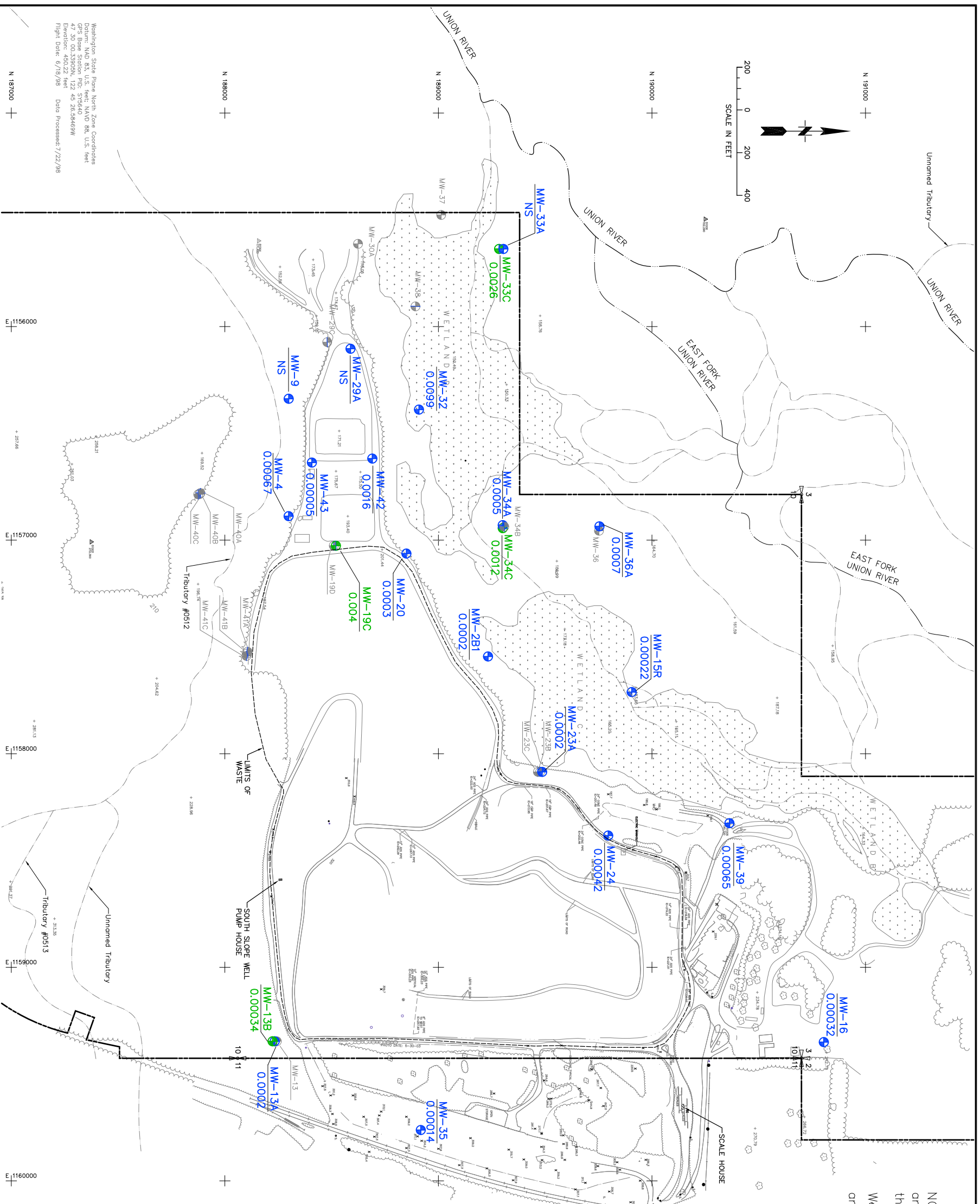


LEGEND	
	MONITORING WELL MW-35 230.32 WATER LEVEL ELEVATION, FT-MSL, DECEMBER 2011
	ESTIMATED GROUNDWATER ELEVATION CONTOUR IN FEET-MSL CONTOUR INTERVAL = 5 FT
	GROUNDWATER FLOW DIRECTION

**SCS ENGINEERS**  
 Environmental Consultants and Contractors  
 2405 140th Avenue NE, Suite 107  
 Bellevue, Washington 98005  
 (425) 746-4600 FAX: (425) 746-6747

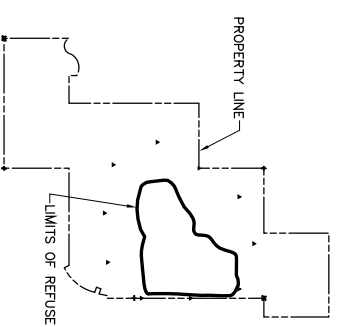
PROJECT NO.	04204027.15	DES BY	W.C.
SCALE	AS SHOWN	CHK BY	E.S.
CAD FILE	FIGURE 7	APP BY	D.V.

WATER LEVEL CONTOUR MAP		DATE	FEBRUARY 2012
DECEMBER 2011		FIGURE	7
OLYMPIC VIEW SANITARY LANDFILL PORT ORCHARD, WASHINGTON			



Washington State Plane North Zone Coordinates  
 Datum: NAD 83, U.S. feet; NAVD 88, U.S. feet  
 GRS Base Station PID: 575640  
 Elevation: 122.45 2638469M  
 Flight Date: 6/18/98 Date Processed: 7/22/98

NOTES : Analyte concentrations are color coded for deep and shallow groundwater wells. Where concentrations are less than the method detection limit, results are in black text. Wells MW-29 and MW-33A are only sampled semi-annually and shown as NS when not sampled.



LEGEND	
	<b>SHALLOW MONITORING WELL</b> MW-32 0.0099 ARSENIC, DISSOLVED (mg/L), SEPTEMBER 2011
	<b>DEEP MONITORING WELL</b> MW-34C 0.0014 ARSENIC, DISSOLVED (mg/L), SEPTEMBER 2011
NOTE: Non-detect results are not color coded.	

**SCS ENGINEERS**  
 Environmental Consultants and Contractors  
 2405 140th Avenue NE, Suite 107  
 Bellevue, Washington 98005  
 (425) 746-4600 FAX: (425) 746-6747

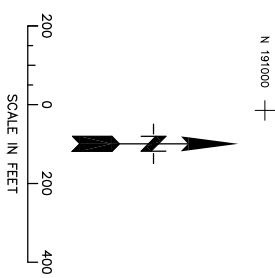
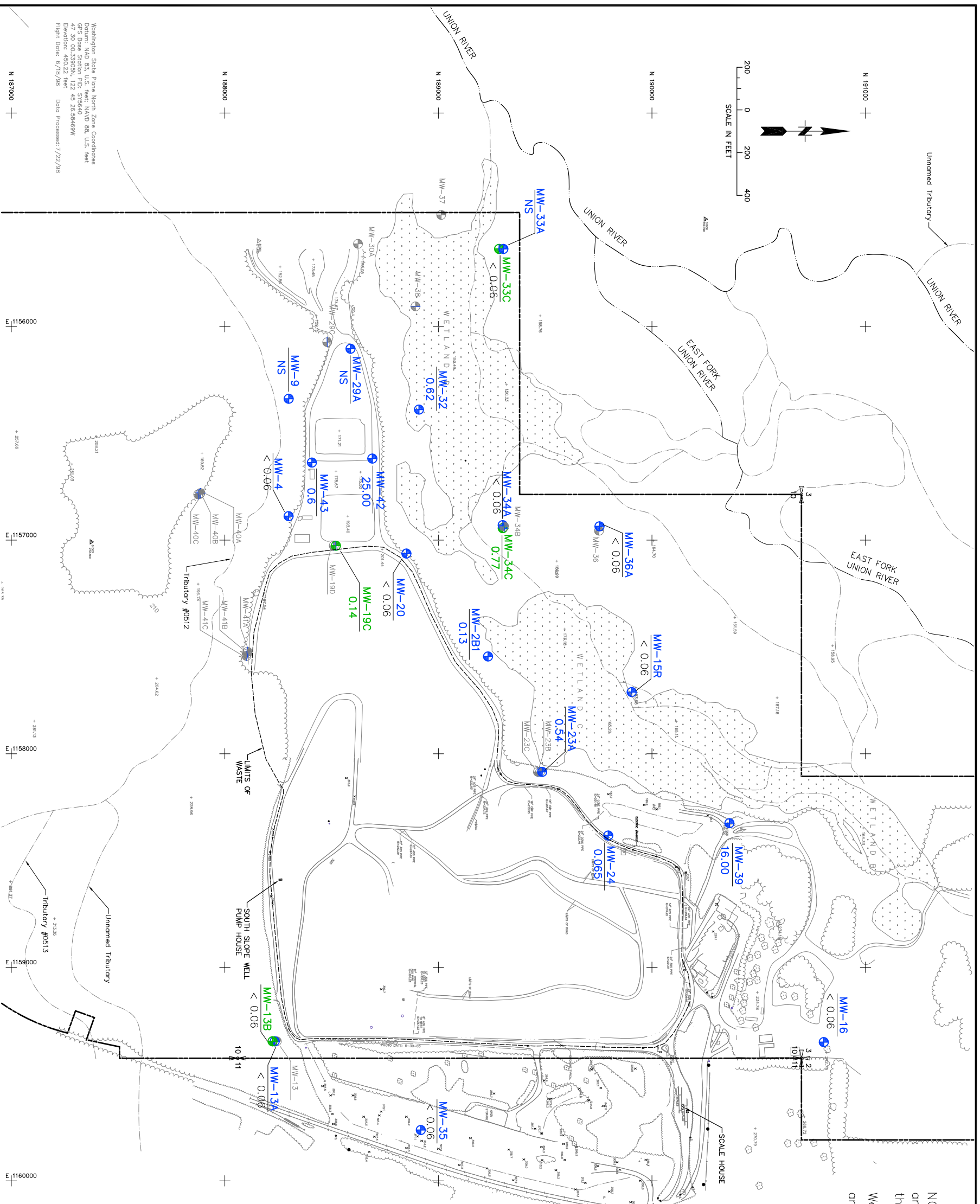
PROJECT NO. 04204027.15  
 SCALE AS SHOWN  
 CAD FILE FIGURE 8

DES BY S.A.  
 CHK BY E.S.  
 APP BY D.V.

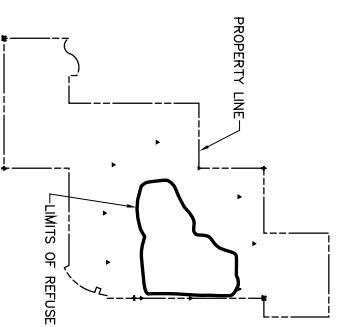
DISSOLVED ARSENIC CONCENTRATION MAP  
 DECEMBER 2011

OLYMPIC VIEW SANITARY LANDFILL  
 PORT ORCHARD, WASHINGTON  
 DATE FEBRUARY 2012  
 FIGURE 8





NOTES : Analyte concentrations are color coded for deep and shallow groundwater wells. Where concentrations are less than the method detection limit, results are in black text. Wells MW-29 and MW-33A are only sampled semi-annually and shown as NS when not sampled.



LEGEND	
	<b>SHALLOW MONITORING WELL</b> MW-32 0.63 IRON, DISSOLVED (mg/L), SEPTEMBER 2011
	<b>DEEP MONITORING WELL</b> MW-34C 0.91 IRON, DISSOLVED (mg/L), SEPTEMBER 2011

NOTE: Non-detect results are not color coded.

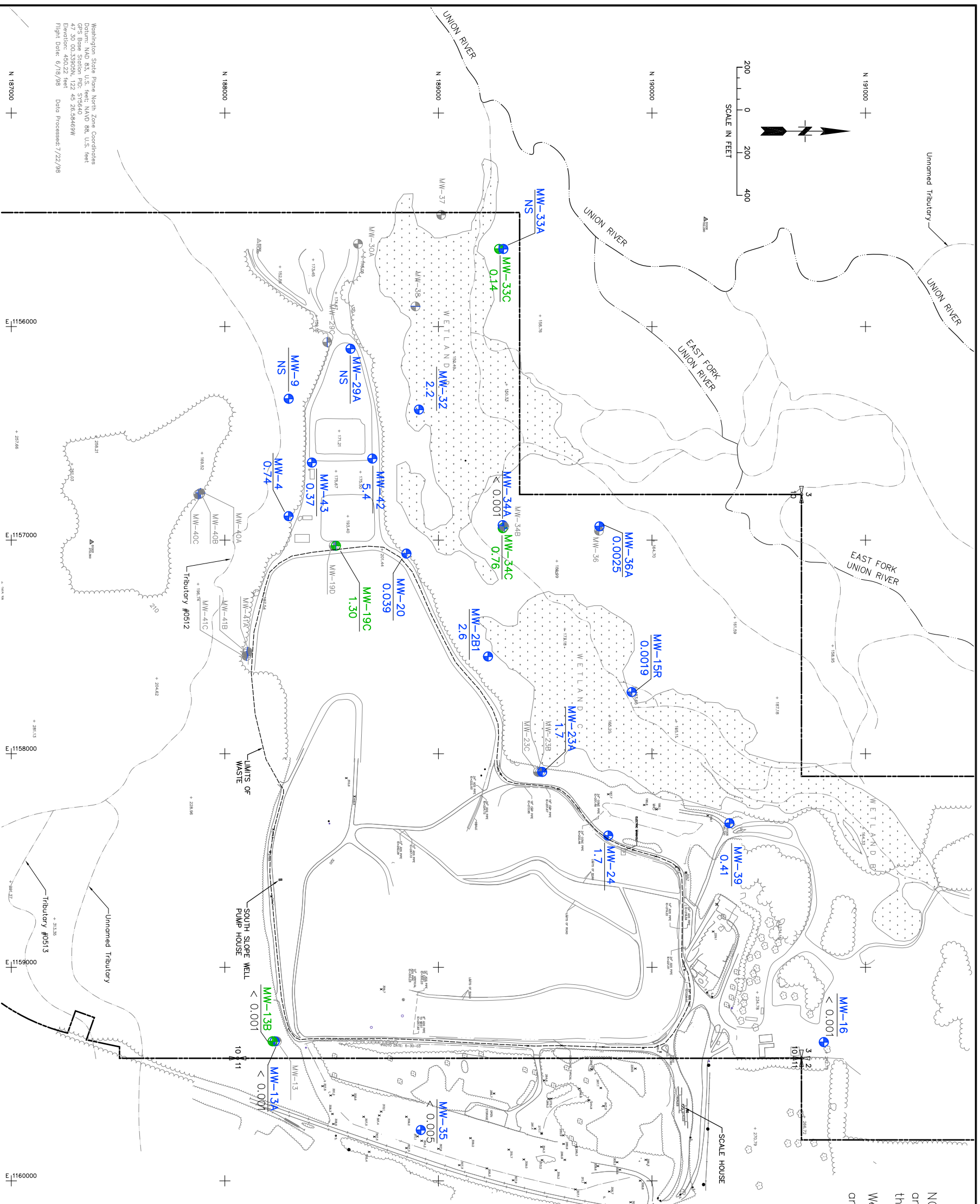
**SCS ENGINEERS**  
Environmental Consultants and Contractors  
2405 140th Avenue NE, Suite 107  
Bellevue, Washington 98005  
(425) 746-4600 FAX: (425) 746-6747

PROJECT NO.	04204027.15	DES BY	S.A.
SCALE	AS SHOWN	CHK BY	E.S.
CAD FILE	FIGURE 9	APP BY	D.V.

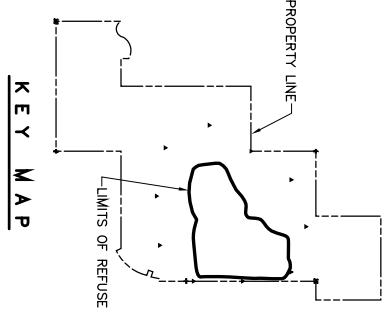
DISSOLVED IRON CONCENTRATION MAP  
DECEMBER 2011

DISSOLVED IRON CONCENTRATION MAP	DATE	FEBRUARY 2012
OLYMPIC VIEW SANITARY LANDFILL PORT ORCHARD, WASHINGTON	FIGURE	9

Washington State Plane North Zone Coordinates  
Datum: NAD 83, U.S. feet; NAD 88, U.S. feet  
GPS Base Station PIB: 575640  
47 30 00.33920N, 122 49 26.0469W  
Easting: 1156000, Northing: 187000  
Flight Date: 6/18/98 Date Processed: 7/22/98



NOTES : Analyte concentrations are color coded for deep and shallow groundwater wells. Where concentrations are less than the method detection limit, results are in black text. Wells MW-29 and MW-33A are only sampled semi-annually and shown as NS when not sampled.



LEGEND	
	<b>SHALLOW MONITORING WELL</b>
	MANGANESE, DISSOLVED (mg/L), SEPTEMBER 2011
	<b>DEEP MONITORING WELL</b>
	MANGANESE, DISSOLVED (mg/L), SEPTEMBER 2011

NOTE: Non-detect results are not color coded.

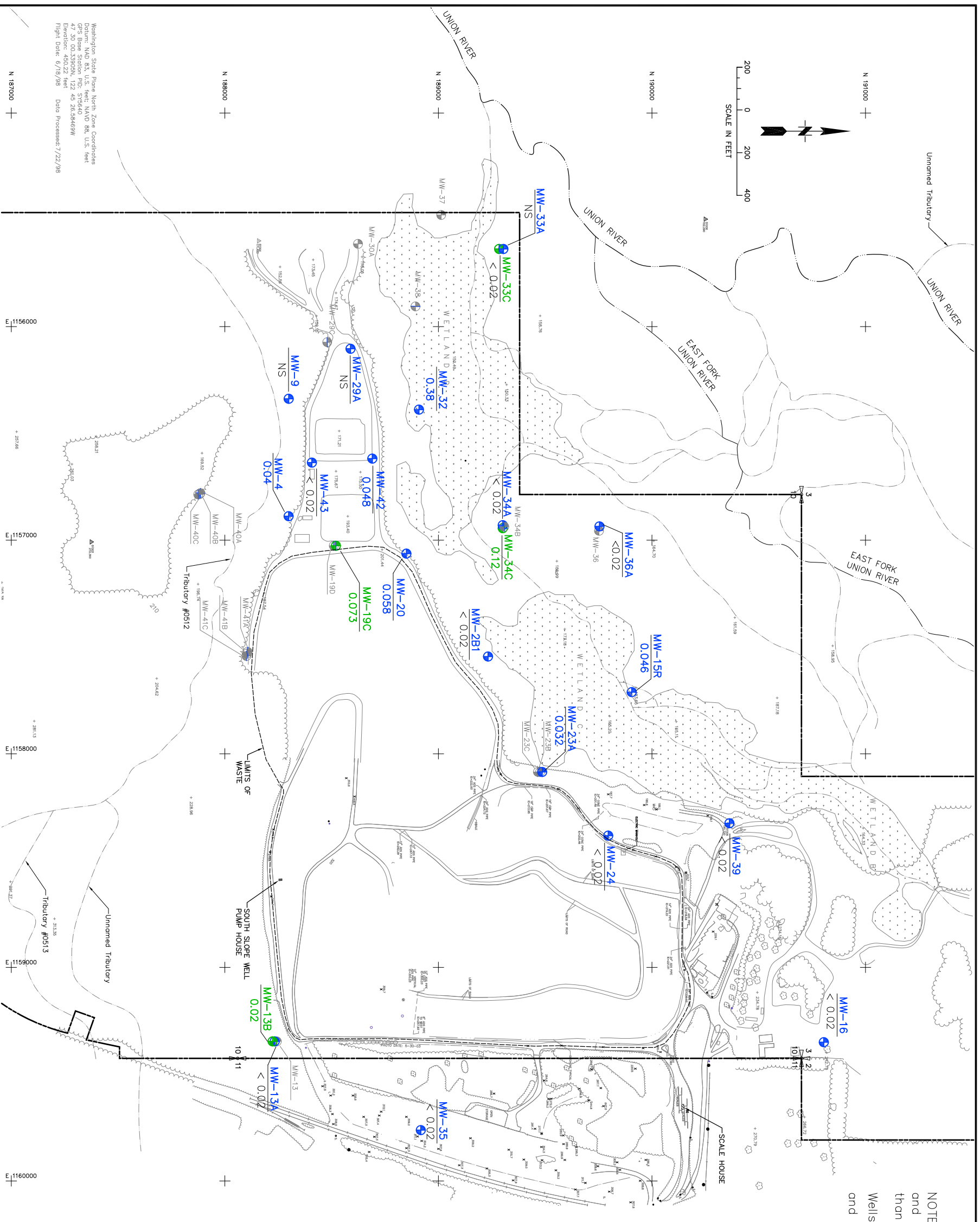
**SCS ENGINEERS**  
 Environmental Consultants and Contractors  
 2405 140th Avenue NE, Suite 107  
 Bellevue, Washington 98005  
 (425) 746-4600 FAX: (425) 746-6747

Washington State Plane North Zone Coordinates  
 Datum: NAD 83, U.S. feet; NAVD 88, U.S. feet  
 GRS Base Station PID: 575640  
 47 30 00.33920N, 122 49 26.04469W  
 Elevation: 100.00 feet  
 Flight Date: 6/18/98 Date Processed: 7/22/98

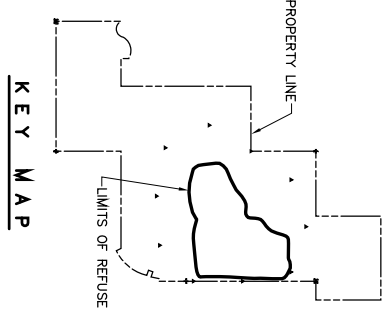
PROJECT NO.	04204027.15	DES BY	S.A.
SCALE	AS SHOWN	CHK BY	E.M.
CAD FILE	FIGURE 10	APP BY	D.V.

DISSOLVED MANGANESE CONCENTRATION MAP  
 DECEMBER 2011

OLYMPIC VIEW SANITARY LANDFILL PORT ORCHARD, WASHINGTON	DATE	FEBRUARY 2012
	FIGURE	10



NOTES : Analyte concentrations are color coded for deep and shallow groundwater wells. Where concentrations are less than the method detection limit, results are in black text. Wells MW-29 and MW-33A are only sampled semi-annually and shown as NS when not sampled.



LEGEND	
	<b>SHALLOW MONITORING WELL</b> VINYL CHLORIDE (ug/L), SEPTEMBER 2011
	<b>DEEP MONITORING WELL</b> VINYL CHLORIDE (ug/L), SEPTEMBER 2011

NOTES: Non-detect results are not color coded.

**SCS ENGINEERS**  
Environmental Consultants and Contractors  
2405 140th Avenue NE, Suite 107  
Bellevue, Washington 98005  
(425) 746-4600 FAX: (425) 746-6747

Washington State Plane North Zone Coordinates  
Datum: NAD 83, U.S. feet; NAD 83, U.S. feet  
GPS Base Station PID: 575640  
47 30 00.33920N, 122 49 26.0469W  
Easting: 1158000, Northing: 1918000  
Flight Date: 6/18/98 Date Processed: 7/22/98

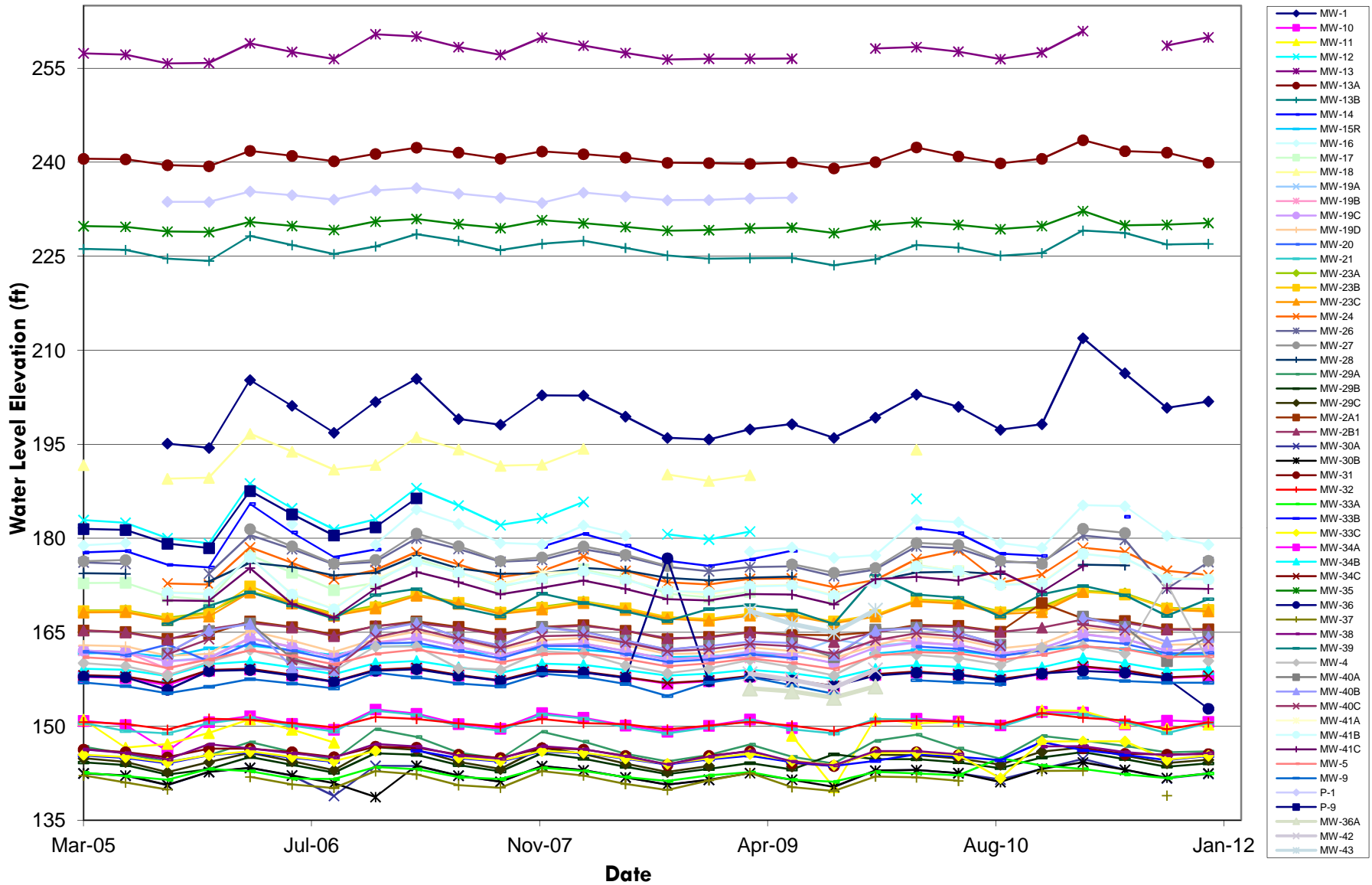
PROJECT NO. 04204027.15  
SCALE AS SHOWN  
CAD FILE FIGURE 11

DES BY S.A.  
CHK BY E.S.  
APP BY D.V.

VINYL CHLORIDE CONCENTRATION MAP  
DECEMBER 2011  
OLYMPIC VIEW SANITARY LANDFILL  
PORT ORCHARD, WASHINGTON

DATE FEBRUARY 2012  
FIGURE 11

Figure 12. Historic OVSL Groundwater Elevations



**Figure 13: Leachate Generation at OVSL, 2007-2011**

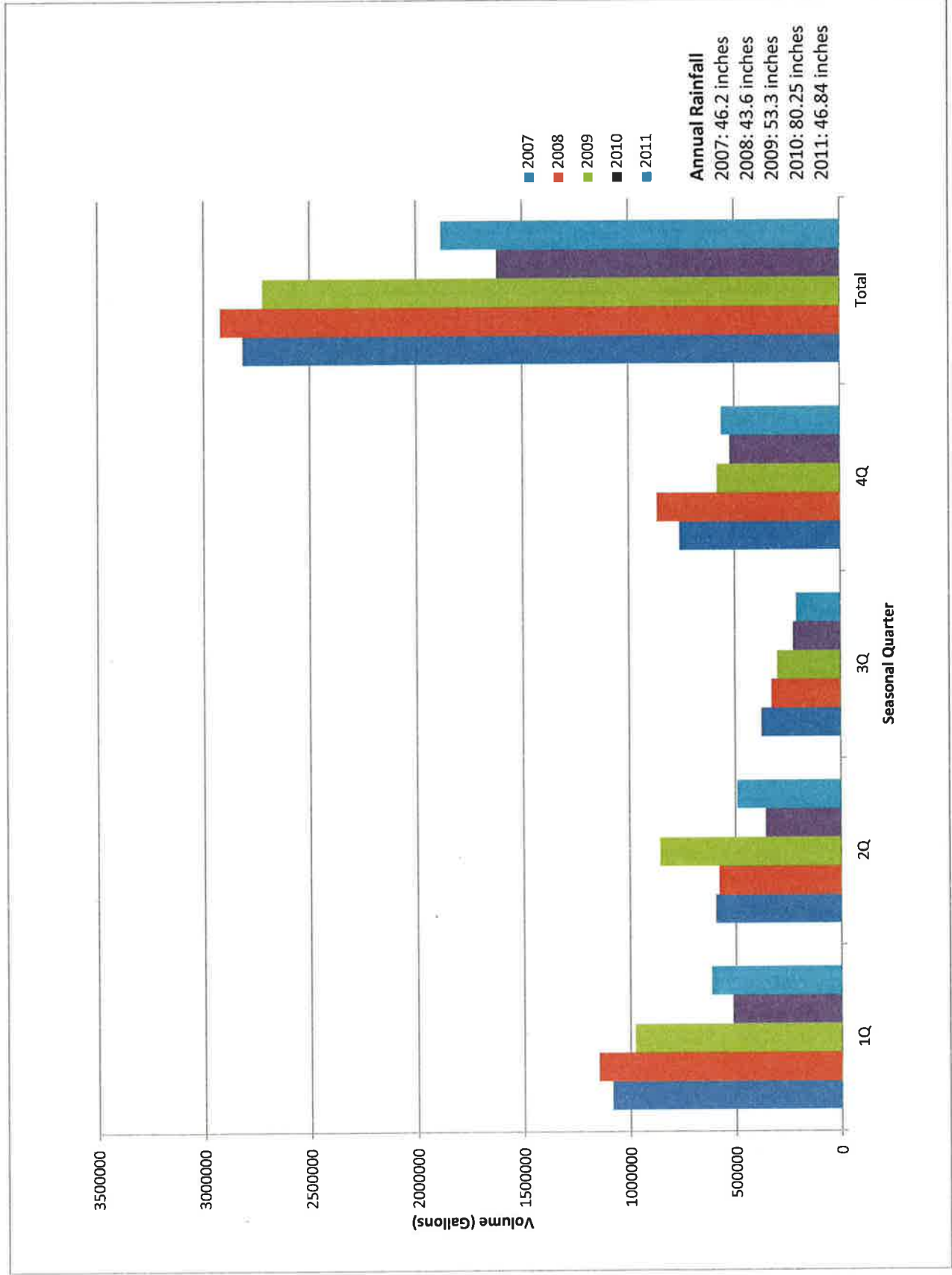
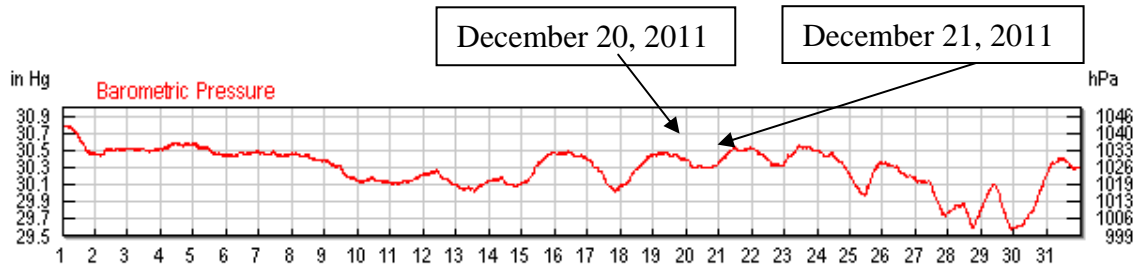


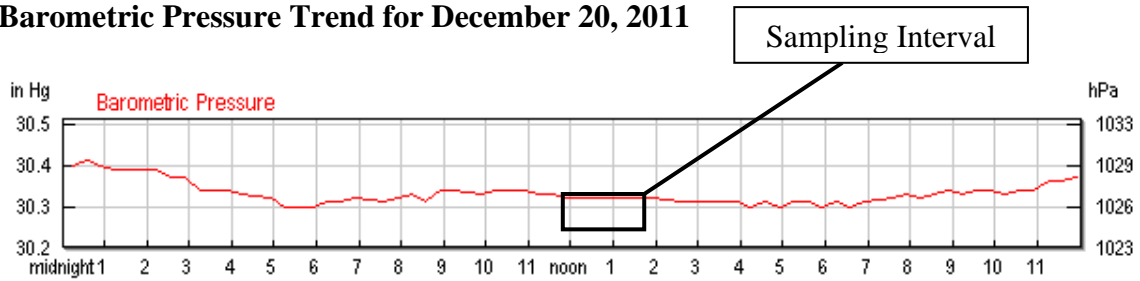
Figure 14.

Olympic View Sanitary Landfill  
Landfill Gas Migration Monitoring  
Fourth Quarter 2011

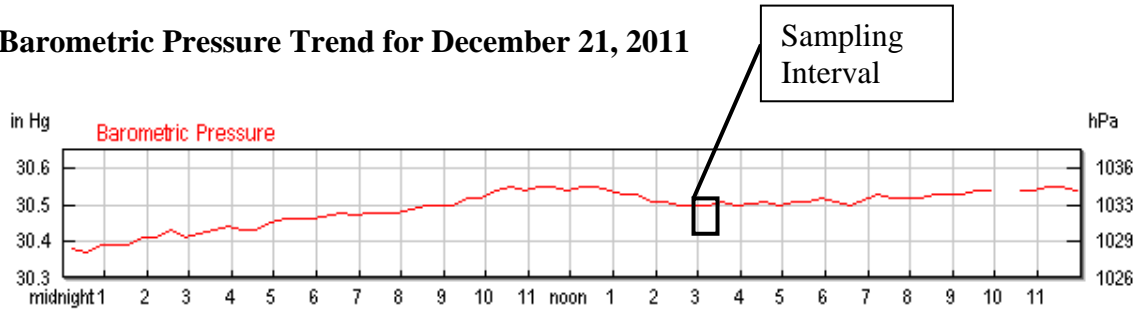
Barometric Pressure Trend for December, 2011



Barometric Pressure Trend for December 20, 2011



Barometric Pressure Trend for December 21, 2011



Source: Bremerton National Airport, Station KPWT  
Latitude 47.5, Longitude 122.75, Elevation 482 ft-AMSL

## TABLES

**Table 1. Groundwater Well Construction Data, Olympic View Sanitary Landfill**

Well ID	Northing	Easting	Reference Elevation (ft-msl)	Total Depth (ft-bgs)	Top of Screen Elevation (ft-msl)	Bottom of Screen Elevation (ft-msl)	Screen Length (ft)
<b>Sampled Wells</b>							
MW-2B1	189232.23	1157544.63	172.94	18	163	153	10
MW-4	188298.52	1156887.57	175.78	34	149	139	10
MW-9	188298.84	1156337.75	160.34	24	140	135	5
MW-13A	188233.33	1159346.53	288.74	155	141	131	10
MW-13B	188223.33	1159346.53	288.66	260	36	26	10
MW-15R	189905.03	1157711.29	180.66	33	157	147	10
MW-16	190804.53	1159350.37	240.01	70	178	168	10
MW-19C	188520.03	1157025.96	196.96	90	111	106	5
MW-20	188850.01	1157062.68	198.41	49	165	150	15
MW-23A	189485.84	1158085.12	182.28	23	172	157	15
MW-24	189795.14	1158383.22	208.24	42	176	161	15
MW-29A	188570.27	1156121.60	160.21	25	140	135	5
MW-32	188908.88	1156388.52	152.36	21	135	130	5
MW-33A	189304.18	1155636.34	147.68	20	140	125	15
MW-33C	189284.18	1155636.34	147.59	65	89	79	10
MW-34A	189391.16	1156929.63	197.95	48	168	148	20
MW-34C	189391.16	1156943.77	199.89	98	114	99	15
MW-35	188917.42	1159762.03	302.69	149	161	151	10
MW-42	188690.50	1156617.90	187.43	33	159	154	5
MW-39	190362.60	1158325.32	189.92	25	174	164	10
MW-43	188407.60	1156636.60	186.42	30	161	156	5
MW-36A	189754.10	1156935.20	192.68	50	147	142	5
<b>Locations for Water Level Measurement Only</b>							
MW-1	188267.80	1158593.35	273.63	180	NA	NA	NA
MW-2A1	189242.23	1157544.63	174.22	38	143	133	10
MW-5	188840.50	1156959.90	164.37	14	159.5	149.5	10
MW-10	188737.81	1156265.18	155.12	17.5	142	137	5
MW-11	188424.54	1156062.42	155.04	22	137	132	5
MW-12	187614.62	1158267.67	233.09	70	183	163	20
MW-13	188243.33	1159346.53	288.94	40	256	246	10
MW-14	190169.37	1159300.21	228.22	80	151	146	5
MW-17	187977.80	1158110.35	208.01	54	163	153	10
MW-18	187322.70	1158398.81	258.34	75	199	184	15
MW-19A	188540.03	1157025.96	195.74	45.5	165	150	15
MW-19B	188530.03	1157025.96	195.82	59.5	146	136	10
MW-19D	188510.03	1157025.96	196.83	143	61	51	10
MW-21	188737.81	1156245.18	156.03	15	150	140	10
MW-23B	189475.84	1158085.12	182.42	60	130	120	10
MW-23C	189465.84	1158085.12	182.41	114	76	66	10
MW-26	191159.90	1158911.65	189.73	25.5	178	163	15
MW-27	190934.05	1158891.56	200.65	32.5	182	167	15
MW-28	191379.07	1158948.49	181.05	15	174.5	164.5	10
MW-29B	188580.27	1156121.60	161.69	65	110	95	15
MW-29C	188479.36	1156072.97	156.92	50	111	106	5
MW-30A	188623.50	1155612.45	166.74	35	136	131	5
MW-29B	188580.27	1156121.60	161.69	65	110	95	15
MW-30B	188613.50	1155612.45	166.6	86	84	79	5
MW-31	189001.26	1155843.17	148.28	20	136	126	10
MW-33B	189294.18	1155636.34	147.55	40	114	104	10
MW-34B	189308.15	1156936.77	198.93	208	-1	-11	10
MW-36	189751.87	1156955.77	189.39	100	99	89	10
MW-37	189012.89	1155477.10	145.93	9	139	134	5
MW-38	188892.50	1155905.23	149.93	47	110	101	10
MW-40A	187885.89	1156779.45	180.16	24.4	160	155	5
MW-40B	187882.31	1156784.38	180.24	67	118	113	5
MW-40C	187875.42	1156785.79	181.16	103.7	82	77	5
MW-41A	188106.83	1157522.05	199.43	35.7	168	163	5
MW-41B	188104.34	1157530.68	200.64	79	126	121	5
MW-41C	188101.13	1157541.93	199.67	117	87	82	5
P-1	188680.42	1159357.03	281.66	57.5	232	224	7.5
P-9	191220.13	1159306.83	211.34	36	179	174	5

NA: screened interval information was not available for well MW-1.

+ : Remedial Investigation Monitoring Locations



**Table 2. Summary of 2011 Analytical Parameters, Olympic View Sanitary Landfill**

Well	Volatile Organic Compounds		Appendix I Metals and Nitrate	Appendix II Field Parameters	Appendix II Geochemical Indicator Parameters	Appendix II Leachate Indicator Parameters	Appendix III Parameters	WAC 173-351 Appendix IV
	WAC 173-351 Appendix I	Vinyl Chloride (SIM)	As, Sb, Ba, Be, Cd, Cr, Co, Cu, Pb, Ni, Se, Ag, Tl, V, Zn, NO <sub>3</sub>	Dissolved Oxygen, Eh, pH, Specific Conductivity, Temperature	Cl, Fe, Mn, SO <sub>4</sub> , Ca, Mg, Na, K, Alkalinity	Ammonia, TOC, TDS	VOCs, SVOCs, PCBs, Pest/Herb, Hg, Sn	Coilform, COD, BOD, Nitrite, Cyanide
<b>Upgradient Monitoring Locations</b>								
MW-13A	•	•	•	•	•	•		
MW-13B								
MW-16								
MW-35								
<b>Compliance Monitoring Locations</b>								
MW-15-R	•	•	•	•	•	•		
MW-34A								
MW-34C								
MW-39								
MW-42								
MW-43								
<b>Downgradient Monitoring Locations</b>								
MW-9	•	•	•	•	•	•		
MW-29A								
MW-32								
MW-33A								
MW-33C								
MW-36A								
<b>Performance Monitoring Locations</b>								
MW-2B1	•	•	•	•	•	•		
MW-4								
MW-19C								
MW-20								
MW-23A								
MW-24								
<b>Leachate Monitoring Locations</b>								
L-INF	x		x	x	x	x	x	x
OBWL-TD								
LP-LCD				x	x	x		

- Indicates entire group of wells was sampled.
  - × Indicates specific wells/stations that were sampled.
- OBWL-TD did not contain samplable volumes of liquid during 2010.

**Table 3. 2011 Water Level Elevations, Groundwater Monitoring Wells  
Olympic View Sanitary Landfill**

Location ID	MPE	Mar-11		Jun-11		Sep-11		Dec-11	
		DTW	WLE	DTW	WLE	DTW	WLE	DTW	WLE
MW-1	273.63	61.69	211.94	67.30	206.33	72.81	200.82	71.79	201.84
MW-10	155.12	2.93	152.19	4.80	150.32	4.21	150.91	4.41	150.71
MW-11	155.04	2.58	152.46	4.57	150.47	5.37	149.67	4.78	150.26
MW-12	233.09	NM	NM	NM	NM	NM	NM	NM	NM
MW-13	288.94	28.00	260.94	NM	NM	30.31	258.63	29.00	259.94
MW-13A	288.74	45.21	243.53	46.96	241.78	47.19	241.55	48.80	239.94
MW-13B	288.66	59.56	229.10	59.95	228.71	61.77	226.89	61.68	226.98
MW-14	228.22	NM	NM	44.78	183.44	NM	NM	NM	NM
MW-15R	180.66	17.95	162.71	18.32	162.34	19.26	161.40	19.15	161.51
MW-16	240.01	54.73	185.28	54.90	185.11	59.61	180.40	61.02	178.99
MW-17	208.01	NM	NM	NM	NM	NM	NM	NM	NM
MW-18	258.34	NM	NM	NM	NM	NM	NM	NM	NM
MW-19A	195.74	31.03	164.71	31.81	163.93	33.67	162.07	33.32	162.42
MW-19B	195.82	31.11	164.71	31.88	163.94	33.74	162.08	33.41	162.41
MW-19C	196.96	32.31	164.65	33.06	163.90	34.90	162.06	34.63	162.33
MW-19D	196.83	31.06	165.77	31.79	165.04	33.83	163.00	33.70	163.13
MW-20	198.41	34.63	163.78	35.26	163.15	36.77	161.64	36.68	161.73
MW-21	156.03	4.15	151.88	5.30	150.73	7.13	148.90	5.48	150.55
MW-23A	182.28	10.62	171.66	11.07	171.21	13.37	168.91	13.60	168.68
MW-23B	182.42	10.97	171.45	11.38	171.04	13.60	168.82	13.86	168.56
MW-23C	182.41	10.98	171.43	NM	NM	13.83	168.58	14.08	168.33
MW-24	208.25	29.75	178.50	30.43	177.82	33.43	174.82	34.11	174.14
MW-26	189.73	9.28	180.45	9.96	179.77	17.80	171.93	13.52	176.21
MW-27	200.65	19.12	181.53	19.79	180.86	NM	NM	24.22	176.43
MW-28	181.05	5.27	175.78	5.38	175.67	NM	NM	NM	NM
MW-29A	160.21	12.50	147.71	13.35	146.86	14.38	145.83	14.20	146.01
MW-29B	161.69	15.81	145.88	16.93	144.76	18.14	143.55	17.60	144.09
MW-29C	156.92	10.31	146.61	11.62	145.30	12.81	144.11	12.27	144.65
MW-2A1	174.22	7.04	167.18	7.41	166.81	8.72	165.50	8.72	165.50
MW-2B1	172.94	5.93	167.01	6.40	166.54	7.50	165.44	7.61	165.33
MW-30A	166.74	21.95	144.79	23.69	143.05	25.05	141.69	24.35	142.39
MW-30B	166.60	22.37	144.23	23.54	143.06	24.83	141.77	24.12	142.48
MW-31	148.28	1.79	146.49	2.68	145.60	2.80	145.48	2.71	145.57
MW-32	152.36	1.01	151.35	1.45	150.91	2.84	149.52	1.75	150.61
MW-33A	147.68	4.50	143.18	5.35	142.33	5.93	141.75	5.20	142.48
MW-33B	147.55	1.37	146.18	2.10	145.45	2.98	144.57	2.30	145.25
MW-33C	147.59	0.00	147.59	0.00	147.59	2.93	144.66	2.27	145.32
MW-34A	197.95	38.56	159.39	39.18	158.77	40.28	157.67	40.00	157.95
MW-34B	198.93	38.01	160.92	38.86	160.07	40.00	158.93	39.81	159.12
MW-34C	199.89	40.33	159.56	40.96	158.93	42.09	157.80	41.80	158.09
MW-35	302.69	70.47	232.22	72.75	229.94	72.66	230.03	72.37	230.32
MW-36	189.39	30.56	158.83	30.85	158.54	31.74	157.65	36.59	152.80
MW-36A	187.43	30.20	157.23	30.82	156.61	31.90	155.53	31.47	155.96
MW-37	145.93	3.04	142.89	NM	NM	7.00	138.93	NM	NM
MW-38	149.93	3.10	146.83	4.04	145.89	4.57	145.36	4.21	145.72
MW-39	189.92	17.51	172.41	19.00	170.92	22.30	167.62	19.63	170.29
MW-4	175.78	12.93	162.85	14.15	161.63	2.93	172.85	15.35	160.43
MW-40A	180.15	12.65	167.50	14.27	165.88	19.74	160.41	15.83	164.32
MW-40B	180.24	12.85	167.39	14.37	165.87	16.75	163.49	16.00	164.24
MW-40C	180.30	14.10	166.20	14.97	165.33	NM	NM	16.75	163.55
MW-41A	199.43	21.90	177.53	22.64	176.79	25.87	173.56	25.79	173.64
MW-41B	199.76	22.24	177.52	22.96	176.80	26.23	173.53	26.33	173.43
MW-41C	199.67	24.11	175.56	NM	NM	27.62	172.05	27.75	171.92
MW-42	186.42	26.43	159.99	27.50	158.92	28.65	157.77	28.30	158.12
MW-43	192.68	22.35	170.33	24.70	167.98	25.76	166.92	28.30	164.38
MW-5	164.37	1.60	162.77	2.08	162.29	3.33	161.04	3.19	161.18
MW-9	160.34	2.59	157.75	3.11	157.23	3.40	156.94	3.39	156.95

DTW Depth to Water (ft)

MPE Measuring Point Elevation (ft-msl)

WLE Water Level Elevation (ft-msl)

NM Not monitoring because well could not be accessed during event.

Please Note: MPE for well MW-1 is approximate ground surface elevations (not top of casing elevation).

**Table 4. 2011 Groundwater, Leachate Influent (L-INF) and Leak Detection (LP-LCD) Analytical Results and Field Parameters, OVSL**

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11
MW-13A	Field Parameter	Dissolved Oxygen	7.03	6.68	4.28	4.3
		eH	234	346	312	89
		pH	6.95	7.45	6.91	7.13
		Specific Conductivity	0.151	0.158	0.158	0.176
		TEMPERATURE	9.37	10.4	9.58	8.92
		Turbidity	0.44	0.96	0.42	0.00
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO <sub>3</sub> )	88	89	89	90
		Alkalinity, Total (As CaCO <sub>3</sub> )	88	89	89	90
		Ammonia (As N)	0.064		0.075	0.086
		Calcium, Dissolved	16	16	16	16
		Chloride	2.9	3 J	3.8	4.4
		Magnesium, Dissolved	9.6	10	9.7	9.3
		Nitrate (As N)	0.53	0.46	0.48	0.48
		Sodium, Dissolved	5.4	5.4	5.6	5.5
		Sulfate	2.2	2.2 J	2.3	2.5
		Total Dissolved Solids (TDS)	110	110	100	97
	Metals (mg/L)	Arsenic, Dissolved	0.0002	0.0002	0.0002	0.0002
		Barium, Dissolved	0.0029	0.0035	0.0026	0.003
		Vanadium, Dissolved	0.0039	0.0038	0.0037	0.0041
	VOC (ug/L)	Vinyl chloride	0.037			

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11
MW-13B	Field Parameter	Dissolved Oxygen	7.7	7.36	4.53	4.59
		eH	237	310	302	89
		pH	7.51	7.58	7.08	7.53
		Specific Conductivity	0.144	0.135	0.151	0.169
		TEMPERATURE	9.3	11.3	10.6	8.8
		Turbidity	0.46	0.17	1.51	0.00
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO <sub>3</sub> )	81	81	83	84
		Alkalinity, Total (As CaCO <sub>3</sub> )	81	81	83	84
		Ammonia (As N)	0.062		0.032	0.03
		Calcium, Dissolved	16	16	16	16
		Chloride	3.1	3.2 J	3.7	3.4
		Magnesium, Dissolved	8.2	9	8.4	8.1
		Nitrate (As N)	0.51	0.43	0.46	0.47
		Sodium, Dissolved	5.1	5.2	5.2	5.1
		Sulfate	4.4	3.7 J	3.7	3.5
		Total Dissolved Solids (TDS)	110	99	100	91
	Metals (mg/L)	Arsenic, Dissolved	0.00034	0.00035	0.00034	0.0003
		Barium, Dissolved	0.0035	0.0034	0.0029	0.0035
		Chromium, Dissolved	0.0031		0.0032	0.0031
		Vanadium, Dissolved	0.0057	0.0055	0.0057	0.0066
VOC (ug/L)	Vinyl chloride				0.02	

(J) result is an estimate, or elevated reporting limit

(B) blank contamination

Blank cell parameter not detected above the reporting limit, or not analyzed

**Table 4. 2011 Groundwater, Leachate Influent (L-INF) and Leak Detection (LP-LCD) Analytical Results and Field Parameters, OVSL**

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11
MW-15R	Field Parameter	Dissolved Oxygen	0.87	0.49	0.45	0.2
		eH	149	153	27	147
		pH	6.35	6.28	6.46	6.57
		Specific Conductivity	0.17	0.206	0.171	0.233
		TEMPERATURE	10.0	10.1	10.1	9.8
		Turbidity	0.30	0.13	0.20	0.22
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO <sub>3</sub> )	120	130	120	120
		Alkalinity, Total (As CaCO <sub>3</sub> )	120	130	120	120
		Ammonia (As N)	0.069	0.044	0.047	0.033
		Calcium, Dissolved	22	22	21	20
		Chloride	4	4.1	4	3.5
		Magnesium, Dissolved	13	14	14	12
		Nitrate (As N)	0.2		0.14	0.073
		Sodium, Dissolved	7.2	6.7	6.2	6.3
		Sulfate	5.1	5.4	6.1	5.8
		Total Dissolved Solids (TDS)	140	150	140	130
	Metals (mg/L)	Arsenic, Dissolved	0.00026	0.00022	0.00019	0.00022
		Barium, Dissolved	0.0067	0.0067	0.0071	0.006
		Manganese, Dissolved	0.0018	0.0039	0.0026	0.0019
		Vanadium, Dissolved	0.0042	0.0035	0.0027	0.0034
	VOC (ug/L)	Vinyl chloride	0.03	0.043	0.041	0.046

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11
MW-16	Field Parameter	Dissolved Oxygen	8.32	4.46	7.12	3.8
		eH	124	143	4.2	141
		pH	6.31	6.15	6.44	6.30
		Specific Conductivity	0.102	0.096	0.068	0.120
		TEMPERATURE	9.1	9.5	9.4	8.8
		Turbidity	0.83	0.25	1.37	4.73
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO <sub>3</sub> )	53	59	66	60
		Alkalinity, Total (As CaCO <sub>3</sub> )	53	59	66	60
		Ammonia (As N)	0.06	0.048		
		Calcium, Dissolved	9.8	9.7	12	11
		Chloride	3.6	2.4	3.9	2.1
		Magnesium, Dissolved	5.8	5.6	6.6	6.2
		Nitrate (As N)	0.52	0.46	0.73	1.1
		Sodium, Dissolved	4.7	5	5.8	5.3
		Sulfate	7.1	2.4	4.1	2.3
		Total Dissolved Solids (TDS)	91	94	100	93
	Metals (mg/L)	Arsenic, Dissolved	0.00033	0.00034	0.00032	0.00032
		Barium, Dissolved	0.0039	0.0039	0.0047	0.0038
		Chromium, Dissolved	0.0082	0.0077	0.0088	0.0073
		Manganese, Dissolved		0.0028	0.0029	
		Vanadium, Dissolved	0.0039	0.0039	0.0043	0.0035

(J) result is an estimate, or elevated reporting limit

(B) blank contamination

Blank cell parameter not detected above the reporting limit, or not analyzed

**Table 4. 2011 Groundwater, Leachate Influent (L-INF) and Leak Detection (LP-LCD) Analytical Results and Field Parameters, OVSL**

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11
MW-19C	Field Parameter	Dissolved Oxygen	0.3	0.32	0.25	0.2
		eH	227	275	231	22
		pH	6.60	6.93	6.81	6.80
		Specific Conductivity	0.124	0.138	0.149	0.171
		TEMPERATURE	10.2	10.6	10.9	10.0
		Turbidity	0.38	0.49	0.79	0.33
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO3)	67	67	76	77
		Alkalinity, Total (As CaCO3)	67	67	76	77
		Ammonia (As N)	0.47	0.44	0.45	0.44
		Calcium, Dissolved	12	12	14	14
		Chloride	3.5	3.6	5.3	4.6
		Magnesium, Dissolved	6.2	6	7.2	6.9
		Potassium, Dissolved	1.3	1.5	1.4	1.4
		Sodium, Dissolved	5.7	5.9	6.2	6.1
		Sulfate	4.8	4.5	5.1	4.7
		Total Dissolved Solids (TDS)	100	110	110	110
	Metals (mg/L)	Arsenic, Dissolved	0.00344	0.0033	0.0036	0.0040
		Barium, Dissolved	0.0037	0.0034	0.003	0.0049
		Iron, Dissolved	0.091	0.093	0.12	0.14
		Manganese, Dissolved	1	0.99	1.2	1.3
		Zinc, Dissolved	0.0061			
	VOC (ug/L)	Trichloroethene	1.4	1.4	1.4	1.4
		Vinyl chloride			0.043	0.073

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11
MW-20	Field Parameter	Dissolved Oxygen	3.97	3.15	0.5	0.34
		eH	388	371	320	103
		pH	6.06	6.43	6.44	6.49
		Specific Conductivity	0.247	0.362	0.359	0.370
		TEMPERATURE	14.9	15.3	16.0	14.9
		Turbidity	0.99	1.51	2.20	0.37
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO3)	90	150	150	150
		Alkalinity, Total (As CaCO3)	90	150	150	150
		Ammonia (As N)	0.063	0.031	0.05	0.039
		Calcium, Dissolved	25	36	35	31
		Chloride	9.7	12	17	15
		Magnesium, Dissolved	13	19	20	17
		Nitrate (As N)	5.1	7.9	6.2	3.8
		Potassium, Dissolved	3.2	4.4	4.2	3.6
		Sodium, Dissolved	9.1	12	12	11
		Sulfate	12	14	14	13
	Total Dissolved Solids (TDS)	180	250	240	220	
	Metals (mg/L)	Arsenic, Dissolved	0.0001	0.0001	0.00028	0.0003
		Barium, Dissolved	0.013	0.019	0.014	0.012
		Manganese, Dissolved			0.013	0.039
	VOC (ug/L)	Vinyl chloride			0.024	0.058

(J) result is an estimate, or elevated reporting limit

(B) blank contamination

Blank cell parameter not detected above the reporting limit, or not analyzed

**Table 4. 2011 Groundwater, Leachate Influent (L-INF) and Leak Detection (LP-LCD) Analytical Results and Field Parameters, OVSL**

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11
MW-23A	Field Parameter	Dissolved Oxygen	0.16	0.39	0.08	0.13
		eH	87	73.8	202	65
		pH	6.19	6.62	6.21	6.26
		Specific Conductivity	0.173	0.144	0.180	0.248
		TEMPERATURE	13.4	14.4	14.2	12.6
		Turbidity		12.10	11.20	14.72
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO3)	98	85	100	130
		Alkalinity, Total (As CaCO3)	98	85	100	130
		Ammonia (As N)	0.079	0.098	0.15	0.046
		Calcium, Dissolved	21	17	19	25
		Chloride	4.1	3.7	4.3	3.4
		Magnesium, Dissolved	9.2	7.7	8.3	11
		Potassium, Dissolved	1.1	1.1	1.1	1.2
		Sodium, Dissolved	6.5	6.1	6.1	7.1
		Sulfate	4.8	4.3	4.8	5.7
		Total Dissolved Solids (TDS)	130	130	140	140
	Metals (mg/L)	Arsenic, Dissolved	0.00016	0.00026	0.00041	0.0002
		Barium, Dissolved	0.011	0.0059	0.0084	0.016
		Iron, Dissolved	0.3	0.41	0.7	0.54
		Manganese, Dissolved	0.77	1.6	2	1.7
		Zinc, Dissolved	0.005			0.0094
	VOC (ug/L)	Vinyl chloride				0.032

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11
MW-24	Field Parameter	Dissolved Oxygen	0.18	0.29	0.08	0.43
		eH	264	266	291	120
		pH	6.34	6.48	6.26	6.27
		Specific Conductivity	0.122	0.107	0.137	0.171
		TEMPERATURE	12.2	12.5	12.2	11.8
		Turbidity	4.24	51.00	4.08	14.30
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO3)	69	59	71	87
		Alkalinity, Total (As CaCO3)	69	59	71	87
		Ammonia (As N)	0.073		0.074	0.037
		Calcium, Dissolved	12	11	13	14
		Chloride	3.6	3.9 J	4.6	4.4
		Magnesium, Dissolved	7.2	6.9	7.8	8.1
		Nitrate (As N)	0.085		0.07	
		Sodium, Dissolved	4.6	4.6	5.2	5.2
		Sulfate	3.9	3.4 J	3.6	4.4
		Total Dissolved Solids (TDS)	99	85	96	110
	Metals (mg/L)	Arsenic, Dissolved	0.0005	0.0005	0.00042	0.00042
		Barium, Dissolved	0.0032	0.0024	0.0026	0.0032
		Iron, Dissolved	0.071			0.065
		Manganese, Dissolved	1.4	1.1	1.3	1.7

(J) result is an estimate, or elevated reporting limit

(B) blank contamination

Blank cell parameter not detected above the reporting limit, or not analyzed

**Table 4. 2011 Groundwater, Leachate Influent (L-INF) and Leak Detection (LP-LCD) Analytical Results and Field Parameters, OVSL**

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11
MW-29A (monitored semi-annually)	Field Parameter	Dissolved Oxygen	0.21		0.12	
		eH	215		203	
		pH	6.18		6.04	
		Specific Conductivity	0.083		0.078	
		TEMPERATURE	6.9		10.3	
		Turbidity	4.26		4.09	
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO3)	43		38	
		Alkalinity, Total (As CaCO3)	43		38	
		Ammonia (As N)	0.14		0.13	
		Calcium, Dissolved	7.2		5.9	
		Chloride	2.9		2.8	
		Magnesium, Dissolved	3.8		3	
		Sodium, Dissolved	2.7		3	
		Sulfate			1.1	
		Total Dissolved Solids (TDS)	54		54	
		Total Organic Carbon (TOC)	1.4		1.5	
	Metals (mg/L)	Arsenic, Dissolved	0.00156		0.00199	
		Barium, Dissolved	0.011		0.012	
		Cobalt, Dissolved	0.0031			
		Iron, Dissolved	4.2		3.3	
Manganese, Dissolved		1.4		1.2		

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11
MW-2B1	Field Parameter	Dissolved Oxygen	0.17	0.13	0.14	0.1
		eH	99	248	191	72
		pH	6.28	6.48	6.29	6.23
		Specific Conductivity	0.314	0.285	0.288	0.261
		TEMPERATURE	13.4	13.3	13.7	12.2
		Turbidity		3.28	1.10	2.76
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO3)	180	160	150	130
		Alkalinity, Total (As CaCO3)	180	160	150	130
		Ammonia (As N)	3.3	2.8 J	2.9	1
		Calcium, Dissolved	30	28	28	25
		Chloride	5.3	12 J	13	7.4
		Magnesium, Dissolved	9.1	9.2	9.1	9.1
		Nitrate (as N)		0.2	0.58	0.48
		Potassium, Dissolved	3.1	2.9	3	2.1
		Sodium, Dissolved	23	27	19	13
		Sulfate	4.9	11 J	7.9	6.6
		Total Dissolved Solids (TDS)	190	190	180	160
		Total Organic Carbon (TOC)	1.1	1.2		
		Metals (mg/L)	Arsenic, Dissolved	0.00088	0.001	0.001
	Barium, Dissolved		0.018	0.017	0.018	0.011
	Iron, Dissolved			0.68	1	0.13
	Manganese, Dissolved		3.1	3	3.4 J	2.6
	Zinc, Dissolved					0.065
	VOC (ug/L)		Vinyl chloride		0.039	0.037

(J) result is an estimate, or elevated reporting limit

(B) blank contamination

Blank cell parameter not detected above the reporting limit, or not analyzed

**Table 4. 2011 Groundwater, Leachate Influent (L-INF) and Leak Detection (LP-LCD) Analytical Results and Field Parameters, OVSL**

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11
MW-32	Field Parameter	Dissolved Oxygen	0.13	0.24	0.14	0.13
		eH	-17	30.1	-27.1	-10
		pH	6.64	7.25	6.71	6.73
		Specific Conductivity	0.253	0.227	0.170	0.295
		TEMPERATURE	11.7	12.2	12.8	12.1
		Turbidity	3.00	4.00	1.33	1.57
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO3)	130	140	130	130
		Alkalinity, Total (As CaCO3)	130	140	130	130
		Ammonia (As N)	0.08	0.049	0.067	0.047
		Calcium, Dissolved	25	23	25	25
		Chloride	7.8	7.1	12	11
		Magnesium, Dissolved	13	12	13	12
		Potassium, Dissolved	1	1.1	1.1	1
		Sodium, Dissolved	13	16	15	15
		Sulfate	13	12	16	16
		Total Dissolved Solids (TDS)	200	190	210	200
		Total Organic Carbon (TOC)			1.2	1.1
	Metals (mg/L)	Arsenic, Dissolved	0.0104	0.0099	0.0099	0.0099
		Barium, Dissolved	0.0059	0.0051	0.0053	0.0048
		Iron, Dissolved	0.66	0.62	0.63	0.62
		Manganese, Dissolved	2.2	2	2.1	2.2
VOC (ug/L)	Vinyl chloride	0.3	0.21	0.32	0.38	

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11
MW-33A (monitored semi-annually)	Field Parameter	Dissolved Oxygen	0.51		0.41	
		eH	140		224	
		pH	6.51		6.99	
		Specific Conductivity	0.113		0.124	
		TEMPERATURE	8.4		9.7	
		Turbidity	3.37		2.69	
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO3)	62		66	
		Alkalinity, Total (As CaCO3)	62		66	
		Ammonia (As N)	0.12		0.21	
		Calcium, Dissolved	14		13	
		Chloride	3.5		4.1	
		Magnesium, Dissolved	6.4		6.2	
		Nitrate (As N)	0.051		0.057	
		Sodium, Dissolved	4		3.8	
		Sulfate	3.7		4.4	
		Total Dissolved Solids (TDS)	93		91	
		Metals (mg/L)	Arsenic, Dissolved	0.00015		0.00015
	Barium, Dissolved		0.0014		0.0011	
	Iron, Dissolved		0.55		0.078	
	Manganese, Dissolved		0.022		0.0044	

(J) result is an estimate, or elevated reporting limit

(B) blank contamination

Blank cell parameter not detected above the reporting limit, or not analyzed



**Table 4. 2011 Groundwater, Leachate Influent (L-INF) and Leak Detection (LP-LCD) Analytical Results and Field Parameters, OVSL**

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11
MW-33C	Field Parameter	Dissolved Oxygen	0.35	0.62	0.14	0.71
		eH	92	111	8.3	-87
		pH	7.77	7.97	7.74	7.42
		Specific Conductivity	0.139	0.129	0.135	0.151
		TEMPERATURE	8.7	9.4	9.4	8.3
		Turbidity	0.95	4.28	0.76	1.52
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO <sub>3</sub> )	69	75	70	69
		Alkalinity, Total (As CaCO <sub>3</sub> )	69	75	70	69
		Ammonia (As N)	0.059	0.062 J	0.087	
		Calcium, Dissolved	17	16	17	16
		Chloride	3.9	3.7 J	4.3	2.9
		Magnesium, Dissolved	6.9	7.2	7	6.8
		Potassium, Dissolved	1.4	1.2	1.4	1.2
		Sodium, Dissolved	4.7	4.5	4.3	4.1
		Sulfate	8.2	8.4 J	8.9	8.2
		Total Dissolved Solids (TDS)	110	95	100	100
	Metals (mg/L)	Arsenic, Dissolved	0.00259	0.00257	0.0025	0.0026
		Barium, Dissolved	0.004	0.0039	0.004	0.0046
		Manganese, Dissolved	0.14	0.13	0.15 J	0.14

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11
MW-34A	Field Parameter	Dissolved Oxygen	7.53	3.97	2.37	0.9
		eH	172	133	-29.6	139
		pH	6.14	6.18	6.41	6.32
		Specific Conductivity	0.131	0.125	0.147	0.177
		TEMPERATURE	10.9	11.5	12.0	11.2
		Turbidity	0.18	0.13	0.10	0.55
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO <sub>3</sub> )	85	75	99	78
		Alkalinity, Total (As CaCO <sub>3</sub> )	85	75	99	78
		Ammonia (As N)	0.065	0.051	0.033	0.041
		Calcium, Dissolved	14	13	16	14
		Chloride	5.2	3.7	5.4	5.9
		Magnesium, Dissolved	6.7	6.6	8.7	7
		Nitrate (As N)	0.53	0.52	0.57	0.29
		Sodium, Dissolved	8.4	8.9	9.5	8.5
		Sulfate	2.4	2.1	1.9	3.3
		Total Dissolved Solids (TDS)	130	120	140	120
	Metals (mg/L)	Arsenic, Dissolved	0.00043	0.00047	0.00052	0.0005
		Barium, Dissolved	0.0054	0.0042	0.0044	0.0041
		Chromium, Dissolved	0.0077	0.0079	0.0068	0.0054
		Nickel, Dissolved	0.0048			
Vanadium, Dissolved		0.0045	0.0053	0.0052	0.0048	

(J) result is an estimate, or elevated reporting limit

(B) blank contamination

Blank cell parameter not detected above the reporting limit, or not analyzed

**Table 4. 2011 Groundwater, Leachate Influent (L-INF) and Leak Detection (LP-LCD) Analytical Results and Field Parameters, OVSL**

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11
MW-34C	Field Parameter	Dissolved Oxygen	0.24	0.2	0.88	0.14
		eH	12	39.2	-21.2	-13
		pH	6.48	7.02	6.55	6.60
		Specific Conductivity	0.257	0.277	0.179	0.306
		TEMPERATURE	11.9	12.5	12.9	11.8
		Turbidity	7.46	6.90	196.00	52.70
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO3)	170	170	160	150
		Alkalinity, Total (As CaCO3)	170	170	160	150
		Ammonia (As N)	0.14	0.042	0.16	0.083
		Calcium, Dissolved	32	32	30	29
		Chloride	8.7	7.1	12	6
		Magnesium, Dissolved	15	14	14	12
		Potassium, Dissolved	1.2	1.3	1.2	1.1
		Sodium, Dissolved	17	18	17	16
		Sulfate	6.3	5.6	5.8	5.7
		Total Dissolved Solids (TDS)	240	230	220	210
		Total Organic Carbon (TOC)	2	1.5	2.1	2
	Metals (mg/L)	Arsenic, Dissolved	0.0013	0.0011	0.0014	0.0012
		Barium, Dissolved	0.014	0.014	0.011	0.011
		Iron, Dissolved	1	1	0.91	0.77
		Manganese, Dissolved	0.8	0.77	0.68	0.76
	VOC (ug/L)	Vinyl chloride	0.14	0.11	0.15	0.12

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11
MW-35	Field Parameter	Dissolved Oxygen	10.24	7.03	4.56	4.42
		eH	-33	293	303	133
		pH	7.37	7.23	6.86	7.00
		Specific Conductivity	0.132	0.123	0.131	0.148
		TEMPERATURE	9.7	10.2	10.1	9.4
		Turbidity		0.48	0.37	1.04
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO3)	77	76	78	77
		Alkalinity, Total (As CaCO3)	77	76	78	77
		Ammonia (As N)	0.063	0.18 J	0.065	
		Calcium, Dissolved	14	13	14	14
		Chloride	3.2	2.3 J	3	3.2
		Magnesium, Dissolved	8.8	9	8.7	8.8
		Nitrate (As N)	0.39	0.39	0.4	0.39
		Sodium, Dissolved	4.9	5.1	5.2	5.1
		Sulfate	2.6	2.5 J	2.6	2.5
		Total Dissolved Solids (TDS)	91	96	100	95
		Metals (mg/L)	Arsenic, Dissolved	0.00013	0.00013	0.00013
	Barium, Dissolved		0.0033	0.0034	0.003	
	Manganese, Dissolved				0.001 J	
	Vanadium, Dissolved		0.0046	0.0044	0.0045	

(J) result is an estimate, or elevated reporting limit

(B) blank contamination

Blank cell parameter not detected above the reporting limit, or not analyzed

**Table 4. 2011 Groundwater, Leachate Influent (L-INF) and Leak Detection (LP-LCD) Analytical Results and Field Parameters, OVSL**

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11	
MW-36A	Field Parameter	Dissolved Oxygen	10.33	1.47	6.88	1.16	
		eH	137	139	-38	151	
		pH	7.19	6.12	7.32	6.25	
		Specific Conductivity	0.114	0.131	0.116	0.137	
		TEMPERATURE	9.2	9.4	9.5	9.0	
		Turbidity	0.16	3.48	0.22	1.23	
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO3)	75	69	79	64	
		Alkalinity, Total (As CaCO3)	75	69	79	64	
		Ammonia (As N)	0.069	0.077	0.035		
		Calcium, Dissolved	17	12	16	11	
		Chloride	3.4	2.9	4	2.9	
		Magnesium, Dissolved	7.9	6.4	7.7	6	
		Nitrate (As N)	0.6	0.89	0.63	0.8	
		Potassium, Dissolved		1.3			
		Sodium, Dissolved	5.4	11	5.1	6.6	
		Sulfate	1.7	7.2	4	3.4	
		Total Dissolved Solids (TDS)	96	130	97	95	
		Metals (mg/L)	Arsenic, Dissolved	0.00096	0.0007	0.00094	0.0007
			Barium, Dissolved	0.0025	0.0026	0.003	0.0036
	Chromium, Dissolved			0.01		0.008	
	Manganese, Dissolved			0.0038		0.0025	
	Selenium, Dissolved			0.0012			
	Vanadium, Dissolved		0.0048	0.0032	0.0045	0.0025	

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11	
MW-39	Field Parameter	Dissolved Oxygen	1.4	0.29	0.18	0.3	
		eH	196	120	133	32	
		pH	6.00	6.33	6.02	5.86	
		Specific Conductivity	0.143	0.207	0.222	0.168	
		TEMPERATURE	9.4	9.6	10.7	10.9	
		Turbidity	4.99	4.88	4.40	2.92	
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO3)	81	96	93	88	
		Alkalinity, Total (As CaCO3)	81	96	93	88	
		Ammonia (As N)	0.21	0.33 J	0.43	0.25	
		Calcium, Dissolved	11	12	11	11	
		Chloride	3.3	4 J	5.6	3.9	
		Magnesium, Dissolved	5.8	7.5	7	6.1	
		Nitrate (As N)	0.2			0.15	
		Sodium, Dissolved	5.8	8.2	8	7	
		Sulfate	1.1				
		Total Dissolved Solids (TDS)	87	120	110	100	
		Total Organic Carbon (TOC)	1.2	2.8	2.5	1.8	
		Metals (mg/L)	Arsenic, Dissolved	0.00046	0.0021	0.00171	0.00065
			Barium, Dissolved	0.01	0.012	0.01	0.012
	Cobalt, Dissolved		0.0036	0.0074	0.0064	0.0052	
	Iron, Dissolved		13	36	32	16	
	Manganese, Dissolved		0.21	0.45	0.44	0.41	

(J) result is an estimate, or elevated reporting limit

(B) blank contamination

Blank cell parameter not detected above the reporting limit, or not analyzed

**Table 4. 2011 Groundwater, Leachate Influent (L-INF) and Leak Detection (LP-LCD) Analytical Results and Field Parameters, OVSL**

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11
MW-4	Field Parameter	Dissolved Oxygen	0.46	0.54	0.54	0.16
		eH	273	75.5	274	133
		pH	6.47	6.87	6.34	6.53
		Specific Conductivity	0.112	0.112	0.115	0.128
		TEMPERATURE	8.9	9.5	9.6	9.3
		Turbidity	0.31	0.53	1.78	1.34
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO <sub>3</sub> )	58	64	66	61
		Alkalinity, Total (As CaCO <sub>3</sub> )	58	64	66	61
		Ammonia (As N)	0.047	0.22	0.11	0.04
		Calcium, Dissolved	11	11	12	11
		Chloride	2.7	3.3	2.9	3
		Magnesium, Dissolved	5.7	5.8	6	5.3
		Sodium, Dissolved	6.6	6.5	6.4	6
		Sulfate	4.6	4.6	4.5	4
		Total Dissolved Solids (TDS)	98	100	100	88
		Metals (mg/L)	Arsenic, Dissolved	0.00051	0.00083	0.00143
	Barium, Dissolved		0.0022	0.0024	0.0023	0.0026
	Manganese, Dissolved		0.41	1.1	1.2 J	0.74
	VOC (ug/L)	Vinyl chloride	0.042	0.081	0.13	0.04

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11
MW-42	Field Parameter	Dissolved Oxygen	0.5	0.78	0.19	0.13
		eH	131	159	119	-78
		pH	6.38	6.55	6.34	6.42
		Specific Conductivity	0.488	0.536	0.464	0.572
		TEMPERATURE	11.7	12.6	12.4	12.2
		Turbidity	1.66	3.46	4.88	1.57
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO <sub>3</sub> )	250	240	200	230
		Alkalinity, Total (As CaCO <sub>3</sub> )	250	240	200	230
		Ammonia (As N)	5.5	4.8	5.1	3.6
		Calcium, Dissolved	37	40	34	38
		Chloride	15	19	21	22
		Magnesium, Dissolved	16	18	15	16
		Potassium, Dissolved	7	6.9	6	6.5
		Sodium, Dissolved	24	26	21	22
		Sulfate	12	19	16	17
		Total Dissolved Solids (TDS)	260	300	250	270
		Total Organic Carbon (TOC)	7.7	7.1	6.1	7.1
		Metals (mg/L)	Arsenic, Dissolved	0.0016	0.0013	0.0016
	Barium, Dissolved		0.13	0.13	0.1	0.12
	Cobalt, Dissolved		0.0034			0.0031
	Iron, Dissolved		26	27	21	25
	Manganese, Dissolved		4.8	5.2	4.7	5.4
	VOC (ug/L)	Vinyl chloride		0.03	0.11	0.048

(J) result is an estimate, or elevated reporting limit

(B) blank contamination

Blank cell parameter not detected above the reporting limit, or not analyzed

**Table 4. 2011 Groundwater, Leachate Influent (L-INF) and Leak Detection (LP-LCD) Analytical Results and Field Parameters, OVSL**

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11
MW-43	Field Parameter	Dissolved Oxygen	5.03	1.84	1.22	1.46
		eH	365	320	455	90
		pH	5.85	6.05	5.50	5.77
		Specific Conductivity	0.041	0.051	0.044	0.063
		TEMPERATURE	7.0	8.1	9.5	10.1
		Turbidity	1.74	3.11	3.32	3.51
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO3)	16	21	18	22
		Alkalinity, Total (As CaCO3)	16	21	18	22
		Ammonia (As N)	0.12	0.14	0.18	0.12
		Calcium, Dissolved	3.9	4.1	3.9	4.6
		Chloride	1.5	2.5	3.7	2.8
		Magnesium, Dissolved	1.5	1.6	1.5	1.8
		Nitrate (As N)	0.29	0.37	0.29	0.79
		Sodium, Dissolved	2.5	2.6	2.4	2.9
		Sulfate	2.1	1.8	1.8	2
		Total Dissolved Solids (TDS)	30	40	28	45
		Total Organic Carbon (TOC)	1.2			1.3
		Metals (mg/L)	Arsenic, Dissolved			
	Barium, Dissolved		0.0031	0.0039	0.0036	0.0053
	Iron, Dissolved			0.29	0.15	0.6
Manganese, Dissolved	0.15		0.22	0.017	0.37	

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11	
MW-9 (monitored semi-annually)	Field Parameter	Dissolved Oxygen	0.27		0.18		
		eH	173		208		
		pH	6.68		6.30		
		Specific Conductivity	0.071		0.071		
		TEMPERATURE	8.5		10.0		
		Turbidity	4.20		1.33		
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (As CaCO3)	35		36		
		Alkalinity, Total (As CaCO3)	35		36		
		Ammonia (As N)	0.059		0.084		
		Calcium, Dissolved	7		6.4		
		Chloride	3.2		4.8		
		Magnesium, Dissolved	3.6		3.3		
		Sodium, Dissolved	3.7		3.4		
		Sulfate	3.2		1.6		
		Total Dissolved Solids (TDS)	71		68		
		Total Organic Carbon (TOC)			1		
		Metals (mg/L)	Arsenic, Dissolved	0.00041		0.00041	
			Barium, Dissolved	0.0023		0.002	
	Iron, Dissolved		0.45		0.48		
	Manganese, Dissolved		0.035		0.041		

(J) result is an estimate, or elevated reporting limit

(B) blank contamination

Blank cell parameter not detected above the reporting limit, or not analyzed

**Table 4. 2011 Groundwater, Leachate Influent (L-INF) and Leak Detection (LP-LCD) Analytical Results and Field Parameters, OVSL**

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11
LP-LCD (insufficient water Mar-11)	Field Parameter	Dissolved Oxygen (mg/L)		3.7	10.5	9.6
		eH (mV)		41	NM	-13.4
		pH (units)		7.31	6.84	7.16
		Specific Conductivity (uS)		4.489	0.074	3.641
		TEMPERATURE ddegrees C)		9.4	28.9	10.2
		Turbidity (ntu)				
	General Chemistry (mg/L)	Alkalinity, Bicarbonate (as CaCO3)		820	860	950
		Alkalinity, Total (as CaCO3)		820	860	950
		Ammonia (As N)		14	8	5.8
		Calcium, Dissolved		46		
		Calcium, Total			49	54
		Chloride		1000	1000	750
		Sulfate		300	280	200
		Total Dissolved Solids (TDS)		3000	2900	2600
		Magnesium, Dissolved		26		
		Magnesium, Total			28	33
		Sodium, Dissolved		880		
		Sodium, Total			1100	950
		Potassium, Dissolved		60		
		Potassium, Total			72	68
	Total Organic Carbon (TOC)		84	95	62	
	Metals (mg/L)	Iron, Dissolved		0.11		
		Iron, Total			1.7	2.5
Manganese, Dissolved			1.3			
Manganese, Total				1.4	1.6	

Location	Class	Parameter	Mar-11	Jun-11	Sep-11	Dec-11	
L-INF (monitored annually)	Field Parameter	Dissolved Oxygen (mg/L)		1.07			
		eH (mV)		91			
		pH (units)		6.94			
		Specific Conductivity (uS)		3.750			
		TEMPERATURE ddegrees C)		14.0			
		Turbidity (ntu)					
		General Chemistry (mg/L)	Ammonia (As N)		150		
	Alkalinity, Bicarbonate (As CaCO3)			1300			
	Alkalinity, Total (As CaCO3)			1300			
	Calcium, Dissolved			88			
	Calcium, Total			130			
	Chloride			530			
	Coliform, Total			TNTC			
	Manganese, Dissolved			1.6			
	Manganese, Total			2.6			
	Potassium, Dissolved			77			
	Potassium, Total			100			
	Sodium, Dissolved			520			
	Sodium, Total			820			
	Sulfate			160			
	Total Dissolved Solids (TDS)			2000			
	Total Organic Carbon (TOC)			87			
	Biochemical Oxygen Demand			19			
	Chemical Oxygen Demand (COD)			260			
	Metals (mg/L)		Arsenic, Total		0.0079		
			Barium, Dissolved		0.17		
		Barium, Total		0.3			
		Chromium, Total		0.014			
		Cobalt, Dissolved		0.0074			
		Cobalt, Total		0.012			
		Iron, Dissolved		2.6			
		Magnesium, Dissolved		47			
		Iron, Total		4			
		Magnesium, Total		78			
		Nickel, Dissolved		0.058			
		Nickel, Total		0.091			
		Vanadium, Total		0.016			
		VOCs (µg/L)	Butyl alcohol, tert-		270		
	Tetrahydrofuran			89			
	Vinyl chloride			0.54			

(J) result is an estimate, or elevated reporting limit

(B) blank contamination

Blank cell parameter not detected above the reporting limit, or not analyzed

**Table 5. 2011 Groundwater and Leachate Influent (L-INF) Volatile Organic Compound (ug/L) Detections, OVSL**

Parameter	Sample Location	Event	Result
Butyl alcohol, tert-	L-INF	Jun-11	270
Tetrahydrofuran	L-INF	Jun-11	89
Trichloroethene	MW-19C	Mar-11	1.4
	MW-19C	Jun-11	1.4
	MW-19C	Sep-11	1.4
	MW-19C	Dec-11	1.4
Vinyl chloride	L-INF	Jun-11	0.54
	MW-13A	Mar-11	0.037
	MW-13B	Dec-11	0.02
	MW-15R	Mar-11	0.03
		Jun-11	0.043
		Sep-11	0.041
		Dec-11	0.046
	MW-19C	Sep-11	0.043
		Dec-11	0.073
	MW-20	Sep-11	0.024
		Dec-11	0.058
	MW-23A	Dec-11	0.032
	MW-2B1	Jun-11	0.039
		Sep-11	0.037
	MW-32	Mar-11	0.3
		Jun-11	0.21
		Sep-11	0.32
		Dec-11	0.38
	MW-34C	Mar-11	0.14
		Jun-11	0.11
		Sep-11	0.15
		Dec-11	0.12
	MW-4	Mar-11	0.042
		Jun-11	0.081
		Sep-11	0.13
		Dec-11	0.04
	MW-42	Jun-11	0.03
Sep-11		0.11	
Dec-11		0.048	

**Table 6. 2011 MTCA Parameter Exceedances in Groundwater for Compliance and Downgradient Wells, OVSL**

Monitoring Well	Monitoring Well Type	Corrective Action Monitoring Parameter	95% UCL of Mean <sup>[3]</sup>	Note	Groundwater Cleanup Level <sup>[5]</sup>	Units <sup>[4]</sup>	Does 95% UCL Exceed Cleanup Level?	Significant Trend? <sup>[6]</sup>
MW-15R	Compliance	1,1-Dichloroethane	0.75	B	50	ug/L	No	No
MW-15R	Compliance	1,4-Dichlorobenzene	0.84	B	2.0	ug/L	No	No
MW-15R	Compliance	Arsenic, dissolved	0.24	LN	0.462	ug/L	No	No
MW-15R	Compliance	Iron, dissolved	0.06	B	0.30	mg/L	No	No
MW-15R	Compliance	Manganese, dissolved	0.004	LN	0.05	mg/L	No	Yes (▼)
MW-15R	Compliance	cis-1,2-dichloroethene	0.81	B	35	ug/L	No	No
MW-15R	Compliance	Ethyl ether	0.72	B	50	ug/L	No	No
MW-15R	Compliance	Trichloroethene	0.46	B	1.0	ug/L	No	No
MW-15R	Compliance	Vinyl Chloride	0.29	LN	0.20	ug/L	Yes	No
MW-15R	Compliance	Ammonia as N	0.06	LN	0.19	mg/L	No	No
MW-34A	Compliance	1,1-Dichloroethane	0.75	B	50	ug/L	No	No
MW-34A	Compliance	1,4-Dichlorobenzene	0.84	B	2.0	ug/L	No	No
MW-34A	Compliance	Arsenic, dissolved	0.485	Z	0.462	ug/L	Yes	No
MW-34A	Compliance	Iron, dissolved	0.06	B	0.30	mg/L	No	No
MW-34A	Compliance	Manganese, dissolved	0.0015	A	0.05	mg/L	No	No
MW-34A	Compliance	cis-1,2-dichloroethene	0.81	B	35	ug/L	No	No
MW-34A	Compliance	Ethyl ether	0.72	B	50	ug/L	No	No
MW-34A	Compliance	Trichloroethene	0.46	B	1.0	ug/L	No	No
MW-34A	Compliance	Vinyl Chloride	0.02	B	0.20	ug/L	No	No
MW-34A	Compliance	Ammonia as N	0.05	LN	0.19	mg/L	No	No
MW-34C	Compliance	1,1-Dichloroethane	0.75	B	50	ug/L	No	No
MW-34C	Compliance	1,4-Dichlorobenzene	0.84	B	2.0	ug/L	No	No
MW-34C	Compliance	Arsenic, dissolved	1.37	LN	0.462	ug/L	Yes	Yes (▼)
MW-34C	Compliance	Iron, dissolved	1.44	LN	0.30	mg/L	Yes	No
MW-34C	Compliance	Manganese, dissolved	0.97	LN	0.05	mg/L	Yes	No
MW-34C	Compliance	cis-1,2-dichloroethene	0.81	A*	35	ug/L	No	No
MW-34C	Compliance	Ethyl ether	0.72	A*	50	ug/L	No	No
MW-34C	Compliance	Trichloroethene	0.46	B	1.0	ug/L	No	No
MW-34C	Compliance	Vinyl Chloride	0.29	LN	0.20	ug/L	Yes	No
MW-34C	Compliance	Ammonia as N	0.12	LN	0.19	mg/L	No	No
MW-39	Compliance	1,1-Dichloroethane	0.75	B	50	ug/L	No	No
MW-39	Compliance	1,4-Dichlorobenzene	0.84	B	2.0	ug/L	No	No
MW-39	Compliance	Arsenic, dissolved	1.95	N	0.462	ug/L	Yes	No
MW-39	Compliance	Iron, dissolved	37.5	Z	0.30	mg/L	Yes	No
MW-39	Compliance	Manganese, dissolved	0.55	Z	0.05	mg/L	Yes	No
MW-39	Compliance	cis-1,2-dichloroethene	0.81	B	35	ug/L	No	No
MW-39	Compliance	Ethyl ether	0.72	B	50	ug/L	No	No
MW-39	Compliance	Trichloroethene	0.46	B	1.0	ug/L	No	No
MW-39	Compliance	Vinyl Chloride	0.02	B	0.20	ug/L	No	No
MW-39	Compliance	Ammonia as N	0.41	N	0.19	mg/L	Yes	No
MW-42	Compliance	1,1-Dichloroethane	0.75	B	50	ug/L	No	No
MW-42	Compliance	1,4-Dichlorobenzene	0.84	A*	2.0	ug/L	No	No
MW-42	Compliance	Arsenic, dissolved	1.60	Z	0.462	ug/L	Yes	No
MW-42	Compliance	Iron, dissolved	26.3	Z	0.30	mg/L	Yes	No
MW-42	Compliance	Manganese, dissolved	5.22	LN	0.05	mg/L	Yes	No
MW-42	Compliance	cis-1,2-dichloroethene	0.81	A*	35	ug/L	No	No
MW-42	Compliance	Ethyl ether	0.72	B	50	ug/L	No	No
MW-42	Compliance	Trichloroethene	0.51	A	1.0	ug/L	No	No
MW-42	Compliance	Vinyl Chloride	0.35	LN	0.20	ug/L	Yes	No
MW-42	Compliance	Ammonia as N	6.57	LN	0.19	mg/L	Yes	No



**Table 6. 2011 MTCA Parameter Exceedances in Groundwater for Compliance and Downgradient Wells, OVSL**

Monitoring Well	Monitoring Well Type	Corrective Action Monitoring Parameter	95% UCL of Mean <sup>[3]</sup>	Note	Groundwater Cleanup Level <sup>[5]</sup>	Units <sup>[4]</sup>	Does 95% UCL Exceed Cleanup Level?	Significant Trend? <sup>[6]</sup>
MW-43	Compliance	1,1-Dichloroethane	0.75	B	50	ug/L	No	No
MW-43	Compliance	1,4-Dichlorobenzene	0.84	B	2.0	ug/L	No	No
MW-43	Compliance	Arsenic, dissolved	0.12	A	0.462	ug/L	No	No
MW-43	Compliance	Iron, dissolved	2.0	A**	0.30	mg/L	Yes	No
MW-43	Compliance	Manganese, dissolved	0.31	Z	0.05	mg/L	Yes	No
MW-43	Compliance	cis-1,2-dichloroethene	0.81	B	35	ug/L	No	No
MW-43	Compliance	Ethyl ether	0.72	B	50	ug/L	No	No
MW-43	Compliance	Trichloroethene	0.46	B	1.0	ug/L	No	No
MW-43	Compliance	Vinyl Chloride	0.02	B	0.20	ug/L	No	No
MW-43	Compliance	Ammonia as N	0.24	LN	0.19	mg/L	Yes	No
MW-9	Downgradient	1,1-Dichloroethane	0.75	B	50	ug/L	No	No
MW-9	Downgradient	1,4-Dichlorobenzene	0.84	B	2.0	ug/L	No	No
MW-9	Downgradient	Arsenic, dissolved	0.427	Z	0.462	ug/L	No	No
MW-9	Downgradient	Iron, dissolved	0.51	Z	0.30	mg/L	Yes	Yes (▼)
MW-9	Downgradient	Manganese, dissolved	0.04	LN	0.05	mg/L	No	No
MW-9	Downgradient	cis-1,2-dichloroethene	0.81	B	35	ug/L	No	No
MW-9	Downgradient	Ethyl ether	0.72	B	50	ug/L	No	No
MW-9	Downgradient	Trichloroethene	0.46	B	1.0	ug/L	No	No
MW-9	Downgradient	Vinyl Chloride	0.02	B	0.20	ug/L	No	No
MW-9	Downgradient	Ammonia as N	0.07	N	0.19	mg/L	No	No
MW-29A	Downgradient	1,1-Dichloroethane	0.75	B	50	ug/L	No	No
MW-29A	Downgradient	1,4-Dichlorobenzene	0.84	B	2.0	ug/L	No	No
MW-29A	Downgradient	Arsenic, dissolved	1.90	LN	0.462	ug/L	Yes	No
MW-29A	Downgradient	Iron, dissolved	4.52	LN	0.30	mg/L	Yes	No
MW-29A	Downgradient	Manganese, dissolved	1.45	LN	0.05	mg/L	Yes	No
MW-29A	Downgradient	cis-1,2-dichloroethene	0.81	B	35	ug/L	No	No
MW-29A	Downgradient	Ethyl ether	0.72	B	50	ug/L	No	No
MW-29A	Downgradient	Trichloroethene	0.46	B	1.0	ug/L	No	No
MW-29A	Downgradient	Vinyl Chloride	0.02	B	0.20	ug/L	No	No
MW-29A	Downgradient	Ammonia as N	0.13	LN	0.19	mg/L	No	No
MW-32	Downgradient	1,1-Dichloroethane	0.75	B	50	ug/L	No	No
MW-32	Downgradient	1,4-Dichlorobenzene	0.84	B	2.0	ug/L	No	No
MW-32	Downgradient	Arsenic, dissolved	10.4	Z	0.462	ug/L	Yes	No
MW-32	Downgradient	Iron, dissolved	0.77	LN	0.30	mg/L	Yes	Yes (▼)
MW-32	Downgradient	Manganese, dissolved	2.47	Z	0.05	mg/L	Yes	No
MW-32	Downgradient	cis-1,2-dichloroethene	0.81	A*	35	ug/L	No	No
MW-32	Downgradient	Ethyl ether	0.72	B	50	ug/L	No	No
MW-32	Downgradient	Trichloroethene	0.62	A	1.0	ug/L	No	No
MW-32	Downgradient	Vinyl Chloride	0.41	LN	0.20	ug/L	Yes	Yes (▼)
MW-32	Downgradient	Ammonia as N	0.09	LN	0.19	mg/L	No	No
MW-33A	Downgradient	1,1-Dichloroethane	0.75	B	50	ug/L	No	No
MW-33A	Downgradient	1,4-Dichlorobenzene	0.84	B	2.0	ug/L	No	No
MW-33A	Downgradient	Arsenic, dissolved	0.21	LN	0.462	ug/L	No	No
MW-33A	Downgradient	Iron, dissolved	1.1	N	0.30	mg/L	Yes	No
MW-33A	Downgradient	Manganese, dissolved	0.04	N	0.05	mg/L	No	No
MW-33A	Downgradient	cis-1,2-dichloroethene	0.81	B	35	ug/L	No	No
MW-33A	Downgradient	Ethyl ether	0.72	B	50	ug/L	No	No
MW-33A	Downgradient	Trichloroethene	0.46	B	1.0	ug/L	No	No
MW-33A	Downgradient	Vinyl Chloride	0.02	B	0.20	ug/L	No	No
MW-33A	Downgradient	Ammonia as N	0.21	A	0.19	mg/L	Yes	No

**Table 6. 2011 MTCA Parameter Exceedances in Groundwater for Compliance and Downgradient Wells, OVSL**

Monitoring Well	Monitoring Well Type	Corrective Action Monitoring Parameter	95% UCL of Mean <sup>[3]</sup>	Note	Groundwater Cleanup Level <sup>[5]</sup>	Units <sup>[4]</sup>	Does 95% UCL Exceed Cleanup Level?	Significant Trend? <sup>[6]</sup>
MW-33C	Downgradient	1,1-Dichloroethane	0.75	B	50	ug/L	No	No
MW-33C	Downgradient	1,4-Dichlorobenzene	0.84	B	2.0	ug/L	No	No
MW-33C	Downgradient	Arsenic, dissolved	2.61	LN	0.462	ug/L	Yes	No
MW-33C	Downgradient	Iron, dissolved	0.06	B	0.3	mg/L	No	No
MW-33C	Downgradient	Manganese, dissolved	0.14	Z	0.05	mg/L	Yes	No
MW-33C	Downgradient	cis-1,2-dichloroethene	0.81	B	35	ug/L	No	No
MW-33C	Downgradient	Ethyl ether	0.72	B	50	ug/L	No	No
MW-33C	Downgradient	Trichloroethene	0.46	B	1.0	ug/L	No	No
MW-33C	Downgradient	Vinyl Chloride	0.02	B	0.20	ug/L	No	No
MW-33C	Downgradient	Ammonia as N	0.11	LN	0.19	mg/L	No	No
MW-36A	Downgradient	1,1-Dichloroethane	0.75	B	50	ug/L	No	No
MW-36A	Downgradient	1,4-Dichlorobenzene	0.84	B	2.0	ug/L	No	No
MW-36A	Downgradient	Arsenic, dissolved	1.00	LN	0.462	ug/L	Yes	No
MW-36A	Downgradient	Iron, dissolved	0.06	B	0.3	mg/L	No	No
MW-36A	Downgradient	Manganese, dissolved	0.02	A	0.05	mg/L	No	No
MW-36A	Downgradient	cis-1,2-dichloroethene	0.81	B	35	ug/L	No	No
MW-36A	Downgradient	Ethyl ether	0.72	B	50	ug/L	No	No
MW-36A	Downgradient	Trichloroethene	0.46	B	1.0	ug/L	No	No
MW-36A	Downgradient	Vinyl Chloride	0.02	B	0.20	ug/L	No	No
MW-36A	Downgradient	Ammonia as N	0.12	LN	0.19	mg/L	No	No

**NOTES:**

<sup>[1]</sup> N = number of data points used for UCL calculation of the mean; only SIM results used for Vinyl Chloride (e.g., duplicate results with higher RLs by non-SIM were omitted)

<sup>[2]</sup> MAX = maximum detected result in the data set; if no detected results, then = maximum reporting limit for non-detect results (indicated with ND).

<sup>[3]</sup> A 3-year moving data set is used for calculation of the UCL.

<sup>[4]</sup> ug/L - micrograms per liter; mg/L = milligrams per liter.

<sup>[5]</sup> Groundwater Cleanup Levels are listed on Table 3 of the October 2010 Draft Cleanup Action Plan.

<sup>[6]</sup> Trend analysis results are based on data for the period January 2005 through December 2011; arrows indicated increasing (▲) or decreasing (▼) trends.

<sup>[7]</sup> The March 2009 non-detected results for Vinyl Chloride (<0.24 ug/L) were excluded from the UCL calculation due to erroneously high reporting limits; all other results are non-detects at <0.02 ug/L.

A = Detection frequency of data set too low to calculate 95% UCL of mean; therefore, the highest detected result in the data set used to represent 95% UCL of mean.

A\* = Same as note "A" except that the highest value in the data set is below the reporting limit of one or more non-detected results; therefore, the highest reporting limit is used to represent the 95% UCL of the mean.

A\*\* = MTCASat suggests use of lognormal formula but calculation of 95% UCL of mean by Land's formula provides unrealistic result; therefore, the highest detected result is used to represent the 95% UCL of the mean.

B = Detection frequency = 0; therefore, the highest reporting limit in the data set is used to represent the 95% UCL of mean.

LN = The 95% UCL of the mean is calculated using Land's formula since lognormal distribution is indicated.

N = The 95% UCL of the mean is calculated using a normal-based t-statistic since a normal distribution is indicated.

Z = the 95% UCL of the mean is calculated using the Z-score method in MTCASat since neither normal nor lognormal distribution can be determined.

N = The 95% UCL of the mean is calculated using a normal-based t-statistic since a normal distribution is indicated.

N\*\* = MTCASat suggests use of lognormal formula but calculation of 95% UCL of mean by Land's formula provides unrealistic result; therefore, a normal-based calculation is performed as described by note "N" in order to provide a meaningful UCL.

Z = the 95% UCL of the mean is calculated using the Z-score method in MTCASat since neither normal nor lognormal distribution can be determined.

**Table 7. 2011 WAC 173-200, Federal MCL, and MTCA Exceedances in Groundwater, OVSL**

Parameter	Well	Event	Result	WAC 173-200	Primary MCL	Secondary MCL	MTCA Cleanup Level
pH	MW-15R	Mar-11	6.35	1			1
		Jun-11	6.28	1			1
		Sep-11	6.46	1			1
	MW-16	Mar-11	6.31	1			1
		Jun-11	6.15	1			1
		Sep-11	6.44	1			1
		Dec-11	6.30	1			1
	MW-20	Mar-11	6.06	1			1
		Jun-11	6.43	1			1
		Sep-11	6.44	1			1
		Dec-11	6.49	1			1
	MW-23A	Mar-11	6.19	1			1
		Sep-11	6.21	1			1
		Dec-11	6.26	1			1
	MW-24	Mar-11	6.34	1			1
		Jun-11	6.48	1			1
		Sep-11	6.26	1			1
		Dec-11	6.27	1			1
	MW-29A	Mar-11	6.18	1			1
		Sep-11	6.04	1			1
	MW-281	Mar-11	6.28	1			1
		Jun-11	6.48	1			1
		Sep-11	6.29	1			1
		Dec-11	6.23	1			1
	MW-34A	Mar-11	6.14	1			1
		Jun-11	6.18	1			1
		Sep-11	6.41	1			1
		Dec-11	6.32	1			1
	MW-34C	Mar-11	6.48	1			1
	MW-36A	Jun-11	6.12	1			1
		Dec-11	6.25	1			1
	MW-39	Mar-11	6.00	1			1
		Jun-11	6.33	1			1
		Sep-11	6.02	1			1
		Dec-11	5.86	1			1
	MW-4	Mar-11	6.47	1			1
		Sep-11	6.34	1			1
	MW-42	Mar-11	6.38	1			1
		Sep-11	6.34	1			1
		Dec-11	6.42	1			1
	MW-43	Mar-11	5.85	1			1
		Jun-11	6.05	1			1
		Sep-11	5.50	1			1
		Dec-11	5.77	1			1
	MW-9	Sep-11	6.30	1			1

**Table 7. 2011 WAC 173-200, Federal MCL, and MTCA Exceedances in Groundwater, OVSL**

Parameter	Well	Event	Result	WAC 173-200	Primary MCL	Secondary MCL	MTCA Cleanup Level
Arsenic, Dissolved	MW-13A	Mar-11	0.00020	0.00005	0.01		0.000462
		Jun-11	0.00020	0.00005	0.01		0.000462
		Sep-11	0.00020	0.00005	0.01		0.000462
		Dec-11	0.00020	0.00005	0.01		0.000462
	MW-13B	Mar-11	0.00034	0.00005	0.01		0.000462
		Jun-11	0.00035	0.00005	0.01		0.000462
		Sep-11	0.00034	0.00005	0.01		0.000462
		Dec-11	0.00034	0.00005	0.01		0.000462
	MW-15R	Mar-11	0.00026	0.00005	0.01		0.000462
		Jun-11	0.00022	0.00005	0.01		0.000462
		Sep-11	0.00019	0.00005	0.01		0.000462
		Dec-11	0.00022	0.00005	0.01		0.000462
	MW-16	Mar-11	0.00033	0.00005	0.01		0.000462
		Jun-11	0.00034	0.00005	0.01		0.000462
		Sep-11	0.00032	0.00005	0.01		0.000462
		Dec-11	0.00032	0.00005	0.01		0.000462
	MW-19C	Mar-11	0.00344	0.00005	0.01		0.000462
		Jun-11	0.00330	0.00005	0.01		0.000462
		Sep-11	0.00360	0.00005	0.01		0.000462
		Dec-11	0.00400	0.00005	0.01		0.000462
	MW-20	Mar-11	0.00010	0.00005	0.01		0.000462
		Jun-11	0.00010	0.00005	0.01		0.000462
		Sep-11	0.00028	0.00005	0.01		0.000462
		Dec-11	0.00030	0.00005	0.01		0.000462
	MW-23A	Mar-11	0.00016	0.00005	0.01		0.000462
		Jun-11	0.00026	0.00005	0.01		0.000462
		Sep-11	0.00041	0.00005	0.01		0.000462
		Dec-11	0.00020	0.00005	0.01		0.000462
	MW-24	Mar-11	0.00050	0.00005	0.01		0.000462
		Jun-11	0.00050	0.00005	0.01		0.000462
		Sep-11	0.00042	0.00005	0.01		0.000462
		Dec-11	0.00042	0.00005	0.01		0.000462
	MW-29A	Mar-11	0.00156	0.00005	0.01		0.000462
		Sep-11	0.00199	0.00005	0.01		0.000462
	MW-281	Mar-11	0.00088	0.00005	0.01		0.000462
		Jun-11	0.00100	0.00005	0.01		0.000462
		Sep-11	0.00100	0.00005	0.01		0.000462
		Dec-11	0.00020	0.00005	0.01		0.000462
	MW-32	Mar-11	0.01040	0.00005	0.01		0.000462
		Jun-11	0.00990	0.00005	0.01		0.000462
		Sep-11	0.00990	0.00005	0.01		0.000462
		Dec-11	0.00990	0.00005	0.01		0.000462
	MW-33A	Mar-11	0.00015	0.00005	0.01		0.000462
		Sep-11	0.00015	0.00005	0.01		0.000462
	MW-33C	Mar-11	0.00259	0.00005	0.01		0.000462
		Jun-11	0.00257	0.00005	0.01		0.000462
		Sep-11	0.00250	0.00005	0.01		0.000462
		Dec-11	0.00260	0.00005	0.01		0.000462
	MW-34A	Mar-11	0.00043	0.00005	0.01		0.000462
		Jun-11	0.00047	0.00005	0.01		0.000462
		Sep-11	0.00052	0.00005	0.01		0.000462
		Dec-11	0.00050	0.00005	0.01		0.000462
	MW-34C	Mar-11	0.00130	0.00005	0.01		0.000462
		Jun-11	0.00110	0.00005	0.01		0.000462
		Sep-11	0.00140	0.00005	0.01		0.000462
		Dec-11	0.00120	0.00005	0.01		0.000462
	MW-35	Mar-11	0.00013	0.00005	0.01		0.000462
		Jun-11	0.00013	0.00005	0.01		0.000462
		Sep-11	0.00013	0.00005	0.01		0.000462
		Dec-11	0.00014	0.00005	0.01		0.000462
	MW-36A	Mar-11	0.00096	0.00005	0.01		0.000462
		Jun-11	0.00070	0.00005	0.01		0.000462
		Sep-11	0.00094	0.00005	0.01		0.000462
		Dec-11	0.00070	0.00005	0.01		0.000462
	MW-39	Mar-11	0.00046	0.00005	0.01		0.000462
		Jun-11	0.00210	0.00005	0.01		0.000462
		Sep-11	0.00171	0.00005	0.01		0.000462
		Dec-11	0.00065	0.00005	0.01		0.000462
	MW-4	Mar-11	0.00051	0.00005	0.01		0.000462
		Jun-11	0.00083	0.00005	0.01		0.000462
		Sep-11	0.00143	0.00005	0.01		0.000462
		Dec-11	0.00067	0.00005	0.01		0.000462
	MW-42	Mar-11	0.00160	0.00005	0.01		0.000462
		Jun-11	0.00130	0.00005	0.01		0.000462
		Sep-11	0.00160	0.00005	0.01		0.000462
		Dec-11	0.00160	0.00005	0.01		0.000462
	MW-9	Mar-11	0.00041	0.00005	0.01		0.000462
		Sep-11	0.00041	0.00005	0.01		0.000462

**Table 7. 2011 WAC 173-200, Federal MCL, and MTCA Exceedances in Groundwater, OVSL**

Parameter	Well	Event	Result	WAC 173-200	Primary MCL	Secondary MCL	MTCA Cleanup Level	
Iron, Dissolved	MW-23A	Jun-11	0.41	0.3		0.3	0.3	
		Sep-11	0.7	0.3		0.3	0.3	
		Dec-11	0.54	0.3		0.3	0.3	
	MW-29A	Mar-11	4.2	0.3		0.3	0.3	
		Sep-11	3.3	0.3		0.3	0.3	
	MW-281	Jun-11	0.68	0.3		0.3	0.3	
		Sep-11	1	0.3		0.3	0.3	
	MW-32	Mar-11	0.66	0.3		0.3	0.3	
		Jun-11	0.62	0.3		0.3	0.3	
		Sep-11	0.63	0.3		0.3	0.3	
		Dec-11	0.62	0.3		0.3	0.3	
	MW-33A	Mar-11	0.55	0.3		0.3	0.3	
	MW-34C	Mar-11	1	0.3		0.3	0.3	
		Jun-11	1	0.3		0.3	0.3	
		Sep-11	0.91	0.3		0.3	0.3	
	MW-39	Dec-11	0.77	0.3		0.3	0.3	
		Mar-11	13	0.3		0.3	0.3	
		Jun-11	36	0.3		0.3	0.3	
		Sep-11	32	0.3		0.3	0.3	
	MW-42	Dec-11	16	0.3		0.3	0.3	
		Mar-11	26	0.3		0.3	0.3	
		Jun-11	27	0.3		0.3	0.3	
		Sep-11	21	0.3		0.3	0.3	
	MW-43	Dec-11	25	0.3		0.3	0.3	
		Dec-11	0.6	0.3		0.3	0.3	
	MW-9	Mar-11	0.45	0.3		0.3	0.3	
		Sep-11	0.48	0.3		0.3	0.3	
	Manganese, Dissolved	MW-19C	Mar-11	1	0.05		0.05	0.05
			Jun-11	0.99	0.05		0.05	0.05
			Sep-11	1.2	0.05		0.05	0.05
			Dec-11	1.3	0.05		0.05	0.05
		MW-23A	Mar-11	0.77	0.05		0.05	0.05
			Jun-11	1.6	0.05		0.05	0.05
			Sep-11	2	0.05		0.05	0.05
			Dec-11	1.7	0.05		0.05	0.05
		MW-24	Mar-11	1.4	0.05		0.05	0.05
Jun-11			1.1	0.05		0.05	0.05	
Sep-11			1.3	0.05		0.05	0.05	
Dec-11			1.7	0.05		0.05	0.05	
MW-29A		Mar-11	1.4	0.05		0.05	0.05	
		Sep-11	1.2	0.05		0.05	0.05	
MW-281		Mar-11	3.1	0.05		0.05	0.05	
		Jun-11	3	0.05		0.05	0.05	
		Sep-11	3.4 J	0.05		0.05	0.05	
		Dec-11	2.6	0.05		0.05	0.05	
MW-32		Mar-11	2.2	0.05		0.05	0.05	
		Jun-11	2	0.05		0.05	0.05	
		Sep-11	2.1	0.05		0.05	0.05	
MW-33C		Dec-11	2.2	0.05		0.05	0.05	
		Mar-11	0.14	0.05		0.05	0.05	
		Jun-11	0.13	0.05		0.05	0.05	
		Sep-11	0.15 J	0.05		0.05	0.05	
MW-34C		Dec-11	0.14	0.05		0.05	0.05	
		Mar-11	0.8	0.05		0.05	0.05	
		Jun-11	0.77	0.05		0.05	0.05	
		Sep-11	0.68	0.05		0.05	0.05	
MW-39		Dec-11	0.76	0.05		0.05	0.05	
		Mar-11	0.21	0.05		0.05	0.05	
		Jun-11	0.45	0.05		0.05	0.05	
		Sep-11	0.44	0.05		0.05	0.05	
MW-4		Dec-11	0.41	0.05		0.05	0.05	
		Mar-11	0.41	0.05		0.05	0.05	
		Jun-11	1.1	0.05		0.05	0.05	
	Sep-11	1.2 J	0.05		0.05	0.05		
MW-42	Dec-11	0.74	0.05		0.05	0.05		
	Mar-11	4.8	0.05		0.05	0.05		
	Jun-11	5.2	0.05		0.05	0.05		
	Sep-11	4.7	0.05		0.05	0.05		
MW-43	Dec-11	5.4	0.05		0.05	0.05		
	Mar-11	0.15	0.05		0.05	0.05		
	Jun-11	0.22	0.05		0.05	0.05		
	Dec-11	0.37	0.05		0.05	0.05		

**Table 7. 2011 WAC 173-200, Federal MCL, and MTCA Exceedances in Groundwater, OVSL**

Parameter	Well	Event	Result	WAC 173-200	Primary MCL	Secondary MCL	MTCA Cleanup Level	
Ammonia (As N)	MW-19C	Mar-11	0.47				0.19	
		Jun-11	0.44				0.19	
		Sep-11	0.45				0.19	
		Dec-11	0.44				0.19	
	MW-281	Mar-11	3.3				0.19	
		Jun-11	2.8				0.19	
		Sep-11	2.9				0.19	
		Dec-11	1				0.19	
	MW-33A	Sep-11	0.21				0.19	
	MW-39	Mar-11	0.21				0.19	
		Jun-11	0.33				0.19	
		Sep-11	0.43				0.19	
		Dec-11	0.25				0.19	
	MW-4	Jun-11	0.22				0.19	
	MW-42	Mar-11	5.5				0.19	
		Jun-11	4.8				0.19	
		Sep-11	5.1				0.19	
		Dec-11	3.6				0.19	
	Trichloroethene	MW-19C	Mar-11	1.4				1.0
Jun-11			1.4				1.0	
Sep-11			1.4				1.0	
Dec-11			1.4				1.0	
Vinyl chloride	MW-13A	Mar-11	0.037	0.02	2		0.2	
	MW-15R	Mar-11	0.03	0.02	2		0.2	
		Jun-11	0.043	0.02	2		0.2	
		Sep-11	0.041	0.02	2		0.2	
		Dec-11	0.046	0.02	2		0.2	
		MW-19C	Sep-11	0.043	0.02	2		0.2
		Dec-11	0.073	0.02	2		0.2	
	MW-20	Sep-11	0.024	0.02	2		0.2	
		Dec-11	0.058	0.02	2		0.2	
	MW-23A	Dec-11	0.032	0.02	2		0.2	
	MW-281	Jun-11	0.039	0.02	2		0.2	
		Sep-11	0.037	0.02	2		0.2	
		MW-32	Mar-11	0.3	0.02	2		0.2
			Jun-11	0.21	0.02	2		0.2
	Sep-11		0.32	0.02	2		0.2	
	Dec-11		0.38	0.02	2		0.2	
	MW-34C	Mar-11	0.14	0.02	2		0.2	
		Jun-11	0.11	0.02	2		0.2	
		Sep-11	0.15	0.02	2		0.2	
		Dec-11	0.12	0.02	2		0.2	
	MW-4	Mar-11	0.042	0.02	2		0.2	
		Jun-11	0.081	0.02	2		0.2	
		Sep-11	0.13	0.02	2		0.2	
		Dec-11	0.04	0.02	2		0.2	
	MW-42	Jun-11	0.03	0.02	2		0.2	
		Sep-11	0.11	0.02	2		0.2	
		Dec-11	0.048	0.02	2		0.2	

J result is an estimate, or elevated reporting limit

**Table 8. Fourth Quarter 2011 Prediction Limit Exceedances in Groundwater, OVSL**

Well	Parameter	Unit	Date Sampled	Latest Result	Prediction Limit
MW-15R	Alkalinity, bicarbonate (as cacO3)	MG/L	12/14/2011	120	96
MW-15R	Alkalinity, total (as cacO3)	MG/L	12/14/2011	120	96
MW-15R	Barium, dissolved	MG/L	12/14/2011	0.006	0.0052
MW-15R	Calcium, dissolved	MG/L	12/14/2011	20	17.1
MW-15R	Magnesium, dissolved	MG/L	12/14/2011	12	10.29
MW-15R	Sodium, dissolved	MG/L	12/14/2011	6.3	5.9542
MW-15R	Specific conductivity	mS/cm	12/14/2011	0.233	0.174
MW-29A	Arsenic, dissolved	UG/L	09/28/2011	1.99	0.38
MW-29A	Barium, dissolved	MG/L	09/28/2011	0.012	0.0052
MW-29A	Iron, dissolved	MG/L	09/28/2011	3.3	0.097
MW-29A	Manganese, dissolved	MG/L	09/28/2011	1.2	0.0067
MW-32	Alkalinity, bicarbonate (as cacO3)	MG/L	12/15/2011	130	96
MW-32	Alkalinity, total (as cacO3)	MG/L	12/15/2011	130	96
MW-32	Arsenic, dissolved	UG/L	12/15/2011	9.9	0.38
MW-32	Calcium, dissolved	MG/L	12/15/2011	25	17.1
MW-32	Chloride	MG/L	12/15/2011	11	3.51
MW-32	Iron, dissolved	MG/L	12/15/2011	0.62	0.097
MW-32	Magnesium, dissolved	MG/L	12/15/2011	12	10.29
MW-32	Manganese, dissolved	MG/L	12/15/2011	2.2	0.0067
MW-32	Sodium, dissolved	MG/L	12/15/2011	15	5.9542
MW-32	Specific conductivity	mS/cm	12/15/2011	0.295	0.174
MW-32	Sulfate	MG/L	12/15/2011	16	9.9
MW-32	Temperature	deg C	12/15/2011	12.12	11.09
MW-32	Total dissolved solids (tds)	MG/L	12/15/2011	200	175
MW-33A	Ammonia (as n)	MG/L	09/28/2011	0.21	0.17
MW-33A	Chloride	MG/L	09/28/2011	4.1	3.51
MW-33C	Arsenic, dissolved	UG/L	12/13/2011	2.6	0.38
MW-33C	Manganese, dissolved	MG/L	12/13/2011	0.14	0.0067
MW-33C	Potassium, dissolved	MG/L	12/13/2011	1.2	1.0
MW-34A	Arsenic, dissolved	UG/L	12/13/2011	0.5	0.38
MW-34A	Chloride	MG/L	12/14/2011	5.9	3.51
MW-34A	Sodium, dissolved	MG/L	12/14/2011	8.5	5.9542
MW-34A	Specific conductivity	mS/cm	12/14/2011	0.177	0.174
MW-34A	Temperature	deg C	12/14/2011	11.22	11.09
MW-34C	Alkalinity, bicarbonate (as cacO3)	MG/L	12/14/2011	150	96
MW-34C	Alkalinity, total (as cacO3)	MG/L	12/14/2011	150	96
MW-34C	Arsenic, dissolved	UG/L	12/13/2011	1.2	0.38
MW-34C	Barium, dissolved	MG/L	12/14/2011	0.011	0.0052
MW-34C	Calcium, dissolved	MG/L	12/14/2011	29	17.1
MW-34C	Chloride	MG/L	12/14/2011	6	3.51
MW-34C	Iron, dissolved	MG/L	12/14/2011	0.77	0.097
MW-34C	Magnesium, dissolved	MG/L	12/14/2011	12	10.29
MW-34C	Manganese, dissolved	MG/L	12/14/2011	0.76	0.0067
MW-34C	Potassium, dissolved	MG/L	12/14/2011	1.1	1.0
MW-34C	Sodium, dissolved	MG/L	12/14/2011	16	5.9542
MW-34C	Specific conductivity	mS/cm	12/14/2011	0.306	0.174
MW-34C	Temperature	deg C	12/14/2011	11.83	11.09
MW-34C	Total dissolved solids (tds)	MG/L	12/14/2011	210	175
MW-36A	Arsenic, dissolved	UG/L	12/14/2011	0.7	0.38
MW-36A	Sodium, dissolved	MG/L	12/14/2011	6.6	5.9542

**Table 8. Fourth Quarter 2011 Prediction Limit Exceedances in Groundwater, OVSL**

Well	Parameter	Unit	Date Sampled	Latest Result	Prediction Limit
MW-39	Ammonia (as n)	MG/L	12/15/2011	0.25	0.17
MW-39	Arsenic, dissolved	UG/L	12/15/2011	0.65	0.38
MW-39	Barium, dissolved	MG/L	12/15/2011	0.012	0.0052
MW-39	Chloride	MG/L	12/15/2011	3.9	3.51
MW-39	Cobalt, dissolved	MG/L	12/15/2011	0.0052	0.003
MW-39	Iron, dissolved	MG/L	12/15/2011	16	0.097
MW-39	Manganese, dissolved	MG/L	12/15/2011	0.41	0.0067
MW-39	pH	pH Units	12/15/2011	5.86	5.90 - 7.85
MW-39	Sodium, dissolved	MG/L	12/15/2011	7	5.9542
MW-42	Alkalinity, bicarbonate (as caco3)	MG/L	12/15/2011	230	96
MW-42	Alkalinity, total (as caco3)	MG/L	12/15/2011	230	96
MW-42	Ammonia (as n)	MG/L	12/15/2011	3.6	0.17
MW-42	Arsenic, dissolved	UG/L	12/14/2011	1.6	0.38
MW-42	Barium, dissolved	MG/L	12/15/2011	0.12	0.0052
MW-42	Calcium, dissolved	MG/L	12/15/2011	38	17.1
MW-42	Chloride	MG/L	12/15/2011	22	3.51
MW-42	Cobalt, dissolved	MG/L	12/15/2011	0.0031	0.003
MW-42	Iron, dissolved	MG/L	12/15/2011	25	0.097
MW-42	Magnesium, dissolved	MG/L	12/15/2011	16	10.29
MW-42	Manganese, dissolved	MG/L	12/15/2011	5.4	0.0067
MW-42	Potassium, dissolved	MG/L	12/15/2011	6.5	1.0
MW-42	Sodium, dissolved	MG/L	12/15/2011	22	5.9542
MW-42	Specific conductivity	mS/cm	12/15/2011	0.572	0.174
MW-42	Sulfate	MG/L	12/15/2011	17	9.9
MW-42	Temperature	deg C	12/15/2011	12.16	11.09
MW-42	Total dissolved solids (tds)	MG/L	12/15/2011	270	175
MW-42	Total organic carbon (toc)	MG/L	12/15/2011	7.1	6.0
MW-43	Barium, dissolved	MG/L	12/15/2011	0.0053	0.0052
MW-43	Iron, dissolved	MG/L	12/15/2011	0.6	0.097
MW-43	Manganese, dissolved	MG/L	12/15/2011	0.37	0.0067
MW-43	pH	pH Units	12/15/2011	5.77	5.90 - 7.85
MW-9	Arsenic, dissolved	UG/L	09/28/2011	0.41	0.38
MW-9	Chloride	MG/L	09/28/2011	4.8	3.51
MW-9	Iron, dissolved	MG/L	09/28/2011	0.48	0.097
MW-9	Manganese, dissolved	MG/L	09/28/2011	0.041	0.0067



**Table 9. Summary of 2011 Increasing and Decreasing Parameter Trends in Groundwater: January 2005 - December 2011, OVSL**

**Sen's Trend Test A** = all organic parameters listed in Appendix I and Appendix II of WAC 173-351-990 that have been detected at least once in at least one of 22 wells comprising the network of 1) compliance, 2) performance, 3) downgradient, and 4) upgradient site monitoring wells, during the trend test period. This includes the following constituents:

Parameter	Significant Increasing Trends	Significant Decreasing Trends
1,1-Dichloroethane	None	None
1,2-Dichloroethene (total)	None	None
1,2-Dichlorobenzene	None	None
1,4-Dichlorobenzene	None	None
Acetone	None	None
Benzene	None	None
Carbon Disulfide	None	None
Chlorobenzene	None	None
Chlorodifluoromethane	None	None
Chloroethane	None	None
Chloroform	None	None
Chloromethane	None	None
cis-1,2-dichloroethene	None	None
Dichlorodifluoromethane	None	None
Ethyl Ether	None	None
Methylene Chloride	None	None
Naphthalene	None	None
n-Butyl Alcohol	None	None
tert-Butyl Alcohol	None	None
Tetrachloroethene	None	None
Tetrahydrofuran	None	None
Toluene	None	None
trans-1,2-Dichloroethene	None	None
Trichloroethene	None	None
Vinyl Chloride	None	MW-23A (graph 535) MW-24 (graph 536) MW-32 (graph 539)

**Trend Test Wells:**

- Compliance Wells MW-39, MW-15R, MW-34A, MW-34C, MW-42, MW-43
- Performance Wells MW-24, MW-23A, MW-2B1, MW-20, MW-19C, MW-4
- Downgradient Wells MW-36A, MW-33A, MW-33C, MW-32, MW-29A, MW-9
- Upgradient Wells MW-13A, MW-13B, MW-35, MW-16

**Table 9. Summary of 2011 Increasing and Decreasing Parameter Trends in Groundwater: January 2005 - December 2011, OVSL**

<b>Sen's Trend Test B = all metals and groundwater quality parameters listed in Appendix I and Appendix II of WAC (173-351-990)</b>		
<b>Parameter</b>	<b>Significant Increasing Trends</b>	<b>Significant Decreasing Trends</b>
Antimony, dissolved	None	None
Arsenic, dissolved	None	MW-19C (graph 93) MW-24 (graph 96) MW-34C (graph 103)
Barium, dissolved	MW-20 (graph 116)	MW-24 (graph 118) MW-29A (graph 119)
Beryllium, dissolved	None	None
Cadmium, dissolved	None	None
Chromium, dissolved	MW-34A (graph 234)	None
Cobalt, dissolved	None	None
Copper, dissolved	None	None
Lead, dissolved	None	None
Nickel, dissolved	None	None
Selenium, dissolved	None	None
Silver, dissolved	None	None
Thallium, dissolved	None	None
Vanadium, dissolved	None	None
Zinc, dissolved	None	None
Nitrate (as N)	None	None
pH	MW-42 (graph 438)	None
Specific Conductivity	None	MW-19C (graph 533) MW-23A (graph 535) MW-24 (graph 536) MW-36A (graph 545)
Temperature	None	MW-24 (graph 580)
Calcium, dissolved	None	MW-9 (graph 198) MW-23A (graph 183) MW-24 (graph 184)
Bicarbonate Alkalinity (as CaCO <sub>3</sub> )	MW-13A (graph 1) MW-13B (graph 2) MW-35 (graph 16)	MW-24 (graph 8) MW-36A (graph 17)
Magnesium, dissolved	None	MW-33A (graph 342) MW-36A (graph 347)
Sulfate	MW-15R (graph 553) MW-24 (graph 558) MW-20 (graph 556)	MW-4 (graph 569) MW-13B (graph 552) MW-19C (graph 555)

**Trend Test Wells:**

- Compliance Wells MW-39, MW-15R, MW-34A, MW-34C, MW-42, MW-43
- Performance Wells MW-24, MW-23A, MW-2B1, MW-20, MW-19C, MW-4
- Downgradient Wells MW-36A, MW-33A, MW-33C, MW-32, MW-29A, MW-9

**Table 9. Summary of 2011 Increasing and Decreasing Parameter Trends in Groundwater: January 2005 - December 2011, OVSL**

- Upgradient Wells MW-13A, MW-13B, MW-35, MW-16

**Sen's Trend Test B** = all metals and groundwater quality parameters listed in Appendix I and Appendix II of WAC (173-351-990)

Sodium, dissolved	None	MW-19C (graph 511) MW-23A (graph 513) MW-34C (graph 521)
Chloride	None	MW-34C (graph 213)
Potassium, dissolved	None	MW-36A (graph 457)
Total Alkalinity as CaCO3	MW-13A (graph 23) MW-13B (graph 24) MW-35 (graph 38)	MW-36A (graph 39)
Iron, dissolved	None	MW-9 (graph 308) MW-19C (graph 291) MW-24 (graph 294) MW-32 (graph 297)
Manganese, dissolved	None	MW-15R (graph 355) MW-24 (graph 360)
Ammonia (as N)	None	MW-19C (graph 49)
Total Organic Carbon	None	None
Total Dissolved Solids	None	MW-24 (graph 624) MW-33A (graph 628) MW-36A (graph 633)

**Trend Test Wells:**

- Compliance Wells MW-39, MW-15R, MW-34A, MW-34C, MW-42, MW-43
- Performance Wells MW-24, MW-23A, MW-2B1, MW-20, MW-19C, MW-4
- Downgradient Wells MW-36A, MW-33A, MW-33C, MW-32, MW-29A, MW-9
- Upgradient Wells MW-13A, MW-13B, MW-35, MW-16

**Table 10. 2011 Leachate Leak Detection System Volumes, Olympic View Sanitary Landfill**

Date	Totalizer Volume (Gals)	Comments
1/3/2011	0	Insufficient volume for the collection of a representative LP-LCD sample was generated during several sampling attempts during reporting quarter.
1/10/2011	0	
1/17/2011	1	
1/24/2011	0	
1/31/2011	6	
2/7/2011	0	
2/14/2011	0	
2/21/2011	2	
2/28/2011	0	
3/7/2011	0	
3/14/2011	0	
3/21/2011	0	
3/28/2011	0	
4/4/2011	0	
4/11/2011	0	
4/18/2011	0	
4/25/2011	0	
5/2/2011	0	
5/9/2011	20	LP-LCD sample collected on 5/11/2011
5/16/2011	24	
5/23/2011	1	
5/30/2011	0	
6/6/2011	0	
6/13/2011	3	
6/20/2011	0	
6/27/2011	0	
7/5/2011	0	
7/11/2011	0	
7/18/2011	0	
7/25/2011	0	
8/1/2011	0	
8/8/2011	0	
8/15/2011	0	
8/22/2011	0	
8/29/2011	0	
9/6/2011	0	
9/12/2011	0	
9/19/2011	0	
9/26/2011	69	LP-LCD sample collected on 9/19/2011
10/3/2011	0	
10/10/2011	0	
10/17/2011	0	
10/24/2011	0	
10/31/2011	0	
11/7/2011	0	
11/14/2011	0	
11/21/2011	0	
11/28/2011	0	
12/5/2011	0	
12/12/2011	0	
12/19/2011	234	LP-LCD sample collected on 12/15/2011
12/27/2011	0	
1/3/2012	0	
Total	360	

**Table 11. LFG Results**

Results of Landfill Gas Monitoring										SCS Engineers																										
Landfill Gas Monitoring Network										04204027.15																										
Olympic View Landfill										4rd Quarter 2011																										
Waste Management Incorporated																																				
Location Reference Designation	Date	Time	Pressure (in. H <sub>2</sub> O)	CH <sub>4</sub> (% vol.)	CO <sub>2</sub> (% vol.)	O <sub>2</sub> (% vol.)	Spike CH <sub>4</sub> Note 1 (% vol.)	Spike CO <sub>2</sub> Note 1 (% vol.)	Depth to Water TOP (ft)	Comments																										
										Exposed Portion of Perforations Note 2 & 3 (ft) (%)	Other																									
<b>Subsurface Gas Detection Wells (Gas Probes)</b>																																				
GP-7	20-Dec	12:31	-0.07	0.0	1.5	20.0			12.7	2.1	41%																									
GP-8	20-Dec	12:33	-0.22	0.0	5.5	5.7			14.6	1.8	36%																									
GP-9s	20-Dec	12:40	-0.08	0.0	3.2	17.6			25.8	14.3	100%																									
GP-9d	20-Dec	12:42	—	—	—	—				0.0	0%	Note 3.																								
GP-10s	20-Dec	12:53	-0.09	0.0	1.3	19.8			23.8	10.8	100%																									
GP-10d	20-Dec	12:55	—	—	—	—				-0.4	0%	Note 3.																								
GP-11s	20-Dec	13:03	-0.11	0.0	1.3	18.9			22.3	12.0	100%																									
GP-11d	20-Dec	13:04	—	—	—	—				0.0	0%	Note 3.																								
GP-12s	20-Dec	13:11	-0.09	0.0	1.4	19.6			38.3	26.9	100%																									
GP-12m	20-Dec	13:13	-0.06	0.0	1.0	19.3				6.7	100%																									
GP-12d	20-Dec	13:16	—	—	—	—				0.0	0%	Note 3.																								
GP-13s	20-Dec	13:24	-0.10	0.0	2.0	17.7			42.8	30.7	100%																									
GP-13m	20-Dec	13:25	-0.05	0.0	2.0	18.4				9.3	100%																									
GP-13d	20-Dec	13:28	—	—	—	—				0.0	0%	Note 3.																								
GP-14	20-Dec	13:36	-0.16	0.0	5.1	6.7			12.8	2.4	47%																									
GP-15	20-Dec	13:41	-0.34	1.5	5.2	12.4			12.4	2.0	40%																									
GP-16	20-Dec	14:01	-0.15	0.0	4.6	15.2			12.3	2.1	43%																									
<b>Onsite Building Interiors</b>																																				
MB-Of												Note 4.																								
MB-Ba												Note 4.																								
MB-Sh												Note 4.																								
WS-R1												Note 4.																								
WS-Of												Note 4.																								
WS-R2												Note 4.																								
OldTB												Note 4.																								
MN-Wh												Note 4.																								
SH-SS	21-Dec	15:07	0.0	0.0	0.0	20.9																														
SH-NS	21-Dec	15:15	0.0	0.0	0.1	20.8																														
SH-In	21-Dec	15:19	0.0	0.0	0.0	20.9																														
SS-Wh	21-Dec	15:01	0.0	0.0	0.1	20.9																														
WR-Sh												Note 4.																								
<b>General Data</b>																																				
Date:			20-Dec-11			Weather Conditions																														
Monitored by:			KL			Sky Cover:			Clear																											
Instruments:			GEM 2000			Wind / Rain / Snow:			Wind 2mph SW																											
Calibration Date:			20-Dec-11			Temperature:			61																											
						Preceding 24 hr Baro. Trend:			see graph																											
<b>Notes</b>																																				
1. Measurement for spike concentrations of CH <sub>4</sub> and CO <sub>2</sub> are recorded if observed during sampling.																																				
2. Exposed Perforation = perforated pipe section not submerged by water.																																				
3. Readings not reported: screened interval submerged.																																				
4. No monitoring at these locations. Building has been demolished, and no longer exists.																																				
5. Depth to water measurements not taken this quarter.																																				
6. This relative pressure reading is believed to be an anomaly due to error in sampling procedure and is not representative of soil gas pressures.																																				
<table border="0"> <tr> <td>CH<sub>4</sub> = Methane</td> <td>MB-Of = Maintenance Building - Office</td> <td>MN-WH = Main Well House</td> </tr> <tr> <td>CO<sub>2</sub> = Carbon Dioxide</td> <td>MB-Ba = Maintenance Building - Bathroom</td> <td>OldTB = Old Toll Booth</td> </tr> <tr> <td>O<sub>2</sub> = Oxygen</td> <td>MB-Sh = Maintenance Building - Shed</td> <td>SH-SS = Scale House - South Side Exterior</td> </tr> <tr> <td>GP = Gas Probe</td> <td>WS-R1 = Welding Shop - Storage Room 1</td> <td>SH-NS = Scale House - North Side Exterior</td> </tr> <tr> <td>S = Shallow Monitoring Zone</td> <td>WS-Of = Welding Shop - Office</td> <td>SH-Of = Scale House - Office Interior</td> </tr> <tr> <td>M = Middle Monitoring Zone</td> <td>WS-R2 = Welding Shop - Storage Room 2</td> <td>SS-WH = South Slope Well House</td> </tr> <tr> <td>D = Deep Monitoring Zone</td> <td></td> <td>WR-Sh = Wash Rack Shed</td> </tr> <tr> <td>TOP = from Top of Pipe</td> <td></td> <td></td> </tr> </table>													CH <sub>4</sub> = Methane	MB-Of = Maintenance Building - Office	MN-WH = Main Well House	CO <sub>2</sub> = Carbon Dioxide	MB-Ba = Maintenance Building - Bathroom	OldTB = Old Toll Booth	O <sub>2</sub> = Oxygen	MB-Sh = Maintenance Building - Shed	SH-SS = Scale House - South Side Exterior	GP = Gas Probe	WS-R1 = Welding Shop - Storage Room 1	SH-NS = Scale House - North Side Exterior	S = Shallow Monitoring Zone	WS-Of = Welding Shop - Office	SH-Of = Scale House - Office Interior	M = Middle Monitoring Zone	WS-R2 = Welding Shop - Storage Room 2	SS-WH = South Slope Well House	D = Deep Monitoring Zone		WR-Sh = Wash Rack Shed	TOP = from Top of Pipe		
CH <sub>4</sub> = Methane	MB-Of = Maintenance Building - Office	MN-WH = Main Well House																																		
CO <sub>2</sub> = Carbon Dioxide	MB-Ba = Maintenance Building - Bathroom	OldTB = Old Toll Booth																																		
O <sub>2</sub> = Oxygen	MB-Sh = Maintenance Building - Shed	SH-SS = Scale House - South Side Exterior																																		
GP = Gas Probe	WS-R1 = Welding Shop - Storage Room 1	SH-NS = Scale House - North Side Exterior																																		
S = Shallow Monitoring Zone	WS-Of = Welding Shop - Office	SH-Of = Scale House - Office Interior																																		
M = Middle Monitoring Zone	WS-R2 = Welding Shop - Storage Room 2	SS-WH = South Slope Well House																																		
D = Deep Monitoring Zone		WR-Sh = Wash Rack Shed																																		
TOP = from Top of Pipe																																				

**Table 12. Summary of 2011 Landfill Gas Monitoring Results, Olympic View Sanitary Landfill**

Location	Date	Pressure (in. H <sub>2</sub> O)	CH <sub>4</sub> (% vol.)	CO <sub>2</sub> (% vol.)	O <sub>2</sub> (% vol.)
GP-7	Mar-11	0.00	0	1.5	20.1
	Jun-11	0.10	0.1	6.6	3.6
	Sep-11	0.01	0.0	9.7	8.9
	Dec-11	-0.07	0.0	1.5	20.0
GP-8	Mar-11	0.00	0	0.5	20.7
	Jun-11	0.00	0.0	3.0	6.5
	Sep-11	0.03	0.0	4.7	10.8
	Dec-11	-0.22	0.0	5.5	5.7
GP-9s	Mar-11	0.00	0	2.1	18.3
	Jun-11	0.00	0.0	3.0	17.9
	Sep-11	0.00	0.0	1.7	19.9
	Dec-11	-0.08	0.0	3.2	17.6
GP-9d	Mar-11	—	—	—	—
	Jun-11	—	—	—	—
	Sep-11	—	—	—	—
	Dec-11	—	—	—	—
GP-10s	Mar-11	0.00	0	0.7	20.5
	Jun-11	0.20	0.0	0.7	20.2
	Sep-11	0.00	0.0	0.7	20.6
	Dec-11	-0.09	0.0	1.3	19.8
GP-10d	Mar-11	—	—	—	—
	Jun-11	—	—	—	—
	Sep-11	—	—	—	—
	Dec-11	—	—	—	—
GP-11s	Mar-11	0.00	0	1.4	16.5
	Jun-11	0.10	0.0	2.1	18.7
	Sep-11	0.01	0.0	1.8	20.0
	Dec-11	-0.11	0.0	1.3	18.9
GP-11d	Mar-11	—	—	—	—
	Jun-11	—	—	—	—
	Sep-11	—	—	—	—
	Dec-11	—	—	—	—
GP-12s	Mar-11	0.00	0	2.4	16.7
	Jun-11	0.10	0.0	2.3	19.4
	Sep-11	0.01	0.0	0.7	20.4
	Dec-11	-0.09	0.0	1.4	19.6
GP-12m	Mar-11	0.00	0	1.7	17.4
	Jun-11	0.10	0.0	0.9	19.8
	Sep-11	0.09	0.0	0.7	19.9
	Dec-11	-0.06	0.0	1.0	19.3
GP-12d	Mar-11	—	—	—	—
	Jun-11	—	—	—	—
	Sep-11	—	—	—	—
	Dec-11	—	—	—	—

**Table 12. Summary of 2011 Landfill Gas Monitoring Results, Olympic View Sanitary Landfill**

Location	Date	Pressure (in. H <sub>2</sub> O)	CH <sub>4</sub> (% vol.)	CO <sub>2</sub> (% vol.)	O <sub>2</sub> (% vol.)
GP-13s	Mar-11	0.00	0	3	16.6
	Jun-11	0.00	0.0	3.4	17.2
	Sep-11	0.05	0.0	2.9	18.3
	Dec-11	-0.10	0.0	2.0	17.7
GP-13m	Mar-11	0.00	0	3.1	15
	Jun-11	0.20	0.0	3.0	14.9
	Sep-11	0.28	0.0	1.8	18.8
	Dec-11	-0.05	0.0	2.0	18.4
GP-13d	Mar-11	—	—	—	—
	Jun-11	—	—	—	—
	Sep-11	—	—	—	—
	Dec-11	—	—	—	—
GP-14	Mar-11	0.00	0	0.3	20.6
	Jun-11	0.20	0.0	6.4	4.8
	Sep-11	-2.41	0.0	8.9	7.6
	Dec-11	-0.16	0.0	5.1	6.7
GP-15	Mar-11	0.00	0	0.3	20.4
	Jun-11	-0.10	1.0	3.9	6.5
	Sep-11	0.01	0.3	8.8	4.4
	Dec-11	-0.34	1.5	5.2	12.4
GP-16	Mar-11	0.00	0	3.8	15.3
	Jun-11	0.10	0.0	6.2	14.8
	Sep-11	-0.01	0.0	2.4	18.8
	Dec-11	-0.15	0.0	4.6	15.2

Notes:

(—) Readings not reported: screened interval submerged

## APPENDIX A

### FIELD RECORDS

*{Appendix A is included on the attached data CD to conserve paper}*

---



## SCS ENGINEERS

December 16, 2011  
File No. 04204027.15

### **Subject: Olympic View Sanitary Landfill Fourth Quarter Ground Water Sampling**

---

Olympic View Sanitary Landfill  
Fourth Quarter Groundwater Monitoring  
December 2011  
12/13/2011 through 12/15/2011

#### Notes/Sampling Decoding:

- Dedicated pumps were used for purging and sampling all wells.
- Duplicate samples were taken at MW-2B1 (DUP 1) and MW-16 (DUP 2).
- Laboratory MS/MSD samples were taken at MW-35.
- All samples were collected using dedicated pumps.

Sample Date	Well Number	Comments
12/13/11	MW-33C	
12/13/11	MW-2B1	Dup 1 taken at same time
12/13/11	MW-16	Dup 2 taken at same time
12/13/11	MW-35	MS/MSD taken at same time
12/14/11	MW-34C	
12/14/11	MW-34A	
12/14/11	MW-36A	Clearing is necessary to improve access to well.
12/14/11	MW-15R	Clearing is necessary to improve access to well.
12/14/11	MW-23A	Clearing is necessary to improve access to well.
12/14/11	MW-4	
12/14/11	MW-19C	
12/14/11	MW-13A	
12/14/11	MW-13B	
12/15/11	MW-43	

12/15/11	MW-42	
12/15/11	MW-20	
12/15/11	MW-39	
12/15/11	MW-24	
12/15/11	MW-32	Major clearing and repair necessary to retain access to well.

# FIELD INFORMATION FORM



Site Name: OVSL

Site No.:       

Sample Point: MW-33C  
Sample ID

**This Waste Management Field Information Form is Required**  
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: \_\_\_\_\_

**PURGE INFO**

<u>121311</u>	<u>1128</u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>
<b>PURGE DATE</b> (MM DD YY)	<b>PURGE TIME</b> (2400 Hr Clock)	<b>ELAPSED HRS</b> (hrs:min)	<b>WATER VOL IN CASING</b> (Gallons)	<b>ACTUAL VOL PURGED</b> (Gallons)	<b>WELL VOLs PURGED</b>

*Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.*

**PURGE/SAMPLE EQUIPMENT**

Purging and Sampling Equipment ... Dedicated:  Y or  N

Filter Device:  Y or  N  0.45  $\mu$  or \_\_\_\_\_  $\mu$  (circle or fill in)

Purging Device:  C A-Submersible Pump D-Boiler  
 B-Peristaltic Pump E-Piston Pump  
 C-QED Bladder Pump F-Dipper/Bottle

Filter Type:  A

Sampling Device:  C

X-Other: \_\_\_\_\_

Sample Tube Type: \_\_\_\_\_

A-In-line Disposable C-Vacuum  
 B-Pressure X-Other \_\_\_\_\_  
 A-Teflon C-PVC X-Other: \_\_\_\_\_  
 B-Stainless Steel D-Polypropylene

**WELL DATA**

Well Elevation (at TOC) \_\_\_\_\_ (ft/msl)      Depth to Water (DTW) (from TOC) 227 (ft)      Groundwater Elevation (site datum, from TOC) \_\_\_\_\_ (ft/msl)

Total Well Depth (from TOC) \_\_\_\_\_ (ft)      Stick Up (from ground elevation) \_\_\_\_\_ (ft)      Casing ID \_\_\_\_\_ (in)      Casing Material \_\_\_\_\_

*Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.*

**STABILIZATION DATA (Optional)**

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) ( $\mu$ mhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L-ppm)	eH/ORP (mV)	DTW (ft)
<u>11:31</u>	1 <sup>st</sup>	<u>6.65</u>	<u>153</u>	<u>8.13</u>	<u>2.19</u>	<u>1.17</u>	<u>22</u>	<u>227</u>
<u>11:34</u>	2 <sup>nd</sup>	<u>6.84</u>	<u>151</u>	<u>8.19</u>	<u>1.19</u>	<u>0.48</u>	<u>-24</u>	<u>227</u>
<u>11:37</u>	3 <sup>rd</sup>	<u>7.03</u>	<u>151</u>	<u>8.29</u>	<u>5.12</u>	<u>0.28</u>	<u>-51</u>	<u>2.27</u>
<u>11:40</u>	4 <sup>th</sup>	<u>7.16</u>	<u>150</u>	<u>8.26</u>	<u>3.39</u>	<u>0.22</u>	<u>-66</u>	<u>2.27</u>
<u>11:43</u>		<u>7.30</u>	<u>151</u>	<u>8.33</u>	<u>1.65</u>	<u>0.19</u>	<u>-79</u>	<u>2.27</u>
<u>11:46</u>		<u>7.37</u>	<u>151</u>	<u>8.34</u>	<u>1.52</u>	<u>0.18</u>	<u>-83</u>	<u>2.27</u>
<u>11:49</u>		<u>7.42</u>	<u>151</u>	<u>8.34</u>		<u>0.17</u>	<u>-87</u>	<u>2.27</u>

Suggested range for 3 consec. readings or note Permit/State requirements:  
 pH: +/- 0.2      Conductance: +/- 3%      Temp: --      Turbidity: --      D.O.: +/- 10%      eH/ORP: +/- 25 mV      DTW: Stabilize

**Stabilization Data Fields are Optional** (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

**FIELD DATA**

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE ( $\mu$ mhos/cm @ 25 °C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Time
<u>121311</u>	<u>7.42</u>	<u>151</u>	<u>8.34</u>	<u>1.52</u>	<u>0.17</u>	<u>-87</u>	<u>1149</u>

**Final Field Readings are required** (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).

Sample Appearance: \_\_\_\_\_ Odor: \_\_\_\_\_ Color: \_\_\_\_\_ Other: \_\_\_\_\_

Weather Conditions (required daily, or as conditions change): \_\_\_\_\_ Direction/Speed: \_\_\_\_\_ Outlook: \_\_\_\_\_ Precipitation:  Y or  N

Specific Comments (including purge/well volume calculations if required): \_\_\_\_\_

**FIELD COMMENTS**

8

7

15

400

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

12, 13, 11      Wayne Chang      Wayne Chang      SCS

\_\_\_\_\_  
Date                                  Name                                  Signature                                  Company

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

## FIELD INFORMATION FORM



Site Name: OVSL  
 Site No.:       
 Sample Point: MW-2B1  
 Sample ID

**This Waste Management Field Information Form is Required**  
 This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:                             

**PURGE INFO**

PURGE DATE (MM DD YY) <u>121311</u>	PURGE TIME (2400 Hr Clock) <u>11242</u>	ELAPSED HRS (hrs:min) <u>    </u>	WATER VOL IN CASING (Gallons) <u>    </u>	ACTUAL VOL PURGED (Gallons) <u>    </u>	WELL VOLS PURGED <u>    </u>
---	---	---	---	---	---------------------------------

*Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.*

**PURGE/SAMPLE EQUIPMENT**

Purging and Sampling Equipment ... Dedicated:  Y or  N

Filter Device:  Y or  N, 0.45 μ or      μ (circle or fill in)

Purging Device:  C    A-Submersible Pump    D-Bailer  
    B-Peristaltic Pump    E-Piston Pump  
    C-QED Bladder Pump    F-Dipper/Bottle

Filter Type:  A    A-In-line Disposable    C-Vacuum  
    B-Pressure    X-Other                             

Sampling Device:  C    A-Teflon    C-PVC    X-Other:                               
    X-Other:                                 B-Stainless Steel    D-Polypropylene

Sample Tube Type:                             

**WELL DATA**

Well Elevation (at TOC):      (ft/msl)    Depth to Water (DTW) (from TOC): 761 (ft)    Groundwater Elevation (site datum, from TOC):      (ft/msl)

Total Well Depth (from TOC):      (ft)    Stick Up (from ground elevation):      (ft)    Casing ID:      (in)    Casing Material:     

*Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.*

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (umhos/cm @ 25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
<u>12:45</u>	<u>1"</u>	<u>631</u>	<u>270</u>	<u>12:17</u>	<u>1723</u>	<u>0.13</u>	<u>83</u>	<u>770</u>
<u>12:49</u>	<u>2"</u>	<u>625</u>	<u>266</u>	<u>12:20</u>	<u>387</u>	<u>0.11</u>	<u>76</u>	<u>785</u>
<u>12:52</u>	<u>3"</u>	<u>624</u>	<u>263</u>	<u>12:21</u>	<u>276</u>	<u>0.10</u>	<u>73</u>	<u>785</u>
<u>12:55</u>	<u>4"</u>	<u>623</u>	<u>261</u>	<u>12:22</u>		<u>0.10</u>	<u>72</u>	<u>    </u>

Suggested range for 3 consec. readings or note Permit/State requirements:    +/- 0.2    +/- 3%    --    +/- 10%    +/- 25 mV    Stabilize

*Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

**FIELD DATA**

SAMPLE DATE (MM DD YY) <u>121311</u>	pH (std) <u>623</u>	CONDUCTANCE (umhos/cm @ 25°C) <u>261</u>	TEMP. (°C) <u>12.22</u>	TURBIDITY (ntu) <u>276</u>	DO (mg/L-ppm) <u>0.10</u>	eH/ORP (mV) <u>72</u>	Other: <u>Time</u> Units: <u>1255</u>
--	---------------------------	--	-------------------------------	----------------------------------	---------------------------------	-----------------------------	--

**Final Field Readings are required** (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).

**Sample Appearance:**                                 Odor:                                 Color:                                 Other:                             

**Weather Conditions** (required daily, or as conditions change):                                 Direction/Speed:                                 Outlook:                                 Precipitation: Y or N

**Specific Comments** (including purge/well volume calculations if required): Dup 1 Taken @ MW-2B1

**FIELD COMMENTS**

8

7

15    450

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

12, 13, 11    Wayne Chang    Wayne Chang    SCS

Date    Name    Signature    Company

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

# FIELD INFORMATION FORM



Site Name: **OVSL**

**This Waste Management Field Information Form is Required**  
 This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: \_\_\_\_\_

Site No.: [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]  
 Sample Point: **MW-116**  
Sample ID

**PURGE INFO**

<b>PURGE DATE</b> (MM DD YY)	<b>PURGE TIME</b> (2400 Hr Clock)	<b>ELAPSED HRS</b> (hrs:min)	<b>WATER VOL IN CASING</b> (Gallons)	<b>ACTUAL VOL PURGED</b> (Gallons)	<b>WELL VOLS PURGED</b>
11/21/13	11323				

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

**PURGE/SAMPLE EQUIPMENT**

Purging and Sampling Equipment ... Dedicated:  Y or  N

Purging Device:  C    A- Submersible Pump    D-Boiler  
 A    B-Peristaltic Pump    E-Piston Pump  
 B    C-QED Bladder Pump    F-Dipper/Bottle

Filter Device:  Y or  N     0.45 µ or \_\_\_\_\_ µ (circle or fill in)

Filter Type:  A    A-In-line Disposable    C-Vacuum  
 B    B-Pressure    X-Other \_\_\_\_\_

Sampling Device:  C

X-Other: \_\_\_\_\_    Sample Tube Type: \_\_\_\_\_    A-Teflon    C-PVC    X-Other: \_\_\_\_\_  
 \_\_\_\_\_    B-Stainless Steel    D-Polypropylene

**WELL DATA**

Well Elevation (at TOC): [ ] [ ] [ ] [ ] [ ] (ft/msl)    Depth to Water (DTW) (from TOC): **6102** (ft)

Total Well Depth (from TOC): [ ] [ ] [ ] [ ] [ ] (ft)    Stick Up (from ground elevation): [ ] [ ] [ ] [ ] [ ] (ft)

Groundwater Elevation (site datum, from TOC): [ ] [ ] [ ] [ ] [ ] (ft/msl)

Casing ID: [ ] [ ] [ ] [ ] [ ] (in)    Casing Material: [ ] [ ] [ ] [ ] [ ]

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

**STABILIZATION DATA (Optional)**

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L-ppm)	eH/ORP (mV)	DTW (ft)
13:30	1 <sup>st</sup>	6.23	123	8.80	1.11	4.27	131	6105
13:33	2 <sup>nd</sup>	6.28	121	8.83	2.94	3.74	134	6105
13:36	3 <sup>rd</sup>	6.30	120	8.84	5.60	3.81	139	6105
13:39	4 <sup>th</sup>	6.30	120	8.84	4.73	3.80	141	61105

Suggested range for 3 consec. readings or note Permit/State requirements:    +/- 0.2    +/- 3%    --    +/- 10%    +/- 25 mV    Stabilize

**Stabilization Data Fields are Optional** (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/State. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

**FIELD DATA**

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (µmhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Type Units
11/21/13	6.30	120	8.84	4.73	3.80	141	1339

Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/State).

**Sample Appearance:** \_\_\_\_\_    Odor: \_\_\_\_\_    Color: \_\_\_\_\_    Other: \_\_\_\_\_

**Weather Conditions** (required daily, or as conditions change): \_\_\_\_\_    Direction/Speed: \_\_\_\_\_    Outlook: \_\_\_\_\_    Precipitation: Y or N

**Specific Comments (including purge/well volume calculations if required):**

Dup 2 taken @ MW-16

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

12/13/11    Wayne Chang    Wayne Chang    SCS

Date    Name    Signature    Company

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

# FIELD INFORMATION FORM



Site Name: \_\_\_\_\_  
 Site No.: \_\_\_\_\_ Sample Point: MW-35  
Sample ID

**This Waste Management Field Information Form is Required**  
 This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: \_\_\_\_\_

**PURGE INFO**

<u>121311</u>	<u>1425</u>				
<b>PURGE DATE</b> <small>(MM DD YY)</small>	<b>PURGE TIME</b> <small>(2400 Hr Clock)</small>	<b>ELAPSED HRS</b> <small>(hrs:min)</small>	<b>WATER VOL IN CASING</b> <small>(Gallons)</small>	<b>ACTUAL VOL PURGED</b> <small>(Gallons)</small>	<b>WELL VOLs PURGED</b>

*Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.*

**PURGE/SAMPLE EQUIPMENT**

Purging and Sampling Equipment ... Dedicated:  Y or  N

Purging Device:  C A-Submersible Pump D-Boiler  
 B-Peristaltic Pump E-Piston Pump  
 C-QED Bladder Pump F-Dipper/Bottle

Sampling Device:  C  
 X-Other: \_\_\_\_\_

Filter Device:  Y or  N 0.45 µ or \_\_\_\_\_ µ (circle or fill in)

Filter Type:  A A-In-line Disposable C-Vacuum  
 B-Pressure X-Other \_\_\_\_\_  
 A-Teflon C-PVC X-Other: \_\_\_\_\_  
 B-Stainless Steel D-Polypropylene

Sample Tube Type: \_\_\_\_\_

**WELL DATA**

Well Elevation (at TOC) \_\_\_\_\_ (ft/msl) Depth to Water (DTW) (from TOC) 7237 (ft) Groundwater Elevation (site datum, from TOC) \_\_\_\_\_ (ft/msl)

Total Well Depth \_\_\_\_\_ (ft) Stick Up \_\_\_\_\_ (ft) Casing ID \_\_\_\_\_ (in) Casing Material \_\_\_\_\_

*Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.*

**STABILIZATION DATA (Optional)**

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
<u>14:29</u>	1 <sup>st</sup>	<u>6.34</u>	<u>146</u>	<u>9.55</u>	<u>0.20</u>	<u>4.39</u>	<u>159</u>	<u>72.40</u>
<u>14:32</u>	2 <sup>nd</sup>	<u>6.55</u>	<u>146</u>	<u>9.47</u>	<u>0.44</u>	<u>4.56</u>	<u>149</u>	<u>72.40</u>
<u>14:35</u>	3 <sup>rd</sup>	<u>6.81</u>	<u>147</u>	<u>9.44</u>	<u>1.49</u>	<u>4.42</u>	<u>139</u>	<u>72.40</u>
<u>14:38</u>	4 <sup>th</sup>	<u>6.94</u>	<u>146</u>	<u>9.43</u>	<u>1.04</u>	<u>4.40</u>	<u>135</u>	<u>72.40</u>
<u>14:42</u>		<u>7.00</u>	<u>148</u>	<u>9.41</u>		<u>4.42</u>	<u>133</u>	

Suggested range for 3 consec. readings or note Permit/State requirements: pH +/- 0.2, Conductance +/- 3%, DO +/- 10%, eH/ORP +/- 25 mV, Stabilize

*Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

**FIELD DATA**

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (µmhos/cm @ 25 °C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L - ppm)	eH/ORP (mV)	Other: <u>TMS</u> Units
<u>121311</u>	<u>7.00</u>	<u>148</u>	<u>9.41</u>	<u>1.04</u>	<u>4.42</u>	<u>133</u>	<u>72.40</u>

**Final Field Readings are required** (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).

Sample Appearance: \_\_\_\_\_ Odor: \_\_\_\_\_ Color: \_\_\_\_\_ Other: \_\_\_\_\_  
 Weather Conditions (required daily, or as conditions change): \_\_\_\_\_ Direction/Speed: \_\_\_\_\_ Outlook: \_\_\_\_\_ Precipitation: Y or N

**FIELD COMMENTS**

Specific Comments (including purge/well volume calculations if required):  
MS/MSD taken @ MW-35

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
12, 13, 11 Wayne Chang Wayne Chang SCS

Date: \_\_\_\_\_ Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Company: \_\_\_\_\_

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

# FIELD INFORMATION FORM



Site Name: OVSL

**This Waste Management Field Information Form is Required**

This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: \_\_\_\_\_

Site No.:      Sample Point: MW-34C  
Sample ID

**PURGE INFO**

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
<u>12/14/11</u>	<u>08:13</u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>

*Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ "Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged". Mark changes, record field data, below.*

**PURGE/SAMPLE EQUIPMENT**

Purging and Sampling Equipment ... Dedicated:  Y or  N

Filter Device:  Y or  N 0.45  or         $\mu$  (circle or fill in)

Purging Device:  C A-Submersible Pump D-Bailer  
 B-Peristaltic Pump E-Piston Pump  
 C-QED Bladder Pump F-Dipper/Bottle

Filter Type:  A A-In-line Disposable C-Vacuum  
 B-Pressure X-Other \_\_\_\_\_

Sampling Device:  C A-Teflon C-PVC X-Other: \_\_\_\_\_  
 X-Other: \_\_\_\_\_ B-Stainless Steel D-Polypropylene

Sample Tube Type:  \_\_\_\_\_

**WELL DATA**

Well Elevation (at TOC)      (ft/MSL) Depth to Water (DTW) (from TOC) 41.80 (ft) Groundwater Elevation (site datum, from TOC)      (ft/MSL)

Total Well Depth (from TOC)      (ft) Stick Up (from ground elevation)      (ft) Casing ID      (in) Casing Material     

*Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.*

**STABILIZATION DATA (Optional)**

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) ( $\mu$ mhos/cm @ 25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L-ppm)	eH/ORP (mV)	DTW (ft)
08:15	1 <sup>st</sup>	6.13	315	11.42	593.7	4.73	150	41.80
08:20	2 <sup>nd</sup>	6.27	307	11.04	572.8	1.34	73	41.80
08:25	3 <sup>rd</sup>	6.34	305	11.68	565.9	0.64	45	41.80
08:30	4 <sup>th</sup>	6.42	306	11.80	595.3	0.41	23	41.80
08:35		6.56	306	11.79	639.1	0.26	9	41.80
08:40		6.59	305	11.50	590.1	0.24	0	41.80
08:45		6.63	305	11.43	632.4	0.26	-4	41.80
08:50		6.61	306	11.74	230.6	0.25	-6	41.80
08:55		6.61	307	11.86	76.87	0.17	10	41.80
09:00		6.61	305	11.92	54.99	0.15	-11	41.80

Suggested range for 3 consec. readings or note Permit/State requirements: pH +/- 0.2, Conductance +/- 3%, Temp. -, Turbidity -, D.O. +/- 10%, eH/ORP +/- 25 mV, DTW Stabilize

**Stabilization Data Fields are Optional** (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

**FIELD DATA**

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE ( $\mu$ mhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: <u>Time</u> Units
<u>12/14/11</u>	<u>6.61</u>	<u>306</u>	<u>11.83</u>	<u>52.70</u>	<u>0.14</u>	<u>-13</u>	<u>0910</u>

**Final Field Readings are required** (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).

Sample Appearance: \_\_\_\_\_ Odor: \_\_\_\_\_ Color: \_\_\_\_\_ Other: \_\_\_\_\_

Weather Conditions (required daily, or as conditions change): \_\_\_\_\_ Direction/Speed: \_\_\_\_\_ Outlook: \_\_\_\_\_ Precipitation: Y or N

**Specific Comments (including purge/well volume calculations if required):**

<u>8 (Bumped to clean)</u>	<u>0905</u>	<u>0.14</u>	<u>0910</u>	<u>0.14</u>
<u>7 (up to Turbidity)</u>	<u>08:1</u>	<u>-13</u>	<u>6.60</u>	<u>-13</u>
<u>40 (50pi)</u>	<u>308</u>		<u>306</u>	
<u>300</u>	<u>11.88</u>		<u>11.83</u>	
<u>[Spiked in Turbidity]</u>	<u>56.75</u>		<u>52.70</u>	

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

\_\_\_\_\_  
Date Name Signature Company

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

# FIELD INFORMATION FORM



Site Name: OVSL

**This Waste Management Field Information Form is Required**

This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: \_\_\_\_\_

Site No.:       
 Sample Point: MW-34A  
 Sample ID

**PURGE INFO**  
 PURGE DATE (MM DD YY): 12/14/11  
 PURGE TIME (2400 Hr Clock): 09:50  
 ELAPSED HRS (hrs:min):       
 WATER VOL IN CASING (Gallons):       
 ACTUAL VOL PURGED (Gallons):       
 WELL VOLs PURGED:       
*Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.*

**PURGE/SAMPLE EQUIPMENT**  
 Purging and Sampling Equipment ... Dedicated:  Y or  N  
 Filter Device:  Y or  N 0.45  $\mu$  (circle or fill in)  
 Purging Device:  C A-Submersible Pump D-Bailer  
 Filter Type:  A A-In-line Disposable C-Vacuum  
 Sampling Device:  C B-Peristaltic Pump E-Piston Pump B-Pressure X-Other \_\_\_\_\_  
 X-Other: \_\_\_\_\_ C-QED Bladder Pump F-Dipper/Bottle  
 Sample Tube Type: \_\_\_\_\_ A-Teflon C-PVC X-Other: \_\_\_\_\_  
 B-Stainless Steel D-Polypropylene

**WELL DATA**  
 Well Elevation (at TOC):      (ft/msl)      Depth to Water (DTW) (from TOC): 40.00 (ft)      Groundwater Elevation (site datum, from TOC):      (ft/msl)  
 Total Well Depth (from TOC):      (ft)      Stick Up (from ground elevation):      (ft)      Casing ID (in):           Casing Material:       
*Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.*

STABILIZATION DATA (Optional)	Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (umhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
		<u>09:51</u>	<u>1"</u>	<u>6.49</u>	<u>194</u>	<u>11.06</u>	<u>1.49</u>	<u>2.24</u>	<u>138</u>
	<u>09:54</u>	<u>2"</u>	<u>6.41</u>	<u>189</u>	<u>11.22</u>	<u>0.34</u>	<u>0.91</u>	<u>135</u>	
	<u>09:57</u>	<u>3"</u>	<u>6.35</u>	<u>179</u>	<u>11.21</u>	<u>0.55</u>	<u>0.87</u>	<u>137</u>	
	<u>10:00</u>	<u>4"</u>	<u>6.32</u>	<u>177</u>	<u>11.22</u>		<u>0.90</u>	<u>139</u>	

Suggested range for 3 consec. readings or more Permit/State requirements: pH +/- 0.2, Conductance +/- 3%, D.O. +/- 10%, eH/ORP +/- 25 mV, Stabilize

**Stabilization Data Fields are Optional** (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/State. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

**FIELD DATA**  
 SAMPLE DATE (MM DD YY): 12/14/11  
 pH (std): 6.32  
 CONDUCTANCE (umhos/cm @ 25 °C): 177  
 TEMP. (°C): 11.22  
 TURBIDITY (ntu): 0.55  
 DO (mg/L - ppm): 0.90  
 eH/ORP (mV): 139  
 Other: Dme  
 Units: 1000  
*Final Field Readings are required* (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/State).

Sample Appearance: \_\_\_\_\_ Odor: \_\_\_\_\_ Color: \_\_\_\_\_ Other: \_\_\_\_\_  
 Weather Conditions (required daily, or as conditions change): \_\_\_\_\_ Direction/Speed: \_\_\_\_\_ Outlook: \_\_\_\_\_ Precipitation:  Y or  N

**FIELD COMMENTS**  
 Specific Comments (including purge/well volume calculations if required):  
DTW MEASURED 1 hr AFTER SAMPLING @ 40.00 FT

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
12/14/11 Wayne Chang Wayne Chang SES  
 Date Name Signature Company

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy



# FIELD INFORMATION FORM



Site Name: OVSL  
 Site No.:   
 Sample Point: MW-36A  
 Sample ID

**This Waste Management Field Information Form is Required**  
 This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:  
 \_\_\_\_\_

**PURGE INFO**  
 PURGE DATE (MM DD YY): 12/14/11  
 PURGE TIME (24Hr Hr Clock): 11020  
 ELAPSED HRS (hrs:min):       
 WATER VOL IN CASING (Gallons):       
 ACTUAL VOL PURGED (Gallons):       
 WELL VOLS PURGED:     

*Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.*

**PURGE/SAMPLE EQUIPMENT**  
 Purging and Sampling Equipment ... Dedicated:  Y or  N  
 Purging Device:  C A-Submersible Pump D-Bailer  
 Sampling Device:  C B-Peristaltic Pump E-Piston Pump  
 X-Other: \_\_\_\_\_ C-QED Bladder Pump F-Dipper/Boitle  
 Filter Device:  Y or  N 0.45    $\mu$  (circle or fill in)  
 Filter Type:  A A-In-line Disposable C-Vacuum  
 B-Pressure X-Other \_\_\_\_\_  
 Sample Tube Type: \_\_\_\_\_ A-Teflon C-PVC X-Other: \_\_\_\_\_  
 B-Stainless Steel D-Polypropylene

**WELL DATA**  
 Well Elevation (at TOC) \_\_\_\_\_ (ft/MSL) Depth to Water (DTW) (from TOC) 3147 (ft)  
 Groundwater Elevation (site datum, from TOC) \_\_\_\_\_ (ft/MSL)  
 Total Well Depth (from TOC) \_\_\_\_\_ (ft) Stick Up (from ground elevation) \_\_\_\_\_ (ft)  
 Casing ID \_\_\_\_\_ (in) Casing Material \_\_\_\_\_  
*Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.*

STABILIZATION DATA (Optional)	Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) ( $\mu$ mhos/cm @ 25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
		<u>10:23</u>	<u>1"</u>	<u>6.18</u>	<u>146</u>	<u>8.97</u>	<u>1.53</u>	<u>1.99</u>	<u>149</u>
	<u>10:26</u>	<u>2"</u>	<u>6.22</u>	<u>137</u>	<u>9.03</u>	<u>1.50</u>	<u>1.18</u>	<u>148</u>	<u>33.95</u>
	<u>10:29</u>	<u>3"</u>	<u>6.24</u>	<u>138</u>	<u>9.03</u>	<u>1.23</u>	<u>1.13</u>	<u>150</u>	<u>34.10</u>
	<u>10:32</u>	<u>4"</u>	<u>6.25</u>	<u>137</u>	<u>9.04</u>		<u>1.16</u>	<u>151</u>	

Suggested range for 3 consec. readings or note Permit/State requirements: pH +/- 0.2, Conductance +/- 3%, D.O. +/- 10%, eH/ORP +/- 25 mV, Stabilize

**Stabilization Data Fields are Optional** (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

**FIELD DATA**  
 SAMPLE DATE (MM DD YY): 12/14/11  
 pH (std): 6.25  
 CONDUCTANCE ( $\mu$ mhos/cm @ 25°C): 137  
 TEMP. (°C): 9.04  
 TURBIDITY (ntu): 1.23  
 DO (mg/L - ppm): 1.16  
 eH/ORP (mV): 151  
 Other: Time  
 Units: 1032  
*Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).*

Sample Appearance: \_\_\_\_\_ Odor: \_\_\_\_\_ Color: \_\_\_\_\_ Other: \_\_\_\_\_  
 Weather Conditions (required daily, or as conditions change): \_\_\_\_\_ Direction/Speed: \_\_\_\_\_ Outlook: \_\_\_\_\_ Precipitation:  Y or  N  
 Specific Comments (including purge/well volume calculations if required): \_\_\_\_\_

**FIELD COMMENTS**  
8  
7  
30  
250

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
12/14/11 Wayne Chang Wayne Chang SCS  
 Date Name Signature Company

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy



# FIELD INFORMATION FORM

Site Name: OVSL

Site No.:     

Sample Point: MW-15R

Sample ID:     

**This Waste Management Field Information Form is Required**

This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:     

**PURGE INFO**

PURGE DATE (MM DD YY): 12/14/11

PURGE TIME (2400 Hr Clock): 09:53

ELAPSED HRS (hrs:min):     

WATER VOL IN CASING (Gallons):     

ACTUAL VOL PURGED (Gallons):     

WELL VOLs PURGED:     

*Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.*

**PURGE/SAMPLE EQUIPMENT**

Purging and Sampling Equipment ... Dedicated:  Y or  N

Filter Device:  Y or  N    0.45 or      µ (circle or fill in)

Purging Device:  C    A- Submersible Pump    D-Boiler  
 B-Peristaltic Pump    E-Piston Pump  
 C-QED Bladder Pump    F-Dipper/Bottle

Filter Type: A    A-In-line Disposable    C-Vacuum  
 B-Pressure    X-Other     

Sampling Device:  C

Sample Tube Type:         A-Teflon    C-PVC    X-Other:       
 X-Other:         B-Stainless Steel    D-Polypropylene

**WELL DATA**

Well Elevation (at TOC)      (ft/msl)

Depth to Water (DTW) (from TOC) 19.15 (ft)

Groundwater Elevation (site datum, from TOC)      (ft/msl)

Total Well Depth (from TOC)      (ft)

Stick Up (from ground elevation)      (ft)

Casing ID      (in)    Casing Material     

*Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.*

**STABILIZATION DATA (Optional)**

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
10:54	1 <sup>st</sup>	6.31	231	9.80	0.26	0.79	158	19.25
10:57	2 <sup>nd</sup>	6.53	240	9.77	0.18	0.32	149	19.32
11:00	3 <sup>rd</sup>	6.57	234	9.80	0.22	0.25	148	19.26
11:03	4 <sup>th</sup>	6.57	233	9.82		0.20	147	

Suggested range for 3 consec. readings or note Permit/State requirements:  
 pH:  $\pm 0.2$     Conductance:  $\pm 3\%$     Temp:  $-$     Turbidity:  $-$     D.O.:  $\pm 10\%$     eH/ORP:  $\pm 25$  mV    DTW: Stabilize

*Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

**FIELD DATA**

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (µmhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: <u>me</u> Units
12/14/11	6.57	233	9.82	0.22	0.20	147	1103

**Final Field Readings are required** (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.)

Sample Appearance:         Odor:         Color:         Other:     

Weather Conditions (required daily, or as conditions change):         Direction/Speed:         Outlook:         Precipitation:  Y or  N

Specific Comments (including purge/well volume calculations if required):     

**FIELD COMMENTS**

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

12, 14, 11    Wayne Chang    Wayne Chang    SOS

Date:         Name:         Signature:         Company:

# FIELD INFORMATION FORM



Site Name: OVSL  
 Site No.:       
 Sample Point: MW-23A  
 Sample ID:     

**This Waste Management Field Information Form is Required**  
 This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:     

**PURGE INFO**  
 PURGE DATE (MM DD YY): 12/14/11  
 PURGE TIME (2400 Hr Clock): 11:34  
 ELAPSED HRS (hrs:min):       
 WATER VOL IN CASING (Gallons):       
 ACTUAL VOL PURGED (Gallons):       
 WELL VOLs PURGED:     

*Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.*

**PURGE/SAMPLE EQUIPMENT**  
 Purging and Sampling Equipment ... Dedicated:  Y or  N  
 Purging Device:  C (Submersible Pump) or  D (Bailer)  
 Sampling Device:  C (Peristaltic Pump) or  F (Dipper/Buttle)  
 X-Other:       
 Filter Device:  Y or  N (0.45  $\mu$  or       $\mu$ )  
 Filter Type:  A (In-line Disposable) or  B (Pressure) or  X (Other)  
 Sample Tube Type:      (A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:     )

**WELL DATA**  
 Well Elevation (at TOC):      (ft/mst)  
 Depth to Water (DTW) (from TOC): 13.60 (m)  
 Groundwater Elevation (site datum, from TOC):      (ft/mst)  
 Total Well Depth (from TOC):      (ft)  
 Stick Up (from ground elevation):      (ft)  
 Casing ID:      (in)  
 Casing Material:     

*Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.*

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) ( $\mu$ mhos/cm @ 25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
11:35	1 <sup>st</sup>	6.23	245	12.26	10.01	0.90	90	
11:38	2 <sup>nd</sup>	6.27	248	12.58	7.76	0.17	69	
11:41	3 <sup>rd</sup>	6.27	248	12.63	14.77	0.13	65	
11:44	4 <sup>th</sup>	6.26	249	12.61	14.67	0.12	64	
11:47		6.26	248	12.64	14.72	0.13	65	

Suggested range for 3 consec. readings or note Permit/State requirements: pH +/- 0.2, Conductance +/- 3%, D.O. +/- 10%, eH/ORP +/- 25 mV, DTW Stabilize.  
**Stabilization Data Fields are Optional** (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

**FIELD DATA**  
 SAMPLE DATE (MM DD YY): 12/14/11  
 pH (std): 6.26  
 CONDUCTANCE ( $\mu$ mhos/cm @ 25°C): 248  
 TEMP. (°C): 12.64  
 TURBIDITY (ntu): 14.72  
 DO (mg/L - ppm): 0.13  
 eH/ORP (mV): 65  
 Other: Time  
 Units: 11:47

**Final Field Readings are required** (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).

Sample Appearance:      Odor:      Color:      Other:       
 Weather Conditions (required daily, or as conditions change):      Direction/Speed:      Outlook:      Precipitation: Y or N

**Specific Comments (including purge/well volume calculations if required):**  
8 DTW MW-B! 13.86 FT  
7 DTW MW-C! 14.08 FT  
15  
250

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
12, 14, 11 Date      Wayne Chang Name      Wayne Chang Signature      SCS Company

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

# FIELD INFORMATION FORM



Site Name: OVSL  
 Site No.:       
 Sample Point: MM-4  
 Sample ID:     

**This Waste Management Field Information Form is Required**  
 This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:     

**PURGE INFO**  
 PURGE DATE (MM DD YY): 12/14/11  
 PURGE TIME (2400 Hr Clock): 11:00  
 ELAPSED HRS (hrs:min):       
 WATER VOL IN CASING (Gallons):       
 ACTUAL VOL PURGED (Gallons):       
 WELL VOLs PURGED:     

*Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.*

**PURGE/SAMPLE EQUIPMENT**  
 Purging and Sampling Equipment ... Dedicated:  Y or  N  
 Purging Device:  C A-Submersible Pump  D-Bailer  
 Sampling Device:  C B-Peristaltic Pump  E-Piston Pump  
 X-Other:      C-QED Bladder Pump  F-Dipper/Bottle  
 Filter Device:  Y or  N 0.45  $\mu$  or       $\mu$  (circle or fill in)  
 Filter Type:  A A-In-line Disposable C-Vacuum  
 B-Pressure X-Other:       
 Sample Tube Type:  A-Teflon C-PVC X-Other:       
 B-Stainless Steel D-Polypropylene

**WELL DATA**  
 Well Elevation (at TOC):      (ft/mst) Depth to Water (DTW) (from TOC): 115.35 (ft)  
 Groundwater Elevation (site datum, from TOC):      (ft/mst)  
 Total Well Depth (from TOC):      (ft) Stick Up (from ground elevation):      (ft)  
 Casing ID:      (in) Casing Material:     

*Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.*

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) ( $\mu$ mhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
13:02	1 <sup>st</sup>	6.45	126	9.19	1.30	1.29	130	
13:05	2 <sup>nd</sup>	6.46	126	9.23	0.71	0.34	134	
13:08	3 <sup>rd</sup>	6.52	126	9.27	1.20	0.20	133	
13:11	4 <sup>th</sup>	6.51	127	9.28	1.34	0.18	133	
13:14		6.53	128	9.31		0.16	133	

Suggested range for 3 consec. readings or note Permit/State requirements: pH +/- 0.2, Conductance +/- 3%, Temp. --, Turbidity --, D.O. +/- 10%, eH/ORP +/- 25 mV, DTW Stabilize

**Stabilization Data Fields are Optional** (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

**FIELD DATA**  
 SAMPLE DATE (MM DD YY): 12/14/11 pH (std): 6.53 CONDUCTANCE (umhos/cm @ 25 °C): 128 TEMP. (°C): 9.31  
 TURBIDITY (ntu): 1.34 DO (mg/L-ppm): 0.16 eH/ORP (mV): 133 Other: 1314

**Final Field Readings are required** (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).

Sample Appearance:      Odor:      Color:      Other:       
 Weather Conditions (required daily, or as conditions change):      Direction/Speed:      Outlook:      Precipitation:  Y or  N  
 Specific Comments (including purge/well volume calculations if required):     

**FIELD COMMENTS**  
      
      
    

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
12/14/11 Wayne Chang Wayne Chang SCS  
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: OVSL  
 Site No.:       
 Sample Point: MW-119C  
 Sample ID:     

**This Waste Management Field Information Form is Required**  
 This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:     

**PURGE INFO**  
 PURGE DATE (MM DD YY): 12/14/11  
 PURGE TIME (2400 Hr Clock): 1443  
 ELAPSED HRS (hrs:min):       
 WATER VOL IN CASING (Gallons):       
 ACTUAL VOL PURGED (Gallons):       
 WELL VOLs PURGED:     

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

**PURGE/SAMPLE EQUIPMENT**  
 Purging and Sampling Equipment ... Dedicated:  Y or  N  
 Purging Device: C A-Submersible Pump D-Bailer  
 Sampling Device: C B-Peristaltic Pump E-Piston Pump  
 X-Other:      C-QED Bladder Pump F-Dipper/Bottle  
 Filter Device: Y or  N 0.45 μ or      μ (circle or fill in)  
 Filter Type: A A-In-line Disposable C-Vacuum  
 Sample Tube Type:      B-Pressure X-Other:       
 A-Teflon C-PVC X-Other:       
 B-Stainless Steel D-Polypropylene

**WELL DATA**  
 Well Elevation (at TOC)      (ft/msl) Depth to Water (DTW) (from TOC) 346.3 (ft)  
 Groundwater Elevation (site datum, from TOC)      (ft/msl)  
 Total Well Depth (from TOC)      (ft) Stick Up (from ground elevation)      (ft)  
 Casing ID      (in) Casing Material       
 Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

**STABILIZATION DATA (Optional)**

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (umhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
14:44	1 <sup>st</sup>	6.71	164	9.89	0.55	2.65	79	346.3
14:47	2 <sup>nd</sup>	6.74	160	9.95	0.53	0.61	36	346.3
14:50	3 <sup>rd</sup>	6.75	171	9.97	0.63	0.30	29	346.3
14:53	4 <sup>th</sup>	6.78	171	10.02	0.33	0.24	26	346.3
14:56		6.80	171	9.99		0.20	22	

Suggested range for 3 consec. readings or note Permit/State requirements:  
 pH: +/- 0.2    Conductance: +/- 3%    Temp: --    Turbidity: --    D.O.: +/- 10%    eH/ORP: +/- 25 mV    DTW: Stabilize

Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

**FIELD DATA**  
 SAMPLE DATE (MM DD YY): 12/14/11  
 pH (std): 6.80  
 CONDUCTANCE (umhos/cm @ 25 °C): 171  
 TEMP. (°C): 9.99  
 TURBIDITY (ntu): 0.33  
 DO (mg/L-ppm): 0.20  
 eH/ORP (mV): 22  
 Other: Time  
 Units: 1456

Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).

Sample Appearance:      Odor:      Color:      Other:       
 Weather Conditions (required daily, or as conditions change):      Direction/Speed:      Outlook:      Precipitation: Y or  N

Specific Comments (including purge/well volume calculations if required):       
      
      
    

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
12/14/11 Wayne Chang Wayne Chang SCS  
 Date Name Signature Company

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy



# FIELD INFORMATION FORM

Site Name: OVSL -13A  
 Site No.:       
 Sample Point: MIN-~~13A~~  
 Sample ID:     

**This Waste Management Field Information Form is Required**  
 This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:     

**PURGE INFO**  
 PURGE DATE (MM DD YY): 12/14/11    PURGE TIME (2400 Hr Clock): 1418    ELAPSED HRS (hrs:min):       
 WATER VOL IN CASING (Gallons):         ACTUAL VOL PURGED (Gallons):         WELL VOLS PURGED:     

*Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.*

**PURGE/SAMPLE EQUIPMENT**  
 Purging and Sampling Equipment ... Dedicated:  Y or  N    Filter Device:  Y or  N    0.45  $\mu$  or       $\mu$  (circle or fill in)  
 Purging Device:  C    A-Submersible Pump    D-Bailer    Filter Type:  A    A-In-line Disposable    C-Vacuum  
 Sampling Device:  C    B-Peristaltic Pump    E-Piston Pump    B-Pressure    X-Other:       
 X-Other:         C-QED Bladder Pump    F-Dipper/Bottle    A-Teflon    C-PVC    X-Other:       
 Sample Tube Type:         B-Stainless Steel    D-Polypropylene

**WELL DATA**  
 Well Elevation (at TOC):      (ft/mst)    Depth to Water (DTW) (from TOC): 4880 (m)    Groundwater Elevation (site datum, from TOC):      (ft/mst)  
 Total Well Depth (from TOC):      (ft)    Stick Up (from ground elevation):      (ft)    Casing ID (in):         Casing Material:     

*Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.*

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) ( $\mu$ mhos/cm @ 25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
14:21	1 <sup>st</sup>	7.03	178	8.83	0.00	4.26	78	48.90
14:24	2 <sup>nd</sup>	7.07	178	8.86	0.00	4.35	83	
14:27	3 <sup>rd</sup>	7.09	176	8.87	0.00	4.33	85	
14:30	4 <sup>th</sup>	7.13	176	8.92	0.00	4.30	89	48.40

Suggested range for 3 consec. readings or note Permit/State requirements:    +/- 0.2    +/- 3%    --    --    +/- 10%    +/- 25 mV    Stabilize

**Stabilization Data Fields are Optional** (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE ( $\mu$ mhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L - ppm)	eH/ORP (mV)	Other: <u>Time</u>
12/14/11	7.13	176	8.92	0.00	4.30	89	Units: <u>1430</u>

**Final Field Readings are required** (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).

Sample Appearance:         Odor:         Color:         Other:       
 Weather Conditions (required daily, or as conditions change):         Direction/Speed:         Outlook:         Precipitation:  Y or  N

**Specific Comments (including purge/well volume calculations if required):**  
Doubler Checked Turbidity  
meter against standards OK

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
12, 14, 11    Wayne Chang    Wayne Chang    SES  
 Date    Name    Signature    Company

# FIELD INFORMATION FORM



Site Name: OVSL  
 Site No.:       
 Sample Point: MW-13B  
 Sample ID:     

**This Waste Management Field Information Form is Required**  
 This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:     

**PURGE INFO**  
 PURGE DATE (MM DD YY): 12/14/11    PURGE TIME (2400 Hr Clock): 14:45    ELAPSED HRS (hrs:min):       
 WATER VOL IN CASING (Gallons):         ACTUAL VOL PURGED (Gallons):         WELL VOLS PURGED:     

*Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.*

**PURGE/SAMPLE EQUIPMENT**  
 Purging and Sampling Equipment ... Dedicated:  Y or  N    Filter Device:  Y or  N    0.45 μ or      μ (circle or fill in)  
 Purging Device:  C    A-Submersible Pump    D-Bailer    Filter Type: A    A-In-line Disposable    C-Vacuum  
 Sampling Device:  C    B-Peristaltic Pump    E-Piston Pump    B-Pressure    X-Other:       
 X-Other:         Sample Tube Type:         A-Teflon    C-PVC    X-Other:       
 B-Stainless Steel    D-Polypropylene

**WELL DATA**  
 Well Elevation (at TOC):      (ft/msl)    Depth to Water (DTW) (from TOC): 16168 (ft)    Groundwater Elevation (site datum, from TOC):      (ft/msl)  
 Total Well Depth (from TOC):      (ft)    Stick Up (from ground elevation):      (ft)    Casing ID:      (in)    Casing Material:     

*Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.*

STABILIZATION DATA (Optional)	Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (umhos/cm @ 25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
		<u>14:50</u>	<u>1"</u>	<u>7.16</u>	<u>169</u>	<u>8.77</u>	<u>0.00</u>	<u>5.06</u>	<u>99</u>
	<u>14:53</u>	<u>2"</u>	<u>7.15</u>	<u>168</u>	<u>8.75</u>	<u>0.01</u>	<u>4.37</u>	<u>94</u>	
	<u>14:56</u>	<u>3"</u>	<u>7.42</u>	<u>169</u>	<u>8.72</u>	<u>0.03</u>	<u>4.57</u>	<u>89</u>	
	<u>14:59</u>	<u>4"</u>	<u>7.47</u>	<u>169</u>	<u>8.72</u>	<u>0.00</u>	<u>4.60</u>	<u>89</u>	
	<u>15:02</u>		<u>7.53</u>	<u>169</u>	<u>8.76</u>	<u>0.00</u>	<u>4.59</u>	<u>89</u>	

Suggested range for 3 consec. readings or note Permit/State requirements:    pH: +/- 0.2    Conductance: +/- 3%    Temp: --    Turbidity: --    D.O.: +/- 10%    eH/ORP: +/- 25 mV    DTW: Stabilize

*Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

**FIELD DATA**  
 SAMPLE DATE (MM DD YY): 12/14/11    pH (std): 7.53    CONDUCTANCE (umhos/cm @ 25°C): 169    TEMP. (°C): 8.76    TURBIDITY (ntu): 0.00    DO (mg/L-ppm): 4.59    eH/ORP (mV): 89    Other: Time Units: 1502

*Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).*

Sample Appearance:         Odor:         Color:         Other:       
 Weather Conditions (required daily, or as conditions change):         Direction/Speed:         Outlook:         Precipitation: Y or N

**FIELD COMMENTS**  
 Specific Comments (including purge/well volume calculations if required):  
Double checked with turbidity calibration standards, OK.  
R 155  
D 4.5  
0250

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
12/14/11    Wayne Chang    Wayne Chang    JES  
 Date    Name    Signature    Company

**DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy**

# FIELD INFORMATION FORM



Site Name: OVSL

Site No.: OVSL Sample Point: mw-43  
Sample ID

**This Waste Management Field Information Form is Required!**  
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: \_\_\_\_\_

PURGE INFO	PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
	<u>121511</u>	<u>0741</u>				

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below:

PURGE/SAMPLE EQUIPMENT	Purging and Sampling Equipment ... Dedicated: <input checked="" type="checkbox"/> Y or <input type="checkbox"/> N	Filter Device: <input checked="" type="checkbox"/> Y or <input type="checkbox"/> N	0.45 μ or _____ μ (circle or fill in)
	Purging Device: <u>C</u> A- Submersible Pump D-Bailer B-Peristaltic Pump E-Piston Pump C-QED Bladder Pump F-Dipper/Bottle	Filter Type: <u>A</u> A-In-line Disposable C-Vacuum B-Pressure X-Other _____	
	Sampling Device: <u>C</u> X-Other: _____	Sample Tube Type: _____	A-Teflon C-PVC X-Other: _____ B-Stainless Steel D-Polypropylene

WELL DATA	Well Elevation (at TOC) _____ (ft/msl)	Depth to Water (DTW) (from TOC) <u>2543</u> (ft)	Groundwater Elevation (site datum, from TOC) _____ (ft/msl)
	Total Well Depth (from TOC) _____ (ft)	Stick Up (from ground elevation) _____ (ft)	Casing ID _____ (in) Casing Material _____

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (umhos/cm @ 25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
<u>07:45</u>		<u>5.80</u>	<u>69</u>	<u>9.96</u>	<u>71000</u>	<u>1.44</u>	<u>119</u>	
<u>07:48</u>		<u>5.77</u>	<u>64</u>	<u>10.06</u>	<u>3318</u>	<u>1.39</u>	<u>102</u>	<u>2545</u>
<u>07:51</u>		<u>5.75</u>	<u>64</u>	<u>10.10</u>	<u>174</u>	<u>1.44</u>	<u>98</u>	<u>2548</u>
<u>07:54</u>		<u>5.77</u>	<u>64</u>	<u>10.10</u>	<u>6.93</u>	<u>1.45</u>	<u>91</u>	<u>2550</u>
<u>07:57</u>		<u>5.76</u>	<u>63</u>	<u>10.11</u>	<u>3.15</u>	<u>1.45</u>	<u>90</u>	<u>2553</u>
<u>08:00</u>		<u>5.77</u>	<u>63</u>	<u>10.11</u>	<u>3.51</u>	<u>1.46</u>	<u>90</u>	

Suggested range for 3 consec. readings or note Permit/State requirements: pH +/- 0.2, Conductance +/- 3%, Temp. --, Turbidity --, D.O. +/- 10%, eH/ORP +/- 25 mV, Stabilize

Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L - ppm)	eH/ORP (mV)	Other: TIME Units
<u>121511</u>	<u>5.77</u>	<u>63</u>	<u>10.11</u>	<u>3.51</u>	<u>1.46</u>	<u>90</u>	<u>0800</u>

Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).

Sample Appearance: CLEAR Odor: — Color: LT ORANGE Other: —  
Weather Conditions (required daily, or as conditions change): \_\_\_\_\_ Direction/Speed: \_\_\_\_\_ Outlook: RAIN Precipitation:  Y or  N

Specific Comments (including purge/well volume calculations if required):  
R: 8 CLOUDY ORANGE STAIN AT START OF PURGE  
D: 7 TURBIDITY CLEARED QUICKLY LIGHT STAIN & LEFT  
psl: 30  
Q: 400 Double checked pH prob with standard OK

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
12/15/11 SAM ADLINGTON [Signature] SCS  
 Date Name Signature Company

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy



# FIELD INFORMATION FORM



Site Name: CVSL  
 Site No.:       
 Sample Point: MW-42  
 Sample ID

**This Waste Management Field Information Form is Required**  
 This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: \_\_\_\_\_

**PURGE INFO**  
 PURGE DATE (MM DD YY): 12 15 11  
 PURGE TIME (2400 Hr Clock): 08:20  
 ELAPSED HRS (hrs:min):       
 WATER VOL IN CASING (Gallons):       
 ACTUAL VOL PURGED (Gallons):       
 WELL VOLS PURGED:     

*Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.*

**PURGE/SAMPLE EQUIPMENT**  
 Purging and Sampling Equipment ... Dedicated:  Y or  N  
 Purging Device: C A-Submersible Pump D-Bailer  
 Sampling Device: C B-Peristaltic Pump E-Piston Pump  
 X-Other: \_\_\_\_\_ C-QED Bladder Pump F-Dipper/Bottle  
 Filter Device: Y or  N 0.45  $\mu$  or \_\_\_\_\_  $\mu$  (circle or fill in)  
 Filter Type: A A-In-line Disposable C-Vacuum  
 B-Pressure X-Other \_\_\_\_\_  
 Sample Tube Type: \_\_\_\_\_ A-Teflon C-PVC X-Other: \_\_\_\_\_  
 B-Stainless Steel D-Polypropylene

**WELL DATA**  
 Well Elevation (at TOC): \_\_\_\_\_ (ft/mst)  
 Depth to Water (DTW) (from TOC): 2830 (ft)  
 Groundwater Elevation (site datum, from TOC): \_\_\_\_\_ (ft/mst)  
 Total Well Depth (from TOC): \_\_\_\_\_ (ft)  
 Stick Up (from ground elevation): \_\_\_\_\_ (ft)  
 Casing ID (in): \_\_\_\_\_ Casing Material: \_\_\_\_\_  
*Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.*

STABILIZATION DATA (Optional)	Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) ( $\mu$ mhos/cm @ 25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
		08:25	1 <sup>st</sup>	6.40	566	12.07	8.20	0.24	-65
	08:28	2 <sup>nd</sup>	6.42	570	12.11	6.38	0.16	-70	2885
	08:31	3 <sup>rd</sup>	6.42	569	12.11	3.15 <del>6.42</del>	0.15	-74	
	08:34	4 <sup>th</sup>	6.43	570	12.13	2.62	0.12	-76	2830
	08:37		6.42	572	12.16	1.57	0.13	-78	2830

Suggested range for 3 consec. readings or note Permit/State requirements: pH +/- 0.2, Conductance +/- 3%, Temp. --, Turbidity --, D.O. +/- 10%, eH/ORP +/- 25 mV, DTW Stabilize

**Stabilization Data Fields are Optional** (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

**FIELD DATA**  
 SAMPLE DATE (MM DD YY): 12 15 11  
 pH (std): 6.42  
 CONDUCTANCE ( $\mu$ mhos/cm @ 25°C): 572  
 TEMP. (°C): 12.16  
 TURBIDITY (ntu): 1.57  
 DO (mg/L - ppm): 0.13  
 eH/ORP (mV): -78  
 Other: TIME Units: TIME  
0837

**Final Field Readings are required** (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).

Sample Appearance: CLEAR Odor: \_\_\_\_\_ Color: \_\_\_\_\_ Other: \_\_\_\_\_  
 Weather Conditions (required daily, or as conditions change): \_\_\_\_\_ Direction/Speed: \_\_\_\_\_ Outlook: RAIN Precipitation: Y or  N  
 Specific Comments (including purge/well volume calculations if required): \_\_\_\_\_

**FIELD COMMENTS**  
R: 8  
D: 7  
psi: 30  
Q: 450

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols, (if more than one sampler, all should sign):  
12/15/11 SAM ADLINGTON [Signature] SCS  
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: OVSL  
 Site No.:      Sample Point: MW-20  
 Sample ID

**This Waste Management Field Information Form is Required**  
 This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:                     

**PURGE INFO**  
 PURGE DATE (MM DD YY): 12/15/11 PURGE TIME (24HR Hr Clock): 09:00  
 ELAPSED HRS (hrs:min):      WATER VOL IN CASING (Gallons):       
 ACTUAL VOL PURGED (Gallons):      WELL VOLS PURGED:     

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

**PURGE/SAMPLE EQUIPMENT**  
 Purging and Sampling Equipment ... Dedicated:  Y or  N  
 Purging Device: C A-Submersible Pump D-Bailer  
 Sampling Device: C B-Peristaltic Pump E-Piston Pump  
 X-Other:      C-QED Bladder Pump F-Dipper/Bottle  
 Filter Device:  Y or  N 0.45 µ or      µ (circle or fill in)  
 Filter Type: A A-In-line Disposable C-Vacuum  
 B-Pressure X-Other:       
 Sample Tube Type:      A-Teflon C-PVC X-Other:       
 B-Stainless Steel D-Polypropylene

**WELL DATA**  
 Well Elevation (at TOC)      (ft/msl) Depth to Water (DTW) (from TOC) 3608 (ft)  
 Groundwater Elevation (site datum, from TOC)      (ft/msl)  
 Total Well Depth (from TOC)      (ft) Stick Up (from ground elevation)      (ft)  
 Casing ID      (in) Casing Material       
 Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

**STABILIZATION DATA (Optional)**

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
09:05	1 <sup>st</sup>	6.48	391	14.82	0.65	0.86	72	3760
09:08	2 <sup>nd</sup>	6.47	391	14.89	0.65	0.60	86	3760
09:11	3 <sup>rd</sup>	6.47	385	14.90	0.33	0.47	91	3765
09:14	4 <sup>th</sup>	6.47	378	14.90	0.50	0.37	98	3765
09:17		6.49	370	14.92	0.37	0.34	103	3765

Suggested range for 3 consec. readings or note Permit/State requirements: pH +/- 0.2, Conductance +/- 3%, D.O. +/- 10%, eH/ORP +/- 25 mV, DTW Stabilize

Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/State. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

**FIELD DATA**  
 SAMPLE DATE (MM DD YY): 12/15/11 pH (std): 6.49 CONDUCTANCE (µmhos/cm @ 25°C): 370 TEMP. (°C): 14.92  
 TURBIDITY (ntu): 0.37 DO (mg/L - ppm): 0.34 eH/ORP (mV): 103 Other: TIME  
 Units: TIME  
 Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/State).

Sample Appearance:      Odor:      Color:      Other:       
 Weather Conditions (required daily, or as conditions change):      Direction/Speed:      Outlook: RAIN Precipitation: Y or N  
 Specific Comments (including purge/well volume calculations if required):     

**FIELD COMMENTS**  
R: 8  
D: 7  
psi: 25  
Q: 406

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
12/15/11 SAM ADLINGTON [Signature] SCS  
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: OVSL  
 Site No.:       
 Sample Point: mw-39  
 Sample ID:     

**This Waste Management Field Information Form is Required**  
 This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:     

**PURGE INFO**  
 PURGE DATE (MM DD YY): 121511  
 PURGE TIME (2400 Hr Clock): 10:00  
 ELAPSED HRS (hrs:min):       
 WATER VOL IN CASING (Gallons):       
 ACTUAL VOL PURGED (Gallons):       
 WELL VOLs PURGED:     

*Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ "Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged". Mark changes, record field data, below.*

**PURGE/SAMPLE EQUIPMENT**  
 Purging and Sampling Equipment ... Dedicated:  Y  N  
 Purging Device: C A-Submersible Pump D-Bailer  
 Sampling Device: C B-Peristaltic Pump E-Piston Pump  
 X-Other:      C-QED Bladder Pump F-Dipper/Boottle  
 Filter Device:  Y  N 0.45 µ or      µ (circle or fill in)  
 Filter Type: A A-In-line Disposable C-Vacuum  
 Sample Tube Type:      B-Pressure X-Other:       
 A-Teflon C-PVC X-Other:       
 B-Stainless Steel D-Polypropylene

**WELL DATA**  
 Well Elevation (at TOC):      (ft/mst)  
 Depth to Water (DTW) (from TOC): 1963 (ft)  
 Groundwater Elevation (site datum, from TOC):      (ft/mst)  
 Total Well Depth (from TOC):      (ft)  
 Stick Up (from ground elevation):      (ft)  
 Casing ID:      (in)  
 Casing Material:     

*Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.*

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L-ppm)	eH/ORP (mV)	DTW (ft)
10:05	1 <sup>st</sup>	6.08	181	10.70	9.34	0.38	15	20.22
10:08	2 <sup>nd</sup>	5.816	150	10.85	3.12	0.41	35	20.49
10:11	3 <sup>rd</sup>	5.82	152	10.89	2.29	0.40	39	20.62
10:14	4 <sup>th</sup>	5.84	159	10.93	2.61	0.35	37	20.82
10:17		5.816	168	10.93	2.92	0.30	32	20.90

Suggested range for 3 consec. readings or note Permit/State requirements:  
 pH: +/- 0.2  
 Conductance: +/- 3%  
 Temp: --  
 Turbidity: --  
 D.O.: +/- 10%  
 eH/ORP: +/- 25 mV  
 DTW: Stabilize

**Stabilization Data Fields are Optional** (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

**FIELD DATA**  
 SAMPLE DATE (MM DD YY): 121511  
 pH (std): 5.816  
 CONDUCTANCE (µmhos/cm @ 25°C): 168  
 TEMP. (°C): 10.93  
 TURBIDITY (ntu): 2.92  
 DO (mg/L-ppm): 0.30  
 eH/ORP (mV): 32  
 Other: TIME  
 Units: TIME  
1017

**Final Field Readings are required** (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).

Sample Appearance:      Odor:      Color:      Other:       
 Weather Conditions (required daily, or as conditions change):      Direction/Speed:      Outlook: RAIN Precipitation: Y or N

**FIELD COMMENTS**  
 Specific Comments (including purge/well volume calculations if required):  
R: 8 - BOBBLES IN WATER STREAM  
D: 7 - pH CONSISTENT W/ LAST QUARTERS READING  
psi: 20  
Q: 450

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
12/15/11 SAM ADLINGTON [Signature] SCS  
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: CVSL  
 Site No.:       
 Sample Point: NW-24  
Sample ID

**This Waste Management Field Information Form is Required**  
 This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:                     

**PURGE INFO**  
 PURGE DATE (MM DD YY): 12 15 11  
 PURGE TIME (2400 Hr Clock): 10 42  
 ELAPSED HRS (hrs:min):       
 WATER VOL IN CASING (Gallons):       
 ACTUAL VOL PURGED (Gallons):       
 WELL VOLs PURGED:     

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

**PURGE/SAMPLE EQUIPMENT**  
 Purging and Sampling Equipment ... Dedicated:  Y or  N  
 Purging Device: C A-Submersible Pump D-Bailer  
 Sampling Device: C B-Peristaltic Pump E-Piston Pump  
 X-Other:                      C-QED Bladder Pump F-Dipper/Boottle  
 Filter Device:  Y or  N 0.45 µ or      µ (circle or fill in)  
 Filter Type: A A-In-line Disposable C-Vacuum  
 Sample Tube Type:      B-Pressure X-Other:                       
 A-Teflon C-PVC X-Other:                       
 B-Stainless Steel D-Polypropylene

**WELL DATA**  
 Well Elevation (at TOC):      (ft/mst) Depth to Water (DTW) (from TOC): 34 11 (ft) Groundwater Elevation (site datum, from TOC):      (ft/mst)  
 Total Well Depth (from TOC):      (ft) Stick Up (from ground elevation):      (ft) Casing ID:      (in) Casing Material:       
Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
10:50	1 <sup>st</sup>	6.27	116.8	11.76	66.00	0.53	109	34.20
10:53	2 <sup>nd</sup>	6.30	116.8	11.77	42.63	0.56	112	
10:56	3 <sup>rd</sup>	6.28	116.9	11.78	37.01	0.56	114	34.26
10:59	4 <sup>th</sup>	6.29	117.0	11.79	35.62	0.53	117	34.25
11:02		6.28	116.9	11.82	27.39	0.54	118	34.25
↓								
11:10		6.30	117.0	11.83	19.00	0.47	120	34.28
11:13		6.30	117.0	11.84	16.28	0.42	121	34.31
11:16		6.30	117.0	11.83	18.16	0.43	121	
11:19		6.27	117.1	11.83	14.30	0.43	120	34.30

Suggested range for 3 consec. readings or note Permit/State requirements: pH +/- 0.2, Conductance +/- 3%, D.O. +/- 10%, eH/ORP +/- 25 mV, DTW Stabilize

**Stabilization Data Fields are Optional** (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

**FIELD DATA**  
 SAMPLE DATE (MM DD YY): 12 15 11 pH (std): 6.27 CONDUCTANCE (µmhos/cm @ 25 °C): 117.1 TEMP. (°C): 11.83 TURBIDITY (ntu): 14.30 DO (mg/L-ppm): 0.43 eH/ORP (mV): 120 Other: TIME  
 Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site). Units: TIME

Sample Appearance:      Odor:      Color:      Other:       
 Weather Conditions (required daily, or as conditions change):      Direction/Speed:      Outlook: RAW Precipitation:  Y or  N

**FIELD COMMENTS**  
 Specific Comments (including purge/well volume calculations if required):  
R: 8 HIGH TURBIDITY @ ~~START~~ START OF PUMPING  
D: 7  
psi: 25  
Q: 400

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
12 15 11 SAM ADLINGTON [Signature] CVSL  
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: OVSL  
Site No.: [ ][ ][ ][ ][ ][ ]  
Sample Point: MW-32  
Sample ID

**This Waste Management Field Information Form is Required**  
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: \_\_\_\_\_

**PURGE INFO**

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLS PURGED
<u>12/15/11</u>	<u>12:03</u>	[ ][ ][ ]	[ ][ ][ ][ ][ ][ ]	[ ][ ][ ][ ][ ][ ]	[ ][ ][ ][ ][ ][ ]

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

**PURGE/SAMPLE EQUIPMENT**

Purging and Sampling Equipment ... Dedicated:  Y or  N

Purging Device:  C A-Submersible Pump D-Bailer  
 B-Peristaltic Pump E-Piston Pump  
Sampling Device:  C QED Bladder Pump F-Dipper/Boottle

Filter Device:  Y or  N 0.45 µ or [ ] µ (circle or fill in)

Filter Type:  A A-In-line Disposable C-Vacuum  
 B-Pressure X-Other \_\_\_\_\_

Sample Tube Type: [ ] A-Teflon C-PVC X-Other: \_\_\_\_\_  
B-Stainless Steel D-Polypropylene

**WELL DATA**

Well Elevation (at TOC) [ ][ ][ ][ ][ ][ ] (ft/msl) Depth to Water (DTW) (from TOC) 175 (ft) Groundwater Elevation (site datum, from TOC) [ ][ ][ ][ ][ ][ ] (ft/msl)

Total Well Depth (from TOC) [ ][ ][ ][ ][ ][ ] (ft) Stick Up (from ground elevation) [ ][ ][ ][ ][ ][ ] (ft) Casing ID [ ][ ] (in) Casing Material \_\_\_\_\_

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

**STABILIZATION DATA (Optional)**

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
<u>12:10</u>	1 <sup>st</sup>	<u>6.67</u>	<u>294</u>	<u>12.07</u>	[ ][ ][ ]	<u>0.19</u>	<u>4</u>	<u>175</u>
<u>12:13</u>	2 <sup>nd</sup>	<u>6.71</u>	<u>295</u>	<u>12.11</u>	<u>1382</u>	<u>0.14</u>	<u>-3</u>	<u>180</u>
<u>12:16</u>	3 <sup>rd</sup>	<u>6.71</u>	<u>295</u>	<u>12.13</u>	<u>151</u>	<u>0.14</u>	<u>-8</u>	[ ][ ][ ]
<u>12:19</u>	4 <sup>th</sup>	<u>6.73</u>	<u>295</u>	<u>12.12</u>	<u>157</u>	<u>0.13</u>	<u>-10</u>	<u>180</u>

Suggested range for 3 consec. readings or note Permit/State requirements:  
pH: +/- 0.2    Conductance: +/- 3%    Temp: -    Turbidity: -    D.O.: +/- 10%    eH/ORP: +/- 25 mV    DTW: Stabilize

**Stabilization Data Fields are Optional** (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

**FIELD DATA**

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (µmhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: <u>Time</u>
<u>12/15/11</u>	<u>6.73</u>	<u>295</u>	<u>12.12</u>	<u>157</u>	<u>0.13</u>	<u>-10</u>	Units: <u>Time</u> <u>12:19</u>

Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).

Sample Appearance: \_\_\_\_\_ Odor: \_\_\_\_\_ Color: \_\_\_\_\_ Other: \_\_\_\_\_  
Weather Conditions (required daily, or as conditions change): \_\_\_\_\_ Direction/Speed: \_\_\_\_\_ Outlook: RAIN Precipitation:  Y or  N

Specific Comments (including purge/well volume calculations if required): \_\_\_\_\_  
**FIELD COMMENTS**  
R: 8  
D: 7  
psi: 25  
Q: 400

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
12/15/11    SAM ADUNTON    \_\_\_\_\_    SCS  
Date    Name    Signature    Company

**GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM**

	Conductivity	pH 7	pH4	DO	Turbidity	Comments/Exceptions
Date	12/13/11					
Time	0828	835		0850	0845	
Weather (sky or precip, temp)	Overcast					
Barometric Pressure (*)						Temp: 0.85°C
Type of Calibration	Standard	Standard	Standard	Standard	Standard	Temp: -1.45°C
Standard Value	0.445	7	4.01	100% or ~8.5	1000, 10, 0.02 <del>100, 100, 20, &lt;0.1</del>	
Pre-Cal Reading	0.407	6.99	4.01	6.37	1000, 10, 0.02	
Post Cal Reading	0.445	7.00	4.01			
Discrepancy	—	—	—	—	—	→
Calib. Successful?	Yes	—	—	—	—	→
Calibration by	WC	SA	SA	SA	SA	
Instrument Type, ID	MP20	MP20	MP20	MP20	MICRO TRU <del>HAZ 2100P</del>	
Calibration Location	Office	—	—	—	—	→

\* If Direct Reading is Unavailable, Assume pressure = 760 mm - 2.5 (altitude in ft/100)

**GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM**

	Conductivity	pH 7	pH4	DO	Turbidity	Comments/Exceptions
Date	12/14/11					
Time	0740	<del>0750</del>	0745	7.53		
Weather (sky or precip, temp)						
Barometric Pressure (*)						
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	0.445	7	4.01	100% or ~8.5	800, 100, 20, <0.1	
Pre-Cal Reading	424	696	400	7.45		
Post Cal Reading	445	700	401			
Discrepancy						
Calib. Successful?						
Calibration by						
Instrument Type, ID	MP20	MP20	MP20	MP20	HACH 2100P	
Calibration Location	Office					

\* If Direct Reading is Unavailable, Assume pressure = 760 mm - 2.5 (altitude in ft/100)

**SCS ENGINEERS**

**GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM**

	Conductivity	pH 7	pH4	DO	Turbidity	Comments/Exceptions
Date	12/15/11			12/15/11		
Time	0715			0730		
Weather (sky or precip, temp)	Rain					
Barometric Pressure (*)						
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	0.445	7	4.01	100% or ~8.5	800, 100, 20, <0.1	
Pre-Cal Reading	0.458	7.02	4.05	6.20		
Post Cal Reading	0.445	7.00	4.01		8625	
Discrepancy					M, 31	
Calib. Successful?					0.13	
Calibration by	col					
Instrument Type, ID	MP20	MP20	MP20	MP20	MINI TFW #ACH-2100P	
Calibration Location	0872					

\* If Direct Reading is Unavailable, Assume pressure = 760 mm - 2.5 (altitude in ft/100)



RECORD OF WATER LEVEL READINGS  
 Olympic View Sanitary Landfill  
 04204027.14

Well ID	Date	Time	DTW	Measured by (initials)	Equipment Used	Comments	Last Quarter DTW
MW-2A1	12/13		8.72	SA			
MW-2B1	12/13		7.61	WC			
MW-4	12/14		15.35	WC			
MW-5	12/14		3.14	SA			
MW-9	12/14		3.39	SA			
MW-10	12/14		4.41	SA			
MW-11	12/14		4.78	SA			
MW-12	NM		—				
MW-13	12/14		29.00	WC			
MW-13A	12/14		48.80	WC			
MW-13B	12/14		61.68	WC			
MW-14	NM					DRY	
MW-15R	12/14		19.15	SA			
MW-16	12/13		61.02	SA			
MW-17	NM		—				
MW-18	NM		—				
MW-19A	12/14		<del>33.41</del>	WC		MEASURED AT 33.32	
MW-19B	12/14		33.41	SA			
MW-19C	12/14		34.36	WC			
MW-19D	12/14		33.70	SA			
MW-20	12/15		36.68	WC			
MW-21	12/14		5.48	SA			
MW-23A	12/14		13.60	WC			
MW-23B	12/14		13.86	WC			
MW-23C	12/14		14.08	WC			
MW-24	12/15		34.11	SA			
MW-26	12/14		13.52	SA			
MW-27	12/14		24.22	SA			

RECORD OF WATER LEVEL READINGS  
OVSL

04204027.14

Well ID	Date	Time	DTW	Measured by (initials)	Equipment Used	Comments	Last Quarter DTW
MW-28	NM					LOST IN BLACK BERRIES	
MW-29A	12/15/11		14.20	WC			
MW-29B	12/15		17.60	WC			
MW-29C	12/15		12.27	WC			
MW-30A	12/14		24.35	SA			
MW-30B	12/14		24.12	SA			
MW-31	12/14		2.71	SA			
MW-32	12/15		1.75	SA			
MW-33A	12/13		5.20	SA			
MW-33B	12/13		2.30	SA			
MW-33C	12/13		2.27	WC			
MW-34A	12/14		40.00	WC		MEASURED 1hr AFTER SAMPLING	
MW-34B	12/14/11		39.81	SA			
MW-34C	12/14		41.20	WC			
MW-35	12/13		72.31	WC			
MW-36 A	12/14/11		31.77	WC			
MW-37	NM					OBSTRUCTED @ 2.7 FT	
MW-38	12/14		4.21	SA			
MW-39	12/15		14.63	SA			
P-9	NM						

MW-1 12/14 71.79 SA  
 MW-41A 12/14 25.79  
 MW-41B 12/14 26.33  
 MW-41C 12/14 27.75  
 MW-40A ~~15.83~~ 12/14 15.83  
 MW-40B 12/14 16.00  
 MW-40C 12/14 16.75  
 MW-36 12/14 31.59  
 MW-42 12/15 28.30  
 MW-43 12/15 25.43

LANDFILL GAS MONITORING  
GEM 2000 CALIBRATION AND PERTINENT DATA

Date: 12-20-11

Site Name: Olympic View Landfill

Technician: Khalfani Lee

Job No.07207006.10

Task- 6540 \_\_\_\_\_

**WEATHER OBSERVATIONS**

Wind Speed:    MPH Wind Direction:    Barometric Pressure: 29.98 "Hg

Air Temperature: 44 °F General Weather Conditions: cloudy

**CALIBRATION INFORMATION**

Pre-monitoring Calibration Precision Check

*Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 2% of the calibration gas value.*

Instrument Serial No. 10772

Calibration Gas: %CH4 15.0% %CO2 15.0% %O2 20.9%

Time	CH4	CO2	O2
12:04:00 PM	15	15	20.8

Post-monitoring Calibration Check

Time	CH4	CO2	O2
19:36	50.2	34.8	21

**NOTES:**

---



---

M-40/4-Gas bump test/Cal

Time	Power level	Bump test	Sensor pass
	Not replaced	Not replaced	Not replaced

# SCS FIELD SERVICES

# DAILY LOG

JOB NO. 07207006.10 TASK NO. \_\_\_\_\_ DATE 12/20/11 PROJECT NAME OVSL - WM  
 TEMP \_\_\_\_\_ BARO \_\_\_\_\_ WIND \_\_\_\_\_ WEATHER \_\_\_\_\_

SCS-FS LABOR	HOURS	OT				HOURS	OT
Khalfani Lee							
			DAILY TOTAL				
EQUIP, SVCS, MTLs, MLG	QTY	UNITS				QTY	UNITS
GEM2000	1						
<b>SUMMARY</b>   Equipment calibration - GEM							
MS-IN reading							
Probes read for quarterly compliance.							
Probe depths sounded for potential obstructions or liquids.							
Buildings inspected for methane intrusion.							
GP7 152"							
GP8 175"							
GP9 309"							
GP10 285"							
GP11 268"							
GP12 459"							
GP13 514"							
GP14 153"							
GP15 149"							
GP16 148"							

PREPARED BY: Khalfani ACCEPTED BY: \_\_\_\_\_

## APPENDIX B

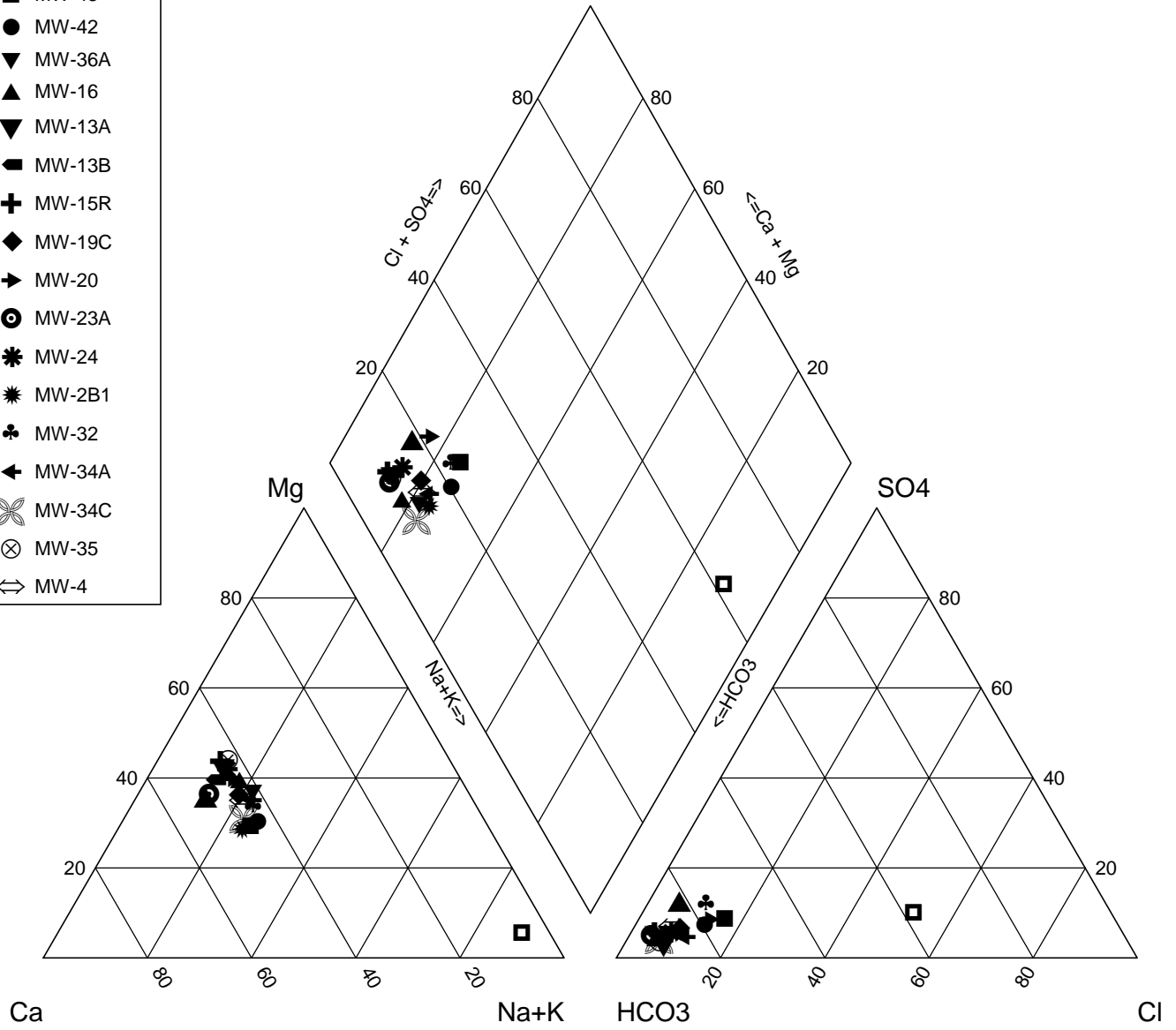
### GROUNDWATER GEOCHEMICAL RESULTS

*{Appendix B is included on the attached data CD to conserve paper}*

---

### Piper Plot 4Q11

- LP-LCD
- MW-43
- MW-42
- ▼ MW-36A
- ▲ MW-16
- ▼ MW-13A
- ◼ MW-13B
- ⊕ MW-15R
- ◆ MW-19C
- ➔ MW-20
- ⊙ MW-23A
- ✱ MW-24
- ✱ MW-2B1
- ♣ MW-32
- ◄ MW-34A
- ♣ MW-34C
- ⊗ MW-35
- ↔ MW-4



Description: Piper Plot

PROJECT: OVSL Fourth Quarter 2011

PROJECT NO: 04204027.15

CLIENT: Waste Management

DATE: December 2011

## Cation/Anion Balance

Location LP-LCD  
Sample Date 12/15/2011

Major Ions	Conversion Factor +	mg/l	meq/l
Mn	0.0364		
Fe	0.03581		
Na	0.04350	950	41.32273
K	0.02258	68	1.739206
Ca	0.04990	54	2.694745
Mg	0.08229	33	2.715491
		Sum of Cations	48.47217 meq/L
Cl	0.02821	750	21.15495
SO4	0.02082	200	4.166667
NO3	0.01613		
HCO3	0.01639	950	15.5694
		Sum of Anions	40.89101 meq/L
Balance (% difference) *			8.483537 %

+ mg/l to meq/l

\*  $[(\text{Total anions} - \text{Total cations}) / (\text{Total anions} + \text{Total cations})] * 100$

## Cation/Anion Balance

Location MW-13A  
 Sample Date 12/14/2011

Major Ions	Conversion Factor +	mg/l	meq/l
Mn	0.0364		
Fe	0.03581		
Na	0.04350	5.5	0.2392368
K	0.02258		
Ca	0.04990	16	0.7984431
Mg	0.08229	9.3	0.7652746
Sum of Cations			1.802955 meq/L
Cl	0.02821	4.4	0.124109
SO4	0.02082	2.5	5.208334E-02
NO3	0.01613	0.48	7.741935E-03
HCO3	0.01639	90	1.474995
Sum of Anions			1.65893 meq/L
Balance (% difference) *			4.160302 %

+ mg/l to meq/l

\*  $[(\text{Total anions} - \text{Total cations}) / (\text{Total anions} + \text{Total cations})] * 100$



# Cation/Anion Balance

Location MW-13B  
 Sample Date 12/14/2011

Major Ions	Conversion Factor +	mg/l	meq/l
Mn	0.0364		
Fe	0.03581		
Na	0.04350	5.1	0.2218378
K	0.02258		
Ca	0.04990	16	0.7984431
Mg	0.08229	8.1	0.6665295
		Sum of Cations	1.68681 meq/L
Cl	0.02821	3.4	9.590242E-02
SO4	0.02082	3.5	7.291667E-02
NO3	0.01613	0.47	7.580645E-03
HCO3	0.01639	84	1.376662
		Sum of Anions	1.553062 meq/L
Balance (% difference) *			4.128196 %

+ mg/l to meq/l

\*  $[(\text{Total anions} - \text{Total cations}) / (\text{Total anions} + \text{Total cations})] * 100$

# Cation/Anion Balance

Location MW-15R  
 Sample Date 12/14/2011

Major Ions	Conversion Factor +	mg/l	meq/l
Mn	0.0364		
Fe	0.03581		
Na	0.04350	6.3	0.2740349
K	0.02258		
Ca	0.04990	20	0.9980538
Mg	0.08229	12	0.9874511
Sum of Cations			2.25954 meq/L
Cl	0.02821	3.5	9.872308E-02
SO4	0.02082	5.8	0.1208333
NO3	0.01613	0.073	1.177419E-03
HCO3	0.01639	120	1.96666
Sum of Anions			2.187394 meq/L
Balance (% difference) *			1.622364 %

+ mg/l to meq/l

\*  $[(\text{Total anions} - \text{Total cations}) / (\text{Total anions} + \text{Total cations})] * 100$

## Cation/Anion Balance

Location MW-16  
 Sample Date 12/13/2011

Major Ions	Conversion Factor +	mg/l	meq/l
Mn	0.0364		
Fe	0.03581		
Na	0.04350	5.3	0.2305373
K	0.02258		
Ca	0.04990	11	0.5489296
Mg	0.08229	6.2	0.5101831
		Sum of Cations	1.28965 meq/L
Cl	0.02821	2.1	5.923384E-02
SO4	0.02082	2.3	4.791667E-02
NO3	0.01613	1.1	1.774194E-02
HCO3	0.01639	60	0.9833302
		Sum of Anions	1.108223 meq/L
Balance (% difference) *			7.566179 %

+ mg/l to meq/l

\*  $[(\text{Total anions} - \text{Total cations}) / (\text{Total anions} + \text{Total cations})] * 100$

## Cation/Anion Balance

Location MW-19C  
 Sample Date 12/14/2011

Major Ions	Conversion Factor +	mg/l	meq/l
Mn	0.0364		
Fe	0.03581		
Na	0.04350	6.1	0.2653354
K	0.02258	1.4	3.580718E-02
Ca	0.04990	14	0.6986377
Mg	0.08229	6.9	0.5677844
Sum of Cations			1.567565 meq/L
Cl	0.02821	4.6	0.1297503
SO4	0.02082	4.7	9.791666E-02
NO3	0.01613		
HCO3	0.01639	77	1.26194
Sum of Anions			1.489608 meq/L
Balance (% difference) *			2.54998 %

+ mg/l to meq/l

\*  $[(\text{Total anions} - \text{Total cations}) / (\text{Total anions} + \text{Total cations})] * 100$

## Cation/Anion Balance

Location MW-20  
 Sample Date 12/15/2011

Major Ions	Conversion Factor +	mg/l	meq/l
Mn	0.0364		
Fe	0.03581		
Na	0.04350	11	0.4784737
K	0.02258	3.6	9.207562E-02
Ca	0.04990	31	1.546983
Mg	0.08229	17	1.398889
Sum of Cations			3.516422 meq/L
Cl	0.02821	15	0.4230989
SO4	0.02082	13	0.2708333
NO3	0.01613	3.8	6.129032E-02
HCO3	0.01639	150	2.458326
Sum of Anions			3.213548 meq/L
Balance (% difference) *			4.500375 %

+ mg/l to meq/l

\*  $[(\text{Total anions} - \text{Total cations}) / (\text{Total anions} + \text{Total cations})] * 100$

# Cation/Anion Balance

Location MW-23A  
 Sample Date 12/14/2011

Major Ions	Conversion Factor +	mg/l	meq/l
Mn	0.0364		
Fe	0.03581		
Na	0.04350	7.1	0.308833
K	0.02258	1.2	3.069187E-02
Ca	0.04990	25	1.247567
Mg	0.08229	11	0.9051635
Sum of Cations			2.492256 meq/L
Cl	0.02821	3.4	9.590242E-02
SO4	0.02082	5.7	0.11875
NO3	0.01613		
HCO3	0.01639	130	2.130549
Sum of Anions			2.345201 meq/L
Balance (% difference) *			3.039907 %

+ mg/l to meq/l

\*  $[(\text{Total anions} - \text{Total cations}) / (\text{Total anions} + \text{Total cations})] * 100$

## Cation/Anion Balance

Location MW-24  
 Sample Date 12/15/2011

Major Ions	Conversion Factor +	mg/l	meq/l
Mn	0.0364		
Fe	0.03581		
Na	0.04350	5.2	0.2261875
K	0.02258		
Ca	0.04990	14	0.6986377
Mg	0.08229	8.1	0.6665295
		Sum of Cations	1.591355 meq/L
Cl	0.02821	4.4	0.124109
SO4	0.02082	4.4	9.166667E-02
NO3	0.01613		
HCO3	0.01639	87	1.425829
		Sum of Anions	1.641605 meq/L
Balance (% difference) *			-1.554294 %

+ mg/l to meq/l

\*  $[(\text{Total anions} - \text{Total cations}) / (\text{Total anions} + \text{Total cations})] * 100$

## Cation/Anion Balance

Location MW-2B1  
 Sample Date 12/13/2011

Major Ions	Conversion Factor +	mg/l	meq/l
Mn	0.0364		
Fe	0.03581		
Na	0.04350	13	0.5654689
K	0.02258	2.1	5.371077E-02
Ca	0.04990	25	1.247567
Mg	0.08229	9.1	0.7488171
Sum of Cations			2.615564 meq/L
Cl	0.02821	7.4	0.2087288
SO4	0.02082	6.6	0.1375
NO3	0.01613	0.48	7.741935E-03
HCO3	0.01639	130	2.130549
Sum of Anions			2.48452 meq/L
Balance (% difference) *			2.56946 %

+ mg/l to meq/l

\*  $[(\text{Total anions} - \text{Total cations}) / (\text{Total anions} + \text{Total cations})] * 100$



## Cation/Anion Balance

Location MW-32  
 Sample Date 12/15/2011

Major Ions	Conversion Factor +	mg/l	meq/l
Mn	0.0364		
Fe	0.03581		
Na	0.04350	15	0.6524641
K	0.02258	1	2.557656E-02
Ca	0.04990	25	1.247567
Mg	0.08229	12	0.9874511
Sum of Cations			2.913059 meq/L
Cl	0.02821	11	0.3102725
SO4	0.02082	16	0.3333333
NO3	0.01613		
HCO3	0.01639	130	2.130549
Sum of Anions			2.774155 meq/L
Balance (% difference) *			2.442401 %

+ mg/l to meq/l

\*  $[(\text{Total anions} - \text{Total cations}) / (\text{Total anions} + \text{Total cations})] * 100$

## Cation/Anion Balance

Location MW-33C  
 Sample Date 12/13/2011

Major Ions	Conversion Factor +	mg/l	meq/l
Mn	0.0364		
Fe	0.03581		
Na	0.04350	4.1	0.1783402
K	0.02258	1.2	3.069187E-02
Ca	0.04990	16	0.7984431
Mg	0.08229	6.8	0.5595556
Sum of Cations			1.567031 meq/L
Cl	0.02821	2.9	8.179913E-02
SO4	0.02082	8.2	0.1708333
NO3	0.01613		
HCO3	0.01639	69	1.13083
Sum of Anions			1.383462 meq/L
Balance (% difference) *			6.22162 %

+ mg/l to meq/l

\*  $[(\text{Total anions} - \text{Total cations}) / (\text{Total anions} + \text{Total cations})] * 100$

# Cation/Anion Balance

Location MW-34A  
 Sample Date 12/14/2011

Major Ions	Conversion Factor +	mg/l	meq/l
Mn	0.0364		
Fe	0.03581		
Na	0.04350	8.5	0.3697297
K	0.02258		
Ca	0.04990	14	0.6986377
Mg	0.08229	7	0.5760131
Sum of Cations			1.64438 meq/L
Cl	0.02821	5.9	0.1664189
SO4	0.02082	3.3	0.06875
NO3	0.01613	0.29	4.677419E-03
HCO3	0.01639	78	1.278329
Sum of Anions			1.518176 meq/L
Balance (% difference) *			3.990596 %

+ mg/l to meq/l

\*  $[(\text{Total anions} - \text{Total cations}) / (\text{Total anions} + \text{Total cations})] * 100$

## Cation/Anion Balance

Location MW-34C  
 Sample Date 12/14/2011

Major Ions	Conversion Factor +	mg/l	meq/l
Mn	0.0364		
Fe	0.03581		
Na	0.04350	16	0.6959617
K	0.02258	1.1	2.813422E-02
Ca	0.04990	29	1.447178
Mg	0.08229	12	0.9874511
Sum of Cations			3.158725 meq/L
Cl	0.02821	6	0.1692396
SO4	0.02082	5.7	0.11875
NO3	0.01613		
HCO3	0.01639	150	2.458326
Sum of Anions			2.746315 meq/L
Balance (% difference) *			6.984034 %

+ mg/l to meq/l

\*  $[(\text{Total anions} - \text{Total cations}) / (\text{Total anions} + \text{Total cations})] * 100$

## Cation/Anion Balance

Location MW-35  
 Sample Date 12/13/2011

Major Ions	Conversion Factor +	mg/l	meq/l
Mn	0.0364		
Fe	0.03581		
Na	0.04350	5.1	0.2218378
K	0.02258		
Ca	0.04990	14	0.6986377
Mg	0.08229	8.8	0.7241309
Sum of Cations			1.644606 meq/L
Cl	0.02821	3.2	0.0902611
SO4	0.02082	2.5	5.208334E-02
NO3	0.01613	0.39	6.290322E-03
HCO3	0.01639	77	1.26194
Sum of Anions			1.410575 meq/L
Balance (% difference) *			7.660136 %

+ mg/l to meq/l

\*  $[(\text{Total anions} - \text{Total cations}) / (\text{Total anions} + \text{Total cations})] * 100$

## Cation/Anion Balance

Location MW-36A  
 Sample Date 12/14/2011

Major Ions	Conversion Factor +	mg/l	meq/l
Mn	0.0364		
Fe	0.03581		
Na	0.04350	6.6	0.2870842
K	0.02258		
Ca	0.04990	11	0.5489296
Mg	0.08229	6	0.4937256
Sum of Cations			1.329739 meq/L
Cl	0.02821	2.9	8.179913E-02
SO4	0.02082	3.4	7.083334E-02
NO3	0.01613	0.8	1.290323E-02
HCO3	0.01639	64	1.048886
Sum of Anions			1.214421 meq/L
Balance (% difference) *			4.532661 %

+ mg/l to meq/l

\*  $[(\text{Total anions} - \text{Total cations}) / (\text{Total anions} + \text{Total cations})] * 100$

# Cation/Anion Balance

Location MW-39  
 Sample Date 12/15/2011

Major Ions	Conversion Factor +	mg/l	meq/l
Mn	0.0364		
Fe	0.03581		
Na	0.04350	7	0.3044832
K	0.02258		
Ca	0.04990	11	0.5489296
Mg	0.08229	6.1	0.5019543
Sum of Cations			1.355367 meq/L
Cl	0.02821	3.9	0.1100057
SO4	0.02082		
NO3	0.01613	0.15	2.419355E-03
HCO3	0.01639	88	1.442218
Sum of Anions			1.554643 meq/L
Balance (% difference) *			-6.847936 %

+ mg/l to meq/l

\*  $[(\text{Total anions} - \text{Total cations}) / (\text{Total anions} + \text{Total cations})] * 100$

## Cation/Anion Balance

Location MW-4  
 Sample Date 12/14/2011

Major Ions	Conversion Factor +	mg/l	meq/l
Mn	0.0364		
Fe	0.03581		
Na	0.04350	6	0.2609856
K	0.02258		
Ca	0.04990	11	0.5489296
Mg	0.08229	5.3	0.4361243
Sum of Cations			1.24604 meq/L
Cl	0.02821	3	8.461978E-02
SO4	0.02082	4	8.333334E-02
NO3	0.01613		
HCO3	0.01639	61	0.9997191
Sum of Anions			1.167672 meq/L
Balance (% difference) *			3.246752 %

+ mg/l to meq/l

\*  $[(\text{Total anions} - \text{Total cations}) / (\text{Total anions} + \text{Total cations})] * 100$



## Cation/Anion Balance

Location MW-42  
Sample Date 12/15/2011

Major Ions	Conversion Factor +	mg/l	meq/l
Mn	0.0364		
Fe	0.03581		
Na	0.04350	22	0.9569473
K	0.02258	6.5	0.1662476
Ca	0.04990	38	1.896302
Mg	0.08229	16	1.316602
		Sum of Cations	4.336099 meq/L
Cl	0.02821	22	0.6205451
SO4	0.02082	17	0.3541667
NO3	0.01613		
HCO3	0.01639	230	3.769433
		Sum of Anions	4.744144 meq/L
Balance (% difference) *			-4.493771 %

+ mg/l to meq/l

\*  $[(\text{Total anions} - \text{Total cations}) / (\text{Total anions} + \text{Total cations})] * 100$

## Cation/Anion Balance

Location MW-43  
 Sample Date 12/15/2011

Major Ions	Conversion Factor +	mg/l	meq/l
Mn	0.0364		
Fe	0.03581		
Na	0.04350	2.9	0.1261431
K	0.02258		
Ca	0.04990	4.6	0.2295524
Mg	0.08229	1.8	0.1481177
		Sum of Cations	0.5038131 meq/L
Cl	0.02821	2.8	7.897846E-02
SO4	0.02082	2	4.166667E-02
NO3	0.01613	0.79	1.274194E-02
HCO3	0.01639	22	0.3605544
		Sum of Anions	0.4939415 meq/L
Balance (% difference) *			0.9893907 %

+ mg/l to meq/l

\*  $[(\text{Total anions} - \text{Total cations}) / (\text{Total anions} + \text{Total cations})] * 100$

## APPENDIX C

### STATISTICAL EVALUATION SUMMARY DATA

**Olympic View Sanitary Landfill**  
**Annual Statistical Evaluation & Summary**  
**2011 Monitoring Year**

Prepared for:

**SCS ENGINEERS**

2405 140<sup>th</sup> Ave NE, Ste 107  
Bellevue, Washington 98005  
(425) 746-4600

Prepared by:

***GeoChem Applications***  
*Geochemical and Statistical Data Analysis*

3941 Park Drive, Suite 20-249  
El Dorado Hills, CA 95762  
916 ♦ 939 ♦ 2307  
[www.geochemapplications.com](http://www.geochemapplications.com)

**FEBRUARY 2012**

---

**CONTENTS:**

1. *Statistical Trend Analysis (showing status through Q4 2011)*
  2. *Prediction Limits for Detection Monitoring*
    - a. *2011 Prediction Limits (showing status through Q4 2011)*
    - b. *Updated Prediction Limits for Use in 2012 Monitoring Year*
  3. *2011 Annual UCL Calculations for Preliminary Groundwater Cleanup Goals*
-

# 1. Statistical Trend Analysis

- Trend Results Summary Table (showing status through Q4 2011) (Table 1-1)
- Time-Series Graphs Depicting Significant Trends for “Trend Test A”
- Time-Series Graphs Depicting Significant Trends for “Trend Test B”

**TABLE 1-1**

**Results of Sen's Non-Parametric Test for Trend**

**FOURTH QUARTER 2011 REPORT**

**Trend Test Period:** January 2005 through December 2011

**Trend Test Wells:**

- Compliance Wells: MW-15R, MW-34A, MW-34C, MW-39, MW-42, MW-43
- Performance Wells: MW-2B1, MW-4, MW-19C, MW-20, MW-23A, MW-24
- Downgradient Wells: MW-9\*, MW-29A\*, MW-32, MW-33A\*, MW-33C, MW-36A
- Upgradient Wells MW-13A, MW-13B, MW-16, MW-35,

\* = wells sampled on semi-annual schedule during Q1 and Q3 of each monitoring year

**Trend Test A** = all organic parameters listed in Appendix I and Appendix II of WAC 173-351-990 that have been detected at least once in at least one of 22 wells comprising the network of 1) compliance, 2) performance, 3) downgradient, and 4) upgradient site monitoring wells, during the trend test period. This includes the following constituents:

	Significant Increasing Trends	Significant Decreasing Trends
1,1-Dichloroethane	None	None
1,2-Dichloroethene (total)	None	None
1,2-Dichlorobenzene	None	None
1,4-Dichlorobenzene	None	None
Acetone	None	None
Benzene	None	None
Carbon Disulfide	None	None
Chlorobenzene	None	None
Chlorodifluoromethane	None	None
Chloroethane	None	None
Chloroform	None	None
Chloromethane	None	None
cis-1,2-dichloroethene	None	None
Dichlorodifluoromethane	None	None
Ethyl Ether	None	None
Methylene Chloride	None	None
Naphthalene	None	None
n-Butyl Alcohol	None	None
tert-Butyl Alcohol	None	None
Tetrachloroethene	None	None
Tetrahydrofuran	None	None
Toluene	None	None
trans-1,2-Dichloroethene	None	None
Trichloroethene	None	None
Vinyl Chloride	None	MW-23A (graph 535) MW-24 (graph 536) MW-32 (graph 539)

**TABLE 1-1**

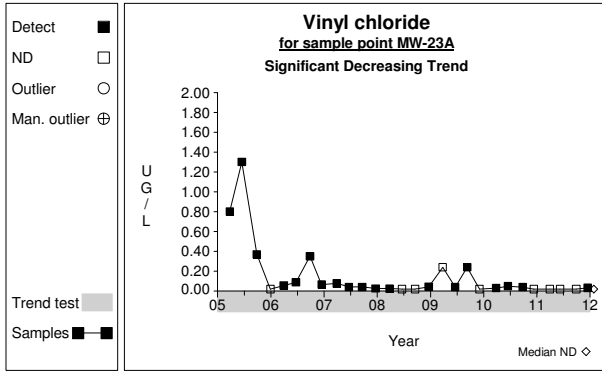
<b>Trend Test B = all metals and groundwater quality parameters listed in Appendix I and Appendix II of WAC (173-351-990)</b>		
	<u>Significant Increasing Trends</u>	<u>Significant Decreasing Trends</u>
Antimony, dissolved	None	None
Arsenic, dissolved	None	MW-19C (graph 93) MW-24 (graph 96) MW-34C (graph 103)
Barium, dissolved	MW-20 (graph 116)	MW-24 (graph 118) MW-29A (graph 119)
Beryllium, dissolved	None	None
Cadmium, dissolved	None	None
Chromium, dissolved	MW-34A (graph 234)	None
Cobalt, dissolved	None	None
Copper, dissolved	None	None
Lead, dissolved	None	None
Nickel, dissolved	None	None
Selenium, dissolved	None	None
Silver, dissolved	None	None
Thallium, dissolved	None	None
Vanadium, dissolved	None	None
Zinc, dissolved	None	None
Nitrate (as N)	None	None
pH	MW-42 (graph 438)	None
Specific Conductivity	None	MW-19C (graph 533) MW-23A (graph 535) MW-24 (graph 536) MW-36A (graph 545)
Temperature	None	MW-24 (graph 580)
Calcium, dissolved	None	MW-9 (graph 198) MW-23A (graph 183) MW-24 (graph 184) MW-29A (graph 185)
Bicarbonate Alkalinity (as CaCO <sub>3</sub> )	MW-13A (graph 1) MW-13B (graph 2) MW-35 (graph 16)	MW-24 (graph 8) MW-36A (graph 17)
Magnesium, dissolved	None	MW-33A (graph 342) MW-36A (graph 347)

**TABLE 1-1**

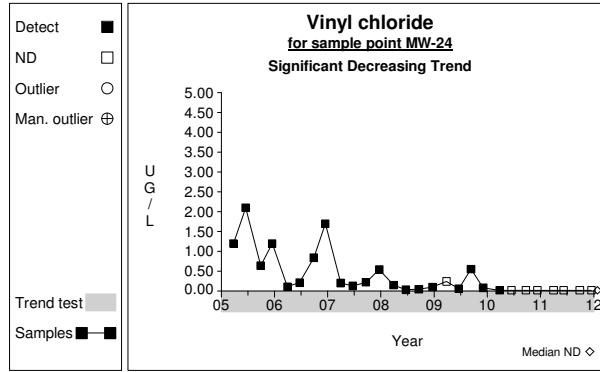
Sulfate	MW-15R (graph 553) MW-24 (graph 558) MW-20 (graph 556)	MW-4 (graph 569) MW-13B (graph 552) MW-19C (graph 555)
Sodium, dissolved	None	MW-19C (graph 511) MW-23A (graph 513) MW-34C (graph 521)
Chloride	None	MW-34C (graph 213)
Potassium, dissolved	None	MW-36A (graph 457)
Total Alkalinity as CaCO <sub>3</sub>	MW-13A (graph 23) MW-13B (graph 24) MW-35 (graph 38)	MW-36A (graph 39)
Iron, dissolved	None	MW-9 (graph 308) MW-19C (graph 291) MW-24 (graph 294) MW-32 (graph 297)
Manganese, dissolved	None	MW-15R (graph 355) MW-24 (graph 360)
Ammonia (as N)	None	MW-19C (graph 49)
Total Organic Carbon	None	None
Total Dissolved Solids	None	MW-24 (graph 624) MW-33A (graph 628) MW-36A (graph 633)



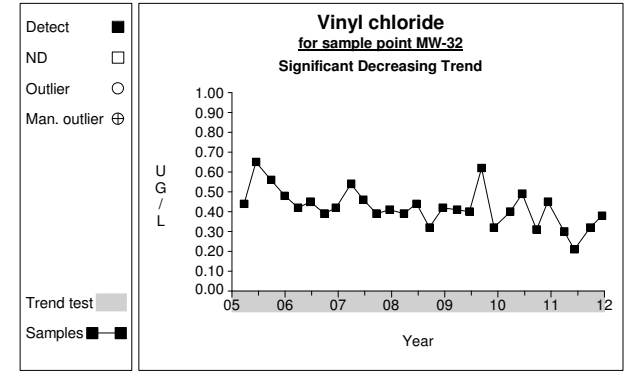
# Time Series



Graph 535

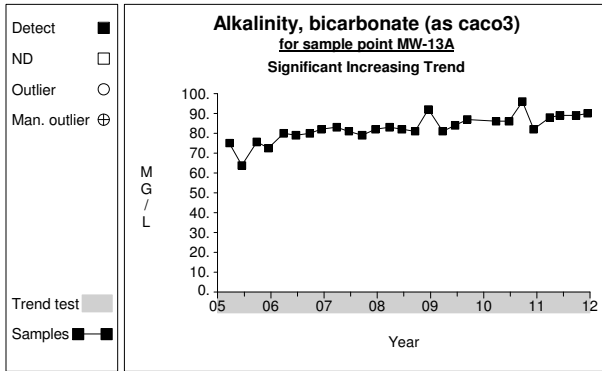


Graph 536

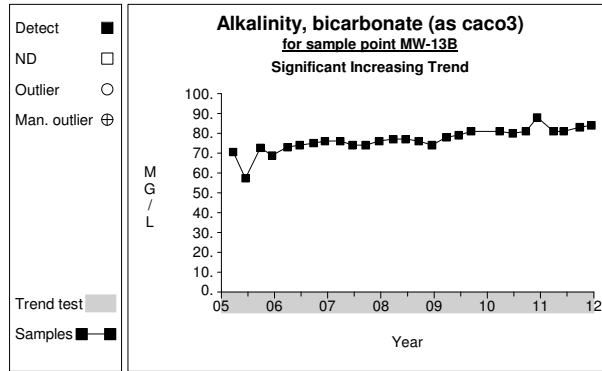


Graph 539

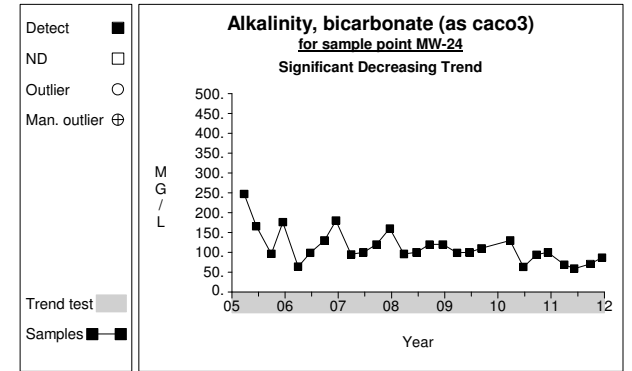
# Time Series



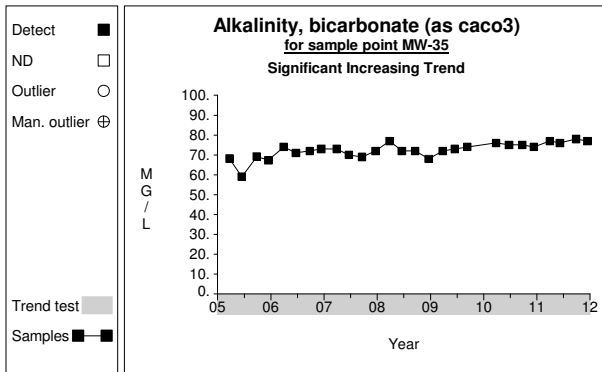
Graph 1



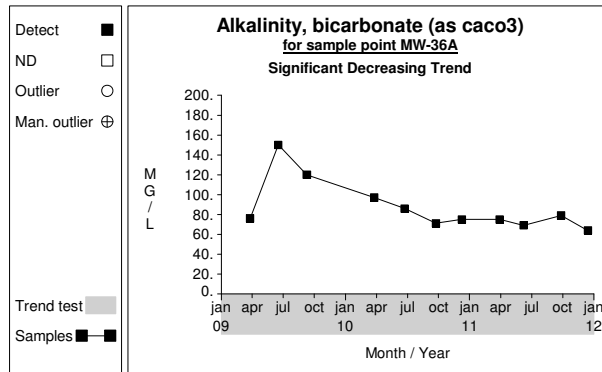
Graph 2



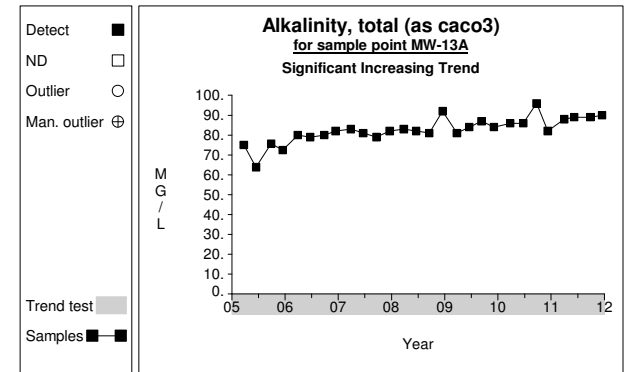
Graph 8



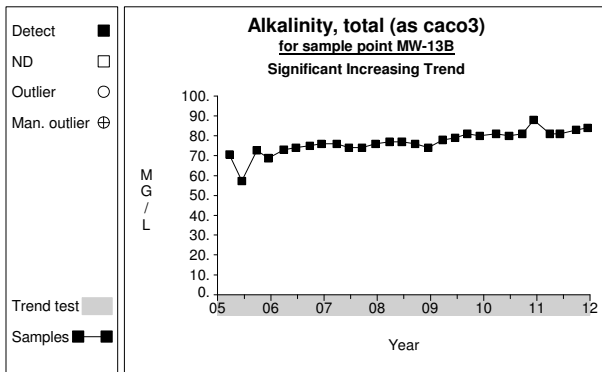
Graph 16



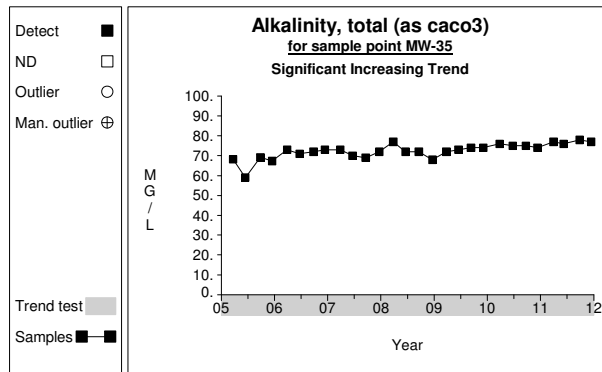
Graph 17



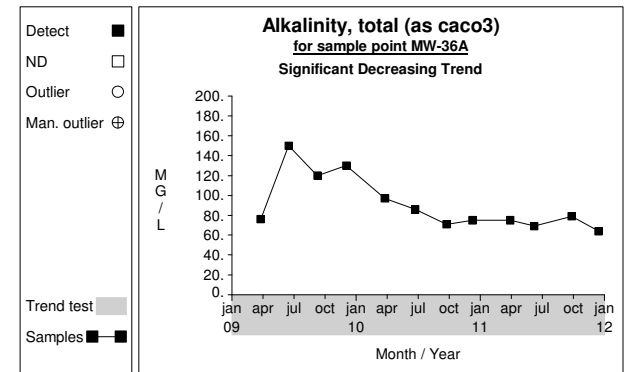
Graph 23



Graph 24

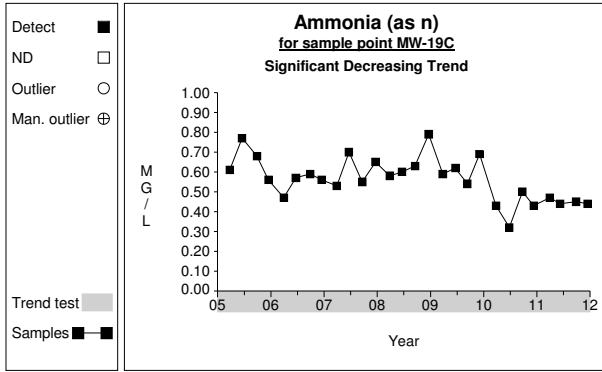


Graph 38

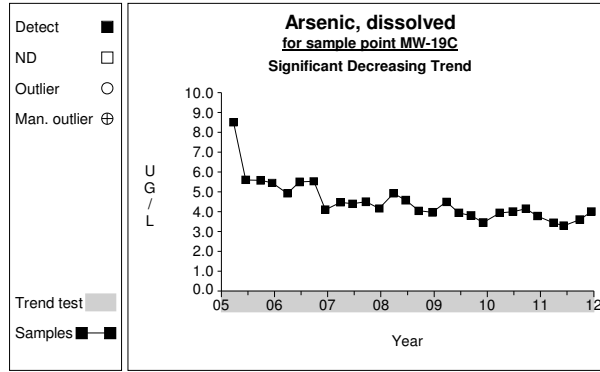


Graph 39

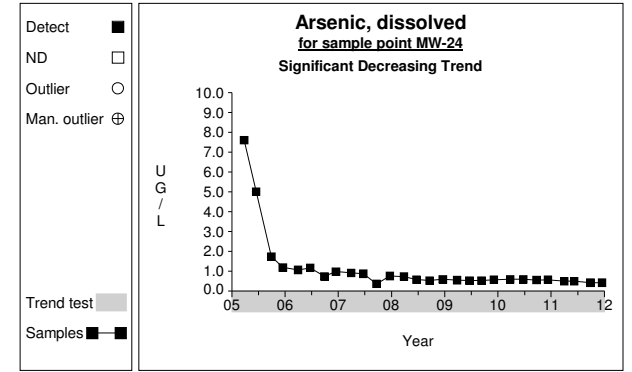
# Time Series



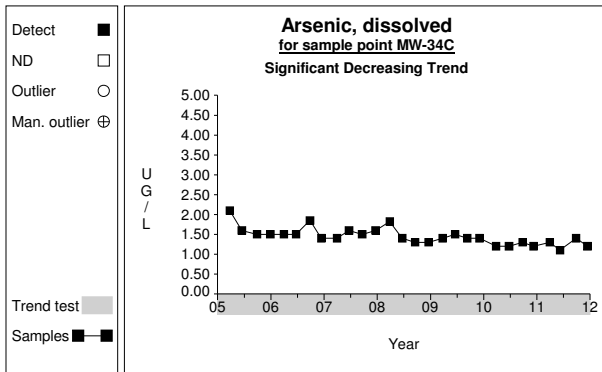
Graph 49



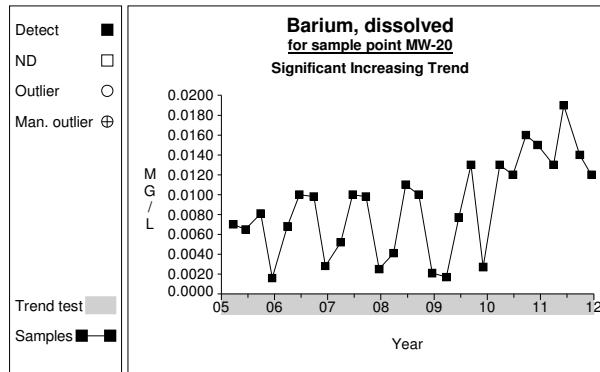
Graph 93



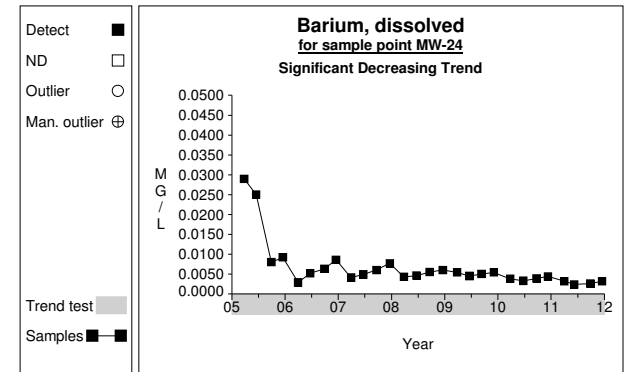
Graph 96



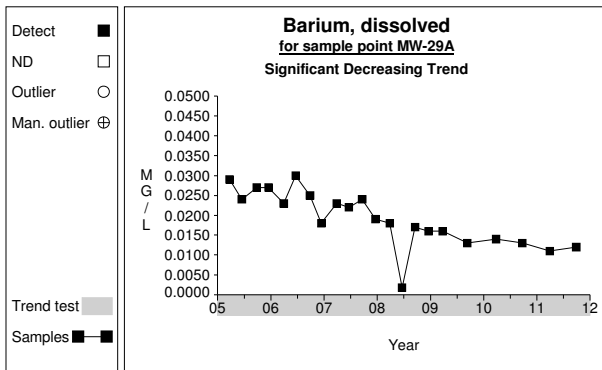
Graph 103



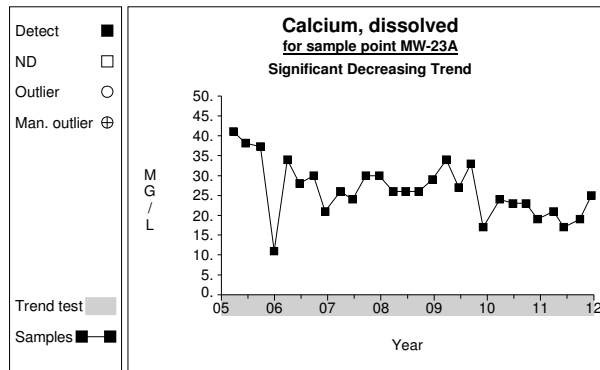
Graph 116



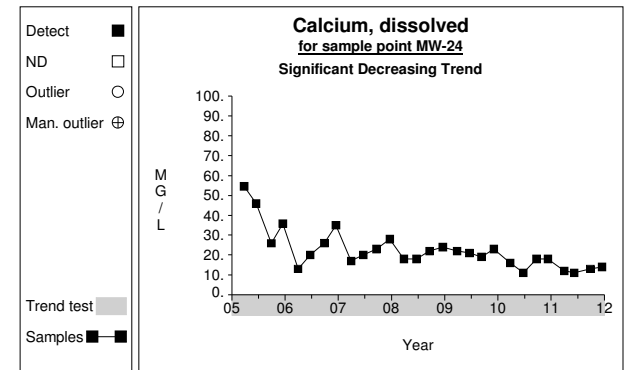
Graph 118



Graph 119

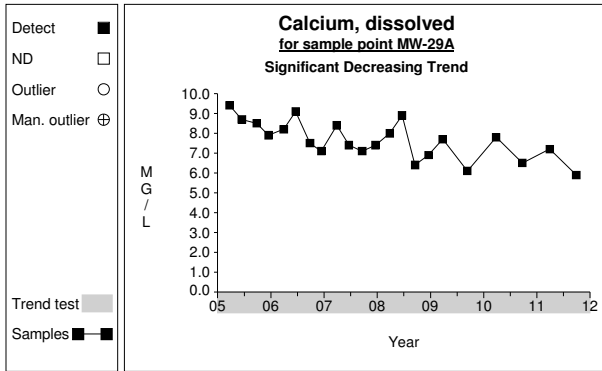


Graph 183

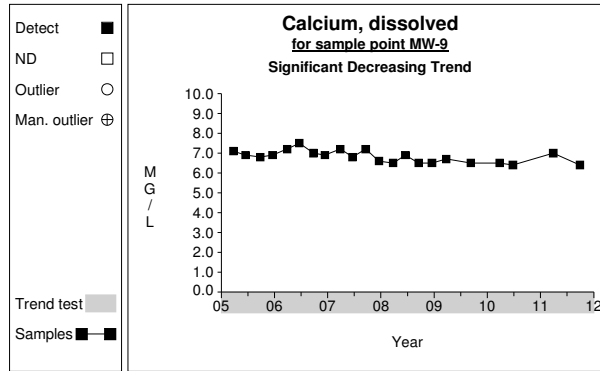


Graph 184

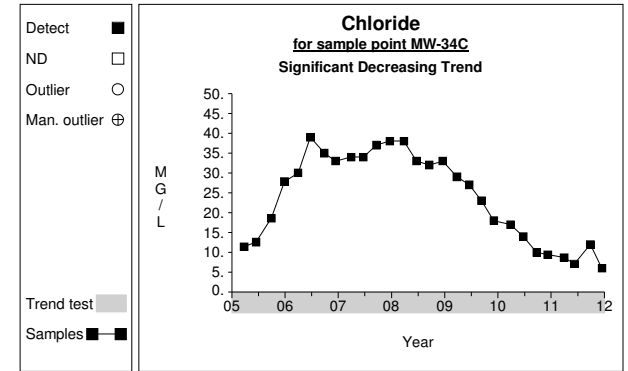
# Time Series



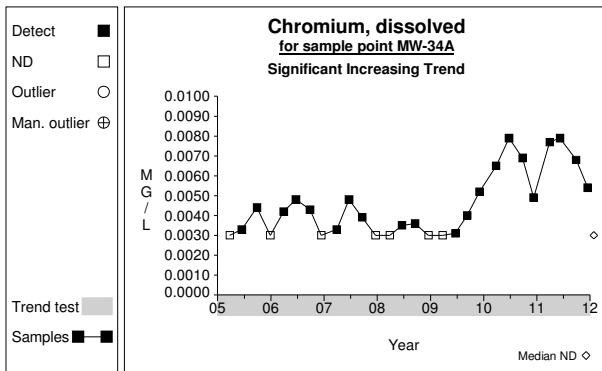
Graph 185



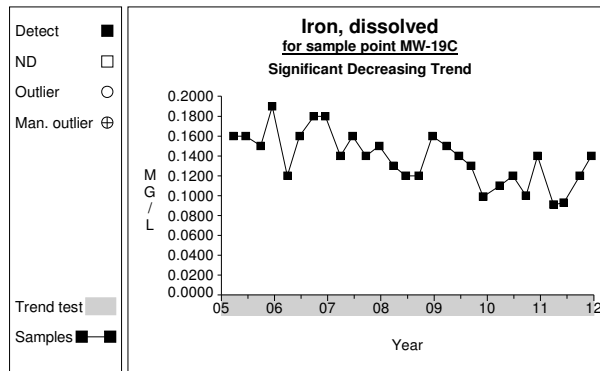
Graph 198



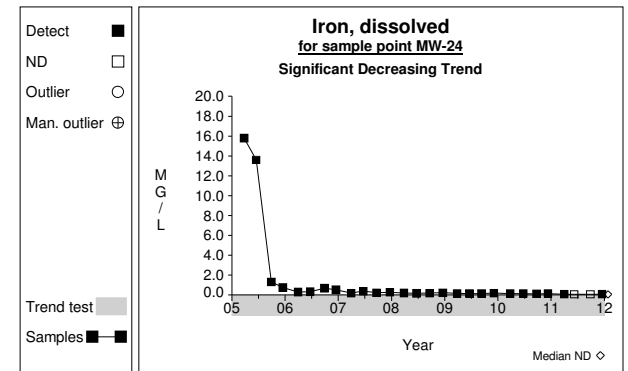
Graph 213



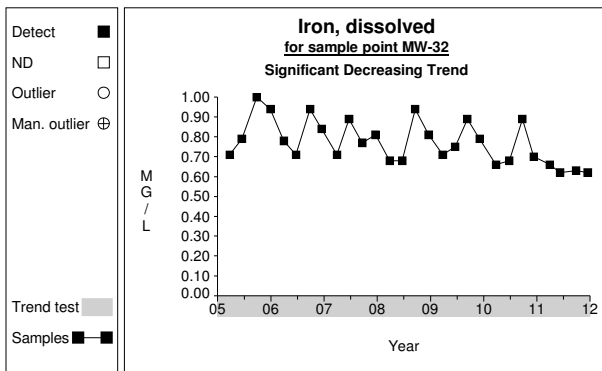
Graph 234



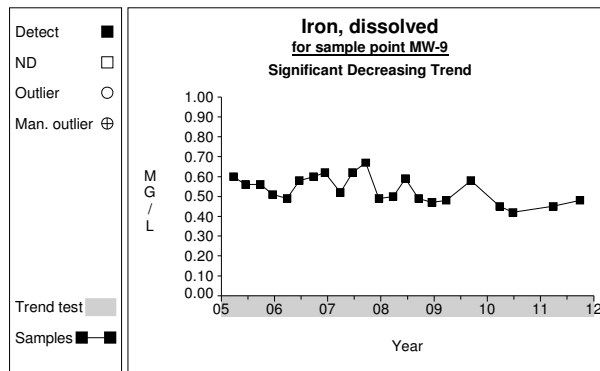
Graph 291



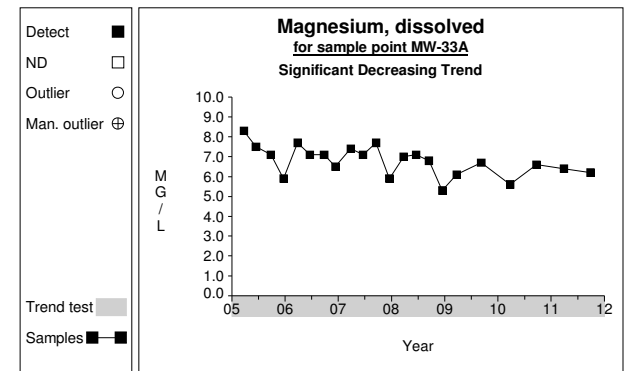
Graph 294



Graph 297

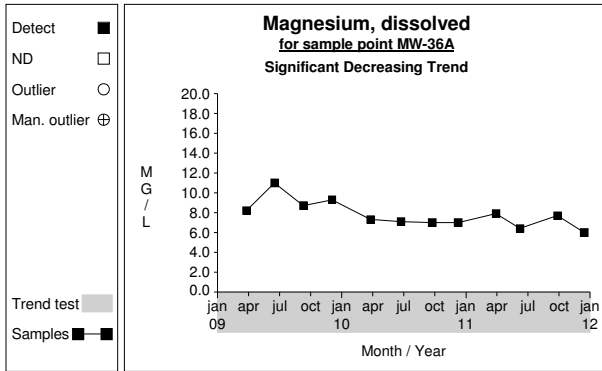


Graph 308

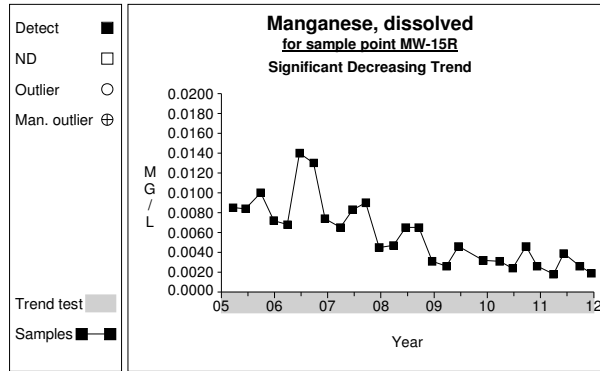


Graph 342

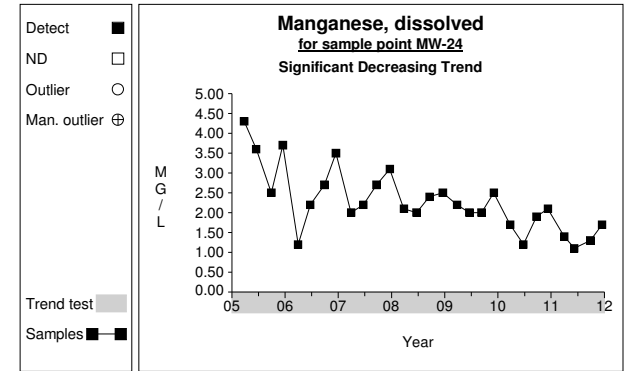
# Time Series



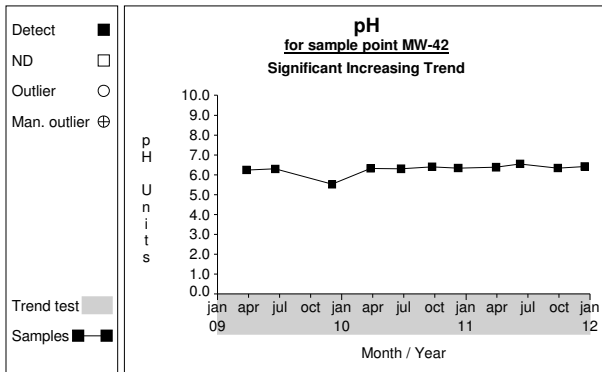
Graph 347



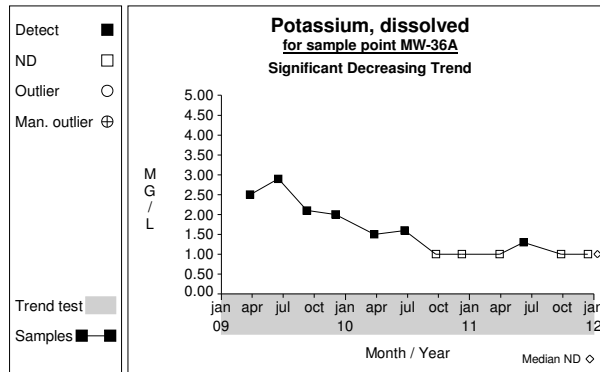
Graph 355



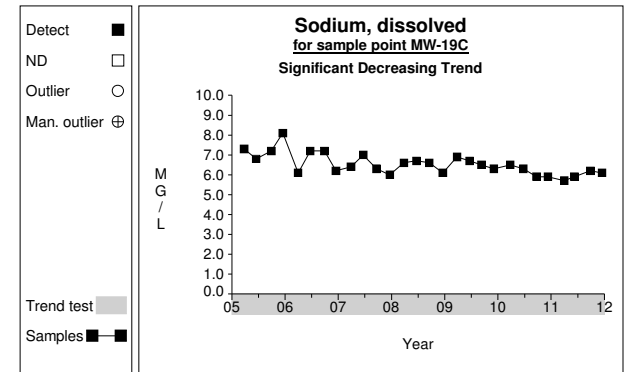
Graph 360



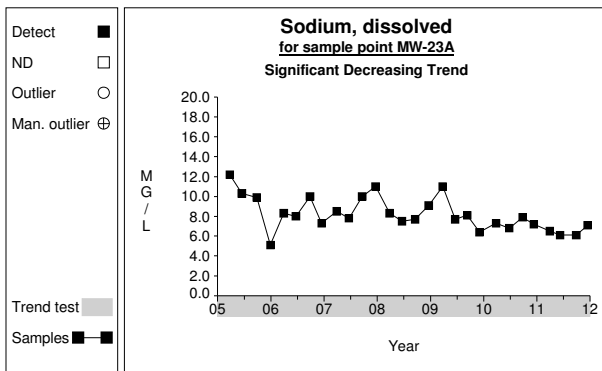
Graph 438



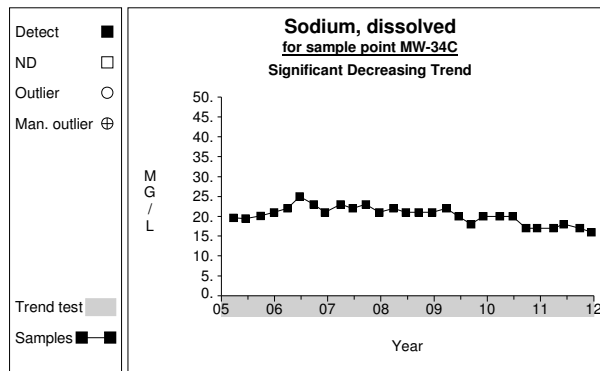
Graph 457



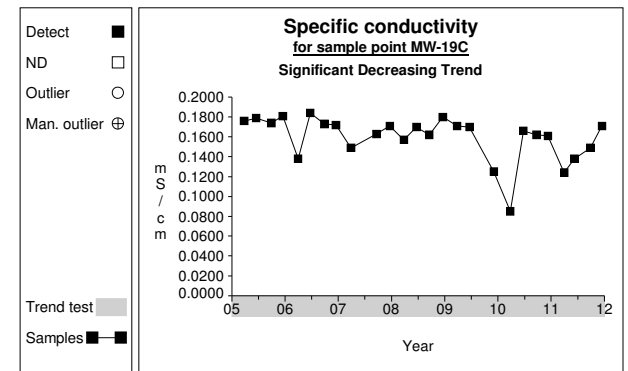
Graph 511



Graph 513

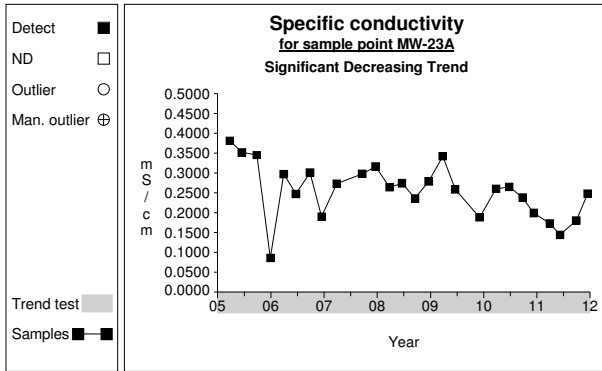


Graph 521

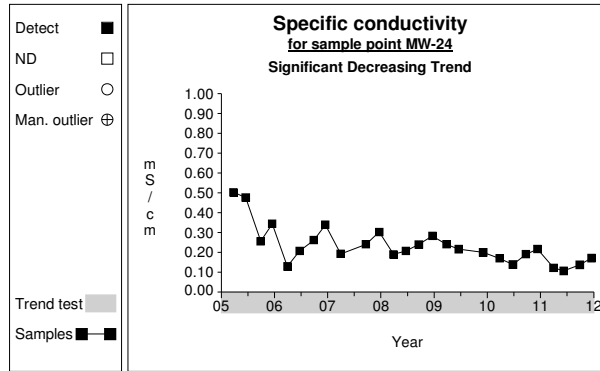


Graph 533

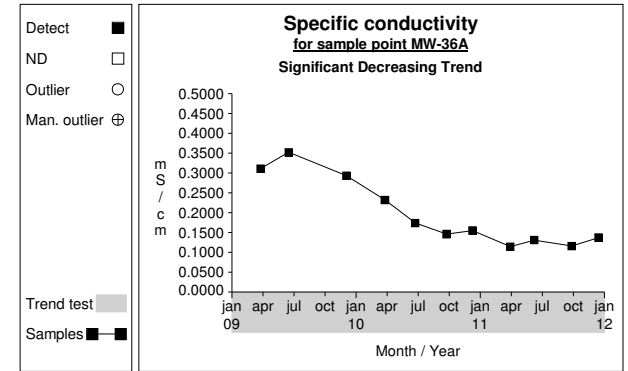
# Time Series



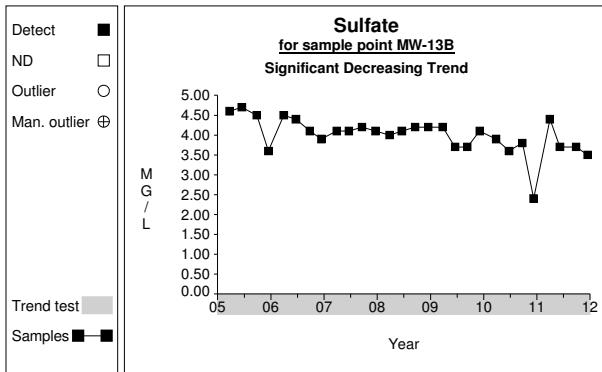
Graph 535



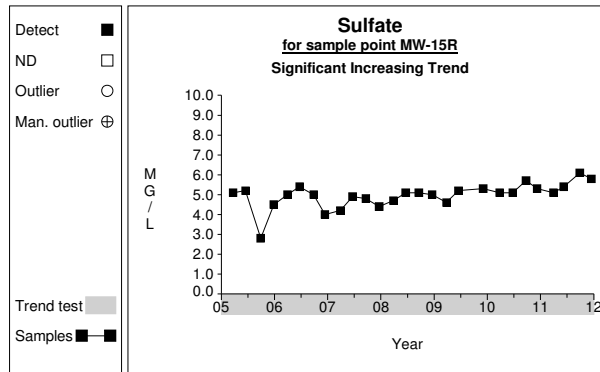
Graph 536



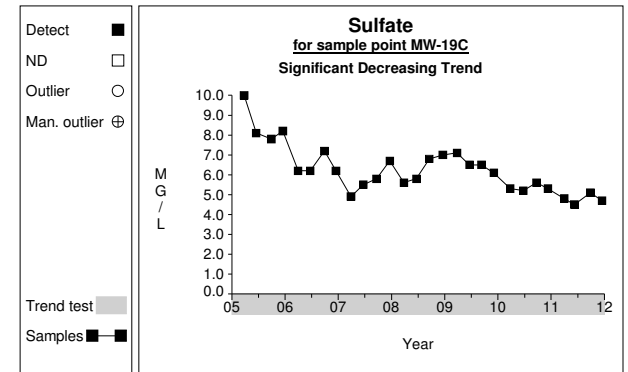
Graph 545



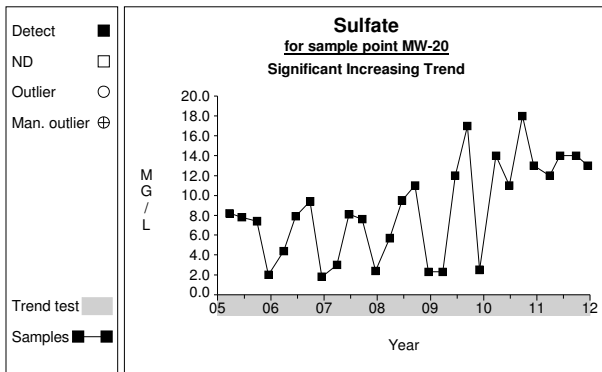
Graph 552



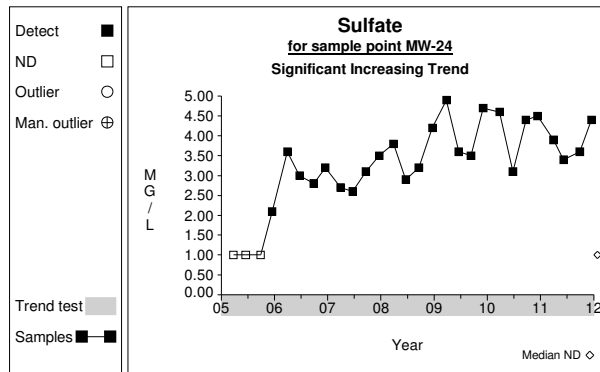
Graph 553



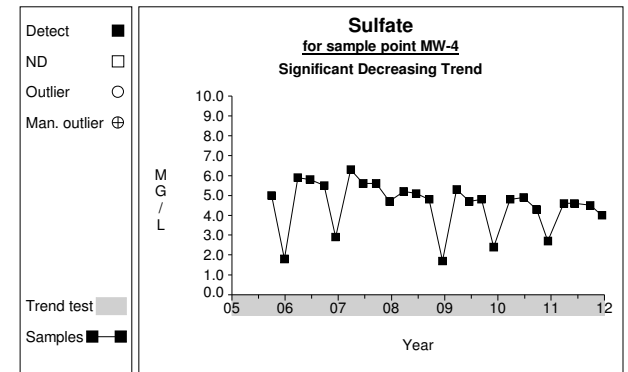
Graph 555



Graph 556

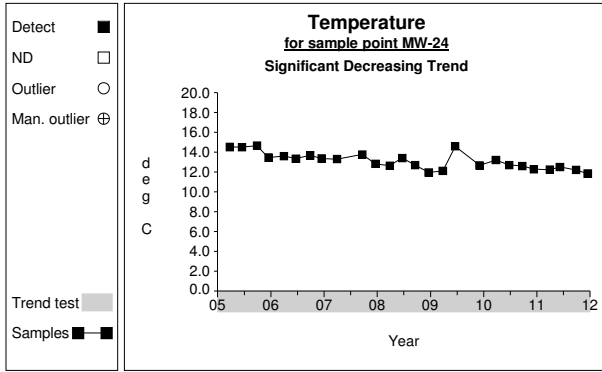


Graph 558

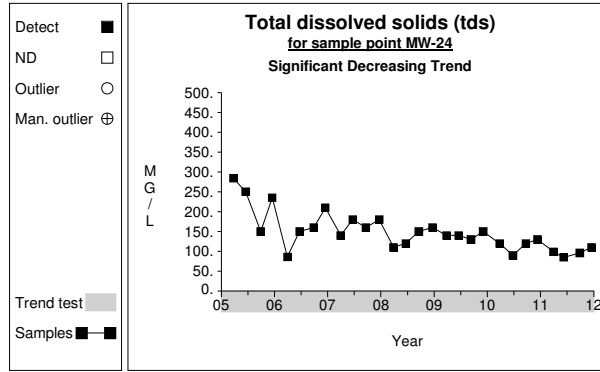


Graph 569

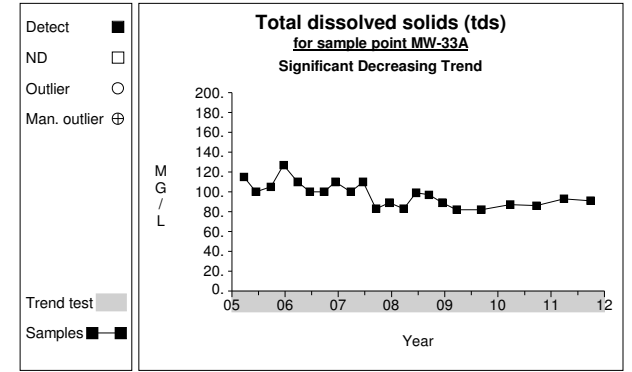
## Time Series



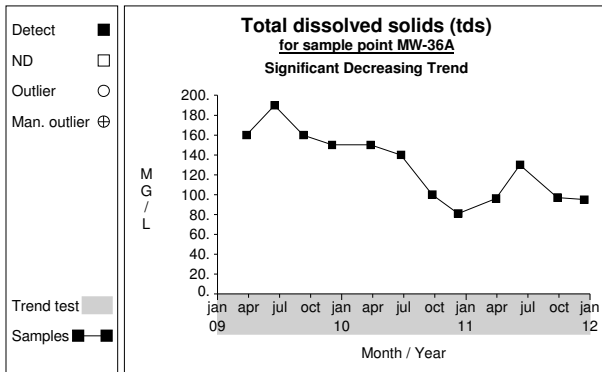
Graph 580



Graph 624



Graph 628



Graph 633

## **2. Prediction Limits for Detection Monitoring**

- 2011 Prediction Limits and Q4 2011 Exceedance Summary Table (Table 2-1)
- Updated Prediction Limits for Use During 2012 Monitoring Year (Table 2-2)
- Upgradient Data used in 2012 Prediction Limit Calculations (Table 2-3)
- Results of Shapiro-Wilk Test for Normality for 2012 Upgradient Data (Table 2-4)
- Comparison of 2011 Prediction Limits with 2012 Prediction Limits (Table 2-5)



**TABLE 2-1**  
**SUMMARY OF CURRENT<sup>[1]</sup> PREDICTION LIMIT EXCEEDANCES**  
**Q4 2011**  
**Olympic View Sanitary Landfill**

**Statistical Methodology:**

1. Inter-Well Prediction Limits using DUMPStat
2. Upgradient Data Set: pooled data from wells 13A, 13B, 16, and 35
3. "Detection Monitoring" well comparisons:
  - compliance wells: MW-15R, MW-34A, MW-34C, MW-39, MW-42, MW-43
  - downgradient wells: MW-9\*, MW-29A\*, MW-32, MW-33A\*, MW-33C, MW-36A
4. Parameters: all Appendix I and II inorganic and ground water quality parameters
5. Background Data Sets: January 2005 - December 2010
6. Arsenic: only low-level Method 200.8 data used
7. Units: MG/L = milligrams per liter; mS/cm = millisiemens per centimeter; deg C = degrees Celcius

<b>Parameter</b>	<b>Unit</b>	<b>Well</b>	<b>Latest Result</b>	<b>Date Sampled</b>	<b>Prediction Limit</b>
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-15R	120	12/14/2011	96
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-32	130	12/15/2011	96
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-34C	150	12/14/2011	96
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-42	230	12/15/2011	96
Alkalinity, total (as cacO3)	MG/L	MW-15R	120	12/14/2011	96
Alkalinity, total (as cacO3)	MG/L	MW-32	130	12/15/2011	96
Alkalinity, total (as cacO3)	MG/L	MW-34C	150	12/14/2011	96
Alkalinity, total (as cacO3)	MG/L	MW-42	230	12/15/2011	96
Ammonia (as n)	MG/L	MW-33A	0.21	09/28/2011	0.17
Ammonia (as n)	MG/L	MW-39	0.25	12/15/2011	0.17
Ammonia (as n)	MG/L	MW-42	3.6	12/15/2011	0.17
Arsenic, dissolved	UG/L	MW-29A	1.99	09/28/2011	0.38
Arsenic, dissolved	UG/L	MW-32	9.9	12/15/2011	0.38
Arsenic, dissolved	UG/L	MW-33C	2.6	12/13/2011	0.38
Arsenic, dissolved	UG/L	MW-34A	0.5	12/13/2011	0.38
Arsenic, dissolved	UG/L	MW-34C	1.2	12/13/2011	0.38
Arsenic, dissolved	UG/L	MW-36A	0.7	12/14/2011	0.38
Arsenic, dissolved	UG/L	MW-39	0.65	12/15/2011	0.38
Arsenic, dissolved	UG/L	MW-42	1.6	12/14/2011	0.38
Arsenic, dissolved	UG/L	MW-9	0.41	09/28/2011	0.38
Barium, dissolved	MG/L	MW-43	0.0053	12/15/2011	0.0052
Barium, dissolved	MG/L	MW-15R	0.006	12/14/2011	0.0052
Barium, dissolved	MG/L	MW-29A	0.012	09/28/2011	0.0052
Barium, dissolved	MG/L	MW-34C	0.011	12/14/2011	0.0052
Barium, dissolved	MG/L	MW-39	0.012	12/15/2011	0.0052
Barium, dissolved	MG/L	MW-42	0.12	12/15/2011	0.0052
Calcium, dissolved	MG/L	MW-15R	20	12/14/2011	17.1
Calcium, dissolved	MG/L	MW-32	25	12/15/2011	17.1
Calcium, dissolved	MG/L	MW-34C	29	12/14/2011	17.1

<b>Parameter</b>	<b>Unit</b>	<b>Well</b>	<b>Latest Result</b>	<b>Date Sampled</b>	<b>Prediction Limit</b>
Calcium, dissolved	MG/L	MW-42	38	12/15/2011	17.1
Chloride	MG/L	MW-33A	4.1	09/28/2011	3.51
Chloride	MG/L	MW-9	4.8	09/28/2011	3.51
Chloride	MG/L	MW-32	11	12/15/2011	3.51
Chloride	MG/L	MW-34A	5.9	12/14/2011	3.51
Chloride	MG/L	MW-34C	6	12/14/2011	3.51
Chloride	MG/L	MW-39	3.9	12/15/2011	3.51
Chloride	MG/L	MW-42	22	12/15/2011	3.51
Cobalt, dissolved	MG/L	MW-42	0.0031	12/15/2011	0.003
Cobalt, dissolved	MG/L	MW-39	0.0052	12/15/2011	0.003
Iron, dissolved	MG/L	MW-29A	3.3	09/28/2011	0.097
Iron, dissolved	MG/L	MW-32	0.62	12/15/2011	0.097
Iron, dissolved	MG/L	MW-34C	0.77	12/14/2011	0.097
Iron, dissolved	MG/L	MW-39	16	12/15/2011	0.097
Iron, dissolved	MG/L	MW-42	25	12/15/2011	0.097
Iron, dissolved	MG/L	MW-43	0.6	12/15/2011	0.097
Iron, dissolved	MG/L	MW-9	0.48	09/28/2011	0.097
Magnesium, dissolved	MG/L	MW-15R	12	12/14/2011	10.29
Magnesium, dissolved	MG/L	MW-32	12	12/15/2011	10.29
Magnesium, dissolved	MG/L	MW-34C	12	12/14/2011	10.29
Magnesium, dissolved	MG/L	MW-42	16	12/15/2011	10.29
Manganese, dissolved	MG/L	MW-29A	1.2	09/28/2011	0.0067
Manganese, dissolved	MG/L	MW-32	2.2	12/15/2011	0.0067
Manganese, dissolved	MG/L	MW-33C	0.14	12/13/2011	0.0067
Manganese, dissolved	MG/L	MW-34C	0.76	12/14/2011	0.0067
Manganese, dissolved	MG/L	MW-39	0.41	12/15/2011	0.0067
Manganese, dissolved	MG/L	MW-42	5.4	12/15/2011	0.0067
Manganese, dissolved	MG/L	MW-43	0.37	12/15/2011	0.0067
Manganese, dissolved	MG/L	MW-9	0.041	09/28/2011	0.0067
pH	pH Units	MW-39	5.86	12/15/2011	5.90 - 7.85
pH	pH Units	MW-43	5.77	12/15/2011	5.90 - 7.85
Potassium, dissolved	MG/L	MW-33C	1.2	12/13/2011	1.0
Potassium, dissolved	MG/L	MW-34C	1.1	12/14/2011	1.0
Potassium, dissolved	MG/L	MW-42	6.5	12/15/2011	1.0
Sodium, dissolved	MG/L	MW-36A	6.6	12/14/2011	5.9542
Sodium, dissolved	MG/L	MW-15R	6.3	12/14/2011	5.9542
Sodium, dissolved	MG/L	MW-32	15	12/15/2011	5.9542
Sodium, dissolved	MG/L	MW-34A	8.5	12/14/2011	5.9542
Sodium, dissolved	MG/L	MW-34C	16	12/14/2011	5.9542
Sodium, dissolved	MG/L	MW-39	7	12/15/2011	5.9542
Sodium, dissolved	MG/L	MW-42	22	12/15/2011	5.9542
Specific conductivity	mS/cm	MW-15R	0.233	12/14/2011	0.174
Specific conductivity	mS/cm	MW-32	0.295	12/15/2011	0.174
Specific conductivity	mS/cm	MW-34A	0.177	12/14/2011	0.174
Specific conductivity	mS/cm	MW-34C	0.306	12/14/2011	0.174

<b>Parameter</b>	<b>Unit</b>	<b>Well</b>	<b>Latest Result</b>	<b>Date Sampled</b>	<b>Prediction Limit</b>
Specific conductivity	mS/cm	MW-42	0.572	12/15/2011	0.174
Sulfate	MG/L	MW-32	16	12/15/2011	9.9
Sulfate	MG/L	MW-42	17	12/15/2011	9.9
Temperature	deg C	MW-32	12.12	12/15/2011	11.09
Temperature	deg C	MW-34A	11.22	12/14/2011	11.09
Temperature	deg C	MW-34C	11.83	12/14/2011	11.09
Temperature	deg C	MW-42	12.16	12/15/2011	11.09
Total dissolved solids (tds)	MG/L	MW-32	200	12/15/2011	175
Total dissolved solids (tds)	MG/L	MW-34C	210	12/14/2011	175
Total dissolved solids (tds)	MG/L	MW-42	270	12/15/2011	175
Total organic carbon (toc)	MG/L	MW-42	7.1	12/15/2011	6.0

---

<sup>[1]</sup> for wells not sampled in current quarter (if applicable), then exceedances shown are from the most recent quarter sampled

\* = wells sampled on semi-annual schedule during Q1 and Q3 of each monitoring year

**TABLE 2-2**  
**STATISTICAL PREDICTION LIMITS UPDATED FOR 2012 MONITORING YEAR**  
**Olympic View Sanitary Landfill**

**Statistical Methodology:**

1. Inter-Well Prediction Limits using DUMPStat
2. Upgradient Data Set: pooled data from wells 13A, 13B, 16, and 35
3. "Detection Monitoring" well comparisons:
  - compliance wells
  - performance wells
  - downgradient wells
4. Parameters: all Appendix I and II inorganic and ground water quality parameters
5. Background Data Sets: January 2005 - December 2011 (updated annually)
6. Arsenic: only low-level Method 200.8 data used
7. Units: MG/L = milligrams per liter; mS/cm = millisiemens per centimeter; deg C = degrees Celcius

Constituent	Units	Distributional Assumption <sup>[1]</sup>	Total N <sup>[2]</sup>	Detected N	Mean	Standard Deviation	Prediction Limit <sup>[3]</sup>	Nonparametric Confidence <sup>[4]</sup>
Alkalinity, bicarbonate (as CaCO <sub>3</sub> )	MG/L	normal	92	92	75.5	8.442	96	
Alkalinity, total (as CaCO <sub>3</sub> )	MG/L	normal	96	96	75.6	8.326	96	
Ammonia (as N)	MG/L	nonparametric	94	59			0.180	0.99
Antimony, dissolved	MG/L	nonparametric	96	0			Current RL*	0.99
Arsenic, dissolved	UG/L	nonparametric	93	93			0.380	0.99
Barium, dissolved	MG/L	nonparametric	96	95			0.0052	0.99
Beryllium, dissolved	MG/L	nonparametric	96	0			Current RL*	0.99
Cadmium, dissolved	MG/L	nonparametric	96	0			Current RL*	0.99
Calcium, dissolved	MG/L	nonparametric	96	96			17.10	0.99
Chloride	MG/L	normal	96	96	2.66	0.500	3.86	
Chromium, dissolved	MG/L	nonparametric	96	30			0.033	0.99
Cobalt, dissolved	MG/L	nonparametric	96	0			Current RL*	0.99
Copper, dissolved	MG/L	nonparametric	96	2			0.0094	0.99
Iron, dissolved	MG/L	nonparametric	96	3			0.097	0.99
Lead, dissolved	MG/L	nonparametric	96	0			Current RL*	0.99
Magnesium, dissolved	MG/L	normal	96	96	8.41	0.898	10.57	
Manganese, dissolved	MG/L	nonparametric	96	7			0.0067	0.99
Nickel, dissolved	MG/L	nonparametric	96	0			Current RL*	0.99
Nitrate (as N)	MG/L	nonparametric	96	96			1.80	0.99
pH	pH Units	normal	89	89	7.11	0.452	5.90 - 8.32	
Potassium, dissolved	MG/L	nonparametric	96	12			1.00	0.99
Selenium, dissolved	MG/L	nonparametric	96	2			0.0011	0.99
Silver, dissolved	MG/L	nonparametric	96	0			Current RL*	0.99
Sodium, dissolved	MG/L	normal	96	96	5.16	0.324	5.94	
Specific conductivity	mS/cm	nonparametric	89	89			0.176	0.99
Sulfate	MG/L	nonparametric	96	95			9.90	0.99
Temperature	deg C	normal	89	89	9.43	0.708	11.14	
Thallium, dissolved	MG/L	nonparametric	96	0			Current RL*	0.99
Total dissolved solids (tds)	MG/L	nonparametric	96	96			175	0.99
Total organic carbon (toc)	MG/L	nonparametric	96	7			6.0	0.99
Vanadium, dissolved	MG/L	nonparametric	96	95			0.0066	0.99
Zinc, dissolved	MG/L	nonparametric	63	1			0.0096	0.99

<sup>[1]</sup> Distributional Assumption based on Multiple Group Shapiro-Wilk Test (results presented on Table 4 herein).

<sup>[2]</sup> N = number of background data points from the pooled upgradient well data set AFTER removal of outliers (see Table 3 herein).

<sup>[3]</sup> Prediction Limit calculated at 95% confidence level and adjusted for multiple comparisons and one verification resample per Unified Guidance (USEPA, March 2009).

<sup>[4]</sup> Nonparametric confidence level as calculated by DUMPStat.

\*Current RL: in cases where all background data are non-detected, a nonparametric prediction limit is set at the current constituent-specific laboratory reporting limit (RL).

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date	Result
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	03/22/2005	75.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	06/15/2005	63.8000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	09/27/2005	75.6000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	12/15/2005	72.5000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	03/28/2006	80.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	06/21/2006	79.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	09/26/2006	80.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	12/13/2006	82.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	03/27/2007	83.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	06/19/2007	81.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	09/19/2007	79.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	12/19/2007	82.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	03/25/2008	83.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	06/18/2008	82.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	09/17/2008	81.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	12/17/2008	92.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	03/24/2009	81.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	06/17/2009	84.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	09/10/2009	87.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	03/25/2010	86.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	06/23/2010	86.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	09/23/2010	96.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	12/08/2010	82.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	03/30/2011	88.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	06/06/2011	89.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	09/27/2011	89.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13A	12/14/2011	90.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	03/22/2005	70.6000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	06/15/2005	57.3000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	09/27/2005	72.7000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	12/15/2005	68.8000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	03/29/2006	73.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	06/21/2006	74.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	09/26/2006	75.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	12/13/2006	76.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	03/27/2007	76.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	06/19/2007	74.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	09/18/2007	74.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	12/19/2007	76.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	03/25/2008	77.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	06/18/2008	77.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	09/17/2008	76.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	12/16/2008	74.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	03/24/2009	78.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	06/17/2009	79.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	09/10/2009	81.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	03/25/2010	81.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	06/23/2010	80.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	09/23/2010	81.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	12/08/2010	88.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	03/30/2011	81.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	06/06/2011	81.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	09/27/2011	83.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-13B	12/14/2011	84.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-16	03/24/2009	66.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-16	06/16/2009	59.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-16	09/09/2009	66.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-16	03/25/2010	46.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-16	06/24/2010	71.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-16	09/24/2010	74.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-16	12/09/2010	72.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-16	03/30/2011	53.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-16	06/07/2011	59.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-16	09/27/2011	66.0000
Alkalinity, bicarbonate (as caco3)	MG/L	MW-16	12/13/2011	60.0000

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date	Result
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	03/22/2005	68.2000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	06/14/2005	59.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	09/27/2005	69.2000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	12/15/2005	67.3000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	03/28/2006	74.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	06/21/2006	71.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	09/26/2006	72.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	12/12/2006	73.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	03/27/2007	73.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	06/20/2007	70.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	09/18/2007	69.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	12/20/2007	72.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	03/25/2008	77.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	06/18/2008	72.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	09/18/2008	72.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	12/19/2008	68.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	03/24/2009	72.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	06/16/2009	73.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	09/10/2009	74.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	03/25/2010	76.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	06/23/2010	75.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	09/23/2010	75.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	12/09/2010	74.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	03/30/2011	77.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	06/06/2011	76.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	09/26/2011	78.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	12/13/2011	77.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	03/22/2005	75.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	06/15/2005	63.8000
Alkalinity, total (as cacO3)	MG/L	MW-13A	09/27/2005	75.6000
Alkalinity, total (as cacO3)	MG/L	MW-13A	12/15/2005	72.5000
Alkalinity, total (as cacO3)	MG/L	MW-13A	03/28/2006	80.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	06/21/2006	79.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	09/26/2006	80.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	12/13/2006	82.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	03/27/2007	83.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	06/19/2007	81.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	09/19/2007	79.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	12/19/2007	82.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	03/25/2008	83.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	06/18/2008	82.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	09/17/2008	81.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	12/17/2008	92.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	03/24/2009	81.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	06/17/2009	84.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	09/10/2009	87.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	12/03/2009	84.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	03/25/2010	86.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	06/23/2010	86.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	09/23/2010	96.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	12/08/2010	82.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	03/30/2011	88.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	06/06/2011	89.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	09/27/2011	89.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	12/14/2011	90.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	03/22/2005	70.6000
Alkalinity, total (as cacO3)	MG/L	MW-13B	06/15/2005	57.3000
Alkalinity, total (as cacO3)	MG/L	MW-13B	09/27/2005	72.7000
Alkalinity, total (as cacO3)	MG/L	MW-13B	12/15/2005	68.8000
Alkalinity, total (as cacO3)	MG/L	MW-13B	03/29/2006	73.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	06/21/2006	74.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	09/26/2006	75.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	12/13/2006	76.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	03/27/2007	76.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	06/19/2007	74.0000

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date	Result
Alkalinity, total (as cacO3)	MG/L	MW-13B	09/18/2007	74.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	12/19/2007	76.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	03/25/2008	77.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	06/18/2008	77.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	09/17/2008	76.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	12/16/2008	74.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	03/24/2009	78.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	06/17/2009	79.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	09/10/2009	81.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	12/03/2009	80.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	03/25/2010	81.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	06/23/2010	80.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	09/23/2010	81.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	12/08/2010	88.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	03/30/2011	81.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	06/06/2011	81.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	09/27/2011	83.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	12/14/2011	84.0000
Alkalinity, total (as cacO3)	MG/L	MW-16	03/24/2009	66.0000
Alkalinity, total (as cacO3)	MG/L	MW-16	06/16/2009	59.0000
Alkalinity, total (as cacO3)	MG/L	MW-16	09/09/2009	66.0000
Alkalinity, total (as cacO3)	MG/L	MW-16	12/03/2009	77.0000
Alkalinity, total (as cacO3)	MG/L	MW-16	03/25/2010	46.0000
Alkalinity, total (as cacO3)	MG/L	MW-16	06/24/2010	71.0000
Alkalinity, total (as cacO3)	MG/L	MW-16	09/24/2010	74.0000
Alkalinity, total (as cacO3)	MG/L	MW-16	12/09/2010	72.0000
Alkalinity, total (as cacO3)	MG/L	MW-16	03/30/2011	53.0000
Alkalinity, total (as cacO3)	MG/L	MW-16	06/07/2011	59.0000
Alkalinity, total (as cacO3)	MG/L	MW-16	09/27/2011	66.0000
Alkalinity, total (as cacO3)	MG/L	MW-16	12/13/2011	60.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	03/22/2005	68.2000
Alkalinity, total (as cacO3)	MG/L	MW-35	06/14/2005	59.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	09/27/2005	69.2000
Alkalinity, total (as cacO3)	MG/L	MW-35	12/15/2005	67.3000
Alkalinity, total (as cacO3)	MG/L	MW-35	03/28/2006	73.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	06/21/2006	71.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	09/26/2006	72.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	12/12/2006	73.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	03/27/2007	73.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	06/20/2007	70.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	09/18/2007	69.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	12/20/2007	72.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	03/25/2008	77.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	06/18/2008	72.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	09/18/2008	72.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	12/19/2008	68.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	03/24/2009	72.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	06/16/2009	73.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	09/10/2009	74.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	12/03/2009	74.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	03/25/2010	76.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	06/23/2010	75.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	09/23/2010	75.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	12/09/2010	74.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	03/30/2011	77.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	06/06/2011	76.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	09/26/2011	78.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	12/13/2011	77.0000
Ammonia (as n)	MG/L	MW-13A	03/22/2005	0.0200
Ammonia (as n)	MG/L	MW-13A	06/15/2005	0.1300
Ammonia (as n)	MG/L	MW-13A	09/27/2005	0.0210
Ammonia (as n)	MG/L	MW-13A	12/15/2005	0.0200
Ammonia (as n)	MG/L	MW-13A	03/28/2006	0.0490
Ammonia (as n)	MG/L	MW-13A	06/21/2006	0.0680
Ammonia (as n)	MG/L	MW-13A	09/26/2006	0.0360

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Ammonia (as n)	MG/L	MW-13A	12/13/2006	ND	0.0300
Ammonia (as n)	MG/L	MW-13A	03/27/2007	ND	0.0300
Ammonia (as n)	MG/L	MW-13A	06/19/2007	ND	0.0300
Ammonia (as n)	MG/L	MW-13A	09/19/2007	ND	0.0300
Ammonia (as n)	MG/L	MW-13A	12/19/2007		0.0420
Ammonia (as n)	MG/L	MW-13A	03/25/2008		0.0500
Ammonia (as n)	MG/L	MW-13A	06/18/2008	ND	0.0300
Ammonia (as n)	MG/L	MW-13A	09/17/2008	ND	0.0300
Ammonia (as n)	MG/L	MW-13A	12/17/2008		0.0630
Ammonia (as n)	MG/L	MW-13A	03/24/2009		0.0830
Ammonia (as n)	MG/L	MW-13A	06/17/2009		0.0930
Ammonia (as n)	MG/L	MW-13A	09/10/2009	ND	0.0300
Ammonia (as n)	MG/L	MW-13A	12/03/2009		0.0590
Ammonia (as n)	MG/L	MW-13A	03/25/2010		0.0460
Ammonia (as n)	MG/L	MW-13A	06/23/2010	ND	0.0300
Ammonia (as n)	MG/L	MW-13A	09/23/2010		0.0490
Ammonia (as n)	MG/L	MW-13A	12/08/2010		0.0610
Ammonia (as n)	MG/L	MW-13A	03/30/2011		0.0640
Ammonia (as n)	MG/L	MW-13A	06/06/2011	ND	0.0300
Ammonia (as n)	MG/L	MW-13A	09/27/2011		0.0750
Ammonia (as n)	MG/L	MW-13A	12/14/2011		0.0860
Ammonia (as n)	MG/L	MW-13B	03/22/2005	ND	0.0200
Ammonia (as n)	MG/L	MW-13B	06/15/2005		0.1200
Ammonia (as n)	MG/L	MW-13B	09/27/2005		0.1700
Ammonia (as n)	MG/L	MW-13B	12/15/2005	ND	0.0200
Ammonia (as n)	MG/L	MW-13B	03/29/2006		0.0360
Ammonia (as n)	MG/L	MW-13B	06/21/2006	ND	0.0300
Ammonia (as n)	MG/L	MW-13B	09/26/2006		0.0300
Ammonia (as n)	MG/L	MW-13B	12/13/2006	ND	0.0300
Ammonia (as n)	MG/L	MW-13B	03/27/2007	ND	0.0300
Ammonia (as n)	MG/L	MW-13B	06/19/2007		0.0300
Ammonia (as n)	MG/L	MW-13B	12/19/2007		0.1100
Ammonia (as n)	MG/L	MW-13B	03/25/2008		0.0600
Ammonia (as n)	MG/L	MW-13B	06/18/2008	ND	0.0300
Ammonia (as n)	MG/L	MW-13B	09/17/2008	ND	0.0300
Ammonia (as n)	MG/L	MW-13B	12/16/2008		0.0560
Ammonia (as n)	MG/L	MW-13B	03/24/2009		0.0630
Ammonia (as n)	MG/L	MW-13B	06/17/2009		0.0870
Ammonia (as n)	MG/L	MW-13B	09/10/2009		0.0450
Ammonia (as n)	MG/L	MW-13B	12/03/2009	ND	0.0300
Ammonia (as n)	MG/L	MW-13B	03/25/2010		0.0440
Ammonia (as n)	MG/L	MW-13B	06/23/2010	ND	0.0300
Ammonia (as n)	MG/L	MW-13B	09/23/2010		0.0450
Ammonia (as n)	MG/L	MW-13B	12/08/2010		0.0520
Ammonia (as n)	MG/L	MW-13B	03/30/2011		0.0620
Ammonia (as n)	MG/L	MW-13B	06/06/2011	ND	0.0300
Ammonia (as n)	MG/L	MW-13B	09/27/2011		0.0320
Ammonia (as n)	MG/L	MW-13B	12/14/2011		0.0300
Ammonia (as n)	MG/L	MW-16	03/24/2009		0.0620
Ammonia (as n)	MG/L	MW-16	06/16/2009		0.0930
Ammonia (as n)	MG/L	MW-16	09/09/2009		0.0360
Ammonia (as n)	MG/L	MW-16	12/03/2009		0.0580
Ammonia (as n)	MG/L	MW-16	03/25/2010		0.0460
Ammonia (as n)	MG/L	MW-16	06/24/2010	ND	0.0300
Ammonia (as n)	MG/L	MW-16	09/24/2010	ND	0.0300
Ammonia (as n)	MG/L	MW-16	12/09/2010		0.0590
Ammonia (as n)	MG/L	MW-16	03/30/2011		0.0600
Ammonia (as n)	MG/L	MW-16	06/07/2011		0.0480
Ammonia (as n)	MG/L	MW-16	09/27/2011	ND	0.0300
Ammonia (as n)	MG/L	MW-16	12/13/2011	ND	0.0300
Ammonia (as n)	MG/L	MW-35	03/22/2005	ND	0.0200
Ammonia (as n)	MG/L	MW-35	06/14/2005		0.1200
Ammonia (as n)	MG/L	MW-35	09/27/2005		0.1500
Ammonia (as n)	MG/L	MW-35	12/15/2005	ND	0.0200
Ammonia (as n)	MG/L	MW-35	03/28/2006	ND	0.0300

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.



Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Ammonia (as n)	MG/L	MW-35	06/21/2006	ND	0.0300
Ammonia (as n)	MG/L	MW-35	09/26/2006		0.0330
Ammonia (as n)	MG/L	MW-35	12/12/2006	ND	0.0300
Ammonia (as n)	MG/L	MW-35	03/27/2007	ND	0.0300
Ammonia (as n)	MG/L	MW-35	06/20/2007		0.0420
Ammonia (as n)	MG/L	MW-35	12/20/2007		0.0600
Ammonia (as n)	MG/L	MW-35	03/25/2008		0.0590
Ammonia (as n)	MG/L	MW-35	06/18/2008	ND	0.0300
Ammonia (as n)	MG/L	MW-35	09/18/2008	ND	0.0300
Ammonia (as n)	MG/L	MW-35	12/19/2008		0.0810
Ammonia (as n)	MG/L	MW-35	03/24/2009		0.0600
Ammonia (as n)	MG/L	MW-35	06/16/2009		0.0660
Ammonia (as n)	MG/L	MW-35	09/10/2009	ND	0.0300
Ammonia (as n)	MG/L	MW-35	12/03/2009		0.0760
Ammonia (as n)	MG/L	MW-35	03/25/2010		0.0410
Ammonia (as n)	MG/L	MW-35	06/23/2010	ND	0.0300
Ammonia (as n)	MG/L	MW-35	09/23/2010		0.0530
Ammonia (as n)	MG/L	MW-35	12/09/2010		0.0550
Ammonia (as n)	MG/L	MW-35	03/30/2011		0.0630
Ammonia (as n)	MG/L	MW-35	06/06/2011		0.1800
Ammonia (as n)	MG/L	MW-35	09/26/2011		0.0650
Ammonia (as n)	MG/L	MW-35	12/13/2011	ND	0.0300
Antimony, dissolved	MG/L	MW-13A	03/22/2005	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	06/15/2005	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	09/27/2005	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	12/15/2005	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	03/28/2006	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	06/21/2006	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	09/26/2006	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	12/13/2006	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	03/27/2007	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	06/19/2007	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	09/19/2007	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	12/19/2007	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	03/25/2008	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	06/18/2008	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	09/17/2008	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	12/17/2008	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	03/24/2009	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	06/17/2009	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	09/10/2009	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	12/03/2009	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	03/25/2010	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	06/23/2010	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	09/23/2010	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	12/08/2010	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	03/30/2011	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	06/06/2011	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	09/27/2011	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	12/14/2011	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	03/22/2005	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	06/15/2005	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	09/27/2005	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	12/15/2005	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	03/29/2006	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	06/21/2006	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	09/26/2006	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	12/13/2006	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	03/27/2007	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	06/19/2007	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	09/18/2007	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	12/19/2007	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	03/25/2008	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	06/18/2008	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	09/17/2008	ND	0.0010

\* - Outlier for that well and constituent.  
ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Antimony, dissolved	MG/L	MW-13B	12/16/2008	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	03/24/2009	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	06/17/2009	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	09/10/2009	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	12/03/2009	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	03/25/2010	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	06/23/2010	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	09/23/2010	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	12/08/2010	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	03/30/2011	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	06/06/2011	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	09/27/2011	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	12/14/2011	ND	0.0010
Antimony, dissolved	MG/L	MW-16	03/24/2009	ND	0.0010
Antimony, dissolved	MG/L	MW-16	06/16/2009	ND	0.0010
Antimony, dissolved	MG/L	MW-16	09/09/2009	ND	0.0010
Antimony, dissolved	MG/L	MW-16	12/03/2009	ND	0.0010
Antimony, dissolved	MG/L	MW-16	03/25/2010	ND	0.0010
Antimony, dissolved	MG/L	MW-16	06/24/2010	ND	0.0010
Antimony, dissolved	MG/L	MW-16	09/24/2010	ND	0.0010
Antimony, dissolved	MG/L	MW-16	12/09/2010	ND	0.0010
Antimony, dissolved	MG/L	MW-16	03/30/2011	ND	0.0010
Antimony, dissolved	MG/L	MW-16	06/07/2011	ND	0.0010
Antimony, dissolved	MG/L	MW-16	09/27/2011	ND	0.0010
Antimony, dissolved	MG/L	MW-16	12/13/2011	ND	0.0010
Antimony, dissolved	MG/L	MW-35	03/22/2005	ND	0.0010
Antimony, dissolved	MG/L	MW-35	06/14/2005	ND	0.0010
Antimony, dissolved	MG/L	MW-35	09/27/2005	ND	0.0010
Antimony, dissolved	MG/L	MW-35	12/15/2005	ND	0.0010
Antimony, dissolved	MG/L	MW-35	03/28/2006	ND	0.0010
Antimony, dissolved	MG/L	MW-35	06/21/2006	ND	0.0010
Antimony, dissolved	MG/L	MW-35	09/26/2006	ND	0.0010
Antimony, dissolved	MG/L	MW-35	12/12/2006	ND	0.0010
Antimony, dissolved	MG/L	MW-35	03/27/2007	ND	0.0010
Antimony, dissolved	MG/L	MW-35	06/20/2007	ND	0.0010
Antimony, dissolved	MG/L	MW-35	09/18/2007	ND	0.0010
Antimony, dissolved	MG/L	MW-35	12/20/2007	ND	0.0010
Antimony, dissolved	MG/L	MW-35	03/25/2008	ND	0.0010
Antimony, dissolved	MG/L	MW-35	06/18/2008	ND	0.0010
Antimony, dissolved	MG/L	MW-35	09/18/2008	ND	0.0010
Antimony, dissolved	MG/L	MW-35	12/19/2008	ND	0.0010
Antimony, dissolved	MG/L	MW-35	03/24/2009	ND	0.0010
Antimony, dissolved	MG/L	MW-35	06/16/2009	ND	0.0010
Antimony, dissolved	MG/L	MW-35	09/10/2009	ND	0.0010
Antimony, dissolved	MG/L	MW-35	12/03/2009	ND	0.0010
Antimony, dissolved	MG/L	MW-35	03/25/2010	ND	0.0010
Antimony, dissolved	MG/L	MW-35	06/23/2010	ND	0.0010
Antimony, dissolved	MG/L	MW-35	09/23/2010	ND	0.0010
Antimony, dissolved	MG/L	MW-35	12/09/2010	ND	0.0010
Antimony, dissolved	MG/L	MW-35	03/30/2011	ND	0.0010
Antimony, dissolved	MG/L	MW-35	06/06/2011	ND	0.0010
Antimony, dissolved	MG/L	MW-35	09/26/2011	ND	0.0010
Antimony, dissolved	MG/L	MW-35	12/13/2011	ND	0.0050
Arsenic, dissolved	UG/L	MW-13A	03/22/2005	ND	1.0000 *
Arsenic, dissolved	UG/L	MW-13A	06/15/2005		0.2100
Arsenic, dissolved	UG/L	MW-13A	09/27/2005		0.2200
Arsenic, dissolved	UG/L	MW-13A	12/15/2005		0.2100
Arsenic, dissolved	UG/L	MW-13A	03/28/2006		0.2000
Arsenic, dissolved	UG/L	MW-13A	06/21/2006		0.2100
Arsenic, dissolved	UG/L	MW-13A	09/26/2006		0.1900
Arsenic, dissolved	UG/L	MW-13A	12/13/2006		0.2100
Arsenic, dissolved	UG/L	MW-13A	03/27/2007		0.2100
Arsenic, dissolved	UG/L	MW-13A	06/19/2007		0.1900
Arsenic, dissolved	UG/L	MW-13A	09/19/2007		0.2100
Arsenic, dissolved	UG/L	MW-13A	12/19/2007		0.1800

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Arsenic, dissolved	UG/L	MW-13A	03/25/2008		0.2000
Arsenic, dissolved	UG/L	MW-13A	06/18/2008		0.2000
Arsenic, dissolved	UG/L	MW-13A	09/17/2008		0.1700
Arsenic, dissolved	UG/L	MW-13A	12/17/2008		0.1900
Arsenic, dissolved	UG/L	MW-13A	03/24/2009		0.2000
Arsenic, dissolved	UG/L	MW-13A	06/17/2009		0.2100
Arsenic, dissolved	UG/L	MW-13A	09/10/2009		0.2100
Arsenic, dissolved	UG/L	MW-13A	12/03/2009		0.2000
Arsenic, dissolved	UG/L	MW-13A	03/25/2010		0.2000
Arsenic, dissolved	UG/L	MW-13A	06/23/2010		0.2100
Arsenic, dissolved	UG/L	MW-13A	09/23/2010		0.2100
Arsenic, dissolved	UG/L	MW-13A	12/08/2010		0.3400
Arsenic, dissolved	UG/L	MW-13A	03/30/2011		0.2000
Arsenic, dissolved	UG/L	MW-13A	06/06/2011		0.2000
Arsenic, dissolved	UG/L	MW-13A	09/27/2011		0.2000
Arsenic, dissolved	UG/L	MW-13A	12/14/2011		0.2000
Arsenic, dissolved	UG/L	MW-13B	03/22/2005	ND	1.0000 *
Arsenic, dissolved	UG/L	MW-13B	06/15/2005		0.3700
Arsenic, dissolved	UG/L	MW-13B	09/27/2005		0.3700
Arsenic, dissolved	UG/L	MW-13B	12/15/2005		0.3500
Arsenic, dissolved	UG/L	MW-13B	03/29/2006		0.3300
Arsenic, dissolved	UG/L	MW-13B	06/21/2006		0.3500
Arsenic, dissolved	UG/L	MW-13B	09/26/2006		0.3100
Arsenic, dissolved	UG/L	MW-13B	12/13/2006		0.3300
Arsenic, dissolved	UG/L	MW-13B	03/27/2007		0.3400
Arsenic, dissolved	UG/L	MW-13B	06/19/2007		0.3300
Arsenic, dissolved	UG/L	MW-13B	09/18/2007		0.3600
Arsenic, dissolved	UG/L	MW-13B	12/19/2007		0.3100
Arsenic, dissolved	UG/L	MW-13B	03/25/2008		0.3400
Arsenic, dissolved	UG/L	MW-13B	06/18/2008		0.3300
Arsenic, dissolved	UG/L	MW-13B	09/17/2008		0.3000
Arsenic, dissolved	UG/L	MW-13B	12/16/2008		0.3200
Arsenic, dissolved	UG/L	MW-13B	03/24/2009		0.3300
Arsenic, dissolved	UG/L	MW-13B	06/17/2009		0.3400
Arsenic, dissolved	UG/L	MW-13B	09/10/2009		0.3500
Arsenic, dissolved	UG/L	MW-13B	12/03/2009		0.3500
Arsenic, dissolved	UG/L	MW-13B	03/25/2010		0.3200
Arsenic, dissolved	UG/L	MW-13B	06/23/2010		0.3700
Arsenic, dissolved	UG/L	MW-13B	09/23/2010		0.3600
Arsenic, dissolved	UG/L	MW-13B	12/08/2010		0.2000
Arsenic, dissolved	UG/L	MW-13B	03/30/2011		0.3400
Arsenic, dissolved	UG/L	MW-13B	06/06/2011		0.3500
Arsenic, dissolved	UG/L	MW-13B	09/27/2011		0.3400
Arsenic, dissolved	UG/L	MW-13B	12/14/2011		0.3400
Arsenic, dissolved	UG/L	MW-16	03/24/2009		0.3500
Arsenic, dissolved	UG/L	MW-16	06/16/2009		0.3800
Arsenic, dissolved	UG/L	MW-16	09/09/2009		0.3500
Arsenic, dissolved	UG/L	MW-16	12/03/2009		0.3300
Arsenic, dissolved	UG/L	MW-16	03/25/2010		0.3500
Arsenic, dissolved	UG/L	MW-16	06/24/2010		0.3400
Arsenic, dissolved	UG/L	MW-16	09/24/2010		0.3300
Arsenic, dissolved	UG/L	MW-16	12/09/2010		0.3200
Arsenic, dissolved	UG/L	MW-16	03/30/2011		0.3300
Arsenic, dissolved	UG/L	MW-16	06/07/2011		0.3400
Arsenic, dissolved	UG/L	MW-16	09/27/2011		0.3200
Arsenic, dissolved	UG/L	MW-16	12/13/2011		0.3200
Arsenic, dissolved	UG/L	MW-35	03/22/2005	ND	1.0000 *
Arsenic, dissolved	UG/L	MW-35	06/14/2005		0.1400
Arsenic, dissolved	UG/L	MW-35	09/27/2005		0.1500
Arsenic, dissolved	UG/L	MW-35	12/15/2005		0.1400
Arsenic, dissolved	UG/L	MW-35	03/28/2006		0.1200
Arsenic, dissolved	UG/L	MW-35	06/21/2006		0.1300
Arsenic, dissolved	UG/L	MW-35	09/26/2006		0.1200
Arsenic, dissolved	UG/L	MW-35	12/12/2006		0.1300
Arsenic, dissolved	UG/L	MW-35	03/27/2007		0.1500

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date	Result
Arsenic, dissolved	UG/L	MW-35	06/20/2007	0.1200
Arsenic, dissolved	UG/L	MW-35	09/18/2007	0.1400
Arsenic, dissolved	UG/L	MW-35	12/20/2007	0.1300
Arsenic, dissolved	UG/L	MW-35	03/25/2008	0.1300
Arsenic, dissolved	UG/L	MW-35	06/18/2008	0.1200
Arsenic, dissolved	UG/L	MW-35	09/18/2008	0.1300
Arsenic, dissolved	UG/L	MW-35	12/19/2008	0.1300
Arsenic, dissolved	UG/L	MW-35	03/24/2009	0.1300
Arsenic, dissolved	UG/L	MW-35	06/16/2009	0.1600
Arsenic, dissolved	UG/L	MW-35	09/10/2009	0.1400
Arsenic, dissolved	UG/L	MW-35	12/03/2009	0.1300
Arsenic, dissolved	UG/L	MW-35	03/25/2010	0.1300
Arsenic, dissolved	UG/L	MW-35	06/23/2010	0.1600
Arsenic, dissolved	UG/L	MW-35	09/23/2010	0.1400
Arsenic, dissolved	UG/L	MW-35	12/09/2010	0.1300
Arsenic, dissolved	UG/L	MW-35	03/30/2011	0.1300
Arsenic, dissolved	UG/L	MW-35	06/06/2011	0.1300
Arsenic, dissolved	UG/L	MW-35	09/26/2011	0.1300
Arsenic, dissolved	UG/L	MW-35	12/13/2011	0.1400
Barium, dissolved	MG/L	MW-13A	03/22/2005	0.0029
Barium, dissolved	MG/L	MW-13A	06/15/2005	0.0025
Barium, dissolved	MG/L	MW-13A	09/27/2005	0.0025
Barium, dissolved	MG/L	MW-13A	12/15/2005	0.0026
Barium, dissolved	MG/L	MW-13A	03/28/2006	0.0028
Barium, dissolved	MG/L	MW-13A	06/21/2006	0.0030
Barium, dissolved	MG/L	MW-13A	09/26/2006	0.0028
Barium, dissolved	MG/L	MW-13A	12/13/2006	0.0026
Barium, dissolved	MG/L	MW-13A	03/27/2007	0.0028
Barium, dissolved	MG/L	MW-13A	06/19/2007	0.0027
Barium, dissolved	MG/L	MW-13A	09/19/2007	0.0035
Barium, dissolved	MG/L	MW-13A	12/19/2007	0.0028
Barium, dissolved	MG/L	MW-13A	03/25/2008	0.0028
Barium, dissolved	MG/L	MW-13A	06/18/2008	0.0027
Barium, dissolved	MG/L	MW-13A	09/17/2008	0.0029
Barium, dissolved	MG/L	MW-13A	12/17/2008	0.0029
Barium, dissolved	MG/L	MW-13A	03/24/2009	0.0030
Barium, dissolved	MG/L	MW-13A	06/17/2009	0.0029
Barium, dissolved	MG/L	MW-13A	09/10/2009	0.0029
Barium, dissolved	MG/L	MW-13A	12/03/2009	0.0028
Barium, dissolved	MG/L	MW-13A	03/25/2010	0.0031
Barium, dissolved	MG/L	MW-13A	06/23/2010	0.0029
Barium, dissolved	MG/L	MW-13A	09/23/2010	0.0028
Barium, dissolved	MG/L	MW-13A	12/08/2010	0.0044
Barium, dissolved	MG/L	MW-13A	03/30/2011	0.0029
Barium, dissolved	MG/L	MW-13A	06/06/2011	0.0035
Barium, dissolved	MG/L	MW-13A	09/27/2011	0.0026
Barium, dissolved	MG/L	MW-13A	12/14/2011	0.0030
Barium, dissolved	MG/L	MW-13B	03/22/2005	0.0036
Barium, dissolved	MG/L	MW-13B	06/15/2005	0.0033
Barium, dissolved	MG/L	MW-13B	09/27/2005	0.0034
Barium, dissolved	MG/L	MW-13B	12/15/2005	0.0031
Barium, dissolved	MG/L	MW-13B	03/29/2006	0.0034
Barium, dissolved	MG/L	MW-13B	06/21/2006	0.0034
Barium, dissolved	MG/L	MW-13B	09/26/2006	0.0033
Barium, dissolved	MG/L	MW-13B	12/13/2006	0.0033
Barium, dissolved	MG/L	MW-13B	03/27/2007	0.0034
Barium, dissolved	MG/L	MW-13B	06/19/2007	0.0032
Barium, dissolved	MG/L	MW-13B	09/18/2007	0.0037
Barium, dissolved	MG/L	MW-13B	12/19/2007	0.0034
Barium, dissolved	MG/L	MW-13B	03/25/2008	0.0033
Barium, dissolved	MG/L	MW-13B	06/18/2008	0.0033
Barium, dissolved	MG/L	MW-13B	09/17/2008	0.0034
Barium, dissolved	MG/L	MW-13B	12/16/2008	0.0037
Barium, dissolved	MG/L	MW-13B	03/24/2009	0.0034
Barium, dissolved	MG/L	MW-13B	06/17/2009	0.0034

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Barium, dissolved	MG/L	MW-13B	09/10/2009		0.0035
Barium, dissolved	MG/L	MW-13B	12/03/2009		0.0035
Barium, dissolved	MG/L	MW-13B	03/25/2010		0.0036
Barium, dissolved	MG/L	MW-13B	06/23/2010		0.0034
Barium, dissolved	MG/L	MW-13B	09/23/2010		0.0034
Barium, dissolved	MG/L	MW-13B	12/08/2010		0.0029
Barium, dissolved	MG/L	MW-13B	03/30/2011		0.0035
Barium, dissolved	MG/L	MW-13B	06/06/2011		0.0034
Barium, dissolved	MG/L	MW-13B	09/27/2011		0.0029
Barium, dissolved	MG/L	MW-13B	12/14/2011		0.0035
Barium, dissolved	MG/L	MW-16	03/24/2009		0.0044
Barium, dissolved	MG/L	MW-16	06/16/2009		0.0037
Barium, dissolved	MG/L	MW-16	09/09/2009		0.0040
Barium, dissolved	MG/L	MW-16	12/03/2009		0.0051
Barium, dissolved	MG/L	MW-16	03/25/2010		0.0033
Barium, dissolved	MG/L	MW-16	06/24/2010		0.0046
Barium, dissolved	MG/L	MW-16	09/24/2010		0.0052
Barium, dissolved	MG/L	MW-16	12/09/2010		0.0045
Barium, dissolved	MG/L	MW-16	03/30/2011		0.0039
Barium, dissolved	MG/L	MW-16	06/07/2011		0.0039
Barium, dissolved	MG/L	MW-16	09/27/2011		0.0047
Barium, dissolved	MG/L	MW-16	12/13/2011		0.0038
Barium, dissolved	MG/L	MW-35	03/22/2005		0.0030
Barium, dissolved	MG/L	MW-35	06/14/2005		0.0027
Barium, dissolved	MG/L	MW-35	09/27/2005		0.0030
Barium, dissolved	MG/L	MW-35	12/15/2005		0.0026
Barium, dissolved	MG/L	MW-35	03/28/2006		0.0030
Barium, dissolved	MG/L	MW-35	06/21/2006		0.0030
Barium, dissolved	MG/L	MW-35	09/26/2006		0.0030
Barium, dissolved	MG/L	MW-35	12/12/2006		0.0027
Barium, dissolved	MG/L	MW-35	03/27/2007		0.0030
Barium, dissolved	MG/L	MW-35	06/20/2007		0.0032
Barium, dissolved	MG/L	MW-35	09/18/2007		0.0035
Barium, dissolved	MG/L	MW-35	12/20/2007		0.0033
Barium, dissolved	MG/L	MW-35	03/25/2008		0.0028
Barium, dissolved	MG/L	MW-35	06/18/2008		0.0029
Barium, dissolved	MG/L	MW-35	09/18/2008		0.0029
Barium, dissolved	MG/L	MW-35	12/19/2008		0.0029
Barium, dissolved	MG/L	MW-35	03/24/2009		0.0029
Barium, dissolved	MG/L	MW-35	06/16/2009		0.0028
Barium, dissolved	MG/L	MW-35	09/10/2009		0.0031
Barium, dissolved	MG/L	MW-35	12/03/2009		0.0031
Barium, dissolved	MG/L	MW-35	03/25/2010		0.0030
Barium, dissolved	MG/L	MW-35	06/23/2010		0.0029
Barium, dissolved	MG/L	MW-35	09/23/2010		0.0028
Barium, dissolved	MG/L	MW-35	12/09/2010		0.0031
Barium, dissolved	MG/L	MW-35	03/30/2011		0.0033
Barium, dissolved	MG/L	MW-35	06/06/2011		0.0034
Barium, dissolved	MG/L	MW-35	09/26/2011		0.0030
Barium, dissolved	MG/L	MW-35	12/13/2011	ND	0.0050
Beryllium, dissolved	MG/L	MW-13A	03/22/2005	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	06/15/2005	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	09/27/2005	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	12/15/2005	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	03/28/2006	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	06/21/2006	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	09/26/2006	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	12/13/2006	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	03/27/2007	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	06/19/2007	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	09/19/2007	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	12/19/2007	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	03/25/2008	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	06/18/2008	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	09/17/2008	ND	0.0010

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Beryllium, dissolved	MG/L	MW-13A	12/17/2008	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	03/24/2009	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	06/17/2009	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	09/10/2009	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	12/03/2009	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	03/25/2010	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	06/23/2010	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	09/23/2010	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	12/08/2010	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	03/30/2011	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	06/06/2011	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	09/27/2011	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	12/14/2011	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	03/22/2005	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	06/15/2005	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	09/27/2005	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	12/15/2005	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	03/29/2006	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	06/21/2006	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	09/26/2006	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	12/13/2006	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	03/27/2007	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	06/19/2007	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	09/18/2007	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	12/19/2007	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	03/25/2008	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	06/18/2008	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	09/17/2008	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	12/16/2008	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	03/24/2009	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	06/17/2009	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	09/10/2009	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	12/03/2009	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	03/25/2010	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	06/23/2010	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	09/23/2010	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	12/08/2010	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	03/30/2011	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	06/06/2011	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	09/27/2011	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	12/14/2011	ND	0.0010
Beryllium, dissolved	MG/L	MW-16	03/24/2009	ND	0.0010
Beryllium, dissolved	MG/L	MW-16	06/16/2009	ND	0.0010
Beryllium, dissolved	MG/L	MW-16	09/09/2009	ND	0.0010
Beryllium, dissolved	MG/L	MW-16	12/03/2009	ND	0.0010
Beryllium, dissolved	MG/L	MW-16	03/25/2010	ND	0.0010
Beryllium, dissolved	MG/L	MW-16	06/24/2010	ND	0.0010
Beryllium, dissolved	MG/L	MW-16	09/24/2010	ND	0.0010
Beryllium, dissolved	MG/L	MW-16	12/09/2010	ND	0.0010
Beryllium, dissolved	MG/L	MW-16	03/30/2011	ND	0.0010
Beryllium, dissolved	MG/L	MW-16	06/07/2011	ND	0.0010
Beryllium, dissolved	MG/L	MW-16	09/27/2011	ND	0.0010
Beryllium, dissolved	MG/L	MW-16	12/13/2011	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	03/22/2005	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	06/14/2005	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	09/27/2005	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	12/15/2005	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	03/28/2006	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	06/21/2006	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	09/26/2006	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	12/12/2006	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	03/27/2007	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	06/20/2007	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	09/18/2007	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	12/20/2007	ND	0.0010

\* - Outlier for that well and constituent.  
 ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Beryllium, dissolved	MG/L	MW-35	03/25/2008	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	06/18/2008	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	09/18/2008	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	12/19/2008	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	03/24/2009	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	06/16/2009	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	09/10/2009	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	12/03/2009	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	03/25/2010	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	06/23/2010	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	09/23/2010	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	12/09/2010	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	03/30/2011	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	06/06/2011	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	09/26/2011	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	12/13/2011	ND	0.0050
Cadmium, dissolved	MG/L	MW-13A	03/22/2005	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	06/15/2005	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	09/27/2005	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	12/15/2005	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	03/28/2006	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	06/21/2006	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	09/26/2006	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	12/13/2006	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	03/27/2007	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	06/19/2007	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	09/19/2007	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	12/19/2007	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	03/25/2008	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	06/18/2008	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	09/17/2008	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	12/17/2008	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	03/24/2009	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	06/17/2009	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	09/10/2009	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	12/03/2009	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	03/25/2010	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	06/23/2010	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	09/23/2010	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	12/08/2010	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	03/30/2011	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	06/06/2011	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	09/27/2011	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	12/14/2011	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	03/22/2005	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	06/15/2005	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	09/27/2005	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	12/15/2005	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	03/29/2006	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	06/21/2006	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	09/26/2006	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	12/13/2006	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	03/27/2007	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	06/19/2007	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	09/18/2007	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	12/19/2007	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	03/25/2008	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	06/18/2008	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	09/17/2008	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	12/16/2008	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	03/24/2009	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	06/17/2009	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	09/10/2009	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	12/03/2009	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	03/25/2010	ND	0.0002

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Cadmium, dissolved	MG/L	MW-13B	06/23/2010	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	09/23/2010	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	12/08/2010	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	03/30/2011	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	06/06/2011	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	09/27/2011	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	12/14/2011	ND	0.0002
Cadmium, dissolved	MG/L	MW-16	03/24/2009	ND	0.0002
Cadmium, dissolved	MG/L	MW-16	06/16/2009	ND	0.0002
Cadmium, dissolved	MG/L	MW-16	09/09/2009	ND	0.0002
Cadmium, dissolved	MG/L	MW-16	12/03/2009	ND	0.0002
Cadmium, dissolved	MG/L	MW-16	03/25/2010	ND	0.0002
Cadmium, dissolved	MG/L	MW-16	06/24/2010	ND	0.0002
Cadmium, dissolved	MG/L	MW-16	09/24/2010	ND	0.0002
Cadmium, dissolved	MG/L	MW-16	12/09/2010	ND	0.0002
Cadmium, dissolved	MG/L	MW-16	03/30/2011	ND	0.0002
Cadmium, dissolved	MG/L	MW-16	06/07/2011	ND	0.0002
Cadmium, dissolved	MG/L	MW-16	09/27/2011	ND	0.0002
Cadmium, dissolved	MG/L	MW-16	12/13/2011	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	03/22/2005	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	06/14/2005	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	09/27/2005	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	12/15/2005	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	03/28/2006	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	06/21/2006	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	09/26/2006	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	12/12/2006	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	03/27/2007	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	06/20/2007	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	09/18/2007	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	12/20/2007	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	03/25/2008	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	06/18/2008	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	09/18/2008	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	12/19/2008	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	03/24/2009	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	06/16/2009	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	09/10/2009	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	12/03/2009	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	03/25/2010	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	06/23/2010	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	09/23/2010	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	12/09/2010	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	03/30/2011	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	06/06/2011	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	09/26/2011	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	12/13/2011	ND	0.0010
Calcium, dissolved	MG/L	MW-13A	03/22/2005		15.7000
Calcium, dissolved	MG/L	MW-13A	06/15/2005		14.2000
Calcium, dissolved	MG/L	MW-13A	09/27/2005		14.2000
Calcium, dissolved	MG/L	MW-13A	12/15/2005		15.1000
Calcium, dissolved	MG/L	MW-13A	03/28/2006		16.0000
Calcium, dissolved	MG/L	MW-13A	06/21/2006		16.0000
Calcium, dissolved	MG/L	MW-13A	09/26/2006		15.0000
Calcium, dissolved	MG/L	MW-13A	12/13/2006		15.0000
Calcium, dissolved	MG/L	MW-13A	03/27/2007		15.0000
Calcium, dissolved	MG/L	MW-13A	06/19/2007		16.0000
Calcium, dissolved	MG/L	MW-13A	09/19/2007		16.0000
Calcium, dissolved	MG/L	MW-13A	12/19/2007		15.0000
Calcium, dissolved	MG/L	MW-13A	03/25/2008		16.0000
Calcium, dissolved	MG/L	MW-13A	06/18/2008		16.0000
Calcium, dissolved	MG/L	MW-13A	09/17/2008		15.0000
Calcium, dissolved	MG/L	MW-13A	12/17/2008		16.0000
Calcium, dissolved	MG/L	MW-13A	03/24/2009		15.0000
Calcium, dissolved	MG/L	MW-13A	06/17/2009		17.0000

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.



Table 2-3

## Upgradient Data

Constituent	Units	Well	Date	Result
Calcium, dissolved	MG/L	MW-13A	09/10/2009	15.0000
Calcium, dissolved	MG/L	MW-13A	12/03/2009	15.0000
Calcium, dissolved	MG/L	MW-13A	03/25/2010	16.0000
Calcium, dissolved	MG/L	MW-13A	06/23/2010	15.0000
Calcium, dissolved	MG/L	MW-13A	09/23/2010	15.0000
Calcium, dissolved	MG/L	MW-13A	12/08/2010	16.0000
Calcium, dissolved	MG/L	MW-13A	03/30/2011	16.0000
Calcium, dissolved	MG/L	MW-13A	06/06/2011	16.0000
Calcium, dissolved	MG/L	MW-13A	09/27/2011	16.0000
Calcium, dissolved	MG/L	MW-13A	12/14/2011	16.0000
Calcium, dissolved	MG/L	MW-13B	03/22/2005	16.9000
Calcium, dissolved	MG/L	MW-13B	06/15/2005	16.0000
Calcium, dissolved	MG/L	MW-13B	09/27/2005	17.1000
Calcium, dissolved	MG/L	MW-13B	12/15/2005	16.1000
Calcium, dissolved	MG/L	MW-13B	03/29/2006	17.0000
Calcium, dissolved	MG/L	MW-13B	06/21/2006	17.0000
Calcium, dissolved	MG/L	MW-13B	09/26/2006	16.0000
Calcium, dissolved	MG/L	MW-13B	12/13/2006	17.0000
Calcium, dissolved	MG/L	MW-13B	03/27/2007	16.0000
Calcium, dissolved	MG/L	MW-13B	06/19/2007	16.0000
Calcium, dissolved	MG/L	MW-13B	09/18/2007	17.0000
Calcium, dissolved	MG/L	MW-13B	12/19/2007	15.0000
Calcium, dissolved	MG/L	MW-13B	03/25/2008	16.0000
Calcium, dissolved	MG/L	MW-13B	06/18/2008	17.0000
Calcium, dissolved	MG/L	MW-13B	09/17/2008	16.0000
Calcium, dissolved	MG/L	MW-13B	12/16/2008	16.0000
Calcium, dissolved	MG/L	MW-13B	03/24/2009	16.0000
Calcium, dissolved	MG/L	MW-13B	06/17/2009	17.0000
Calcium, dissolved	MG/L	MW-13B	09/10/2009	16.0000
Calcium, dissolved	MG/L	MW-13B	12/03/2009	16.0000
Calcium, dissolved	MG/L	MW-13B	03/25/2010	17.0000
Calcium, dissolved	MG/L	MW-13B	06/23/2010	16.0000
Calcium, dissolved	MG/L	MW-13B	09/23/2010	16.0000
Calcium, dissolved	MG/L	MW-13B	12/08/2010	16.0000
Calcium, dissolved	MG/L	MW-13B	03/30/2011	16.0000
Calcium, dissolved	MG/L	MW-13B	06/06/2011	16.0000
Calcium, dissolved	MG/L	MW-13B	09/27/2011	16.0000
Calcium, dissolved	MG/L	MW-13B	12/14/2011	16.0000
Calcium, dissolved	MG/L	MW-16	03/24/2009	12.0000
Calcium, dissolved	MG/L	MW-16	06/16/2009	10.0000
Calcium, dissolved	MG/L	MW-16	09/09/2009	11.0000
Calcium, dissolved	MG/L	MW-16	12/03/2009	14.0000
Calcium, dissolved	MG/L	MW-16	03/25/2010	9.6000
Calcium, dissolved	MG/L	MW-16	06/24/2010	12.0000
Calcium, dissolved	MG/L	MW-16	09/24/2010	13.0000
Calcium, dissolved	MG/L	MW-16	12/09/2010	13.0000
Calcium, dissolved	MG/L	MW-16	03/30/2011	9.8000
Calcium, dissolved	MG/L	MW-16	06/07/2011	9.7000
Calcium, dissolved	MG/L	MW-16	09/27/2011	12.0000
Calcium, dissolved	MG/L	MW-16	12/13/2011	11.0000
Calcium, dissolved	MG/L	MW-35	03/22/2005	13.9000
Calcium, dissolved	MG/L	MW-35	06/14/2005	12.9000
Calcium, dissolved	MG/L	MW-35	09/27/2005	14.8000
Calcium, dissolved	MG/L	MW-35	12/15/2005	13.2000
Calcium, dissolved	MG/L	MW-35	03/28/2006	14.0000
Calcium, dissolved	MG/L	MW-35	06/21/2006	14.0000
Calcium, dissolved	MG/L	MW-35	09/26/2006	13.0000
Calcium, dissolved	MG/L	MW-35	12/12/2006	14.0000
Calcium, dissolved	MG/L	MW-35	03/27/2007	13.0000
Calcium, dissolved	MG/L	MW-35	06/20/2007	14.0000
Calcium, dissolved	MG/L	MW-35	09/18/2007	14.0000
Calcium, dissolved	MG/L	MW-35	12/20/2007	13.0000
Calcium, dissolved	MG/L	MW-35	03/25/2008	13.0000
Calcium, dissolved	MG/L	MW-35	06/18/2008	13.0000
Calcium, dissolved	MG/L	MW-35	09/18/2008	13.0000

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date	Result
Calcium, dissolved	MG/L	MW-35	12/19/2008	12.0000
Calcium, dissolved	MG/L	MW-35	03/24/2009	13.0000
Calcium, dissolved	MG/L	MW-35	06/16/2009	13.0000
Calcium, dissolved	MG/L	MW-35	09/10/2009	12.0000
Calcium, dissolved	MG/L	MW-35	12/03/2009	13.0000
Calcium, dissolved	MG/L	MW-35	03/25/2010	13.0000
Calcium, dissolved	MG/L	MW-35	06/23/2010	13.0000
Calcium, dissolved	MG/L	MW-35	09/23/2010	13.0000
Calcium, dissolved	MG/L	MW-35	12/09/2010	14.0000
Calcium, dissolved	MG/L	MW-35	03/30/2011	14.0000
Calcium, dissolved	MG/L	MW-35	06/06/2011	13.0000
Calcium, dissolved	MG/L	MW-35	09/26/2011	14.0000
Calcium, dissolved	MG/L	MW-35	12/13/2011	14.0000
Chloride	MG/L	MW-13A	03/22/2005	2.6000
Chloride	MG/L	MW-13A	06/15/2005	1.9000
Chloride	MG/L	MW-13A	09/27/2005	2.4000
Chloride	MG/L	MW-13A	12/15/2005	2.1000
Chloride	MG/L	MW-13A	03/28/2006	3.0000
Chloride	MG/L	MW-13A	06/21/2006	2.4000
Chloride	MG/L	MW-13A	09/26/2006	2.6000
Chloride	MG/L	MW-13A	12/13/2006	3.0000
Chloride	MG/L	MW-13A	03/27/2007	2.8000
Chloride	MG/L	MW-13A	06/19/2007	2.6000
Chloride	MG/L	MW-13A	09/19/2007	2.6000
Chloride	MG/L	MW-13A	12/19/2007	2.6000
Chloride	MG/L	MW-13A	03/25/2008	2.5000
Chloride	MG/L	MW-13A	06/18/2008	2.6000
Chloride	MG/L	MW-13A	09/17/2008	2.5000
Chloride	MG/L	MW-13A	12/17/2008	3.1000
Chloride	MG/L	MW-13A	03/24/2009	2.7000
Chloride	MG/L	MW-13A	06/17/2009	2.4000
Chloride	MG/L	MW-13A	09/10/2009	2.1000
Chloride	MG/L	MW-13A	12/03/2009	3.4000
Chloride	MG/L	MW-13A	03/25/2010	2.2000
Chloride	MG/L	MW-13A	06/23/2010	2.6000
Chloride	MG/L	MW-13A	09/23/2010	2.8000
Chloride	MG/L	MW-13A	12/08/2010	2.9000
Chloride	MG/L	MW-13A	03/30/2011	2.9000
Chloride	MG/L	MW-13A	06/06/2011	3.0000
Chloride	MG/L	MW-13A	09/27/2011	3.8000
Chloride	MG/L	MW-13A	12/14/2011	4.4000
Chloride	MG/L	MW-13B	03/22/2005	3.0000
Chloride	MG/L	MW-13B	06/15/2005	2.3000
Chloride	MG/L	MW-13B	09/27/2005	2.8000
Chloride	MG/L	MW-13B	12/15/2005	2.4000
Chloride	MG/L	MW-13B	03/29/2006	3.2000
Chloride	MG/L	MW-13B	06/21/2006	2.9000
Chloride	MG/L	MW-13B	09/26/2006	2.7000
Chloride	MG/L	MW-13B	12/13/2006	3.3000
Chloride	MG/L	MW-13B	03/27/2007	3.0000
Chloride	MG/L	MW-13B	06/19/2007	2.8000
Chloride	MG/L	MW-13B	09/18/2007	2.8000
Chloride	MG/L	MW-13B	12/19/2007	2.8000
Chloride	MG/L	MW-13B	03/25/2008	2.7000
Chloride	MG/L	MW-13B	06/18/2008	2.8000
Chloride	MG/L	MW-13B	09/17/2008	2.7000
Chloride	MG/L	MW-13B	12/16/2008	3.2000
Chloride	MG/L	MW-13B	03/24/2009	2.6000
Chloride	MG/L	MW-13B	06/17/2009	3.0000
Chloride	MG/L	MW-13B	09/10/2009	2.3000
Chloride	MG/L	MW-13B	12/03/2009	2.9000
Chloride	MG/L	MW-13B	03/25/2010	2.5000
Chloride	MG/L	MW-13B	06/23/2010	2.8000
Chloride	MG/L	MW-13B	09/23/2010	3.0000
Chloride	MG/L	MW-13B	12/08/2010	2.5000

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Chloride	MG/L	MW-13B	03/30/2011		3.1000
Chloride	MG/L	MW-13B	06/06/2011		3.2000
Chloride	MG/L	MW-13B	09/27/2011		3.7000
Chloride	MG/L	MW-13B	12/14/2011		3.4000
Chloride	MG/L	MW-16	03/24/2009		2.1000
Chloride	MG/L	MW-16	06/16/2009		2.2000
Chloride	MG/L	MW-16	09/09/2009		1.3000
Chloride	MG/L	MW-16	12/03/2009		1.9000
Chloride	MG/L	MW-16	03/25/2010		1.7000
Chloride	MG/L	MW-16	06/24/2010		1.6000
Chloride	MG/L	MW-16	09/24/2010		1.7000
Chloride	MG/L	MW-16	12/09/2010		2.3000
Chloride	MG/L	MW-16	03/30/2011		3.6000
Chloride	MG/L	MW-16	06/07/2011		2.4000
Chloride	MG/L	MW-16	09/27/2011		3.9000
Chloride	MG/L	MW-16	12/13/2011		2.1000
Chloride	MG/L	MW-35	03/22/2005		2.2000
Chloride	MG/L	MW-35	06/14/2005		2.2000
Chloride	MG/L	MW-35	09/27/2005		2.6000
Chloride	MG/L	MW-35	12/15/2005		1.9000
Chloride	MG/L	MW-35	03/28/2006		2.9000
Chloride	MG/L	MW-35	06/21/2006		2.8000
Chloride	MG/L	MW-35	09/26/2006		2.5000
Chloride	MG/L	MW-35	12/12/2006		3.0000
Chloride	MG/L	MW-35	03/27/2007		2.8000
Chloride	MG/L	MW-35	06/20/2007		2.6000
Chloride	MG/L	MW-35	09/18/2007		2.4000
Chloride	MG/L	MW-35	12/20/2007		2.3000
Chloride	MG/L	MW-35	03/25/2008		2.4000
Chloride	MG/L	MW-35	06/18/2008		2.6000
Chloride	MG/L	MW-35	09/18/2008		2.4000
Chloride	MG/L	MW-35	12/19/2008		2.9000
Chloride	MG/L	MW-35	03/24/2009		2.3000
Chloride	MG/L	MW-35	06/16/2009		2.4000
Chloride	MG/L	MW-35	09/10/2009		2.5000
Chloride	MG/L	MW-35	12/03/2009		2.8000
Chloride	MG/L	MW-35	03/25/2010		2.0000
Chloride	MG/L	MW-35	06/23/2010		2.1000
Chloride	MG/L	MW-35	09/23/2010		2.6000
Chloride	MG/L	MW-35	12/09/2010		2.7000
Chloride	MG/L	MW-35	03/30/2011		3.2000
Chloride	MG/L	MW-35	06/06/2011		2.3000
Chloride	MG/L	MW-35	09/26/2011		3.0000
Chloride	MG/L	MW-35	12/13/2011		3.2000
Chromium, dissolved	MG/L	MW-13A	03/22/2005	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	06/15/2005	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	09/27/2005	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	12/15/2005	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	03/28/2006	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	06/21/2006	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	09/26/2006	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	12/13/2006	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	03/27/2007	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	06/19/2007	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	09/19/2007	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	12/19/2007	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	03/25/2008	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	06/18/2008	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	09/17/2008	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	12/17/2008	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	03/24/2009	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	06/17/2009	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	09/10/2009	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	12/03/2009	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	03/25/2010	ND	0.0030

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Chromium, dissolved	MG/L	MW-13A	06/23/2010	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	09/23/2010	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	12/08/2010		0.0032
Chromium, dissolved	MG/L	MW-13A	03/30/2011	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	06/06/2011	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	09/27/2011	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	12/14/2011	ND	0.0030
Chromium, dissolved	MG/L	MW-13B	03/22/2005		0.0035
Chromium, dissolved	MG/L	MW-13B	06/15/2005	ND	0.0030
Chromium, dissolved	MG/L	MW-13B	09/27/2005		0.0031
Chromium, dissolved	MG/L	MW-13B	12/15/2005	ND	0.0030
Chromium, dissolved	MG/L	MW-13B	03/29/2006		0.0035
Chromium, dissolved	MG/L	MW-13B	06/21/2006		0.0032
Chromium, dissolved	MG/L	MW-13B	09/26/2006	ND	0.0030
Chromium, dissolved	MG/L	MW-13B	12/13/2006	ND	0.0030
Chromium, dissolved	MG/L	MW-13B	03/27/2007		0.0033
Chromium, dissolved	MG/L	MW-13B	06/19/2007		0.0031
Chromium, dissolved	MG/L	MW-13B	09/18/2007		0.0030
Chromium, dissolved	MG/L	MW-13B	12/19/2007		0.0031
Chromium, dissolved	MG/L	MW-13B	03/25/2008		0.0032
Chromium, dissolved	MG/L	MW-13B	06/18/2008	ND	0.0030
Chromium, dissolved	MG/L	MW-13B	09/17/2008	ND	0.0030
Chromium, dissolved	MG/L	MW-13B	12/16/2008	ND	0.0030
Chromium, dissolved	MG/L	MW-13B	03/24/2009		0.0030
Chromium, dissolved	MG/L	MW-13B	06/17/2009	ND	0.0030
Chromium, dissolved	MG/L	MW-13B	09/10/2009		0.0031
Chromium, dissolved	MG/L	MW-13B	12/03/2009		0.0030
Chromium, dissolved	MG/L	MW-13B	03/25/2010		0.0031
Chromium, dissolved	MG/L	MW-13B	06/23/2010	ND	0.0030
Chromium, dissolved	MG/L	MW-13B	09/23/2010	ND	0.0030
Chromium, dissolved	MG/L	MW-13B	12/08/2010	ND	0.0030
Chromium, dissolved	MG/L	MW-13B	03/30/2011		0.0031
Chromium, dissolved	MG/L	MW-13B	06/06/2011	ND	0.0030
Chromium, dissolved	MG/L	MW-13B	09/27/2011		0.0032
Chromium, dissolved	MG/L	MW-13B	12/14/2011		0.0031
Chromium, dissolved	MG/L	MW-16	03/24/2009		0.0100
Chromium, dissolved	MG/L	MW-16	06/16/2009		0.0082
Chromium, dissolved	MG/L	MW-16	09/09/2009		0.0094
Chromium, dissolved	MG/L	MW-16	12/03/2009		0.0094
Chromium, dissolved	MG/L	MW-16	03/25/2010		0.0062
Chromium, dissolved	MG/L	MW-16	06/24/2010		0.0088
Chromium, dissolved	MG/L	MW-16	09/24/2010		0.0099
Chromium, dissolved	MG/L	MW-16	12/09/2010		0.0088
Chromium, dissolved	MG/L	MW-16	03/30/2011		0.0082
Chromium, dissolved	MG/L	MW-16	06/07/2011		0.0077
Chromium, dissolved	MG/L	MW-16	09/27/2011		0.0088
Chromium, dissolved	MG/L	MW-16	12/13/2011		0.0073
Chromium, dissolved	MG/L	MW-35	03/22/2005	ND	0.0030
Chromium, dissolved	MG/L	MW-35	06/14/2005	ND	0.0030
Chromium, dissolved	MG/L	MW-35	09/27/2005	ND	0.0030
Chromium, dissolved	MG/L	MW-35	12/15/2005	ND	0.0030
Chromium, dissolved	MG/L	MW-35	03/28/2006	ND	0.0030
Chromium, dissolved	MG/L	MW-35	06/21/2006	ND	0.0030
Chromium, dissolved	MG/L	MW-35	09/26/2006	ND	0.0030
Chromium, dissolved	MG/L	MW-35	12/12/2006	ND	0.0030
Chromium, dissolved	MG/L	MW-35	03/27/2007	ND	0.0030
Chromium, dissolved	MG/L	MW-35	06/20/2007	ND	0.0030
Chromium, dissolved	MG/L	MW-35	09/18/2007	ND	0.0030
Chromium, dissolved	MG/L	MW-35	12/20/2007	ND	0.0030
Chromium, dissolved	MG/L	MW-35	03/25/2008	ND	0.0030
Chromium, dissolved	MG/L	MW-35	06/18/2008	ND	0.0030
Chromium, dissolved	MG/L	MW-35	09/18/2008	ND	0.0030
Chromium, dissolved	MG/L	MW-35	12/19/2008	ND	0.0030
Chromium, dissolved	MG/L	MW-35	03/24/2009	ND	0.0030
Chromium, dissolved	MG/L	MW-35	06/16/2009		0.0330

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Chromium, dissolved	MG/L	MW-35	09/10/2009	ND	0.0030
Chromium, dissolved	MG/L	MW-35	12/03/2009	ND	0.0030
Chromium, dissolved	MG/L	MW-35	03/25/2010	ND	0.0030
Chromium, dissolved	MG/L	MW-35	06/23/2010	ND	0.0030
Chromium, dissolved	MG/L	MW-35	09/23/2010	ND	0.0030
Chromium, dissolved	MG/L	MW-35	12/09/2010	ND	0.0030
Chromium, dissolved	MG/L	MW-35	03/30/2011	ND	0.0030
Chromium, dissolved	MG/L	MW-35	06/06/2011	ND	0.0030
Chromium, dissolved	MG/L	MW-35	09/26/2011	ND	0.0030
Chromium, dissolved	MG/L	MW-35	12/13/2011	ND	0.0150
Cobalt, dissolved	MG/L	MW-13A	03/22/2005	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	06/15/2005	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	09/27/2005	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	12/15/2005	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	03/28/2006	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	06/21/2006	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	09/26/2006	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	12/13/2006	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	03/27/2007	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	06/19/2007	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	09/19/2007	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	12/19/2007	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	03/25/2008	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	06/18/2008	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	09/17/2008	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	12/17/2008	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	03/24/2009	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	06/17/2009	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	09/10/2009	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	12/03/2009	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	03/25/2010	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	06/23/2010	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	09/23/2010	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	12/08/2010	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	03/30/2011	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	06/06/2011	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	09/27/2011	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	12/14/2011	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	03/22/2005	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	06/15/2005	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	09/27/2005	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	12/15/2005	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	03/29/2006	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	06/21/2006	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	09/26/2006	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	12/13/2006	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	03/27/2007	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	06/19/2007	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	09/18/2007	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	12/19/2007	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	03/25/2008	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	06/18/2008	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	09/17/2008	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	12/16/2008	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	03/24/2009	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	06/17/2009	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	09/10/2009	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	12/03/2009	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	03/25/2010	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	06/23/2010	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	09/23/2010	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	12/08/2010	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	03/30/2011	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	06/06/2011	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	09/27/2011	ND	0.0030

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Cobalt, dissolved	MG/L	MW-13B	12/14/2011	ND	0.0030
Cobalt, dissolved	MG/L	MW-16	03/24/2009	ND	0.0030
Cobalt, dissolved	MG/L	MW-16	06/16/2009	ND	0.0030
Cobalt, dissolved	MG/L	MW-16	09/09/2009	ND	0.0030
Cobalt, dissolved	MG/L	MW-16	12/03/2009	ND	0.0030
Cobalt, dissolved	MG/L	MW-16	03/25/2010	ND	0.0030
Cobalt, dissolved	MG/L	MW-16	06/24/2010	ND	0.0030
Cobalt, dissolved	MG/L	MW-16	09/24/2010	ND	0.0030
Cobalt, dissolved	MG/L	MW-16	12/09/2010	ND	0.0030
Cobalt, dissolved	MG/L	MW-16	03/30/2011	ND	0.0030
Cobalt, dissolved	MG/L	MW-16	06/07/2011	ND	0.0030
Cobalt, dissolved	MG/L	MW-16	09/27/2011	ND	0.0030
Cobalt, dissolved	MG/L	MW-16	12/13/2011	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	03/22/2005	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	06/14/2005	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	09/27/2005	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	12/15/2005	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	03/28/2006	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	06/21/2006	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	09/26/2006	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	12/12/2006	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	03/27/2007	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	06/20/2007	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	09/18/2007	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	12/20/2007	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	03/25/2008	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	06/18/2008	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	09/18/2008	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	12/19/2008	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	03/24/2009	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	06/16/2009	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	09/10/2009	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	12/03/2009	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	03/25/2010	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	06/23/2010	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	09/23/2010	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	12/09/2010	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	03/30/2011	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	06/06/2011	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	09/26/2011	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	12/13/2011	ND	0.0030
Copper, dissolved	MG/L	MW-13A	03/22/2005	ND	0.0020
Copper, dissolved	MG/L	MW-13A	06/15/2005	ND	0.0020
Copper, dissolved	MG/L	MW-13A	09/27/2005	ND	0.0020
Copper, dissolved	MG/L	MW-13A	12/15/2005	ND	0.0020
Copper, dissolved	MG/L	MW-13A	03/28/2006	ND	0.0020
Copper, dissolved	MG/L	MW-13A	06/21/2006		0.0094
Copper, dissolved	MG/L	MW-13A	09/26/2006	ND	0.0020
Copper, dissolved	MG/L	MW-13A	12/13/2006	ND	0.0020
Copper, dissolved	MG/L	MW-13A	03/27/2007	ND	0.0020
Copper, dissolved	MG/L	MW-13A	06/19/2007	ND	0.0020
Copper, dissolved	MG/L	MW-13A	09/19/2007	ND	0.0020
Copper, dissolved	MG/L	MW-13A	12/19/2007	ND	0.0020
Copper, dissolved	MG/L	MW-13A	03/25/2008	ND	0.0020
Copper, dissolved	MG/L	MW-13A	06/18/2008	ND	0.0020
Copper, dissolved	MG/L	MW-13A	09/17/2008	ND	0.0020
Copper, dissolved	MG/L	MW-13A	12/17/2008	ND	0.0020
Copper, dissolved	MG/L	MW-13A	03/24/2009	ND	0.0020
Copper, dissolved	MG/L	MW-13A	06/17/2009	ND	0.0020
Copper, dissolved	MG/L	MW-13A	09/10/2009	ND	0.0020
Copper, dissolved	MG/L	MW-13A	12/03/2009	ND	0.0020
Copper, dissolved	MG/L	MW-13A	03/25/2010	ND	0.0020
Copper, dissolved	MG/L	MW-13A	06/23/2010	ND	0.0020
Copper, dissolved	MG/L	MW-13A	09/23/2010	ND	0.0020
Copper, dissolved	MG/L	MW-13A	12/08/2010	ND	0.0020

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Copper, dissolved	MG/L	MW-13A	03/30/2011	ND	0.0020
Copper, dissolved	MG/L	MW-13A	06/06/2011	ND	0.0020
Copper, dissolved	MG/L	MW-13A	09/27/2011	ND	0.0020
Copper, dissolved	MG/L	MW-13A	12/14/2011	ND	0.0020
Copper, dissolved	MG/L	MW-13B	03/22/2005	ND	0.0020
Copper, dissolved	MG/L	MW-13B	06/15/2005	ND	0.0020
Copper, dissolved	MG/L	MW-13B	09/27/2005	ND	0.0020
Copper, dissolved	MG/L	MW-13B	12/15/2005	ND	0.0020
Copper, dissolved	MG/L	MW-13B	03/29/2006	ND	0.0020
Copper, dissolved	MG/L	MW-13B	06/21/2006	ND	0.0020
Copper, dissolved	MG/L	MW-13B	09/26/2006	ND	0.0020
Copper, dissolved	MG/L	MW-13B	12/13/2006	ND	0.0020
Copper, dissolved	MG/L	MW-13B	03/27/2007	ND	0.0020
Copper, dissolved	MG/L	MW-13B	06/19/2007	ND	0.0020
Copper, dissolved	MG/L	MW-13B	09/18/2007		0.0040
Copper, dissolved	MG/L	MW-13B	12/19/2007	ND	0.0020
Copper, dissolved	MG/L	MW-13B	03/25/2008	ND	0.0020
Copper, dissolved	MG/L	MW-13B	06/18/2008	ND	0.0020
Copper, dissolved	MG/L	MW-13B	09/17/2008	ND	0.0020
Copper, dissolved	MG/L	MW-13B	12/16/2008	ND	0.0020
Copper, dissolved	MG/L	MW-13B	03/24/2009	ND	0.0020
Copper, dissolved	MG/L	MW-13B	06/17/2009	ND	0.0020
Copper, dissolved	MG/L	MW-13B	09/10/2009	ND	0.0020
Copper, dissolved	MG/L	MW-13B	12/03/2009	ND	0.0020
Copper, dissolved	MG/L	MW-13B	03/25/2010	ND	0.0020
Copper, dissolved	MG/L	MW-13B	06/23/2010	ND	0.0020
Copper, dissolved	MG/L	MW-13B	09/23/2010	ND	0.0020
Copper, dissolved	MG/L	MW-13B	12/08/2010	ND	0.0020
Copper, dissolved	MG/L	MW-13B	03/30/2011	ND	0.0020
Copper, dissolved	MG/L	MW-13B	06/06/2011	ND	0.0020
Copper, dissolved	MG/L	MW-13B	09/27/2011	ND	0.0020
Copper, dissolved	MG/L	MW-13B	12/14/2011	ND	0.0020
Copper, dissolved	MG/L	MW-16	03/24/2009	ND	0.0020
Copper, dissolved	MG/L	MW-16	06/16/2009	ND	0.0020
Copper, dissolved	MG/L	MW-16	09/09/2009	ND	0.0020
Copper, dissolved	MG/L	MW-16	12/03/2009	ND	0.0020
Copper, dissolved	MG/L	MW-16	03/25/2010	ND	0.0020
Copper, dissolved	MG/L	MW-16	06/24/2010	ND	0.0020
Copper, dissolved	MG/L	MW-16	09/24/2010	ND	0.0020
Copper, dissolved	MG/L	MW-16	12/09/2010	ND	0.0020
Copper, dissolved	MG/L	MW-16	03/30/2011	ND	0.0020
Copper, dissolved	MG/L	MW-16	06/07/2011	ND	0.0020
Copper, dissolved	MG/L	MW-16	09/27/2011	ND	0.0020
Copper, dissolved	MG/L	MW-16	12/13/2011	ND	0.0020
Copper, dissolved	MG/L	MW-35	03/22/2005	ND	0.0020
Copper, dissolved	MG/L	MW-35	06/14/2005	ND	0.0020
Copper, dissolved	MG/L	MW-35	09/27/2005	ND	0.0020
Copper, dissolved	MG/L	MW-35	12/15/2005	ND	0.0020
Copper, dissolved	MG/L	MW-35	03/28/2006	ND	0.0020
Copper, dissolved	MG/L	MW-35	06/21/2006	ND	0.0020
Copper, dissolved	MG/L	MW-35	09/26/2006	ND	0.0020
Copper, dissolved	MG/L	MW-35	12/12/2006	ND	0.0020
Copper, dissolved	MG/L	MW-35	03/27/2007	ND	0.0020
Copper, dissolved	MG/L	MW-35	06/20/2007	ND	0.0020
Copper, dissolved	MG/L	MW-35	09/18/2007	ND	0.0020
Copper, dissolved	MG/L	MW-35	12/20/2007	ND	0.0020
Copper, dissolved	MG/L	MW-35	03/25/2008	ND	0.0020
Copper, dissolved	MG/L	MW-35	06/18/2008	ND	0.0020
Copper, dissolved	MG/L	MW-35	09/18/2008	ND	0.0020
Copper, dissolved	MG/L	MW-35	12/19/2008	ND	0.0020
Copper, dissolved	MG/L	MW-35	03/24/2009	ND	0.0020
Copper, dissolved	MG/L	MW-35	06/16/2009	ND	0.0020
Copper, dissolved	MG/L	MW-35	09/10/2009	ND	0.0020
Copper, dissolved	MG/L	MW-35	12/03/2009	ND	0.0020
Copper, dissolved	MG/L	MW-35	03/25/2010	ND	0.0020

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Copper, dissolved	MG/L	MW-35	06/23/2010	ND	0.0020
Copper, dissolved	MG/L	MW-35	09/23/2010	ND	0.0020
Copper, dissolved	MG/L	MW-35	12/09/2010	ND	0.0020
Copper, dissolved	MG/L	MW-35	03/30/2011	ND	0.0020
Copper, dissolved	MG/L	MW-35	06/06/2011	ND	0.0020
Copper, dissolved	MG/L	MW-35	09/26/2011	ND	0.0020
Copper, dissolved	MG/L	MW-35	12/13/2011	ND	0.0100
Iron, dissolved	MG/L	MW-13A	03/22/2005	ND	0.0600
Iron, dissolved	MG/L	MW-13A	06/15/2005	ND	0.0600
Iron, dissolved	MG/L	MW-13A	09/27/2005	ND	0.0600
Iron, dissolved	MG/L	MW-13A	12/15/2005	ND	0.0600
Iron, dissolved	MG/L	MW-13A	03/28/2006	ND	0.0600
Iron, dissolved	MG/L	MW-13A	06/21/2006	ND	0.0600
Iron, dissolved	MG/L	MW-13A	09/26/2006	ND	0.0600
Iron, dissolved	MG/L	MW-13A	12/13/2006	ND	0.0600
Iron, dissolved	MG/L	MW-13A	03/27/2007	ND	0.0600
Iron, dissolved	MG/L	MW-13A	06/19/2007	ND	0.0600
Iron, dissolved	MG/L	MW-13A	09/19/2007	ND	0.0600
Iron, dissolved	MG/L	MW-13A	12/19/2007	ND	0.0600
Iron, dissolved	MG/L	MW-13A	03/25/2008	ND	0.0600
Iron, dissolved	MG/L	MW-13A	06/18/2008	ND	0.0600
Iron, dissolved	MG/L	MW-13A	09/17/2008	ND	0.0600
Iron, dissolved	MG/L	MW-13A	12/17/2008	ND	0.0600
Iron, dissolved	MG/L	MW-13A	03/24/2009	ND	0.0600
Iron, dissolved	MG/L	MW-13A	06/17/2009	ND	0.0600
Iron, dissolved	MG/L	MW-13A	09/10/2009		0.0630
Iron, dissolved	MG/L	MW-13A	12/03/2009	ND	0.0600
Iron, dissolved	MG/L	MW-13A	03/25/2010	ND	0.0600
Iron, dissolved	MG/L	MW-13A	06/23/2010	ND	0.0600
Iron, dissolved	MG/L	MW-13A	09/23/2010	ND	0.0600
Iron, dissolved	MG/L	MW-13A	12/08/2010	ND	0.0600
Iron, dissolved	MG/L	MW-13A	03/30/2011	ND	0.0600
Iron, dissolved	MG/L	MW-13A	06/06/2011	ND	0.0600
Iron, dissolved	MG/L	MW-13A	09/27/2011	ND	0.0600
Iron, dissolved	MG/L	MW-13A	12/14/2011	ND	0.0600
Iron, dissolved	MG/L	MW-13B	03/22/2005	ND	0.0600
Iron, dissolved	MG/L	MW-13B	06/15/2005	ND	0.0600
Iron, dissolved	MG/L	MW-13B	09/27/2005	ND	0.0600
Iron, dissolved	MG/L	MW-13B	12/15/2005	ND	0.0600
Iron, dissolved	MG/L	MW-13B	03/29/2006	ND	0.0600
Iron, dissolved	MG/L	MW-13B	06/21/2006	ND	0.0600
Iron, dissolved	MG/L	MW-13B	09/26/2006	ND	0.0600
Iron, dissolved	MG/L	MW-13B	12/13/2006	ND	0.0600
Iron, dissolved	MG/L	MW-13B	03/27/2007	ND	0.0600
Iron, dissolved	MG/L	MW-13B	06/19/2007	ND	0.0600
Iron, dissolved	MG/L	MW-13B	09/18/2007	ND	0.0600
Iron, dissolved	MG/L	MW-13B	12/19/2007	ND	0.0600
Iron, dissolved	MG/L	MW-13B	03/25/2008	ND	0.0600
Iron, dissolved	MG/L	MW-13B	06/18/2008	ND	0.0600
Iron, dissolved	MG/L	MW-13B	09/17/2008	ND	0.0600
Iron, dissolved	MG/L	MW-13B	12/16/2008	ND	0.0600
Iron, dissolved	MG/L	MW-13B	03/24/2009	ND	0.0600
Iron, dissolved	MG/L	MW-13B	06/17/2009	ND	0.0600
Iron, dissolved	MG/L	MW-13B	09/10/2009		0.0970
Iron, dissolved	MG/L	MW-13B	12/03/2009	ND	0.0600
Iron, dissolved	MG/L	MW-13B	03/25/2010	ND	0.0600
Iron, dissolved	MG/L	MW-13B	06/23/2010	ND	0.0600
Iron, dissolved	MG/L	MW-13B	09/23/2010	ND	0.0600
Iron, dissolved	MG/L	MW-13B	12/08/2010	ND	0.0600
Iron, dissolved	MG/L	MW-13B	03/30/2011	ND	0.0600
Iron, dissolved	MG/L	MW-13B	06/06/2011	ND	0.0600
Iron, dissolved	MG/L	MW-13B	09/27/2011	ND	0.0600
Iron, dissolved	MG/L	MW-13B	12/14/2011	ND	0.0600
Iron, dissolved	MG/L	MW-16	03/24/2009	ND	0.0600
Iron, dissolved	MG/L	MW-16	06/16/2009	ND	0.0600

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.



Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Iron, dissolved	MG/L	MW-16	09/09/2009	ND	0.0600
Iron, dissolved	MG/L	MW-16	12/03/2009	ND	0.0600
Iron, dissolved	MG/L	MW-16	03/25/2010	ND	0.0600
Iron, dissolved	MG/L	MW-16	06/24/2010	ND	0.0600
Iron, dissolved	MG/L	MW-16	09/24/2010	ND	0.0600
Iron, dissolved	MG/L	MW-16	12/09/2010	ND	0.0600
Iron, dissolved	MG/L	MW-16	03/30/2011	ND	0.0600
Iron, dissolved	MG/L	MW-16	06/07/2011	ND	0.0600
Iron, dissolved	MG/L	MW-16	09/27/2011	ND	0.0600
Iron, dissolved	MG/L	MW-16	12/13/2011	ND	0.0600
Iron, dissolved	MG/L	MW-35	03/22/2005	ND	0.0600
Iron, dissolved	MG/L	MW-35	06/14/2005	ND	0.0600
Iron, dissolved	MG/L	MW-35	09/27/2005	ND	0.0600
Iron, dissolved	MG/L	MW-35	12/15/2005	ND	0.0600
Iron, dissolved	MG/L	MW-35	03/28/2006	ND	0.0600
Iron, dissolved	MG/L	MW-35	06/21/2006	ND	0.0600
Iron, dissolved	MG/L	MW-35	09/26/2006	ND	0.0600
Iron, dissolved	MG/L	MW-35	12/12/2006	ND	0.0600
Iron, dissolved	MG/L	MW-35	03/27/2007	ND	0.0600
Iron, dissolved	MG/L	MW-35	06/20/2007	ND	0.0600
Iron, dissolved	MG/L	MW-35	09/18/2007	ND	0.0600
Iron, dissolved	MG/L	MW-35	12/20/2007	ND	0.0600
Iron, dissolved	MG/L	MW-35	03/25/2008		0.0740
Iron, dissolved	MG/L	MW-35	06/18/2008	ND	0.0600
Iron, dissolved	MG/L	MW-35	09/18/2008	ND	0.0600
Iron, dissolved	MG/L	MW-35	12/19/2008	ND	0.0600
Iron, dissolved	MG/L	MW-35	03/24/2009	ND	0.0600
Iron, dissolved	MG/L	MW-35	06/16/2009	ND	0.0600
Iron, dissolved	MG/L	MW-35	09/10/2009	ND	0.0600
Iron, dissolved	MG/L	MW-35	12/03/2009	ND	0.0600
Iron, dissolved	MG/L	MW-35	03/25/2010	ND	0.0600
Iron, dissolved	MG/L	MW-35	06/23/2010	ND	0.0600
Iron, dissolved	MG/L	MW-35	09/23/2010	ND	0.0600
Iron, dissolved	MG/L	MW-35	12/09/2010	ND	0.0600
Iron, dissolved	MG/L	MW-35	03/30/2011	ND	0.0600
Iron, dissolved	MG/L	MW-35	06/06/2011	ND	0.0600
Iron, dissolved	MG/L	MW-35	09/26/2011	ND	0.0600
Iron, dissolved	MG/L	MW-35	12/13/2011	ND	0.0600
Lead, dissolved	MG/L	MW-13A	03/22/2005	ND	0.0010
Lead, dissolved	MG/L	MW-13A	06/15/2005	ND	0.0010
Lead, dissolved	MG/L	MW-13A	09/27/2005	ND	0.0010
Lead, dissolved	MG/L	MW-13A	12/15/2005	ND	0.0010
Lead, dissolved	MG/L	MW-13A	03/28/2006	ND	0.0010
Lead, dissolved	MG/L	MW-13A	06/21/2006	ND	0.0010
Lead, dissolved	MG/L	MW-13A	09/26/2006	ND	0.0010
Lead, dissolved	MG/L	MW-13A	12/13/2006	ND	0.0010
Lead, dissolved	MG/L	MW-13A	03/27/2007	ND	0.0010
Lead, dissolved	MG/L	MW-13A	06/19/2007	ND	0.0010
Lead, dissolved	MG/L	MW-13A	09/19/2007	ND	0.0010
Lead, dissolved	MG/L	MW-13A	12/19/2007	ND	0.0010
Lead, dissolved	MG/L	MW-13A	03/25/2008	ND	0.0010
Lead, dissolved	MG/L	MW-13A	06/18/2008	ND	0.0010
Lead, dissolved	MG/L	MW-13A	09/17/2008	ND	0.0010
Lead, dissolved	MG/L	MW-13A	12/17/2008	ND	0.0010
Lead, dissolved	MG/L	MW-13A	03/24/2009	ND	0.0010
Lead, dissolved	MG/L	MW-13A	06/17/2009	ND	0.0010
Lead, dissolved	MG/L	MW-13A	09/10/2009	ND	0.0010
Lead, dissolved	MG/L	MW-13A	12/03/2009	ND	0.0010
Lead, dissolved	MG/L	MW-13A	03/25/2010	ND	0.0010
Lead, dissolved	MG/L	MW-13A	06/23/2010	ND	0.0010
Lead, dissolved	MG/L	MW-13A	09/23/2010	ND	0.0010
Lead, dissolved	MG/L	MW-13A	12/08/2010	ND	0.0010
Lead, dissolved	MG/L	MW-13A	03/30/2011	ND	0.0010
Lead, dissolved	MG/L	MW-13A	06/06/2011	ND	0.0010
Lead, dissolved	MG/L	MW-13A	09/27/2011	ND	0.0010

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Lead, dissolved	MG/L	MW-13A	12/14/2011	ND	0.0010
Lead, dissolved	MG/L	MW-13B	03/22/2005	ND	0.0010
Lead, dissolved	MG/L	MW-13B	06/15/2005	ND	0.0010
Lead, dissolved	MG/L	MW-13B	09/27/2005	ND	0.0010
Lead, dissolved	MG/L	MW-13B	12/15/2005	ND	0.0010
Lead, dissolved	MG/L	MW-13B	03/29/2006	ND	0.0010
Lead, dissolved	MG/L	MW-13B	06/21/2006	ND	0.0010
Lead, dissolved	MG/L	MW-13B	09/26/2006	ND	0.0010
Lead, dissolved	MG/L	MW-13B	12/13/2006	ND	0.0010
Lead, dissolved	MG/L	MW-13B	03/27/2007	ND	0.0010
Lead, dissolved	MG/L	MW-13B	06/19/2007	ND	0.0010
Lead, dissolved	MG/L	MW-13B	09/18/2007	ND	0.0010
Lead, dissolved	MG/L	MW-13B	12/19/2007	ND	0.0010
Lead, dissolved	MG/L	MW-13B	03/25/2008	ND	0.0010
Lead, dissolved	MG/L	MW-13B	06/18/2008	ND	0.0010
Lead, dissolved	MG/L	MW-13B	09/17/2008	ND	0.0010
Lead, dissolved	MG/L	MW-13B	12/16/2008	ND	0.0010
Lead, dissolved	MG/L	MW-13B	03/24/2009	ND	0.0010
Lead, dissolved	MG/L	MW-13B	06/17/2009	ND	0.0010
Lead, dissolved	MG/L	MW-13B	09/10/2009	ND	0.0010
Lead, dissolved	MG/L	MW-13B	12/03/2009	ND	0.0010
Lead, dissolved	MG/L	MW-13B	03/25/2010	ND	0.0010
Lead, dissolved	MG/L	MW-13B	06/23/2010	ND	0.0010
Lead, dissolved	MG/L	MW-13B	09/23/2010	ND	0.0010
Lead, dissolved	MG/L	MW-13B	12/08/2010	ND	0.0010
Lead, dissolved	MG/L	MW-13B	03/30/2011	ND	0.0010
Lead, dissolved	MG/L	MW-13B	06/06/2011	ND	0.0010
Lead, dissolved	MG/L	MW-13B	09/27/2011	ND	0.0010
Lead, dissolved	MG/L	MW-13B	12/14/2011	ND	0.0010
Lead, dissolved	MG/L	MW-16	03/24/2009	ND	0.0010
Lead, dissolved	MG/L	MW-16	06/16/2009	ND	0.0010
Lead, dissolved	MG/L	MW-16	09/09/2009	ND	0.0010
Lead, dissolved	MG/L	MW-16	12/03/2009	ND	0.0010
Lead, dissolved	MG/L	MW-16	03/25/2010	ND	0.0010
Lead, dissolved	MG/L	MW-16	06/24/2010	ND	0.0010
Lead, dissolved	MG/L	MW-16	09/24/2010	ND	0.0010
Lead, dissolved	MG/L	MW-16	12/09/2010	ND	0.0010
Lead, dissolved	MG/L	MW-16	03/30/2011	ND	0.0010
Lead, dissolved	MG/L	MW-16	06/07/2011	ND	0.0010
Lead, dissolved	MG/L	MW-16	09/27/2011	ND	0.0010
Lead, dissolved	MG/L	MW-16	12/13/2011	ND	0.0010
Lead, dissolved	MG/L	MW-35	03/22/2005	ND	0.0010
Lead, dissolved	MG/L	MW-35	06/14/2005	ND	0.0010
Lead, dissolved	MG/L	MW-35	09/27/2005	ND	0.0010
Lead, dissolved	MG/L	MW-35	12/15/2005	ND	0.0010
Lead, dissolved	MG/L	MW-35	03/28/2006	ND	0.0010
Lead, dissolved	MG/L	MW-35	06/21/2006	ND	0.0010
Lead, dissolved	MG/L	MW-35	09/26/2006	ND	0.0010
Lead, dissolved	MG/L	MW-35	12/12/2006	ND	0.0010
Lead, dissolved	MG/L	MW-35	03/27/2007	ND	0.0010
Lead, dissolved	MG/L	MW-35	06/20/2007	ND	0.0010
Lead, dissolved	MG/L	MW-35	09/18/2007	ND	0.0010
Lead, dissolved	MG/L	MW-35	12/20/2007	ND	0.0010
Lead, dissolved	MG/L	MW-35	03/25/2008	ND	0.0010
Lead, dissolved	MG/L	MW-35	06/18/2008	ND	0.0010
Lead, dissolved	MG/L	MW-35	09/18/2008	ND	0.0010
Lead, dissolved	MG/L	MW-35	12/19/2008	ND	0.0010
Lead, dissolved	MG/L	MW-35	03/24/2009	ND	0.0010
Lead, dissolved	MG/L	MW-35	06/16/2009	ND	0.0010
Lead, dissolved	MG/L	MW-35	09/10/2009	ND	0.0010
Lead, dissolved	MG/L	MW-35	12/03/2009	ND	0.0010
Lead, dissolved	MG/L	MW-35	03/25/2010	ND	0.0010
Lead, dissolved	MG/L	MW-35	06/23/2010	ND	0.0010
Lead, dissolved	MG/L	MW-35	09/23/2010	ND	0.0010
Lead, dissolved	MG/L	MW-35	12/09/2010	ND	0.0010

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Lead, dissolved	MG/L	MW-35	03/30/2011	ND	0.0010
Lead, dissolved	MG/L	MW-35	06/06/2011	ND	0.0010
Lead, dissolved	MG/L	MW-35	09/26/2011	ND	0.0010
Lead, dissolved	MG/L	MW-35	12/13/2011	ND	0.0050
Magnesium, dissolved	MG/L	MW-13A	03/22/2005		9.2000
Magnesium, dissolved	MG/L	MW-13A	06/15/2005		8.2000
Magnesium, dissolved	MG/L	MW-13A	09/27/2005		8.4000
Magnesium, dissolved	MG/L	MW-13A	12/15/2005		8.6000
Magnesium, dissolved	MG/L	MW-13A	03/28/2006		9.2000
Magnesium, dissolved	MG/L	MW-13A	06/21/2006		9.1000
Magnesium, dissolved	MG/L	MW-13A	09/26/2006		9.2000
Magnesium, dissolved	MG/L	MW-13A	12/13/2006		9.3000
Magnesium, dissolved	MG/L	MW-13A	03/27/2007		9.3000
Magnesium, dissolved	MG/L	MW-13A	06/19/2007		9.0000
Magnesium, dissolved	MG/L	MW-13A	09/19/2007		9.4000
Magnesium, dissolved	MG/L	MW-13A	12/19/2007		8.6000
Magnesium, dissolved	MG/L	MW-13A	03/25/2008		9.1000
Magnesium, dissolved	MG/L	MW-13A	06/18/2008		9.3000
Magnesium, dissolved	MG/L	MW-13A	09/17/2008		9.2000
Magnesium, dissolved	MG/L	MW-13A	12/17/2008		9.3000
Magnesium, dissolved	MG/L	MW-13A	03/24/2009		9.6000
Magnesium, dissolved	MG/L	MW-13A	06/17/2009		9.6000
Magnesium, dissolved	MG/L	MW-13A	09/10/2009		9.3000
Magnesium, dissolved	MG/L	MW-13A	12/03/2009		9.1000
Magnesium, dissolved	MG/L	MW-13A	03/25/2010		8.7000
Magnesium, dissolved	MG/L	MW-13A	06/23/2010		9.7000
Magnesium, dissolved	MG/L	MW-13A	09/23/2010		9.4000
Magnesium, dissolved	MG/L	MW-13A	12/08/2010		8.1000
Magnesium, dissolved	MG/L	MW-13A	03/30/2011		9.6000
Magnesium, dissolved	MG/L	MW-13A	06/06/2011		10.0000
Magnesium, dissolved	MG/L	MW-13A	09/27/2011		9.7000
Magnesium, dissolved	MG/L	MW-13A	12/14/2011		9.3000
Magnesium, dissolved	MG/L	MW-13B	03/22/2005		8.6000
Magnesium, dissolved	MG/L	MW-13B	06/15/2005		8.0000
Magnesium, dissolved	MG/L	MW-13B	09/27/2005		8.7000
Magnesium, dissolved	MG/L	MW-13B	12/15/2005		8.0000
Magnesium, dissolved	MG/L	MW-13B	03/29/2006		8.1000
Magnesium, dissolved	MG/L	MW-13B	06/21/2006		8.3000
Magnesium, dissolved	MG/L	MW-13B	09/26/2006		8.5000
Magnesium, dissolved	MG/L	MW-13B	12/13/2006		8.7000
Magnesium, dissolved	MG/L	MW-13B	03/27/2007		8.4000
Magnesium, dissolved	MG/L	MW-13B	06/19/2007		7.9000
Magnesium, dissolved	MG/L	MW-13B	09/18/2007		8.7000
Magnesium, dissolved	MG/L	MW-13B	12/19/2007		7.6000
Magnesium, dissolved	MG/L	MW-13B	03/25/2008		8.0000
Magnesium, dissolved	MG/L	MW-13B	06/18/2008		8.2000
Magnesium, dissolved	MG/L	MW-13B	09/17/2008		8.3000
Magnesium, dissolved	MG/L	MW-13B	12/16/2008		8.3000
Magnesium, dissolved	MG/L	MW-13B	03/24/2009		8.5000
Magnesium, dissolved	MG/L	MW-13B	06/17/2009		8.5000
Magnesium, dissolved	MG/L	MW-13B	09/10/2009		8.3000
Magnesium, dissolved	MG/L	MW-13B	12/03/2009		8.0000
Magnesium, dissolved	MG/L	MW-13B	03/25/2010		8.1000
Magnesium, dissolved	MG/L	MW-13B	06/23/2010		8.7000
Magnesium, dissolved	MG/L	MW-13B	09/23/2010		8.3000
Magnesium, dissolved	MG/L	MW-13B	12/08/2010		9.3000
Magnesium, dissolved	MG/L	MW-13B	03/30/2011		8.2000
Magnesium, dissolved	MG/L	MW-13B	06/06/2011		9.0000
Magnesium, dissolved	MG/L	MW-13B	09/27/2011		8.4000
Magnesium, dissolved	MG/L	MW-13B	12/14/2011		8.1000
Magnesium, dissolved	MG/L	MW-16	03/24/2009		7.2000
Magnesium, dissolved	MG/L	MW-16	06/16/2009		5.9000
Magnesium, dissolved	MG/L	MW-16	09/09/2009		6.9000
Magnesium, dissolved	MG/L	MW-16	12/03/2009		8.0000
Magnesium, dissolved	MG/L	MW-16	03/25/2010		5.1000

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Magnesium, dissolved	MG/L	MW-16	06/24/2010		6.9000
Magnesium, dissolved	MG/L	MW-16	09/24/2010		7.4000
Magnesium, dissolved	MG/L	MW-16	12/09/2010		8.3000
Magnesium, dissolved	MG/L	MW-16	03/30/2011		5.8000
Magnesium, dissolved	MG/L	MW-16	06/07/2011		5.6000
Magnesium, dissolved	MG/L	MW-16	09/27/2011		6.6000
Magnesium, dissolved	MG/L	MW-16	12/13/2011		6.2000
Magnesium, dissolved	MG/L	MW-35	03/22/2005		8.6000
Magnesium, dissolved	MG/L	MW-35	06/14/2005		8.1000
Magnesium, dissolved	MG/L	MW-35	09/27/2005		9.2000
Magnesium, dissolved	MG/L	MW-35	12/15/2005		8.0000
Magnesium, dissolved	MG/L	MW-35	03/28/2006		8.3000
Magnesium, dissolved	MG/L	MW-35	06/21/2006		8.4000
Magnesium, dissolved	MG/L	MW-35	09/26/2006		8.2000
Magnesium, dissolved	MG/L	MW-35	12/12/2006		8.8000
Magnesium, dissolved	MG/L	MW-35	03/27/2007		8.6000
Magnesium, dissolved	MG/L	MW-35	06/20/2007		8.4000
Magnesium, dissolved	MG/L	MW-35	09/18/2007		9.1000
Magnesium, dissolved	MG/L	MW-35	12/20/2007		8.1000
Magnesium, dissolved	MG/L	MW-35	03/25/2008		8.2000
Magnesium, dissolved	MG/L	MW-35	06/18/2008		8.1000
Magnesium, dissolved	MG/L	MW-35	09/18/2008		8.1000
Magnesium, dissolved	MG/L	MW-35	12/19/2008		8.1000
Magnesium, dissolved	MG/L	MW-35	03/24/2009		8.7000
Magnesium, dissolved	MG/L	MW-35	06/16/2009		8.1000
Magnesium, dissolved	MG/L	MW-35	09/10/2009		8.1000
Magnesium, dissolved	MG/L	MW-35	12/03/2009		8.3000
Magnesium, dissolved	MG/L	MW-35	03/25/2010		7.9000
Magnesium, dissolved	MG/L	MW-35	06/23/2010		8.8000
Magnesium, dissolved	MG/L	MW-35	09/23/2010		8.7000
Magnesium, dissolved	MG/L	MW-35	12/09/2010		9.3000
Magnesium, dissolved	MG/L	MW-35	03/30/2011		8.8000
Magnesium, dissolved	MG/L	MW-35	06/06/2011		9.0000
Magnesium, dissolved	MG/L	MW-35	09/26/2011		8.7000
Magnesium, dissolved	MG/L	MW-35	12/13/2011		8.8000
Manganese, dissolved	MG/L	MW-13A	03/22/2005	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	06/15/2005	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	09/27/2005	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	12/15/2005	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	03/28/2006	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	06/21/2006	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	09/26/2006	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	12/13/2006	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	03/27/2007	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	06/19/2007	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	09/19/2007	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	12/19/2007	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	03/25/2008	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	06/18/2008	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	09/17/2008	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	12/17/2008	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	03/24/2009	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	06/17/2009	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	09/10/2009	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	12/03/2009	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	03/25/2010	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	06/23/2010	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	09/23/2010	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	12/08/2010	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	03/30/2011	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	06/06/2011	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	09/27/2011	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	12/14/2011	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	03/22/2005	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	06/15/2005	ND	0.0010

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Manganese, dissolved	MG/L	MW-13B	09/27/2005	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	12/15/2005	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	03/29/2006	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	06/21/2006	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	09/26/2006	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	12/13/2006	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	03/27/2007	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	06/19/2007	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	09/18/2007	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	12/19/2007	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	03/25/2008	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	06/18/2008	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	09/17/2008	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	12/16/2008	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	03/24/2009	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	06/17/2009	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	09/10/2009	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	12/03/2009	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	03/25/2010	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	06/23/2010	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	09/23/2010	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	12/08/2010	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	03/30/2011	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	06/06/2011	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	09/27/2011	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	12/14/2011	ND	0.0010
Manganese, dissolved	MG/L	MW-16	03/24/2009	ND	0.0010
Manganese, dissolved	MG/L	MW-16	06/16/2009	ND	0.0010
Manganese, dissolved	MG/L	MW-16	09/09/2009	ND	0.0010
Manganese, dissolved	MG/L	MW-16	12/03/2009	ND	0.0010
Manganese, dissolved	MG/L	MW-16	03/25/2010		0.0027
Manganese, dissolved	MG/L	MW-16	06/24/2010		0.0067
Manganese, dissolved	MG/L	MW-16	09/24/2010		0.0027
Manganese, dissolved	MG/L	MW-16	12/09/2010		0.0021
Manganese, dissolved	MG/L	MW-16	03/30/2011	ND	0.0010
Manganese, dissolved	MG/L	MW-16	06/07/2011		0.0028
Manganese, dissolved	MG/L	MW-16	09/27/2011		0.0029
Manganese, dissolved	MG/L	MW-16	12/13/2011	ND	0.0010
Manganese, dissolved	MG/L	MW-35	03/22/2005	ND	0.0010
Manganese, dissolved	MG/L	MW-35	06/14/2005	ND	0.0010
Manganese, dissolved	MG/L	MW-35	09/27/2005	ND	0.0010
Manganese, dissolved	MG/L	MW-35	12/15/2005	ND	0.0010
Manganese, dissolved	MG/L	MW-35	03/28/2006	ND	0.0010
Manganese, dissolved	MG/L	MW-35	06/21/2006	ND	0.0010
Manganese, dissolved	MG/L	MW-35	09/26/2006	ND	0.0010
Manganese, dissolved	MG/L	MW-35	12/12/2006	ND	0.0010
Manganese, dissolved	MG/L	MW-35	03/27/2007	ND	0.0010
Manganese, dissolved	MG/L	MW-35	06/20/2007	ND	0.0010
Manganese, dissolved	MG/L	MW-35	09/18/2007	ND	0.0010
Manganese, dissolved	MG/L	MW-35	12/20/2007	ND	0.0010
Manganese, dissolved	MG/L	MW-35	03/25/2008	ND	0.0010
Manganese, dissolved	MG/L	MW-35	06/18/2008	ND	0.0010
Manganese, dissolved	MG/L	MW-35	09/18/2008	ND	0.0010
Manganese, dissolved	MG/L	MW-35	12/19/2008	ND	0.0010
Manganese, dissolved	MG/L	MW-35	03/24/2009	ND	0.0010
Manganese, dissolved	MG/L	MW-35	06/16/2009	ND	0.0010
Manganese, dissolved	MG/L	MW-35	09/10/2009	ND	0.0010
Manganese, dissolved	MG/L	MW-35	12/03/2009	ND	0.0010
Manganese, dissolved	MG/L	MW-35	03/25/2010	ND	0.0010
Manganese, dissolved	MG/L	MW-35	06/23/2010	ND	0.0010
Manganese, dissolved	MG/L	MW-35	09/23/2010	ND	0.0010
Manganese, dissolved	MG/L	MW-35	12/09/2010	ND	0.0010
Manganese, dissolved	MG/L	MW-35	03/30/2011	ND	0.0010
Manganese, dissolved	MG/L	MW-35	06/06/2011	ND	0.0010
Manganese, dissolved	MG/L	MW-35	09/26/2011		0.0010

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Manganese, dissolved	MG/L	MW-35	12/13/2011	ND	0.0050
Nickel, dissolved	MG/L	MW-13A	03/22/2005	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	06/15/2005	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	09/27/2005	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	12/15/2005	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	03/28/2006	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	06/21/2006	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	09/26/2006	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	12/13/2006	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	03/27/2007	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	06/19/2007	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	09/19/2007	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	12/19/2007	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	03/25/2008	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	06/18/2008	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	09/17/2008	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	12/17/2008	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	03/24/2009	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	06/17/2009	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	09/10/2009	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	12/03/2009	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	03/25/2010	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	06/23/2010	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	09/23/2010	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	12/08/2010	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	03/30/2011	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	06/06/2011	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	09/27/2011	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	12/14/2011	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	03/22/2005	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	06/15/2005	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	09/27/2005	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	12/15/2005	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	03/29/2006	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	06/21/2006	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	09/26/2006	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	12/13/2006	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	03/27/2007	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	06/19/2007	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	09/18/2007	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	12/19/2007	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	03/25/2008	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	06/18/2008	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	09/17/2008	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	12/16/2008	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	03/24/2009	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	06/17/2009	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	09/10/2009	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	12/03/2009	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	03/25/2010	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	06/23/2010	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	09/23/2010	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	12/08/2010	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	03/30/2011	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	06/06/2011	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	09/27/2011	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	12/14/2011	ND	0.0040
Nickel, dissolved	MG/L	MW-16	03/24/2009	ND	0.0040
Nickel, dissolved	MG/L	MW-16	06/16/2009	ND	0.0040
Nickel, dissolved	MG/L	MW-16	09/09/2009	ND	0.0040
Nickel, dissolved	MG/L	MW-16	12/03/2009	ND	0.0040
Nickel, dissolved	MG/L	MW-16	03/25/2010	ND	0.0040
Nickel, dissolved	MG/L	MW-16	06/24/2010	ND	0.0040
Nickel, dissolved	MG/L	MW-16	09/24/2010	ND	0.0040
Nickel, dissolved	MG/L	MW-16	12/09/2010	ND	0.0040

\* - Outlier for that well and constituent.  
 ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Nickel, dissolved	MG/L	MW-16	03/30/2011	ND	0.0040
Nickel, dissolved	MG/L	MW-16	06/07/2011	ND	0.0040
Nickel, dissolved	MG/L	MW-16	09/27/2011	ND	0.0040
Nickel, dissolved	MG/L	MW-16	12/13/2011	ND	0.0040
Nickel, dissolved	MG/L	MW-35	03/22/2005	ND	0.0040
Nickel, dissolved	MG/L	MW-35	06/14/2005	ND	0.0040
Nickel, dissolved	MG/L	MW-35	09/27/2005	ND	0.0040
Nickel, dissolved	MG/L	MW-35	12/15/2005	ND	0.0040
Nickel, dissolved	MG/L	MW-35	03/28/2006	ND	0.0040
Nickel, dissolved	MG/L	MW-35	06/21/2006	ND	0.0040
Nickel, dissolved	MG/L	MW-35	09/26/2006	ND	0.0040
Nickel, dissolved	MG/L	MW-35	12/12/2006	ND	0.0040
Nickel, dissolved	MG/L	MW-35	03/27/2007	ND	0.0040
Nickel, dissolved	MG/L	MW-35	06/20/2007	ND	0.0040
Nickel, dissolved	MG/L	MW-35	09/18/2007	ND	0.0040
Nickel, dissolved	MG/L	MW-35	12/20/2007	ND	0.0040
Nickel, dissolved	MG/L	MW-35	03/25/2008	ND	0.0040
Nickel, dissolved	MG/L	MW-35	06/18/2008	ND	0.0040
Nickel, dissolved	MG/L	MW-35	09/18/2008	ND	0.0040
Nickel, dissolved	MG/L	MW-35	12/19/2008	ND	0.0040
Nickel, dissolved	MG/L	MW-35	03/24/2009	ND	0.0040
Nickel, dissolved	MG/L	MW-35	06/16/2009	ND	0.0040
Nickel, dissolved	MG/L	MW-35	09/10/2009	ND	0.0040
Nickel, dissolved	MG/L	MW-35	12/03/2009	ND	0.0040
Nickel, dissolved	MG/L	MW-35	03/25/2010	ND	0.0040
Nickel, dissolved	MG/L	MW-35	06/23/2010	ND	0.0040
Nickel, dissolved	MG/L	MW-35	09/23/2010	ND	0.0040
Nickel, dissolved	MG/L	MW-35	12/09/2010	ND	0.0040
Nickel, dissolved	MG/L	MW-35	03/30/2011	ND	0.0040
Nickel, dissolved	MG/L	MW-35	06/06/2011	ND	0.0040
Nickel, dissolved	MG/L	MW-35	09/26/2011	ND	0.0040
Nickel, dissolved	MG/L	MW-35	12/13/2011	ND	0.0200
Nitrate (as n)	MG/L	MW-13A	03/22/2005		0.5100
Nitrate (as n)	MG/L	MW-13A	06/15/2005		0.4400
Nitrate (as n)	MG/L	MW-13A	09/27/2005		1.8000
Nitrate (as n)	MG/L	MW-13A	12/15/2005		0.4700
Nitrate (as n)	MG/L	MW-13A	03/28/2006		0.4400
Nitrate (as n)	MG/L	MW-13A	06/21/2006		0.5400
Nitrate (as n)	MG/L	MW-13A	09/26/2006		0.4400
Nitrate (as n)	MG/L	MW-13A	12/13/2006		0.4600
Nitrate (as n)	MG/L	MW-13A	03/27/2007		0.4200
Nitrate (as n)	MG/L	MW-13A	06/19/2007		0.4600
Nitrate (as n)	MG/L	MW-13A	09/19/2007		0.4600
Nitrate (as n)	MG/L	MW-13A	12/19/2007		0.4100
Nitrate (as n)	MG/L	MW-13A	03/25/2008		0.4900
Nitrate (as n)	MG/L	MW-13A	06/18/2008		0.5100
Nitrate (as n)	MG/L	MW-13A	09/17/2008		0.4400
Nitrate (as n)	MG/L	MW-13A	12/17/2008		0.4800
Nitrate (as n)	MG/L	MW-13A	03/24/2009		0.4700
Nitrate (as n)	MG/L	MW-13A	06/17/2009		0.4900
Nitrate (as n)	MG/L	MW-13A	09/10/2009		0.4500
Nitrate (as n)	MG/L	MW-13A	12/03/2009		0.4100
Nitrate (as n)	MG/L	MW-13A	03/25/2010		0.4800
Nitrate (as n)	MG/L	MW-13A	06/23/2010		0.4700
Nitrate (as n)	MG/L	MW-13A	09/23/2010		0.5100
Nitrate (as n)	MG/L	MW-13A	12/08/2010		0.4900
Nitrate (as n)	MG/L	MW-13A	03/30/2011		0.5300
Nitrate (as n)	MG/L	MW-13A	06/06/2011		0.4600
Nitrate (as n)	MG/L	MW-13A	09/27/2011		0.4800
Nitrate (as n)	MG/L	MW-13A	12/14/2011		0.4800
Nitrate (as n)	MG/L	MW-13B	03/22/2005		0.5000
Nitrate (as n)	MG/L	MW-13B	06/15/2005		0.7400
Nitrate (as n)	MG/L	MW-13B	09/27/2005		0.4600
Nitrate (as n)	MG/L	MW-13B	12/15/2005		0.4900
Nitrate (as n)	MG/L	MW-13B	03/29/2006		0.4400

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date	Result
Nitrate (as n)	MG/L	MW-13B	06/21/2006	0.5600
Nitrate (as n)	MG/L	MW-13B	09/26/2006	0.4400
Nitrate (as n)	MG/L	MW-13B	12/13/2006	0.4000
Nitrate (as n)	MG/L	MW-13B	03/27/2007	0.4300
Nitrate (as n)	MG/L	MW-13B	06/19/2007	0.4800
Nitrate (as n)	MG/L	MW-13B	09/18/2007	0.4800
Nitrate (as n)	MG/L	MW-13B	12/19/2007	0.8900
Nitrate (as n)	MG/L	MW-13B	03/25/2008	0.4800
Nitrate (as n)	MG/L	MW-13B	06/18/2008	0.9500
Nitrate (as n)	MG/L	MW-13B	09/17/2008	0.4600
Nitrate (as n)	MG/L	MW-13B	12/16/2008	0.5300
Nitrate (as n)	MG/L	MW-13B	03/24/2009	0.4600
Nitrate (as n)	MG/L	MW-13B	06/17/2009	0.4900
Nitrate (as n)	MG/L	MW-13B	09/10/2009	0.4600
Nitrate (as n)	MG/L	MW-13B	12/03/2009	0.4000
Nitrate (as n)	MG/L	MW-13B	03/25/2010	0.4600
Nitrate (as n)	MG/L	MW-13B	06/23/2010	0.4500
Nitrate (as n)	MG/L	MW-13B	09/23/2010	0.4800
Nitrate (as n)	MG/L	MW-13B	12/08/2010	0.5000
Nitrate (as n)	MG/L	MW-13B	03/30/2011	0.5100
Nitrate (as n)	MG/L	MW-13B	06/06/2011	0.4300
Nitrate (as n)	MG/L	MW-13B	09/27/2011	0.4600
Nitrate (as n)	MG/L	MW-13B	12/14/2011	0.4700
Nitrate (as n)	MG/L	MW-16	03/24/2009	0.2800
Nitrate (as n)	MG/L	MW-16	06/16/2009	0.3300
Nitrate (as n)	MG/L	MW-16	09/09/2009	0.3100
Nitrate (as n)	MG/L	MW-16	12/03/2009	0.4000
Nitrate (as n)	MG/L	MW-16	03/25/2010	0.2900
Nitrate (as n)	MG/L	MW-16	06/24/2010	0.1600
Nitrate (as n)	MG/L	MW-16	09/24/2010	0.5100
Nitrate (as n)	MG/L	MW-16	12/09/2010	0.9000
Nitrate (as n)	MG/L	MW-16	03/30/2011	0.5200
Nitrate (as n)	MG/L	MW-16	06/07/2011	0.4600
Nitrate (as n)	MG/L	MW-16	09/27/2011	0.7300
Nitrate (as n)	MG/L	MW-16	12/13/2011	1.1000
Nitrate (as n)	MG/L	MW-35	03/22/2005	0.3700
Nitrate (as n)	MG/L	MW-35	06/14/2005	0.3300
Nitrate (as n)	MG/L	MW-35	09/27/2005	0.9600
Nitrate (as n)	MG/L	MW-35	12/15/2005	0.2900
Nitrate (as n)	MG/L	MW-35	03/28/2006	0.3400
Nitrate (as n)	MG/L	MW-35	06/21/2006	0.4000
Nitrate (as n)	MG/L	MW-35	09/26/2006	0.3100
Nitrate (as n)	MG/L	MW-35	12/12/2006	0.3500
Nitrate (as n)	MG/L	MW-35	03/27/2007	0.3000
Nitrate (as n)	MG/L	MW-35	06/20/2007	0.3400
Nitrate (as n)	MG/L	MW-35	09/18/2007	0.3200
Nitrate (as n)	MG/L	MW-35	12/20/2007	0.3200
Nitrate (as n)	MG/L	MW-35	03/25/2008	0.3000
Nitrate (as n)	MG/L	MW-35	06/18/2008	1.0000
Nitrate (as n)	MG/L	MW-35	09/18/2008	0.3500
Nitrate (as n)	MG/L	MW-35	12/19/2008	0.3700
Nitrate (as n)	MG/L	MW-35	03/24/2009	0.3500
Nitrate (as n)	MG/L	MW-35	06/16/2009	0.3700
Nitrate (as n)	MG/L	MW-35	09/10/2009	0.3500
Nitrate (as n)	MG/L	MW-35	12/03/2009	0.5200
Nitrate (as n)	MG/L	MW-35	03/25/2010	0.3600
Nitrate (as n)	MG/L	MW-35	06/23/2010	0.3200
Nitrate (as n)	MG/L	MW-35	09/23/2010	0.4000
Nitrate (as n)	MG/L	MW-35	12/09/2010	0.3900
Nitrate (as n)	MG/L	MW-35	03/30/2011	0.3900
Nitrate (as n)	MG/L	MW-35	06/06/2011	0.3900
Nitrate (as n)	MG/L	MW-35	09/26/2011	0.4000
Nitrate (as n)	MG/L	MW-35	12/13/2011	0.3900
pH	pH Units	MW-13A	03/22/2005	7.0100
pH	pH Units	MW-13A	06/15/2005	7.2100

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.



Table 2-3

## Upgradient Data

Constituent	Units	Well	Date	Result
pH	pH Units	MW-13A	09/27/2005	7.1000
pH	pH Units	MW-13A	12/15/2005	6.3400
pH	pH Units	MW-13A	03/28/2006	6.9000
pH	pH Units	MW-13A	06/21/2006	7.2500
pH	pH Units	MW-13A	09/26/2006	7.2500
pH	pH Units	MW-13A	12/13/2006	6.8700
pH	pH Units	MW-13A	03/27/2007	7.3200
pH	pH Units	MW-13A	09/19/2007	6.6800
pH	pH Units	MW-13A	12/19/2007	7.2900
pH	pH Units	MW-13A	03/25/2008	7.1200
pH	pH Units	MW-13A	06/18/2008	7.1900
pH	pH Units	MW-13A	09/17/2008	7.0000
pH	pH Units	MW-13A	12/17/2008	6.5100
pH	pH Units	MW-13A	03/24/2009	6.8500
pH	pH Units	MW-13A	06/17/2009	7.0700
pH	pH Units	MW-13A	12/03/2009	7.0300
pH	pH Units	MW-13A	03/25/2010	6.9600
pH	pH Units	MW-13A	06/23/2010	6.9900
pH	pH Units	MW-13A	09/23/2010	6.7800
pH	pH Units	MW-13A	12/08/2010	7.4800
pH	pH Units	MW-13A	03/30/2011	6.9500
pH	pH Units	MW-13A	06/06/2011	7.4500
pH	pH Units	MW-13A	09/27/2011	6.9100
pH	pH Units	MW-13A	12/14/2011	7.1300
pH	pH Units	MW-13B	03/22/2005	7.4900
pH	pH Units	MW-13B	06/15/2005	7.8100
pH	pH Units	MW-13B	09/27/2005	7.7300
pH	pH Units	MW-13B	12/15/2005	6.9300
pH	pH Units	MW-13B	03/29/2006	7.4500
pH	pH Units	MW-13B	06/21/2006	7.7600
pH	pH Units	MW-13B	09/26/2006	7.7800
pH	pH Units	MW-13B	12/13/2006	7.3200
pH	pH Units	MW-13B	03/27/2007	7.7600
pH	pH Units	MW-13B	09/18/2007	7.4800
pH	pH Units	MW-13B	12/19/2007	7.8500
pH	pH Units	MW-13B	03/25/2008	7.7800
pH	pH Units	MW-13B	06/18/2008	7.7400
pH	pH Units	MW-13B	09/17/2008	7.5700
pH	pH Units	MW-13B	12/16/2008	7.2300
pH	pH Units	MW-13B	03/24/2009	7.3700
pH	pH Units	MW-13B	06/17/2009	7.5600
pH	pH Units	MW-13B	12/03/2009	6.9300
pH	pH Units	MW-13B	03/25/2010	7.4900
pH	pH Units	MW-13B	06/23/2010	7.2700
pH	pH Units	MW-13B	09/23/2010	7.1100
pH	pH Units	MW-13B	12/08/2010	7.0500
pH	pH Units	MW-13B	03/30/2011	7.5100
pH	pH Units	MW-13B	06/06/2011	7.5800
pH	pH Units	MW-13B	09/27/2011	7.0800
pH	pH Units	MW-13B	12/14/2011	7.5300
pH	pH Units	MW-16	03/24/2009	6.2700
pH	pH Units	MW-16	06/16/2009	6.3300
pH	pH Units	MW-16	12/03/2009	6.2700
pH	pH Units	MW-16	03/25/2010	6.2600
pH	pH Units	MW-16	06/24/2010	6.0400
pH	pH Units	MW-16	09/24/2010	5.9000
pH	pH Units	MW-16	12/09/2010	6.1700
pH	pH Units	MW-16	03/30/2011	6.3100
pH	pH Units	MW-16	06/07/2011	6.1500
pH	pH Units	MW-16	09/27/2011	6.4400
pH	pH Units	MW-16	12/13/2011	6.3000
pH	pH Units	MW-35	03/22/2005	7.0600
pH	pH Units	MW-35	06/14/2005	7.4300
pH	pH Units	MW-35	09/27/2005	7.3900
pH	pH Units	MW-35	12/15/2005	6.4100

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

**Table 2-3**

**Upgradient Data**

Constituent	Units	Well	Date		Result
pH	pH Units	MW-35	03/28/2006		7.1000
pH	pH Units	MW-35	06/21/2006		7.4600
pH	pH Units	MW-35	09/26/2006		7.5000
pH	pH Units	MW-35	12/12/2006		6.9900
pH	pH Units	MW-35	03/27/2007		7.5100
pH	pH Units	MW-35	09/18/2007		6.9700
pH	pH Units	MW-35	12/20/2007		7.2500
pH	pH Units	MW-35	03/25/2008		7.4000
pH	pH Units	MW-35	06/18/2008		7.4400
pH	pH Units	MW-35	09/18/2008		7.4200
pH	pH Units	MW-35	12/19/2008		7.1900
pH	pH Units	MW-35	03/24/2009		7.2100
pH	pH Units	MW-35	06/16/2009		7.1500
pH	pH Units	MW-35	12/03/2009		7.2200
pH	pH Units	MW-35	03/25/2010		7.2400
pH	pH Units	MW-35	06/23/2010		7.3700
pH	pH Units	MW-35	09/23/2010		6.8500
pH	pH Units	MW-35	12/09/2010		7.3900
pH	pH Units	MW-35	03/30/2011		7.3700
pH	pH Units	MW-35	06/06/2011		7.2300
pH	pH Units	MW-35	09/26/2011		6.8600
pH	pH Units	MW-35	12/13/2011		7.0000
Potassium, dissolved	MG/L	MW-13A	03/22/2005		0.5700
Potassium, dissolved	MG/L	MW-13A	06/15/2005		0.5200
Potassium, dissolved	MG/L	MW-13A	09/27/2005		0.4800
Potassium, dissolved	MG/L	MW-13A	12/15/2005		0.5000
Potassium, dissolved	MG/L	MW-13A	03/28/2006	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	06/21/2006	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	09/26/2006	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	12/13/2006	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	03/27/2007	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	06/19/2007	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	09/19/2007	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	12/19/2007	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	03/25/2008	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	06/18/2008	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	09/17/2008	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	12/17/2008	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	03/24/2009	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	06/17/2009	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	09/10/2009	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	12/03/2009	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	03/25/2010	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	06/23/2010	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	09/23/2010	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	12/08/2010	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	03/30/2011	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	06/06/2011	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	09/27/2011	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	12/14/2011	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	03/22/2005		0.6000
Potassium, dissolved	MG/L	MW-13B	06/15/2005		0.5500
Potassium, dissolved	MG/L	MW-13B	09/27/2005		0.5500
Potassium, dissolved	MG/L	MW-13B	12/15/2005		0.5200
Potassium, dissolved	MG/L	MW-13B	03/29/2006	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	06/21/2006	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	09/26/2006	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	12/13/2006	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	03/27/2007	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	06/19/2007	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	09/18/2007	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	12/19/2007	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	03/25/2008	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	06/18/2008	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	09/17/2008	ND	1.0000

\* - Outlier for that well and constituent.  
 ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Potassium, dissolved	MG/L	MW-13B	12/16/2008	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	03/24/2009	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	06/17/2009	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	09/10/2009	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	12/03/2009	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	03/25/2010	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	06/23/2010	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	09/23/2010	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	12/08/2010	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	03/30/2011	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	06/06/2011	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	09/27/2011	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	12/14/2011	ND	1.0000
Potassium, dissolved	MG/L	MW-16	03/24/2009	ND	1.0000
Potassium, dissolved	MG/L	MW-16	06/16/2009	ND	1.0000
Potassium, dissolved	MG/L	MW-16	09/09/2009	ND	1.0000
Potassium, dissolved	MG/L	MW-16	12/03/2009	ND	1.0000
Potassium, dissolved	MG/L	MW-16	03/25/2010	ND	1.0000
Potassium, dissolved	MG/L	MW-16	06/24/2010	ND	1.0000
Potassium, dissolved	MG/L	MW-16	09/24/2010	ND	1.0000
Potassium, dissolved	MG/L	MW-16	12/09/2010	ND	1.0000
Potassium, dissolved	MG/L	MW-16	03/30/2011	ND	1.0000
Potassium, dissolved	MG/L	MW-16	06/07/2011	ND	1.0000
Potassium, dissolved	MG/L	MW-16	09/27/2011	ND	1.0000
Potassium, dissolved	MG/L	MW-16	12/13/2011	ND	1.0000
Potassium, dissolved	MG/L	MW-35	03/22/2005		0.5200
Potassium, dissolved	MG/L	MW-35	06/14/2005		0.4800
Potassium, dissolved	MG/L	MW-35	09/27/2005		0.5200
Potassium, dissolved	MG/L	MW-35	12/15/2005		0.4600
Potassium, dissolved	MG/L	MW-35	03/28/2006	ND	1.0000
Potassium, dissolved	MG/L	MW-35	06/21/2006	ND	1.0000
Potassium, dissolved	MG/L	MW-35	09/26/2006	ND	1.0000
Potassium, dissolved	MG/L	MW-35	12/12/2006	ND	1.0000
Potassium, dissolved	MG/L	MW-35	03/27/2007	ND	1.0000
Potassium, dissolved	MG/L	MW-35	06/20/2007	ND	1.0000
Potassium, dissolved	MG/L	MW-35	09/18/2007	ND	1.0000
Potassium, dissolved	MG/L	MW-35	12/20/2007	ND	1.0000
Potassium, dissolved	MG/L	MW-35	03/25/2008	ND	1.0000
Potassium, dissolved	MG/L	MW-35	06/18/2008	ND	1.0000
Potassium, dissolved	MG/L	MW-35	09/18/2008	ND	1.0000
Potassium, dissolved	MG/L	MW-35	12/19/2008	ND	1.0000
Potassium, dissolved	MG/L	MW-35	03/24/2009	ND	1.0000
Potassium, dissolved	MG/L	MW-35	06/16/2009	ND	1.0000
Potassium, dissolved	MG/L	MW-35	09/10/2009	ND	1.0000
Potassium, dissolved	MG/L	MW-35	12/03/2009	ND	1.0000
Potassium, dissolved	MG/L	MW-35	03/25/2010	ND	1.0000
Potassium, dissolved	MG/L	MW-35	06/23/2010	ND	1.0000
Potassium, dissolved	MG/L	MW-35	09/23/2010	ND	1.0000
Potassium, dissolved	MG/L	MW-35	12/09/2010	ND	1.0000
Potassium, dissolved	MG/L	MW-35	03/30/2011	ND	1.0000
Potassium, dissolved	MG/L	MW-35	06/06/2011	ND	1.0000
Potassium, dissolved	MG/L	MW-35	09/26/2011	ND	1.0000
Potassium, dissolved	MG/L	MW-35	12/13/2011	ND	1.0000
Selenium, dissolved	MG/L	MW-13A	03/22/2005	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	06/15/2005	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	09/27/2005	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	12/15/2005	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	03/28/2006	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	06/21/2006	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	09/26/2006	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	12/13/2006	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	03/27/2007	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	06/19/2007	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	09/19/2007	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	12/19/2007	ND	0.0010

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Selenium, dissolved	MG/L	MW-13A	03/25/2008	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	06/18/2008	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	09/17/2008	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	12/17/2008	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	03/24/2009	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	06/17/2009	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	09/10/2009	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	12/03/2009		0.0010
Selenium, dissolved	MG/L	MW-13A	03/25/2010	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	06/23/2010	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	09/23/2010	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	12/08/2010	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	03/30/2011	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	06/06/2011	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	09/27/2011	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	12/14/2011	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	03/22/2005	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	06/15/2005	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	09/27/2005	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	12/15/2005	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	03/29/2006	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	06/21/2006	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	09/26/2006	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	12/13/2006	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	03/27/2007	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	06/19/2007	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	09/18/2007	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	12/19/2007	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	03/25/2008	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	06/18/2008	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	09/17/2008	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	12/16/2008	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	03/24/2009	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	06/17/2009	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	09/10/2009	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	12/03/2009	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	03/25/2010	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	06/23/2010	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	09/23/2010	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	12/08/2010	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	03/30/2011	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	06/06/2011	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	09/27/2011	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	12/14/2011	ND	0.0010
Selenium, dissolved	MG/L	MW-16	03/24/2009	ND	0.0010
Selenium, dissolved	MG/L	MW-16	06/16/2009	ND	0.0010
Selenium, dissolved	MG/L	MW-16	09/09/2009	ND	0.0010
Selenium, dissolved	MG/L	MW-16	12/03/2009		0.0011
Selenium, dissolved	MG/L	MW-16	03/25/2010	ND	0.0010
Selenium, dissolved	MG/L	MW-16	06/24/2010	ND	0.0010
Selenium, dissolved	MG/L	MW-16	09/24/2010	ND	0.0010
Selenium, dissolved	MG/L	MW-16	12/09/2010	ND	0.0010
Selenium, dissolved	MG/L	MW-16	03/30/2011	ND	0.0010
Selenium, dissolved	MG/L	MW-16	06/07/2011	ND	0.0010
Selenium, dissolved	MG/L	MW-16	09/27/2011	ND	0.0010
Selenium, dissolved	MG/L	MW-16	12/13/2011	ND	0.0010
Selenium, dissolved	MG/L	MW-35	03/22/2005	ND	0.0010
Selenium, dissolved	MG/L	MW-35	06/14/2005	ND	0.0010
Selenium, dissolved	MG/L	MW-35	09/27/2005	ND	0.0010
Selenium, dissolved	MG/L	MW-35	12/15/2005	ND	0.0010
Selenium, dissolved	MG/L	MW-35	03/28/2006	ND	0.0010
Selenium, dissolved	MG/L	MW-35	06/21/2006	ND	0.0010
Selenium, dissolved	MG/L	MW-35	09/26/2006	ND	0.0010
Selenium, dissolved	MG/L	MW-35	12/12/2006	ND	0.0010
Selenium, dissolved	MG/L	MW-35	03/27/2007	ND	0.0010

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Selenium, dissolved	MG/L	MW-35	06/20/2007	ND	0.0010
Selenium, dissolved	MG/L	MW-35	09/18/2007	ND	0.0010
Selenium, dissolved	MG/L	MW-35	12/20/2007	ND	0.0010
Selenium, dissolved	MG/L	MW-35	03/25/2008	ND	0.0010
Selenium, dissolved	MG/L	MW-35	06/18/2008	ND	0.0010
Selenium, dissolved	MG/L	MW-35	09/18/2008	ND	0.0010
Selenium, dissolved	MG/L	MW-35	12/19/2008	ND	0.0010
Selenium, dissolved	MG/L	MW-35	03/24/2009	ND	0.0010
Selenium, dissolved	MG/L	MW-35	06/16/2009	ND	0.0010
Selenium, dissolved	MG/L	MW-35	09/10/2009	ND	0.0010
Selenium, dissolved	MG/L	MW-35	12/03/2009	ND	0.0010
Selenium, dissolved	MG/L	MW-35	03/25/2010	ND	0.0010
Selenium, dissolved	MG/L	MW-35	06/23/2010	ND	0.0010
Selenium, dissolved	MG/L	MW-35	09/23/2010	ND	0.0010
Selenium, dissolved	MG/L	MW-35	12/09/2010	ND	0.0010
Selenium, dissolved	MG/L	MW-35	03/30/2011	ND	0.0010
Selenium, dissolved	MG/L	MW-35	06/06/2011	ND	0.0010
Selenium, dissolved	MG/L	MW-35	09/26/2011	ND	0.0010
Selenium, dissolved	MG/L	MW-35	12/13/2011	ND	0.0050
Silver, dissolved	MG/L	MW-13A	03/22/2005	ND	0.0020
Silver, dissolved	MG/L	MW-13A	06/15/2005	ND	0.0020
Silver, dissolved	MG/L	MW-13A	09/27/2005	ND	0.0020
Silver, dissolved	MG/L	MW-13A	12/15/2005	ND	0.0020
Silver, dissolved	MG/L	MW-13A	03/28/2006	ND	0.0020
Silver, dissolved	MG/L	MW-13A	06/21/2006	ND	0.0020
Silver, dissolved	MG/L	MW-13A	09/26/2006	ND	0.0020
Silver, dissolved	MG/L	MW-13A	12/13/2006	ND	0.0020
Silver, dissolved	MG/L	MW-13A	03/27/2007	ND	0.0020
Silver, dissolved	MG/L	MW-13A	06/19/2007	ND	0.0020
Silver, dissolved	MG/L	MW-13A	09/19/2007	ND	0.0020
Silver, dissolved	MG/L	MW-13A	12/19/2007	ND	0.0020
Silver, dissolved	MG/L	MW-13A	03/25/2008	ND	0.0020
Silver, dissolved	MG/L	MW-13A	06/18/2008	ND	0.0020
Silver, dissolved	MG/L	MW-13A	09/17/2008	ND	0.0020
Silver, dissolved	MG/L	MW-13A	12/17/2008	ND	0.0020
Silver, dissolved	MG/L	MW-13A	03/24/2009	ND	0.0020
Silver, dissolved	MG/L	MW-13A	06/17/2009	ND	0.0020
Silver, dissolved	MG/L	MW-13A	09/10/2009	ND	0.0020
Silver, dissolved	MG/L	MW-13A	12/03/2009	ND	0.0020
Silver, dissolved	MG/L	MW-13A	03/25/2010	ND	0.0020
Silver, dissolved	MG/L	MW-13A	06/23/2010	ND	0.0020
Silver, dissolved	MG/L	MW-13A	09/23/2010	ND	0.0020
Silver, dissolved	MG/L	MW-13A	12/08/2010	ND	0.0020
Silver, dissolved	MG/L	MW-13A	03/30/2011	ND	0.0020
Silver, dissolved	MG/L	MW-13A	06/06/2011	ND	0.0020
Silver, dissolved	MG/L	MW-13A	09/27/2011	ND	0.0020
Silver, dissolved	MG/L	MW-13A	12/14/2011	ND	0.0020
Silver, dissolved	MG/L	MW-13B	03/22/2005	ND	0.0020
Silver, dissolved	MG/L	MW-13B	06/15/2005	ND	0.0020
Silver, dissolved	MG/L	MW-13B	09/27/2005	ND	0.0020
Silver, dissolved	MG/L	MW-13B	12/15/2005	ND	0.0020
Silver, dissolved	MG/L	MW-13B	03/29/2006	ND	0.0020
Silver, dissolved	MG/L	MW-13B	06/21/2006	ND	0.0020
Silver, dissolved	MG/L	MW-13B	09/26/2006	ND	0.0020
Silver, dissolved	MG/L	MW-13B	12/13/2006	ND	0.0020
Silver, dissolved	MG/L	MW-13B	03/27/2007	ND	0.0020
Silver, dissolved	MG/L	MW-13B	06/19/2007	ND	0.0020
Silver, dissolved	MG/L	MW-13B	09/18/2007	ND	0.0020
Silver, dissolved	MG/L	MW-13B	12/19/2007	ND	0.0020
Silver, dissolved	MG/L	MW-13B	03/25/2008	ND	0.0020
Silver, dissolved	MG/L	MW-13B	06/18/2008	ND	0.0020
Silver, dissolved	MG/L	MW-13B	09/17/2008	ND	0.0020
Silver, dissolved	MG/L	MW-13B	12/16/2008	ND	0.0020
Silver, dissolved	MG/L	MW-13B	03/24/2009	ND	0.0020
Silver, dissolved	MG/L	MW-13B	06/17/2009	ND	0.0020

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Silver, dissolved	MG/L	MW-13B	09/10/2009	ND	0.0020
Silver, dissolved	MG/L	MW-13B	12/03/2009	ND	0.0020
Silver, dissolved	MG/L	MW-13B	03/25/2010	ND	0.0020
Silver, dissolved	MG/L	MW-13B	06/23/2010	ND	0.0020
Silver, dissolved	MG/L	MW-13B	09/23/2010	ND	0.0020
Silver, dissolved	MG/L	MW-13B	12/08/2010	ND	0.0020
Silver, dissolved	MG/L	MW-13B	03/30/2011	ND	0.0020
Silver, dissolved	MG/L	MW-13B	06/06/2011	ND	0.0020
Silver, dissolved	MG/L	MW-13B	09/27/2011	ND	0.0020
Silver, dissolved	MG/L	MW-13B	12/14/2011	ND	0.0020
Silver, dissolved	MG/L	MW-16	03/24/2009	ND	0.0020
Silver, dissolved	MG/L	MW-16	06/16/2009	ND	0.0020
Silver, dissolved	MG/L	MW-16	09/09/2009	ND	0.0020
Silver, dissolved	MG/L	MW-16	12/03/2009	ND	0.0020
Silver, dissolved	MG/L	MW-16	03/25/2010	ND	0.0020
Silver, dissolved	MG/L	MW-16	06/24/2010	ND	0.0020
Silver, dissolved	MG/L	MW-16	09/24/2010	ND	0.0020
Silver, dissolved	MG/L	MW-16	12/09/2010	ND	0.0020
Silver, dissolved	MG/L	MW-16	03/30/2011	ND	0.0020
Silver, dissolved	MG/L	MW-16	06/07/2011	ND	0.0020
Silver, dissolved	MG/L	MW-16	09/27/2011	ND	0.0020
Silver, dissolved	MG/L	MW-16	12/13/2011	ND	0.0020
Silver, dissolved	MG/L	MW-35	03/22/2005	ND	0.0020
Silver, dissolved	MG/L	MW-35	06/14/2005	ND	0.0020
Silver, dissolved	MG/L	MW-35	09/27/2005	ND	0.0020
Silver, dissolved	MG/L	MW-35	12/15/2005	ND	0.0020
Silver, dissolved	MG/L	MW-35	03/28/2006	ND	0.0020
Silver, dissolved	MG/L	MW-35	06/21/2006	ND	0.0020
Silver, dissolved	MG/L	MW-35	09/26/2006	ND	0.0020
Silver, dissolved	MG/L	MW-35	12/12/2006	ND	0.0020
Silver, dissolved	MG/L	MW-35	03/27/2007	ND	0.0020
Silver, dissolved	MG/L	MW-35	06/20/2007	ND	0.0020
Silver, dissolved	MG/L	MW-35	09/18/2007	ND	0.0020
Silver, dissolved	MG/L	MW-35	12/20/2007	ND	0.0020
Silver, dissolved	MG/L	MW-35	03/25/2008	ND	0.0020
Silver, dissolved	MG/L	MW-35	06/18/2008	ND	0.0020
Silver, dissolved	MG/L	MW-35	09/18/2008	ND	0.0020
Silver, dissolved	MG/L	MW-35	12/19/2008	ND	0.0020
Silver, dissolved	MG/L	MW-35	03/24/2009	ND	0.0020
Silver, dissolved	MG/L	MW-35	06/16/2009	ND	0.0020
Silver, dissolved	MG/L	MW-35	09/10/2009	ND	0.0020
Silver, dissolved	MG/L	MW-35	12/03/2009	ND	0.0020
Silver, dissolved	MG/L	MW-35	03/25/2010	ND	0.0020
Silver, dissolved	MG/L	MW-35	06/23/2010	ND	0.0020
Silver, dissolved	MG/L	MW-35	09/23/2010	ND	0.0020
Silver, dissolved	MG/L	MW-35	12/09/2010	ND	0.0020
Silver, dissolved	MG/L	MW-35	03/30/2011	ND	0.0020
Silver, dissolved	MG/L	MW-35	06/06/2011	ND	0.0020
Silver, dissolved	MG/L	MW-35	09/26/2011	ND	0.0020
Silver, dissolved	MG/L	MW-35	12/13/2011	ND	0.0100
Sodium, dissolved	MG/L	MW-13A	03/22/2005		5.4000
Sodium, dissolved	MG/L	MW-13A	06/15/2005		4.4000
Sodium, dissolved	MG/L	MW-13A	09/27/2005		4.5000
Sodium, dissolved	MG/L	MW-13A	12/15/2005		4.8000
Sodium, dissolved	MG/L	MW-13A	03/28/2006		5.4000
Sodium, dissolved	MG/L	MW-13A	06/21/2006		5.2000
Sodium, dissolved	MG/L	MW-13A	09/26/2006		5.5000
Sodium, dissolved	MG/L	MW-13A	12/13/2006		4.8000
Sodium, dissolved	MG/L	MW-13A	03/27/2007		5.4000
Sodium, dissolved	MG/L	MW-13A	06/19/2007		5.5000
Sodium, dissolved	MG/L	MW-13A	09/19/2007		5.4000
Sodium, dissolved	MG/L	MW-13A	12/19/2007		4.9000
Sodium, dissolved	MG/L	MW-13A	03/25/2008		5.5000
Sodium, dissolved	MG/L	MW-13A	06/18/2008		5.5000
Sodium, dissolved	MG/L	MW-13A	09/17/2008		5.2000

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date	Result
Sodium, dissolved	MG/L	MW-13A	12/17/2008	5.5000
Sodium, dissolved	MG/L	MW-13A	03/24/2009	5.3000
Sodium, dissolved	MG/L	MW-13A	06/17/2009	5.4000
Sodium, dissolved	MG/L	MW-13A	09/10/2009	5.2000
Sodium, dissolved	MG/L	MW-13A	12/03/2009	5.6000
Sodium, dissolved	MG/L	MW-13A	03/25/2010	6.1000
Sodium, dissolved	MG/L	MW-13A	06/23/2010	5.7000
Sodium, dissolved	MG/L	MW-13A	09/23/2010	5.0000
Sodium, dissolved	MG/L	MW-13A	12/08/2010	5.2000
Sodium, dissolved	MG/L	MW-13A	03/30/2011	5.4000
Sodium, dissolved	MG/L	MW-13A	06/06/2011	5.4000
Sodium, dissolved	MG/L	MW-13A	09/27/2011	5.6000
Sodium, dissolved	MG/L	MW-13A	12/14/2011	5.5000
Sodium, dissolved	MG/L	MW-13B	03/22/2005	5.3000
Sodium, dissolved	MG/L	MW-13B	06/15/2005	4.8000
Sodium, dissolved	MG/L	MW-13B	09/27/2005	5.0000
Sodium, dissolved	MG/L	MW-13B	12/15/2005	4.8000
Sodium, dissolved	MG/L	MW-13B	03/29/2006	4.9000
Sodium, dissolved	MG/L	MW-13B	06/21/2006	5.0000
Sodium, dissolved	MG/L	MW-13B	09/26/2006	5.5000
Sodium, dissolved	MG/L	MW-13B	12/13/2006	4.8000
Sodium, dissolved	MG/L	MW-13B	03/27/2007	5.2000
Sodium, dissolved	MG/L	MW-13B	06/19/2007	5.2000
Sodium, dissolved	MG/L	MW-13B	09/18/2007	5.2000
Sodium, dissolved	MG/L	MW-13B	12/19/2007	4.9000
Sodium, dissolved	MG/L	MW-13B	03/25/2008	5.3000
Sodium, dissolved	MG/L	MW-13B	06/18/2008	5.3000
Sodium, dissolved	MG/L	MW-13B	09/17/2008	5.0000
Sodium, dissolved	MG/L	MW-13B	12/16/2008	5.1000
Sodium, dissolved	MG/L	MW-13B	03/24/2009	5.1000
Sodium, dissolved	MG/L	MW-13B	06/17/2009	5.3000
Sodium, dissolved	MG/L	MW-13B	09/10/2009	5.1000
Sodium, dissolved	MG/L	MW-13B	12/03/2009	5.3000
Sodium, dissolved	MG/L	MW-13B	03/25/2010	5.3000
Sodium, dissolved	MG/L	MW-13B	06/23/2010	5.3000
Sodium, dissolved	MG/L	MW-13B	09/23/2010	4.8000
Sodium, dissolved	MG/L	MW-13B	12/08/2010	5.6000
Sodium, dissolved	MG/L	MW-13B	03/30/2011	5.1000
Sodium, dissolved	MG/L	MW-13B	06/06/2011	5.2000
Sodium, dissolved	MG/L	MW-13B	09/27/2011	5.2000
Sodium, dissolved	MG/L	MW-13B	12/14/2011	5.1000
Sodium, dissolved	MG/L	MW-16	03/24/2009	5.4000
Sodium, dissolved	MG/L	MW-16	06/16/2009	5.3000
Sodium, dissolved	MG/L	MW-16	09/09/2009	5.4000
Sodium, dissolved	MG/L	MW-16	12/03/2009	6.2000
Sodium, dissolved	MG/L	MW-16	03/25/2010	4.9000
Sodium, dissolved	MG/L	MW-16	06/24/2010	5.7000
Sodium, dissolved	MG/L	MW-16	09/24/2010	5.7000
Sodium, dissolved	MG/L	MW-16	12/09/2010	5.2000
Sodium, dissolved	MG/L	MW-16	03/30/2011	4.7000
Sodium, dissolved	MG/L	MW-16	06/07/2011	5.0000
Sodium, dissolved	MG/L	MW-16	09/27/2011	5.8000
Sodium, dissolved	MG/L	MW-16	12/13/2011	5.3000
Sodium, dissolved	MG/L	MW-35	03/22/2005	5.1000
Sodium, dissolved	MG/L	MW-35	06/14/2005	4.5000
Sodium, dissolved	MG/L	MW-35	09/27/2005	5.1000
Sodium, dissolved	MG/L	MW-35	12/15/2005	4.6000
Sodium, dissolved	MG/L	MW-35	03/28/2006	5.0000
Sodium, dissolved	MG/L	MW-35	06/21/2006	4.9000
Sodium, dissolved	MG/L	MW-35	09/26/2006	5.1000
Sodium, dissolved	MG/L	MW-35	12/12/2006	4.7000
Sodium, dissolved	MG/L	MW-35	03/27/2007	5.1000
Sodium, dissolved	MG/L	MW-35	06/20/2007	5.2000
Sodium, dissolved	MG/L	MW-35	09/18/2007	5.2000
Sodium, dissolved	MG/L	MW-35	12/20/2007	4.8000

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date	Result
Sodium, dissolved	MG/L	MW-35	03/25/2008	5.1000
Sodium, dissolved	MG/L	MW-35	06/18/2008	4.9000
Sodium, dissolved	MG/L	MW-35	09/18/2008	4.8000
Sodium, dissolved	MG/L	MW-35	12/19/2008	4.7000
Sodium, dissolved	MG/L	MW-35	03/24/2009	5.0000
Sodium, dissolved	MG/L	MW-35	06/16/2009	5.1000
Sodium, dissolved	MG/L	MW-35	09/10/2009	4.9000
Sodium, dissolved	MG/L	MW-35	12/03/2009	5.3000
Sodium, dissolved	MG/L	MW-35	03/25/2010	5.0000
Sodium, dissolved	MG/L	MW-35	06/23/2010	5.1000
Sodium, dissolved	MG/L	MW-35	09/23/2010	4.7000
Sodium, dissolved	MG/L	MW-35	12/09/2010	4.8000
Sodium, dissolved	MG/L	MW-35	03/30/2011	4.9000
Sodium, dissolved	MG/L	MW-35	06/06/2011	5.1000
Sodium, dissolved	MG/L	MW-35	09/26/2011	5.2000
Sodium, dissolved	MG/L	MW-35	12/13/2011	5.1000
Specific conductivity	mS/cm	MW-13A	03/22/2005	0.1580
Specific conductivity	mS/cm	MW-13A	06/15/2005	0.1670
Specific conductivity	mS/cm	MW-13A	09/27/2005	0.1610
Specific conductivity	mS/cm	MW-13A	12/15/2005	0.1590
Specific conductivity	mS/cm	MW-13A	03/28/2006	0.1520
Specific conductivity	mS/cm	MW-13A	06/21/2006	0.1690
Specific conductivity	mS/cm	MW-13A	09/26/2006	0.1710
Specific conductivity	mS/cm	MW-13A	12/13/2006	0.1700
Specific conductivity	mS/cm	MW-13A	03/27/2007	0.1670
Specific conductivity	mS/cm	MW-13A	09/19/2007	0.1670
Specific conductivity	mS/cm	MW-13A	12/19/2007	0.1690
Specific conductivity	mS/cm	MW-13A	03/25/2008	0.1660
Specific conductivity	mS/cm	MW-13A	06/18/2008	0.1700
Specific conductivity	mS/cm	MW-13A	09/17/2008	0.1680
Specific conductivity	mS/cm	MW-13A	12/17/2008	0.1390
Specific conductivity	mS/cm	MW-13A	03/24/2009	0.1680
Specific conductivity	mS/cm	MW-13A	06/17/2009	0.1740
Specific conductivity	mS/cm	MW-13A	12/03/2009	0.1730
Specific conductivity	mS/cm	MW-13A	03/25/2010	0.0930
Specific conductivity	mS/cm	MW-13A	06/23/2010	0.1450
Specific conductivity	mS/cm	MW-13A	09/23/2010	0.1700
Specific conductivity	mS/cm	MW-13A	12/08/2010	0.0700
Specific conductivity	mS/cm	MW-13A	03/30/2011	0.1510
Specific conductivity	mS/cm	MW-13A	06/06/2011	0.1580
Specific conductivity	mS/cm	MW-13A	09/27/2011	0.1580
Specific conductivity	mS/cm	MW-13A	12/14/2011	0.1760
Specific conductivity	mS/cm	MW-13B	03/22/2005	0.1550
Specific conductivity	mS/cm	MW-13B	06/15/2005	0.1650
Specific conductivity	mS/cm	MW-13B	09/27/2005	0.1590
Specific conductivity	mS/cm	MW-13B	12/15/2005	0.1570
Specific conductivity	mS/cm	MW-13B	03/29/2006	0.1510
Specific conductivity	mS/cm	MW-13B	06/21/2006	0.1650
Specific conductivity	mS/cm	MW-13B	09/26/2006	0.1680
Specific conductivity	mS/cm	MW-13B	12/13/2006	0.1650
Specific conductivity	mS/cm	MW-13B	03/27/2007	0.1610
Specific conductivity	mS/cm	MW-13B	09/18/2007	0.1680
Specific conductivity	mS/cm	MW-13B	12/19/2007	0.1640
Specific conductivity	mS/cm	MW-13B	03/25/2008	0.1620
Specific conductivity	mS/cm	MW-13B	06/18/2008	0.1650
Specific conductivity	mS/cm	MW-13B	09/17/2008	0.1640
Specific conductivity	mS/cm	MW-13B	12/16/2008	0.1630
Specific conductivity	mS/cm	MW-13B	03/24/2009	0.1670
Specific conductivity	mS/cm	MW-13B	06/17/2009	0.1690
Specific conductivity	mS/cm	MW-13B	12/03/2009	0.1670
Specific conductivity	mS/cm	MW-13B	03/25/2010	0.0900
Specific conductivity	mS/cm	MW-13B	06/23/2010	0.1410
Specific conductivity	mS/cm	MW-13B	09/23/2010	0.1620
Specific conductivity	mS/cm	MW-13B	12/08/2010	0.0730
Specific conductivity	mS/cm	MW-13B	03/30/2011	0.1440

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.



Table 2-3

## Upgradient Data

Constituent	Units	Well	Date	Result
Specific conductivity	mS/cm	MW-13B	06/06/2011	0.1350
Specific conductivity	mS/cm	MW-13B	09/27/2011	0.1510
Specific conductivity	mS/cm	MW-13B	12/14/2011	0.1690
Specific conductivity	mS/cm	MW-16	03/24/2009	0.1350
Specific conductivity	mS/cm	MW-16	06/16/2009	0.1230
Specific conductivity	mS/cm	MW-16	12/03/2009	0.1600
Specific conductivity	mS/cm	MW-16	03/25/2010	0.1180
Specific conductivity	mS/cm	MW-16	06/24/2010	0.1550
Specific conductivity	mS/cm	MW-16	09/24/2010	0.1480
Specific conductivity	mS/cm	MW-16	12/09/2010	0.1500
Specific conductivity	mS/cm	MW-16	03/30/2011	0.1020
Specific conductivity	mS/cm	MW-16	06/07/2011	0.0960
Specific conductivity	mS/cm	MW-16	09/27/2011	0.0680
Specific conductivity	mS/cm	MW-16	12/13/2011	0.1200
Specific conductivity	mS/cm	MW-35	03/22/2005	0.1430
Specific conductivity	mS/cm	MW-35	06/14/2005	0.1530
Specific conductivity	mS/cm	MW-35	09/27/2005	0.1480
Specific conductivity	mS/cm	MW-35	12/15/2005	0.1450
Specific conductivity	mS/cm	MW-35	03/28/2006	0.1360
Specific conductivity	mS/cm	MW-35	06/21/2006	0.1520
Specific conductivity	mS/cm	MW-35	09/26/2006	0.1550
Specific conductivity	mS/cm	MW-35	12/12/2006	0.1510
Specific conductivity	mS/cm	MW-35	03/27/2007	0.1480
Specific conductivity	mS/cm	MW-35	09/18/2007	0.1520
Specific conductivity	mS/cm	MW-35	12/20/2007	0.1520
Specific conductivity	mS/cm	MW-35	03/25/2008	0.1470
Specific conductivity	mS/cm	MW-35	06/18/2008	0.1510
Specific conductivity	mS/cm	MW-35	09/18/2008	0.1420
Specific conductivity	mS/cm	MW-35	12/19/2008	0.1440
Specific conductivity	mS/cm	MW-35	03/24/2009	0.1500
Specific conductivity	mS/cm	MW-35	06/16/2009	0.1550
Specific conductivity	mS/cm	MW-35	12/03/2009	0.1520
Specific conductivity	mS/cm	MW-35	03/25/2010	0.0840
Specific conductivity	mS/cm	MW-35	06/23/2010	0.1280
Specific conductivity	mS/cm	MW-35	09/23/2010	0.1510
Specific conductivity	mS/cm	MW-35	12/09/2010	0.1500
Specific conductivity	mS/cm	MW-35	03/30/2011	0.1320
Specific conductivity	mS/cm	MW-35	06/06/2011	0.1230
Specific conductivity	mS/cm	MW-35	09/26/2011	0.1310
Specific conductivity	mS/cm	MW-35	12/13/2011	0.1480
Sulfate	MG/L	MW-13A	03/22/2005	2.8000
Sulfate	MG/L	MW-13A	06/15/2005	2.9000
Sulfate	MG/L	MW-13A	09/27/2005	3.2000
Sulfate	MG/L	MW-13A	12/15/2005	2.1000
Sulfate	MG/L	MW-13A	03/28/2006	3.2000
Sulfate	MG/L	MW-13A	06/21/2006	3.1000
Sulfate	MG/L	MW-13A	09/26/2006	2.5000
Sulfate	MG/L	MW-13A	12/13/2006	2.3000
Sulfate	MG/L	MW-13A	03/27/2007	2.5000
Sulfate	MG/L	MW-13A	06/19/2007	2.5000
Sulfate	MG/L	MW-13A	09/19/2007	2.5000
Sulfate	MG/L	MW-13A	12/19/2007	2.5000
Sulfate	MG/L	MW-13A	03/25/2008	2.4000
Sulfate	MG/L	MW-13A	06/18/2008	2.6000
Sulfate	MG/L	MW-13A	09/17/2008	2.4000
Sulfate	MG/L	MW-13A	12/17/2008	2.4000
Sulfate	MG/L	MW-13A	03/24/2009	2.5000
Sulfate	MG/L	MW-13A	06/17/2009	2.1000
Sulfate	MG/L	MW-13A	09/10/2009	2.2000
Sulfate	MG/L	MW-13A	12/03/2009	2.3000
Sulfate	MG/L	MW-13A	03/25/2010	2.3000
Sulfate	MG/L	MW-13A	06/23/2010	2.1000
Sulfate	MG/L	MW-13A	09/23/2010	2.3000
Sulfate	MG/L	MW-13A	12/08/2010	3.7000
Sulfate	MG/L	MW-13A	03/30/2011	2.2000

\* - Outlier for that well and constituent.  
 ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Sulfate	MG/L	MW-13A	06/06/2011		2.2000
Sulfate	MG/L	MW-13A	09/27/2011		2.3000
Sulfate	MG/L	MW-13A	12/14/2011		2.5000
Sulfate	MG/L	MW-13B	03/22/2005		4.6000
Sulfate	MG/L	MW-13B	06/15/2005		4.7000
Sulfate	MG/L	MW-13B	09/27/2005		4.5000
Sulfate	MG/L	MW-13B	12/15/2005		3.6000
Sulfate	MG/L	MW-13B	03/29/2006		4.5000
Sulfate	MG/L	MW-13B	06/21/2006		4.4000
Sulfate	MG/L	MW-13B	09/26/2006		4.1000
Sulfate	MG/L	MW-13B	12/13/2006		3.9000
Sulfate	MG/L	MW-13B	03/27/2007		4.1000
Sulfate	MG/L	MW-13B	06/19/2007		4.1000
Sulfate	MG/L	MW-13B	09/18/2007		4.2000
Sulfate	MG/L	MW-13B	12/19/2007		4.1000
Sulfate	MG/L	MW-13B	03/25/2008		4.0000
Sulfate	MG/L	MW-13B	06/18/2008		4.1000
Sulfate	MG/L	MW-13B	09/17/2008		4.2000
Sulfate	MG/L	MW-13B	12/16/2008		4.2000
Sulfate	MG/L	MW-13B	03/24/2009		4.2000
Sulfate	MG/L	MW-13B	06/17/2009		3.7000
Sulfate	MG/L	MW-13B	09/10/2009		3.7000
Sulfate	MG/L	MW-13B	12/03/2009		4.1000
Sulfate	MG/L	MW-13B	03/25/2010		3.9000
Sulfate	MG/L	MW-13B	06/23/2010		3.6000
Sulfate	MG/L	MW-13B	09/23/2010		3.8000
Sulfate	MG/L	MW-13B	12/08/2010		2.4000
Sulfate	MG/L	MW-13B	03/30/2011		4.4000
Sulfate	MG/L	MW-13B	06/06/2011		3.7000
Sulfate	MG/L	MW-13B	09/27/2011		3.7000
Sulfate	MG/L	MW-13B	12/14/2011		3.5000
Sulfate	MG/L	MW-16	03/24/2009		3.0000
Sulfate	MG/L	MW-16	06/16/2009		2.2000
Sulfate	MG/L	MW-16	09/09/2009		4.3000
Sulfate	MG/L	MW-16	12/03/2009		3.6000
Sulfate	MG/L	MW-16	03/25/2010		9.9000
Sulfate	MG/L	MW-16	06/24/2010		2.5000
Sulfate	MG/L	MW-16	09/24/2010		2.3000
Sulfate	MG/L	MW-16	12/09/2010		2.7000
Sulfate	MG/L	MW-16	03/30/2011		7.1000
Sulfate	MG/L	MW-16	06/07/2011		2.4000
Sulfate	MG/L	MW-16	09/27/2011		4.1000
Sulfate	MG/L	MW-16	12/13/2011		2.3000
Sulfate	MG/L	MW-35	03/22/2005	ND	2.5000
Sulfate	MG/L	MW-35	06/14/2005		1.6000
Sulfate	MG/L	MW-35	09/27/2005		1.3000
Sulfate	MG/L	MW-35	12/15/2005		1.0000
Sulfate	MG/L	MW-35	03/28/2006		3.0000
Sulfate	MG/L	MW-35	06/21/2006		3.0000
Sulfate	MG/L	MW-35	09/26/2006		2.4000
Sulfate	MG/L	MW-35	12/12/2006		2.2000
Sulfate	MG/L	MW-35	03/27/2007		2.5000
Sulfate	MG/L	MW-35	06/20/2007		2.4000
Sulfate	MG/L	MW-35	09/18/2007		2.6000
Sulfate	MG/L	MW-35	12/20/2007		2.4000
Sulfate	MG/L	MW-35	03/25/2008		2.4000
Sulfate	MG/L	MW-35	06/18/2008		2.6000
Sulfate	MG/L	MW-35	09/18/2008		2.3000
Sulfate	MG/L	MW-35	12/19/2008		2.6000
Sulfate	MG/L	MW-35	03/24/2009		2.7000
Sulfate	MG/L	MW-35	06/16/2009		2.2000
Sulfate	MG/L	MW-35	09/10/2009		2.4000
Sulfate	MG/L	MW-35	12/03/2009		2.5000
Sulfate	MG/L	MW-35	03/25/2010		2.6000
Sulfate	MG/L	MW-35	06/23/2010		2.3000

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date	Result
Sulfate	MG/L	MW-35	09/23/2010	2.5000
Sulfate	MG/L	MW-35	12/09/2010	2.2000
Sulfate	MG/L	MW-35	03/30/2011	2.6000
Sulfate	MG/L	MW-35	06/06/2011	2.5000
Sulfate	MG/L	MW-35	09/26/2011	2.6000
Sulfate	MG/L	MW-35	12/13/2011	2.5000
Temperature	deg C	MW-13A	03/22/2005	9.0800
Temperature	deg C	MW-13A	06/15/2005	9.3700
Temperature	deg C	MW-13A	09/27/2005	9.6500
Temperature	deg C	MW-13A	12/15/2005	8.6000
Temperature	deg C	MW-13A	03/28/2006	9.4400
Temperature	deg C	MW-13A	06/21/2006	9.4100
Temperature	deg C	MW-13A	09/26/2006	9.7100
Temperature	deg C	MW-13A	12/13/2006	8.7900
Temperature	deg C	MW-13A	03/27/2007	9.1400
Temperature	deg C	MW-13A	09/19/2007	9.2600
Temperature	deg C	MW-13A	12/19/2007	8.1700
Temperature	deg C	MW-13A	03/25/2008	8.4700
Temperature	deg C	MW-13A	06/18/2008	9.3000
Temperature	deg C	MW-13A	09/17/2008	8.8000
Temperature	deg C	MW-13A	12/17/2008	8.7500
Temperature	deg C	MW-13A	03/24/2009	8.3200
Temperature	deg C	MW-13A	06/17/2009	9.8500
Temperature	deg C	MW-13A	12/03/2009	8.9200
Temperature	deg C	MW-13A	03/25/2010	9.2200
Temperature	deg C	MW-13A	06/23/2010	9.5800
Temperature	deg C	MW-13A	09/23/2010	9.4200
Temperature	deg C	MW-13A	12/08/2010	9.4500
Temperature	deg C	MW-13A	03/30/2011	9.3700
Temperature	deg C	MW-13A	06/06/2011	10.4000
Temperature	deg C	MW-13A	09/27/2011	9.5800
Temperature	deg C	MW-13A	12/14/2011	8.9200
Temperature	deg C	MW-13B	03/22/2005	9.5500
Temperature	deg C	MW-13B	06/15/2005	9.9200
Temperature	deg C	MW-13B	09/27/2005	10.7900
Temperature	deg C	MW-13B	12/15/2005	8.1100
Temperature	deg C	MW-13B	03/29/2006	8.8000
Temperature	deg C	MW-13B	06/21/2006	9.7600
Temperature	deg C	MW-13B	09/26/2006	10.3200
Temperature	deg C	MW-13B	12/13/2006	8.8500
Temperature	deg C	MW-13B	03/27/2007	9.0400
Temperature	deg C	MW-13B	09/18/2007	10.0100
Temperature	deg C	MW-13B	12/19/2007	8.0800
Temperature	deg C	MW-13B	03/25/2008	8.0900
Temperature	deg C	MW-13B	06/18/2008	9.2300
Temperature	deg C	MW-13B	09/17/2008	9.0100
Temperature	deg C	MW-13B	12/16/2008	8.4300
Temperature	deg C	MW-13B	03/24/2009	8.3700
Temperature	deg C	MW-13B	06/17/2009	10.8100
Temperature	deg C	MW-13B	12/03/2009	8.7900
Temperature	deg C	MW-13B	03/25/2010	9.2300
Temperature	deg C	MW-13B	06/23/2010	9.9700
Temperature	deg C	MW-13B	09/23/2010	9.6000
Temperature	deg C	MW-13B	12/08/2010	9.2500
Temperature	deg C	MW-13B	03/30/2011	9.3200
Temperature	deg C	MW-13B	06/06/2011	11.3000
Temperature	deg C	MW-13B	09/27/2011	10.5700
Temperature	deg C	MW-13B	12/14/2011	8.7600
Temperature	deg C	MW-16	03/24/2009	9.0800
Temperature	deg C	MW-16	06/16/2009	9.9800
Temperature	deg C	MW-16	12/03/2009	9.0800
Temperature	deg C	MW-16	03/25/2010	9.1100
Temperature	deg C	MW-16	06/24/2010	9.3900
Temperature	deg C	MW-16	09/24/2010	9.4400
Temperature	deg C	MW-16	12/09/2010	9.1300

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date	Result	
Temperature	deg C	MW-16	03/30/2011	9.1400	
Temperature	deg C	MW-16	06/07/2011	9.4600	
Temperature	deg C	MW-16	09/27/2011	9.4300	
Temperature	deg C	MW-16	12/13/2011	8.8400	
Temperature	deg C	MW-35	03/22/2005	9.8000	
Temperature	deg C	MW-35	06/14/2005	10.2800	
Temperature	deg C	MW-35	09/27/2005	10.4900	
Temperature	deg C	MW-35	12/15/2005	8.8600	
Temperature	deg C	MW-35	03/28/2006	9.5300	
Temperature	deg C	MW-35	06/21/2006	10.3100	
Temperature	deg C	MW-35	09/26/2006	10.6200	
Temperature	deg C	MW-35	12/12/2006	9.2600	
Temperature	deg C	MW-35	03/27/2007	9.4000	
Temperature	deg C	MW-35	09/18/2007	10.2400	
Temperature	deg C	MW-35	12/20/2007	8.6900	
Temperature	deg C	MW-35	03/25/2008	8.7500	
Temperature	deg C	MW-35	06/18/2008	9.7300	
Temperature	deg C	MW-35	09/18/2008	9.9800	
Temperature	deg C	MW-35	12/19/2008	8.5000	
Temperature	deg C	MW-35	03/24/2009	9.3200	
Temperature	deg C	MW-35	06/16/2009	11.7600	
Temperature	deg C	MW-35	12/03/2009	9.5700	
Temperature	deg C	MW-35	03/25/2010	9.8200	
Temperature	deg C	MW-35	06/23/2010	10.0700	
Temperature	deg C	MW-35	09/23/2010	10.0900	
Temperature	deg C	MW-35	12/09/2010	9.8500	
Temperature	deg C	MW-35	03/30/2011	9.7200	
Temperature	deg C	MW-35	06/06/2011	10.2000	
Temperature	deg C	MW-35	09/26/2011	10.1400	
Temperature	deg C	MW-35	12/13/2011	9.4100	
Thallium, dissolved	MG/L	MW-13A	03/22/2005	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	06/15/2005	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	09/27/2005	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	12/15/2005	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	03/28/2006	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	06/21/2006	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	09/26/2006	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	12/13/2006	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	03/27/2007	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	06/19/2007	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	09/19/2007	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	12/19/2007	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	03/25/2008	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	06/18/2008	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	09/17/2008	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	12/17/2008	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	03/24/2009	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	06/17/2009	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	09/10/2009	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	12/03/2009	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	03/25/2010	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	06/23/2010	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	09/23/2010	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	12/08/2010	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	03/30/2011	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	06/06/2011	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	09/27/2011	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	12/14/2011	ND	0.0010
Thallium, dissolved	MG/L	MW-13B	03/22/2005	ND	0.0010
Thallium, dissolved	MG/L	MW-13B	06/15/2005	ND	0.0010
Thallium, dissolved	MG/L	MW-13B	09/27/2005	ND	0.0010
Thallium, dissolved	MG/L	MW-13B	12/15/2005	ND	0.0010
Thallium, dissolved	MG/L	MW-13B	03/29/2006	ND	0.0010
Thallium, dissolved	MG/L	MW-13B	06/21/2006	ND	0.0010
Thallium, dissolved	MG/L	MW-13B	09/26/2006	ND	0.0010

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date	Result
Thallium, dissolved	MG/L	MW-13B	12/13/2006	ND 0.0010
Thallium, dissolved	MG/L	MW-13B	03/27/2007	ND 0.0010
Thallium, dissolved	MG/L	MW-13B	06/19/2007	ND 0.0010
Thallium, dissolved	MG/L	MW-13B	09/18/2007	ND 0.0010
Thallium, dissolved	MG/L	MW-13B	12/19/2007	ND 0.0010
Thallium, dissolved	MG/L	MW-13B	03/25/2008	ND 0.0010
Thallium, dissolved	MG/L	MW-13B	06/18/2008	ND 0.0010
Thallium, dissolved	MG/L	MW-13B	09/17/2008	ND 0.0010
Thallium, dissolved	MG/L	MW-13B	12/16/2008	ND 0.0010
Thallium, dissolved	MG/L	MW-13B	03/24/2009	ND 0.0010
Thallium, dissolved	MG/L	MW-13B	06/17/2009	ND 0.0010
Thallium, dissolved	MG/L	MW-13B	09/10/2009	ND 0.0010
Thallium, dissolved	MG/L	MW-13B	12/03/2009	ND 0.0010
Thallium, dissolved	MG/L	MW-13B	03/25/2010	ND 0.0010
Thallium, dissolved	MG/L	MW-13B	06/23/2010	ND 0.0010
Thallium, dissolved	MG/L	MW-13B	09/23/2010	ND 0.0010
Thallium, dissolved	MG/L	MW-13B	12/08/2010	ND 0.0010
Thallium, dissolved	MG/L	MW-13B	03/30/2011	ND 0.0010
Thallium, dissolved	MG/L	MW-13B	06/06/2011	ND 0.0010
Thallium, dissolved	MG/L	MW-13B	09/27/2011	ND 0.0010
Thallium, dissolved	MG/L	MW-13B	12/14/2011	ND 0.0010
Thallium, dissolved	MG/L	MW-16	03/24/2009	ND 0.0010
Thallium, dissolved	MG/L	MW-16	06/16/2009	ND 0.0010
Thallium, dissolved	MG/L	MW-16	09/09/2009	ND 0.0010
Thallium, dissolved	MG/L	MW-16	12/03/2009	ND 0.0010
Thallium, dissolved	MG/L	MW-16	03/25/2010	ND 0.0010
Thallium, dissolved	MG/L	MW-16	06/24/2010	ND 0.0010
Thallium, dissolved	MG/L	MW-16	09/24/2010	ND 0.0010
Thallium, dissolved	MG/L	MW-16	12/09/2010	ND 0.0010
Thallium, dissolved	MG/L	MW-16	03/30/2011	ND 0.0010
Thallium, dissolved	MG/L	MW-16	06/07/2011	ND 0.0010
Thallium, dissolved	MG/L	MW-16	09/27/2011	ND 0.0010
Thallium, dissolved	MG/L	MW-16	12/13/2011	ND 0.0010
Thallium, dissolved	MG/L	MW-35	03/22/2005	ND 0.0010
Thallium, dissolved	MG/L	MW-35	06/14/2005	ND 0.0010
Thallium, dissolved	MG/L	MW-35	09/27/2005	ND 0.0010
Thallium, dissolved	MG/L	MW-35	12/15/2005	ND 0.0010
Thallium, dissolved	MG/L	MW-35	03/28/2006	ND 0.0010
Thallium, dissolved	MG/L	MW-35	06/21/2006	ND 0.0010
Thallium, dissolved	MG/L	MW-35	09/26/2006	ND 0.0010
Thallium, dissolved	MG/L	MW-35	12/12/2006	ND 0.0010
Thallium, dissolved	MG/L	MW-35	03/27/2007	ND 0.0010
Thallium, dissolved	MG/L	MW-35	06/20/2007	ND 0.0010
Thallium, dissolved	MG/L	MW-35	09/18/2007	ND 0.0010
Thallium, dissolved	MG/L	MW-35	12/20/2007	ND 0.0010
Thallium, dissolved	MG/L	MW-35	03/25/2008	ND 0.0010
Thallium, dissolved	MG/L	MW-35	06/18/2008	ND 0.0010
Thallium, dissolved	MG/L	MW-35	09/18/2008	ND 0.0010
Thallium, dissolved	MG/L	MW-35	12/19/2008	ND 0.0010
Thallium, dissolved	MG/L	MW-35	03/24/2009	ND 0.0010
Thallium, dissolved	MG/L	MW-35	06/16/2009	ND 0.0010
Thallium, dissolved	MG/L	MW-35	09/10/2009	ND 0.0010
Thallium, dissolved	MG/L	MW-35	12/03/2009	ND 0.0010
Thallium, dissolved	MG/L	MW-35	03/25/2010	ND 0.0010
Thallium, dissolved	MG/L	MW-35	06/23/2010	ND 0.0010
Thallium, dissolved	MG/L	MW-35	09/23/2010	ND 0.0010
Thallium, dissolved	MG/L	MW-35	12/09/2010	ND 0.0010
Thallium, dissolved	MG/L	MW-35	03/30/2011	ND 0.0010
Thallium, dissolved	MG/L	MW-35	06/06/2011	ND 0.0010
Thallium, dissolved	MG/L	MW-35	09/26/2011	ND 0.0010
Thallium, dissolved	MG/L	MW-35	12/13/2011	ND 0.0050
Total dissolved solids (tds)	MG/L	MW-13A	03/22/2005	113.0000
Total dissolved solids (tds)	MG/L	MW-13A	06/15/2005	111.0000
Total dissolved solids (tds)	MG/L	MW-13A	09/27/2005	175.0000
Total dissolved solids (tds)	MG/L	MW-13A	12/15/2005	166.0000

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date	Result
Total dissolved solids (tds)	MG/L	MW-13A	03/28/2006	110.0000
Total dissolved solids (tds)	MG/L	MW-13A	06/21/2006	120.0000
Total dissolved solids (tds)	MG/L	MW-13A	09/26/2006	110.0000
Total dissolved solids (tds)	MG/L	MW-13A	12/13/2006	100.0000
Total dissolved solids (tds)	MG/L	MW-13A	03/27/2007	100.0000
Total dissolved solids (tds)	MG/L	MW-13A	06/19/2007	100.0000
Total dissolved solids (tds)	MG/L	MW-13A	09/19/2007	110.0000
Total dissolved solids (tds)	MG/L	MW-13A	12/19/2007	84.0000
Total dissolved solids (tds)	MG/L	MW-13A	03/25/2008	99.0000
Total dissolved solids (tds)	MG/L	MW-13A	06/18/2008	110.0000
Total dissolved solids (tds)	MG/L	MW-13A	09/17/2008	110.0000
Total dissolved solids (tds)	MG/L	MW-13A	12/17/2008	90.0000
Total dissolved solids (tds)	MG/L	MW-13A	03/24/2009	95.0000
Total dissolved solids (tds)	MG/L	MW-13A	06/17/2009	110.0000
Total dissolved solids (tds)	MG/L	MW-13A	09/10/2009	100.0000
Total dissolved solids (tds)	MG/L	MW-13A	12/03/2009	100.0000
Total dissolved solids (tds)	MG/L	MW-13A	03/25/2010	100.0000
Total dissolved solids (tds)	MG/L	MW-13A	06/23/2010	120.0000
Total dissolved solids (tds)	MG/L	MW-13A	09/23/2010	98.0000
Total dissolved solids (tds)	MG/L	MW-13A	12/08/2010	90.0000
Total dissolved solids (tds)	MG/L	MW-13A	03/30/2011	110.0000
Total dissolved solids (tds)	MG/L	MW-13A	06/06/2011	110.0000
Total dissolved solids (tds)	MG/L	MW-13A	09/27/2011	100.0000
Total dissolved solids (tds)	MG/L	MW-13A	12/14/2011	97.0000
Total dissolved solids (tds)	MG/L	MW-13B	03/22/2005	108.0000
Total dissolved solids (tds)	MG/L	MW-13B	06/15/2005	114.0000
Total dissolved solids (tds)	MG/L	MW-13B	09/27/2005	111.0000
Total dissolved solids (tds)	MG/L	MW-13B	12/15/2005	130.0000
Total dissolved solids (tds)	MG/L	MW-13B	03/29/2006	89.0000
Total dissolved solids (tds)	MG/L	MW-13B	06/21/2006	110.0000
Total dissolved solids (tds)	MG/L	MW-13B	09/26/2006	100.0000
Total dissolved solids (tds)	MG/L	MW-13B	12/13/2006	98.0000
Total dissolved solids (tds)	MG/L	MW-13B	03/27/2007	100.0000
Total dissolved solids (tds)	MG/L	MW-13B	06/19/2007	99.0000
Total dissolved solids (tds)	MG/L	MW-13B	09/18/2007	99.0000
Total dissolved solids (tds)	MG/L	MW-13B	12/19/2007	91.0000
Total dissolved solids (tds)	MG/L	MW-13B	03/25/2008	99.0000
Total dissolved solids (tds)	MG/L	MW-13B	06/18/2008	120.0000
Total dissolved solids (tds)	MG/L	MW-13B	09/17/2008	110.0000
Total dissolved solids (tds)	MG/L	MW-13B	12/16/2008	93.0000
Total dissolved solids (tds)	MG/L	MW-13B	03/24/2009	94.0000
Total dissolved solids (tds)	MG/L	MW-13B	06/17/2009	100.0000
Total dissolved solids (tds)	MG/L	MW-13B	09/10/2009	100.0000
Total dissolved solids (tds)	MG/L	MW-13B	12/03/2009	110.0000
Total dissolved solids (tds)	MG/L	MW-13B	03/25/2010	100.0000
Total dissolved solids (tds)	MG/L	MW-13B	06/23/2010	110.0000
Total dissolved solids (tds)	MG/L	MW-13B	09/23/2010	94.0000
Total dissolved solids (tds)	MG/L	MW-13B	12/08/2010	94.0000
Total dissolved solids (tds)	MG/L	MW-13B	03/30/2011	110.0000
Total dissolved solids (tds)	MG/L	MW-13B	06/06/2011	99.0000
Total dissolved solids (tds)	MG/L	MW-13B	09/27/2011	100.0000
Total dissolved solids (tds)	MG/L	MW-13B	12/14/2011	91.0000
Total dissolved solids (tds)	MG/L	MW-16	03/24/2009	87.0000
Total dissolved solids (tds)	MG/L	MW-16	06/16/2009	85.0000
Total dissolved solids (tds)	MG/L	MW-16	09/09/2009	89.0000
Total dissolved solids (tds)	MG/L	MW-16	12/03/2009	97.0000
Total dissolved solids (tds)	MG/L	MW-16	03/25/2010	83.0000
Total dissolved solids (tds)	MG/L	MW-16	06/24/2010	95.0000
Total dissolved solids (tds)	MG/L	MW-16	09/24/2010	120.0000
Total dissolved solids (tds)	MG/L	MW-16	12/09/2010	100.0000
Total dissolved solids (tds)	MG/L	MW-16	03/30/2011	91.0000
Total dissolved solids (tds)	MG/L	MW-16	06/07/2011	94.0000
Total dissolved solids (tds)	MG/L	MW-16	09/27/2011	100.0000
Total dissolved solids (tds)	MG/L	MW-16	12/13/2011	93.0000
Total dissolved solids (tds)	MG/L	MW-35	03/22/2005	100.0000

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Total dissolved solids (tds)	MG/L	MW-35	06/14/2005		88.0000
Total dissolved solids (tds)	MG/L	MW-35	09/27/2005		123.0000
Total dissolved solids (tds)	MG/L	MW-35	12/15/2005		87.0000
Total dissolved solids (tds)	MG/L	MW-35	03/28/2006		91.0000
Total dissolved solids (tds)	MG/L	MW-35	06/21/2006		110.0000
Total dissolved solids (tds)	MG/L	MW-35	09/26/2006		110.0000
Total dissolved solids (tds)	MG/L	MW-35	12/12/2006		90.0000
Total dissolved solids (tds)	MG/L	MW-35	03/27/2007		93.0000
Total dissolved solids (tds)	MG/L	MW-35	06/20/2007		110.0000
Total dissolved solids (tds)	MG/L	MW-35	09/18/2007		90.0000
Total dissolved solids (tds)	MG/L	MW-35	12/20/2007		120.0000
Total dissolved solids (tds)	MG/L	MW-35	03/25/2008		76.0000
Total dissolved solids (tds)	MG/L	MW-35	06/18/2008		93.0000
Total dissolved solids (tds)	MG/L	MW-35	09/18/2008		92.0000
Total dissolved solids (tds)	MG/L	MW-35	12/19/2008		93.0000
Total dissolved solids (tds)	MG/L	MW-35	03/24/2009		84.0000
Total dissolved solids (tds)	MG/L	MW-35	06/16/2009		95.0000
Total dissolved solids (tds)	MG/L	MW-35	09/10/2009		83.0000
Total dissolved solids (tds)	MG/L	MW-35	12/03/2009		85.0000
Total dissolved solids (tds)	MG/L	MW-35	03/25/2010		96.0000
Total dissolved solids (tds)	MG/L	MW-35	06/23/2010		100.0000
Total dissolved solids (tds)	MG/L	MW-35	09/23/2010		86.0000
Total dissolved solids (tds)	MG/L	MW-35	12/09/2010		97.0000
Total dissolved solids (tds)	MG/L	MW-35	03/30/2011		91.0000
Total dissolved solids (tds)	MG/L	MW-35	06/06/2011		96.0000
Total dissolved solids (tds)	MG/L	MW-35	09/26/2011		100.0000
Total dissolved solids (tds)	MG/L	MW-35	12/13/2011		95.0000
Total organic carbon (toc)	MG/L	MW-13A	03/22/2005	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	06/15/2005	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	09/27/2005	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	12/15/2005	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	03/28/2006	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	06/21/2006		2.2000
Total organic carbon (toc)	MG/L	MW-13A	09/26/2006		6.0000
Total organic carbon (toc)	MG/L	MW-13A	12/13/2006	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	03/27/2007	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	06/19/2007	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	09/19/2007	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	12/19/2007	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	03/25/2008	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	06/18/2008	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	09/17/2008	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	12/17/2008		1.0000
Total organic carbon (toc)	MG/L	MW-13A	03/24/2009	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	06/17/2009	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	09/10/2009	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	12/03/2009	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	03/25/2010	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	06/23/2010	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	09/23/2010	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	12/08/2010	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	03/30/2011	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	06/06/2011	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	09/27/2011	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	12/14/2011	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	03/22/2005	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	06/15/2005	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	09/27/2005	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	12/15/2005	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	03/29/2006	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	06/21/2006	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	09/26/2006		4.8000
Total organic carbon (toc)	MG/L	MW-13B	12/13/2006	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	03/27/2007	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	06/19/2007	ND	1.0000

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Total organic carbon (toc)	MG/L	MW-13B	09/18/2007	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	12/19/2007	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	03/25/2008	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	06/18/2008	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	09/17/2008	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	12/16/2008	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	03/24/2009	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	06/17/2009	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	09/10/2009	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	12/03/2009	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	03/25/2010	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	06/23/2010	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	09/23/2010	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	12/08/2010	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	03/30/2011	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	06/06/2011	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	09/27/2011	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	12/14/2011	ND	1.0000
Total organic carbon (toc)	MG/L	MW-16	03/24/2009	ND	1.0000
Total organic carbon (toc)	MG/L	MW-16	06/16/2009	ND	1.0000
Total organic carbon (toc)	MG/L	MW-16	09/09/2009	ND	1.0000
Total organic carbon (toc)	MG/L	MW-16	12/03/2009	ND	1.0000
Total organic carbon (toc)	MG/L	MW-16	03/25/2010	ND	1.0000
Total organic carbon (toc)	MG/L	MW-16	06/24/2010	ND	1.0000
Total organic carbon (toc)	MG/L	MW-16	09/24/2010	ND	1.0000
Total organic carbon (toc)	MG/L	MW-16	12/09/2010	ND	1.0000
Total organic carbon (toc)	MG/L	MW-16	03/30/2011	ND	1.0000
Total organic carbon (toc)	MG/L	MW-16	06/07/2011	ND	1.0000
Total organic carbon (toc)	MG/L	MW-16	09/27/2011	ND	1.0000
Total organic carbon (toc)	MG/L	MW-16	12/13/2011	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	03/22/2005	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	06/14/2005	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	09/27/2005	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	12/15/2005	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	03/28/2006	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	06/21/2006		2.1000
Total organic carbon (toc)	MG/L	MW-35	09/26/2006		4.3000
Total organic carbon (toc)	MG/L	MW-35	12/12/2006	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	03/27/2007	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	06/20/2007	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	09/18/2007	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	12/20/2007	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	03/25/2008	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	06/18/2008	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	09/18/2008	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	12/19/2008		1.0000
Total organic carbon (toc)	MG/L	MW-35	03/24/2009	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	06/16/2009	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	09/10/2009	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	12/03/2009	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	03/25/2010	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	06/23/2010	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	09/23/2010	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	12/09/2010	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	03/30/2011	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	06/06/2011	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	09/26/2011	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	12/13/2011	ND	1.0000
Vanadium, dissolved	MG/L	MW-13A	03/22/2005		0.0042
Vanadium, dissolved	MG/L	MW-13A	06/15/2005		0.0036
Vanadium, dissolved	MG/L	MW-13A	09/27/2005		0.0036
Vanadium, dissolved	MG/L	MW-13A	12/15/2005		0.0038
Vanadium, dissolved	MG/L	MW-13A	03/28/2006		0.0041
Vanadium, dissolved	MG/L	MW-13A	06/21/2006		0.0043
Vanadium, dissolved	MG/L	MW-13A	09/26/2006		0.0041

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.



Table 2-3

## Upgradient Data

Constituent	Units	Well	Date	Result
Vanadium, dissolved	MG/L	MW-13A	12/13/2006	0.0038
Vanadium, dissolved	MG/L	MW-13A	03/27/2007	0.0041
Vanadium, dissolved	MG/L	MW-13A	06/19/2007	0.0041
Vanadium, dissolved	MG/L	MW-13A	09/19/2007	0.0039
Vanadium, dissolved	MG/L	MW-13A	12/19/2007	0.0043
Vanadium, dissolved	MG/L	MW-13A	03/25/2008	0.0040
Vanadium, dissolved	MG/L	MW-13A	06/18/2008	0.0038
Vanadium, dissolved	MG/L	MW-13A	09/17/2008	0.0040
Vanadium, dissolved	MG/L	MW-13A	12/17/2008	0.0038
Vanadium, dissolved	MG/L	MW-13A	03/24/2009	0.0039
Vanadium, dissolved	MG/L	MW-13A	06/17/2009	0.0039
Vanadium, dissolved	MG/L	MW-13A	09/10/2009	0.0041
Vanadium, dissolved	MG/L	MW-13A	12/03/2009	0.0041
Vanadium, dissolved	MG/L	MW-13A	03/25/2010	0.0039
Vanadium, dissolved	MG/L	MW-13A	06/23/2010	0.0038
Vanadium, dissolved	MG/L	MW-13A	09/23/2010	0.0038
Vanadium, dissolved	MG/L	MW-13A	12/08/2010	0.0058
Vanadium, dissolved	MG/L	MW-13A	03/30/2011	0.0039
Vanadium, dissolved	MG/L	MW-13A	06/06/2011	0.0038
Vanadium, dissolved	MG/L	MW-13A	09/27/2011	0.0037
Vanadium, dissolved	MG/L	MW-13A	12/14/2011	0.0041
Vanadium, dissolved	MG/L	MW-13B	03/22/2005	0.0066
Vanadium, dissolved	MG/L	MW-13B	06/15/2005	0.0057
Vanadium, dissolved	MG/L	MW-13B	09/27/2005	0.0058
Vanadium, dissolved	MG/L	MW-13B	12/15/2005	0.0057
Vanadium, dissolved	MG/L	MW-13B	03/29/2006	0.0061
Vanadium, dissolved	MG/L	MW-13B	06/21/2006	0.0059
Vanadium, dissolved	MG/L	MW-13B	09/26/2006	0.0058
Vanadium, dissolved	MG/L	MW-13B	12/13/2006	0.0056
Vanadium, dissolved	MG/L	MW-13B	03/27/2007	0.0059
Vanadium, dissolved	MG/L	MW-13B	06/19/2007	0.0060
Vanadium, dissolved	MG/L	MW-13B	09/18/2007	0.0057
Vanadium, dissolved	MG/L	MW-13B	12/19/2007	0.0060
Vanadium, dissolved	MG/L	MW-13B	03/25/2008	0.0060
Vanadium, dissolved	MG/L	MW-13B	06/18/2008	0.0054
Vanadium, dissolved	MG/L	MW-13B	09/17/2008	0.0056
Vanadium, dissolved	MG/L	MW-13B	12/16/2008	0.0058
Vanadium, dissolved	MG/L	MW-13B	03/24/2009	0.0056
Vanadium, dissolved	MG/L	MW-13B	06/17/2009	0.0059
Vanadium, dissolved	MG/L	MW-13B	09/10/2009	0.0057
Vanadium, dissolved	MG/L	MW-13B	12/03/2009	0.0062
Vanadium, dissolved	MG/L	MW-13B	03/25/2010	0.0056
Vanadium, dissolved	MG/L	MW-13B	06/23/2010	0.0055
Vanadium, dissolved	MG/L	MW-13B	09/23/2010	0.0055
Vanadium, dissolved	MG/L	MW-13B	12/08/2010	0.0038
Vanadium, dissolved	MG/L	MW-13B	03/30/2011	0.0057
Vanadium, dissolved	MG/L	MW-13B	06/06/2011	0.0055
Vanadium, dissolved	MG/L	MW-13B	09/27/2011	0.0057
Vanadium, dissolved	MG/L	MW-13B	12/14/2011	0.0066
Vanadium, dissolved	MG/L	MW-16	03/24/2009	0.0035
Vanadium, dissolved	MG/L	MW-16	06/16/2009	0.0036
Vanadium, dissolved	MG/L	MW-16	09/09/2009	0.0036
Vanadium, dissolved	MG/L	MW-16	12/03/2009	0.0034
Vanadium, dissolved	MG/L	MW-16	03/25/2010	0.0036
Vanadium, dissolved	MG/L	MW-16	06/24/2010	0.0038
Vanadium, dissolved	MG/L	MW-16	09/24/2010	0.0041
Vanadium, dissolved	MG/L	MW-16	12/09/2010	0.0037
Vanadium, dissolved	MG/L	MW-16	03/30/2011	0.0039
Vanadium, dissolved	MG/L	MW-16	06/07/2011	0.0039
Vanadium, dissolved	MG/L	MW-16	09/27/2011	0.0043
Vanadium, dissolved	MG/L	MW-16	12/13/2011	0.0035
Vanadium, dissolved	MG/L	MW-35	03/22/2005	0.0047
Vanadium, dissolved	MG/L	MW-35	06/14/2005	0.0039
Vanadium, dissolved	MG/L	MW-35	09/27/2005	0.0044
Vanadium, dissolved	MG/L	MW-35	12/15/2005	0.0041

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

Table 2-3

## Upgradient Data

Constituent	Units	Well	Date		Result
Vanadium, dissolved	MG/L	MW-35	03/28/2006		0.0048
Vanadium, dissolved	MG/L	MW-35	06/21/2006		0.0046
Vanadium, dissolved	MG/L	MW-35	09/26/2006		0.0046
Vanadium, dissolved	MG/L	MW-35	12/12/2006		0.0044
Vanadium, dissolved	MG/L	MW-35	03/27/2007		0.0047
Vanadium, dissolved	MG/L	MW-35	06/20/2007		0.0046
Vanadium, dissolved	MG/L	MW-35	09/18/2007		0.0050
Vanadium, dissolved	MG/L	MW-35	12/20/2007		0.0045
Vanadium, dissolved	MG/L	MW-35	03/25/2008		0.0046
Vanadium, dissolved	MG/L	MW-35	06/18/2008		0.0047
Vanadium, dissolved	MG/L	MW-35	09/18/2008		0.0045
Vanadium, dissolved	MG/L	MW-35	12/19/2008		0.0042
Vanadium, dissolved	MG/L	MW-35	03/24/2009		0.0043
Vanadium, dissolved	MG/L	MW-35	06/16/2009		0.0041
Vanadium, dissolved	MG/L	MW-35	09/10/2009		0.0047
Vanadium, dissolved	MG/L	MW-35	12/03/2009		0.0048
Vanadium, dissolved	MG/L	MW-35	03/25/2010		0.0043
Vanadium, dissolved	MG/L	MW-35	06/23/2010		0.0044
Vanadium, dissolved	MG/L	MW-35	09/23/2010		0.0043
Vanadium, dissolved	MG/L	MW-35	12/09/2010		0.0045
Vanadium, dissolved	MG/L	MW-35	03/30/2011		0.0046
Vanadium, dissolved	MG/L	MW-35	06/06/2011		0.0044
Vanadium, dissolved	MG/L	MW-35	09/26/2011		0.0045
Vanadium, dissolved	MG/L	MW-35	12/13/2011	ND	0.0020
Zinc, dissolved	MG/L	MW-13A	12/19/2007	ND	0.0050
Zinc, dissolved	MG/L	MW-13A	03/25/2008	ND	0.0050
Zinc, dissolved	MG/L	MW-13A	06/18/2008	ND	0.0050
Zinc, dissolved	MG/L	MW-13A	09/17/2008	ND	0.0050
Zinc, dissolved	MG/L	MW-13A	12/17/2008	ND	0.0050
Zinc, dissolved	MG/L	MW-13A	03/24/2009	ND	0.0050
Zinc, dissolved	MG/L	MW-13A	06/17/2009	ND	0.0050
Zinc, dissolved	MG/L	MW-13A	09/10/2009	ND	0.0050
Zinc, dissolved	MG/L	MW-13A	12/03/2009	ND	0.0050
Zinc, dissolved	MG/L	MW-13A	03/25/2010	ND	0.0050
Zinc, dissolved	MG/L	MW-13A	06/23/2010	ND	0.0050
Zinc, dissolved	MG/L	MW-13A	09/23/2010	ND	0.0050
Zinc, dissolved	MG/L	MW-13A	12/08/2010	ND	0.0050
Zinc, dissolved	MG/L	MW-13A	03/30/2011	ND	0.0050
Zinc, dissolved	MG/L	MW-13A	06/06/2011	ND	0.0050
Zinc, dissolved	MG/L	MW-13A	09/27/2011	ND	0.0050
Zinc, dissolved	MG/L	MW-13A	12/14/2011	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	09/18/2007		0.0096
Zinc, dissolved	MG/L	MW-13B	12/19/2007	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	03/25/2008	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	06/18/2008	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	09/17/2008	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	12/16/2008	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	03/24/2009	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	06/17/2009	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	09/10/2009	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	12/03/2009	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	03/25/2010	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	09/23/2010	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	12/08/2010	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	03/30/2011	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	06/06/2011	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	09/27/2011	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	12/14/2011	ND	0.0050
Zinc, dissolved	MG/L	MW-16	03/24/2009	ND	0.0050
Zinc, dissolved	MG/L	MW-16	06/16/2009	ND	0.0050
Zinc, dissolved	MG/L	MW-16	09/09/2009	ND	0.0050
Zinc, dissolved	MG/L	MW-16	12/03/2009	ND	0.0050
Zinc, dissolved	MG/L	MW-16	03/25/2010	ND	0.0050
Zinc, dissolved	MG/L	MW-16	06/24/2010	ND	0.0050
Zinc, dissolved	MG/L	MW-16	09/24/2010	ND	0.0050

\* - Outlier for that well and constituent.

ND = Not detected, result = detection limit.

**Table 2-3****Upgradient Data**

Constituent	Units	Well	Date		Result
Zinc, dissolved	MG/L	MW-16	12/09/2010	ND	0.0050
Zinc, dissolved	MG/L	MW-16	03/30/2011	ND	0.0050
Zinc, dissolved	MG/L	MW-16	06/07/2011	ND	0.0050
Zinc, dissolved	MG/L	MW-16	09/27/2011	ND	0.0050
Zinc, dissolved	MG/L	MW-16	12/13/2011	ND	0.0050
Zinc, dissolved	MG/L	MW-35	12/20/2007	ND	0.0050
Zinc, dissolved	MG/L	MW-35	03/25/2008	ND	0.0050
Zinc, dissolved	MG/L	MW-35	06/18/2008	ND	0.0050
Zinc, dissolved	MG/L	MW-35	09/18/2008	ND	0.0050
Zinc, dissolved	MG/L	MW-35	12/19/2008	ND	0.0050
Zinc, dissolved	MG/L	MW-35	03/24/2009	ND	0.0050
Zinc, dissolved	MG/L	MW-35	06/16/2009	ND	0.0050
Zinc, dissolved	MG/L	MW-35	09/10/2009	ND	0.0050
Zinc, dissolved	MG/L	MW-35	12/03/2009	ND	0.0050
Zinc, dissolved	MG/L	MW-35	03/25/2010	ND	0.0050
Zinc, dissolved	MG/L	MW-35	06/23/2010	ND	0.0050
Zinc, dissolved	MG/L	MW-35	09/23/2010	ND	0.0050
Zinc, dissolved	MG/L	MW-35	12/09/2010	ND	0.0050
Zinc, dissolved	MG/L	MW-35	03/30/2011	ND	0.0050
Zinc, dissolved	MG/L	MW-35	06/06/2011	ND	0.0050
Zinc, dissolved	MG/L	MW-35	09/26/2011	ND	0.0050
Zinc, dissolved	MG/L	MW-35	12/13/2011	ND	0.0050

\* - Outlier for that well and constituent.  
 ND = Not detected, result = detection limit.

Table 2-4

## Shapiro Wilk Test of Normality for Multiple Groups

Constituent	N (Detects)	Detect Freq	G raw	G log	Critical Value	Limit Type
Alkalinity, bicarbonate (as caco3)	92	1.000	2.107	3.553	2.326	normal
Alkalinity, total (as caco3)	96	1.000	2.004	3.553	2.326	normal
Ammonia (as n)	59	0.628	3.526	3.247	2.326	nonpar
Antimony, dissolved	0	0.000				nonpar
Arsenic, dissolved	93	1.000	7.830	7.812	2.326	nonpar
Barium, dissolved	95	0.990	3.610	3.608	2.326	nonpar
Beryllium, dissolved	0	0.000				nonpar
Cadmium, dissolved	0	0.000				nonpar
Calcium, dissolved	96	1.000	5.896	5.923	2.326	nonpar
Chloride	96	1.000	1.571	0.230	2.326	normal
Chromium, dissolved	30	0.313	1.906	1.909	2.326	nonpar
Cobalt, dissolved	0	0.000				nonpar
Copper, dissolved	2	0.021				nonpar
Iron, dissolved	3	0.031				nonpar
Lead, dissolved	0	0.000				nonpar
Magnesium, dissolved	96	1.000	0.893	0.736	2.326	normal
Manganese, dissolved	7	0.073	3.410	3.404	2.326	nonpar
Nickel, dissolved	0	0.000				nonpar
Nitrate (as n)	96	1.000	11.562	10.406	2.326	nonpar
pH	89	1.000	2.122	2.523	2.326	normal
Potassium, dissolved	12	0.125	0.153	0.091	2.326	nonpar
Selenium, dissolved	2	0.021				nonpar
Silver, dissolved	0	0.000				nonpar
Sodium, dissolved	96	1.000	1.467	1.562	2.326	normal
Specific conductivity	89	1.000	8.017	8.184	2.326	nonpar
Sulfate	95	0.990	6.242	6.341	2.326	nonpar
Temperature	89	1.000	0.352	0.010	2.326	normal
Thallium, dissolved	0	0.000				nonpar
Total dissolved solids (tds)	96	1.000	5.085	3.571	2.326	nonpar
Total organic carbon (toc)	7	0.073	0.146	1.287	2.326	nonpar
Vanadium, dissolved	95	0.990	4.814	4.815	2.326	nonpar
Zinc, dissolved	1	0.016				nonpar

Fit to distribution is confirmed if  $G < \text{critical value}$ .

If detection frequency is  $< 50\%$  nonparametric or Poisson limit is used

Data in table are based on pooled data shown in Table 3, outliers excluded

**TABLE 2-5**  
**COMPARISON OF UPDATED (2012) PREDICTION LIMITS**  
**TO PREVIOUS YEAR (2011) PREDICTION LIMITS**  
**Olympic View Sanitary Landfill**

<b>Constituent</b>	<b>2011 Pred. Limit</b>	<b>Distributional Assumption</b>	<b>2012 Pred. Limit</b>	<b>Distributional Assumption</b>
Alkalinity, bicarbonate (as caco3)	96	nonparametric	96	normal
Alkalinity, total (as caco3)	96	nonparametric	96	normal
Ammonia (as n)	0.17	nonparametric	0.18	nonparametric
Antimony, dissolved	Current RL*	nonparametric	Current RL*	nonparametric
Arsenic, dissolved	0.38	nonparametric	0.38	nonparametric
Barium, dissolved	0.0052	nonparametric	0.0052	nonparametric
Beryllium, dissolved	Current RL*	nonparametric	Current RL*	nonparametric
Cadmium, dissolved	Current RL*	nonparametric	Current RL*	nonparametric
Calcium, dissolved	17.1	nonparametric	17.1	nonparametric
Chloride	3.51	normal	3.86	normal
Chromium, dissolved	0.033	nonparametric	0.033	nonparametric
Cobalt, dissolved	Current RL*	nonparametric	Current RL*	nonparametric
Copper, dissolved	0.0094	nonparametric	0.0094	nonparametric
Iron, dissolved	0.097	nonparametric	0.097	nonparametric
Lead, dissolved	Current RL*	nonparametric	Current RL*	nonparametric
Magnesium, dissolved	10.29	normal	10.57	normal
Manganese, dissolved	0.0067	nonparametric	0.0067	nonparametric
Nickel, dissolved	Current RL*	nonparametric	Current RL*	nonparametric
Nitrate (as n)	1.80	nonparametric	1.80	nonparametric
pH	5.90 - 7.85	nonparametric	5.90 - 8.32	normal
Potassium, dissolved	1.00	nonparametric	1.00	nonparametric
Selenium, dissolved	0.0011	nonparametric	0.0011	nonparametric
Silver, dissolved	Current RL*	nonparametric	Current RL*	nonparametric
Sodium, dissolved	5.95	normal	5.94	normal
Specific conductivity	0.174	nonparametric	0.176	nonparametric
Sulfate	9.90	nonparametric	9.90	nonparametric
Temperature	11.09	normal	11.14	normal
Thallium, dissolved	Current RL*	nonparametric	Current RL*	nonparametric
Total dissolved solids (tds)	175	nonparametric	175	nonparametric
Total organic carbon (toc)	6.0	nonparametric	6.0	nonparametric
Vanadium, dissolved	0.0066	nonparametric	0.0066	nonparametric
Zinc, dissolved	0.0096	nonparametric	0.0096	nonparametric

\* in cases where all background data are non-detected values, a nonparametric prediction limit is set at the current constituent-specific laboratory reporting limit (RL)

### **3. Annual UCL Calculations using Preliminary Groundwater Cleanup Goals**

- 2011 Annual Preliminary Groundwater Cleanup Goals Statistical Evaluation Summary (Table 3-1)

**TABLE 3-1: 2011 Annual Groundwater Cleanup Level Statistical Evaluation Summary**

**Olympic View Sanitary Landfill**

**Statistical Methodology:** calculation of 95% UCL of mean per MTCASat

**Data Input (general):** 3-year "moving window", updated annually

**Data Input (specific):** January 1, 2009 through December 31, 2011

**Wells Evaluated:** (1) Compliance -- MW-15R, MW-34A, MW-34C, MW-39, MW-42, MW-43; (2) Downgradient -- MW-9, MW-29A, MW-32, MW-33A, MW-33C, MW-36A

Monitoring Well	Monitoring Well Type	Corrective Action Monitoring Parameter	N <sup>[1]</sup>	% Detect	Max <sup>[2]</sup>	95% UCL of Mean <sup>[3]</sup>	Units <sup>[4]</sup>	Note	Groundwater Cleanup Level <sup>[5]</sup>	Units <sup>[4]</sup>	Does 95% UCL Exceed Cleanup Level?	Significant Trend? <sup>[6]</sup>
MW-15R	Compliance	1,1-Dichloroethane	11	0%	0.75 (ND)	0.75	ug/L	B	50	ug/L	No	No
MW-15R	Compliance	1,4-Dichlorobenzene	11	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
MW-15R	Compliance	Arsenic, dissolved	11	100%	0.26	0.24	ug/L	LN	0.462	ug/L	No	No
MW-15R	Compliance	Iron, dissolved	11	0%	0.06 (ND)	0.06	mg/L	B	0.30	mg/L	No	No
MW-15R	Compliance	Manganese, dissolved	11	100%	0.0046	0.004	mg/L	LN	0.05	mg/L	No	Yes (▼)
MW-15R	Compliance	cis-1,2-dichloroethene	11	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No
MW-15R	Compliance	Ethyl ether	11	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
MW-15R	Compliance	Trichloroethene	11	0%	0.46 (ND)	0.46	ug/L	B	1.0	ug/L	No	No
MW-15R	Compliance	Vinyl Chloride	11	82%	0.16	0.29	ug/L	LN	0.20	ug/L	Yes	No
MW-15R	Compliance	Ammonia as N	11	91%	0.072	0.06	mg/L	LN	0.19	mg/L	No	No
MW-34A	Compliance	1,1-Dichloroethane	12	0%	0.75 (ND)	0.75	ug/L	B	50	ug/L	No	No
MW-34A	Compliance	1,4-Dichlorobenzene	12	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
MW-34A	Compliance	Arsenic, dissolved	12	100%	0.52	0.485	ug/L	Z	0.462	ug/L	Yes	No
MW-34A	Compliance	Iron, dissolved	12	0%	0.06 (ND)	0.06	mg/L	B	0.30	mg/L	No	No
MW-34A	Compliance	Manganese, dissolved	12	8.3%	0.0015	0.0015	mg/L	A	0.05	mg/L	No	No
MW-34A	Compliance	cis-1,2-dichloroethene	12	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No
MW-34A	Compliance	Ethyl ether	11	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
MW-34A	Compliance	Trichloroethene	12	0%	0.46 (ND)	0.46	ug/L	B	1.0	ug/L	No	No
MW-34A	Compliance	Vinyl Chloride	12	0%	0.02 (ND) <sup>[7]</sup>	0.02	ug/L	B	0.20	ug/L	No	No
MW-34A	Compliance	Ammonia as N	12	75%	0.065	0.05	mg/L	LN	0.19	mg/L	No	No
MW-34C	Compliance	1,1-Dichloroethane	12	0%	0.75 (ND)	0.75	ug/L	B	50	ug/L	No	No
MW-34C	Compliance	1,4-Dichlorobenzene	12	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
MW-34C	Compliance	Arsenic, dissolved	12	100%	1.5	1.37	ug/L	LN	0.462	ug/L	Yes	Yes (▼)
MW-34C	Compliance	Iron, dissolved	12	100%	1.7	1.44	mg/L	LN	0.30	mg/L	Yes	No
MW-34C	Compliance	Manganese, dissolved	12	100%	1.1	0.97	mg/L	LN	0.05	mg/L	Yes	No

**TABLE 3-1: 2011 Annual Groundwater Cleanup Level Statistical Evaluation Summary**

**Olympic View Sanitary Landfill**

**Statistical Methodology:** calculation of 95% UCL of mean per MTCASat

**Data Input (general):** 3-year "moving window", updated annually

**Data Input (specific):** January 1, 2009 through December 31, 2011

**Wells Evaluated:** (1) Compliance -- MW-15R, MW-34A, MW-34C, MW-39, MW-42, MW-43; (2) Downgradient -- MW-9, MW-29A, MW-32, MW-33A, MW-33C, MW-36A

Monitoring Well	Monitoring Well Type	Corrective Action Monitoring Parameter	N <sup>[1]</sup>	% Detect	Max <sup>[2]</sup>	95% UCL of Mean <sup>[3]</sup>	Units <sup>[4]</sup>	Note	Groundwater Cleanup Level <sup>[5]</sup>	Units <sup>[4]</sup>	Does 95% UCL Exceed Cleanup Level?	Significant Trend? <sup>[6]</sup>
MW-34C	Compliance	cis-1,2-dichloroethene	12	33%	0.54	0.81	ug/L	A*	35	ug/L	No	No
MW-34C	Compliance	Ethyl ether	12	25%	0.52	0.72	ug/L	A*	50	ug/L	No	No
MW-34C	Compliance	Trichloroethene	12	0%	0.46 (ND)	0.46	ug/L	B	1.0	ug/L	No	No
MW-34C	Compliance	Vinyl Chloride	12	100%	0.36	0.29	ug/L	LN	0.20	ug/L	Yes	No
MW-34C	Compliance	Ammonia as N	12	83%	0.16	0.12	mg/L	LN	0.19	mg/L	No	No
MW-39	Compliance	1,1-Dichloroethane	12	0%	0.75 (ND)	0.75	ug/L	B	50	ug/L	No	No
MW-39	Compliance	1,4-Dichlorobenzene	12	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
MW-39	Compliance	Arsenic, dissolved	12	100%	2.8	1.95	ug/L	N	0.462	ug/L	Yes	No
MW-39	Compliance	Iron, dissolved	12	100%	45.0	37.5	mg/L	Z	0.30	mg/L	Yes	No
MW-39	Compliance	Manganese, dissolved	12	100%	0.92	0.55	mg/L	Z	0.05	mg/L	Yes	No
MW-39	Compliance	cis-1,2-dichloroethene	12	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No
MW-39	Compliance	Ethyl ether	12	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
MW-39	Compliance	Trichloroethene	12	0%	0.46 (ND)	0.46	ug/L	B	1.0	ug/L	No	No
MW-39	Compliance	Vinyl Chloride	12	0%	0.02 (ND) <sup>[7]</sup>	0.02	ug/L	B	0.20	ug/L	No	No
MW-39	Compliance	Ammonia as N	12	100%	0.50	0.41	mg/L	N	0.19	mg/L	Yes	No
MW-42	Compliance	1,1-Dichloroethane	12	0%	0.75 (ND)	0.75	ug/L	B	50	ug/L	No	No
MW-42	Compliance	1,4-Dichlorobenzene	12	17%	0.50	0.84	ug/L	A*	2.0	ug/L	No	No
MW-42	Compliance	Arsenic, dissolved	12	100%	1.7	1.60	ug/L	Z	0.462	ug/L	Yes	No
MW-42	Compliance	Iron, dissolved	12	100%	28	26.3	mg/L	Z	0.30	mg/L	Yes	No
MW-42	Compliance	Manganese, dissolved	12	100%	5.6	5.22	mg/L	LN	0.05	mg/L	Yes	No
MW-42	Compliance	cis-1,2-dichloroethene	12	17%	0.42	0.81	ug/L	A*	35	ug/L	No	No
MW-42	Compliance	Ethyl ether	12	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
MW-42	Compliance	Trichloroethene	12	17%	0.51	0.51	ug/L	A	1.0	ug/L	No	No
MW-42	Compliance	Vinyl Chloride	12	75%	0.16	0.35	ug/L	LN	0.20	ug/L	Yes	No
MW-42	Compliance	Ammonia as N	12	100%	8.9	6.57	mg/L	LN	0.19	mg/L	Yes	No



**TABLE 3-1: 2011 Annual Groundwater Cleanup Level Statistical Evaluation Summary**

**Olympic View Sanitary Landfill**

**Statistical Methodology:** calculation of 95% UCL of mean per MTCASat

**Data Input (general):** 3-year "moving window", updated annually

**Data Input (specific):** January 1, 2009 through December 31, 2011

**Wells Evaluated:** (1) Compliance -- MW-15R, MW-34A, MW-34C, MW-39, MW-42, MW-43; (2) Downgradient -- MW-9, MW-29A, MW-32, MW-33A, MW-33C, MW-36A

Monitoring Well	Monitoring Well Type	Corrective Action Monitoring Parameter	N <sup>[1]</sup>	% Detect	Max <sup>[2]</sup>	95% UCL of Mean <sup>[3]</sup>	Units <sup>[4]</sup>	Note	Groundwater Cleanup Level <sup>[5]</sup>	Units <sup>[4]</sup>	Does 95% UCL Exceed Cleanup Level?	Significant Trend? <sup>[6]</sup>
MW-43	Compliance	1,1-Dichloroethane	12	0%	0.75 (ND)	0.75	ug/L	B	50	ug/L	No	No
MW-43	Compliance	1,4-Dichlorobenzene	12	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
MW-43	Compliance	Arsenic, dissolved	12	67%	0.12	0.12	ug/L	A	0.462	ug/L	No	No
MW-43	Compliance	Iron, dissolved	12	50%	2.0	2.0	mg/L	A**	0.30	mg/L	Yes	No
MW-43	Compliance	Manganese, dissolved	12	100%	0.70	0.31	mg/L	Z	0.05	mg/L	Yes	No
MW-43	Compliance	cis-1,2-dichloroethene	12	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No
MW-43	Compliance	Ethyl ether	12	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
MW-43	Compliance	Trichloroethene	12	0%	0.46 (ND)	0.46	ug/L	B	1.0	ug/L	No	No
MW-43	Compliance	Vinyl Chloride	12	0%	0.02 (ND) <sup>[7]</sup>	0.02	ug/L	B	0.20	ug/L	No	No
MW-43	Compliance	Ammonia as N	12	92%	0.27	0.24	mg/L	LN	0.19	mg/L	Yes	No
MW-9	Downgradient	1,1-Dichloroethane	6	0%	0.75 (ND)	0.75	ug/L	B	50	ug/L	No	No
MW-9	Downgradient	1,4-Dichlorobenzene	6	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
MW-9	Downgradient	Arsenic, dissolved	6	100%	0.43	0.427	ug/L	Z	0.462	ug/L	No	No
MW-9	Downgradient	Iron, dissolved	6	100%	0.58	0.51	mg/L	Z	0.30	mg/L	Yes	Yes (▼)
MW-9	Downgradient	Manganese, dissolved	6	100%	0.041	0.04	mg/L	LN	0.05	mg/L	No	No
MW-9	Downgradient	cis-1,2-dichloroethene	6	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No
MW-9	Downgradient	Ethyl ether	6	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
MW-9	Downgradient	Trichloroethene	6	0%	0.46 (ND)	0.46	ug/L	B	1.0	ug/L	No	No
MW-9	Downgradient	Vinyl Chloride	6	0%	0.02 (ND) <sup>[7]</sup>	0.02	ug/L	B	0.20	ug/L	No	No
MW-9	Downgradient	Ammonia as N	6	67%	0.084	0.07	mg/L	N	0.19	mg/L	No	No
MW-29A	Downgradient	1,1-Dichloroethane	6	0%	0.75 (ND)	0.75	ug/L	B	50	ug/L	No	No
MW-29A	Downgradient	1,4-Dichlorobenzene	6	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
MW-29A	Downgradient	Arsenic, dissolved	6	100%	1.99	1.90	ug/L	LN	0.462	ug/L	Yes	No
MW-29A	Downgradient	Iron, dissolved	6	100%	4.6	4.52	mg/L	LN	0.30	mg/L	Yes	No
MW-29A	Downgradient	Manganese, dissolved	6	100%	1.5	1.45	mg/L	LN	0.05	mg/L	Yes	No
MW-29A	Downgradient	cis-1,2-dichloroethene	6	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No

**TABLE 3-1: 2011 Annual Groundwater Cleanup Level Statistical Evaluation Summary**

**Olympic View Sanitary Landfill**

**Statistical Methodology:** calculation of 95% UCL of mean per MTCASat

**Data Input (general):** 3-year "moving window", updated annually

**Data Input (specific):** January 1, 2009 through December 31, 2011

**Wells Evaluated:** (1) Compliance -- MW-15R, MW-34A, MW-34C, MW-39, MW-42, MW-43; (2) Downgradient -- MW-9, MW-29A, MW-32, MW-33A, MW-33C, MW-36A

Monitoring Well	Monitoring Well Type	Corrective Action Monitoring Parameter	N <sup>[1]</sup>	% Detect	Max <sup>[2]</sup>	95% UCL of Mean <sup>[3]</sup>	Units <sup>[4]</sup>	Note	Groundwater Cleanup Level <sup>[5]</sup>	Units <sup>[4]</sup>	Does 95% UCL Exceed Cleanup Level?	Significant Trend? <sup>[6]</sup>
MW-29A	Downgradient	Ethyl ether	6	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
MW-29A	Downgradient	Trichloroethene	6	0%	0.46 (ND)	0.46	ug/L	B	1.0	ug/L	No	No
MW-29A	Downgradient	Vinyl Chloride	6	0%	0.02 (ND) <sup>[7]</sup>	0.02	ug/L	B	0.20	ug/L	No	No
MW-29A	Downgradient	Ammonia as N	6	100%	0.14	0.13	mg/L	LN	0.19	mg/L	No	No
MW-32	Downgradient	1,1-Dichloroethane	12	0%	0.75 (ND)	0.75	ug/L	B	50	ug/L	No	No
MW-32	Downgradient	1,4-Dichlorobenzene	12	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
MW-32	Downgradient	Arsenic, dissolved	12	100%	11.3	10.4	ug/L	Z	0.462	ug/L	Yes	No
MW-32	Downgradient	Iron, dissolved	12	100%	0.89	0.77	mg/L	LN	0.30	mg/L	Yes	Yes (▼)
MW-32	Downgradient	Manganese, dissolved	12	100%	3.1	2.47	mg/L	Z	0.05	mg/L	Yes	No
MW-32	Downgradient	cis-1,2-dichloroethene	12	42%	0.63	0.81	ug/L	A*	35	ug/L	No	No
MW-32	Downgradient	Ethyl ether	12	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
MW-32	Downgradient	Trichloroethene	12	42%	0.62	0.62	ug/L	A	1.0	ug/L	No	No
MW-32	Downgradient	Vinyl Chloride	12	100%	0.49	0.41	ug/L	LN	0.20	ug/L	Yes	Yes (▼)
MW-32	Downgradient	Ammonia as N	12	92%	0.10	0.09	mg/L	LN	0.19	mg/L	No	No
MW-33A	Downgradient	1,1-Dichloroethane	6	0%	0.75 (ND)	0.75	ug/L	B	50	ug/L	No	No
MW-33A	Downgradient	1,4-Dichlorobenzene	6	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
MW-33A	Downgradient	Arsenic, dissolved	6	100%	0.23	0.21	ug/L	LN	0.462	ug/L	No	No
MW-33A	Downgradient	Iron, dissolved	6	67%	1.4	1.1	mg/L	N	0.30	mg/L	Yes	No
MW-33A	Downgradient	Manganese, dissolved	6	83%	0.046	0.04	mg/L	N	0.05	mg/L	No	No
MW-33A	Downgradient	cis-1,2-dichloroethene	6	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No
MW-33A	Downgradient	Ethyl ether	6	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
MW-33A	Downgradient	Trichloroethene	6	0%	0.46 (ND)	0.46	ug/L	B	1.0	ug/L	No	No
MW-33A	Downgradient	Vinyl Chloride	6	0%	0.02 (ND) <sup>[7]</sup>	0.02	ug/L	B	0.20	ug/L	No	No
MW-33A	Downgradient	Ammonia as N	6	67%	0.21	0.21	mg/L	A	0.19	mg/L	Yes	No
MW-33C	Downgradient	1,1-Dichloroethane	12	0%	0.75 (ND)	0.75	ug/L	B	50	ug/L	No	No

**TABLE 3-1: 2011 Annual Groundwater Cleanup Level Statistical Evaluation Summary**

**Olympic View Sanitary Landfill**

**Statistical Methodology:** calculation of 95% UCL of mean per MTCASat

**Data Input (general):** 3-year "moving window", updated annually

**Data Input (specific):** January 1, 2009 through December 31, 2011

**Wells Evaluated:** (1) Compliance -- MW-15R, MW-34A, MW-34C, MW-39, MW-42, MW-43; (2) Downgradient -- MW-9, MW-29A, MW-32, MW-33A, MW-33C, MW-36A

Monitoring Well	Monitoring Well Type	Corrective Action Monitoring Parameter	N <sup>[1]</sup>	% Detect	Max <sup>[2]</sup>	95% UCL of Mean <sup>[3]</sup>	Units <sup>[4]</sup>	Note	Groundwater Cleanup Level <sup>[5]</sup>	Units <sup>[4]</sup>	Does 95% UCL Exceed Cleanup Level?	Significant Trend? <sup>[6]</sup>
MW-33C	Downgradient	1,4-Dichlorobenzene	12	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
MW-33C	Downgradient	Arsenic, dissolved	12	100%	2.7	2.61	ug/L	LN	0.462	ug/L	Yes	No
MW-33C	Downgradient	Iron, dissolved	12	0%	0.06(ND)	0.06	mg/L	B	0.3	mg/L	No	No
MW-33C	Downgradient	Manganese, dissolved	12	100%	0.15	0.14	mg/L	Z	0.05	mg/L	Yes	No
MW-33C	Downgradient	cis-1,2-dichloroethene	12	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No
MW-33C	Downgradient	Ethyl ether	12	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
MW-33C	Downgradient	Trichloroethene	12	0%	0.46 (ND)	0.46	ug/L	B	1.0	ug/L	No	No
MW-33C	Downgradient	Vinyl Chloride	12	0%	0.02 (ND) <sup>[7]</sup>	0.02	ug/L	B	0.20	ug/L	No	No
MW-33C	Downgradient	Ammonia as N	12	75%	0.21	0.11	mg/L	LN	0.19	mg/L	No	No
MW-36A	Downgradient	1,1-Dichloroethane	12	0%	0.75 (ND)	0.75	ug/L	B	50	ug/L	No	No
MW-36A	Downgradient	1,4-Dichlorobenzene	12	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
MW-36A	Downgradient	Arsenic, dissolved	12	100%	1.16	1.00	ug/L	LN	0.462	ug/L	Yes	No
MW-36A	Downgradient	Iron, dissolved	12	0%	0.06 (ND)	0.06	mg/L	B	0.3	mg/L	No	No
MW-36A	Downgradient	Manganese, dissolved	12	67%	0.019	0.02	mg/L	A	0.05	mg/L	No	No
MW-36A	Downgradient	cis-1,2-dichloroethene	12	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No
MW-36A	Downgradient	Ethyl ether	12	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
MW-36A	Downgradient	Trichloroethene	12	0%	0.46 (ND)	0.46	ug/L	B	1.0	ug/L	No	No
MW-36A	Downgradient	Vinyl Chloride	12	0%	0.02 (ND) <sup>[7]</sup>	0.02	ug/L	B	0.20	ug/L	No	No
MW-36A	Downgradient	Ammonia as N	12	83%	0.16	0.12	mg/L	LN	0.19	mg/L	No	No

**NOTES:**

<sup>[1]</sup> N = number of data points used for UCL calculation of the mean; only SIM results used for Vinyl Chloride (e.g., duplicate results with higher RLs by non-SIM were omitted).

<sup>[2]</sup> MAX = maximum detected result in the data set; if no detected results, then = maximum reporting limit for non-detect results (indicated with ND).

<sup>[3]</sup> A 3-year moving data set is used for calculation of the UCL.

<sup>[4]</sup> ug/L - micrograms per liter; mg/L = milligrams per liter.

<sup>[5]</sup> Groundwater Cleanup Levels are listed on Table 3 of the October 2010 Draft Cleanup Action Plan.

## TABLE 3-1: 2011 Annual Groundwater Cleanup Level Statistical Evaluation Summary

### Olympic View Sanitary Landfill

**Statistical Methodology:** calculation of 95% UCL of mean per MTCASat

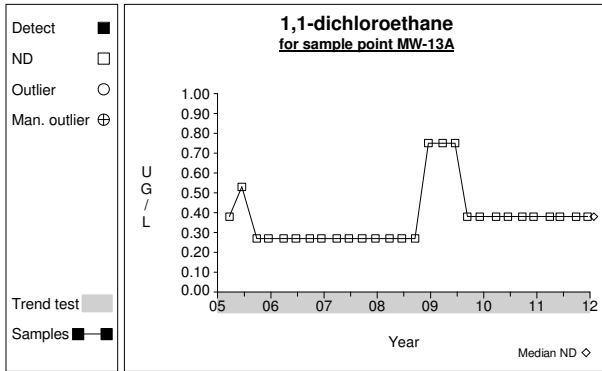
**Data Input (general):** 3-year "moving window", updated annually

**Data Input (specific):** January 1, 2009 through December 31, 2011

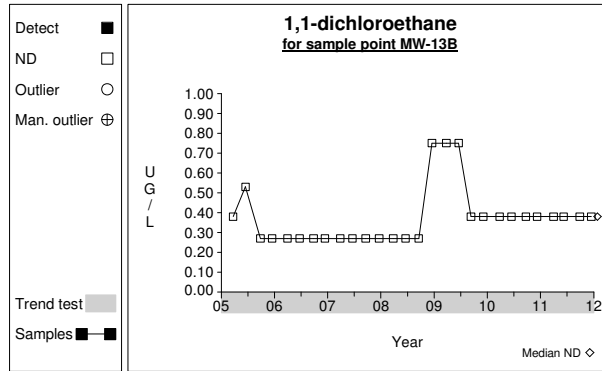
**Wells Evaluated:** (1) Compliance -- MW-15R, MW-34A, MW-34C, MW-39, MW-42, MW-43; (2) Downgradient -- MW-9, MW-29A, MW-32, MW-33A, MW-33C, MW-36A

Monitoring Well	Monitoring Well Type	Corrective Action Monitoring Parameter	N <sup>[1]</sup>	% Detect	Max <sup>[2]</sup>	95% UCL of Mean <sup>[3]</sup>	Units <sup>[4]</sup>	Note	Groundwater Cleanup Level <sup>[5]</sup>	Units <sup>[4]</sup>	Does 95% UCL Exceed Cleanup Level?	Significant Trend? <sup>[6]</sup>
<sup>[6]</sup> Trend analysis results are based on data for the period January 2005 through December 2011; arrows indicated increasing (▲) or decreasing (▼) trends.												
<sup>[7]</sup> The March 2009 non-detected results for Vinyl Chloride (<0.24 ug/L) were excluded from the UCL calculation due to erroneously high reporting limits; all other results are non-detects at <0.02 ug/L.												
A = Detection frequency of data set too low to calculate 95% UCL of mean; therefore, the highest detected result in the data set used to represent 95% UCL of mean.												
A* = Same as note "A" except that the highest value in the data set is below the reporting limit of one or more non-detected results; therefore, the highest reporting limit is used to represent the 95% UCL of the mean.												
A** = MTCASat suggests use of lognormal formula but calculation of 95% UCL of mean by Land's formula provides unrealistic result; therefore, the highest detected result is used to represent the 95% UCL of the mean.												
B = Detection frequency = 0; therefore, the highest reporting limit in the data set is used to represent the 95% UCL of mean.												
LN = The 95% UCL of the mean is calculated using Land's formula since lognormal distribution is indicated.												
N = The 95% UCL of the mean is calculated using a normal-based t-statistic since a normal distribution is indicated.												
Z = the 95% UCL of the mean is calculated using the Z-score method in MTCASat since neither normal nor lognormal distribution can be determined.												

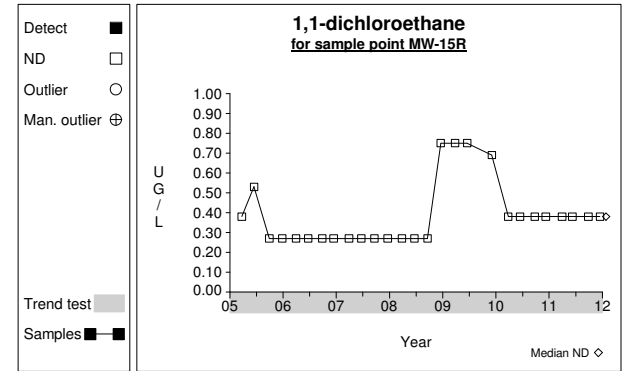
# Time Series



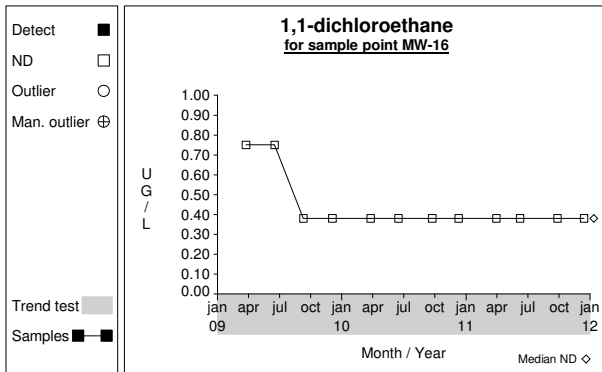
Graph 1



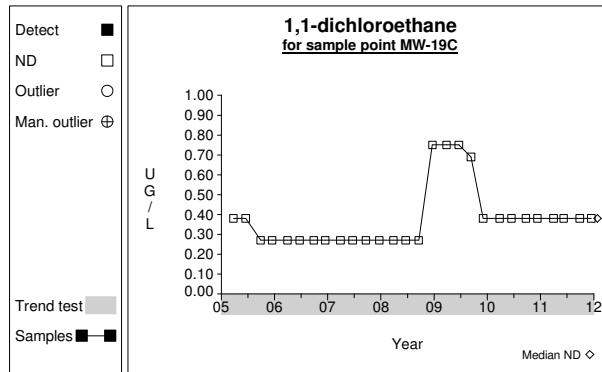
Graph 2



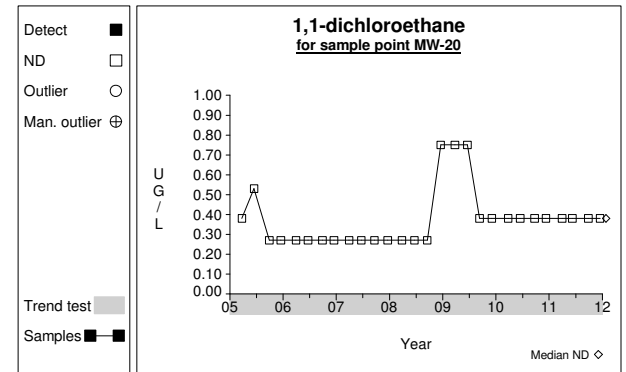
Graph 3



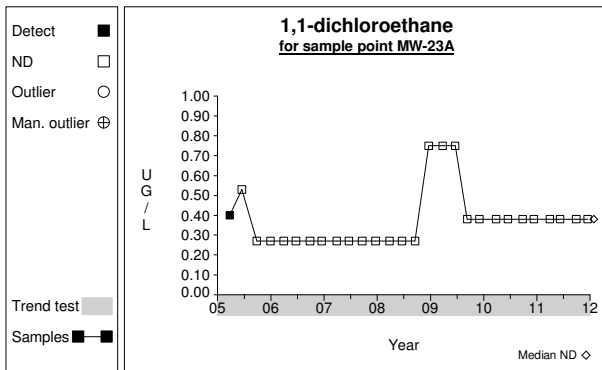
Graph 4



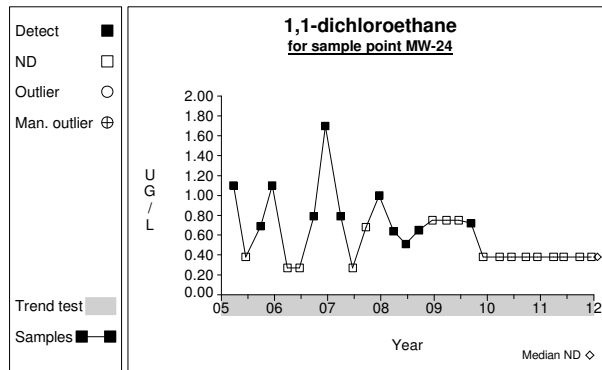
Graph 5



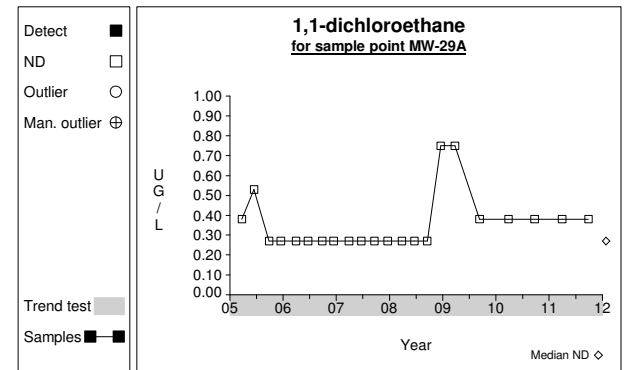
Graph 6



Graph 7

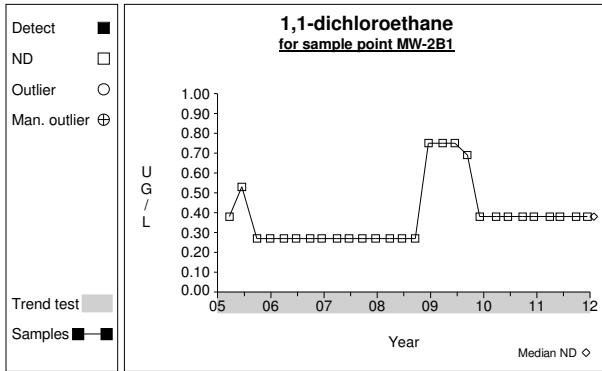


Graph 8

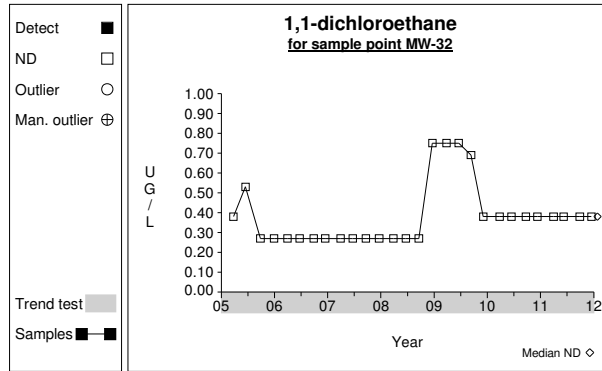


Graph 9

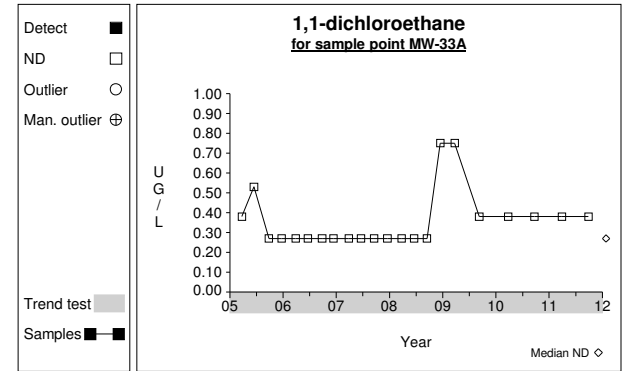
# Time Series



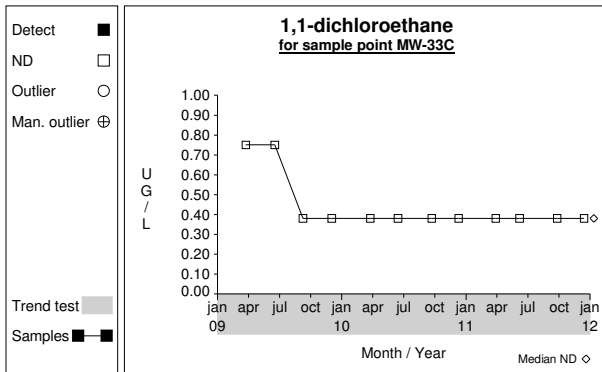
Graph 10



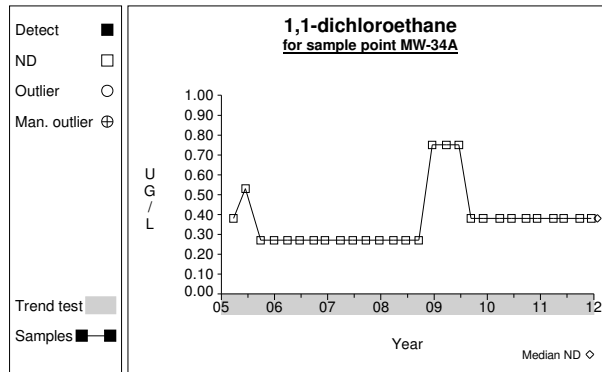
Graph 11



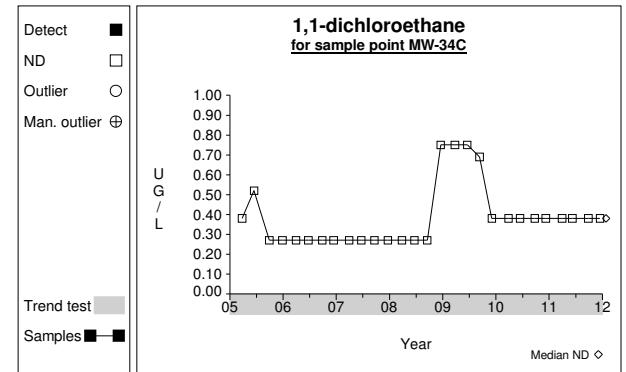
Graph 12



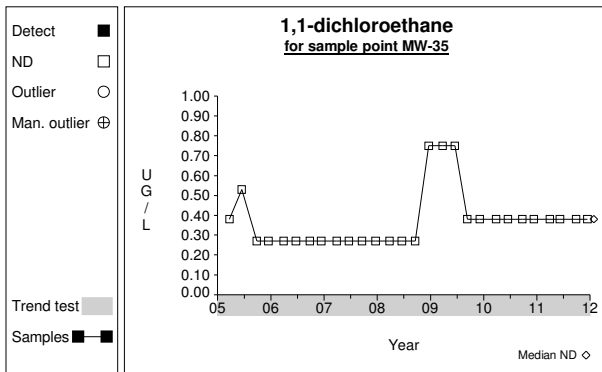
Graph 13



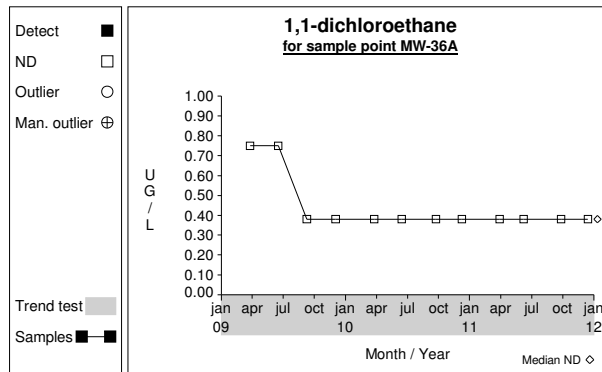
Graph 14



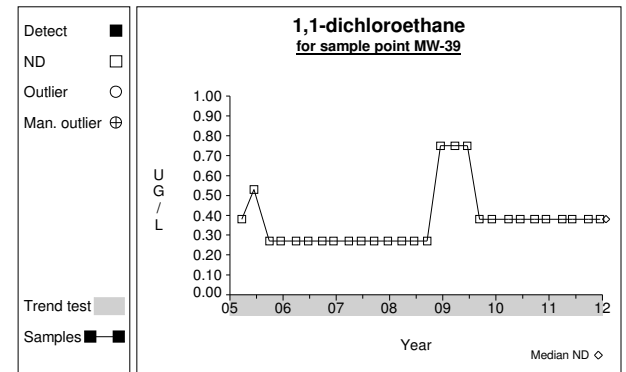
Graph 15



Graph 16

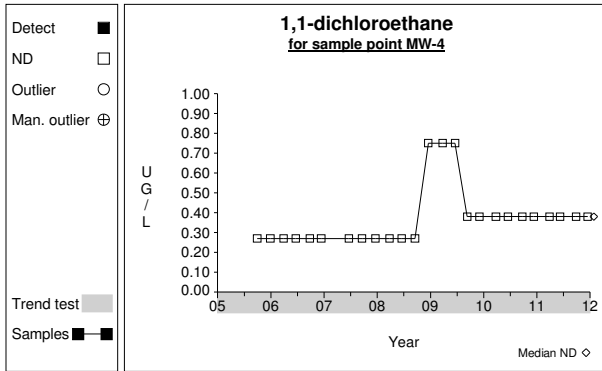


Graph 17

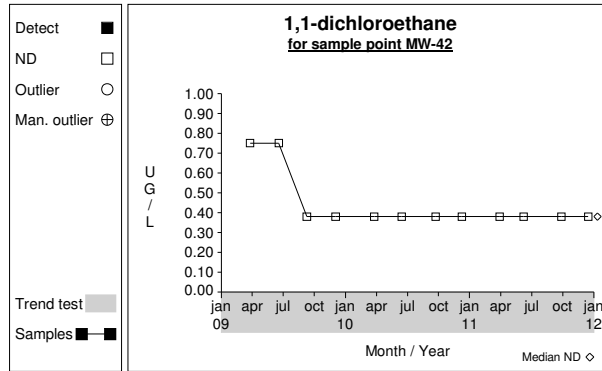


Graph 18

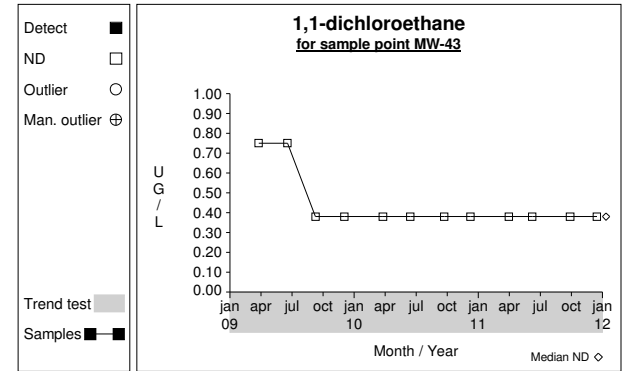
# Time Series



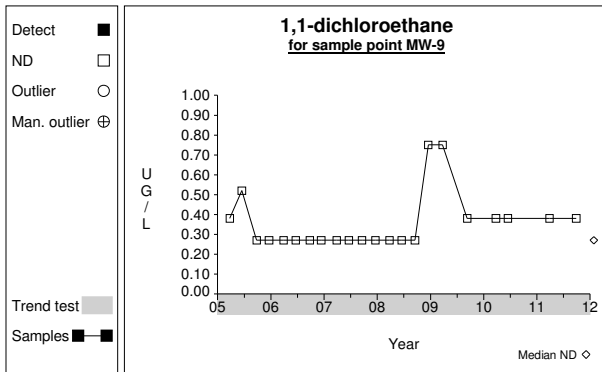
Graph 19



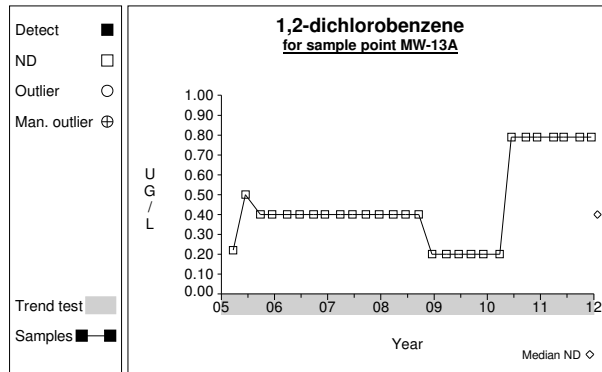
Graph 20



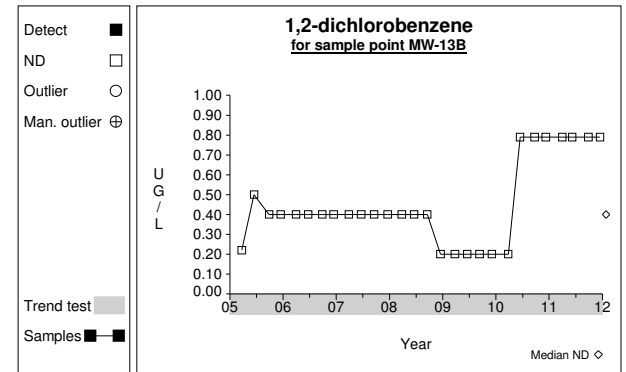
Graph 21



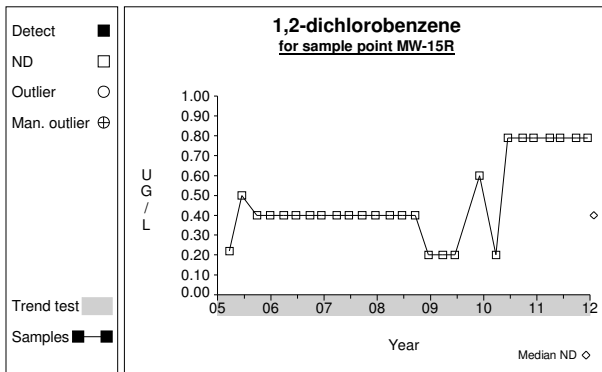
Graph 22



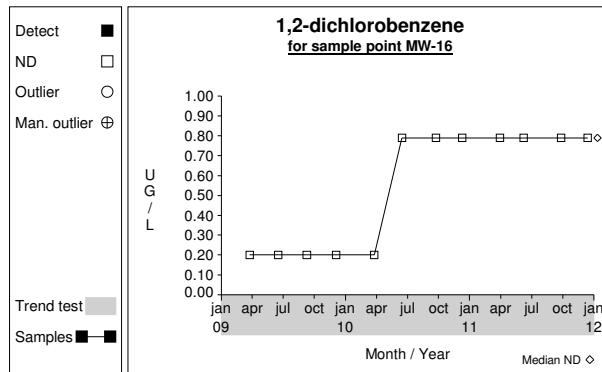
Graph 23



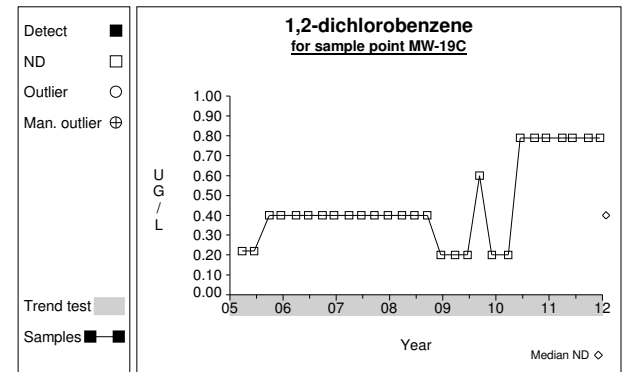
Graph 24



Graph 25

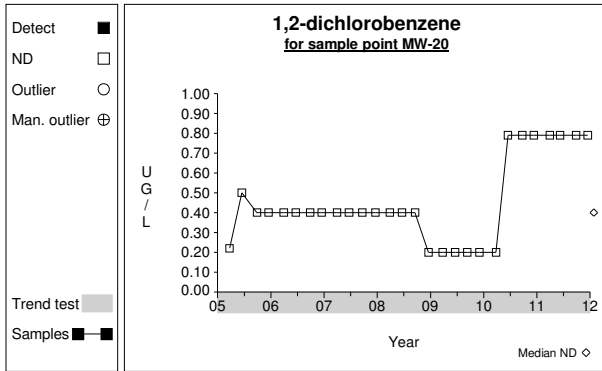


Graph 26

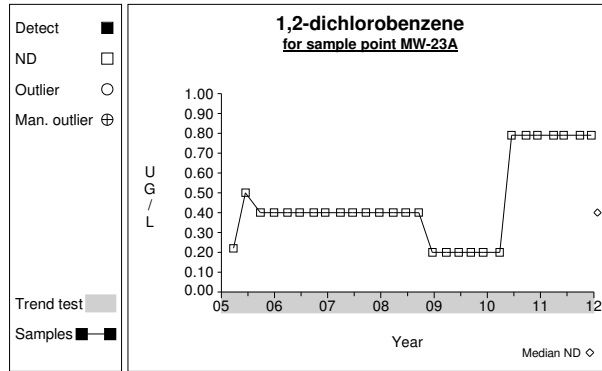


Graph 27

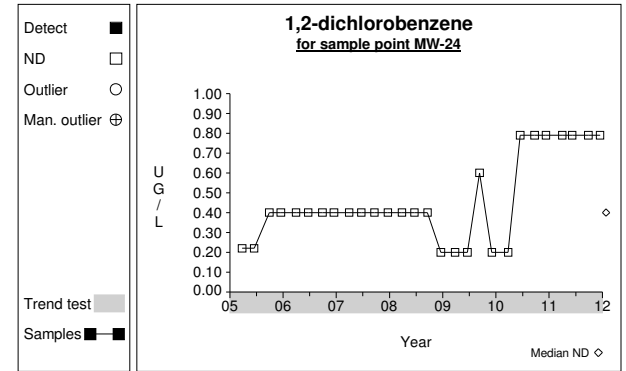
# Time Series



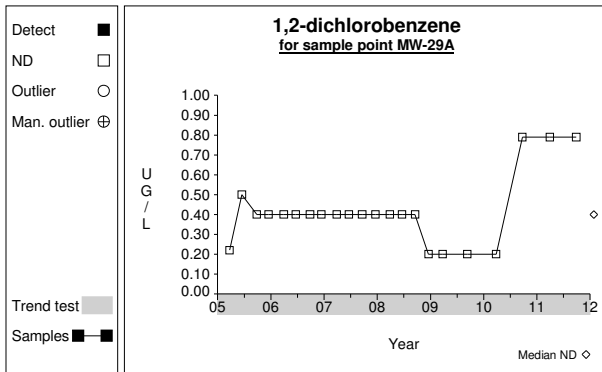
**Graph 28**



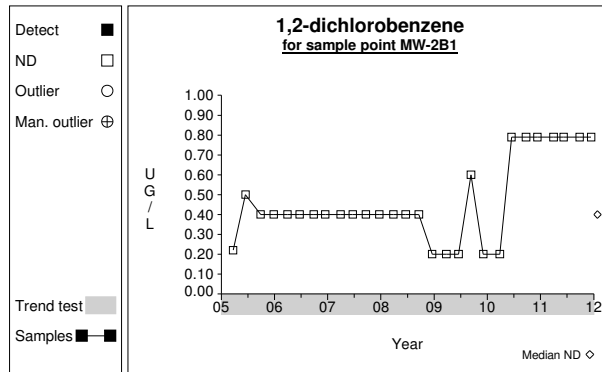
**Graph 29**



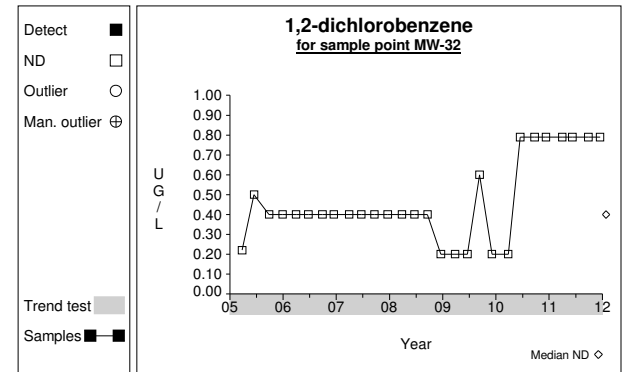
**Graph 30**



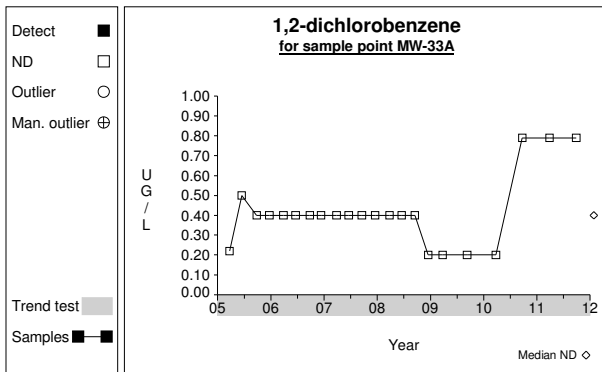
**Graph 31**



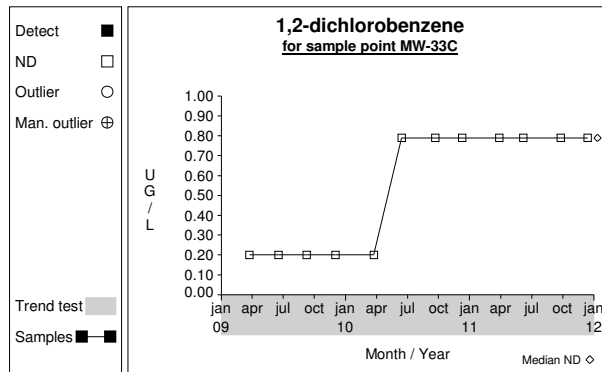
**Graph 32**



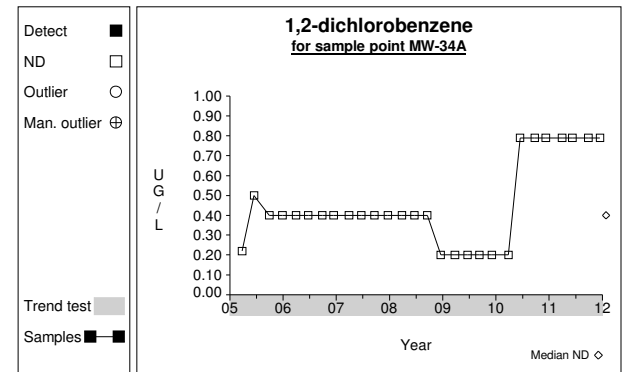
**Graph 33**



**Graph 34**



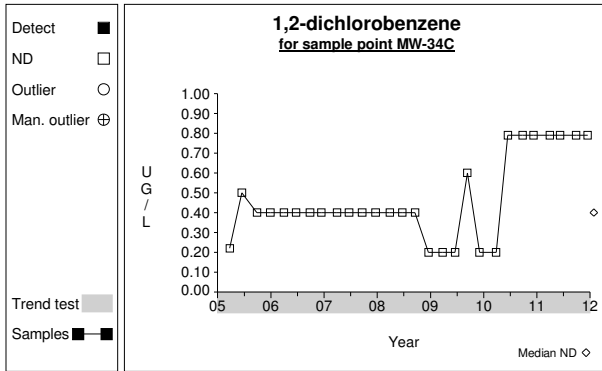
**Graph 35**



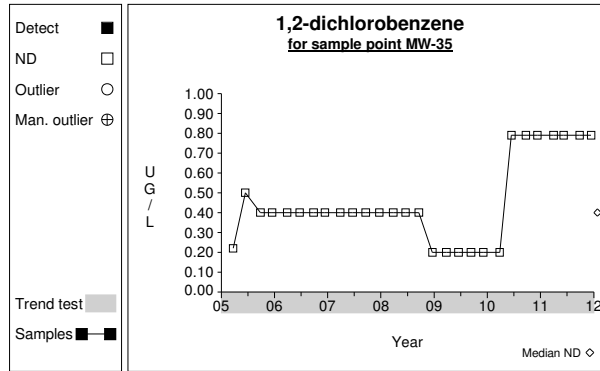
**Graph 36**



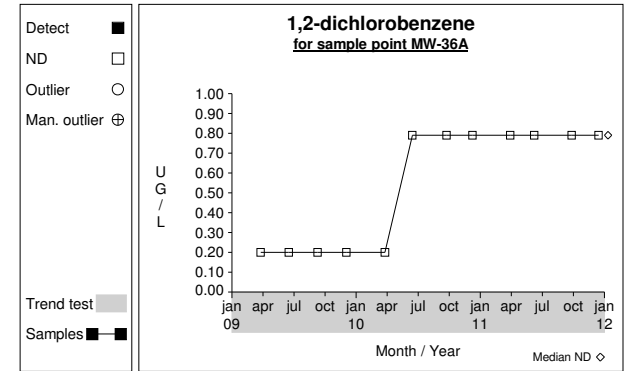
# Time Series



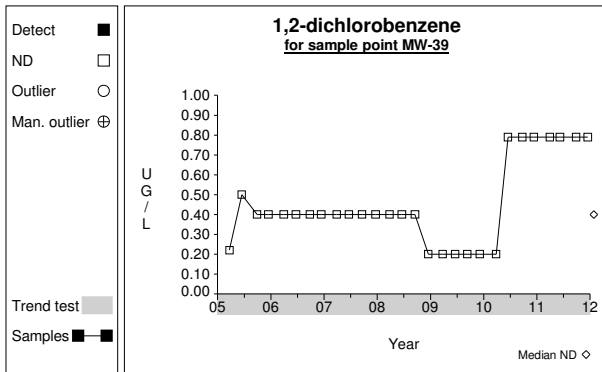
**Graph 37**



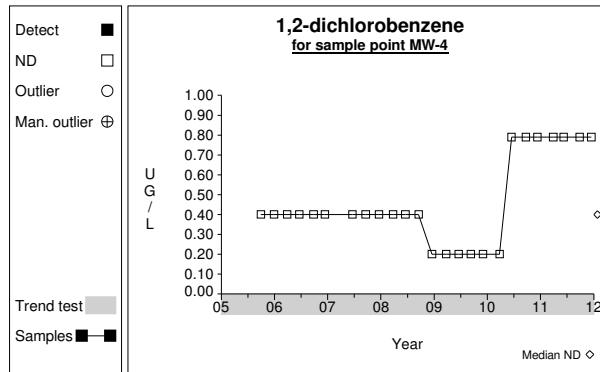
**Graph 38**



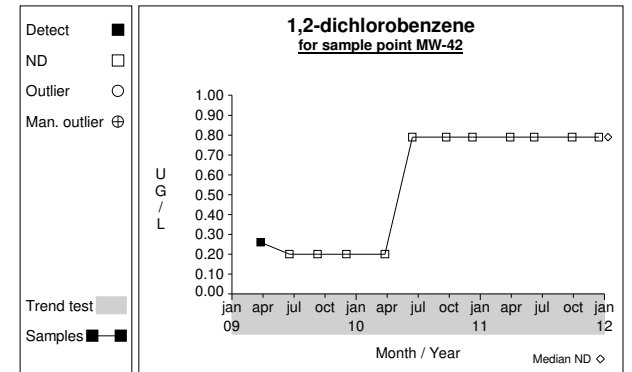
**Graph 39**



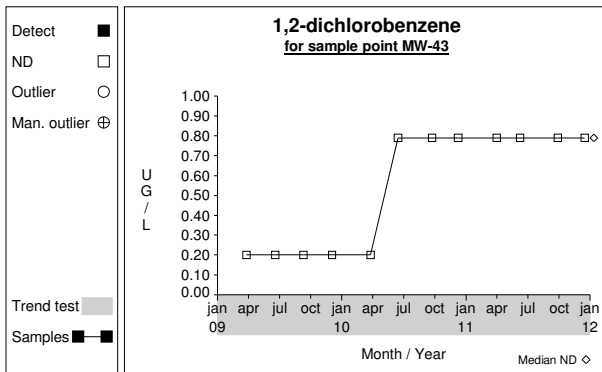
**Graph 40**



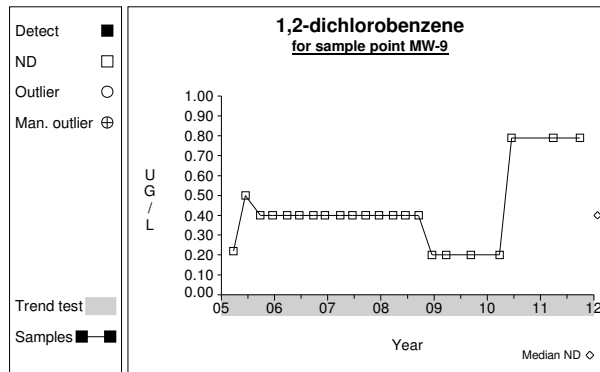
**Graph 41**



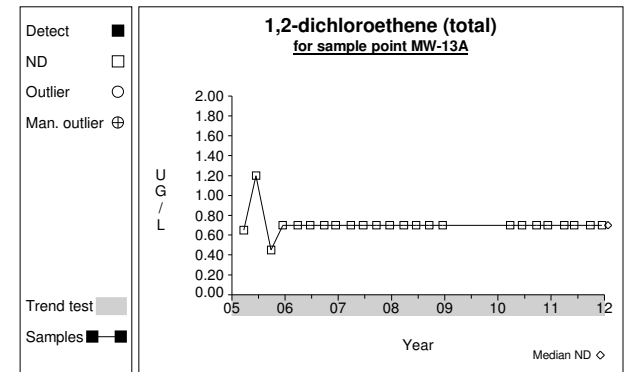
**Graph 42**



**Graph 43**

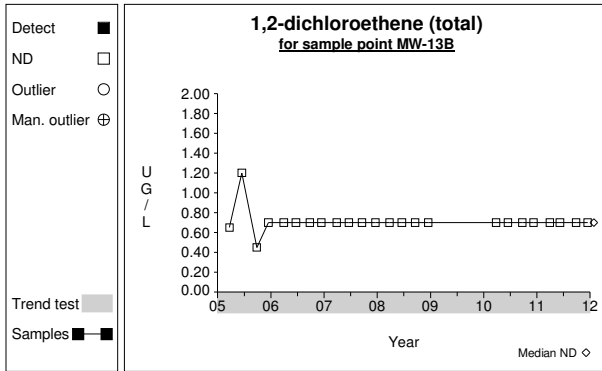


**Graph 44**

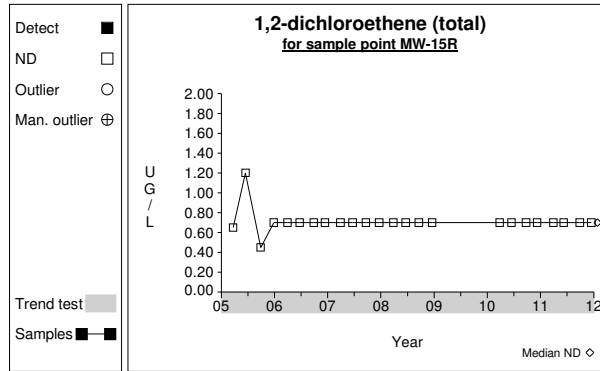


**Graph 45**

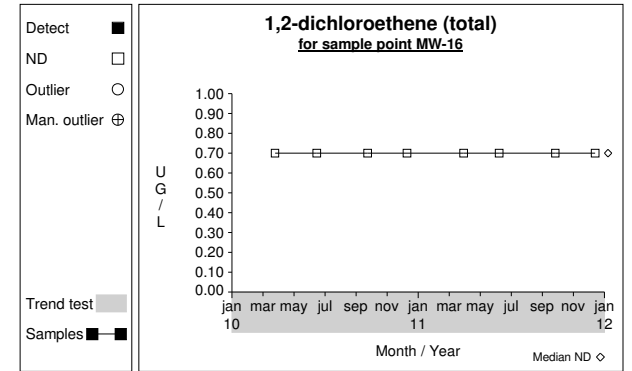
# Time Series



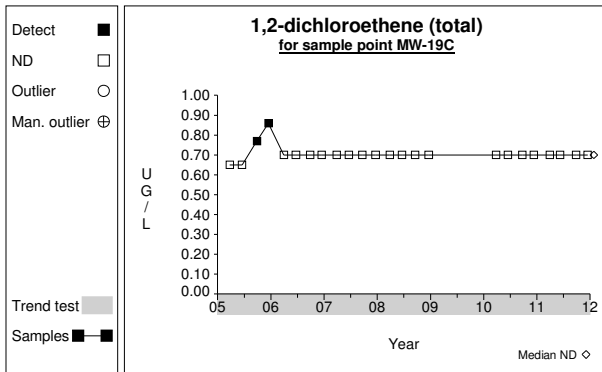
**Graph 46**



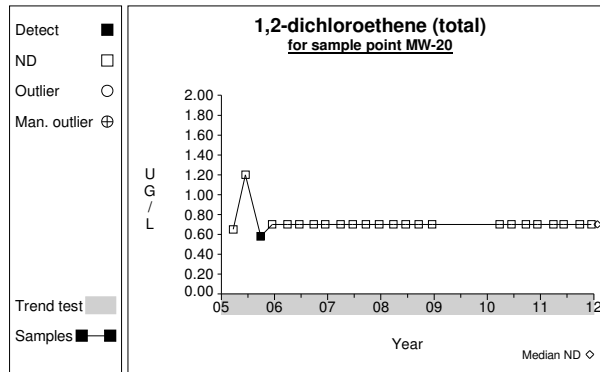
**Graph 47**



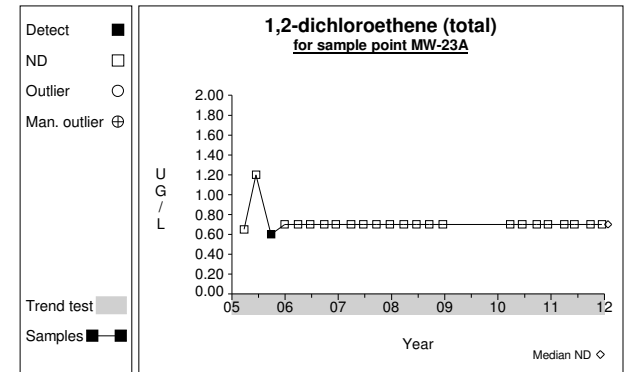
**Graph 48**



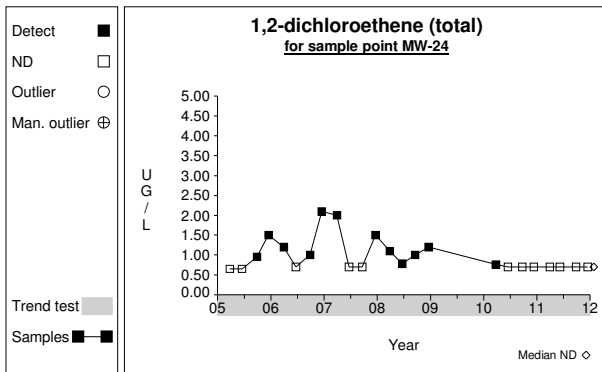
**Graph 49**



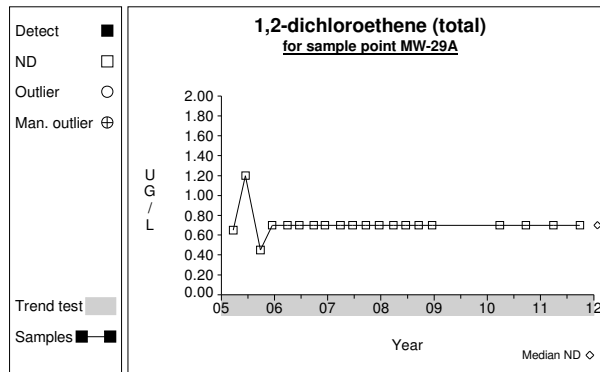
**Graph 50**



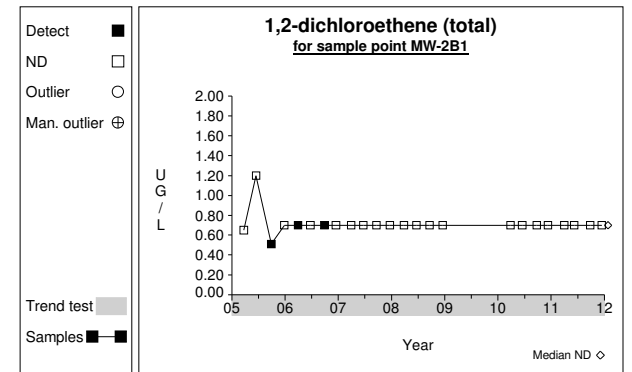
**Graph 51**



**Graph 52**

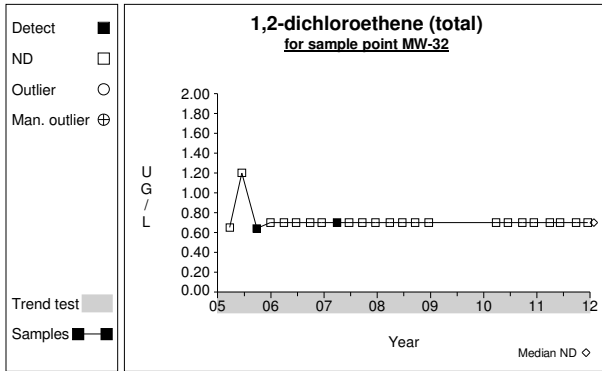


**Graph 53**

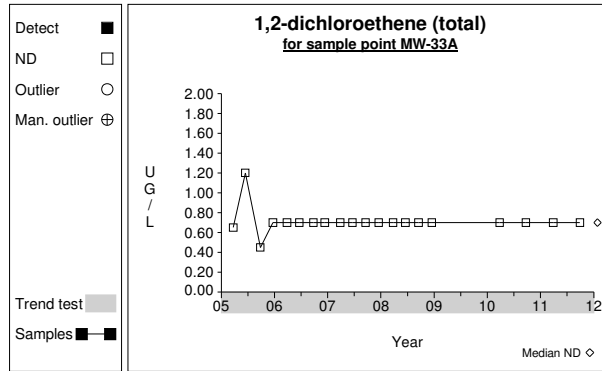


**Graph 54**

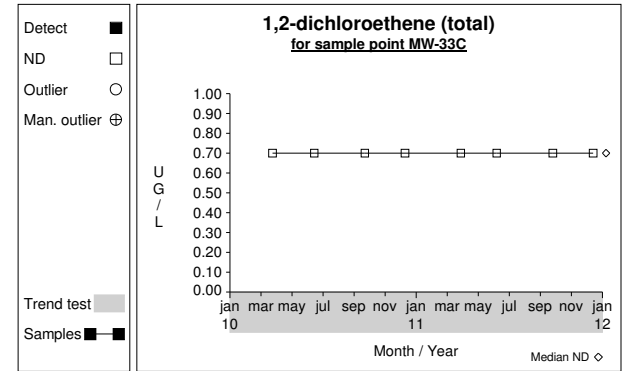
# Time Series



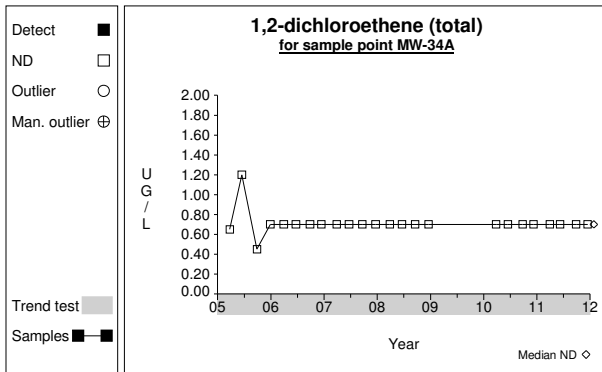
**Graph 55**



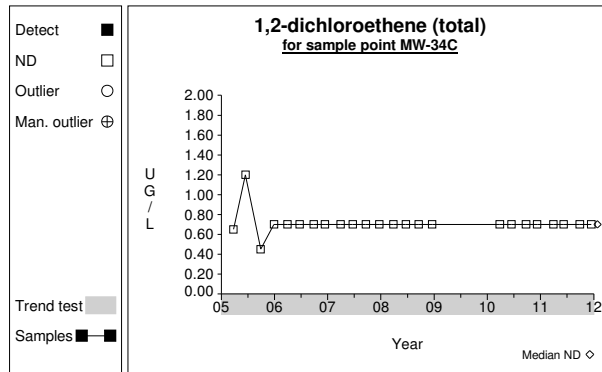
**Graph 56**



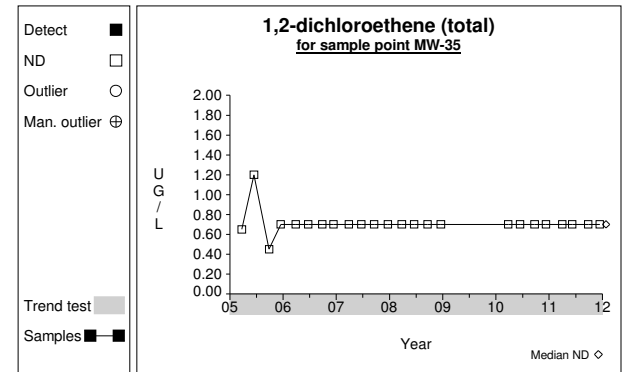
**Graph 57**



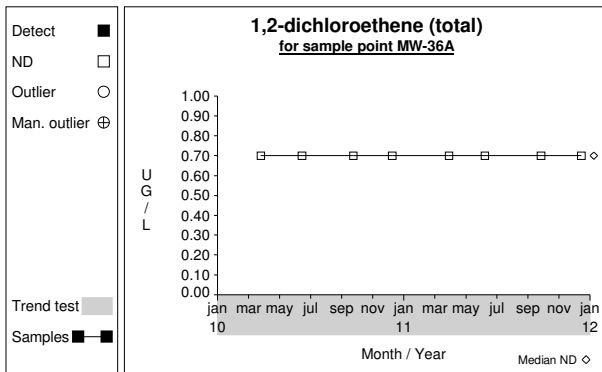
**Graph 58**



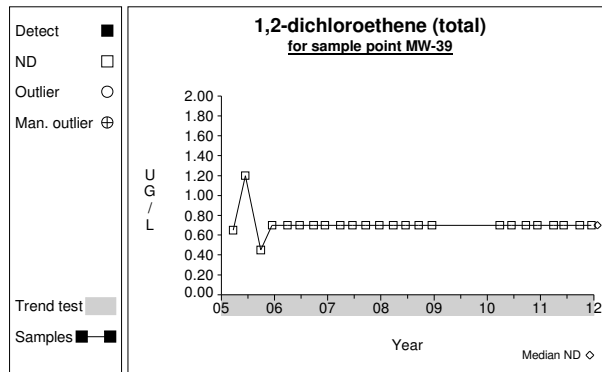
**Graph 59**



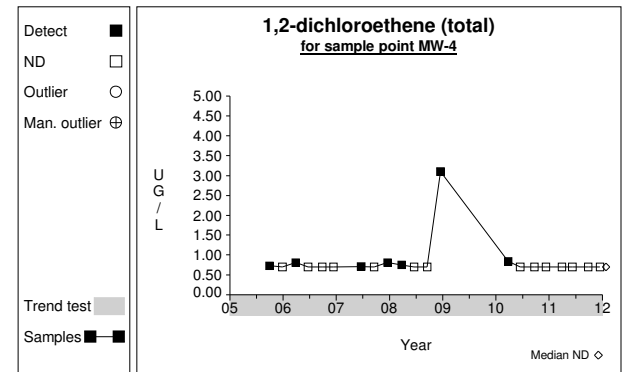
**Graph 60**



**Graph 61**

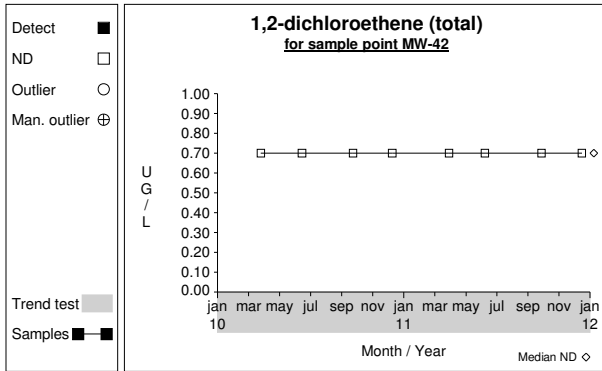


**Graph 62**

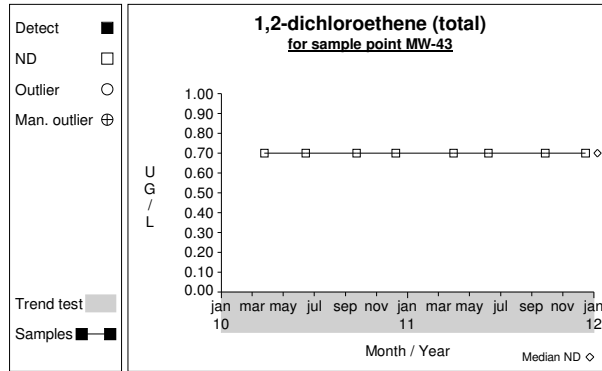


**Graph 63**

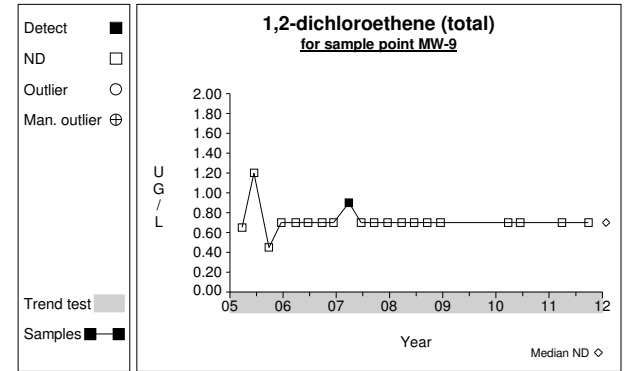
# Time Series



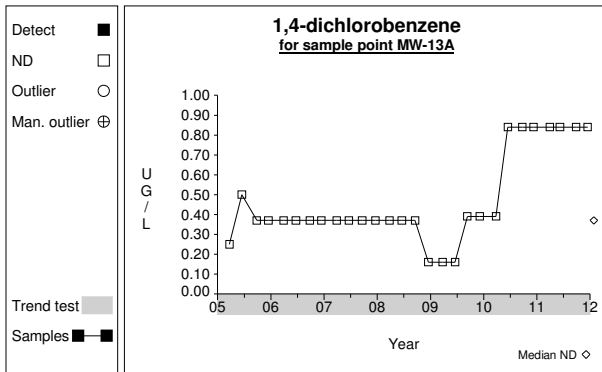
Graph 64



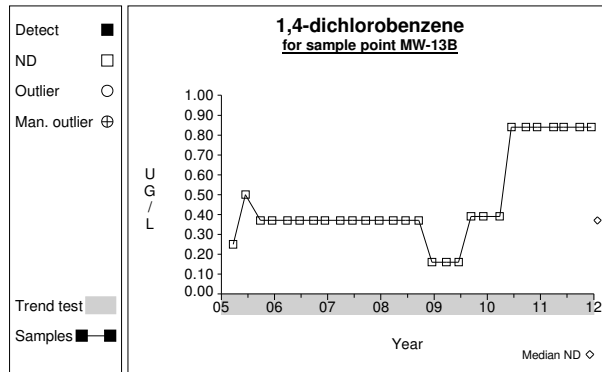
Graph 65



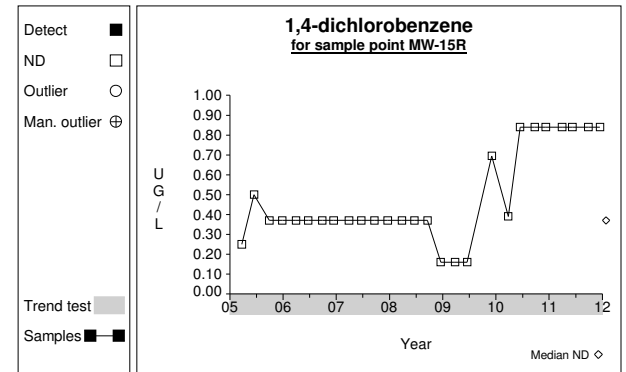
Graph 66



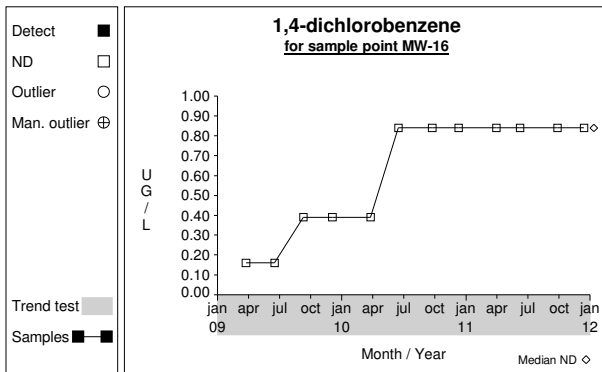
Graph 67



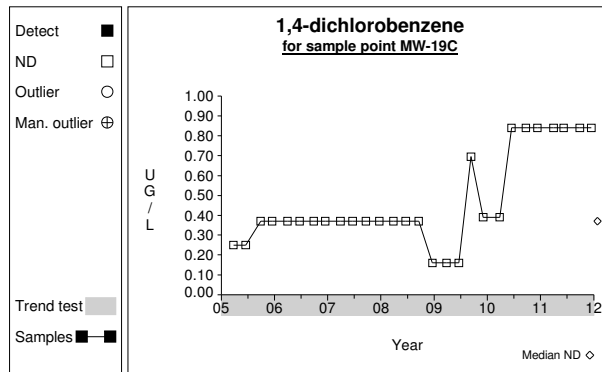
Graph 68



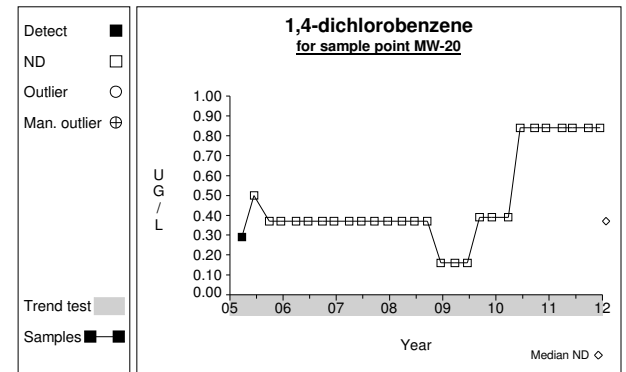
Graph 69



Graph 70

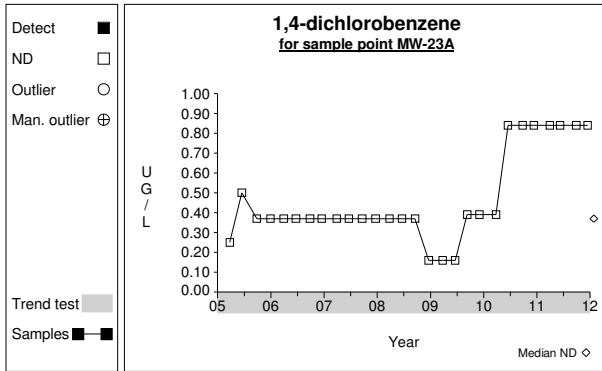


Graph 71

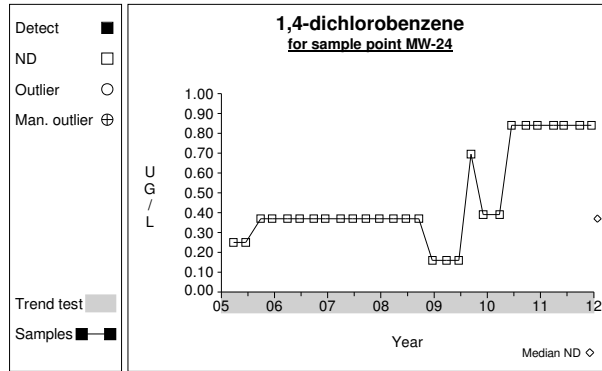


Graph 72

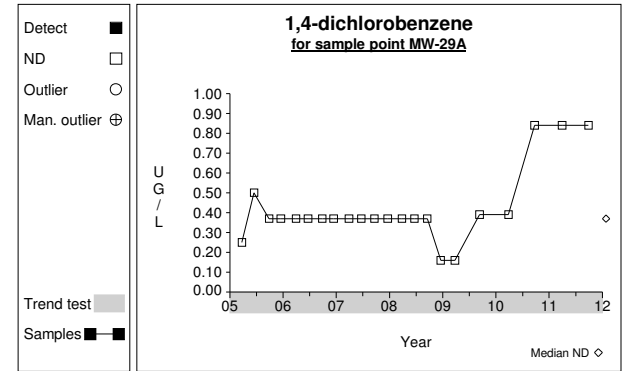
# Time Series



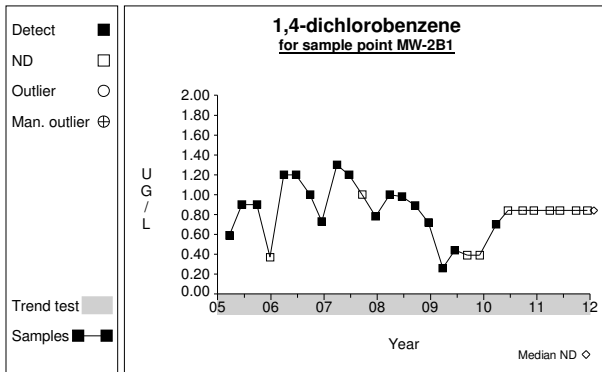
**Graph 73**



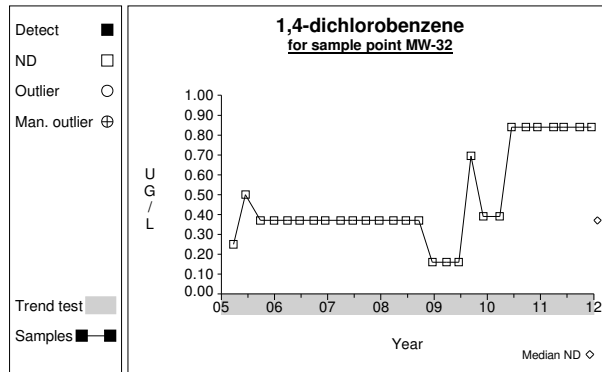
**Graph 74**



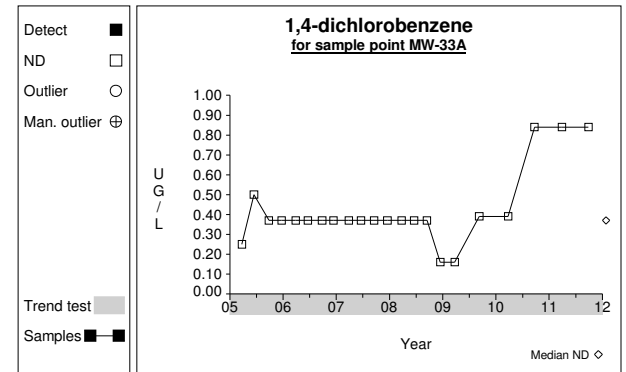
**Graph 75**



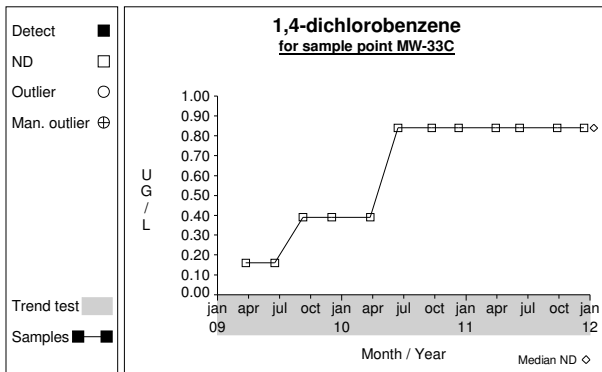
**Graph 76**



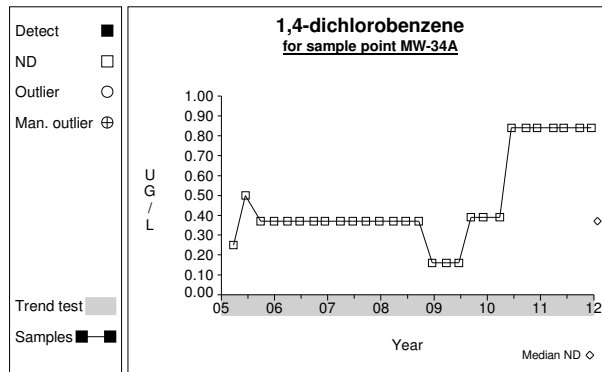
**Graph 77**



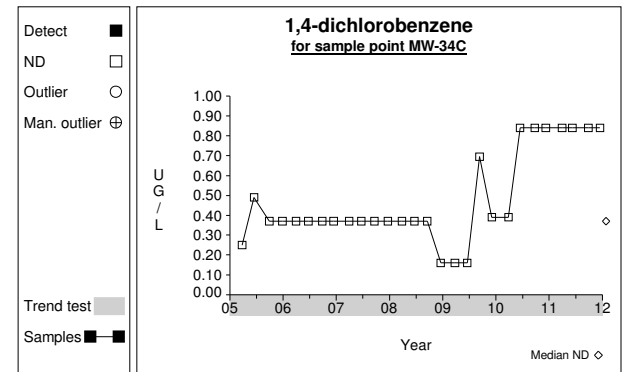
**Graph 78**



**Graph 79**



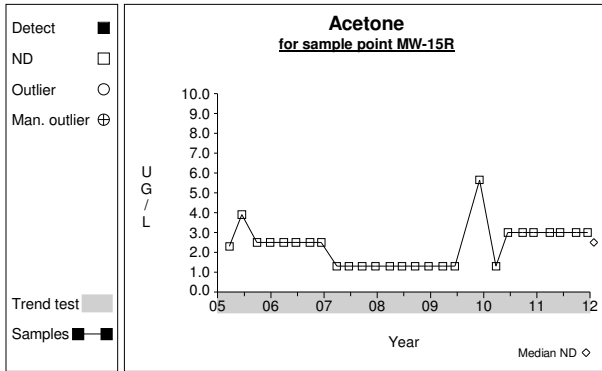
**Graph 80**



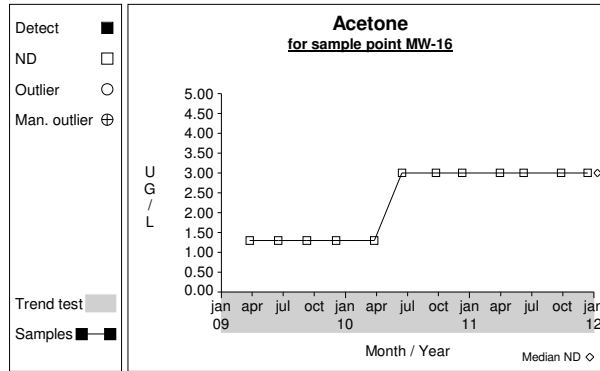
**Graph 81**



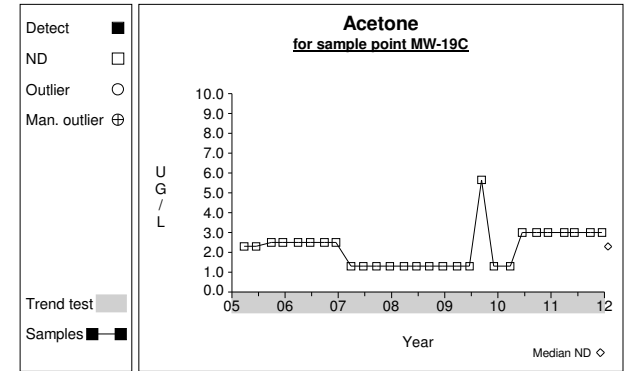
# Time Series



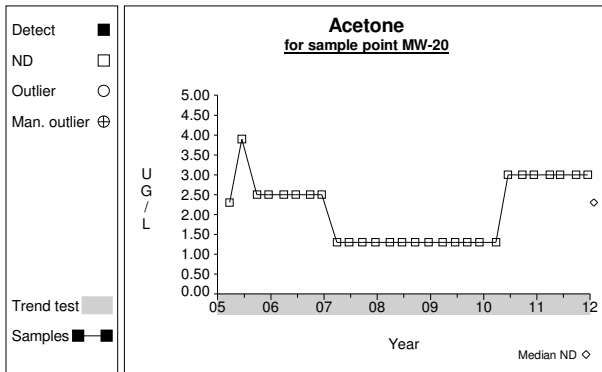
**Graph 91**



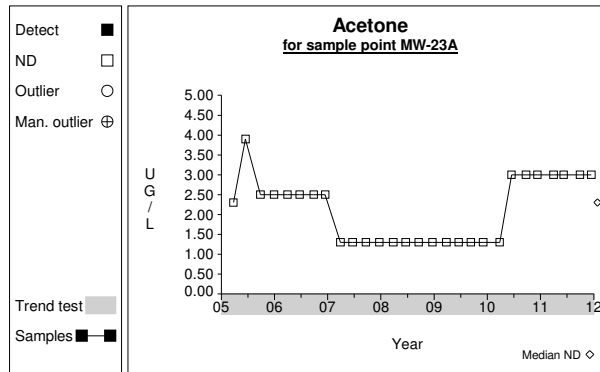
**Graph 92**



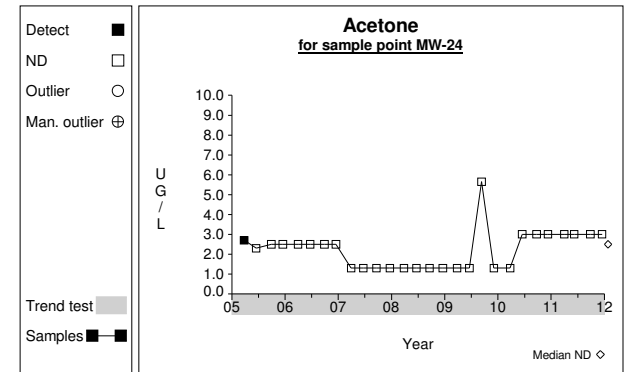
**Graph 93**



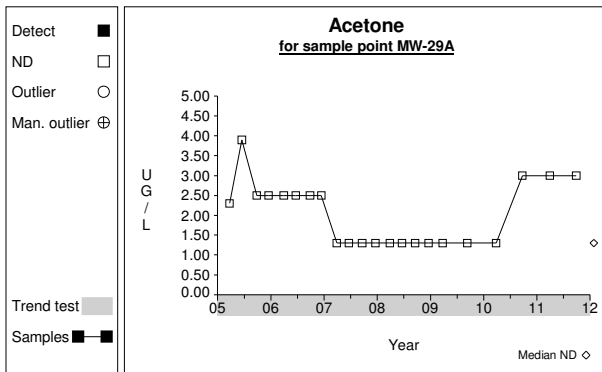
**Graph 94**



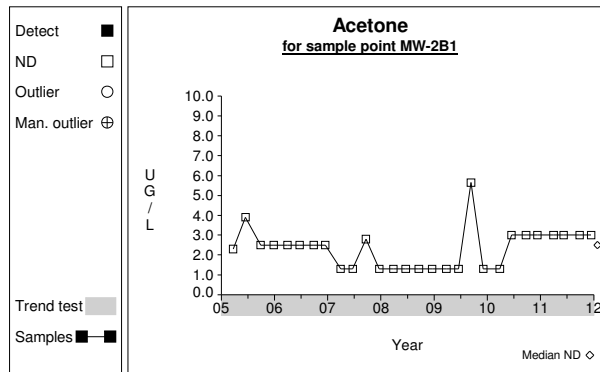
**Graph 95**



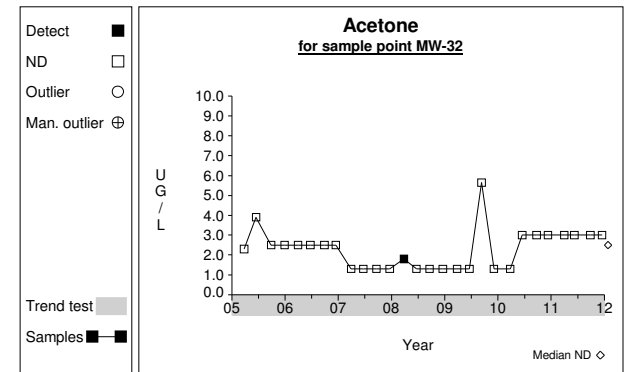
**Graph 96**



**Graph 97**

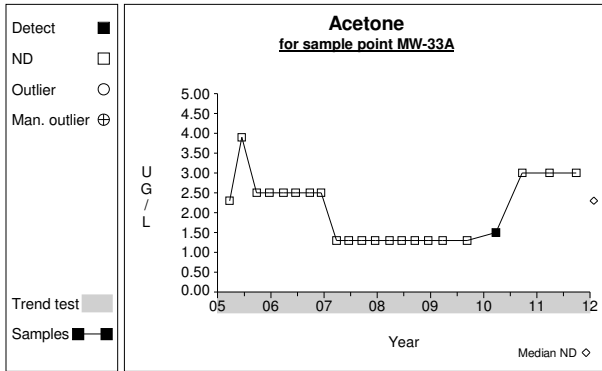


**Graph 98**

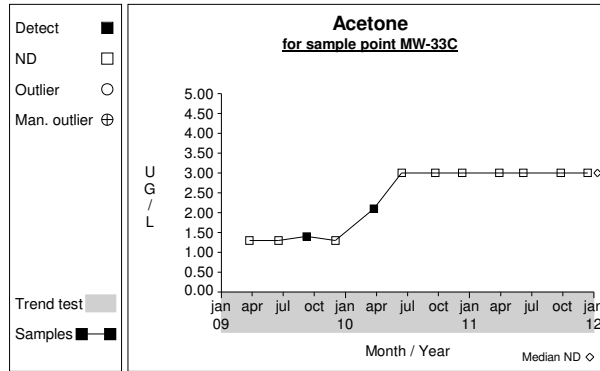


**Graph 99**

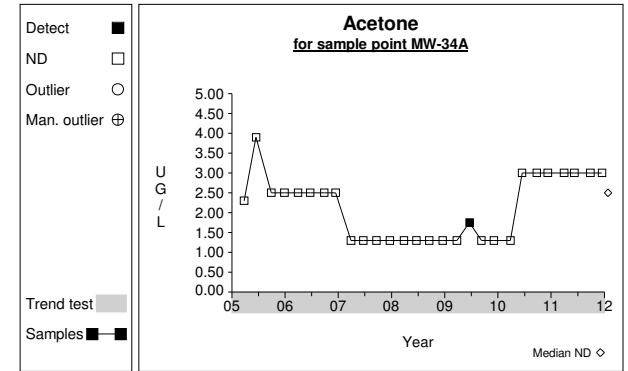
# Time Series



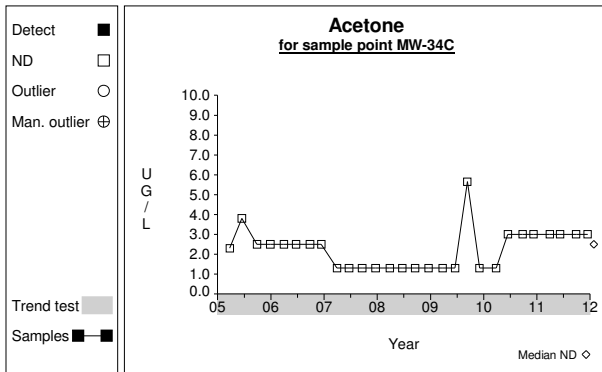
**Graph 100**



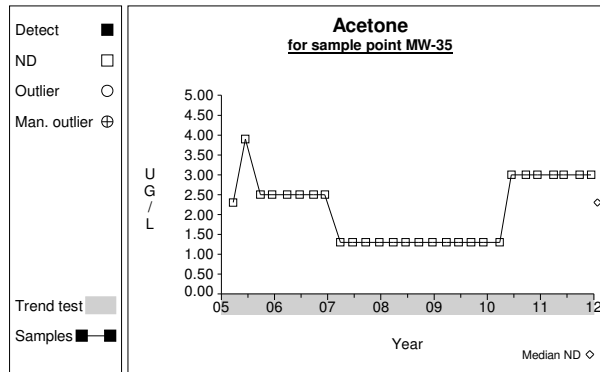
**Graph 101**



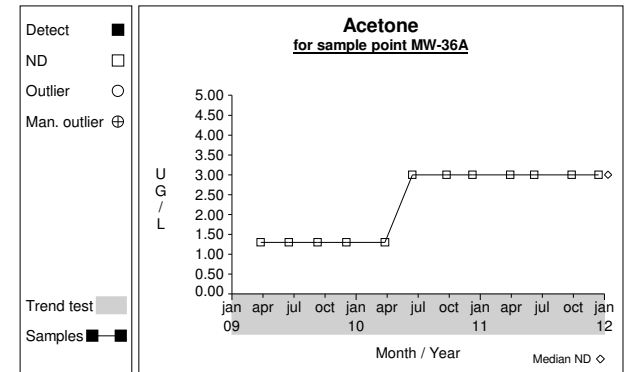
**Graph 102**



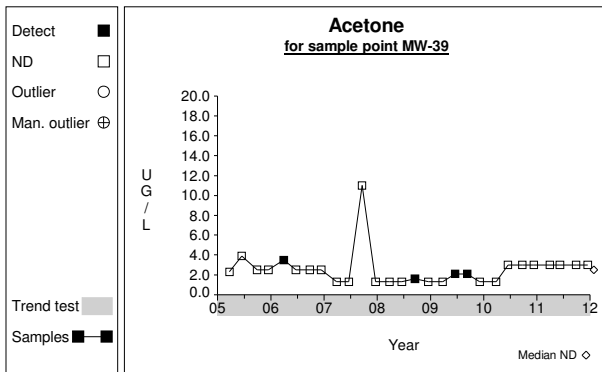
**Graph 103**



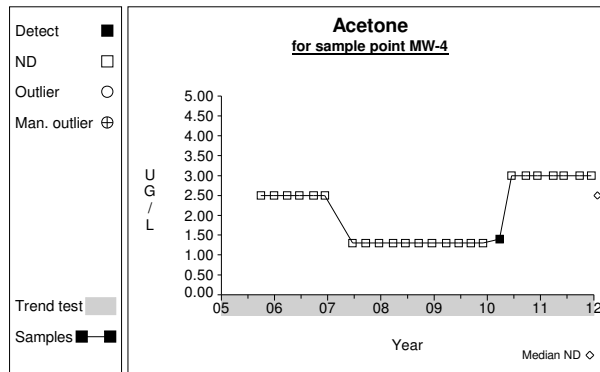
**Graph 104**



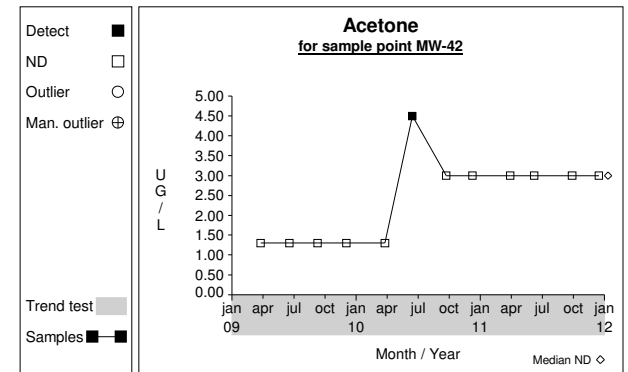
**Graph 105**



**Graph 106**



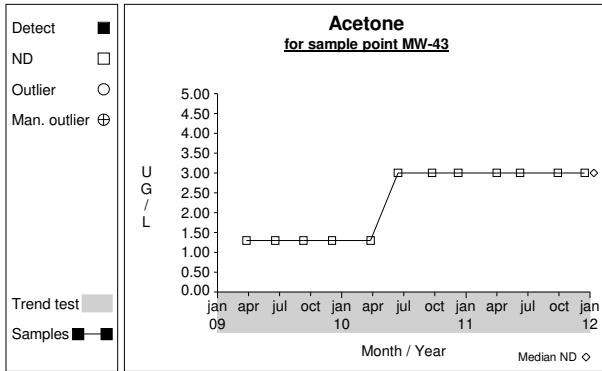
**Graph 107**



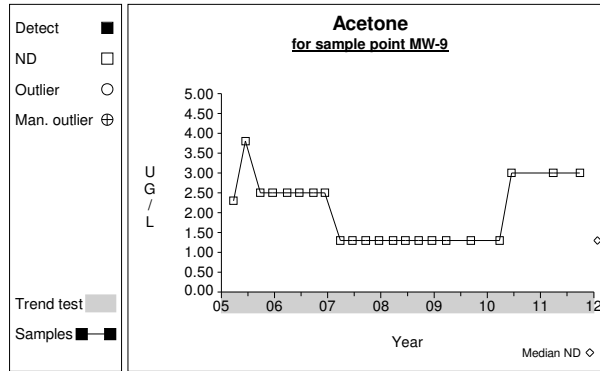
**Graph 108**



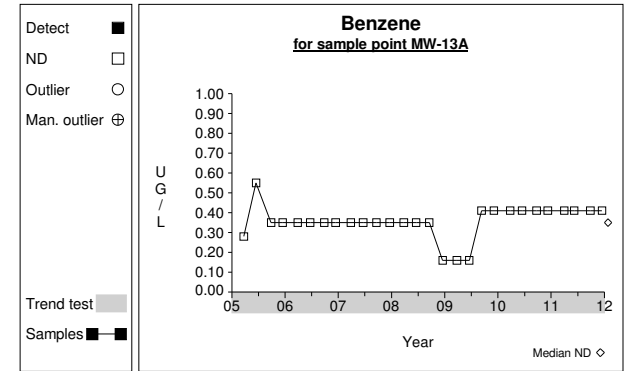
# Time Series



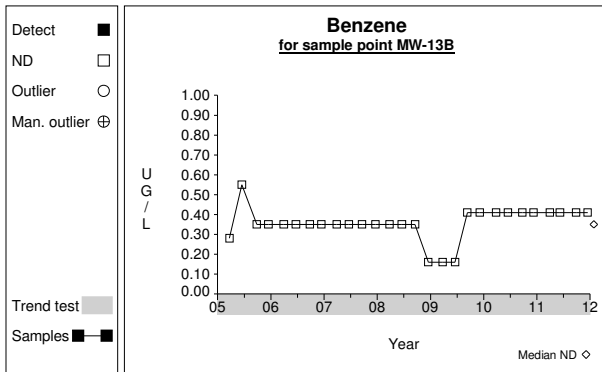
Graph 109



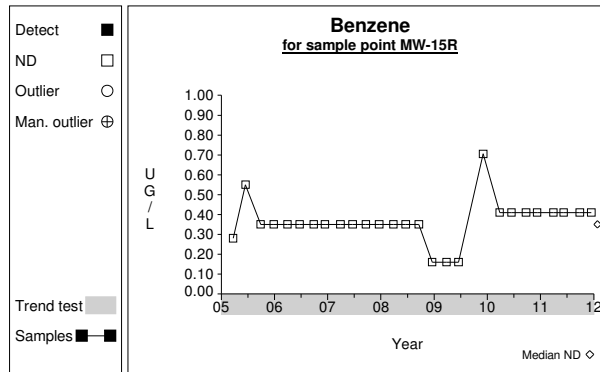
Graph 110



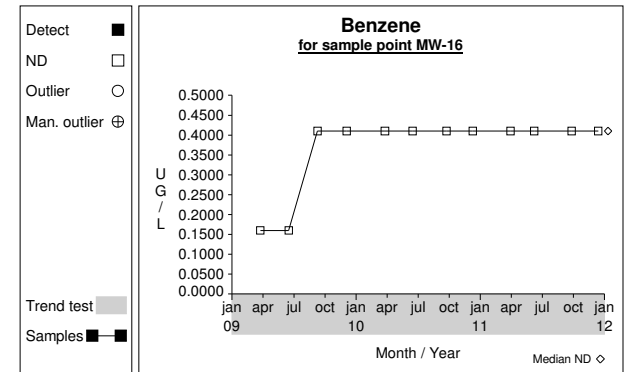
Graph 111



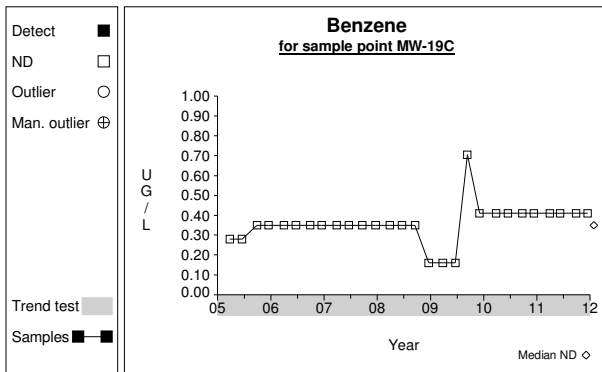
Graph 112



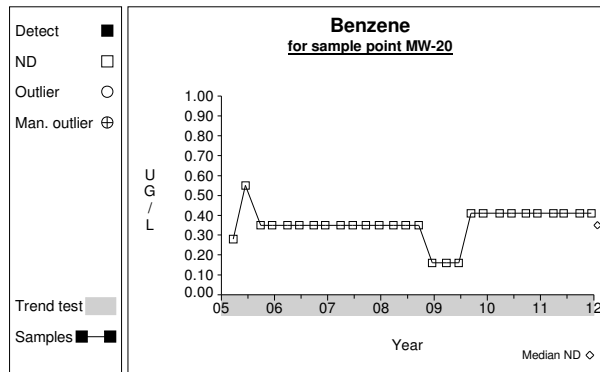
Graph 113



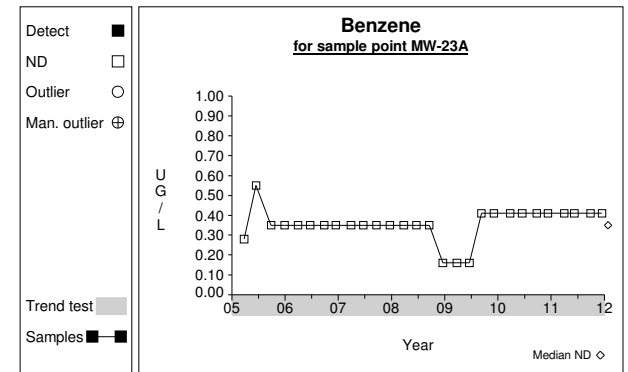
Graph 114



Graph 115

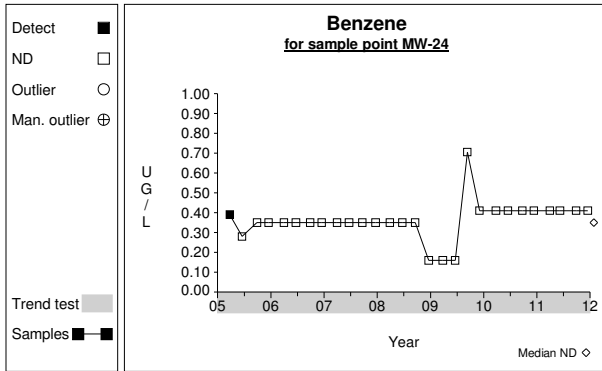


Graph 116

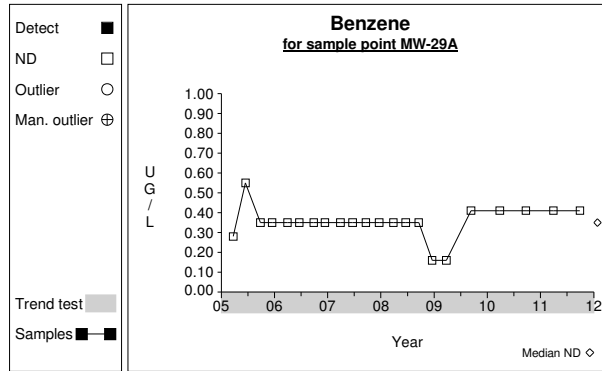


Graph 117

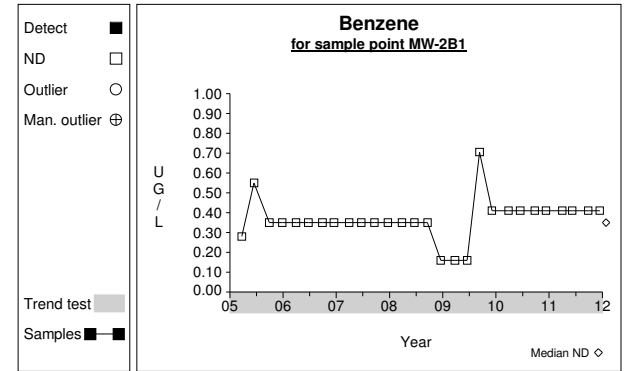
# Time Series



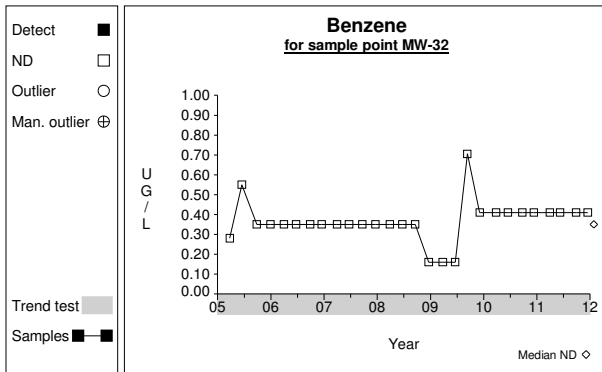
**Graph 118**



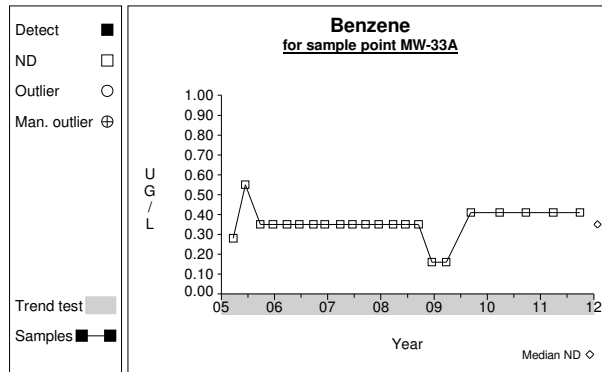
**Graph 119**



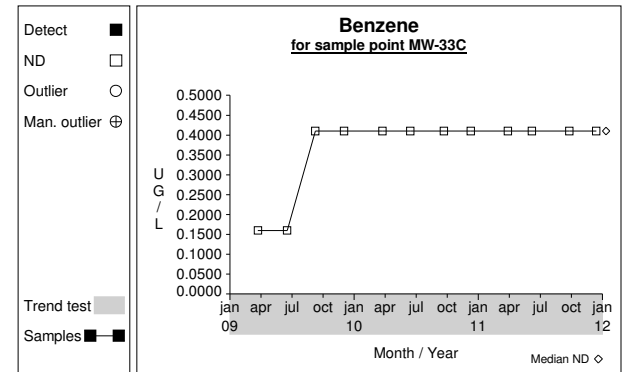
**Graph 120**



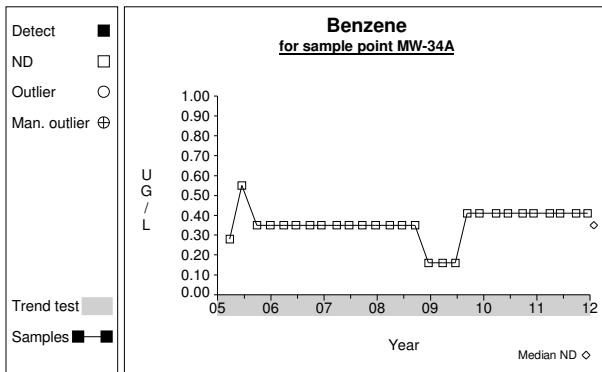
**Graph 121**



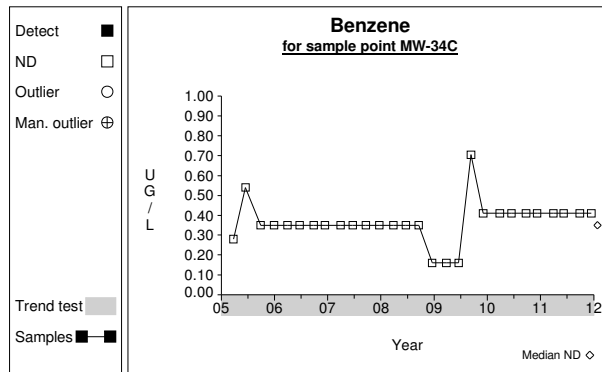
**Graph 122**



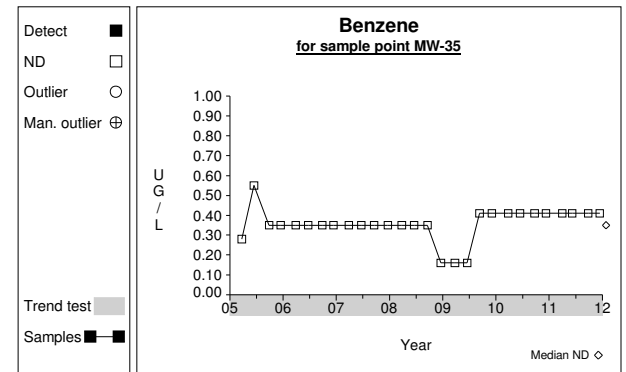
**Graph 123**



**Graph 124**

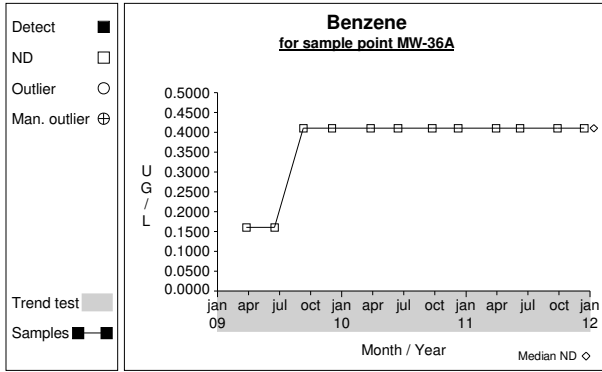


**Graph 125**

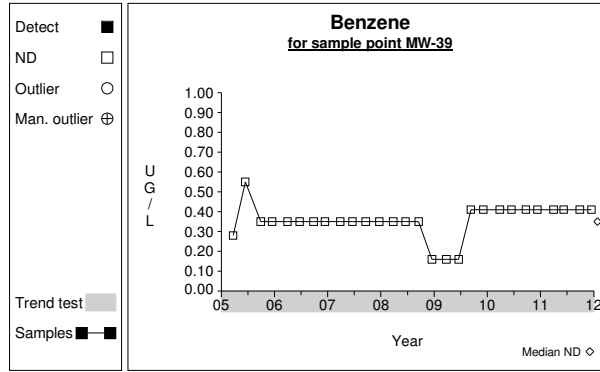


**Graph 126**

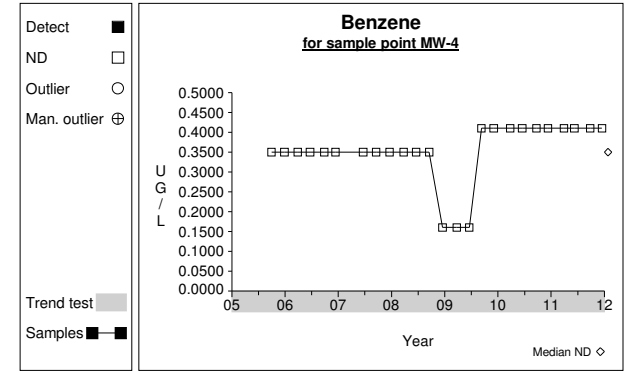
# Time Series



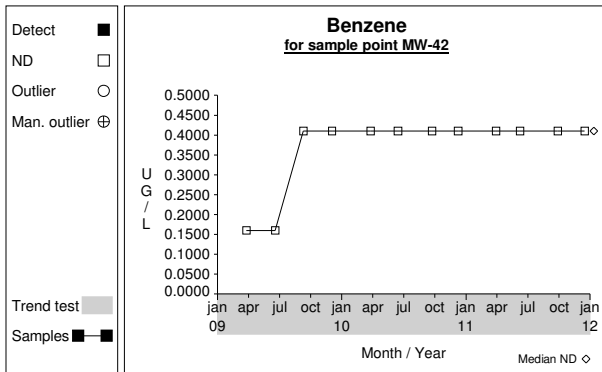
Graph 127



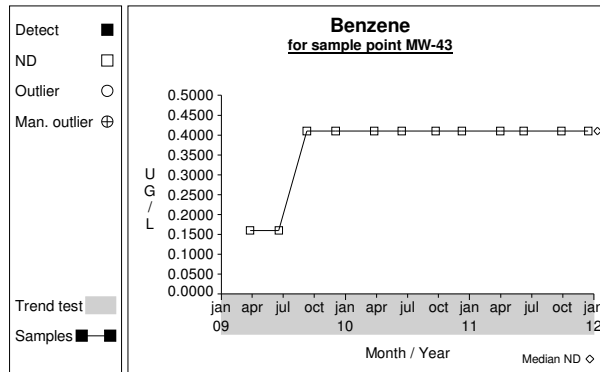
Graph 128



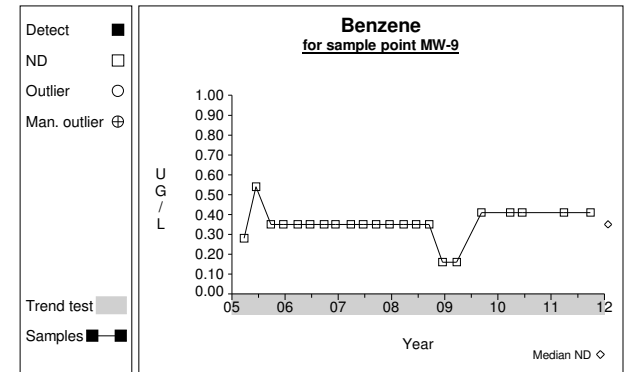
Graph 129



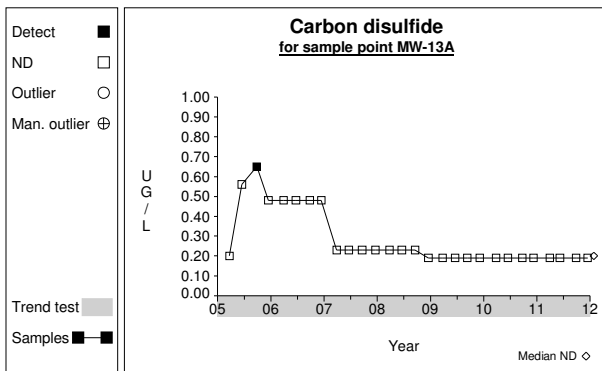
Graph 130



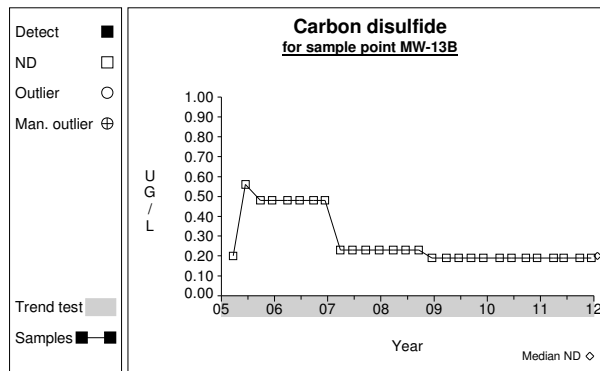
Graph 131



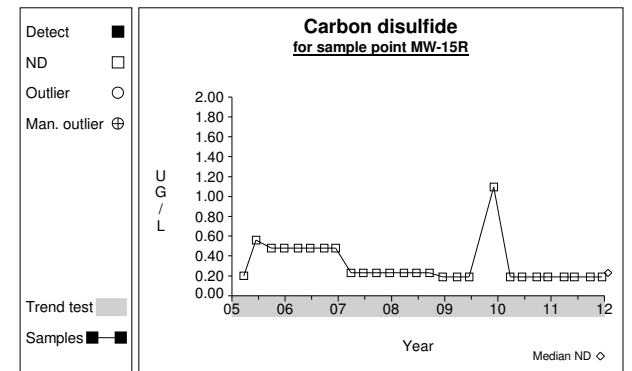
Graph 132



Graph 133

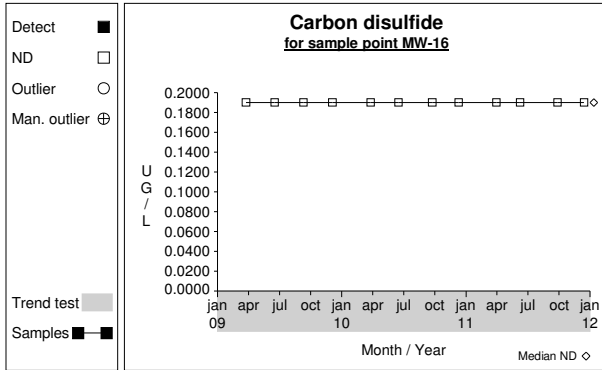


Graph 134

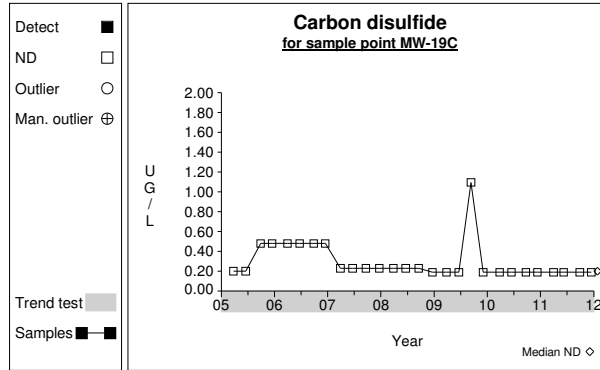


Graph 135

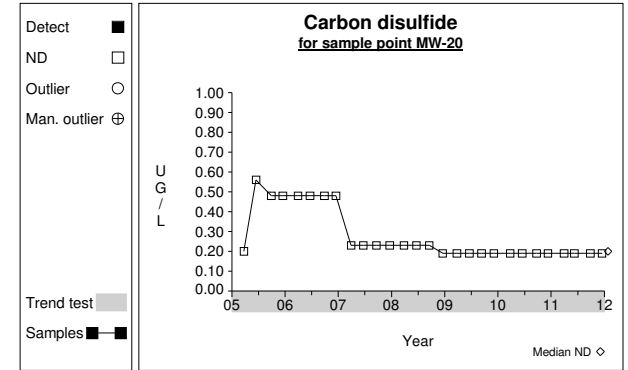
# Time Series



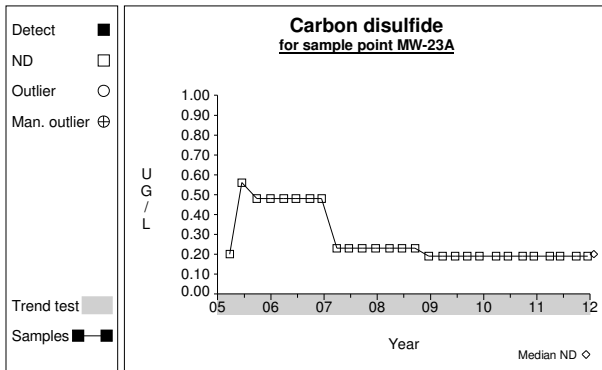
Graph 136



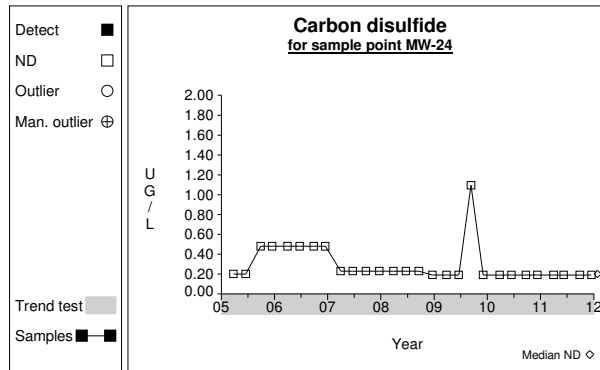
Graph 137



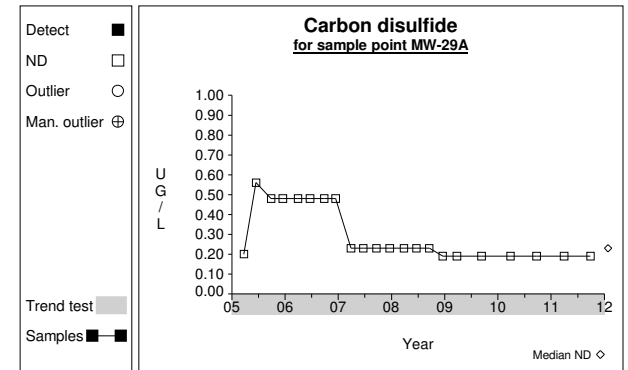
Graph 138



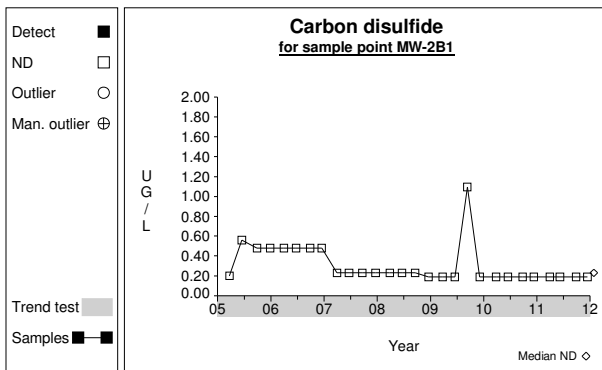
Graph 139



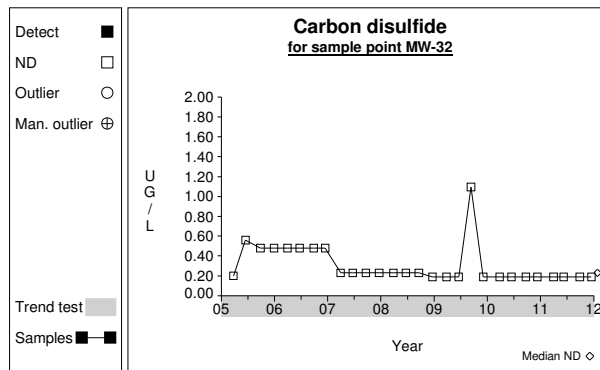
Graph 140



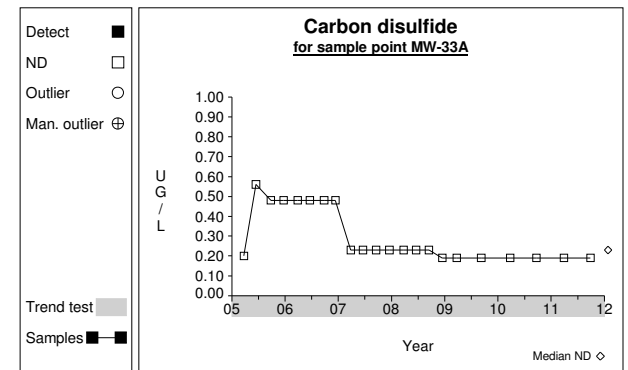
Graph 141



Graph 142

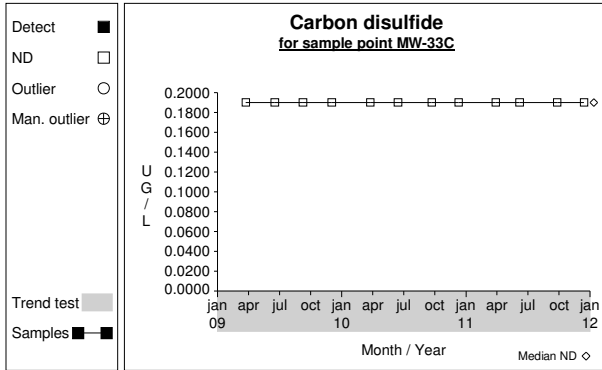


Graph 143

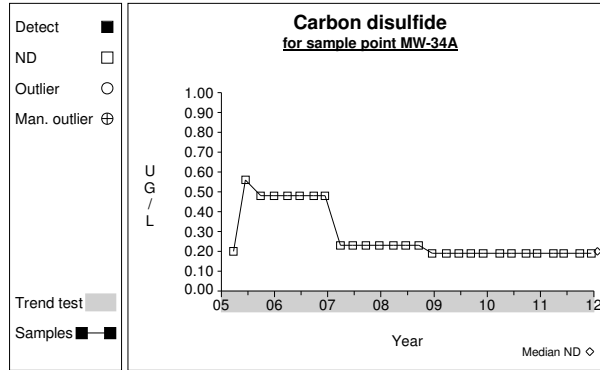


Graph 144

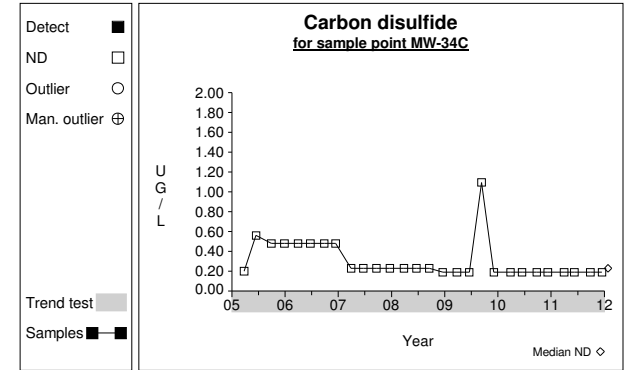
# Time Series



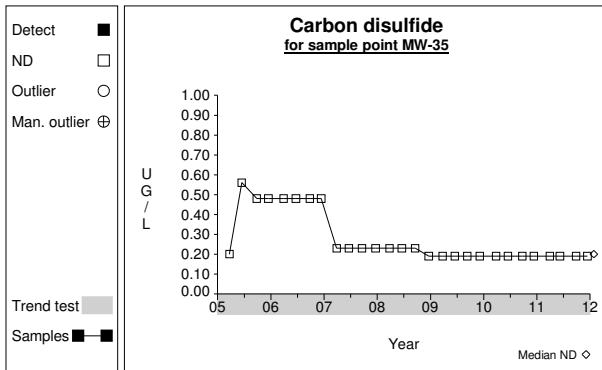
Graph 145



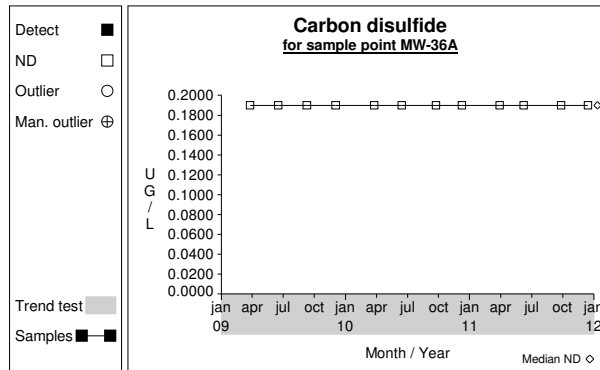
Graph 146



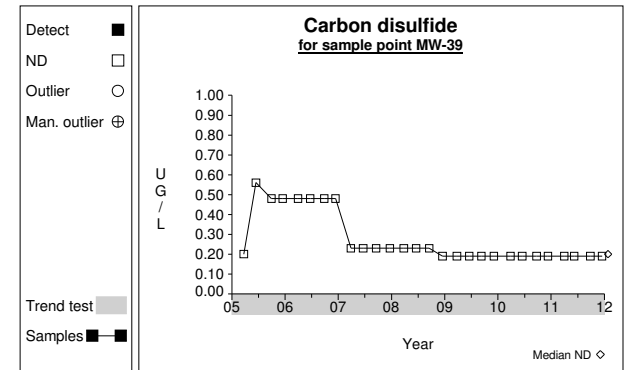
Graph 147



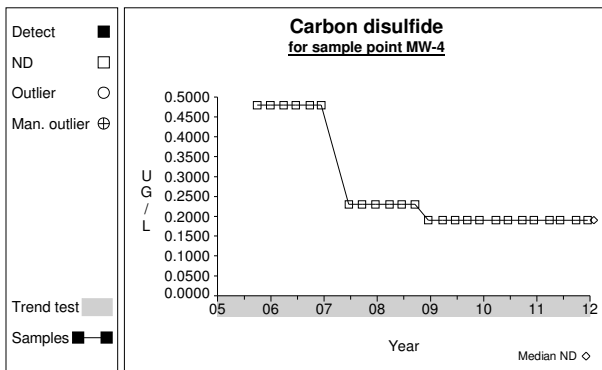
Graph 148



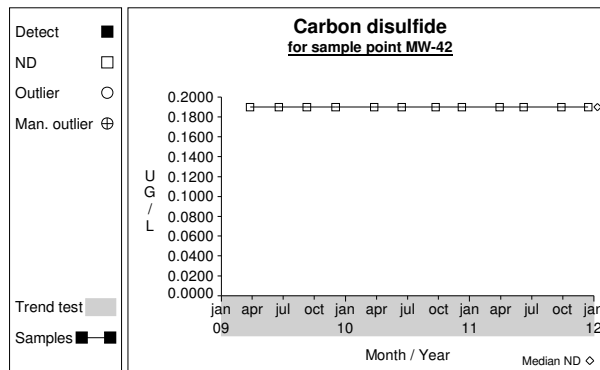
Graph 149



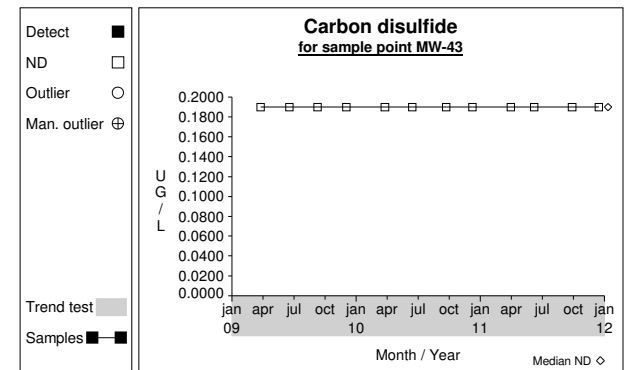
Graph 150



Graph 151

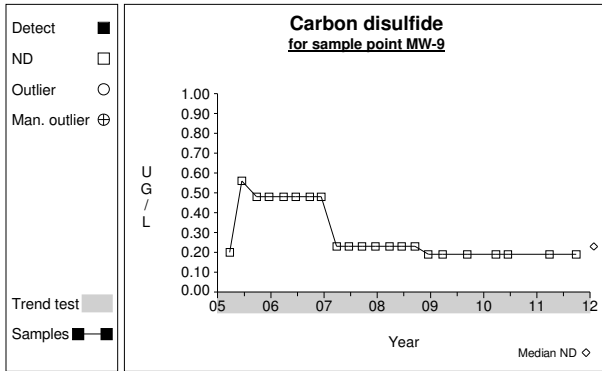


Graph 152

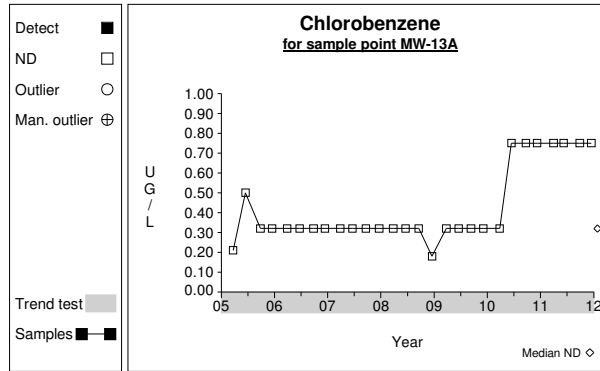


Graph 153

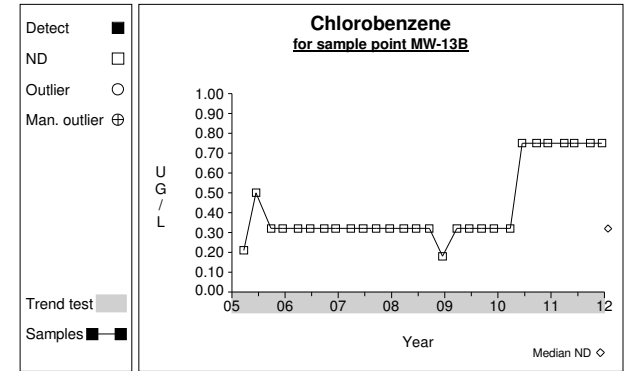
# Time Series



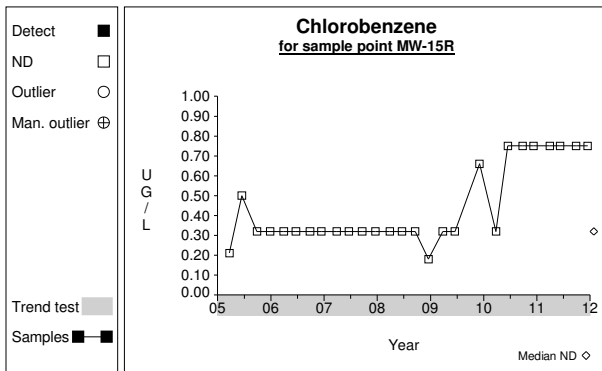
**Graph 154**



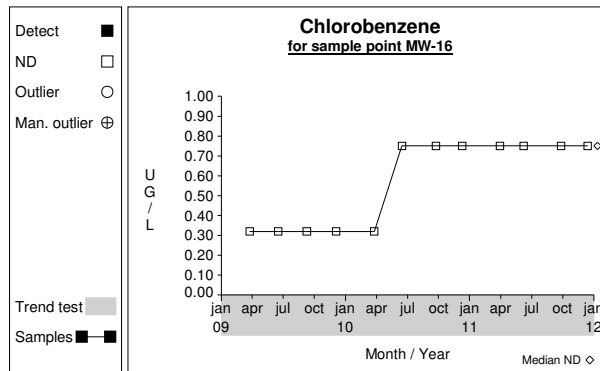
**Graph 155**



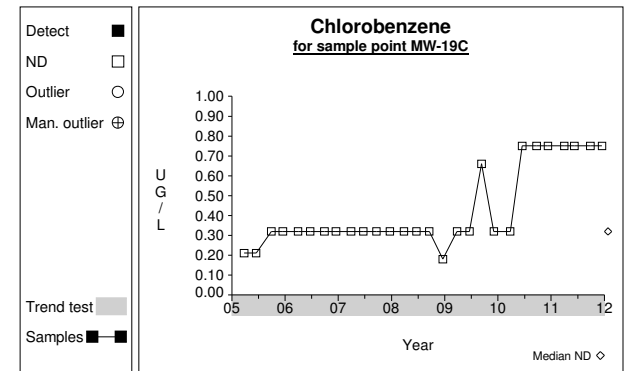
**Graph 156**



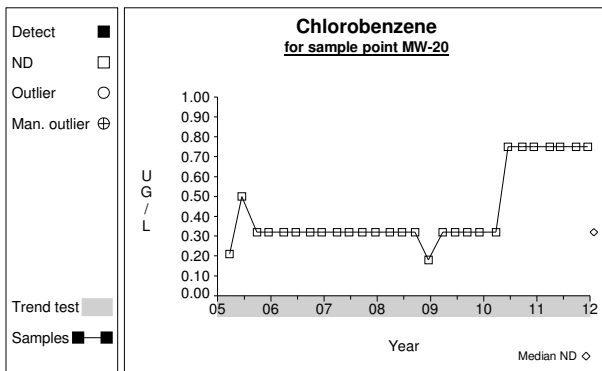
**Graph 157**



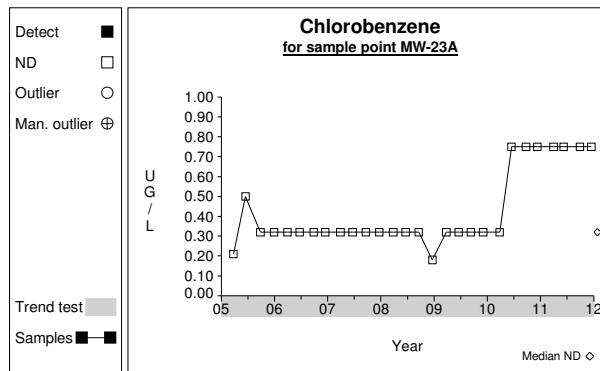
**Graph 158**



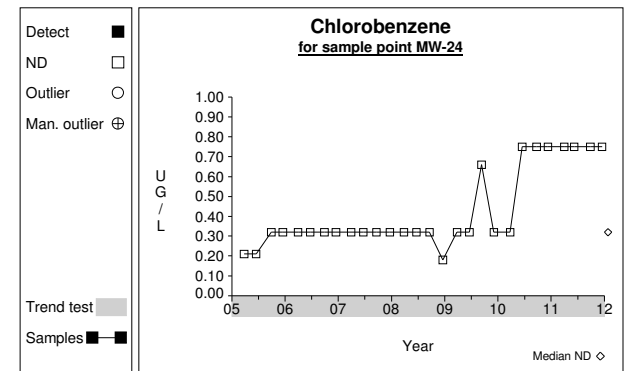
**Graph 159**



**Graph 160**

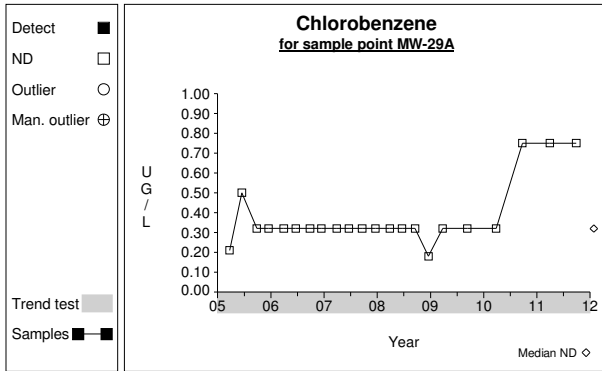


**Graph 161**

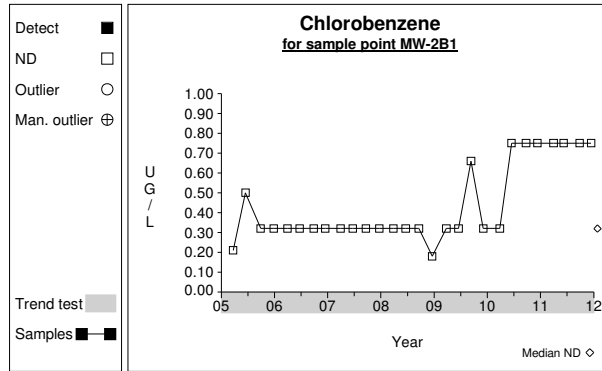


**Graph 162**

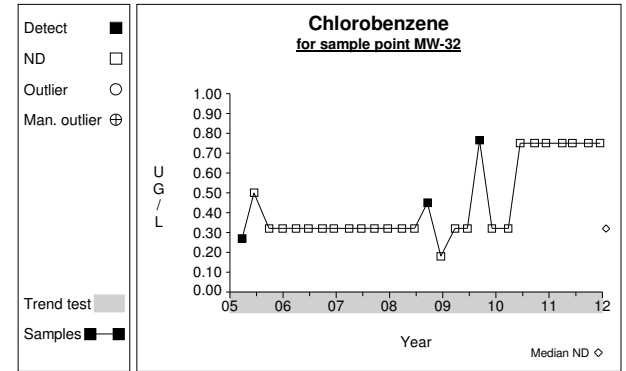
# Time Series



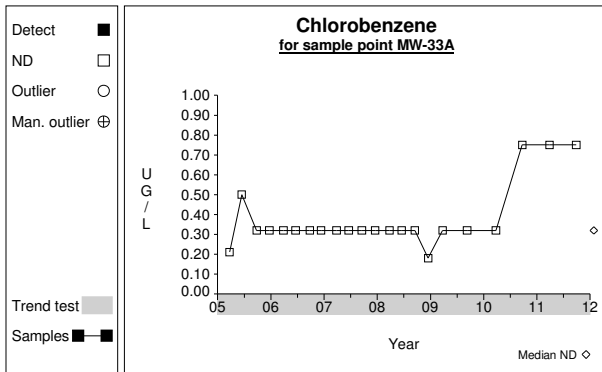
**Graph 163**



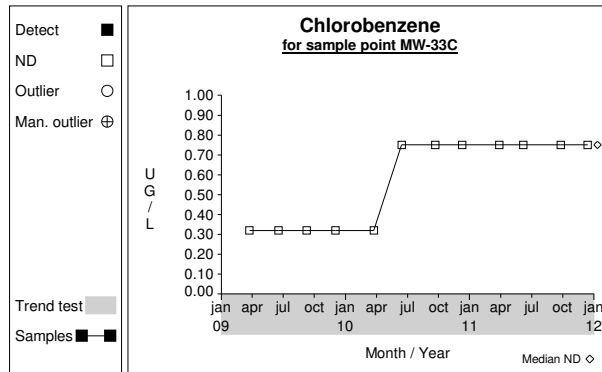
**Graph 164**



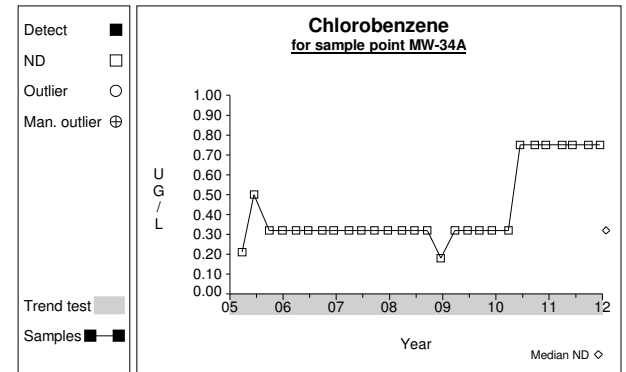
**Graph 165**



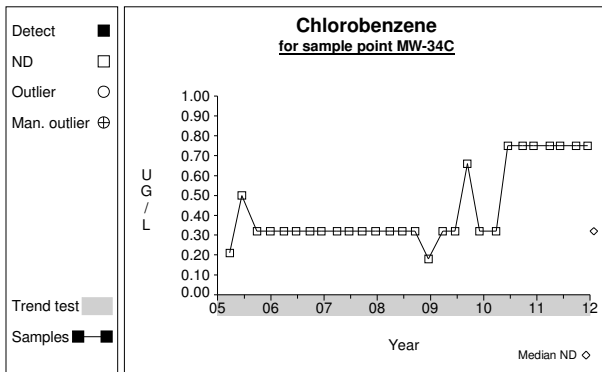
**Graph 166**



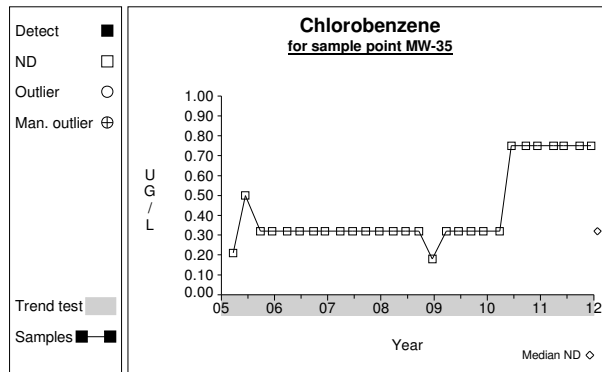
**Graph 167**



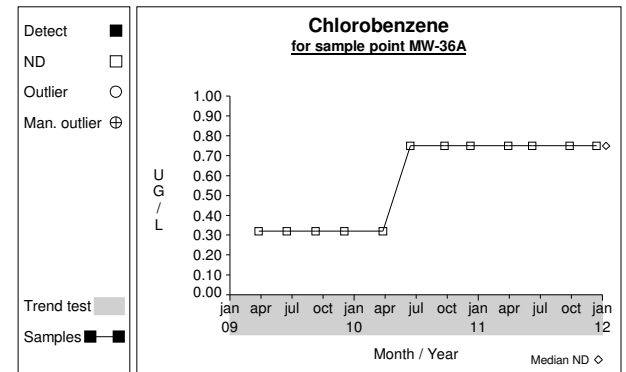
**Graph 168**



**Graph 169**

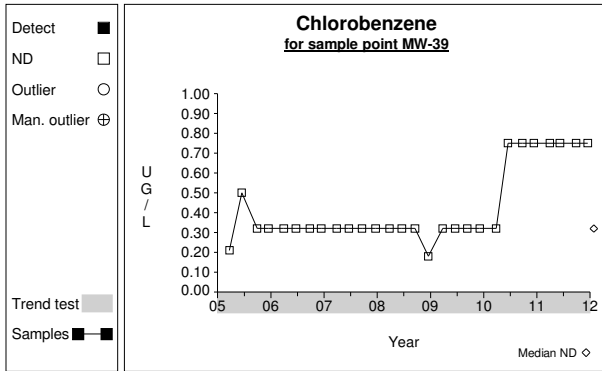


**Graph 170**

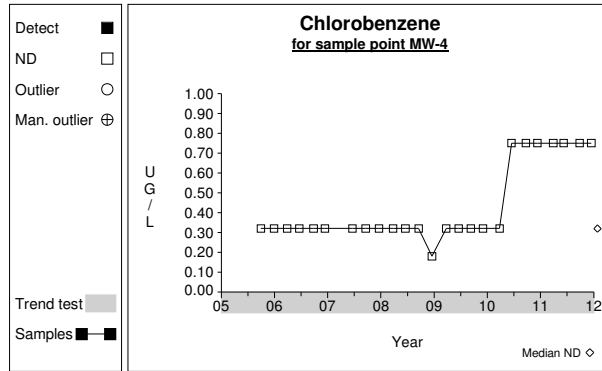


**Graph 171**

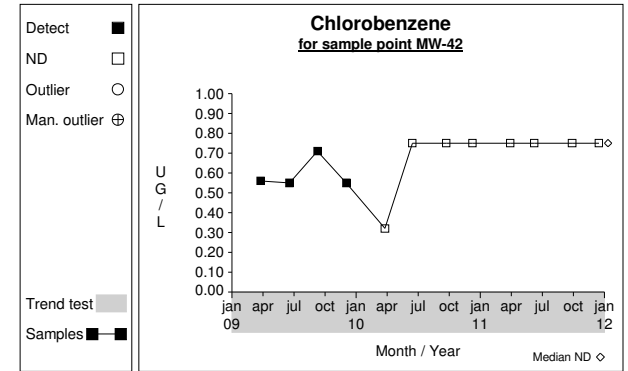
# Time Series



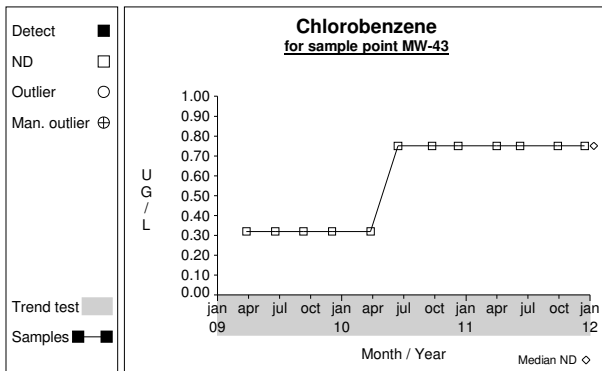
**Graph 172**



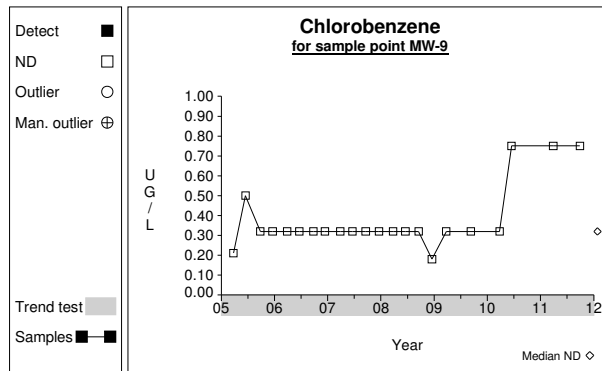
**Graph 173**



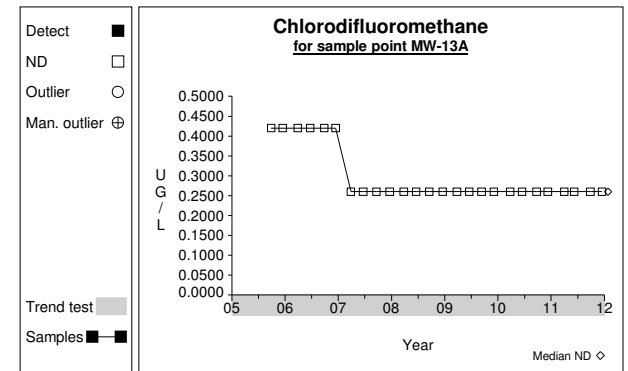
**Graph 174**



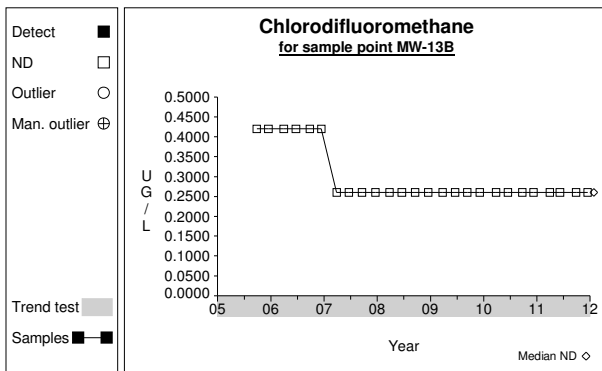
**Graph 175**



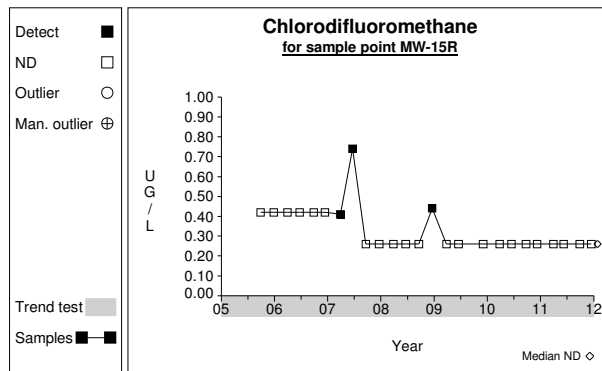
**Graph 176**



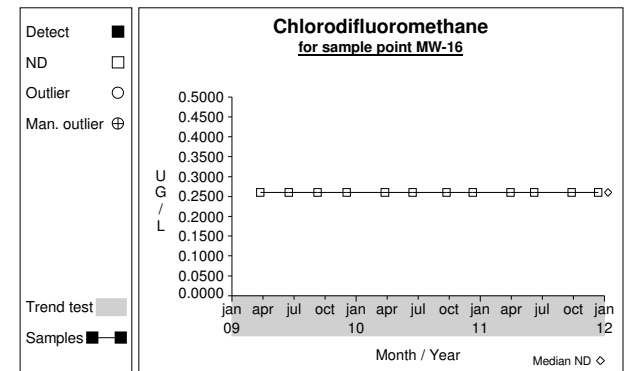
**Graph 177**



**Graph 178**



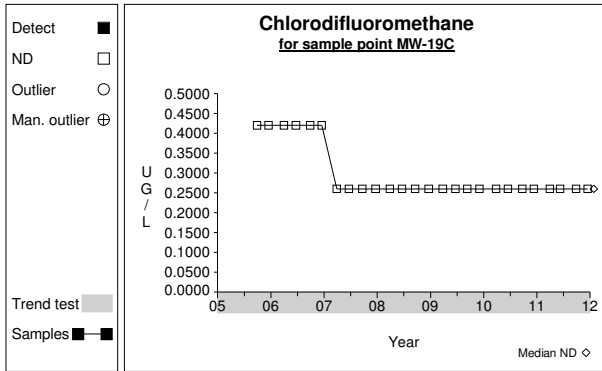
**Graph 179**



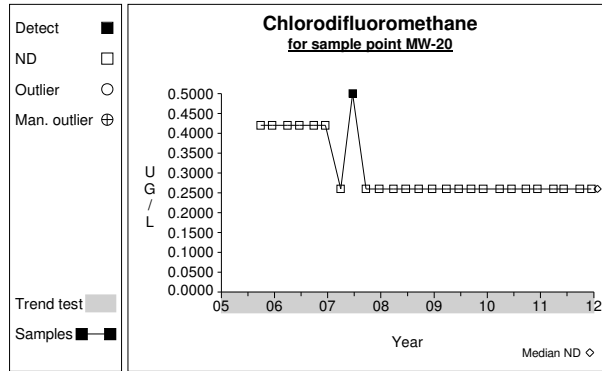
**Graph 180**



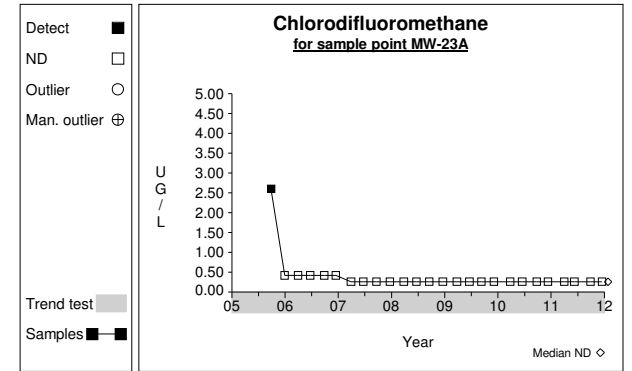
# Time Series



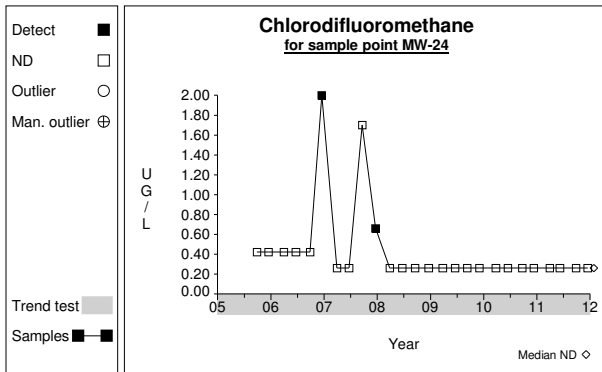
**Graph 181**



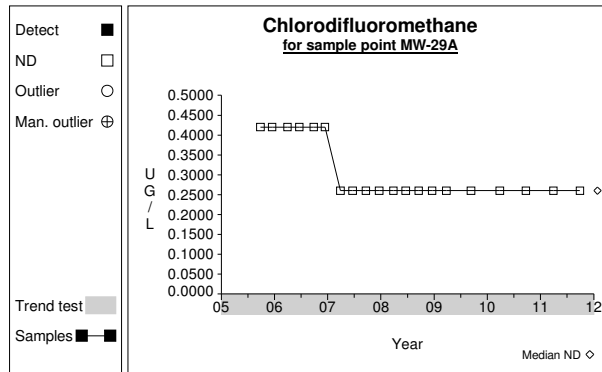
**Graph 182**



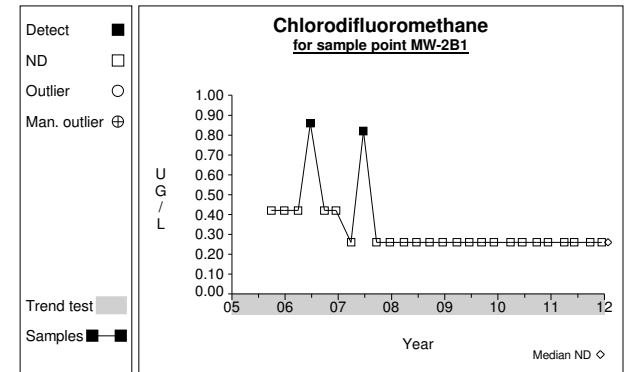
**Graph 183**



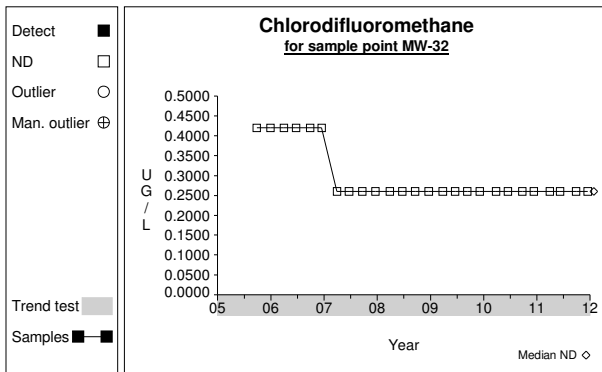
**Graph 184**



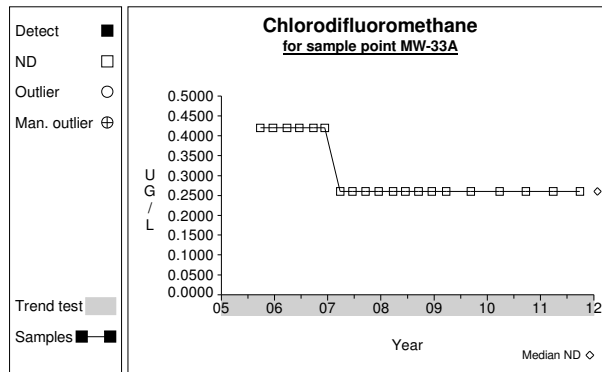
**Graph 185**



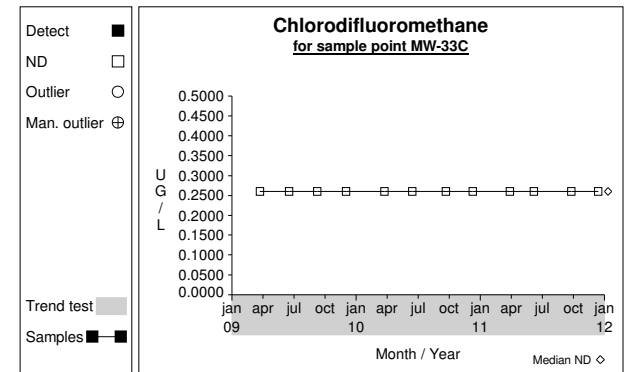
**Graph 186**



**Graph 187**

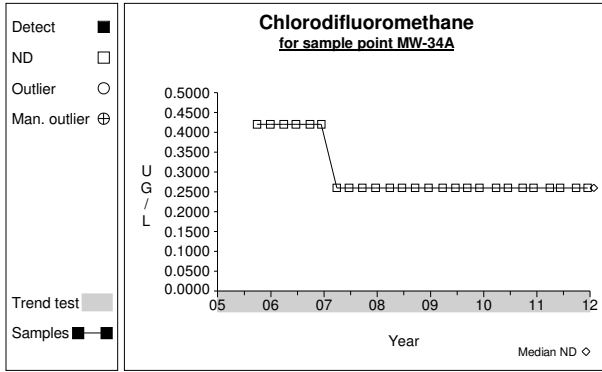


**Graph 188**

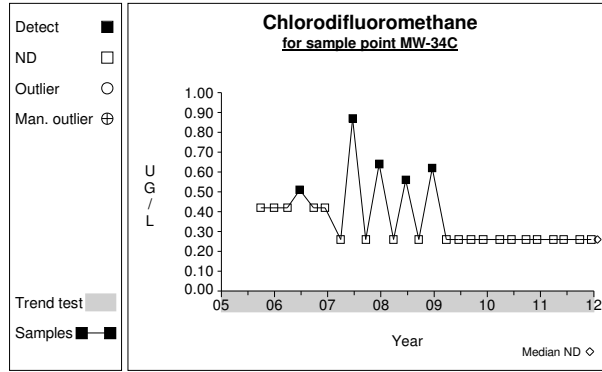


**Graph 189**

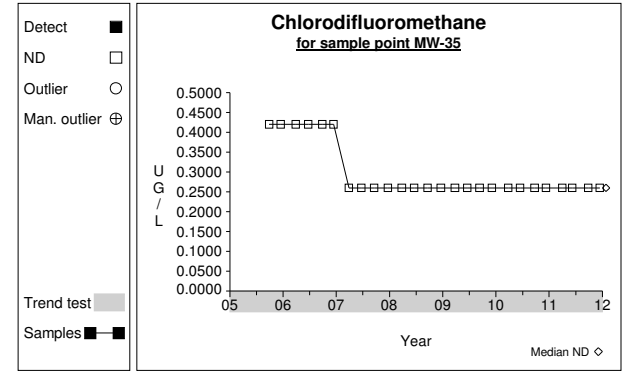
# Time Series



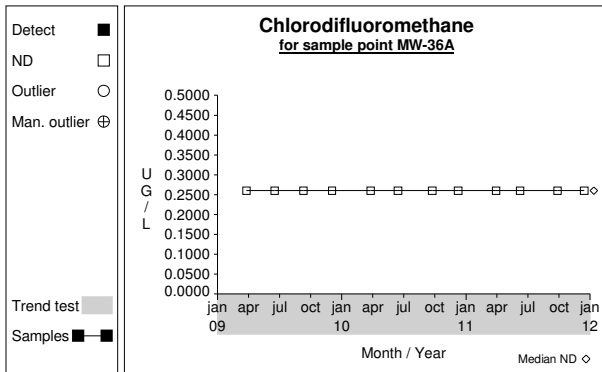
**Graph 190**



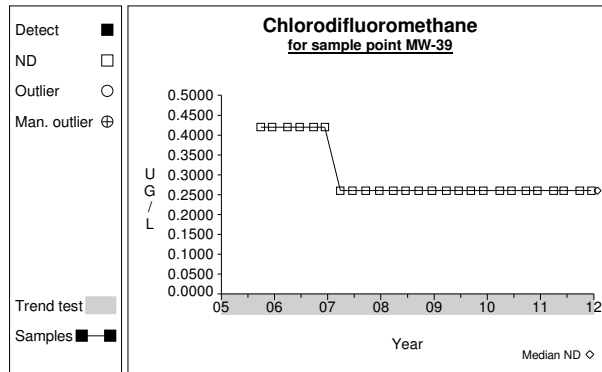
**Graph 191**



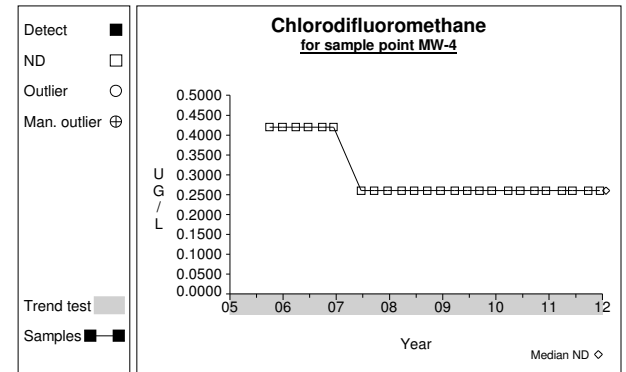
**Graph 192**



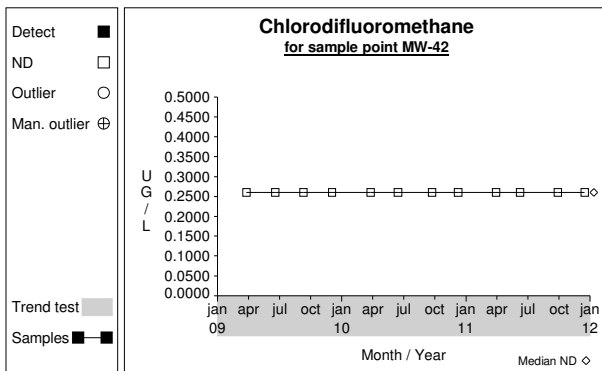
**Graph 193**



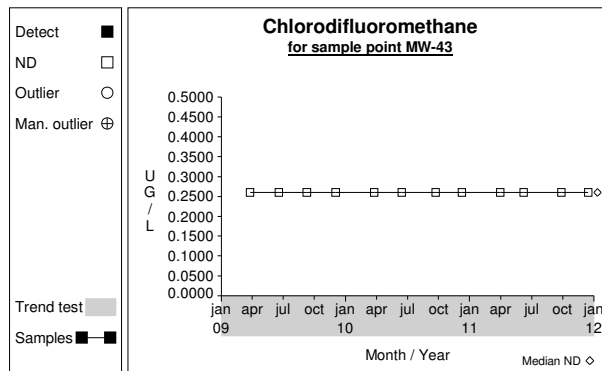
**Graph 194**



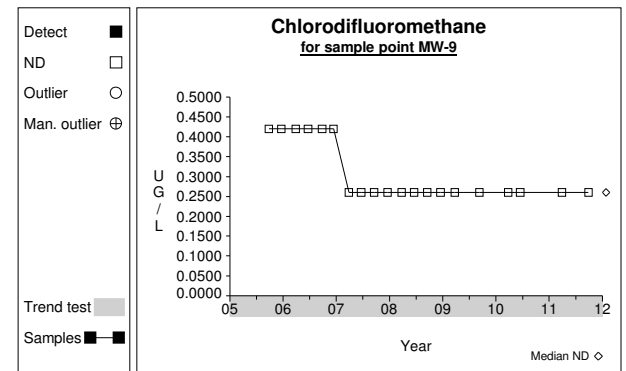
**Graph 195**



**Graph 196**

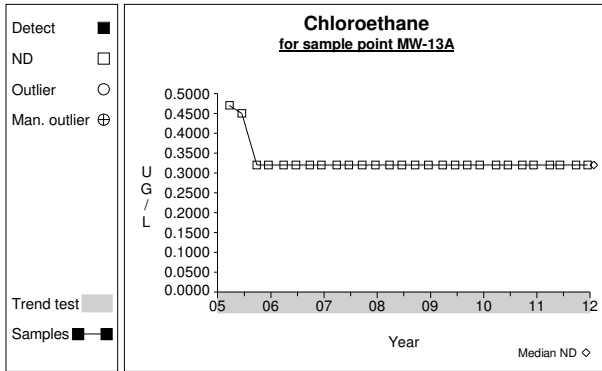


**Graph 197**

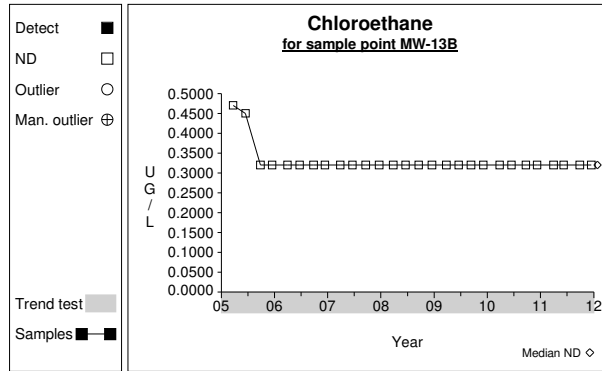


**Graph 198**

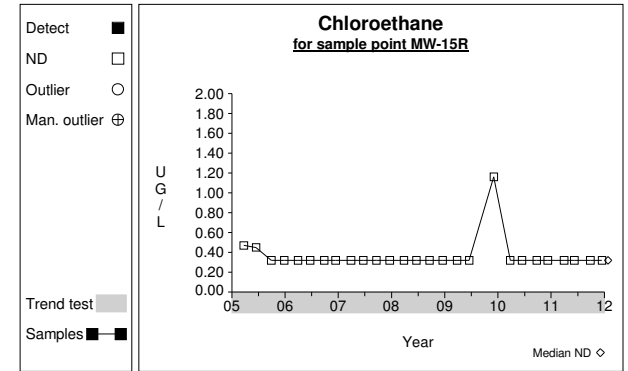
# Time Series



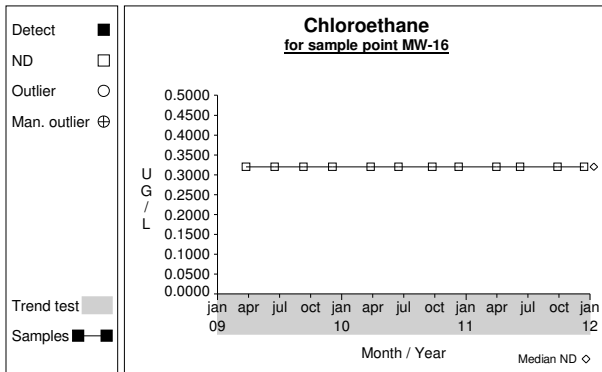
Graph 199



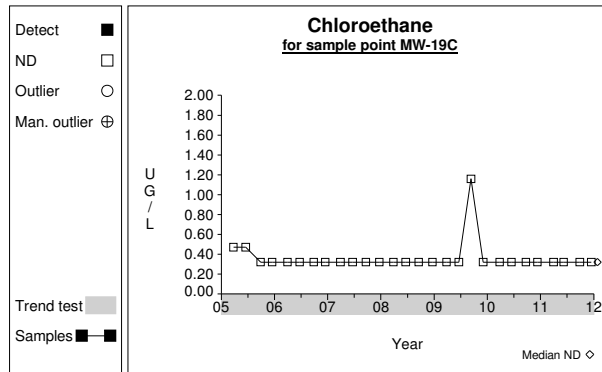
Graph 200



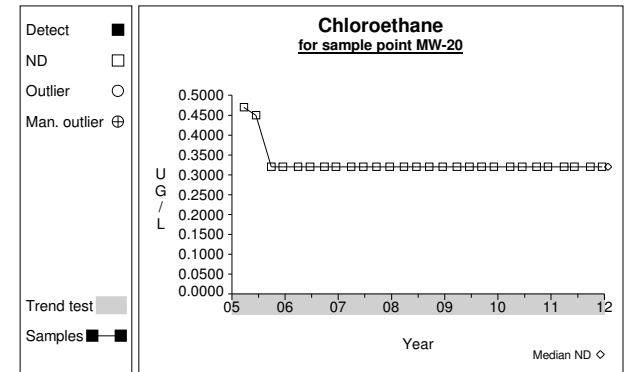
Graph 201



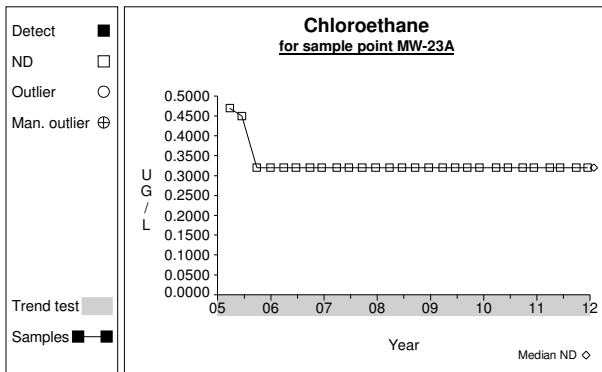
Graph 202



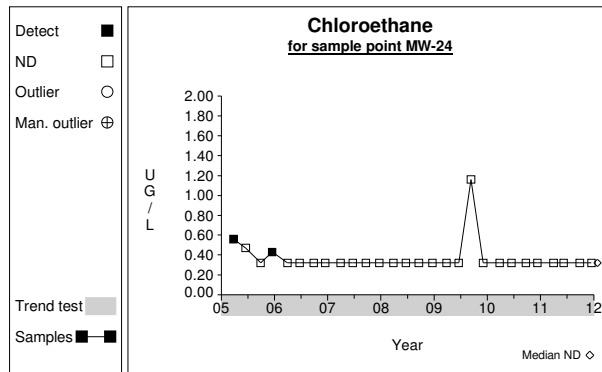
Graph 203



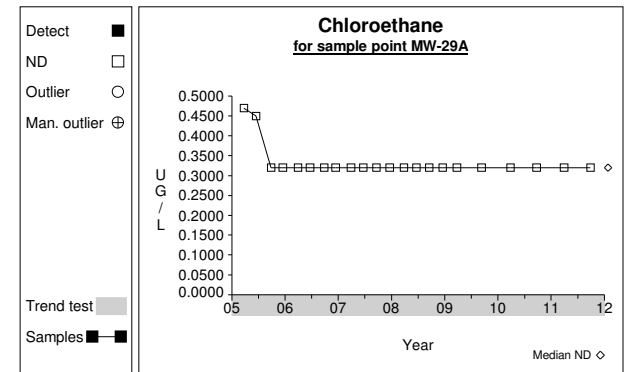
Graph 204



Graph 205

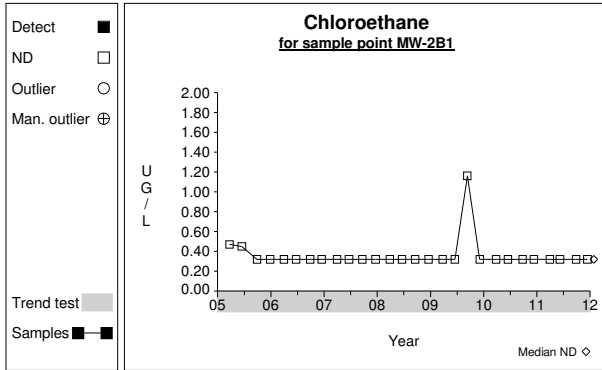


Graph 206

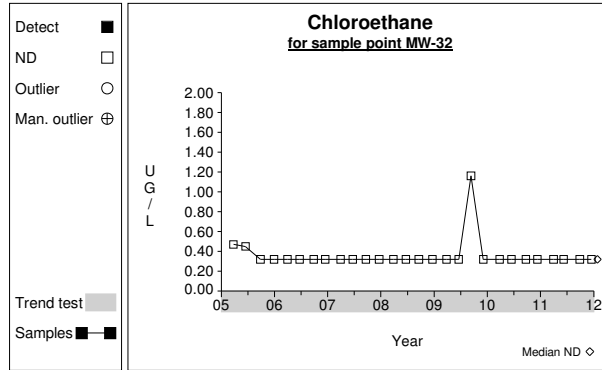


Graph 207

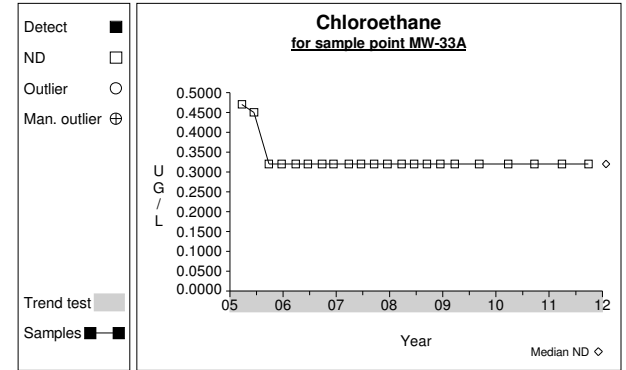
# Time Series



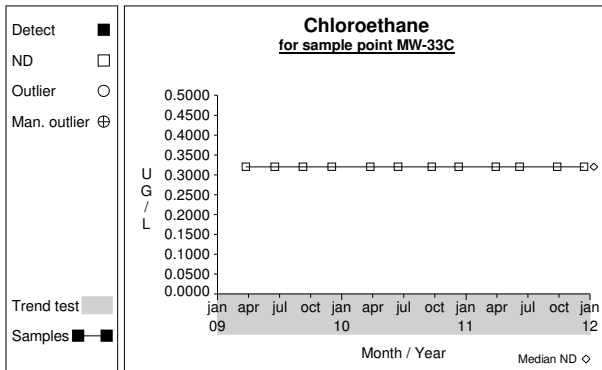
**Graph 208**



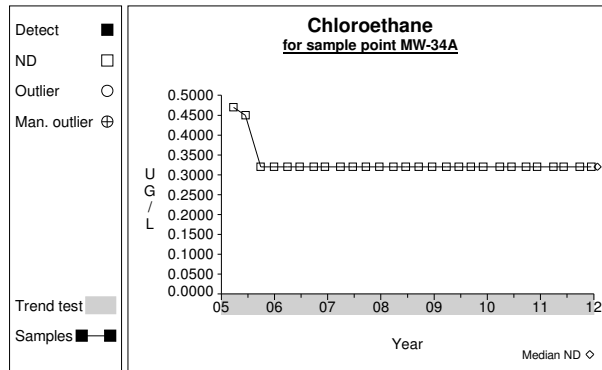
**Graph 209**



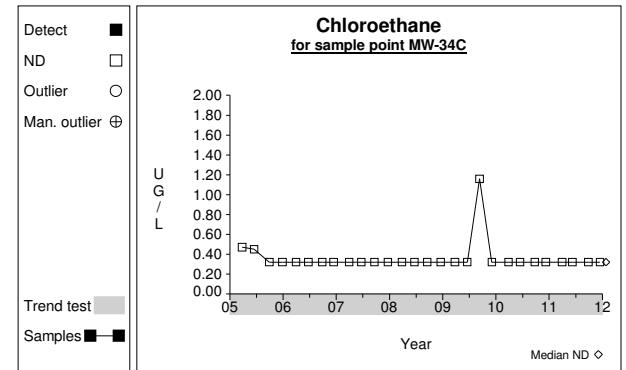
**Graph 210**



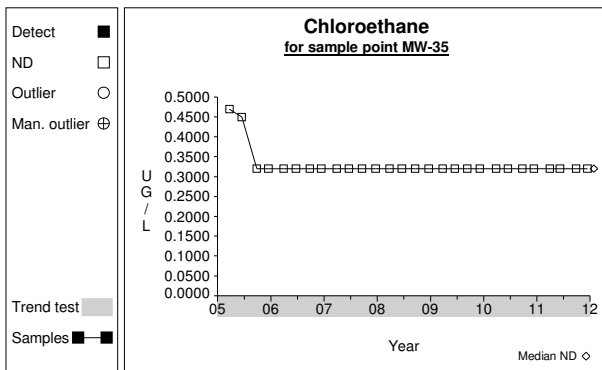
**Graph 211**



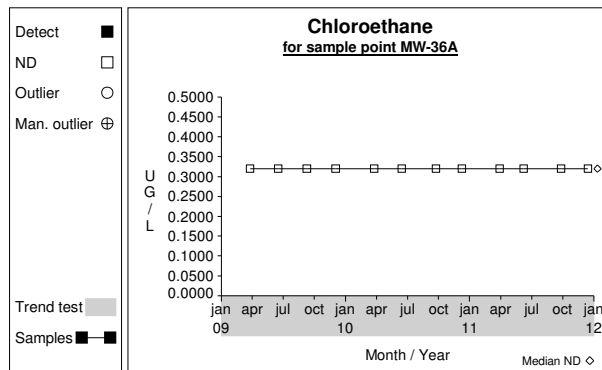
**Graph 212**



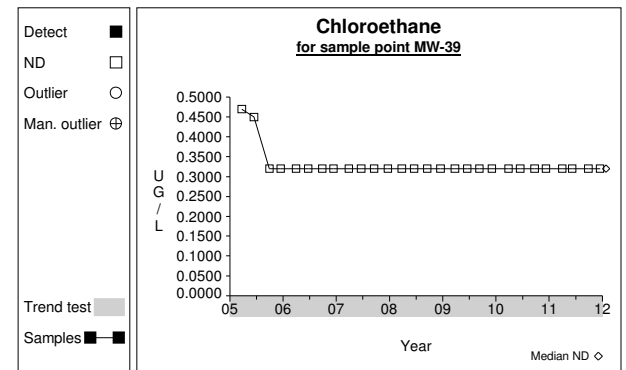
**Graph 213**



**Graph 214**

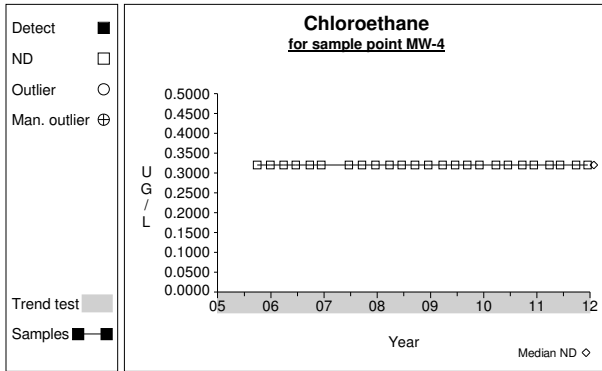


**Graph 215**

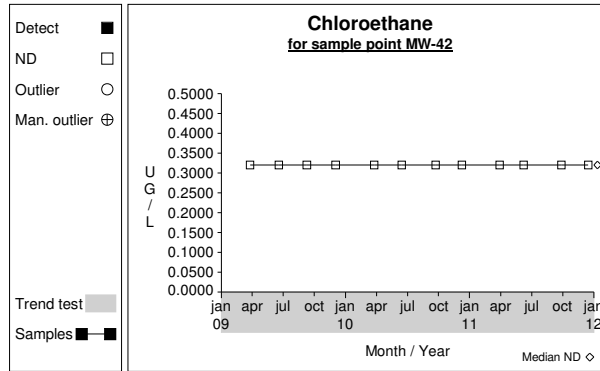


**Graph 216**

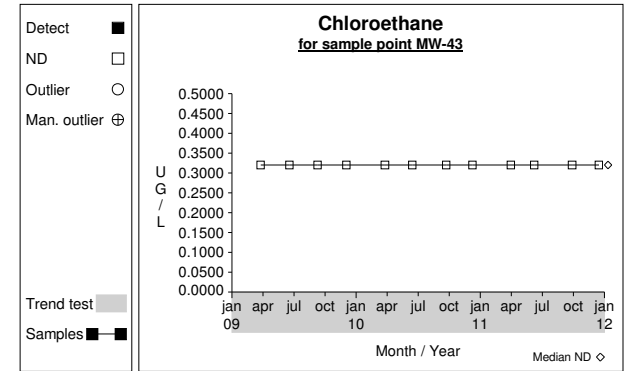
# Time Series



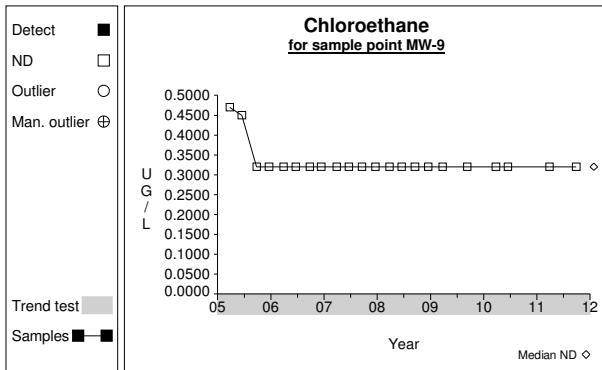
**Graph 217**



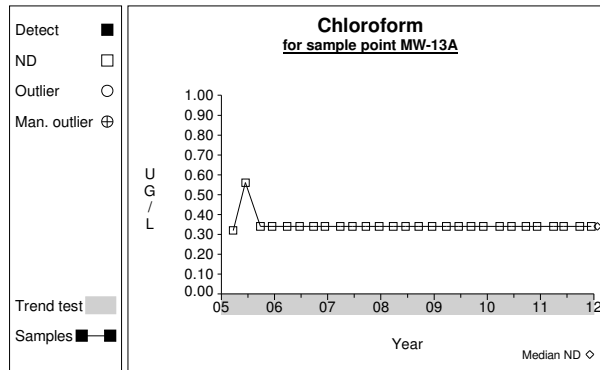
**Graph 218**



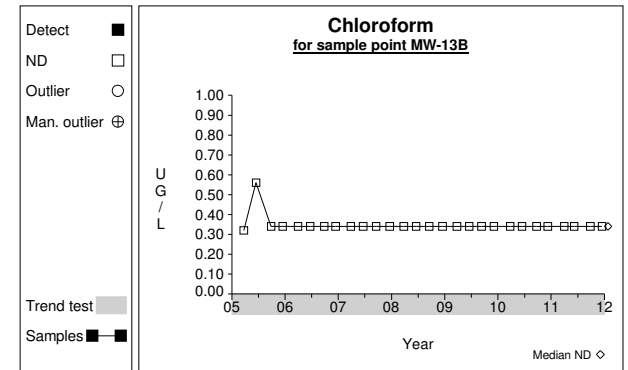
**Graph 219**



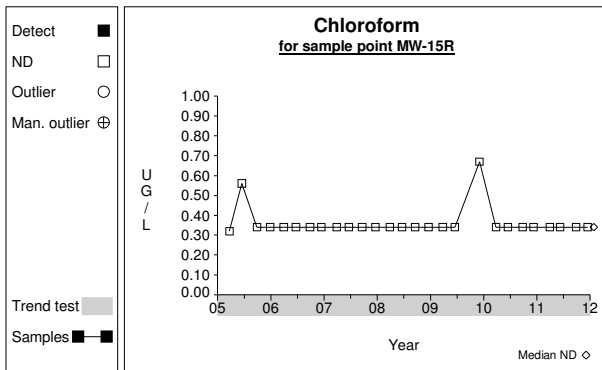
**Graph 220**



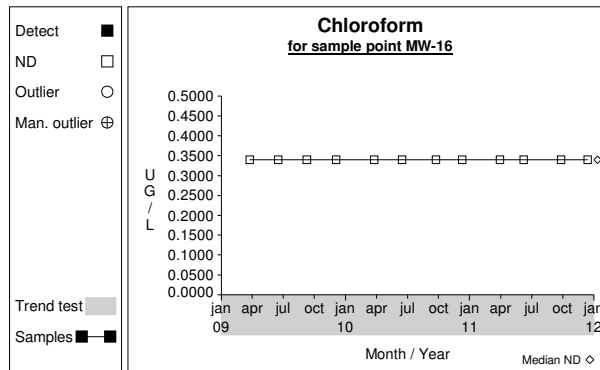
**Graph 221**



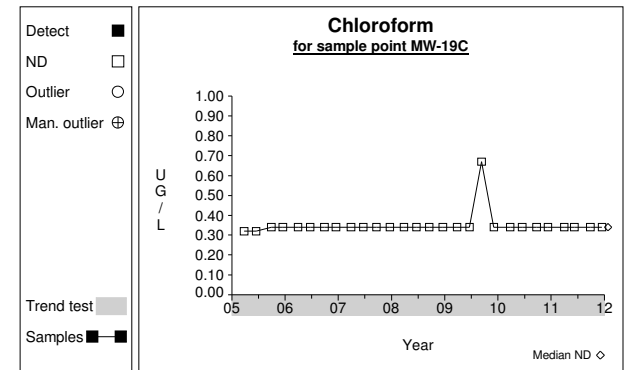
**Graph 222**



**Graph 223**

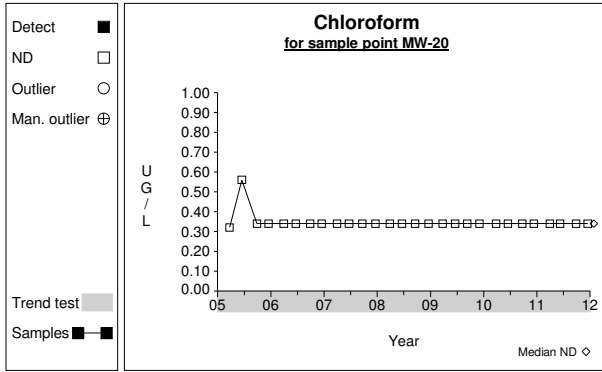


**Graph 224**

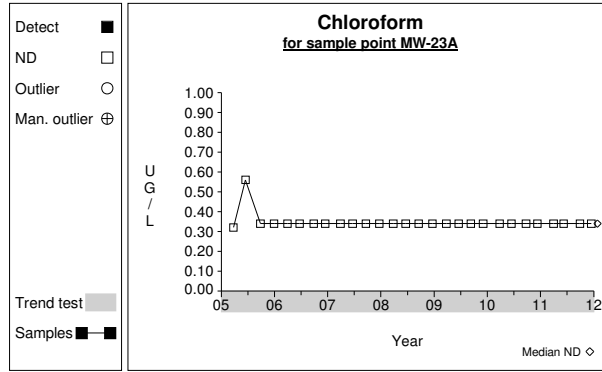


**Graph 225**

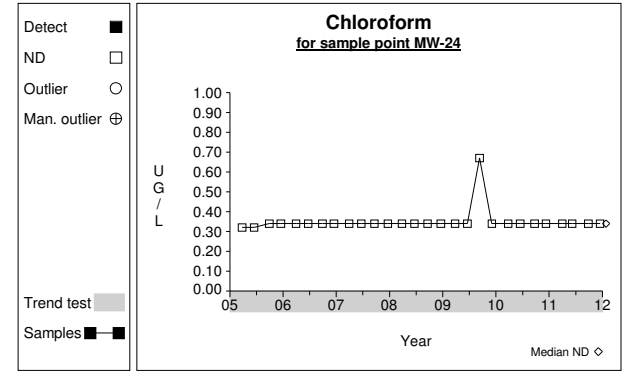
# Time Series



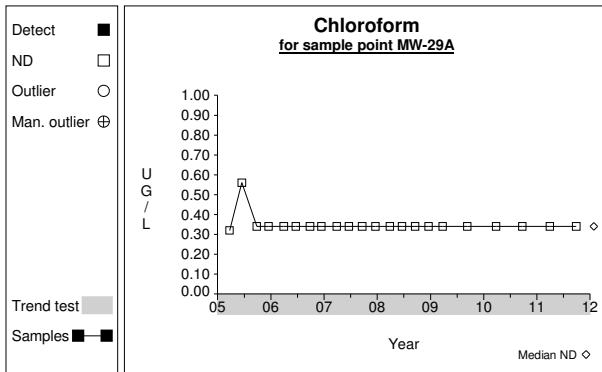
**Graph 226**



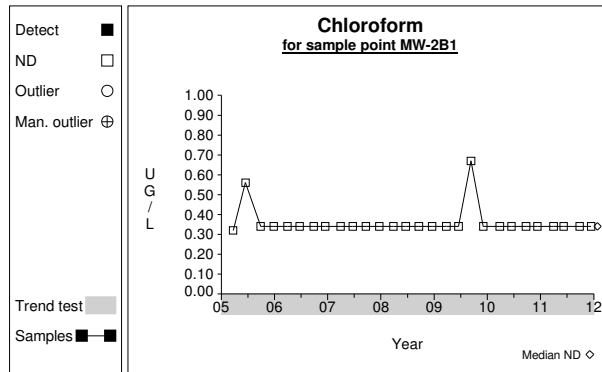
**Graph 227**



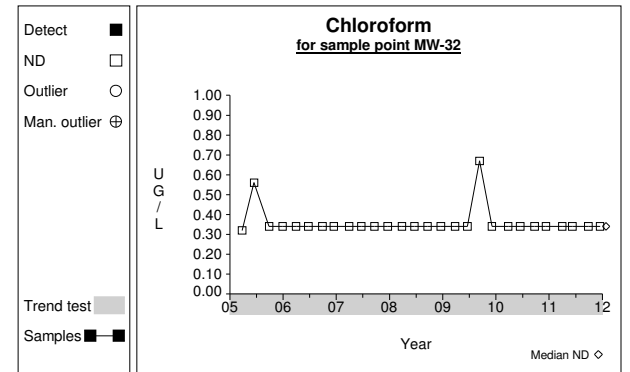
**Graph 228**



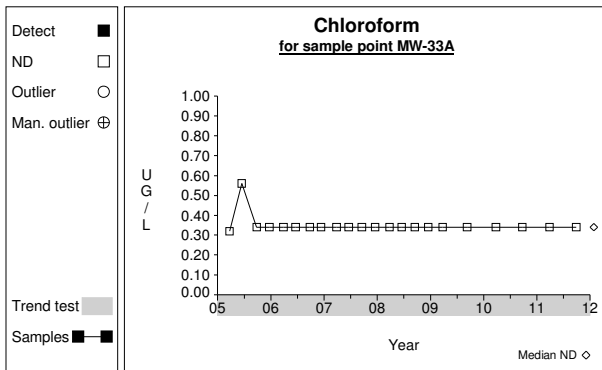
**Graph 229**



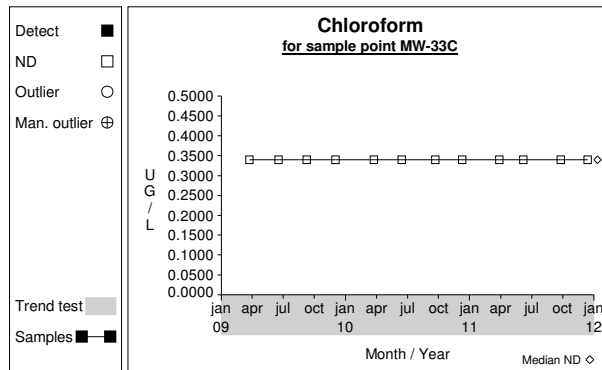
**Graph 230**



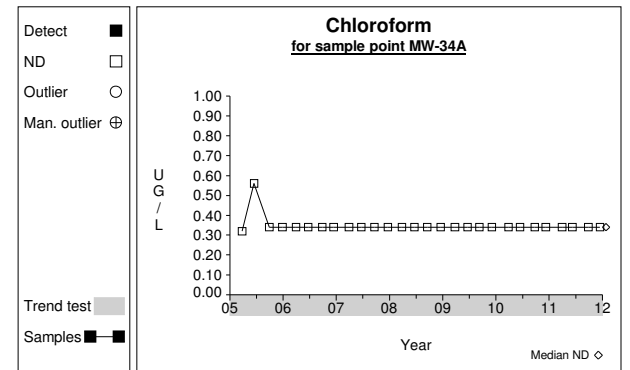
**Graph 231**



**Graph 232**

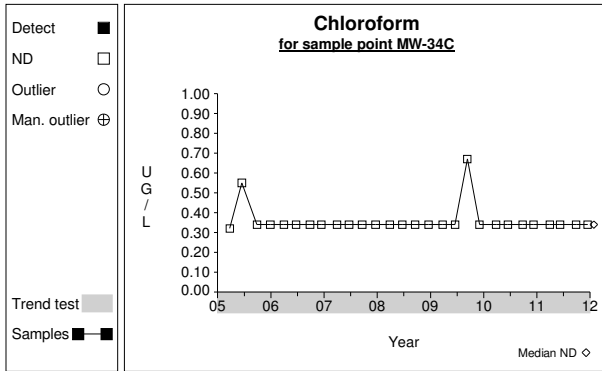


**Graph 233**

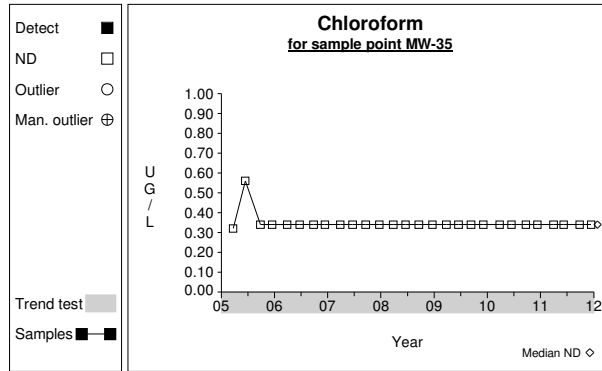


**Graph 234**

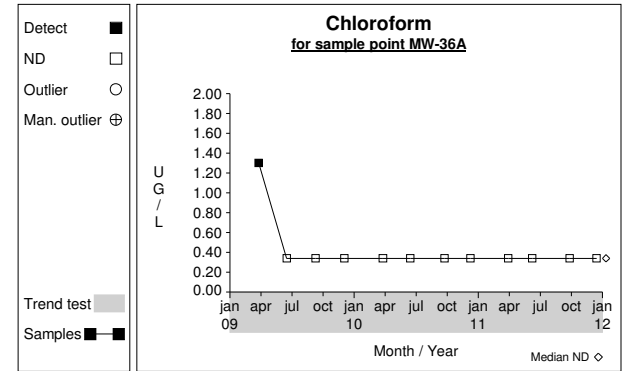
# Time Series



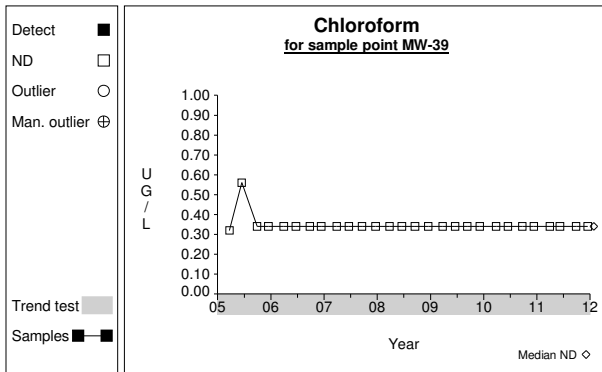
**Graph 235**



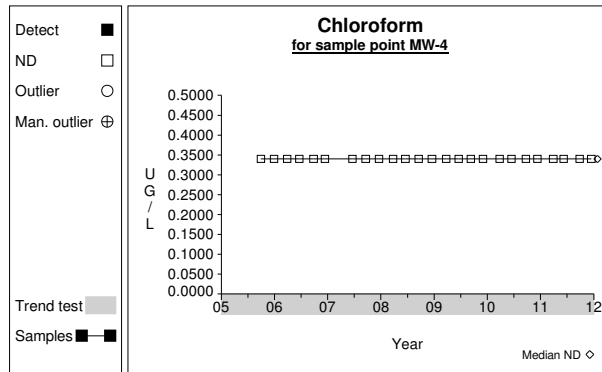
**Graph 236**



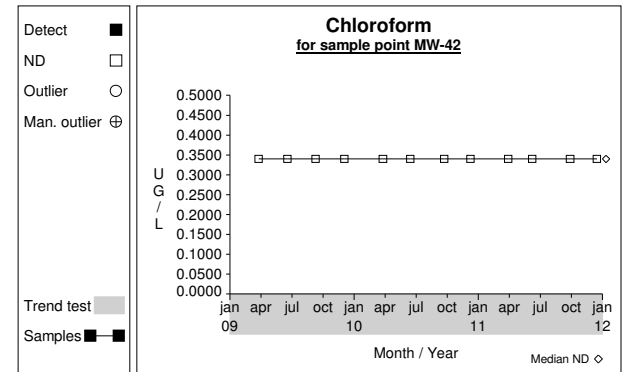
**Graph 237**



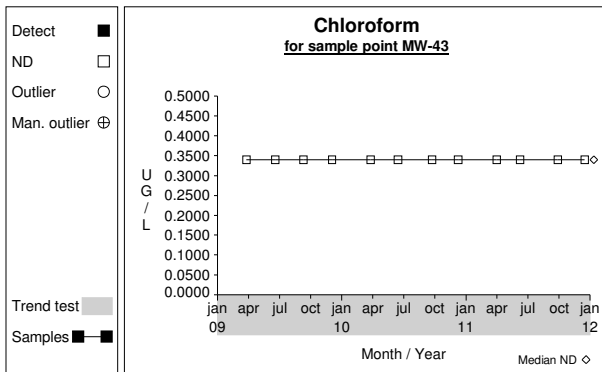
**Graph 238**



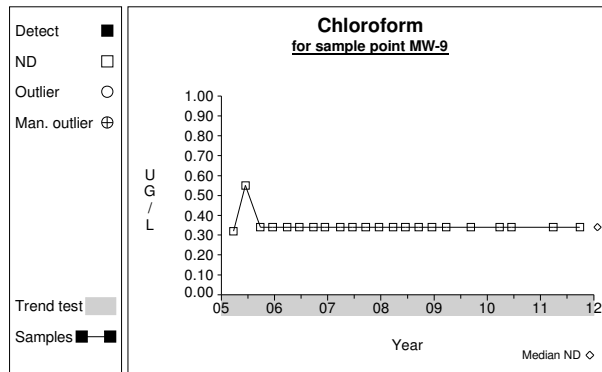
**Graph 239**



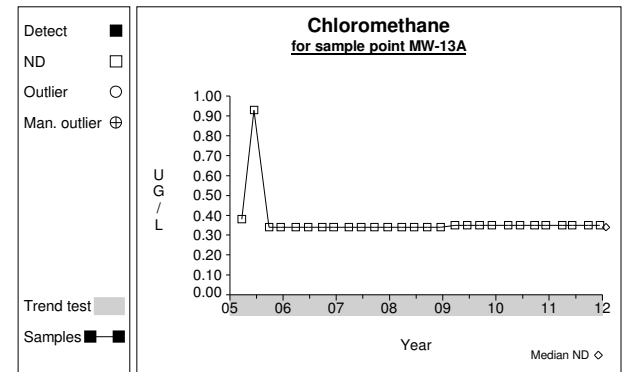
**Graph 240**



**Graph 241**

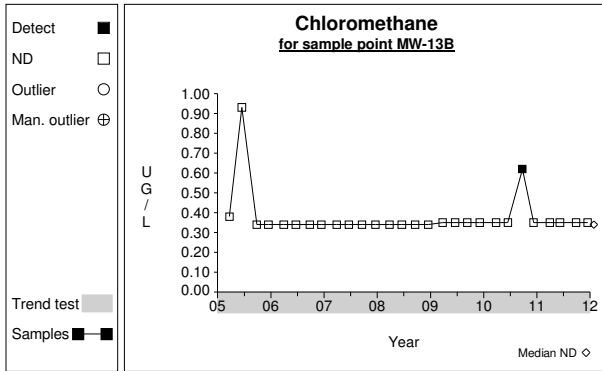


**Graph 242**

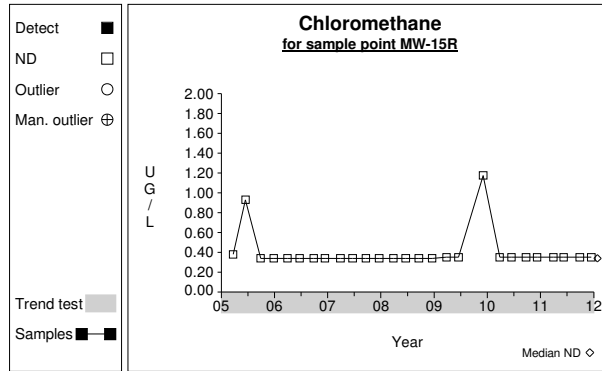


**Graph 243**

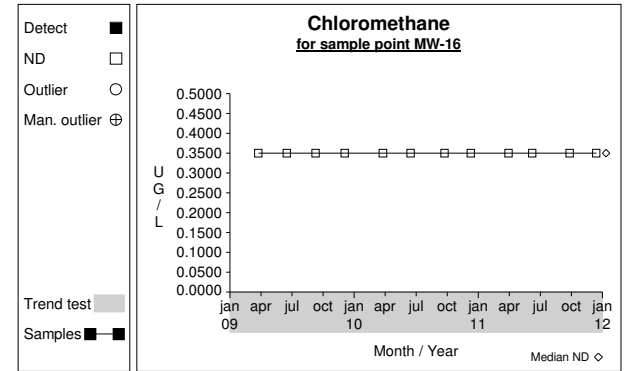
# Time Series



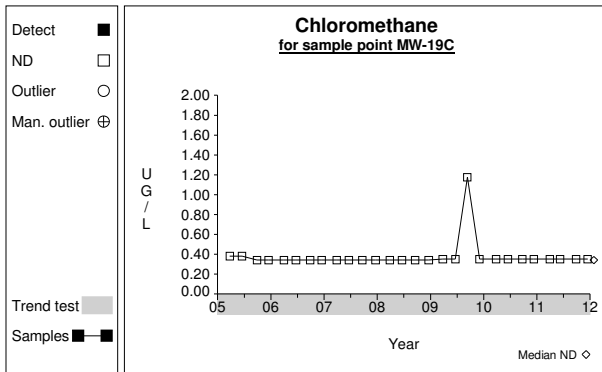
**Graph 244**



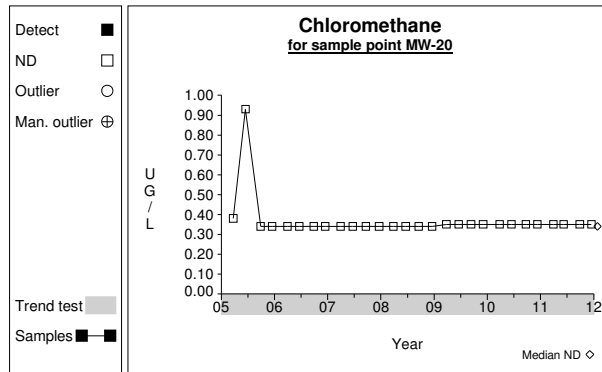
**Graph 245**



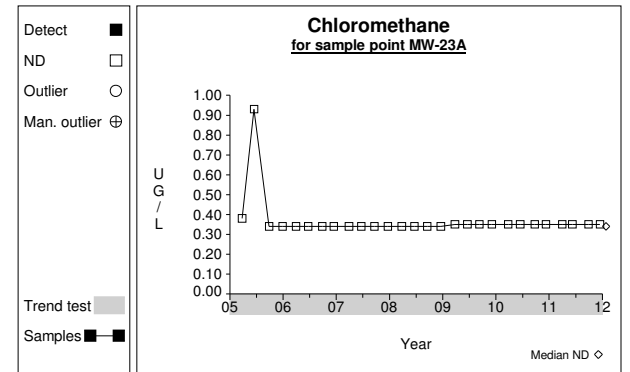
**Graph 246**



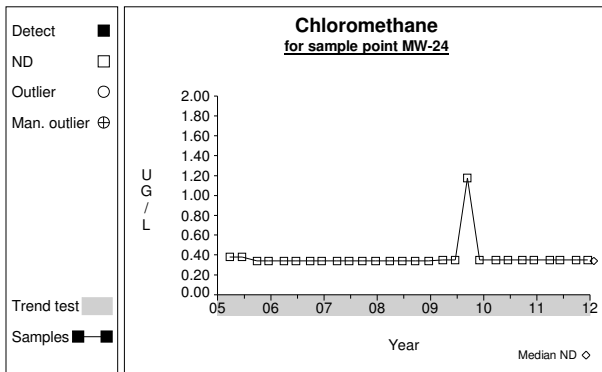
**Graph 247**



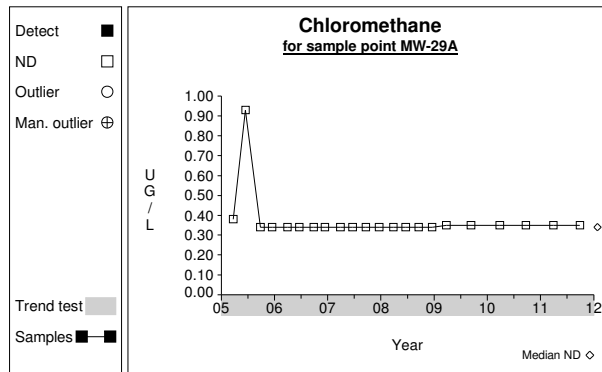
**Graph 248**



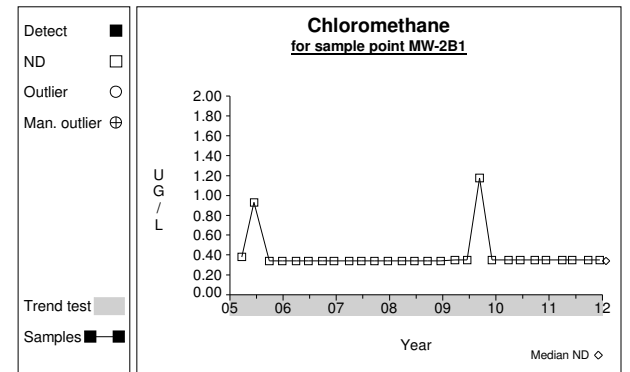
**Graph 249**



**Graph 250**



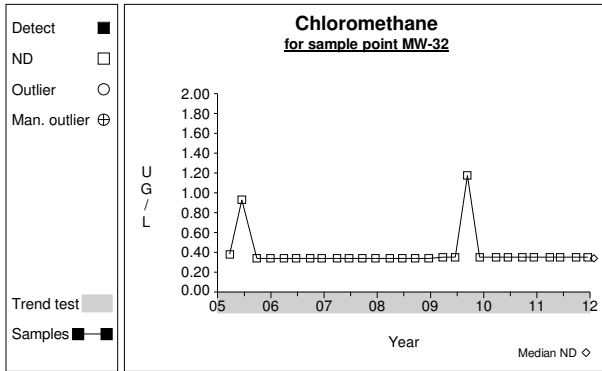
**Graph 251**



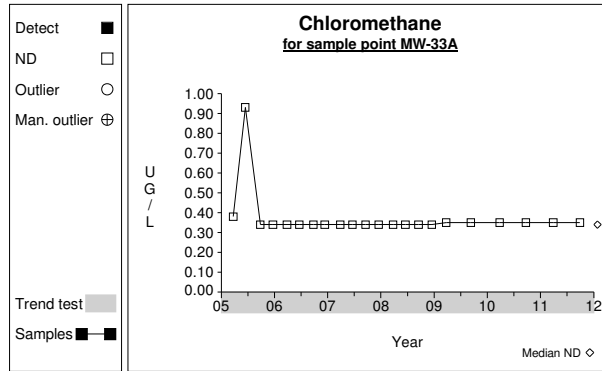
**Graph 252**



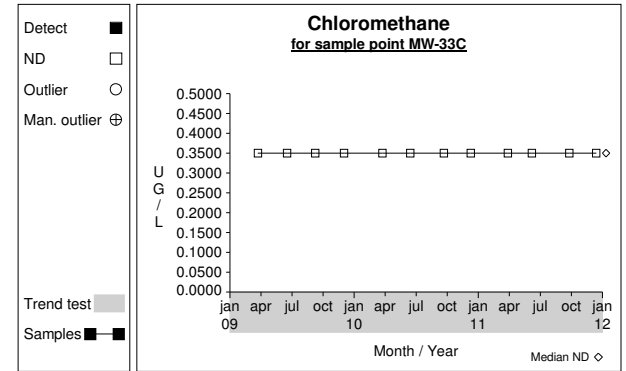
# Time Series



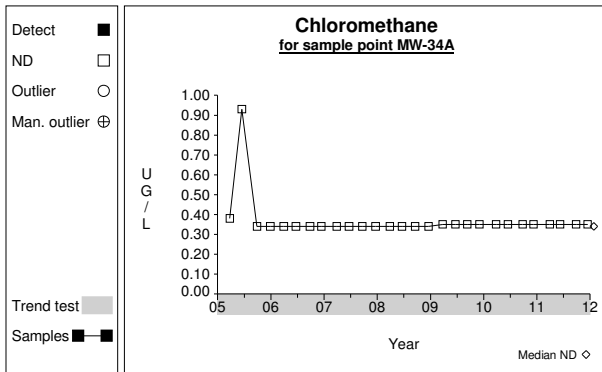
**Graph 253**



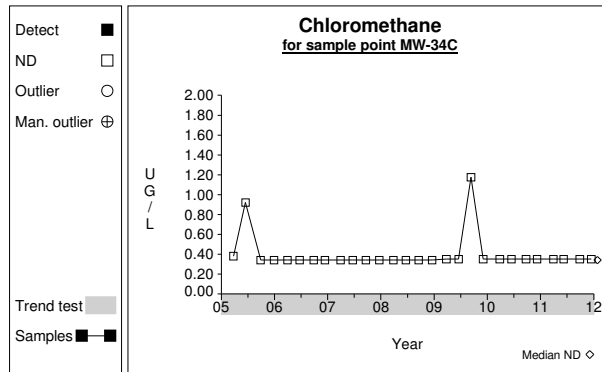
**Graph 254**



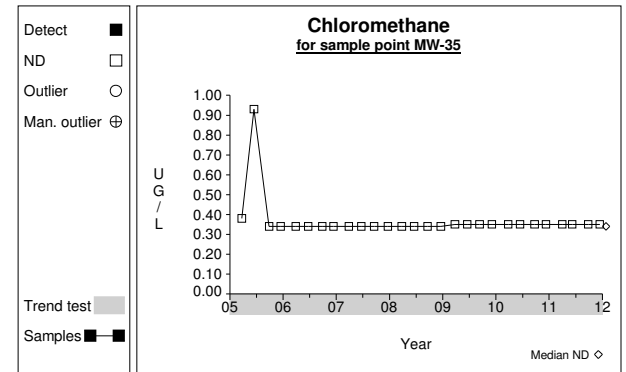
**Graph 255**



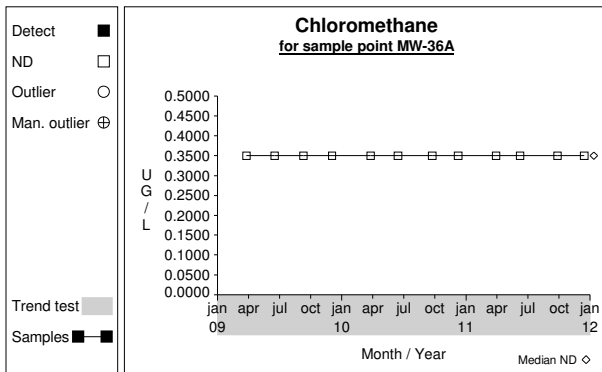
**Graph 256**



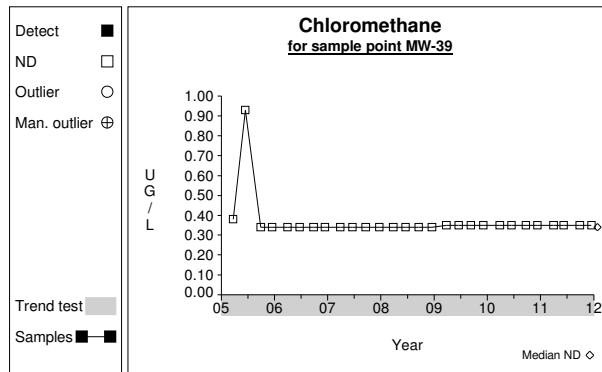
**Graph 257**



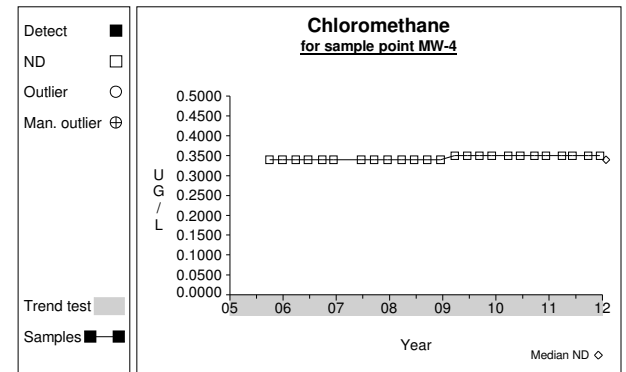
**Graph 258**



**Graph 259**

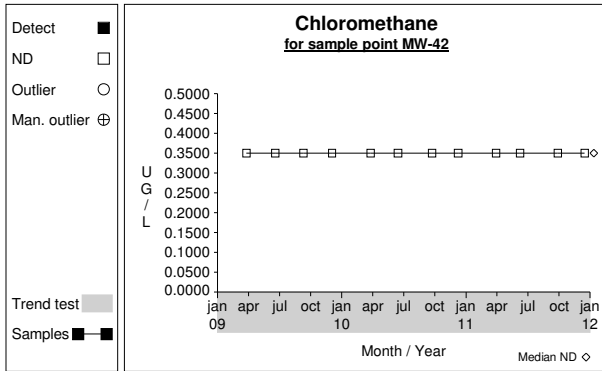


**Graph 260**

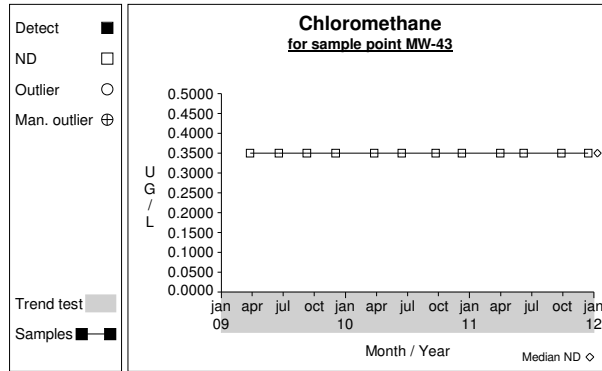


**Graph 261**

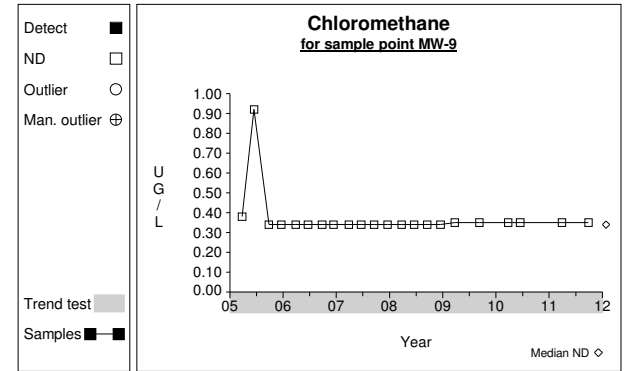
# Time Series



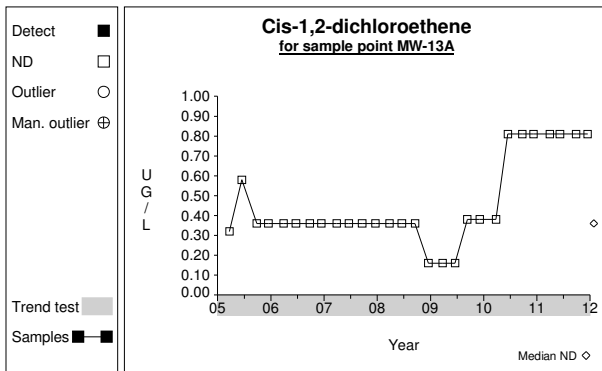
Graph 262



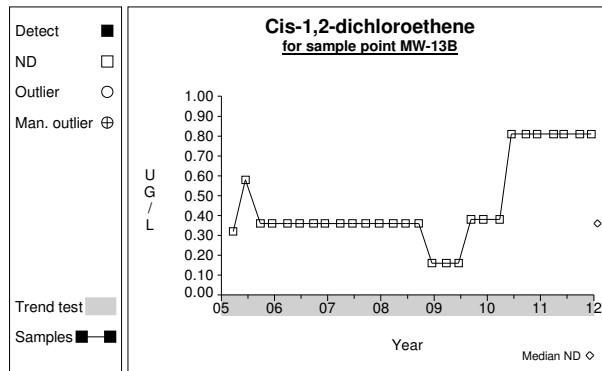
Graph 263



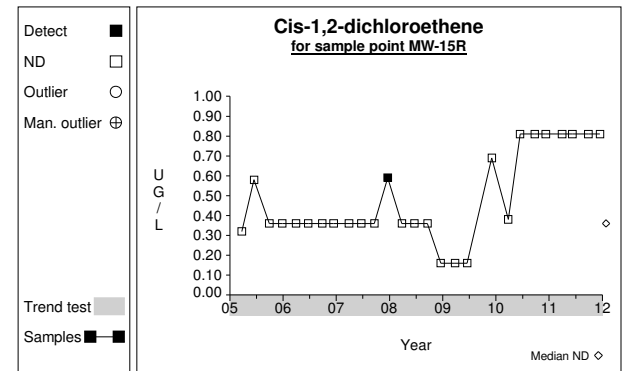
Graph 264



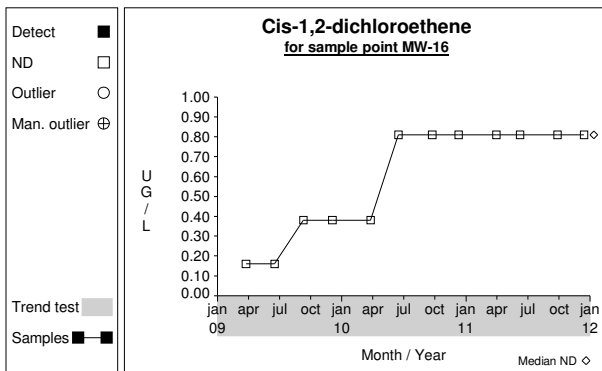
Graph 265



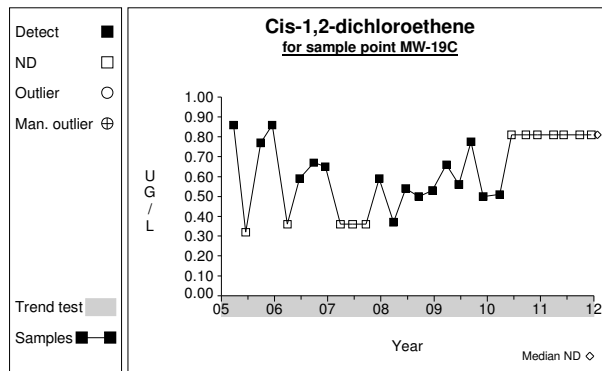
Graph 266



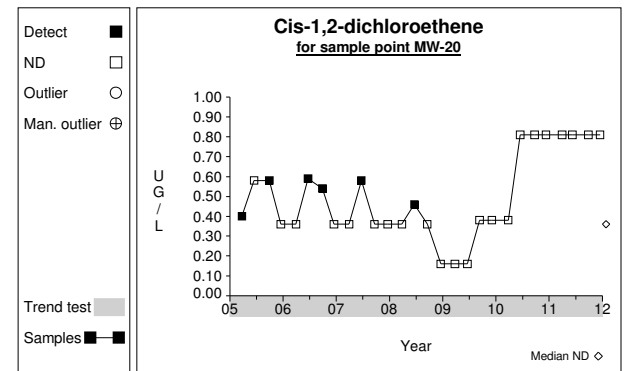
Graph 267



Graph 268

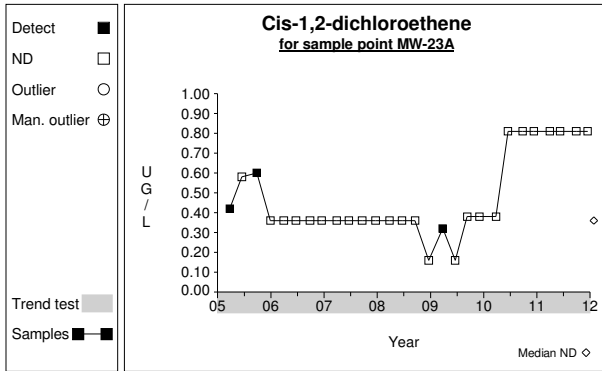


Graph 269

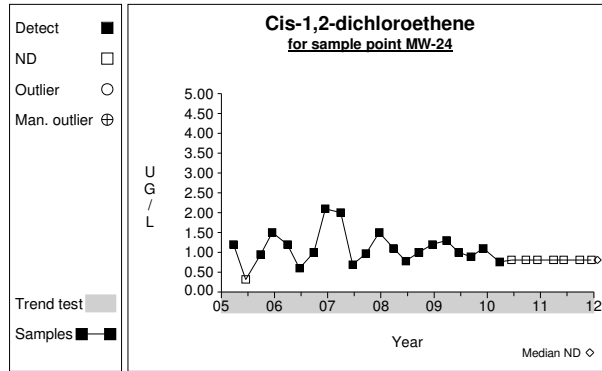


Graph 270

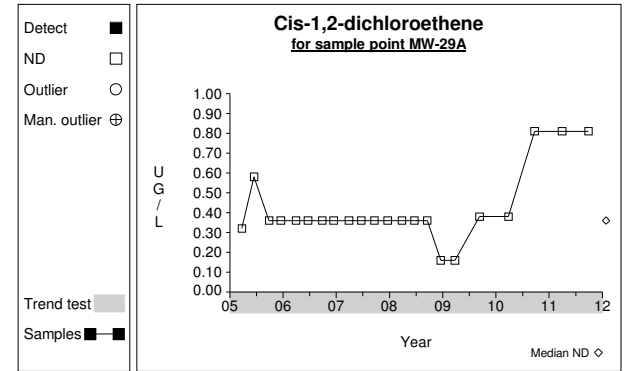
# Time Series



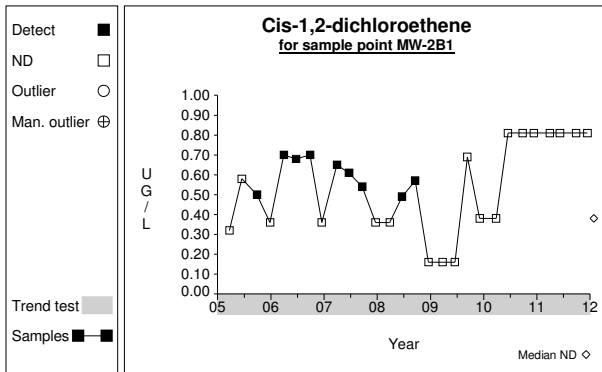
Graph 271



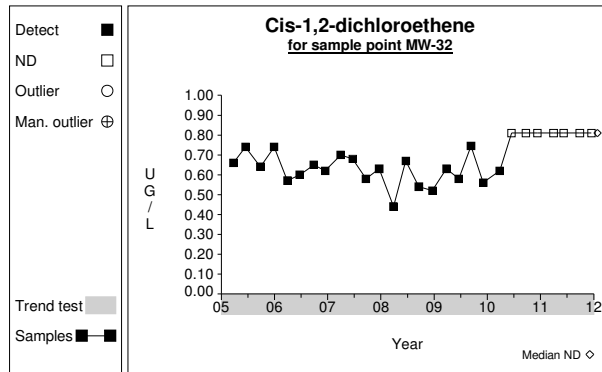
Graph 272



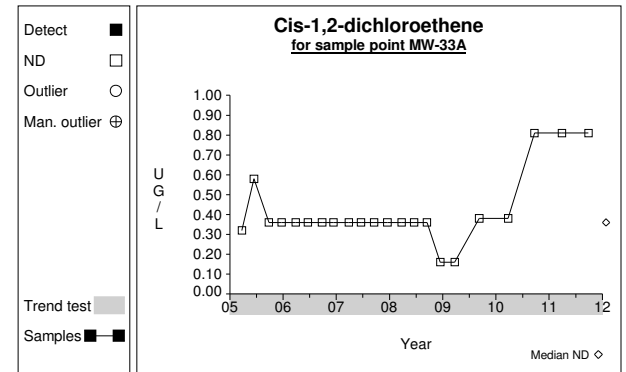
Graph 273



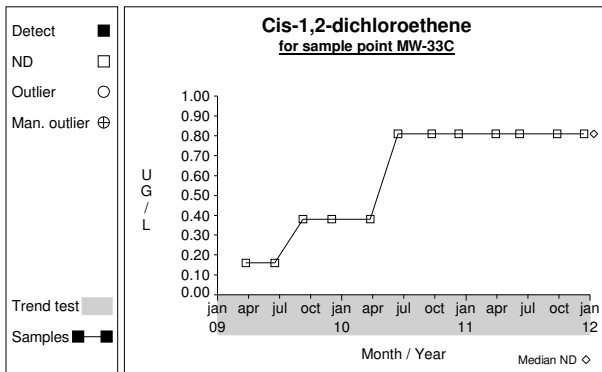
Graph 274



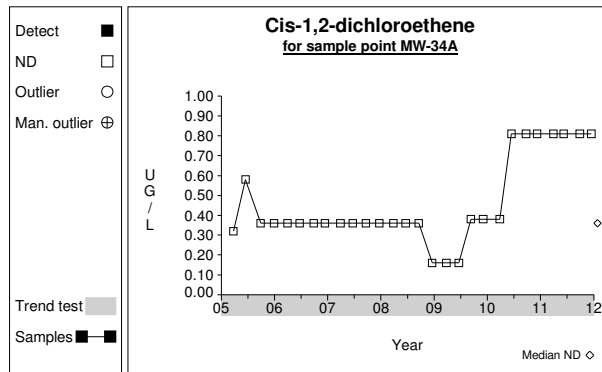
Graph 275



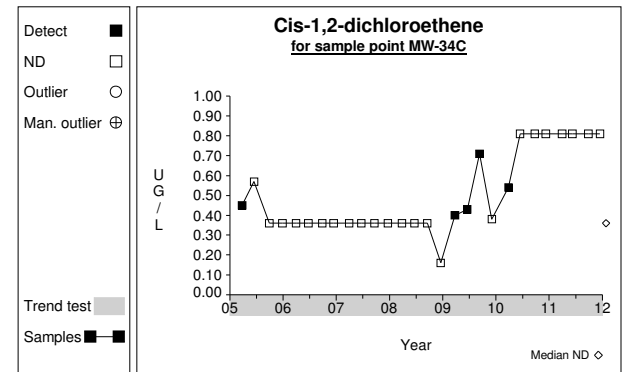
Graph 276



Graph 277

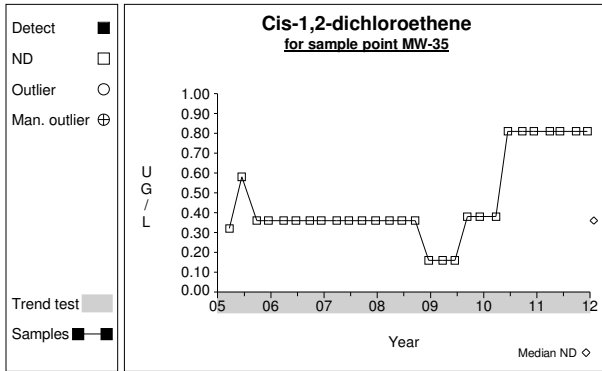


Graph 278

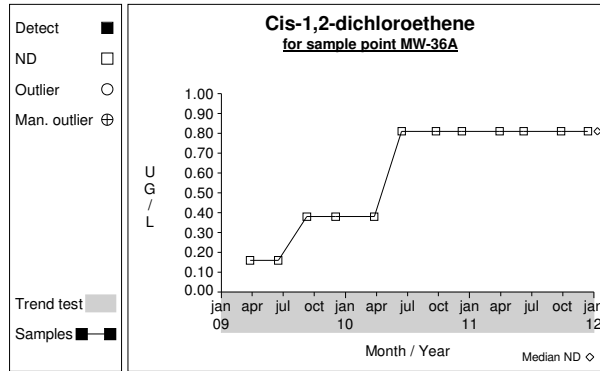


Graph 279

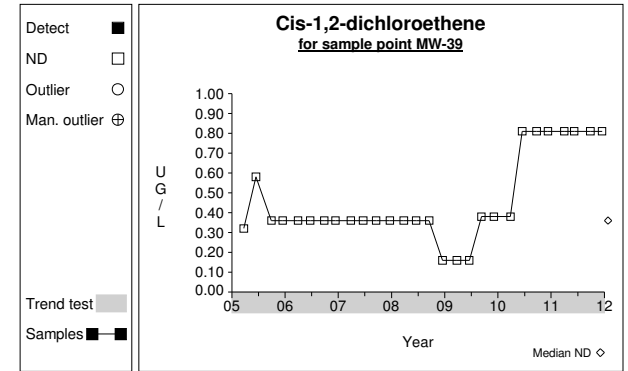
# Time Series



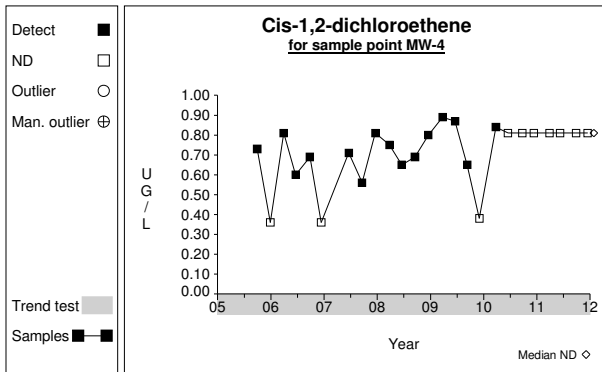
**Graph 280**



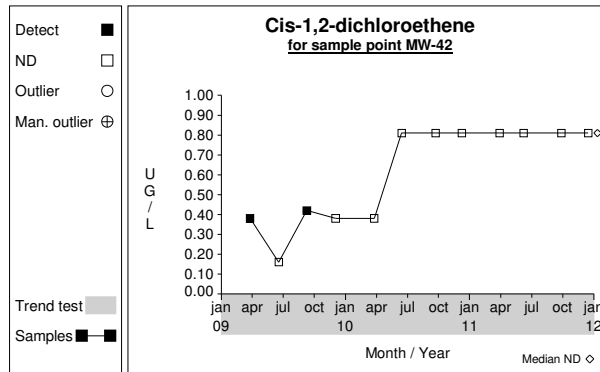
**Graph 281**



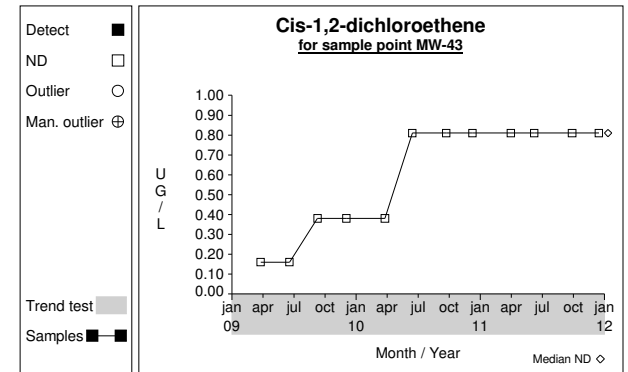
**Graph 282**



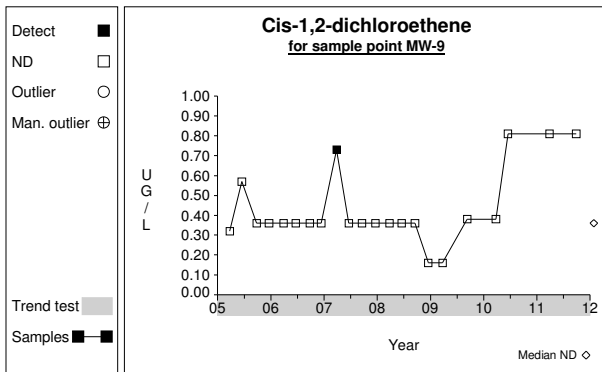
**Graph 283**



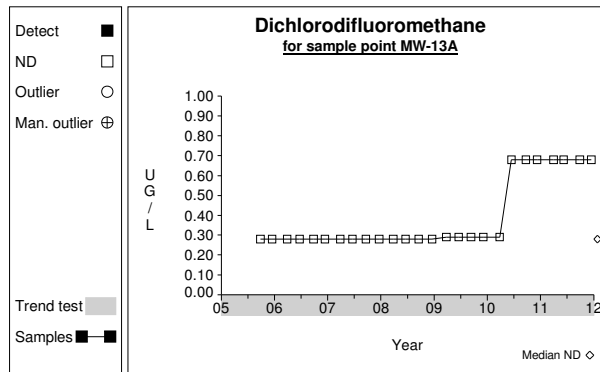
**Graph 284**



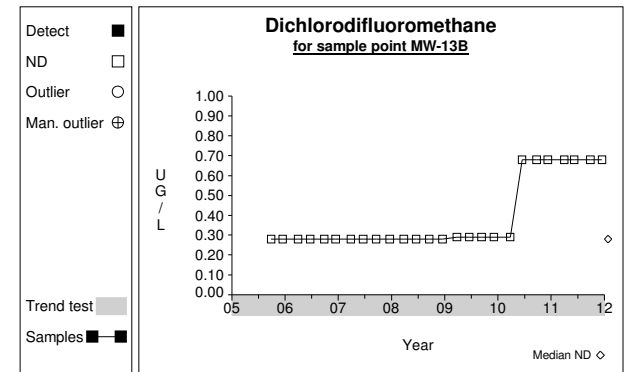
**Graph 285**



**Graph 286**

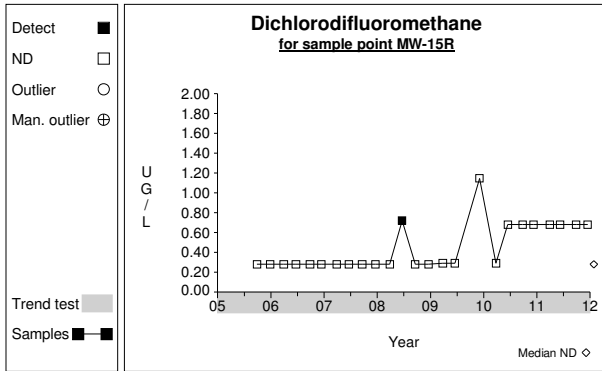


**Graph 287**

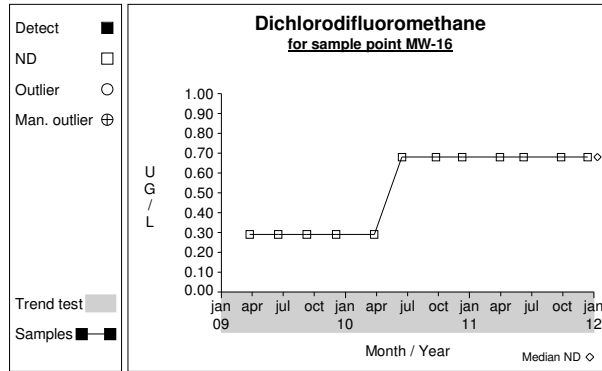


**Graph 288**

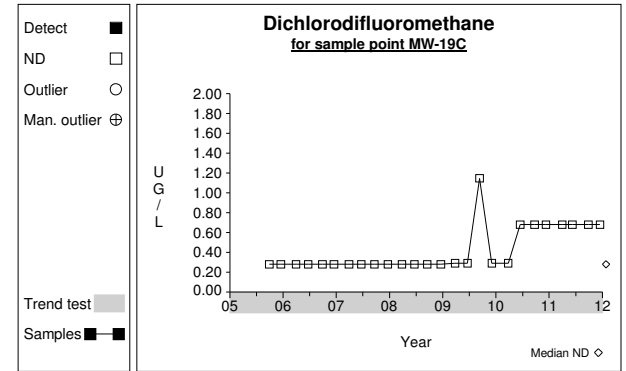
# Time Series



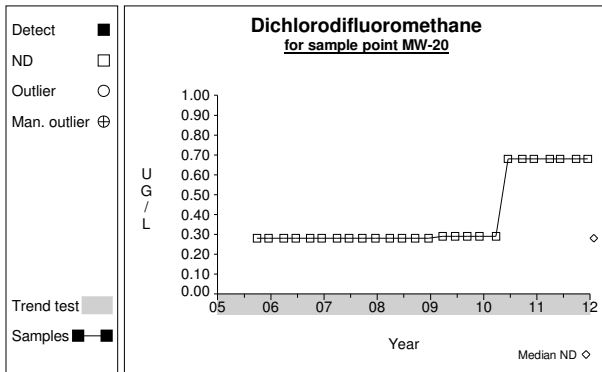
Graph 289



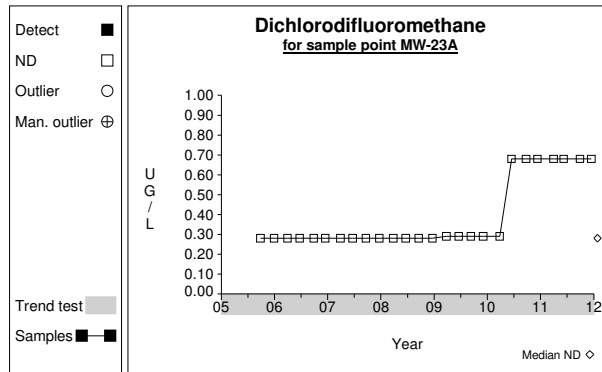
Graph 290



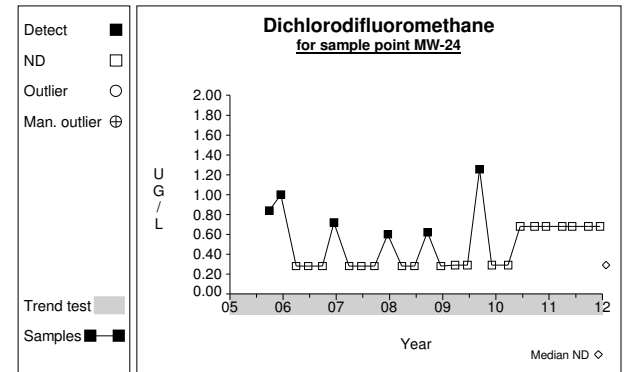
Graph 291



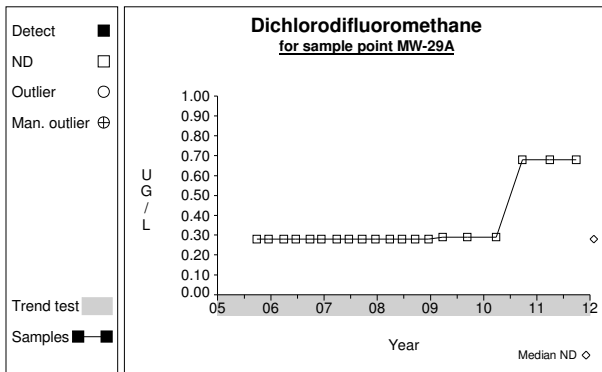
Graph 292



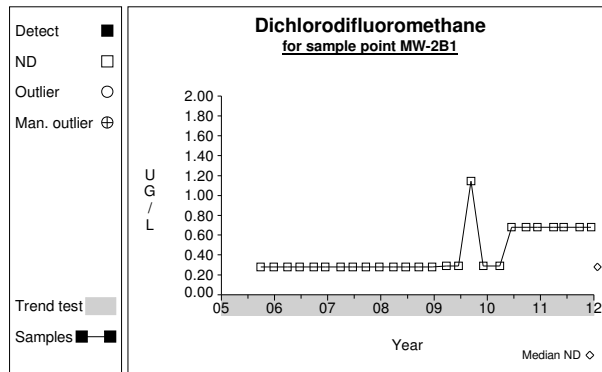
Graph 293



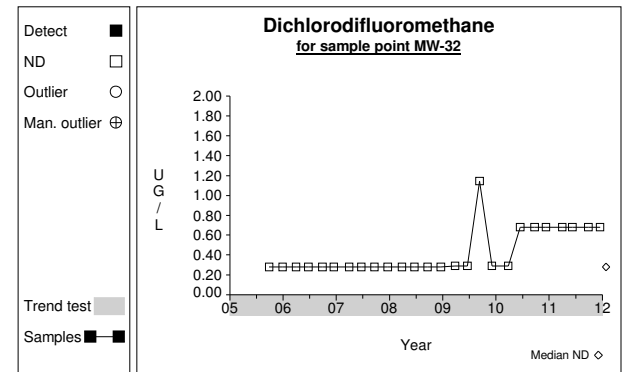
Graph 294



Graph 295

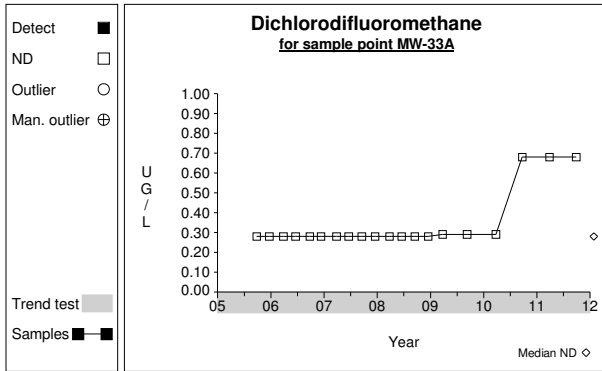


Graph 296

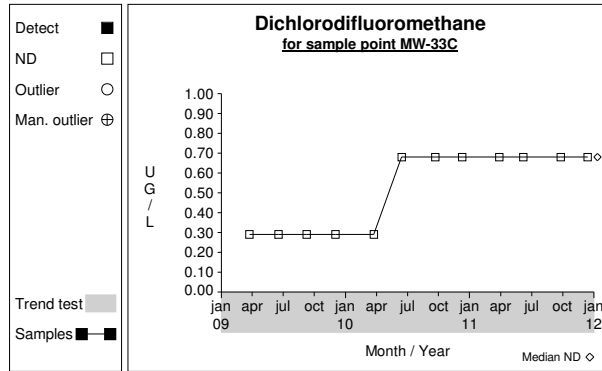


Graph 297

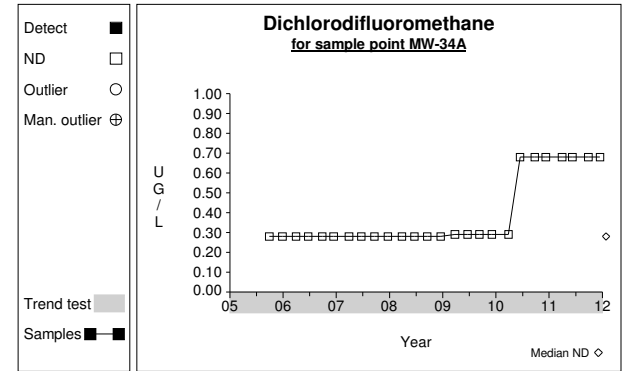
# Time Series



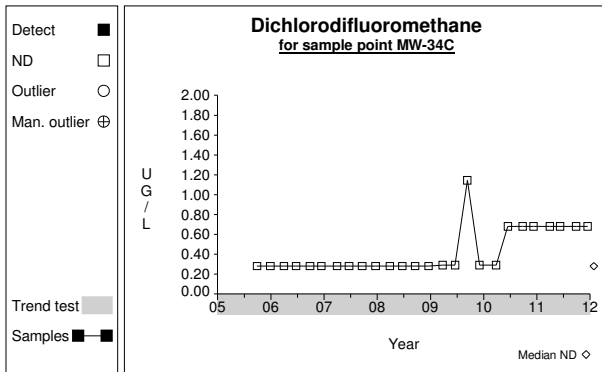
Graph 298



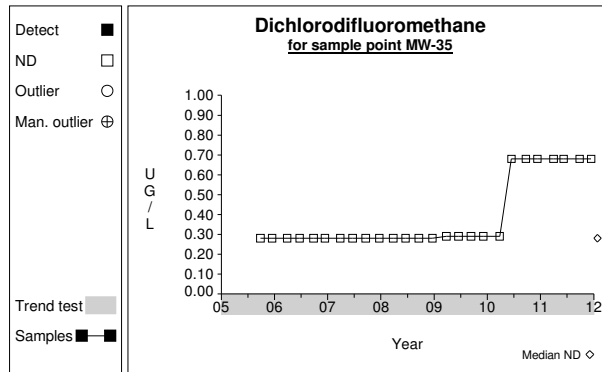
Graph 299



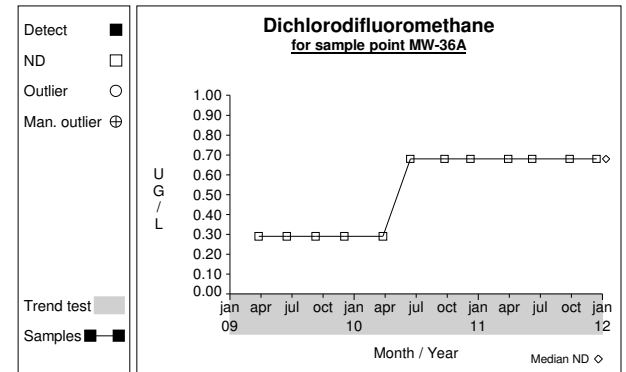
Graph 300



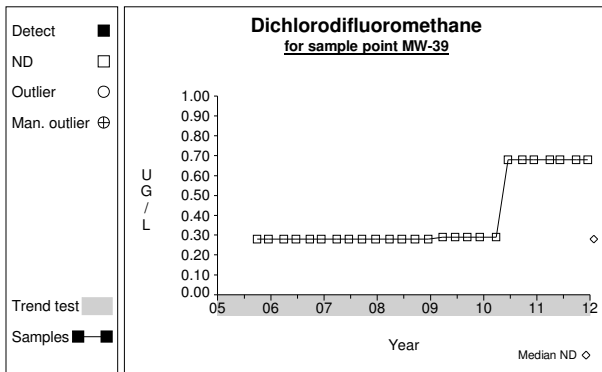
Graph 301



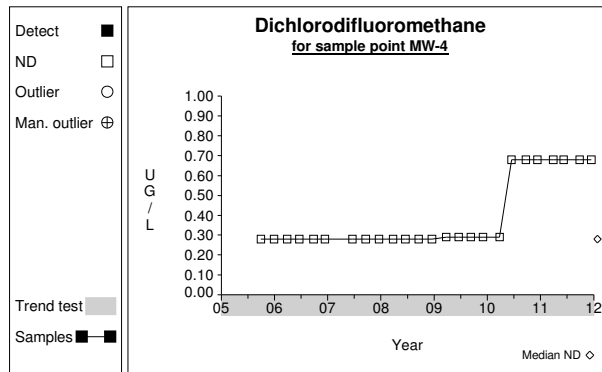
Graph 302



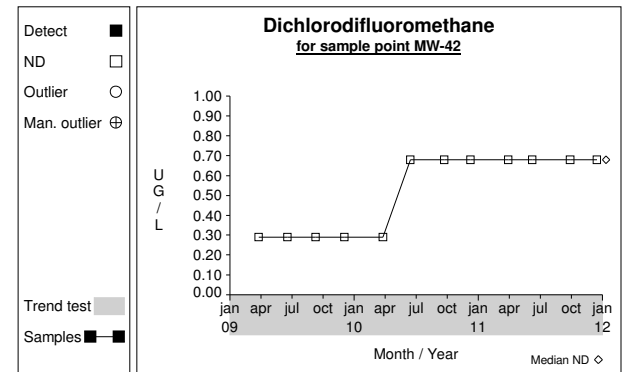
Graph 303



Graph 304

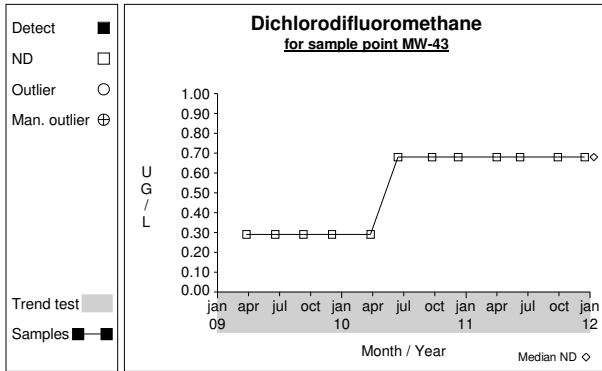


Graph 305

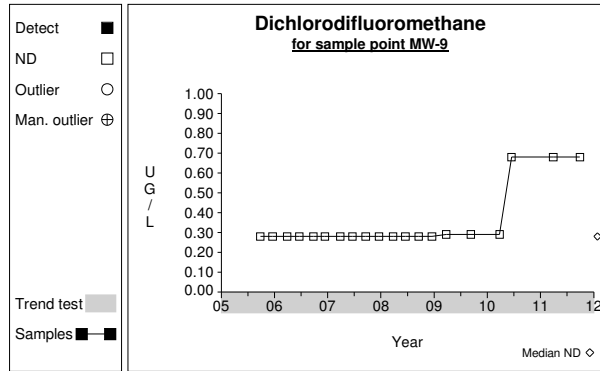


Graph 306

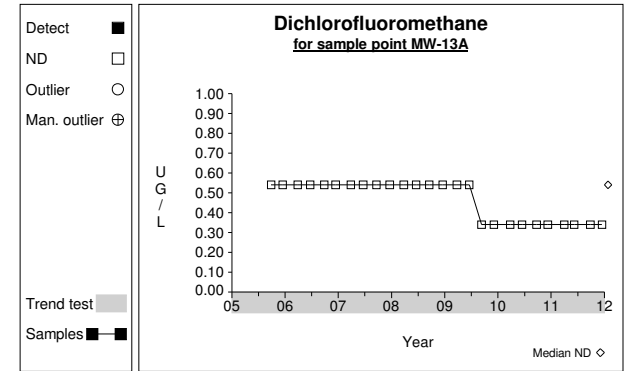
# Time Series



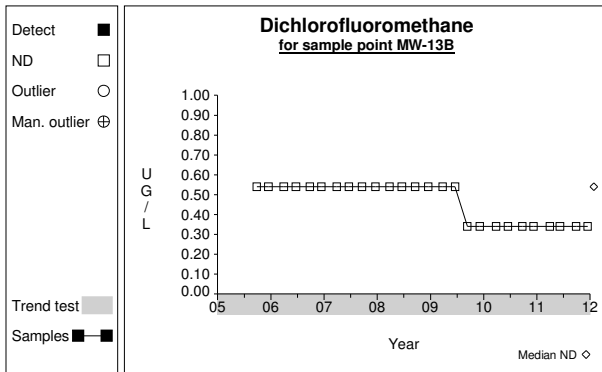
**Graph 307**



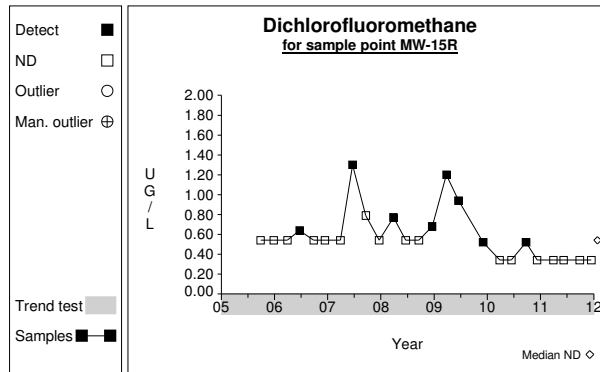
**Graph 308**



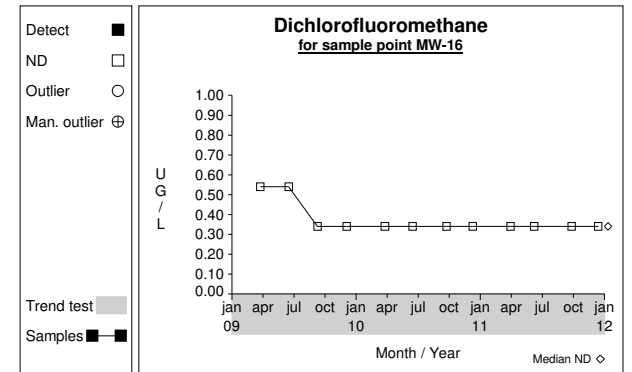
**Graph 309**



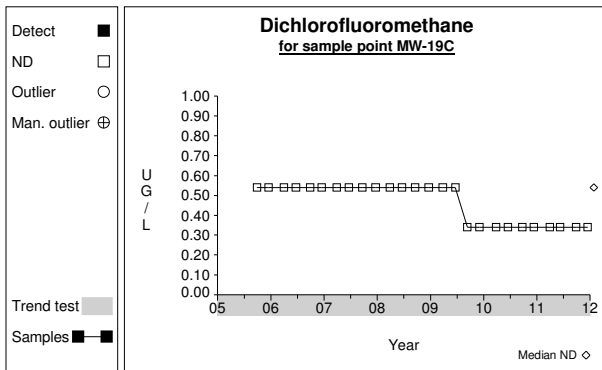
**Graph 310**



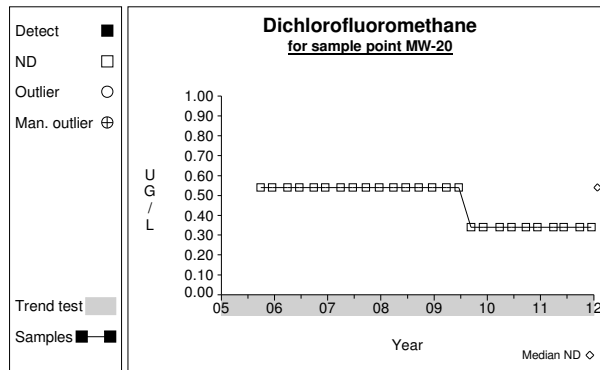
**Graph 311**



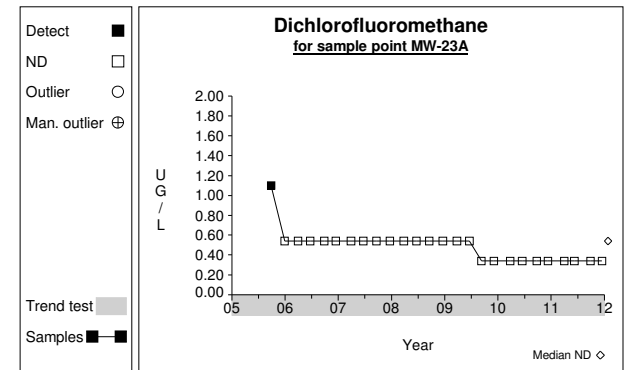
**Graph 312**



**Graph 313**

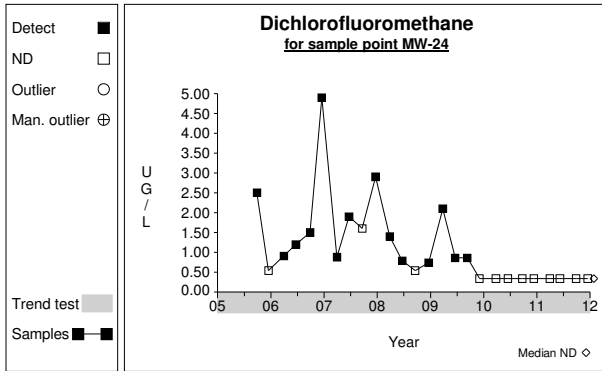


**Graph 314**

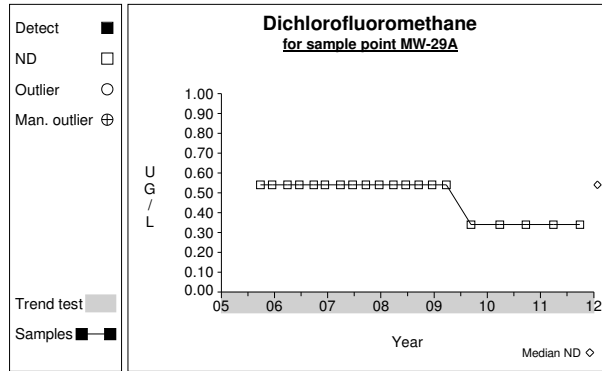


**Graph 315**

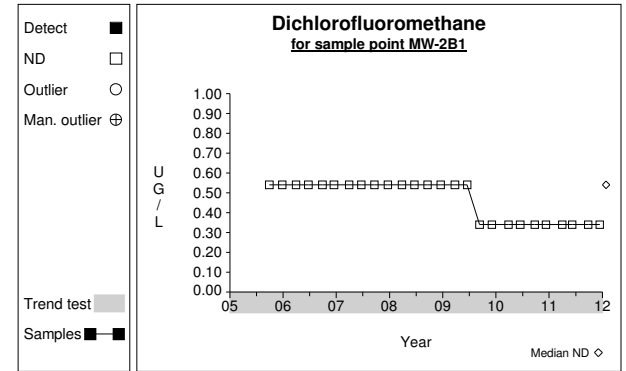
# Time Series



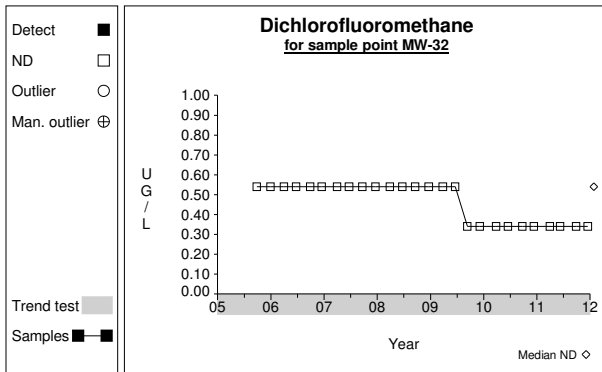
**Graph 316**



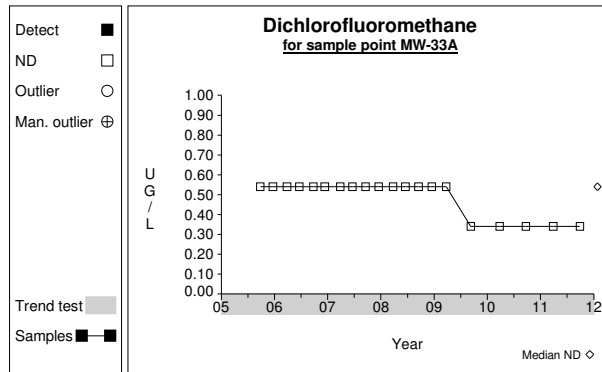
**Graph 317**



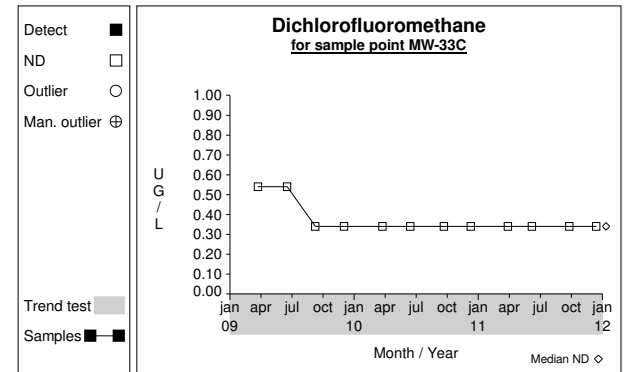
**Graph 318**



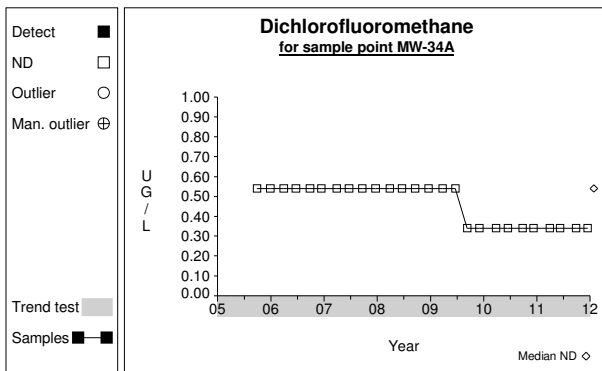
**Graph 319**



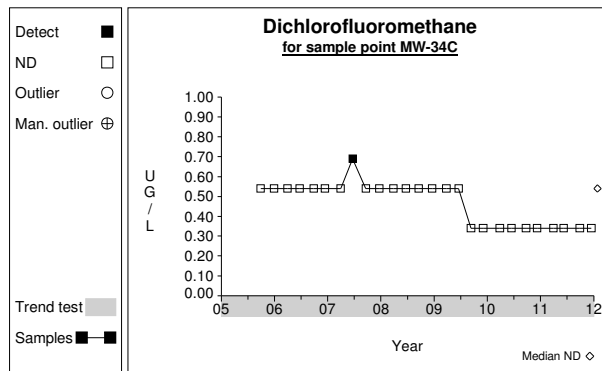
**Graph 320**



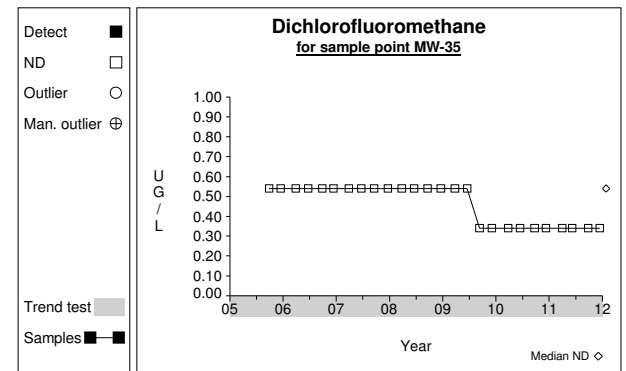
**Graph 321**



**Graph 322**



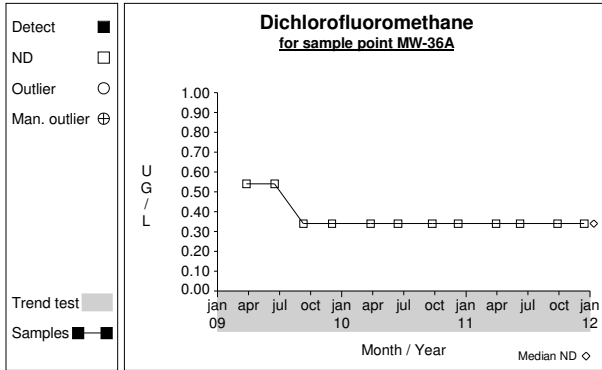
**Graph 323**



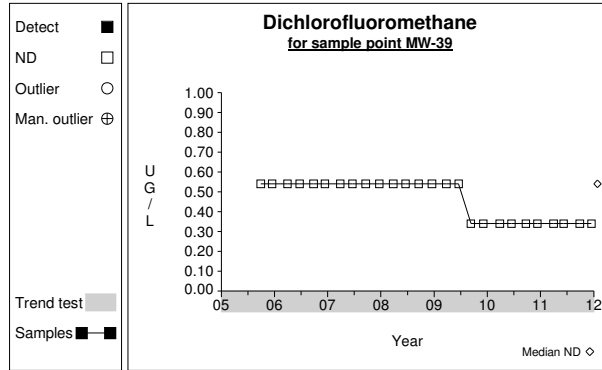
**Graph 324**



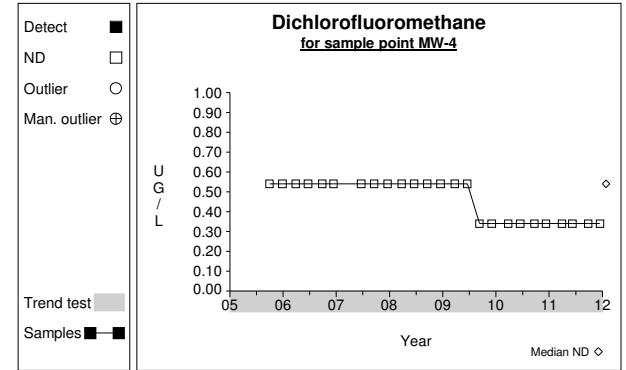
# Time Series



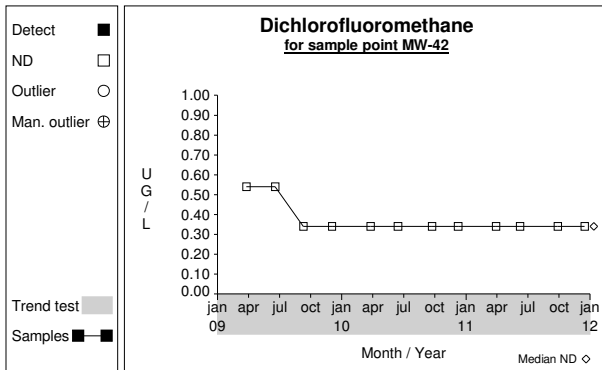
**Graph 325**



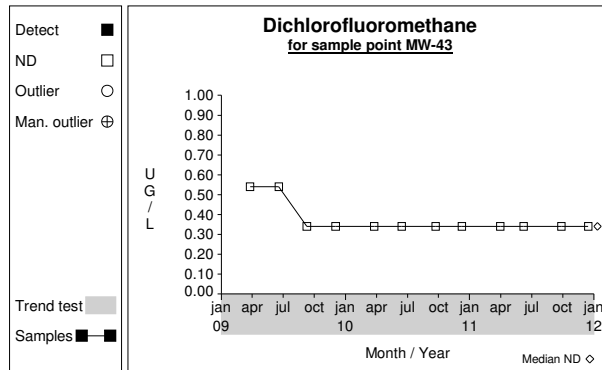
**Graph 326**



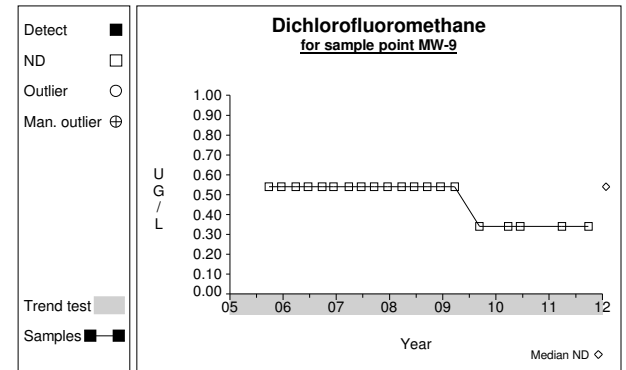
**Graph 327**



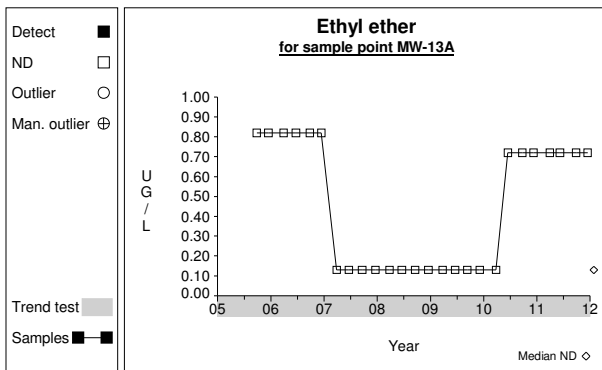
**Graph 328**



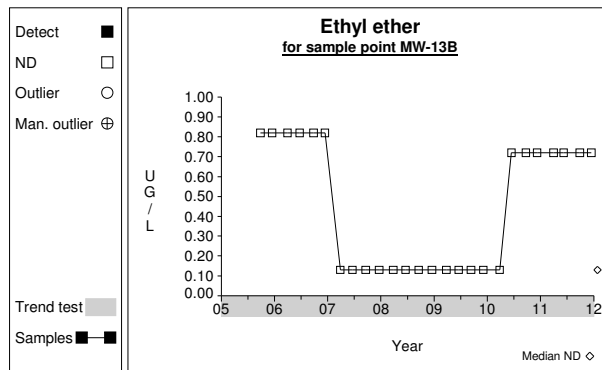
**Graph 329**



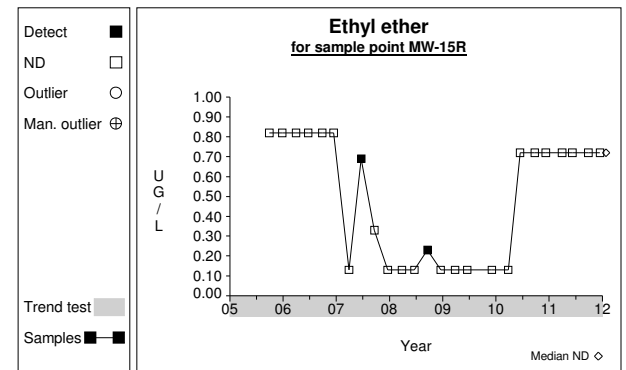
**Graph 330**



**Graph 331**

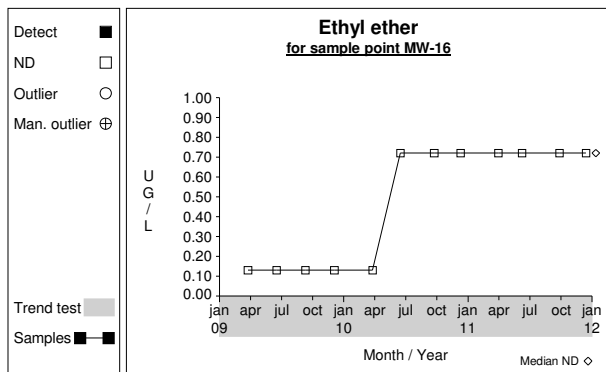


**Graph 332**

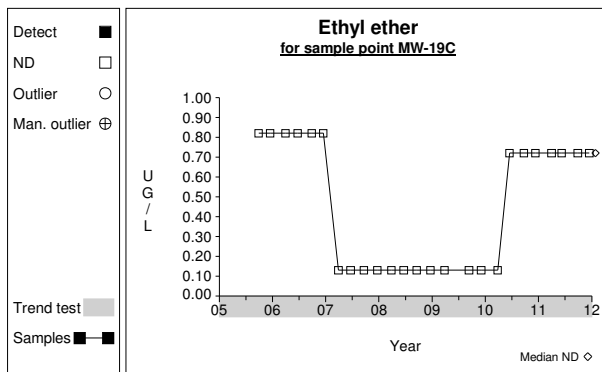


**Graph 333**

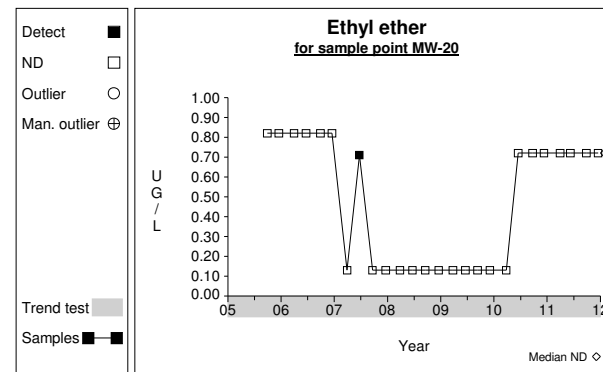
### Time Series



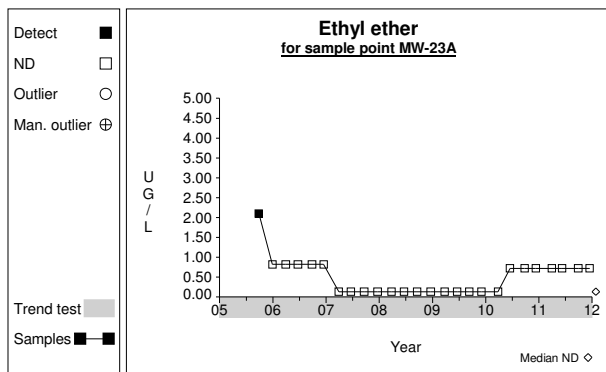
Graph 334



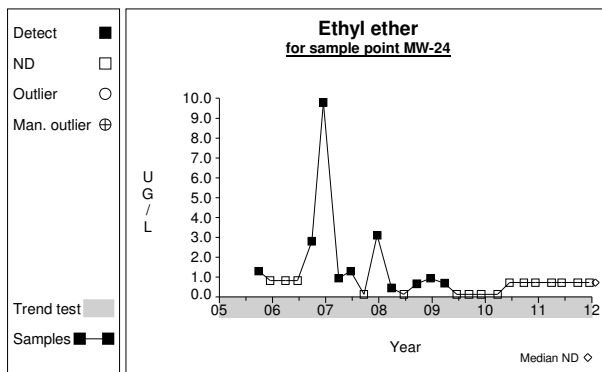
Graph 335



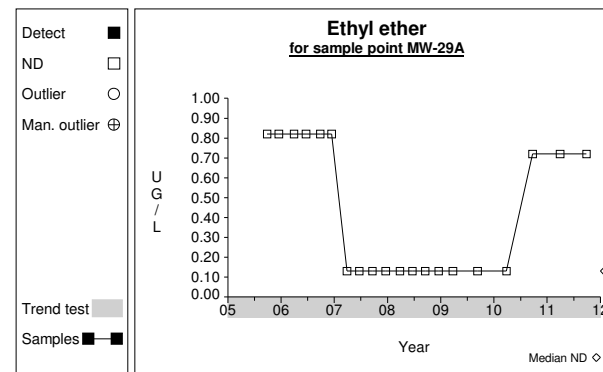
Graph 336



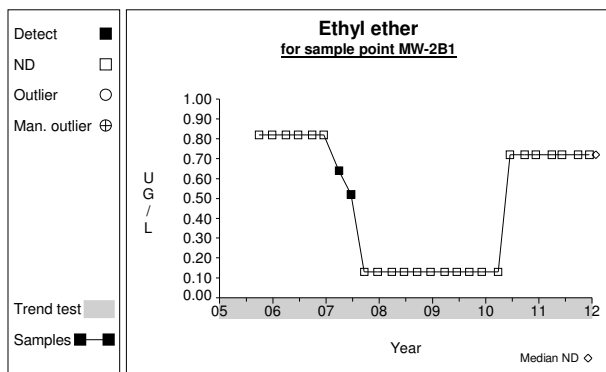
Graph 337



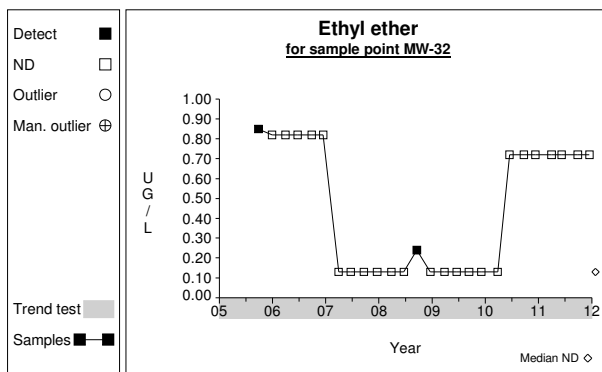
Graph 338



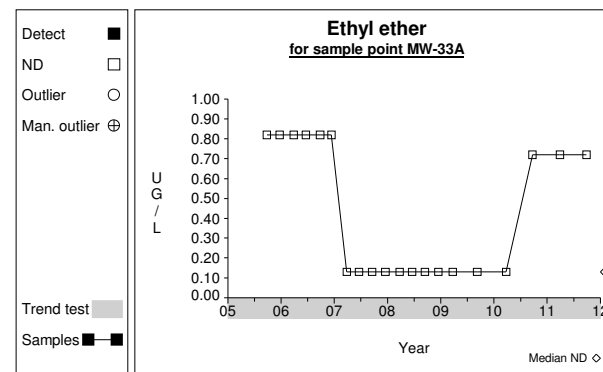
Graph 339



Graph 340

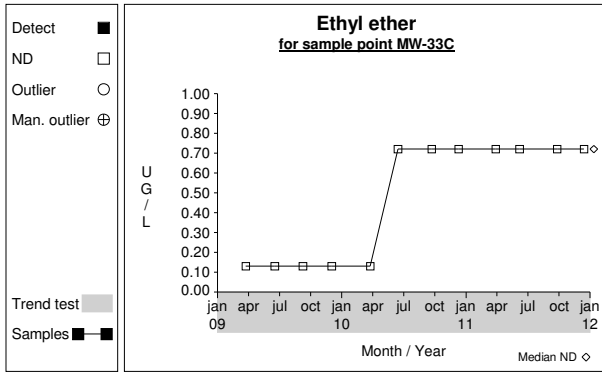


Graph 341

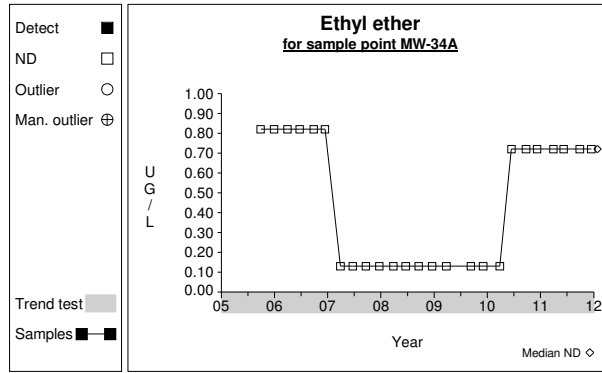


Graph 342

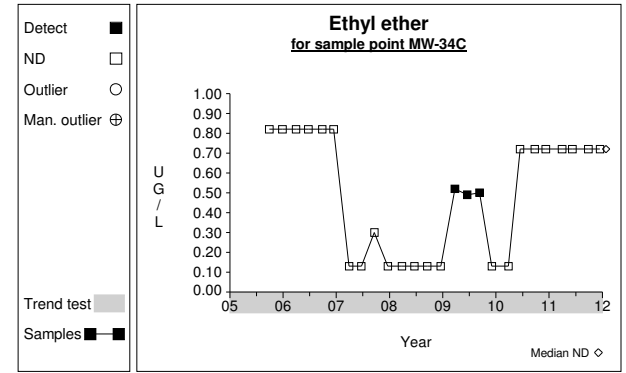
# Time Series



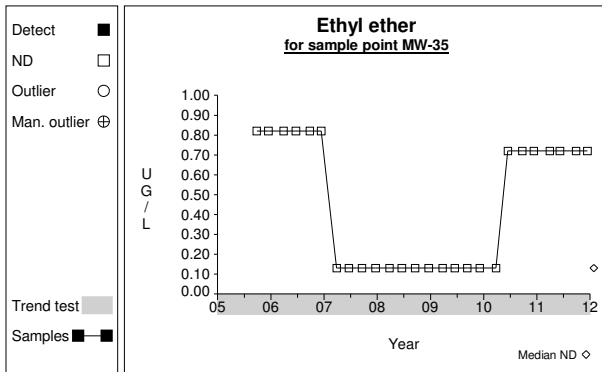
**Graph 343**



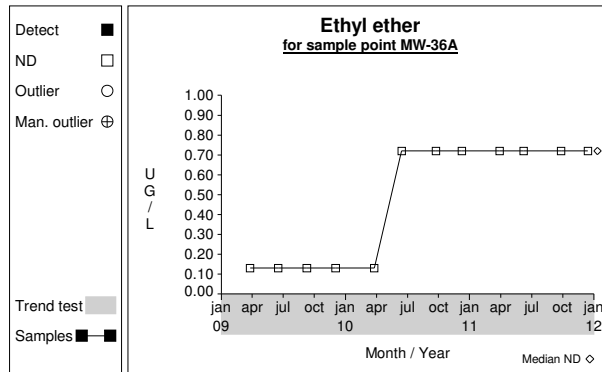
**Graph 344**



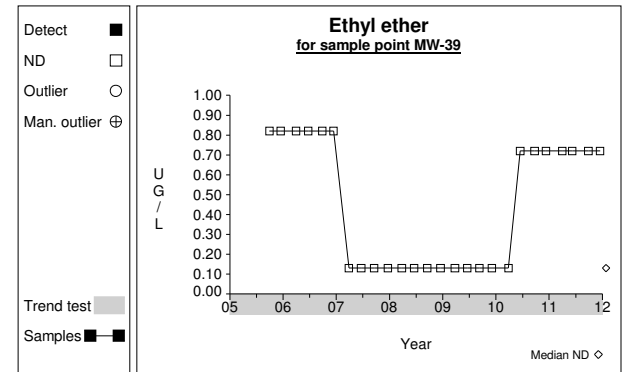
**Graph 345**



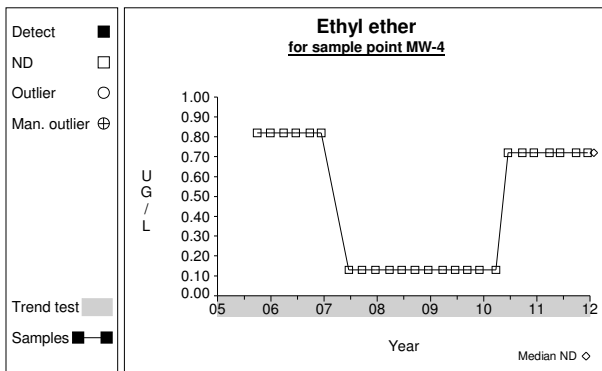
**Graph 346**



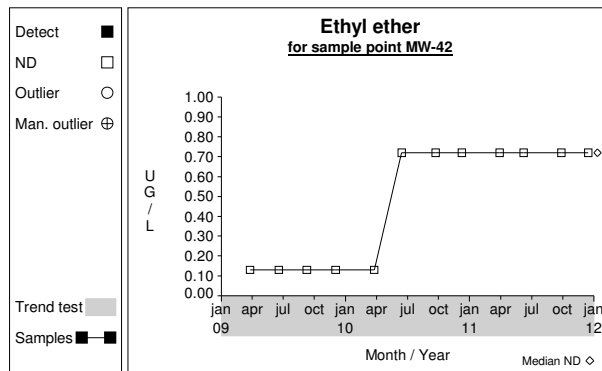
**Graph 347**



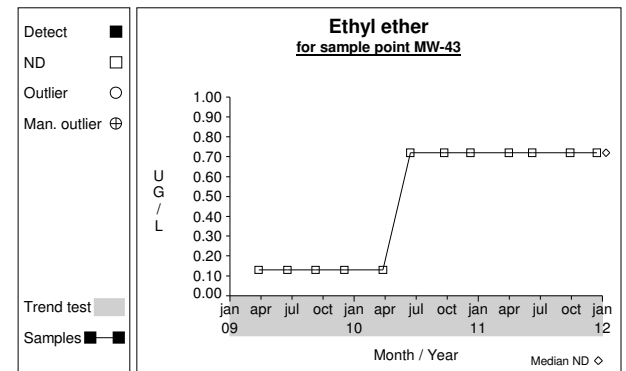
**Graph 348**



**Graph 349**

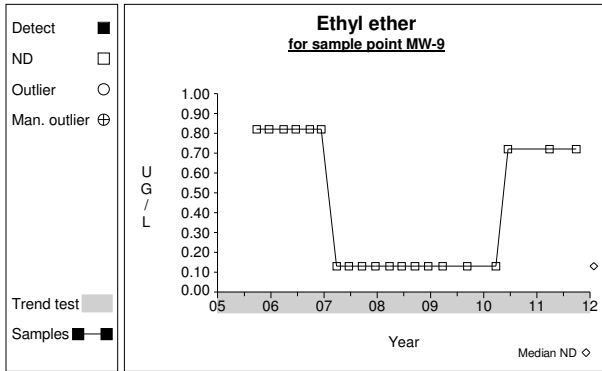


**Graph 350**

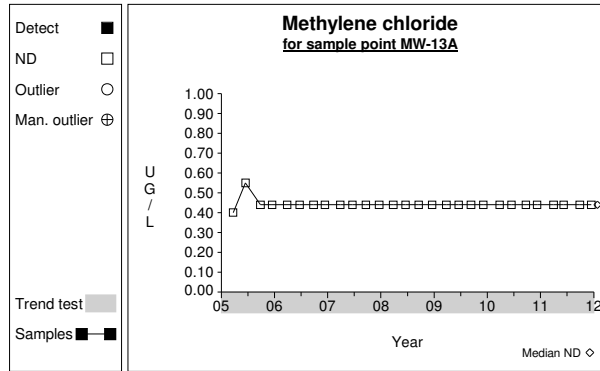


**Graph 351**

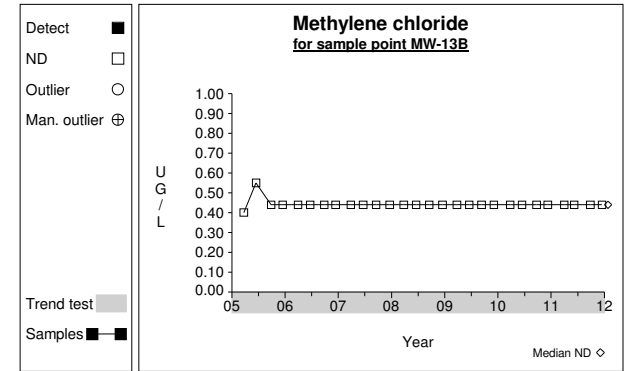
# Time Series



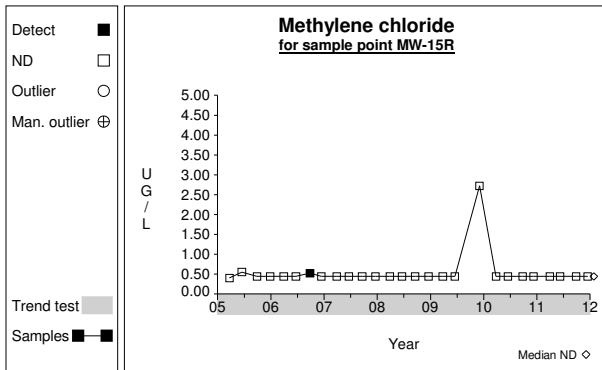
Graph 352



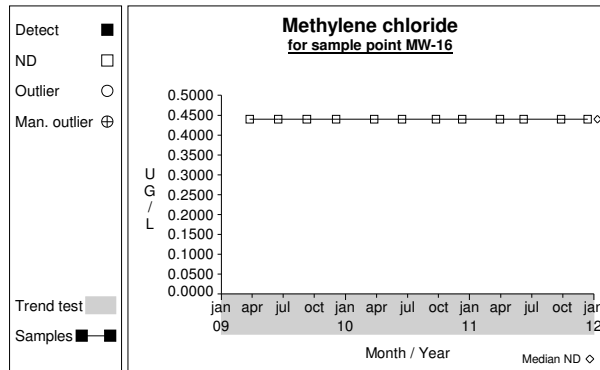
Graph 353



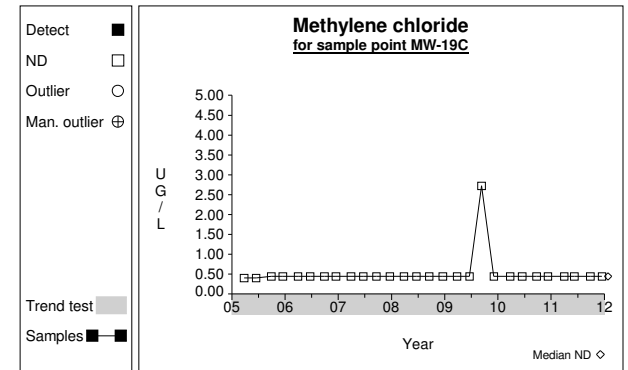
Graph 354



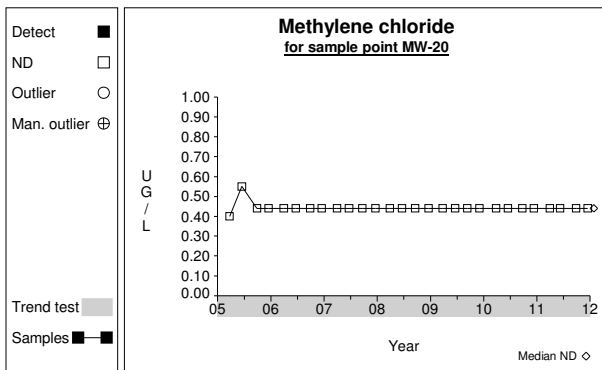
Graph 355



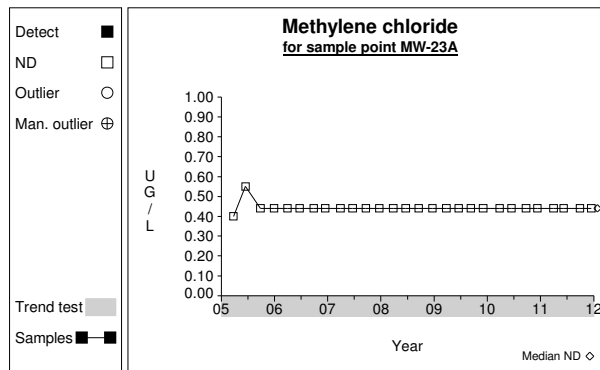
Graph 356



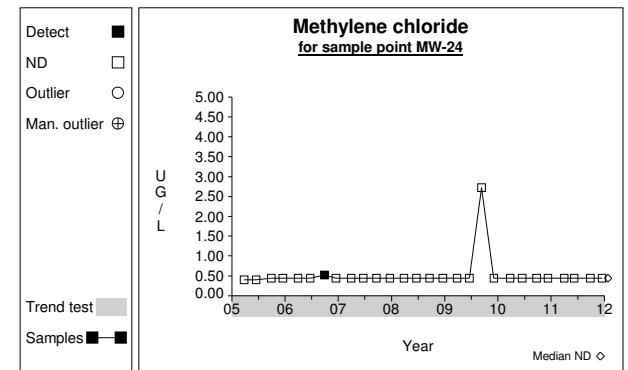
Graph 357



Graph 358

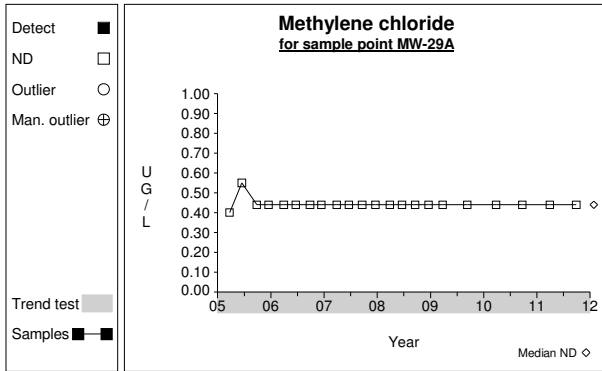


Graph 359

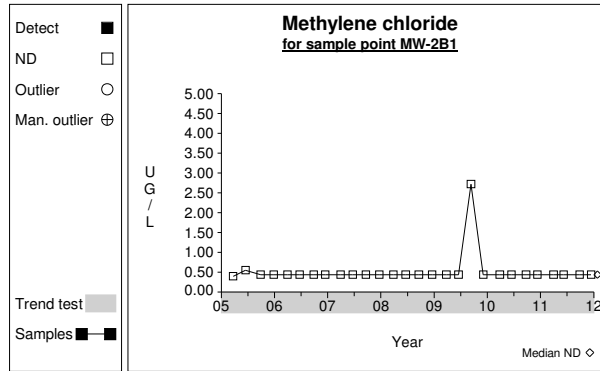


Graph 360

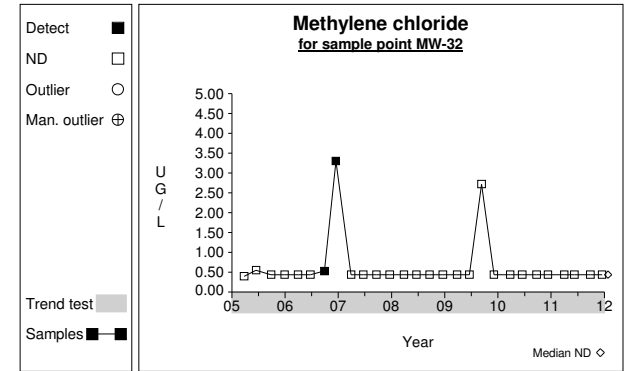
# Time Series



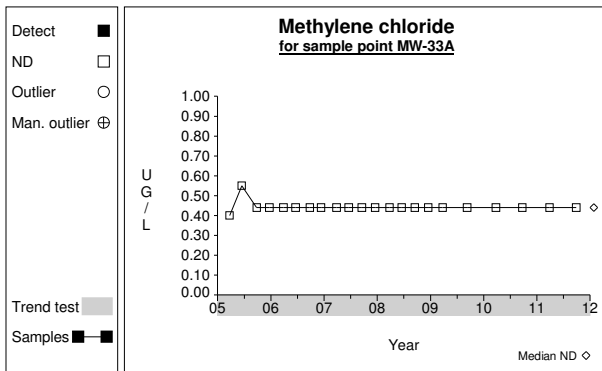
**Graph 361**



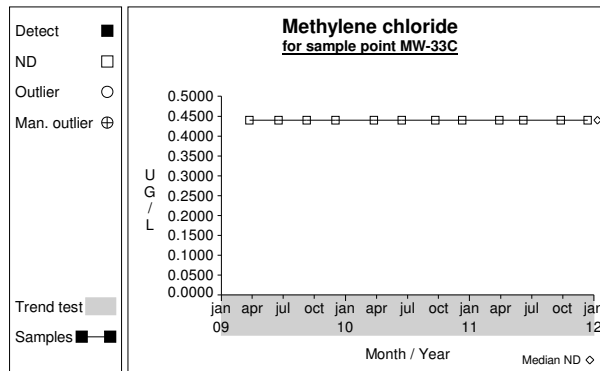
**Graph 362**



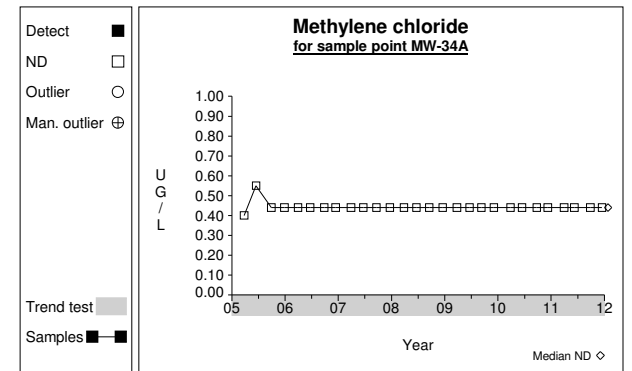
**Graph 363**



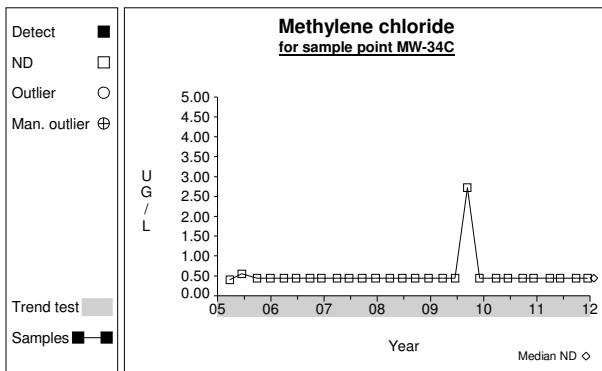
**Graph 364**



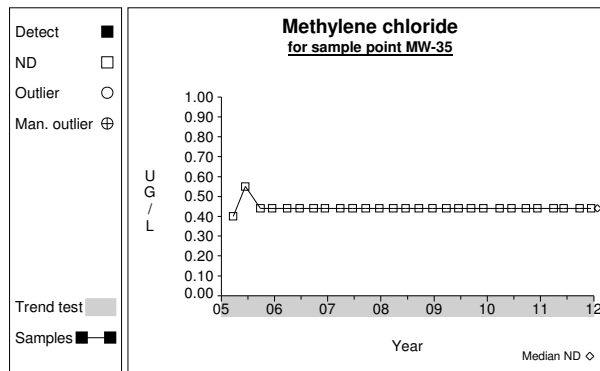
**Graph 365**



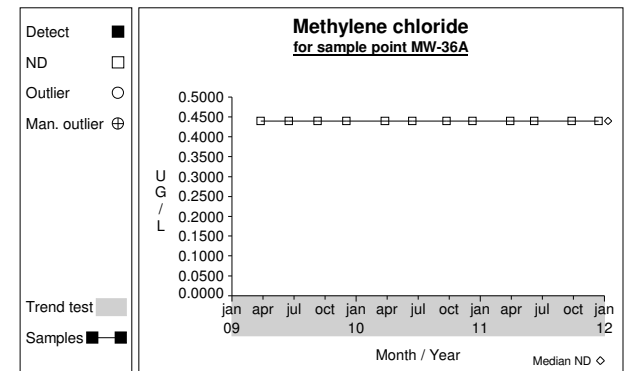
**Graph 366**



**Graph 367**

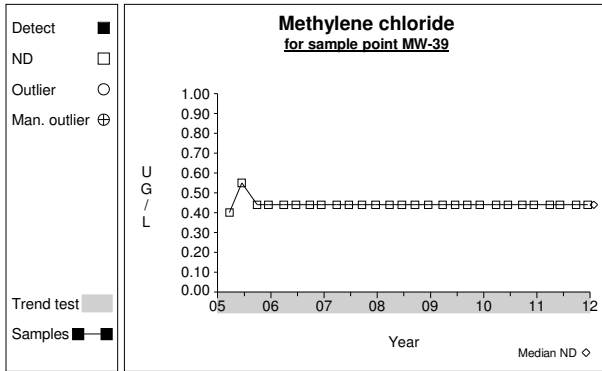


**Graph 368**

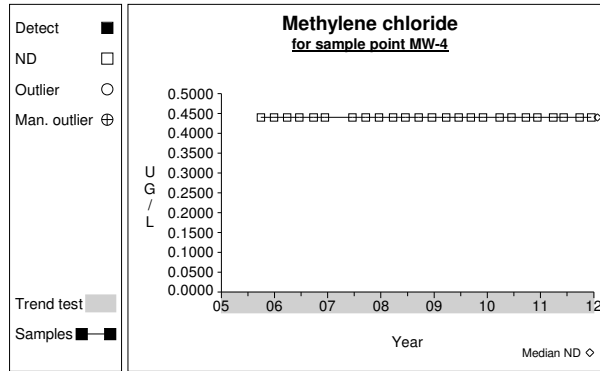


**Graph 369**

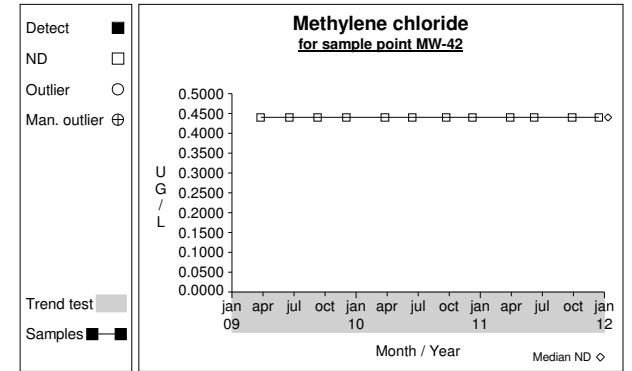
# Time Series



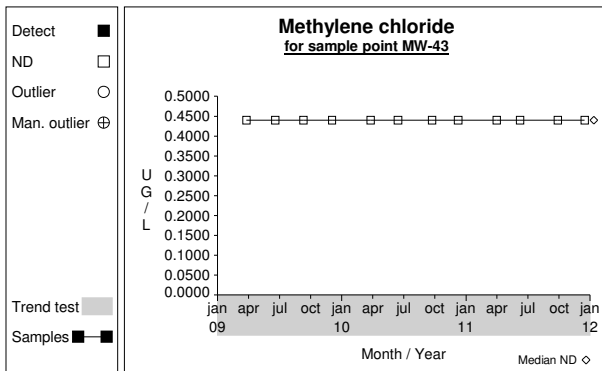
**Graph 370**



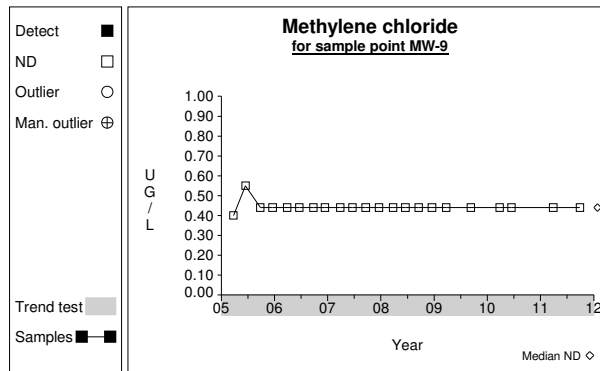
**Graph 371**



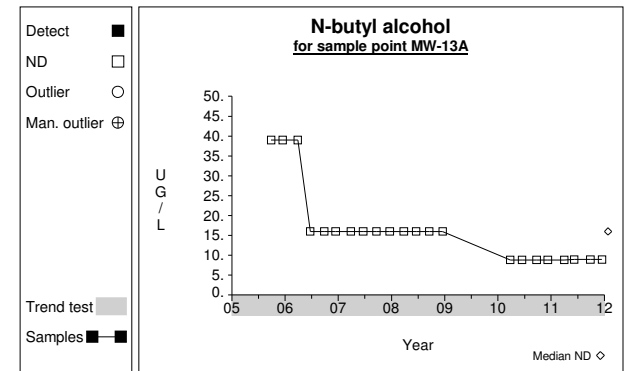
**Graph 372**



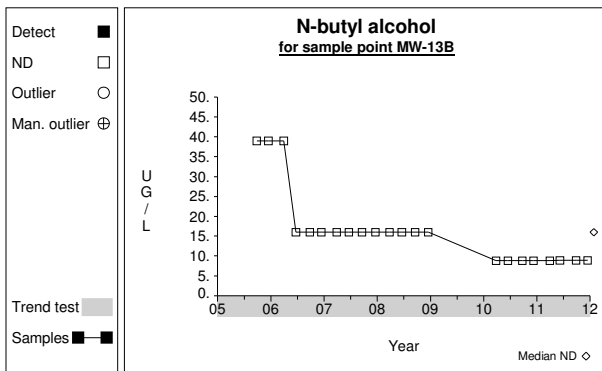
**Graph 373**



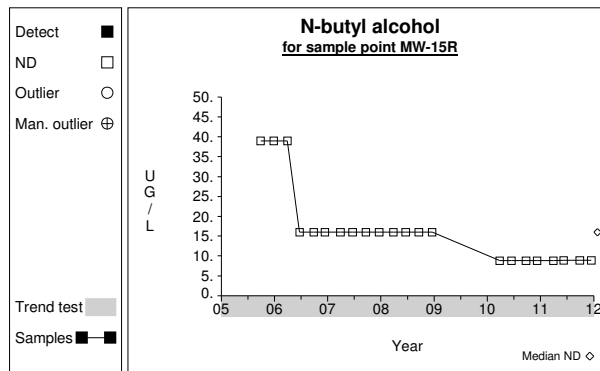
**Graph 374**



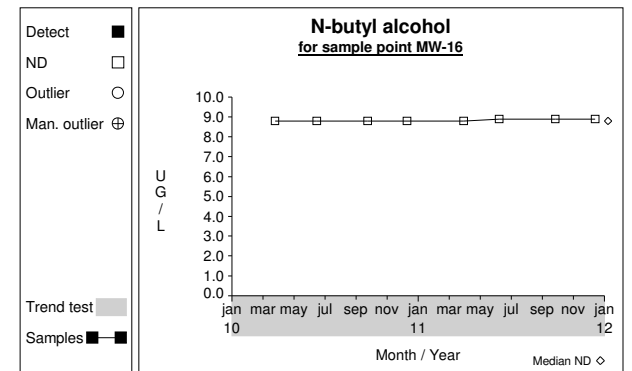
**Graph 375**



**Graph 376**

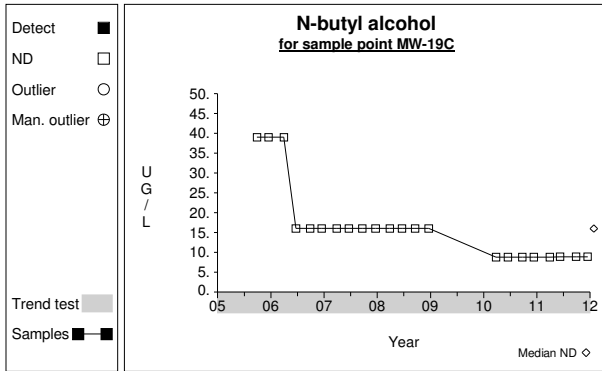


**Graph 377**

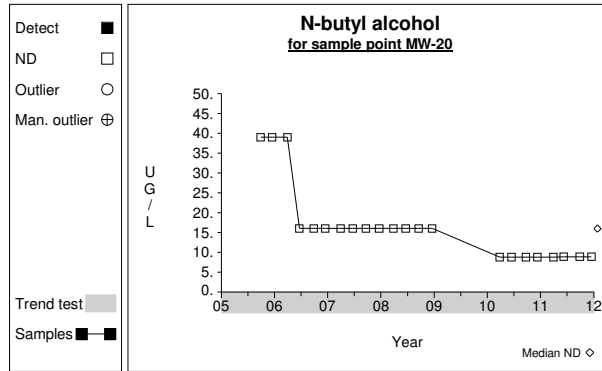


**Graph 378**

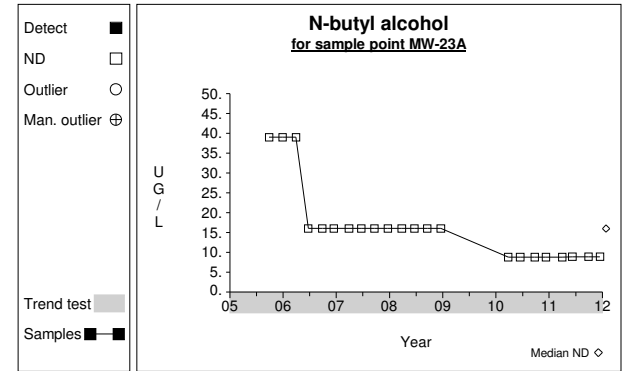
# Time Series



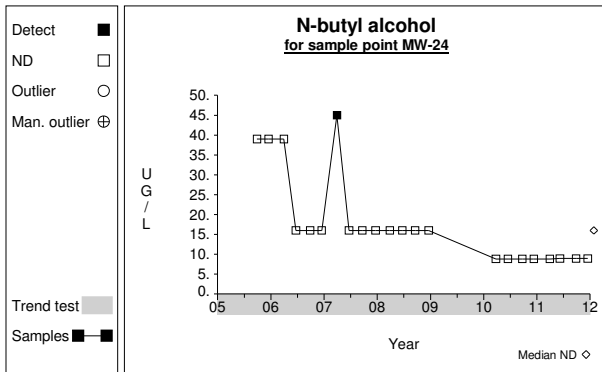
Graph 379



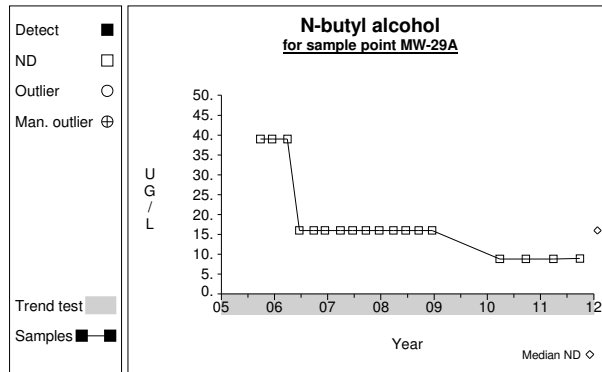
Graph 380



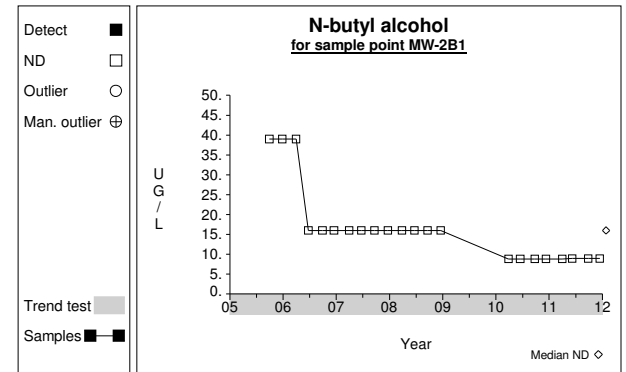
Graph 381



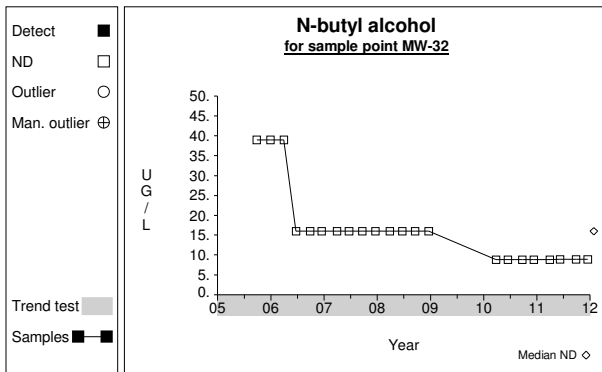
Graph 382



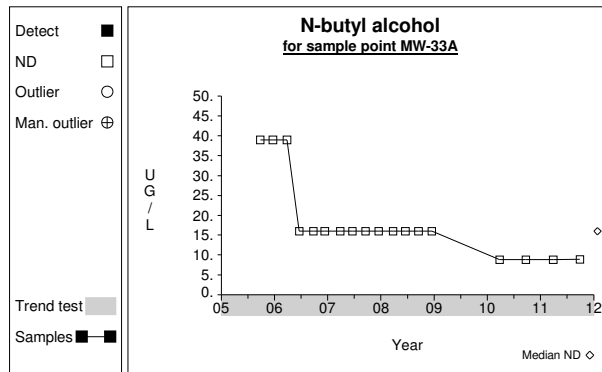
Graph 383



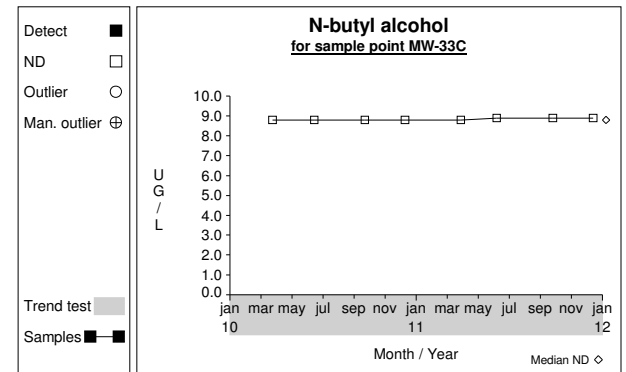
Graph 384



Graph 385

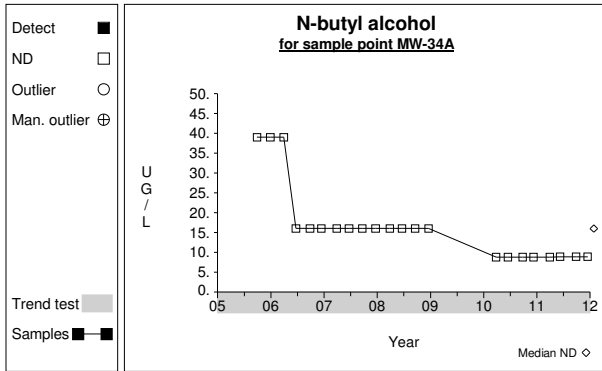


Graph 386

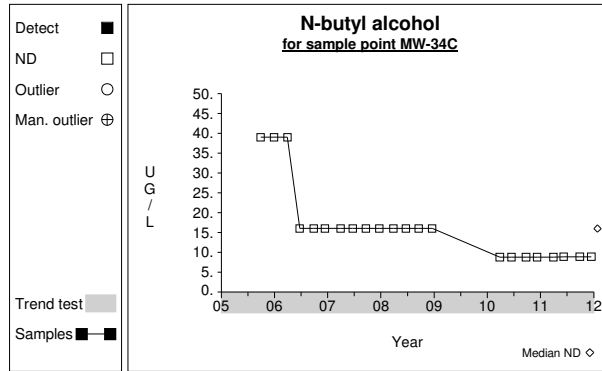


Graph 387

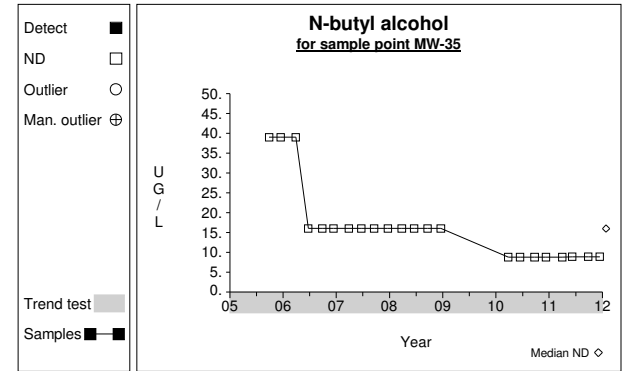
# Time Series



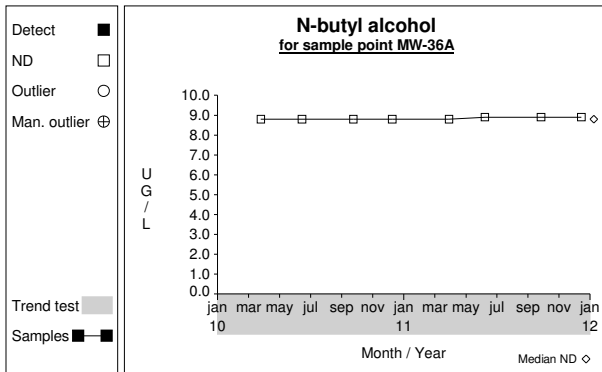
**Graph 388**



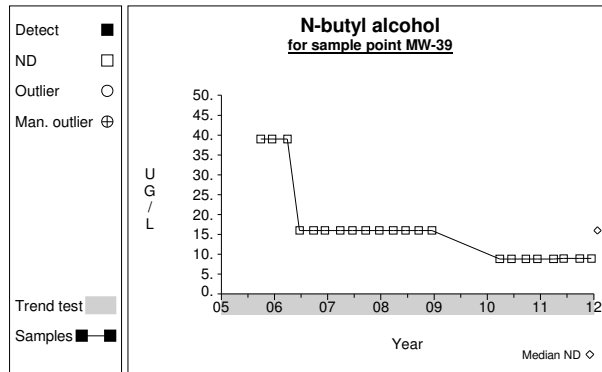
**Graph 389**



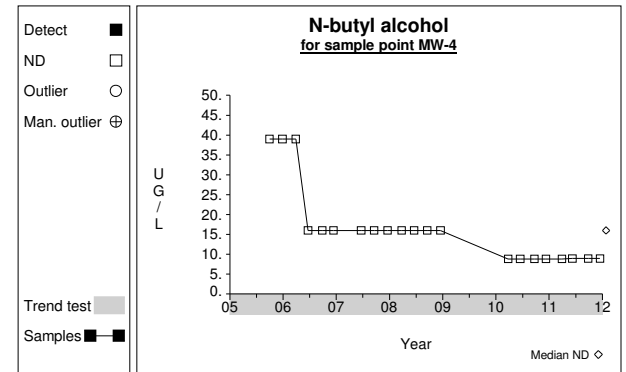
**Graph 390**



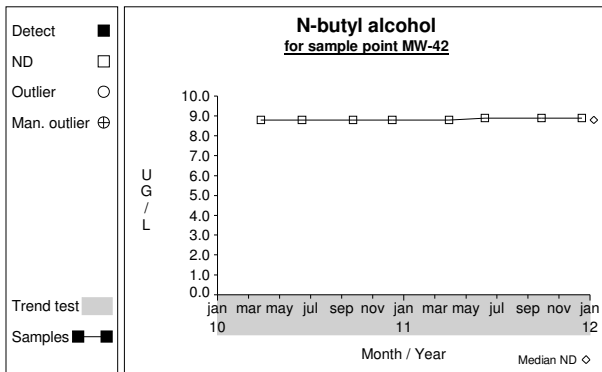
**Graph 391**



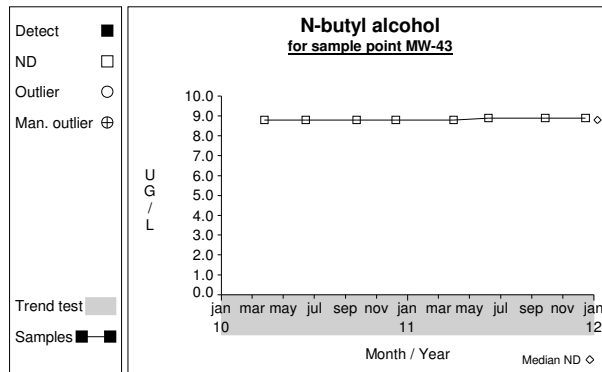
**Graph 392**



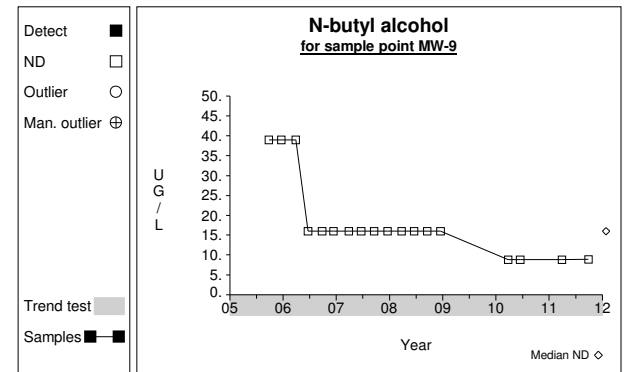
**Graph 393**



**Graph 394**



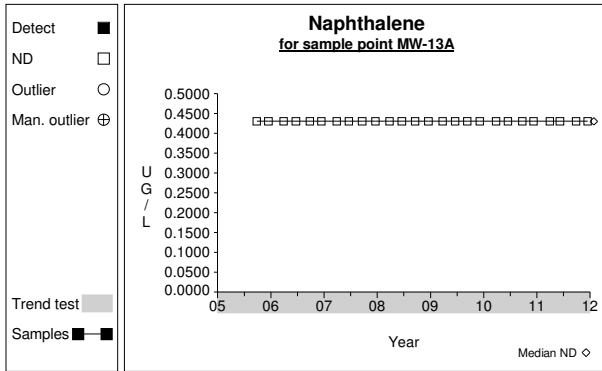
**Graph 395**



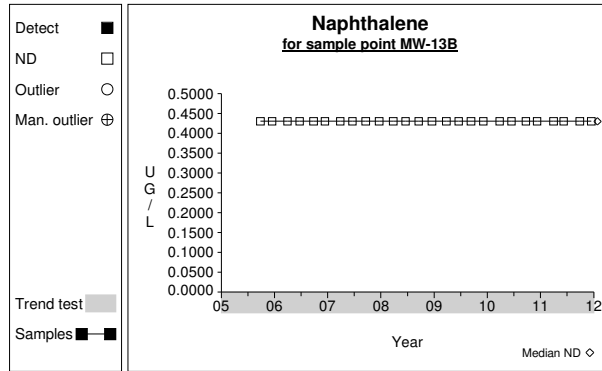
**Graph 396**



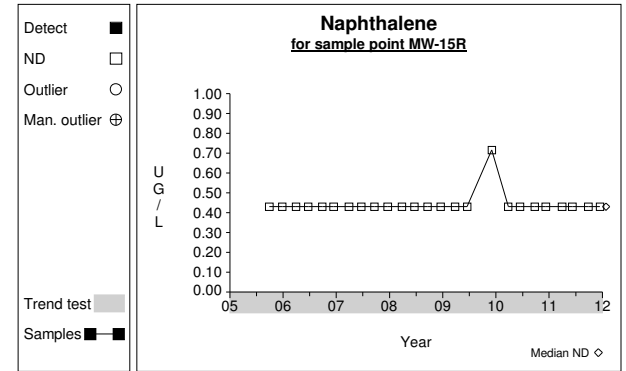
# Time Series



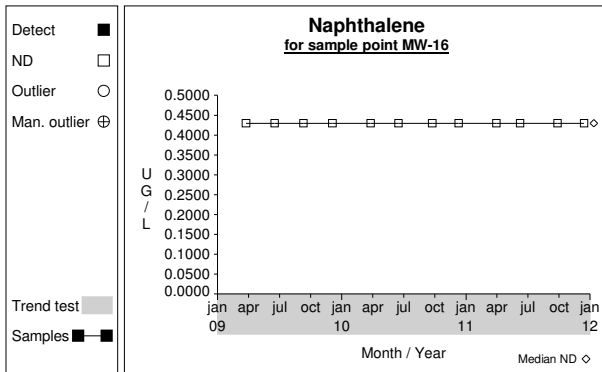
Graph 397



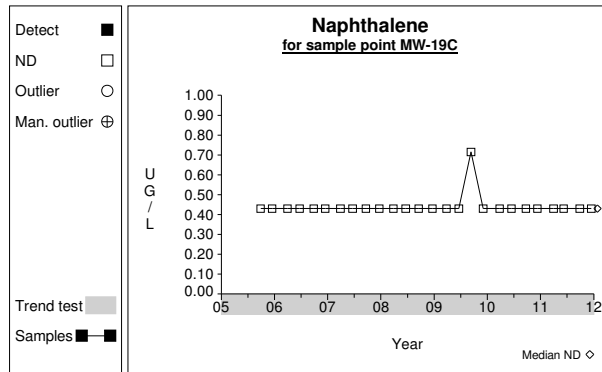
Graph 398



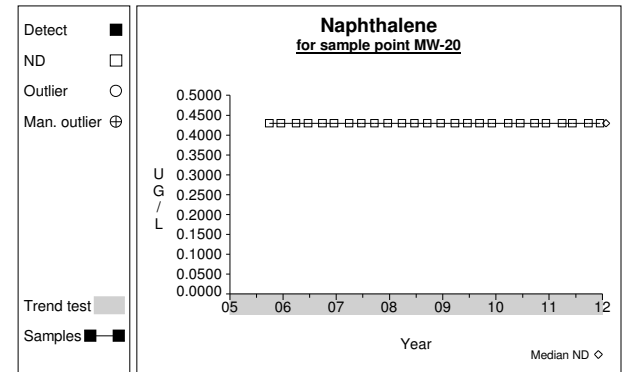
Graph 399



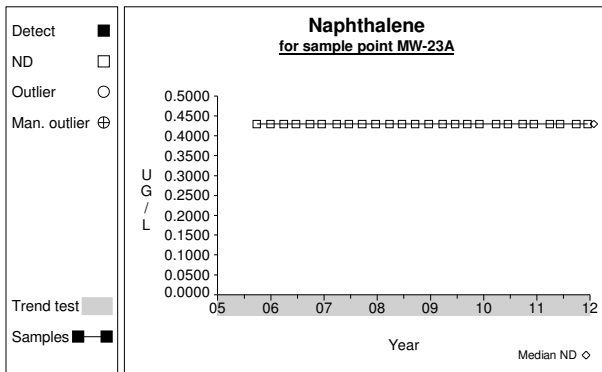
Graph 400



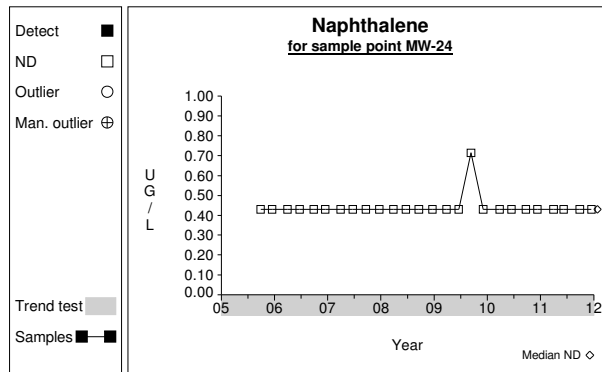
Graph 401



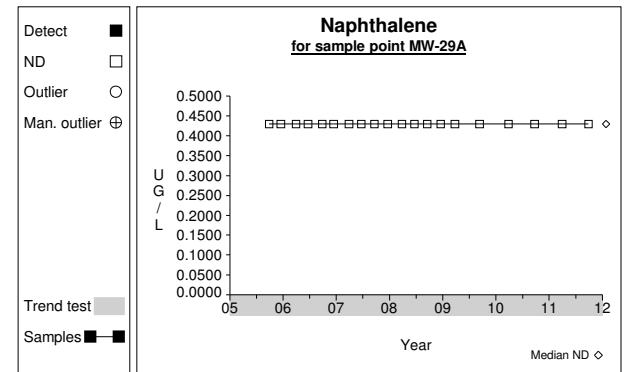
Graph 402



Graph 403

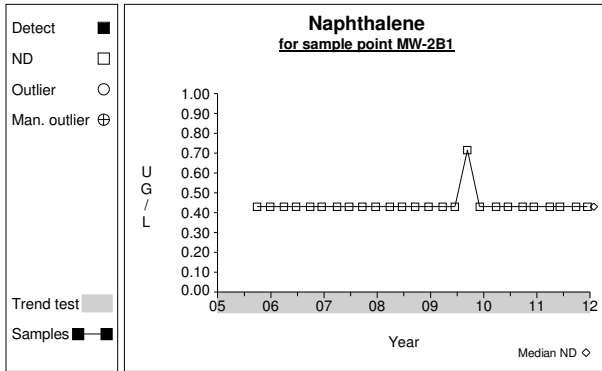


Graph 404

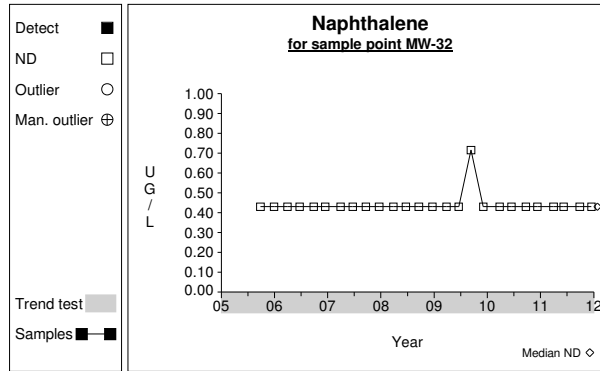


Graph 405

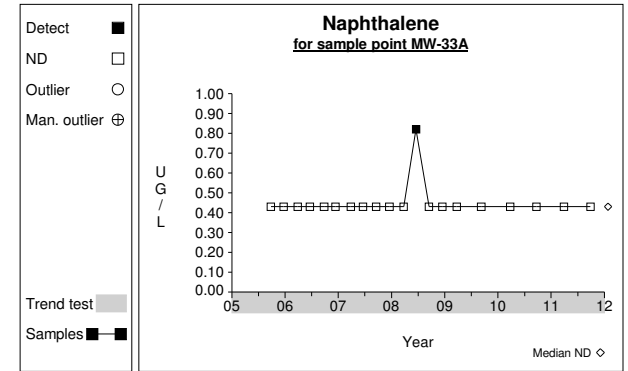
# Time Series



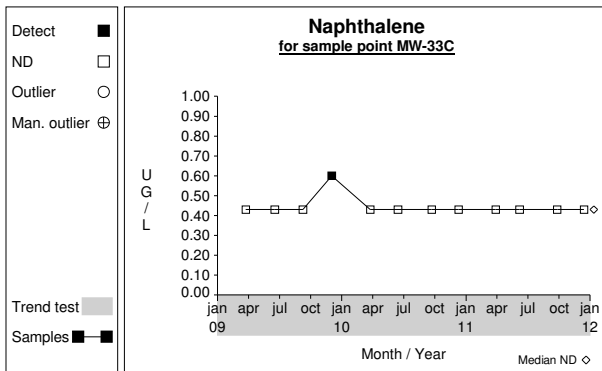
Graph 406



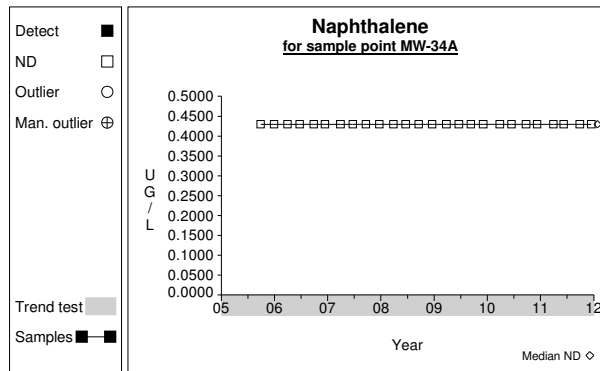
Graph 407



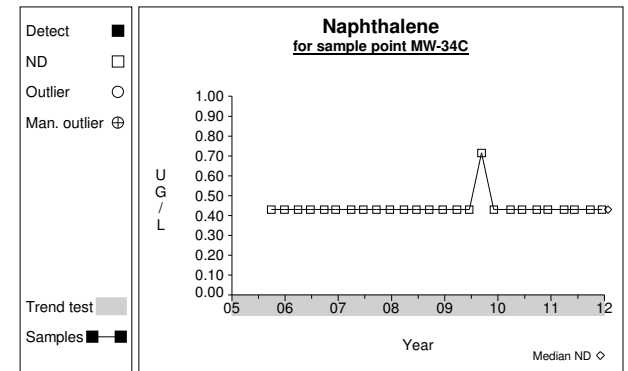
Graph 408



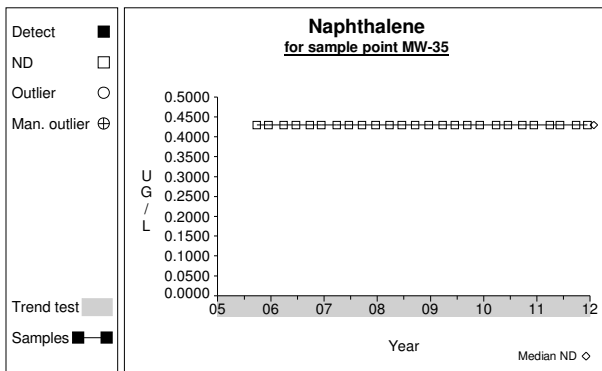
Graph 409



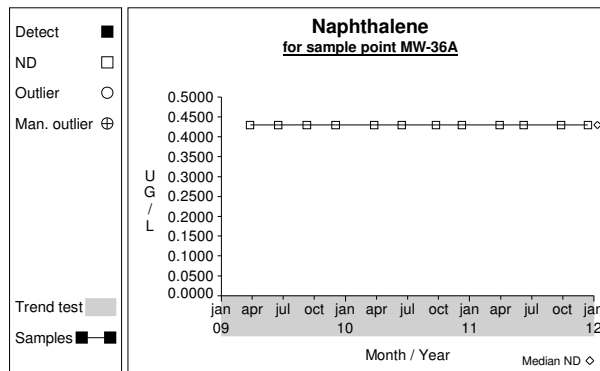
Graph 410



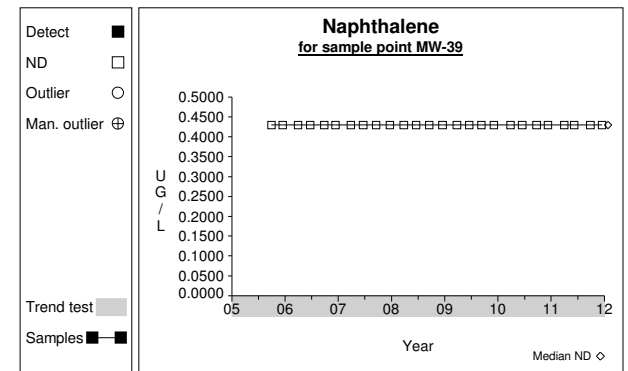
Graph 411



Graph 412

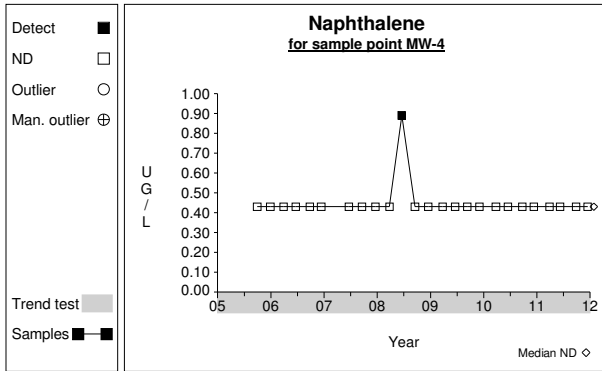


Graph 413

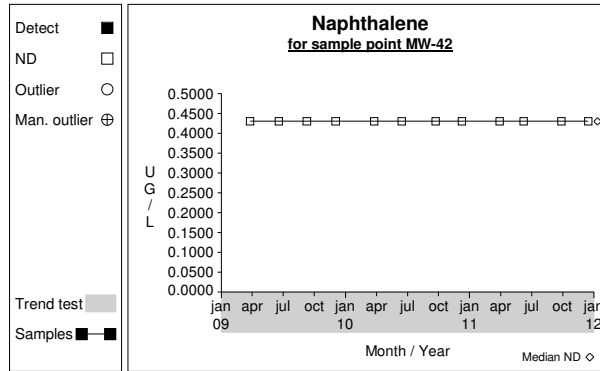


Graph 414

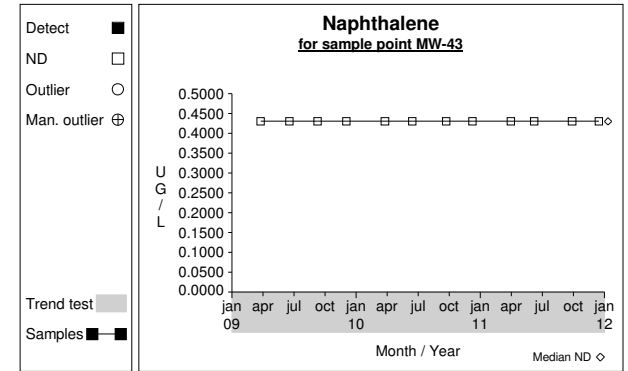
# Time Series



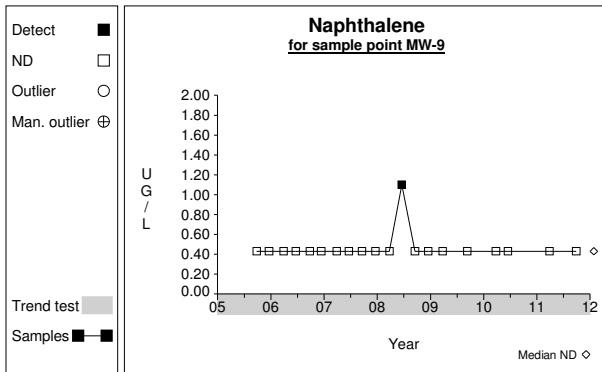
Graph 415



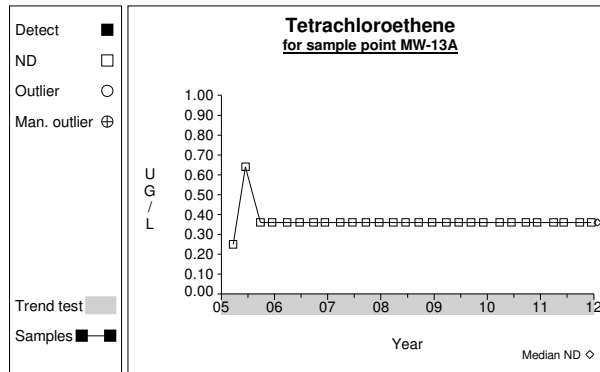
Graph 416



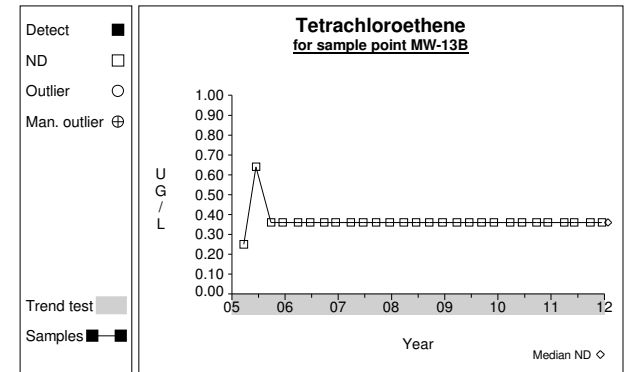
Graph 417



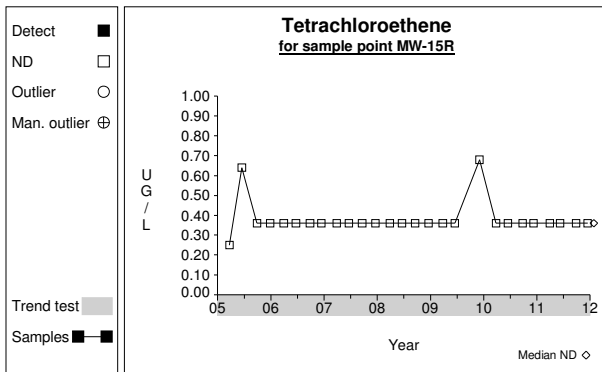
Graph 418



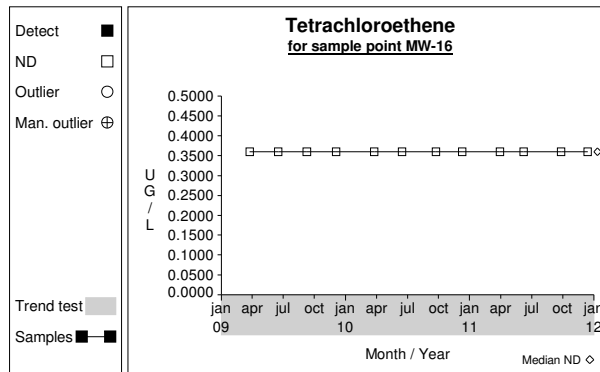
Graph 419



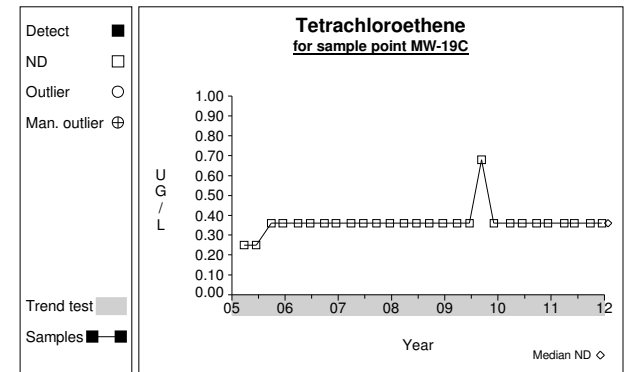
Graph 420



Graph 421

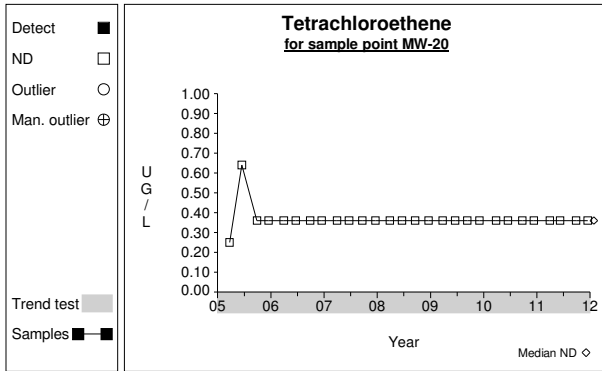


Graph 422

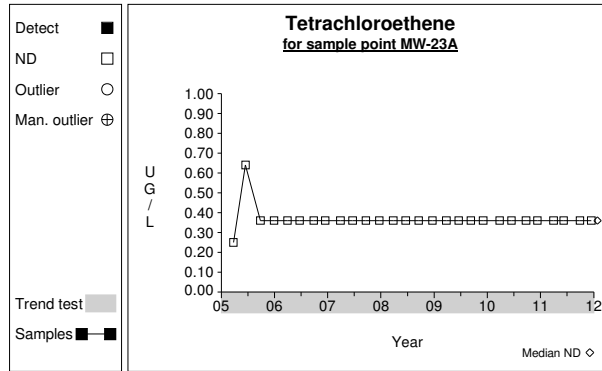


Graph 423

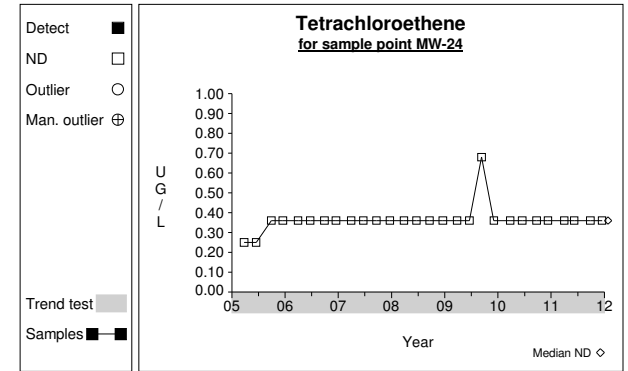
# Time Series



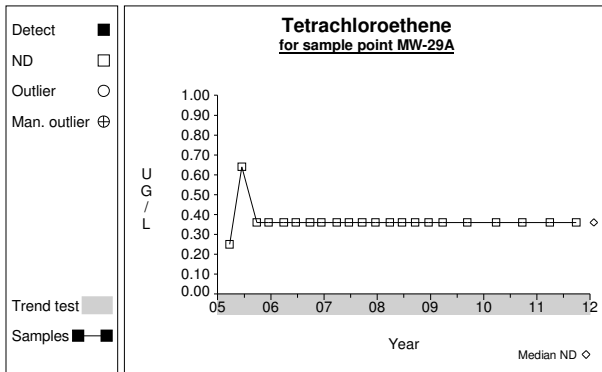
**Graph 424**



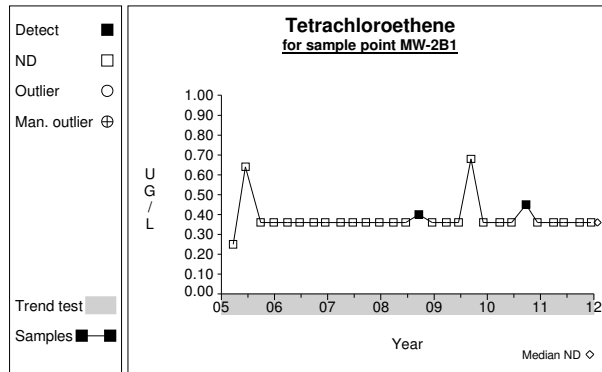
**Graph 425**



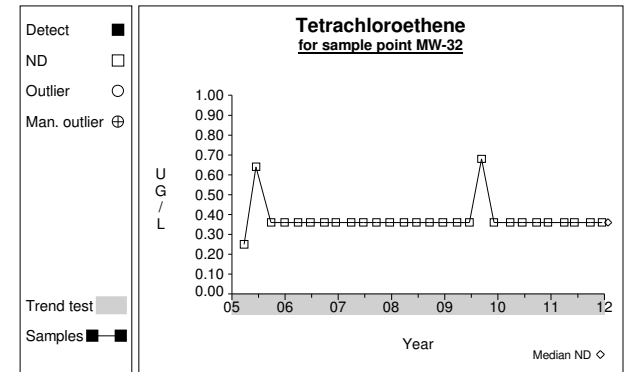
**Graph 426**



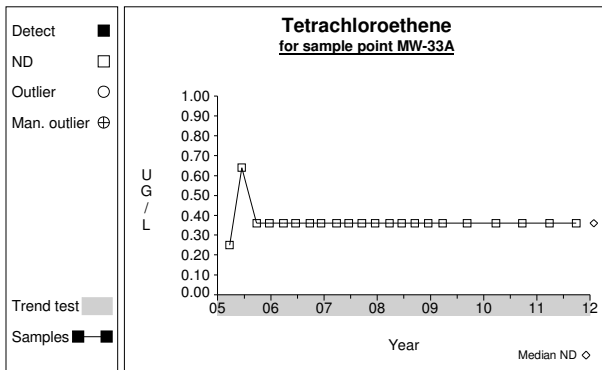
**Graph 427**



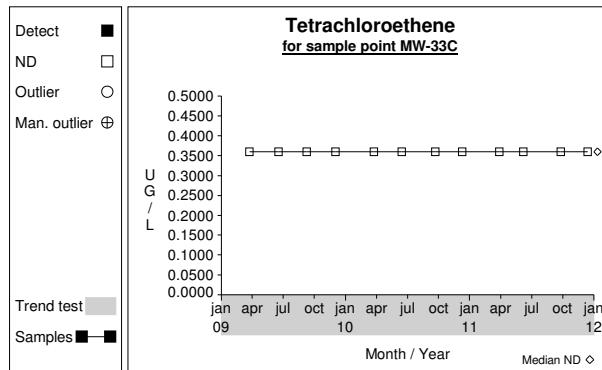
**Graph 428**



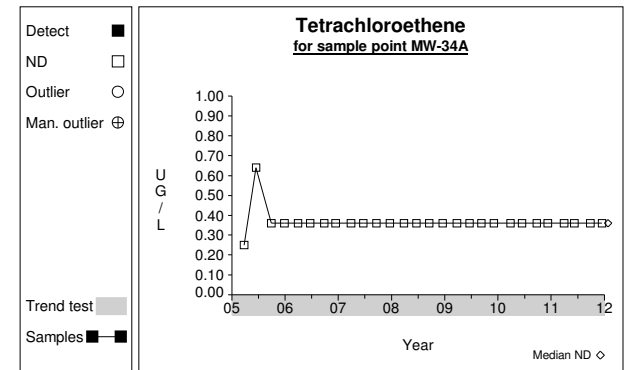
**Graph 429**



**Graph 430**

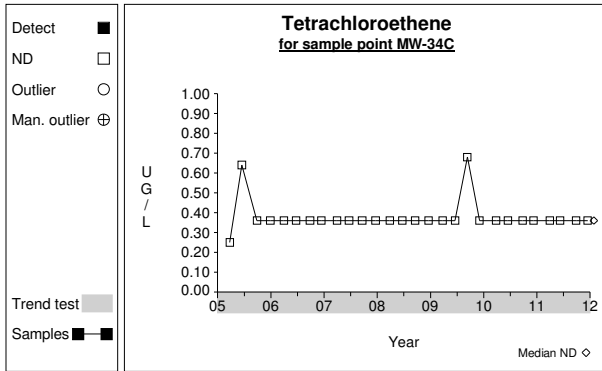


**Graph 431**

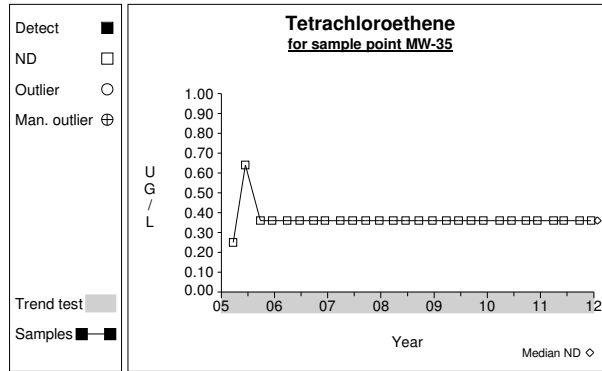


**Graph 432**

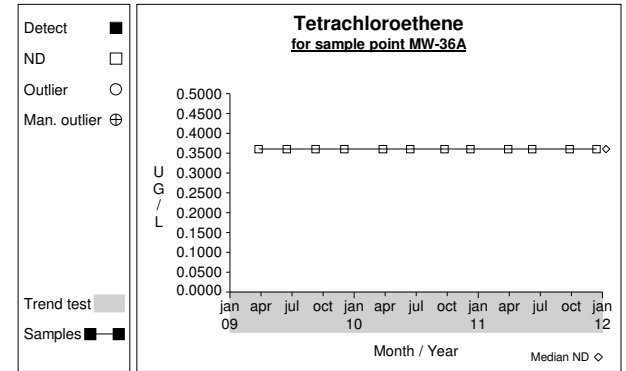
# Time Series



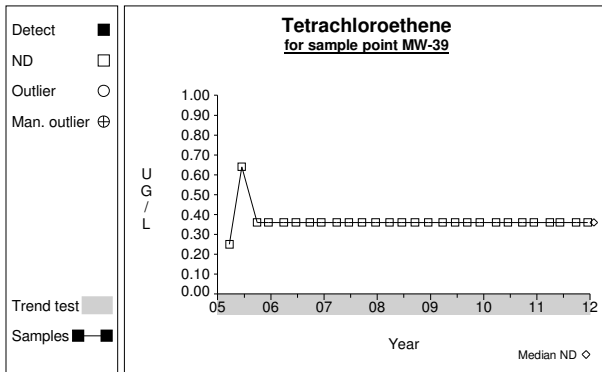
**Graph 433**



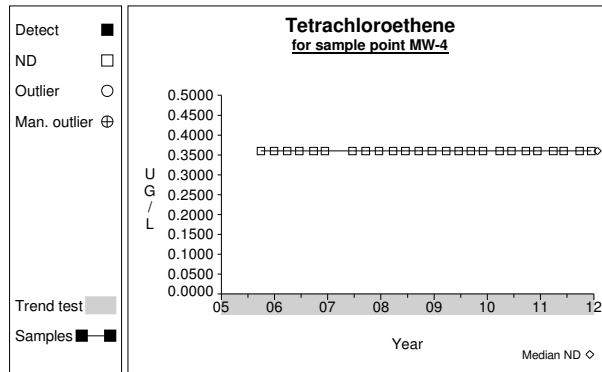
**Graph 434**



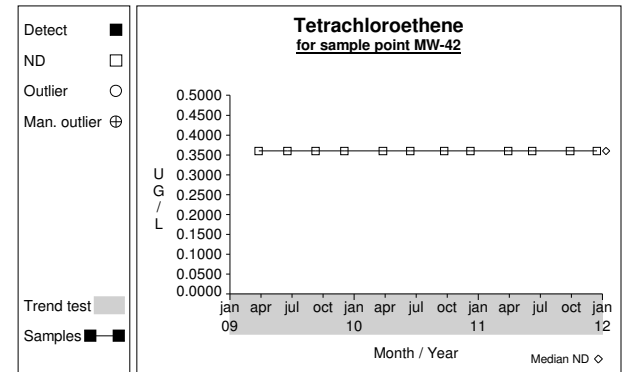
**Graph 435**



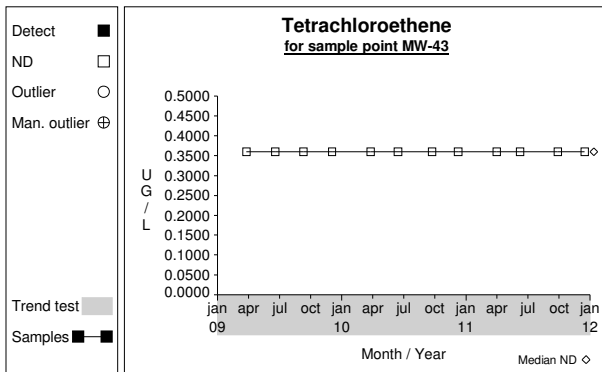
**Graph 436**



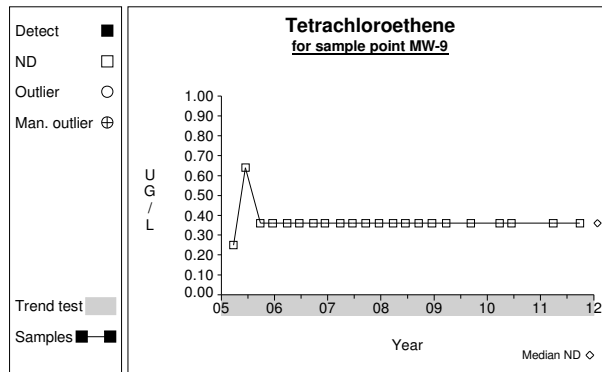
**Graph 437**



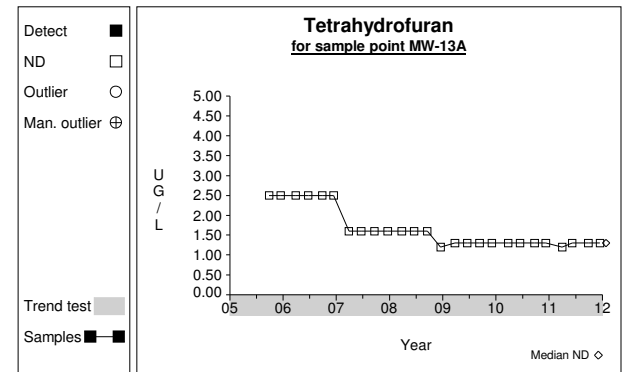
**Graph 438**



**Graph 439**

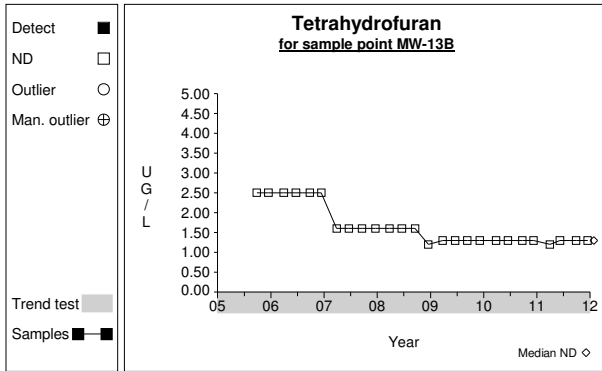


**Graph 440**

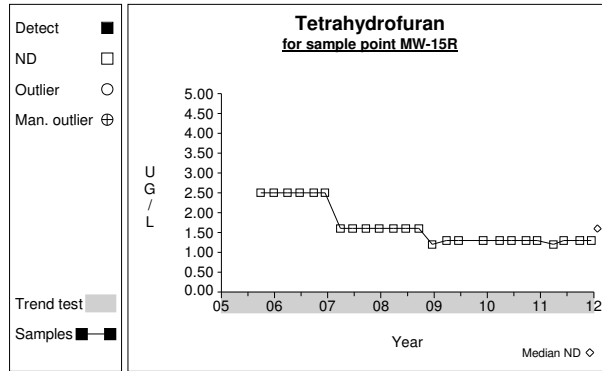


**Graph 441**

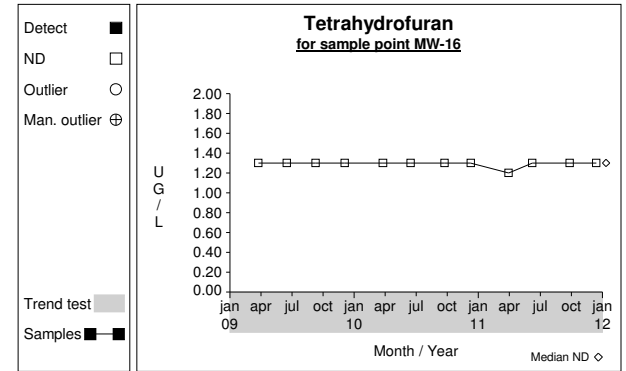
# Time Series



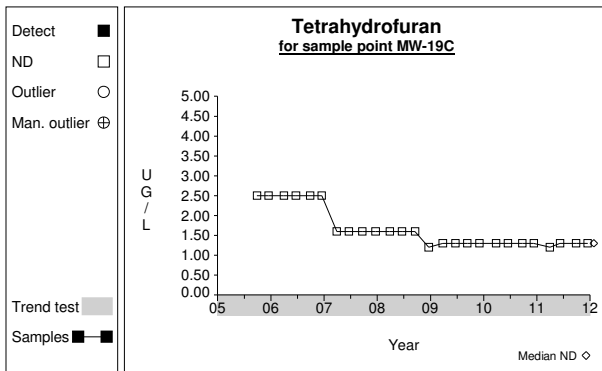
**Graph 442**



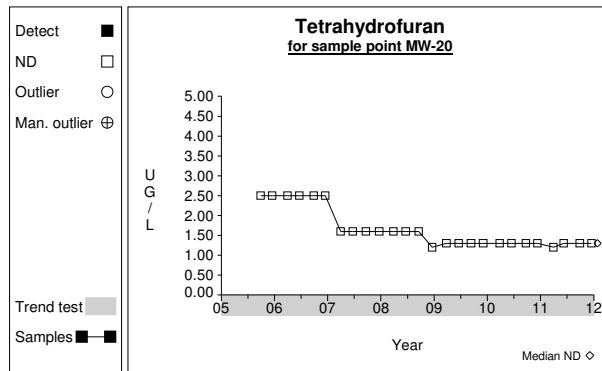
**Graph 443**



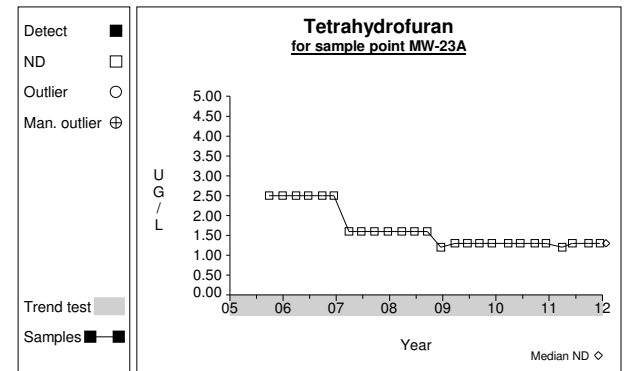
**Graph 444**



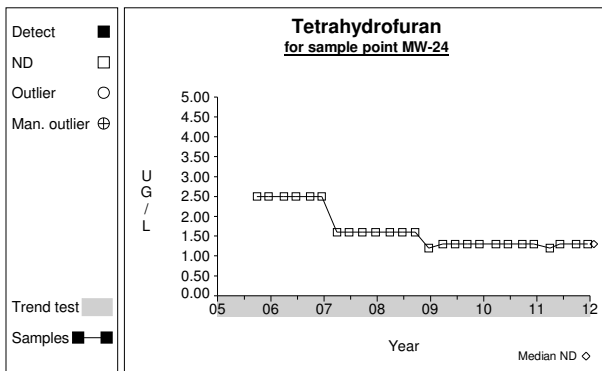
**Graph 445**



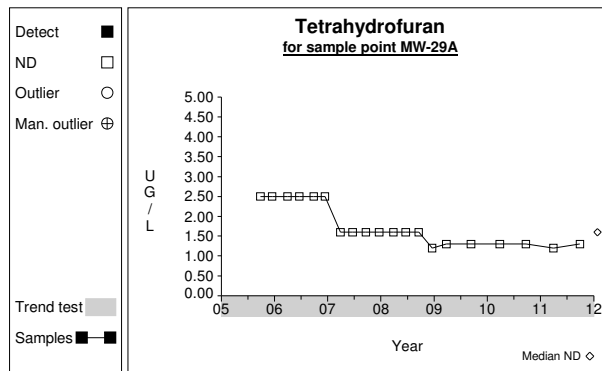
**Graph 446**



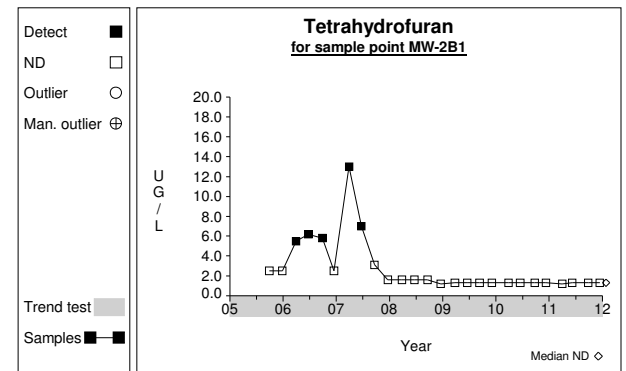
**Graph 447**



**Graph 448**

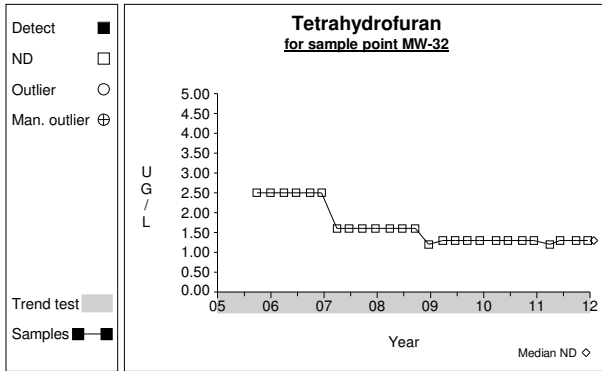


**Graph 449**

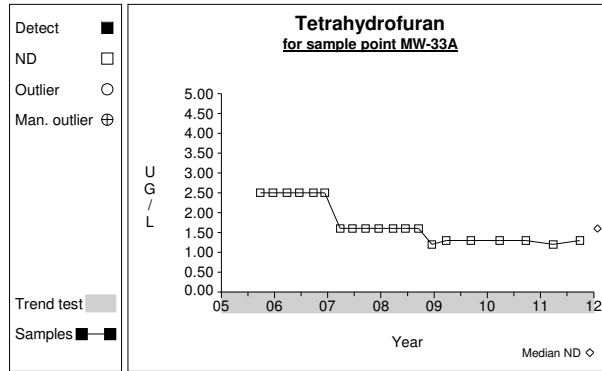


**Graph 450**

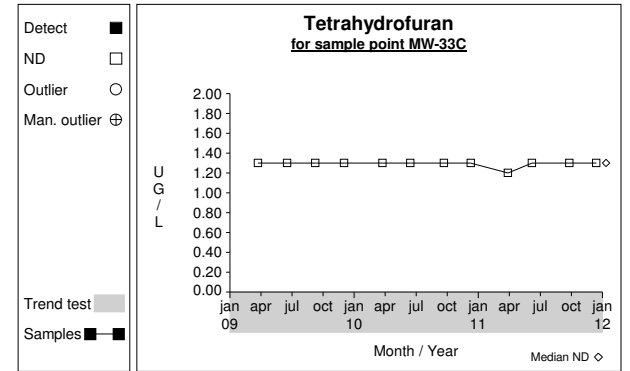
# Time Series



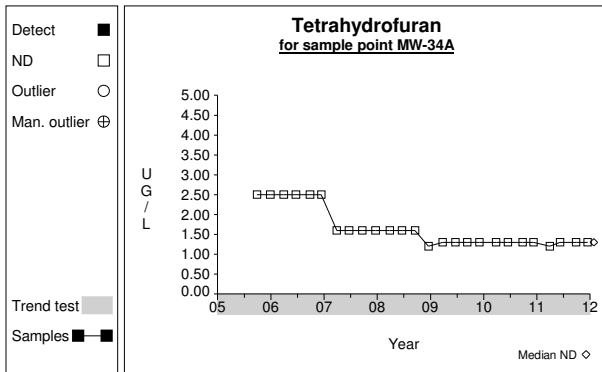
**Graph 451**



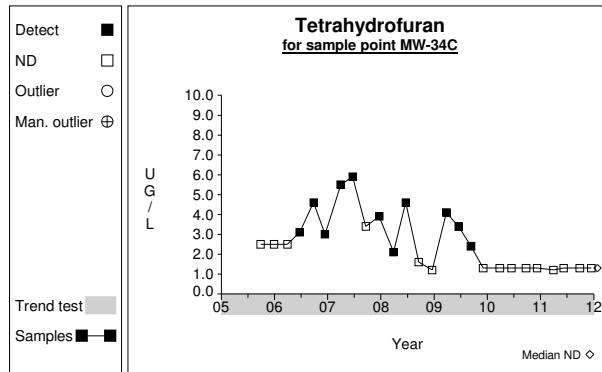
**Graph 452**



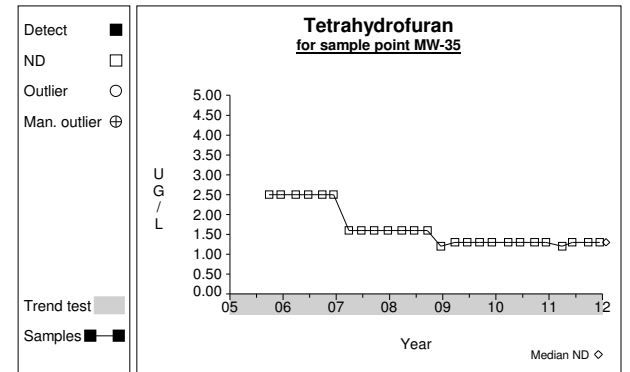
**Graph 453**



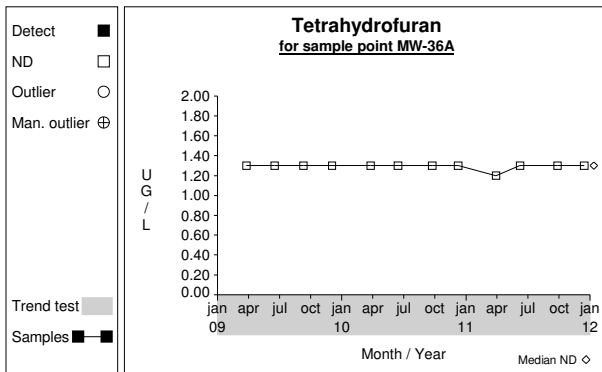
**Graph 454**



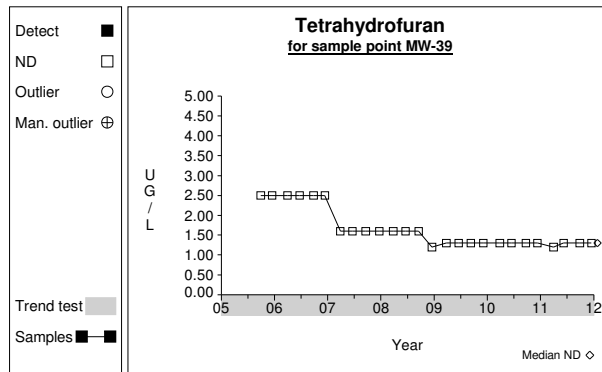
**Graph 455**



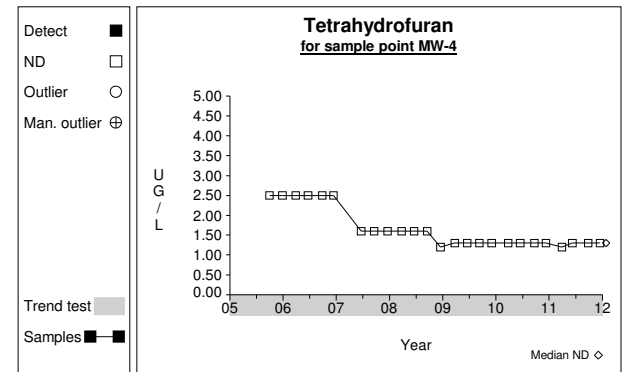
**Graph 456**



**Graph 457**

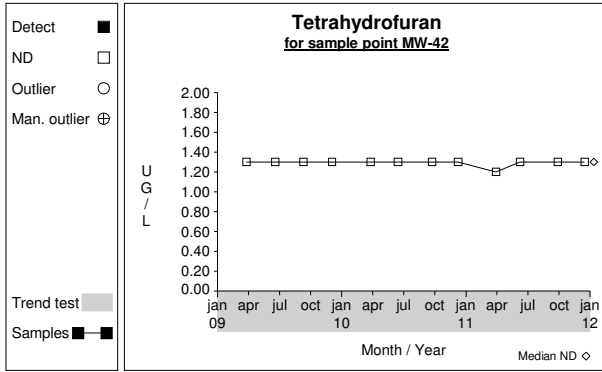


**Graph 458**

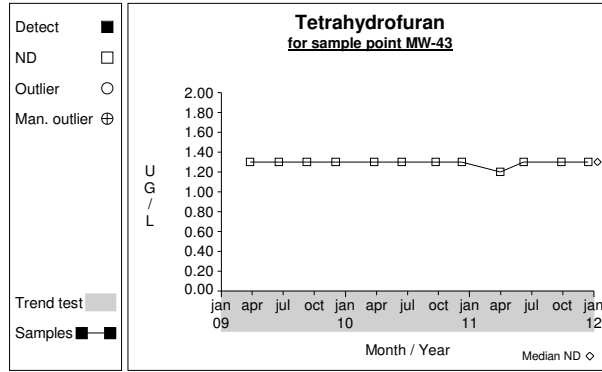


**Graph 459**

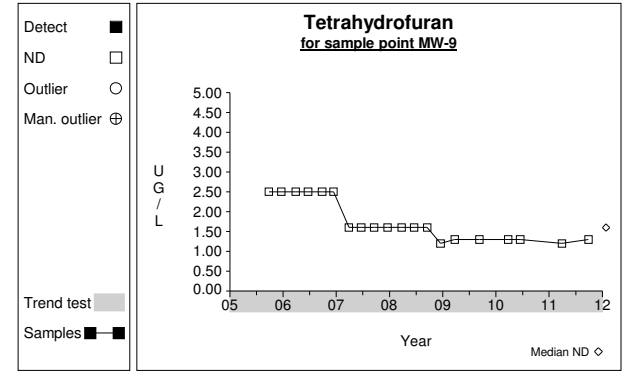
# Time Series



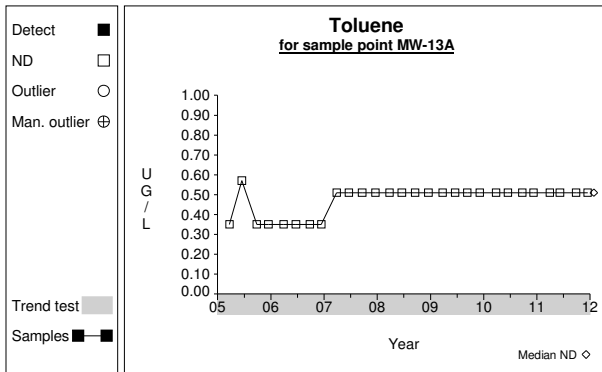
Graph 460



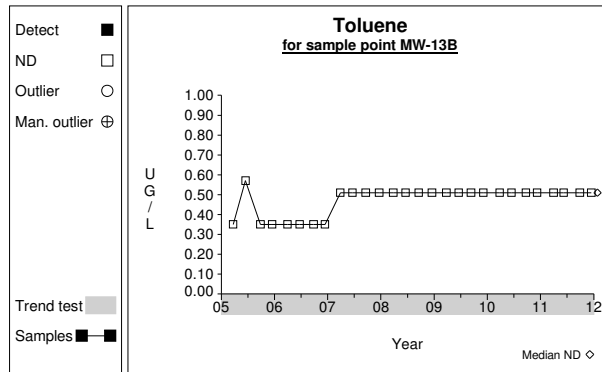
Graph 461



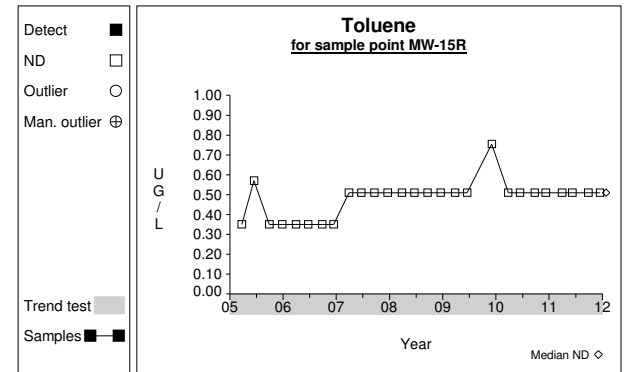
Graph 462



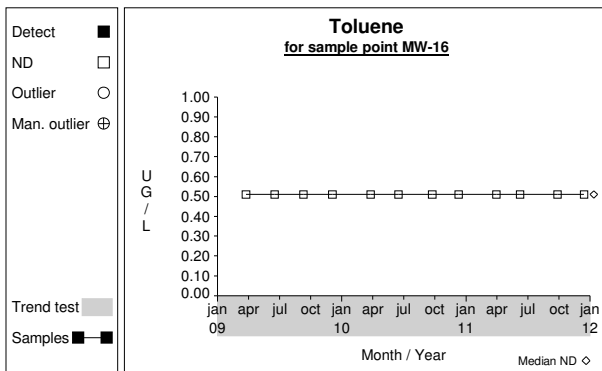
Graph 463



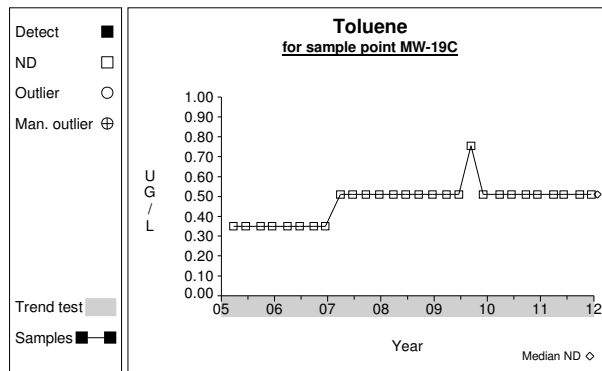
Graph 464



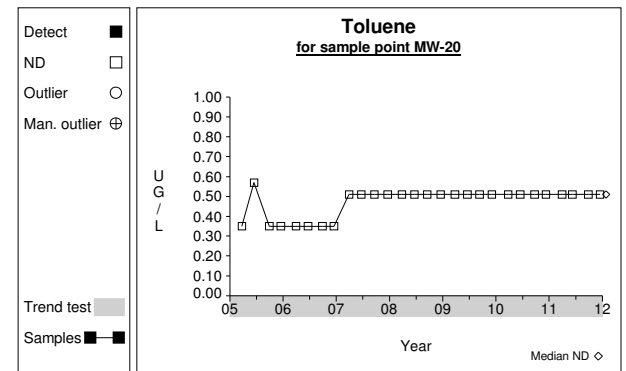
Graph 465



Graph 466



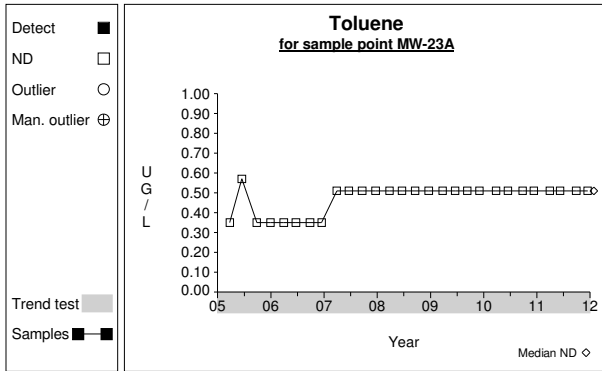
Graph 467



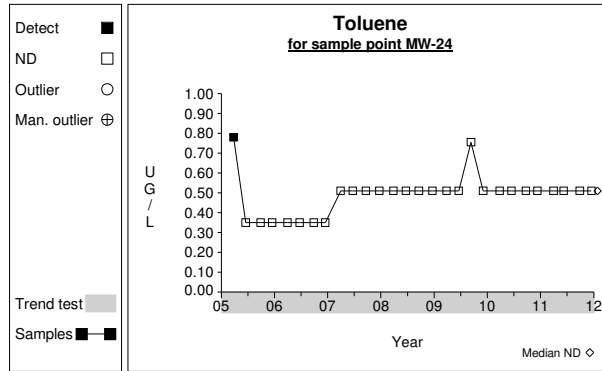
Graph 468



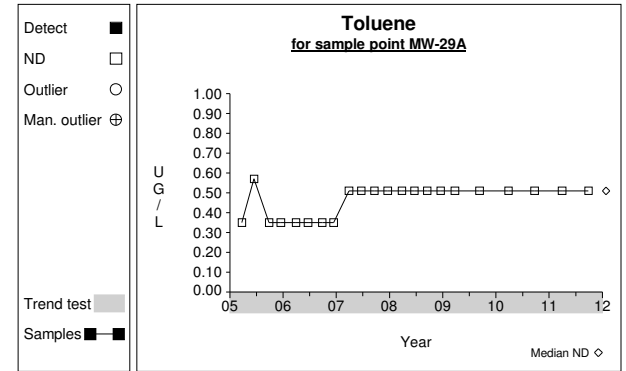
# Time Series



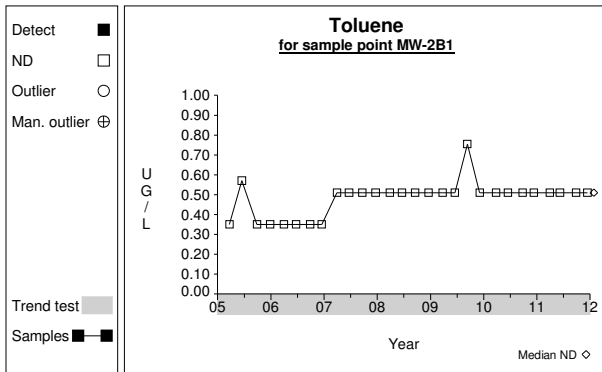
**Graph 469**



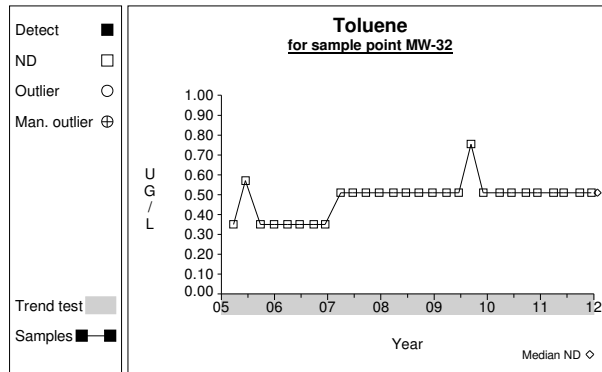
**Graph 470**



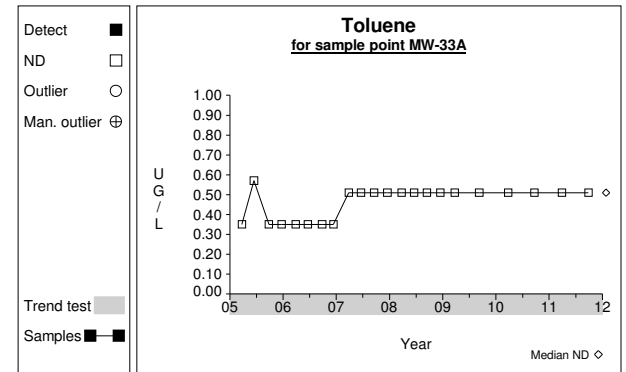
**Graph 471**



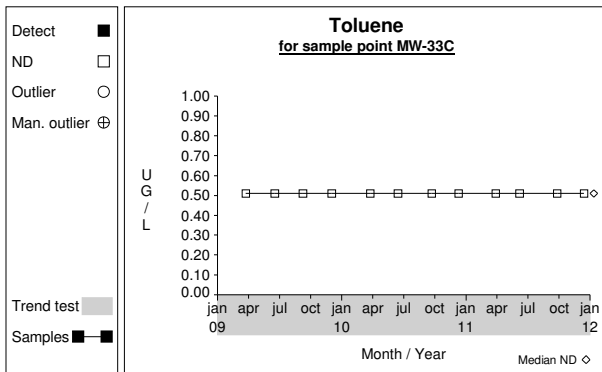
**Graph 472**



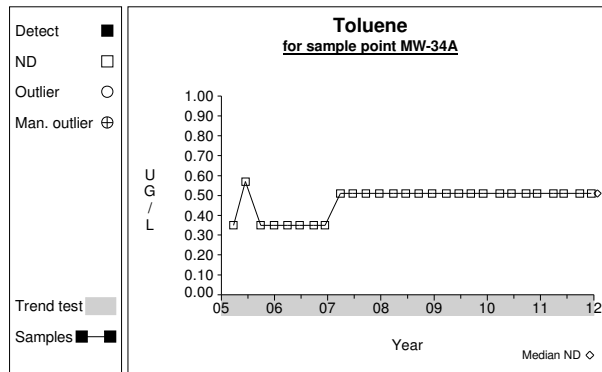
**Graph 473**



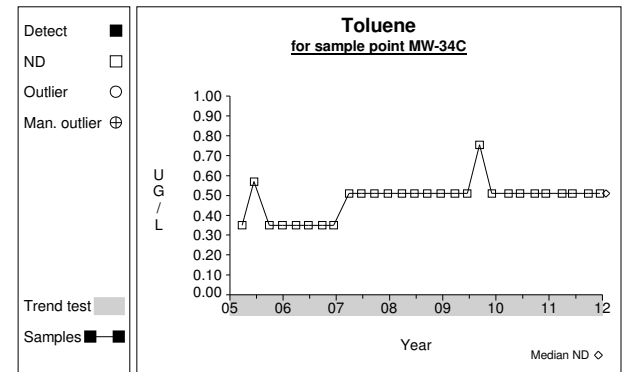
**Graph 474**



**Graph 475**

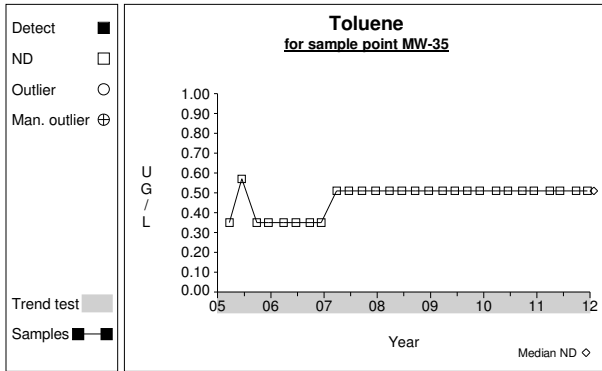


**Graph 476**

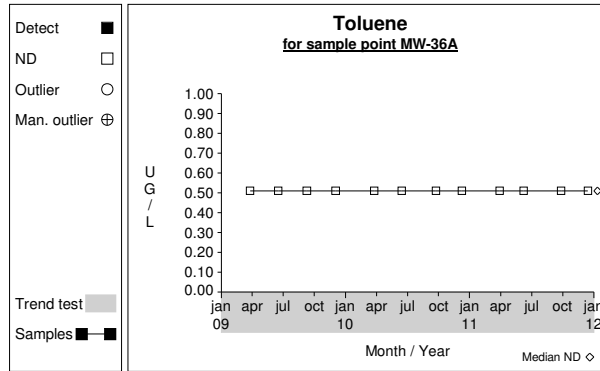


**Graph 477**

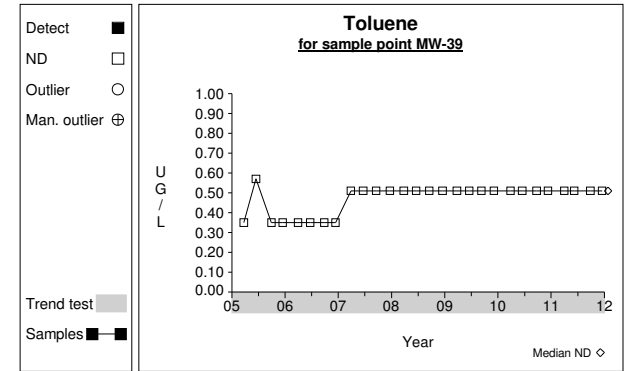
# Time Series



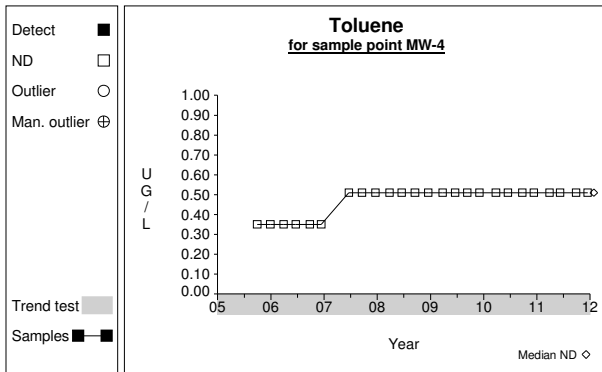
Graph 478



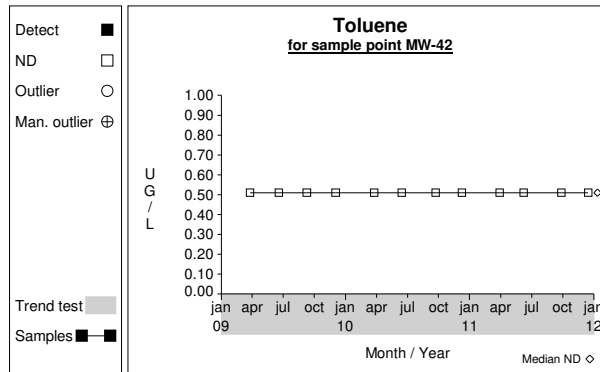
Graph 479



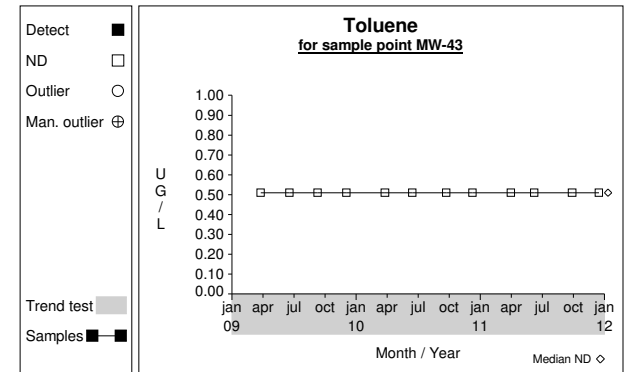
Graph 480



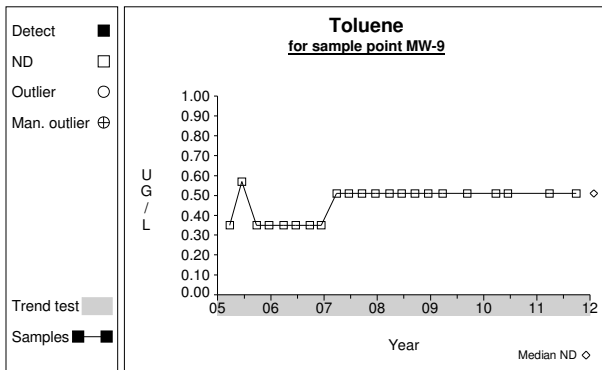
Graph 481



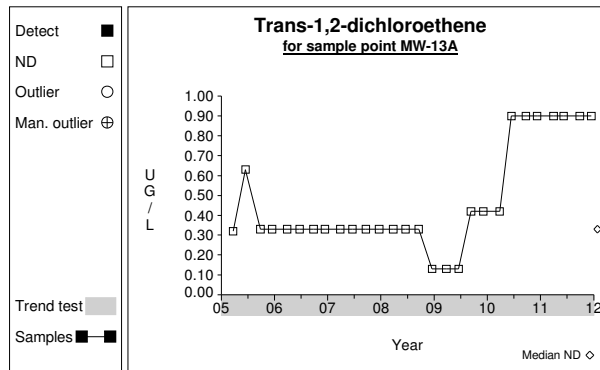
Graph 482



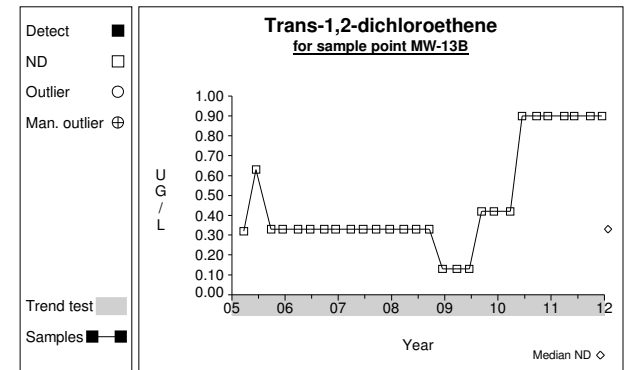
Graph 483



Graph 484

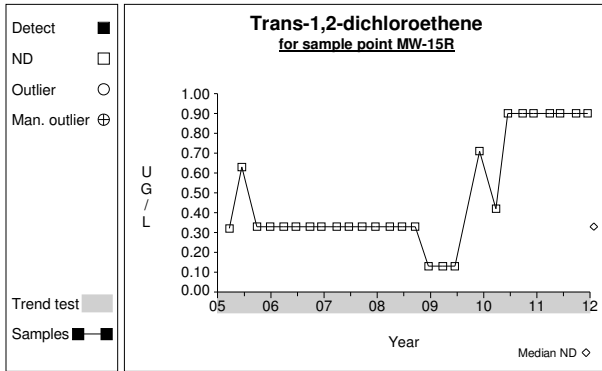


Graph 485

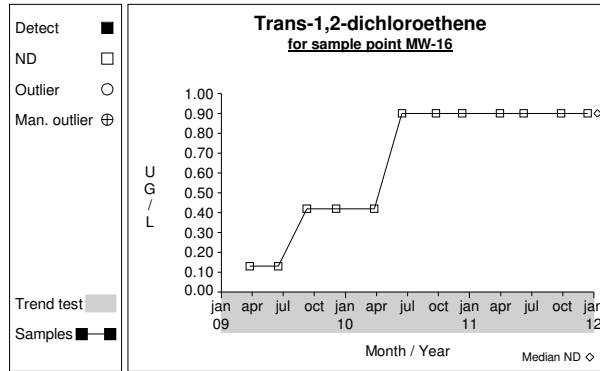


Graph 486

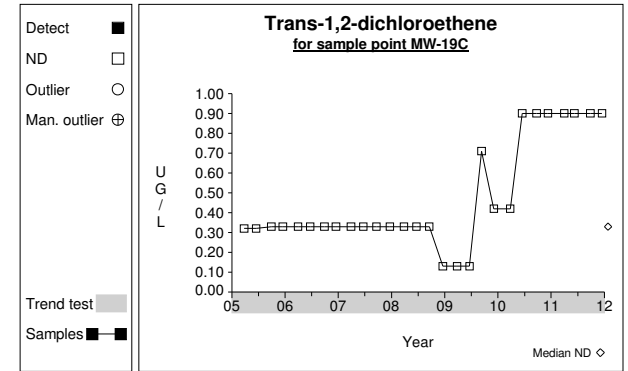
# Time Series



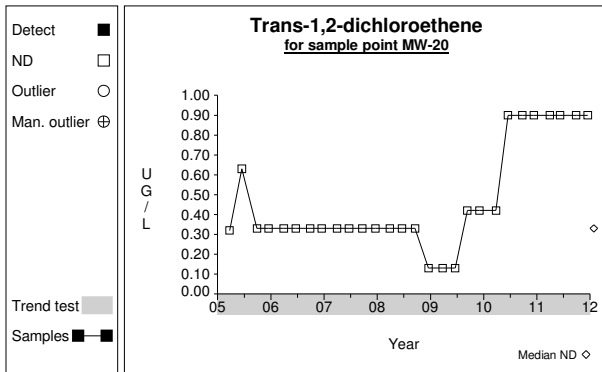
**Graph 487**



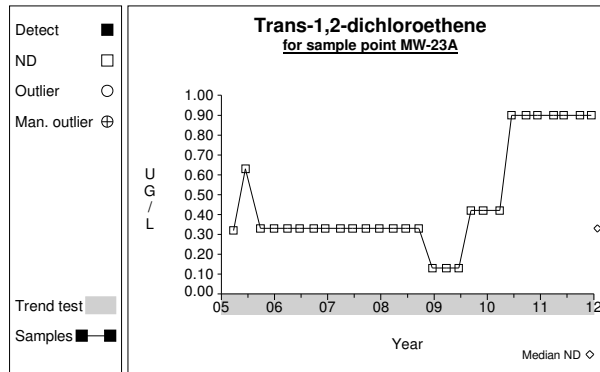
**Graph 488**



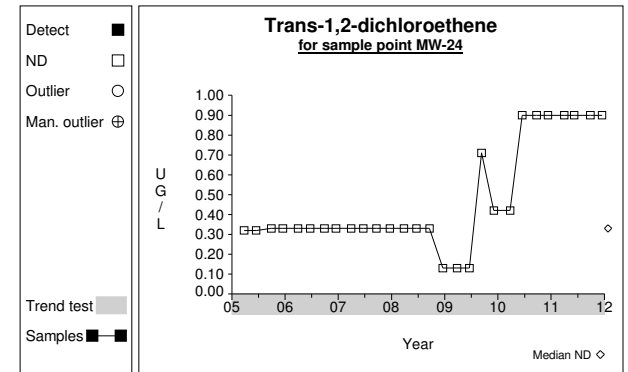
**Graph 489**



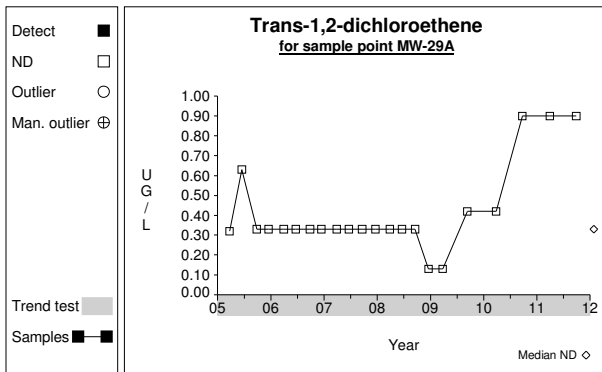
**Graph 490**



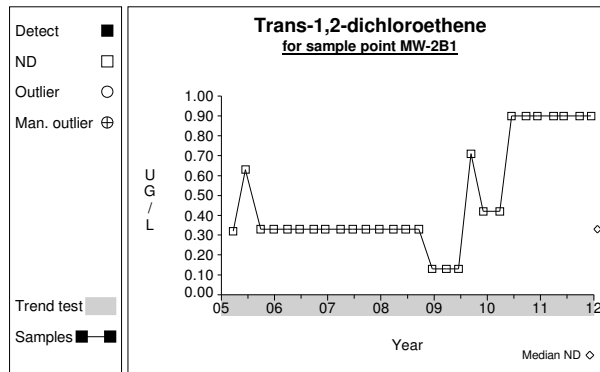
**Graph 491**



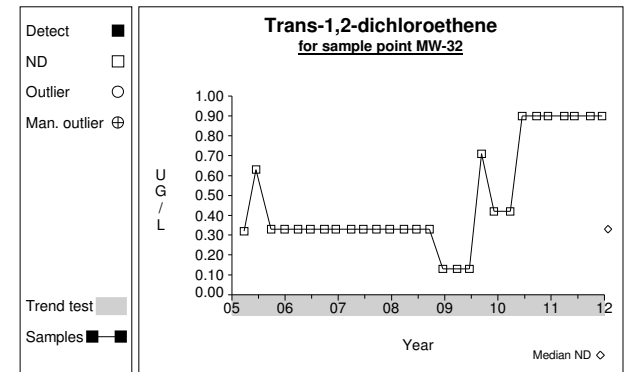
**Graph 492**



**Graph 493**

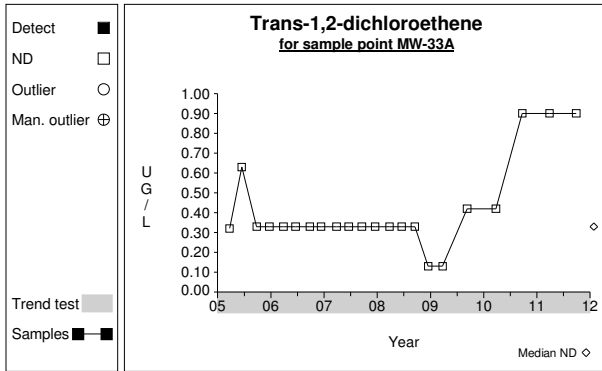


**Graph 494**

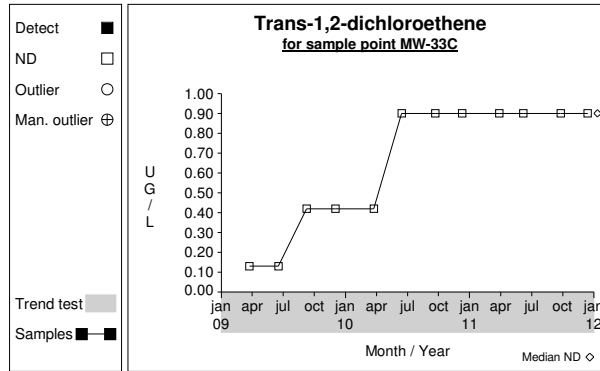


**Graph 495**

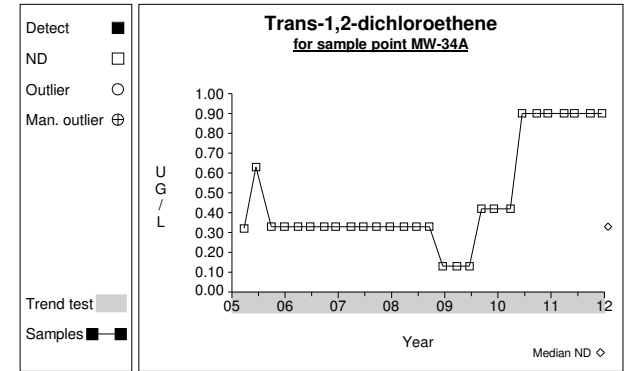
# Time Series



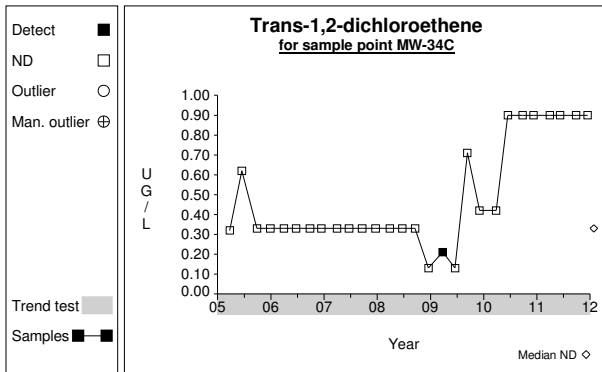
**Graph 496**



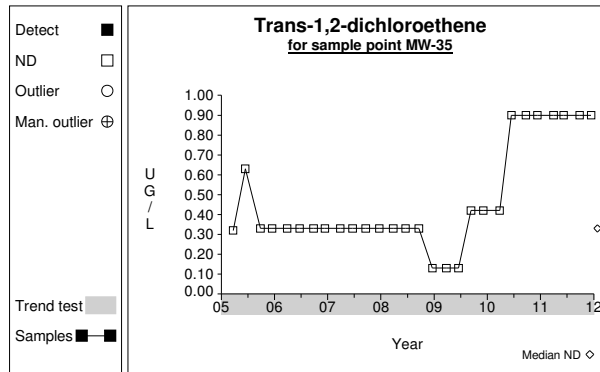
**Graph 497**



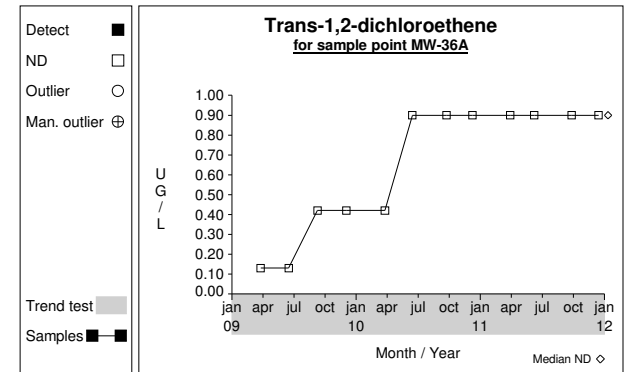
**Graph 498**



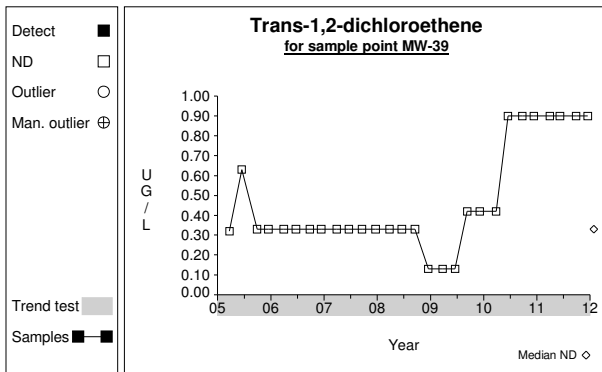
**Graph 499**



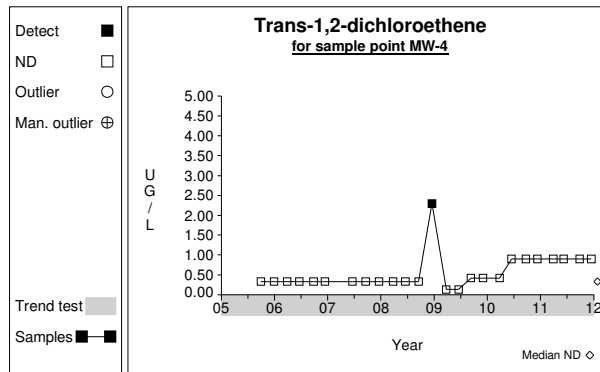
**Graph 500**



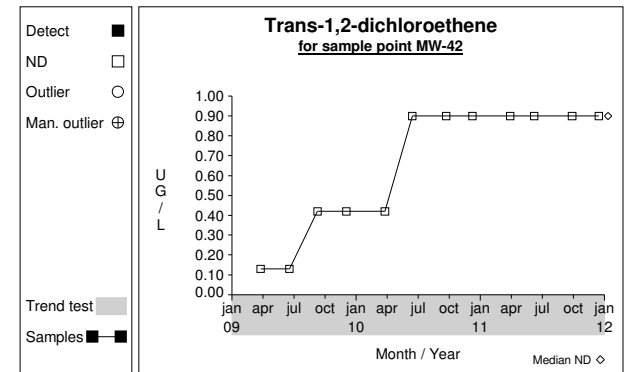
**Graph 501**



**Graph 502**

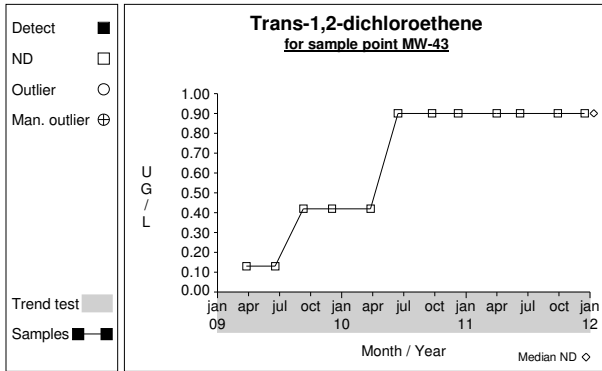


**Graph 503**

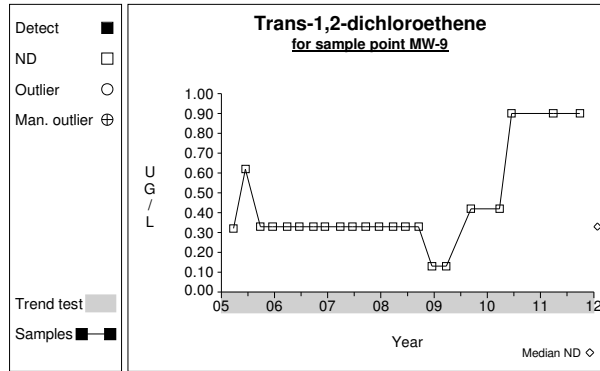


**Graph 504**

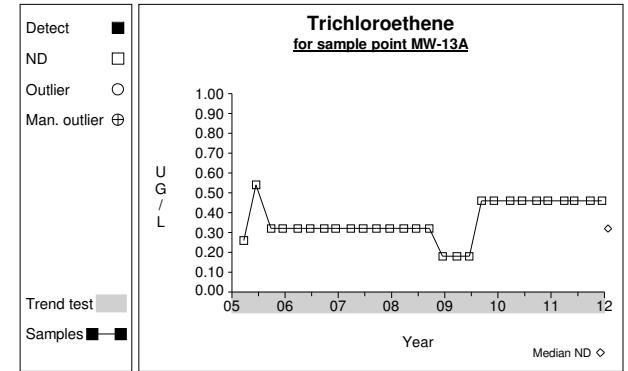
# Time Series



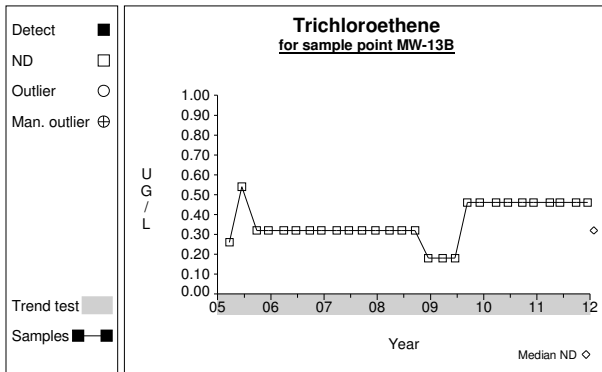
**Graph 505**



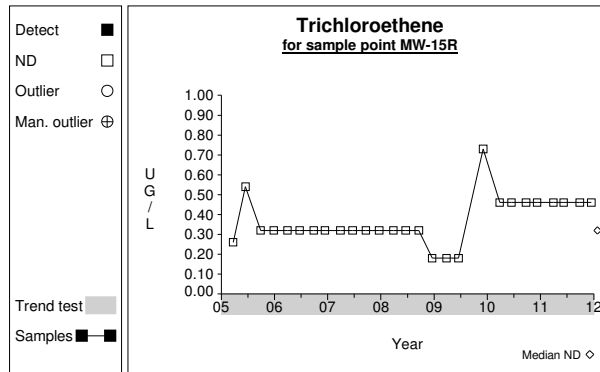
**Graph 506**



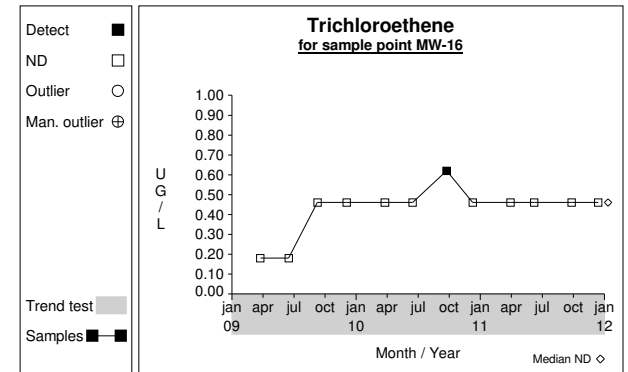
**Graph 507**



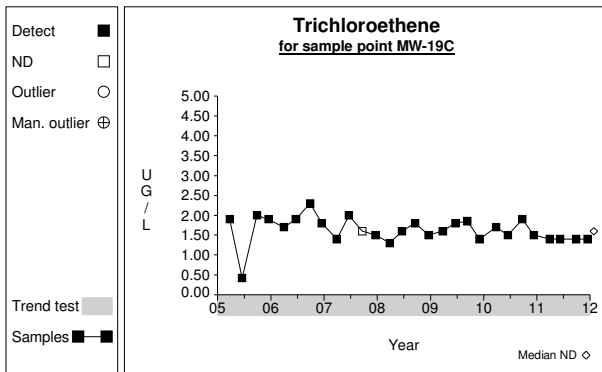
**Graph 508**



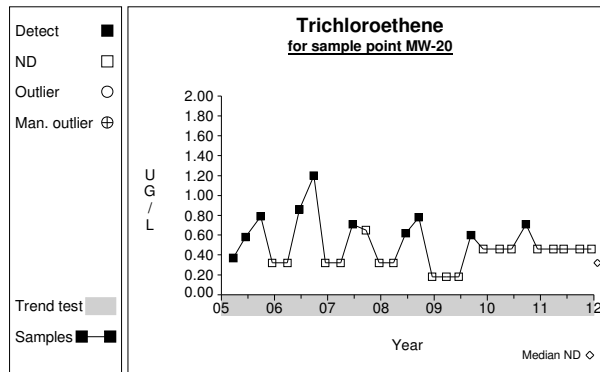
**Graph 509**



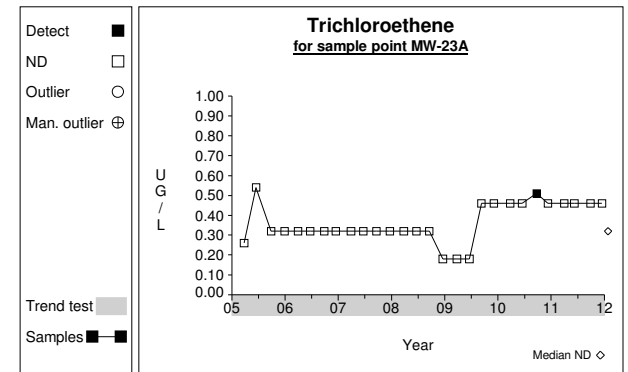
**Graph 510**



**Graph 511**

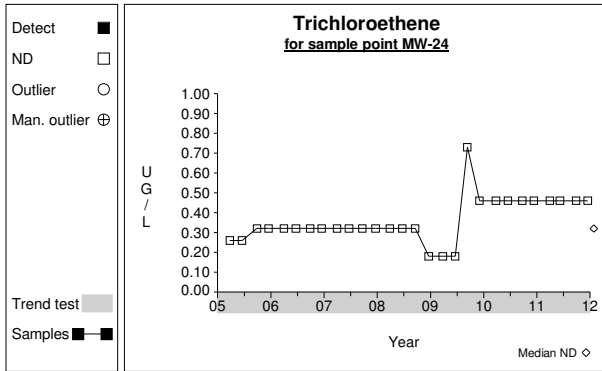


**Graph 512**

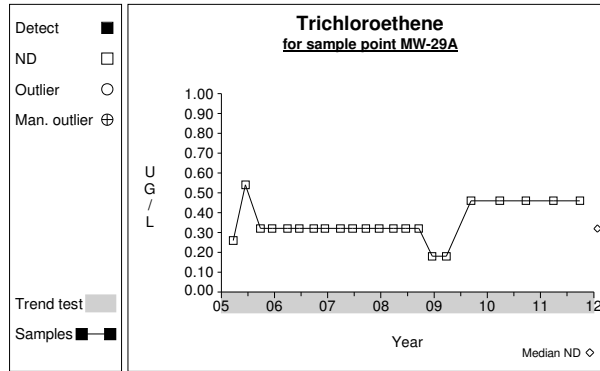


**Graph 513**

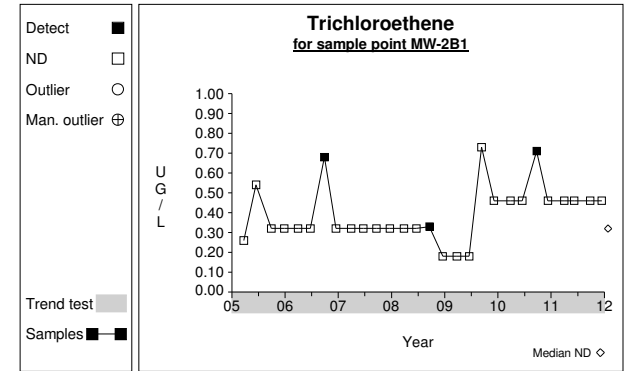
# Time Series



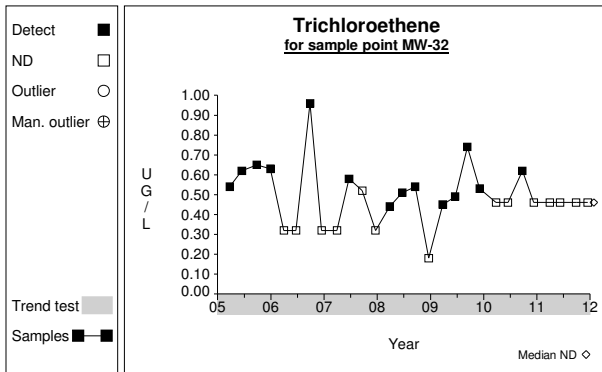
**Graph 514**



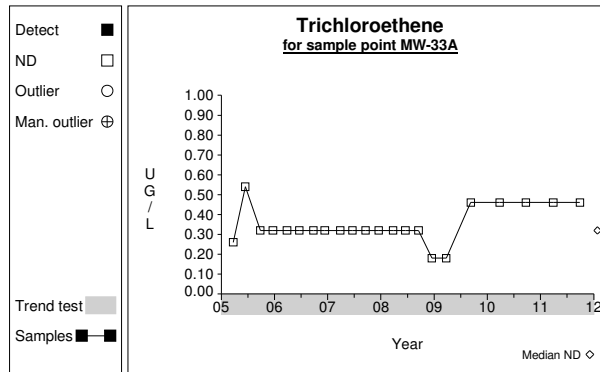
**Graph 515**



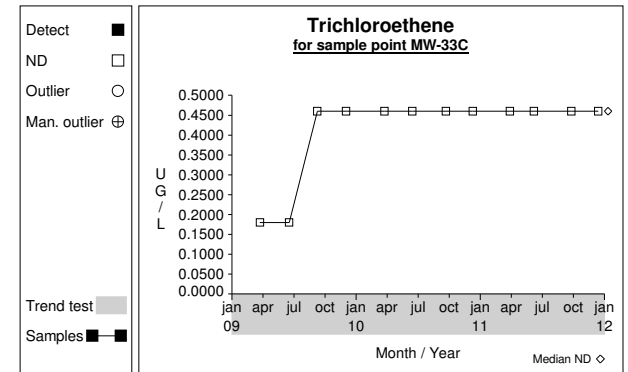
**Graph 516**



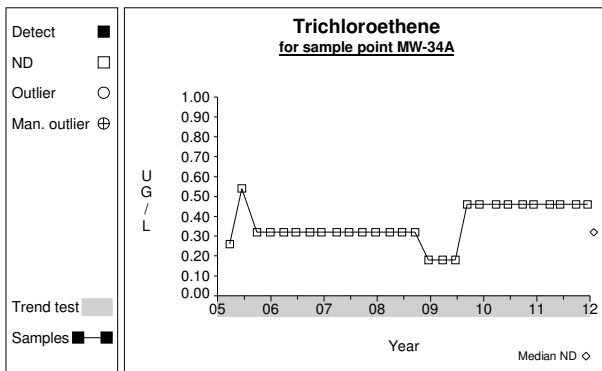
**Graph 517**



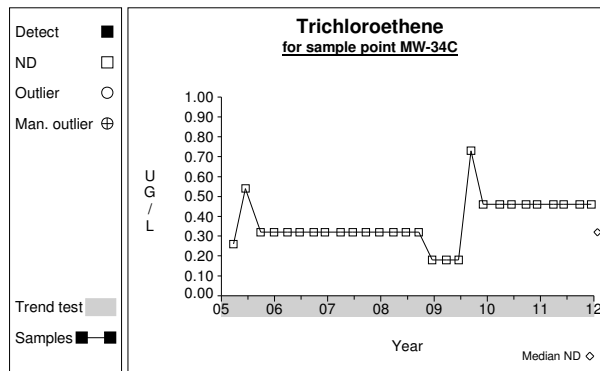
**Graph 518**



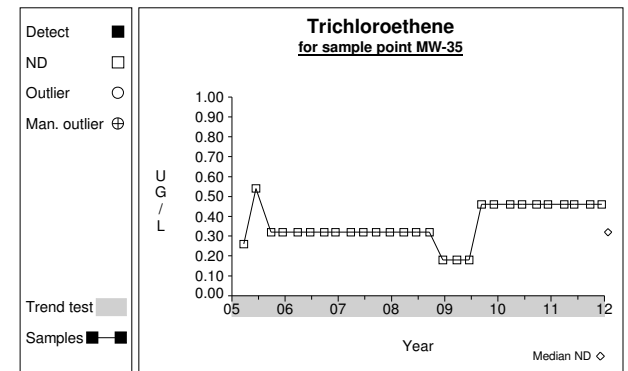
**Graph 519**



**Graph 520**

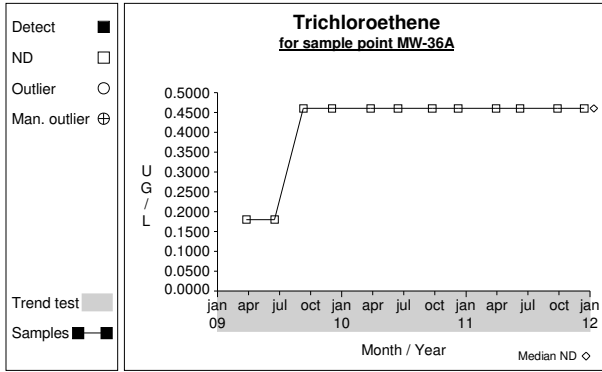


**Graph 521**

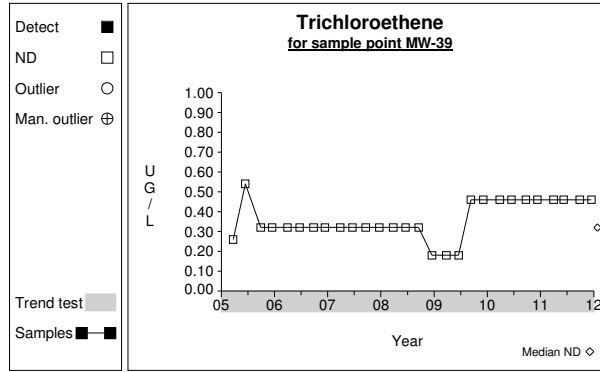


**Graph 522**

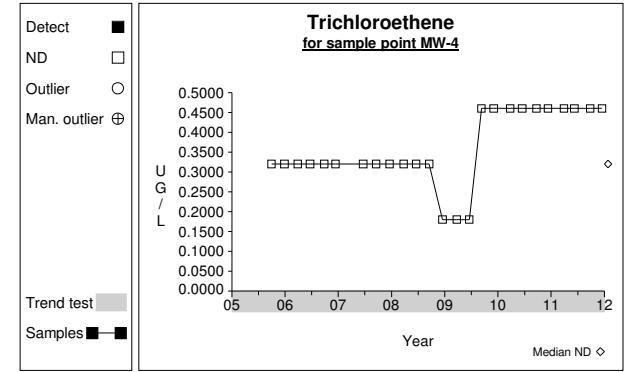
## Time Series



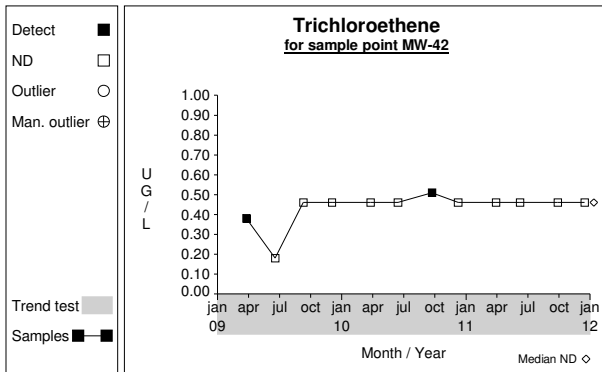
**Graph 523**



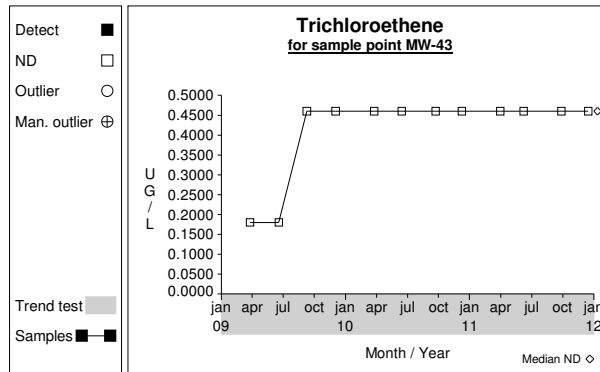
**Graph 524**



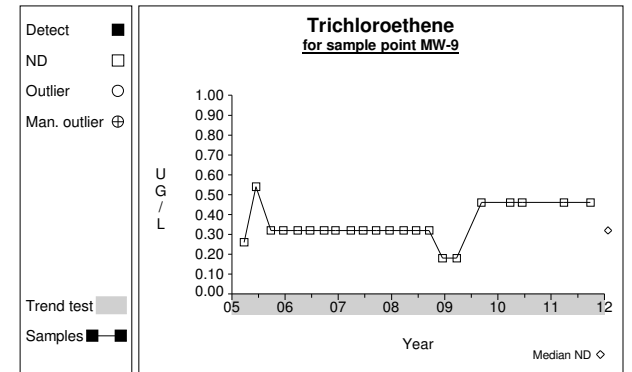
**Graph 525**



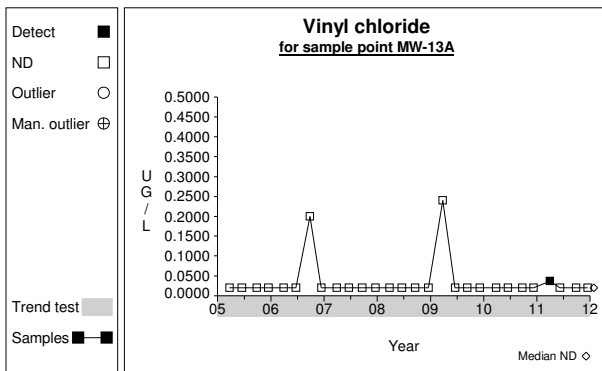
**Graph 526**



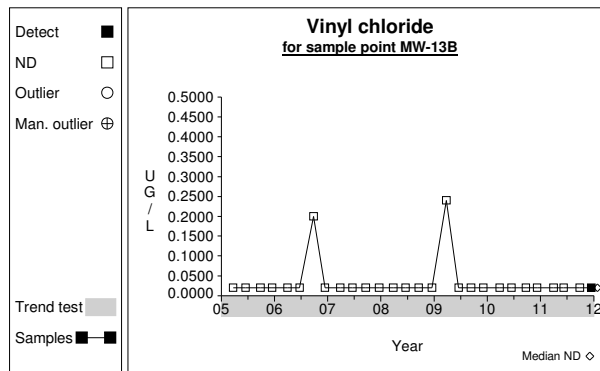
**Graph 527**



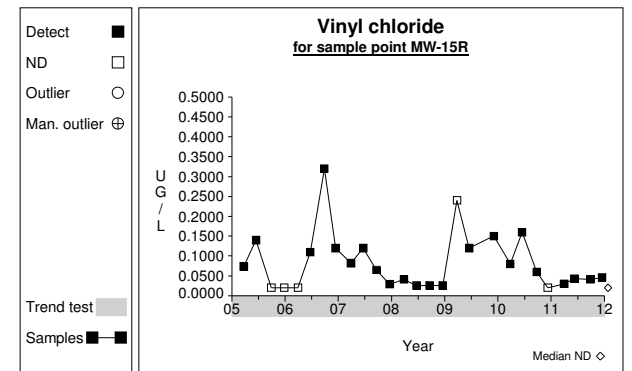
**Graph 528**



**Graph 529**

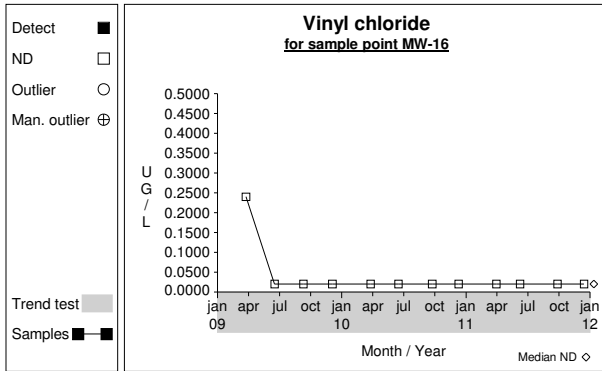


**Graph 530**

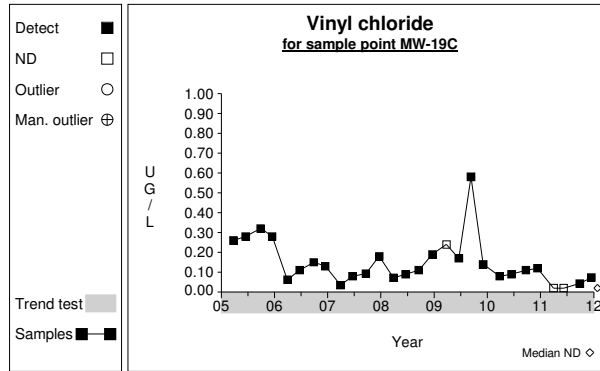


**Graph 531**

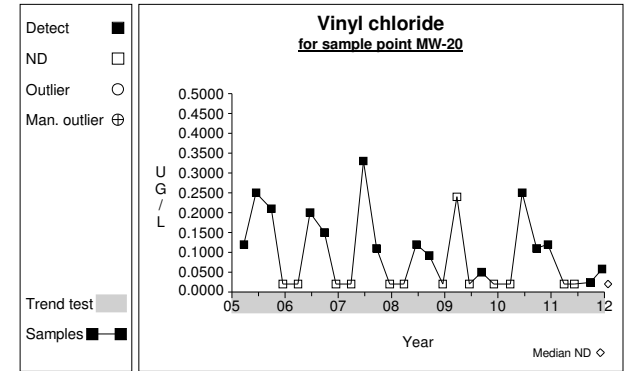
# Time Series



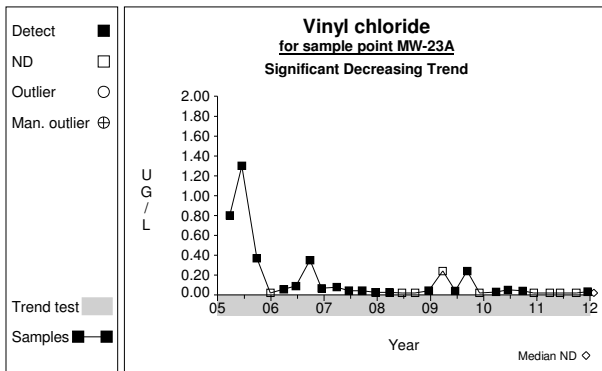
Graph 532



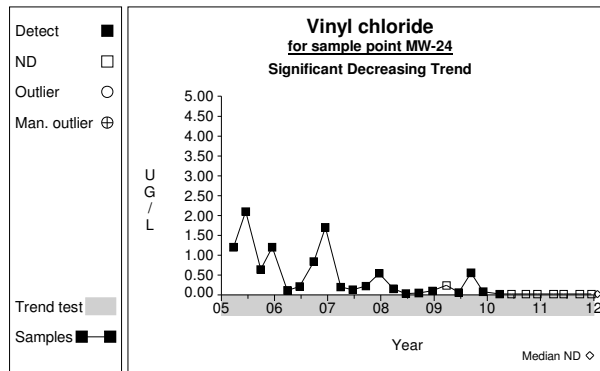
Graph 533



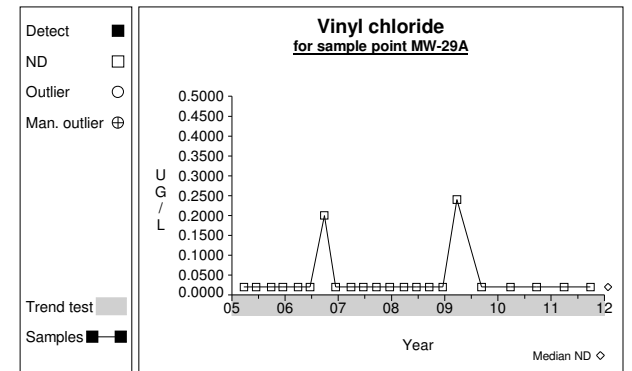
Graph 534



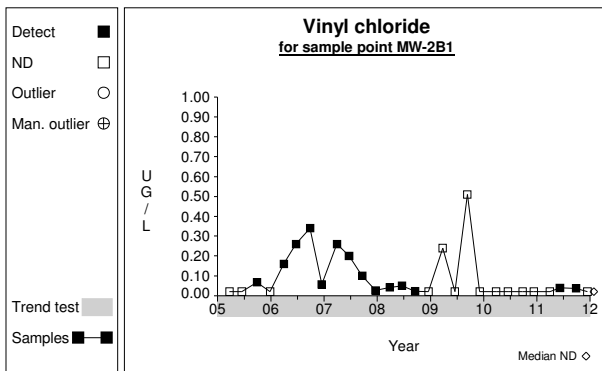
Graph 535



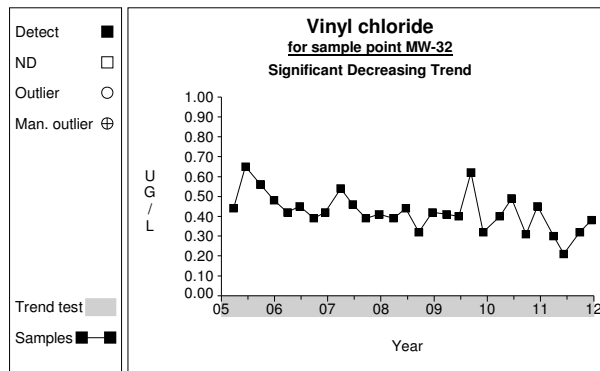
Graph 536



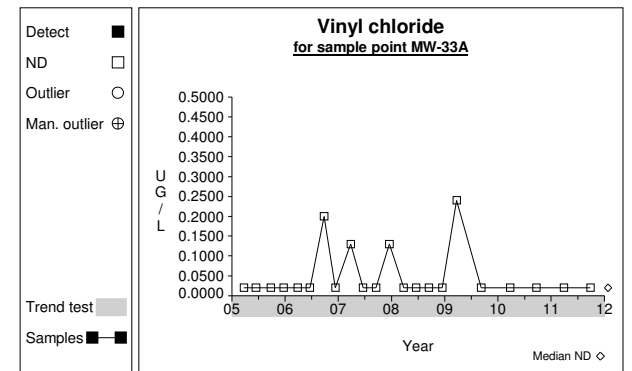
Graph 537



Graph 538



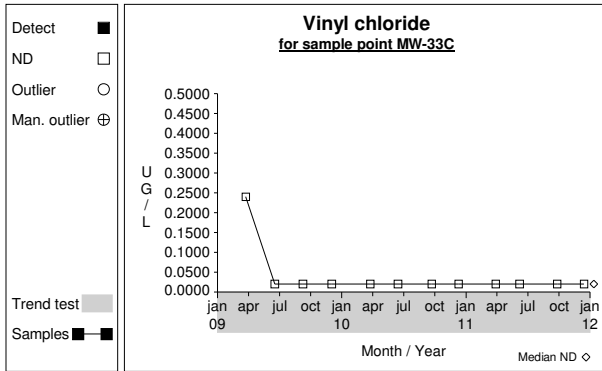
Graph 539



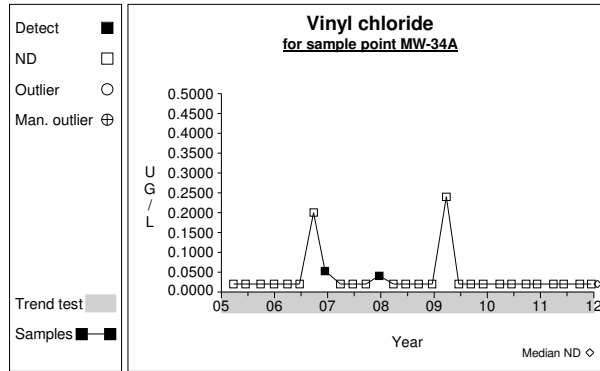
Graph 540



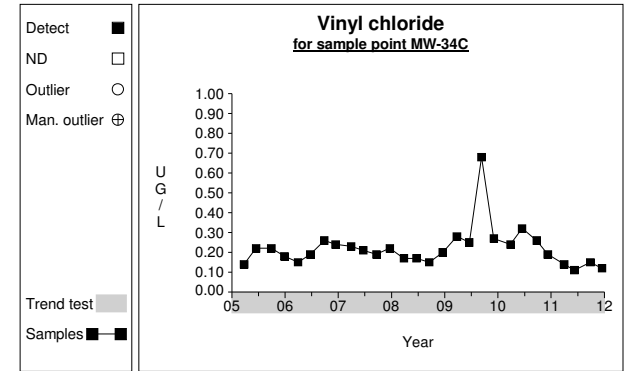
# Time Series



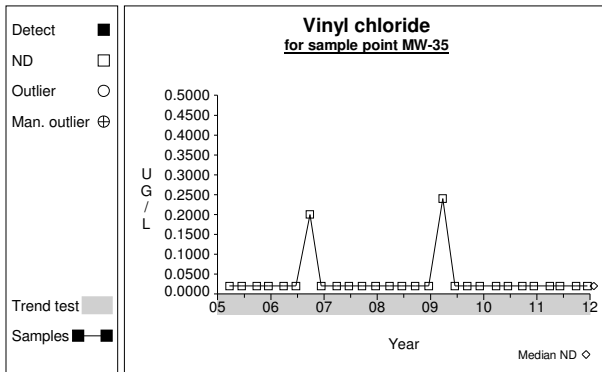
**Graph 541**



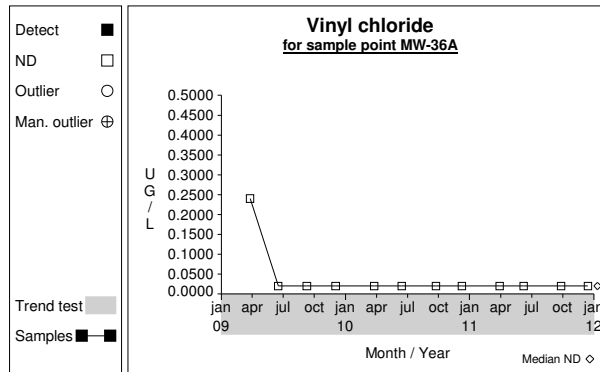
**Graph 542**



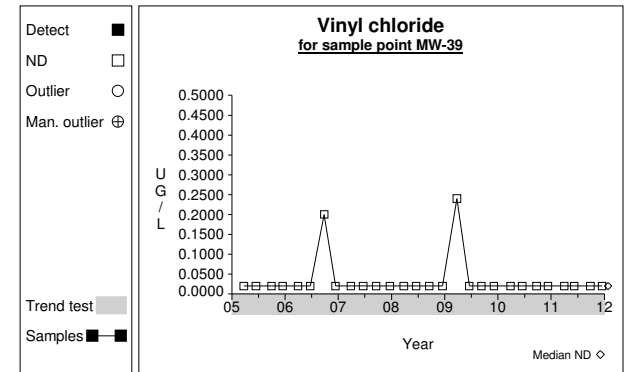
**Graph 543**



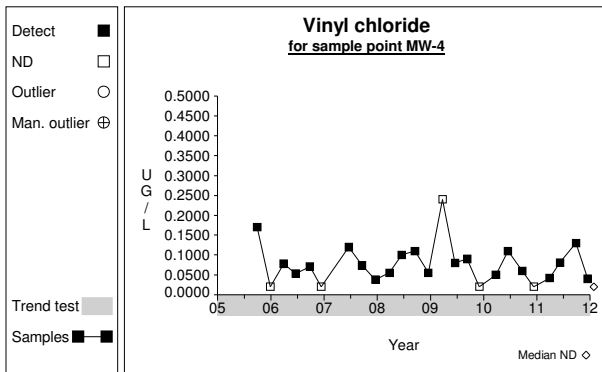
**Graph 544**



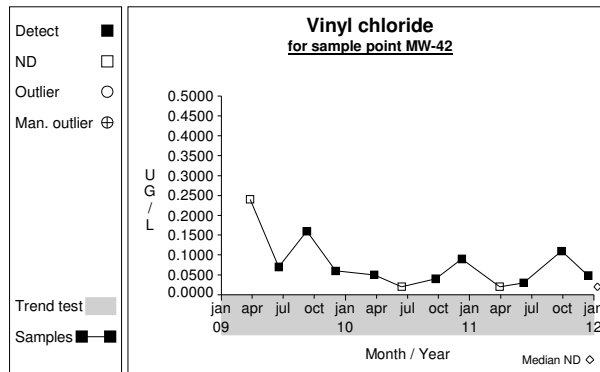
**Graph 545**



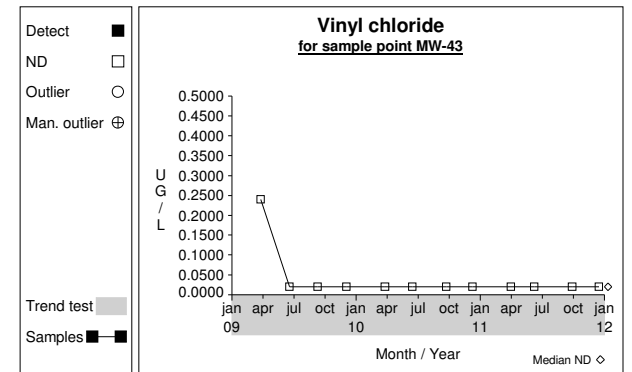
**Graph 546**



**Graph 547**

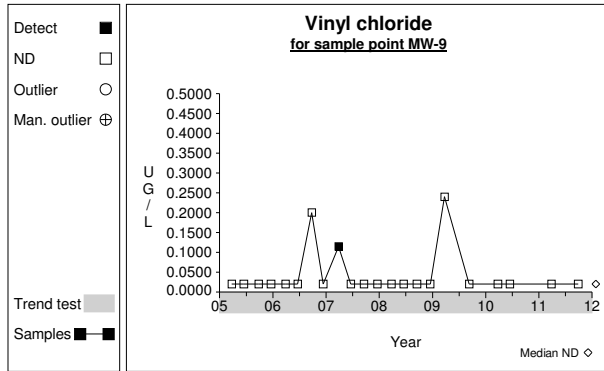


**Graph 548**



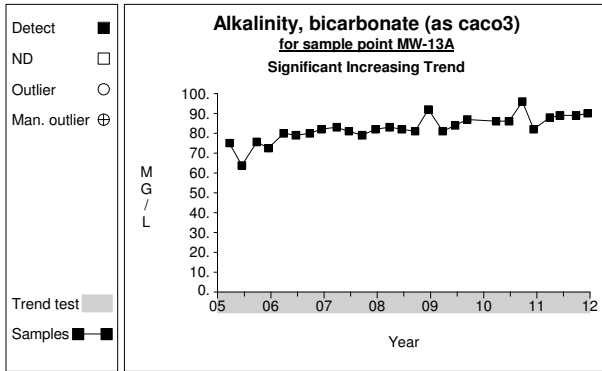
**Graph 549**

# Time Series

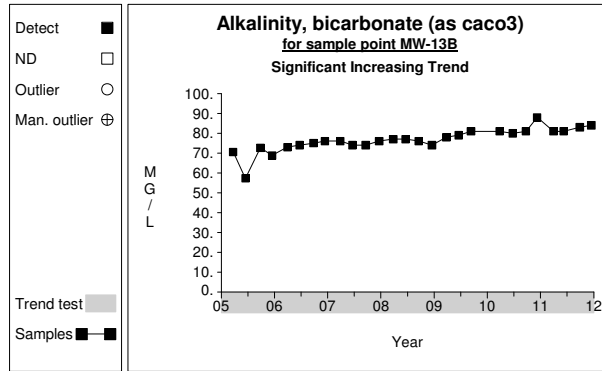


Graph 550

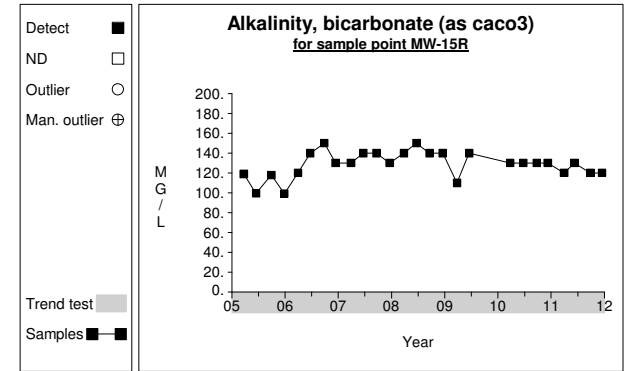
# Time Series



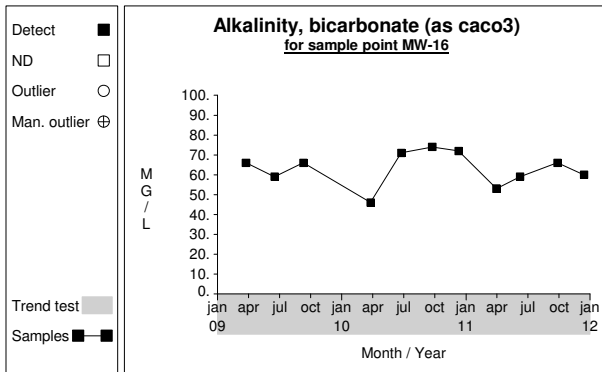
Graph 1



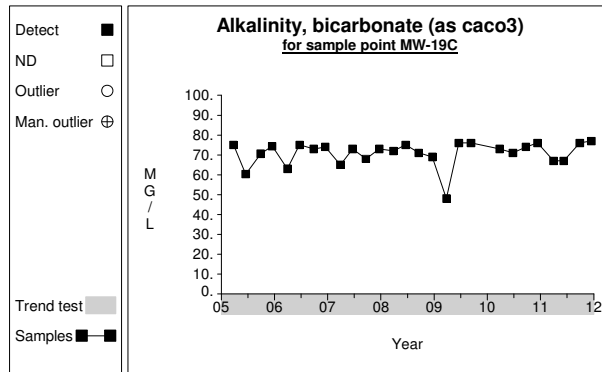
Graph 2



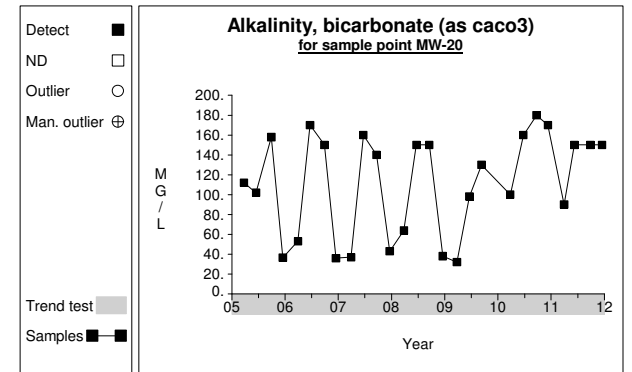
Graph 3



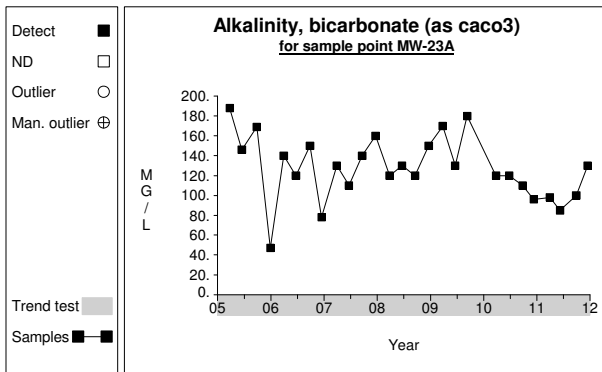
Graph 4



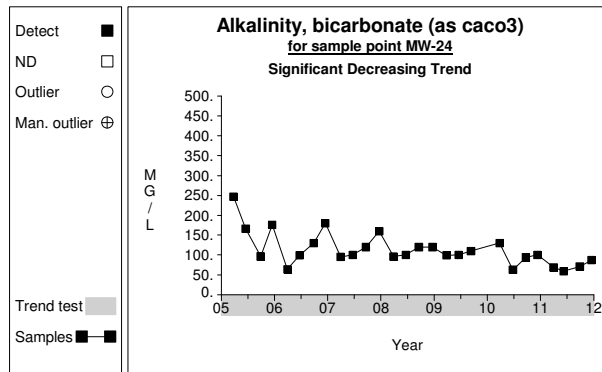
Graph 5



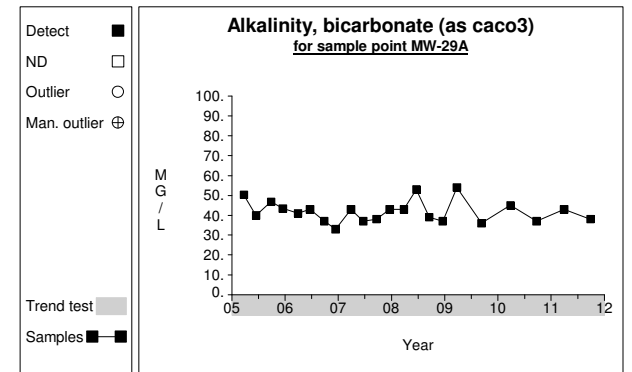
Graph 6



Graph 7

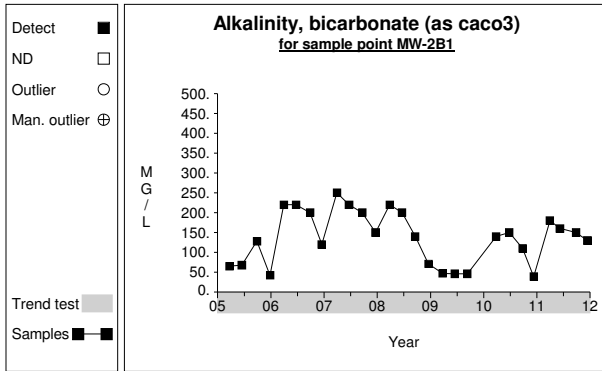


Graph 8

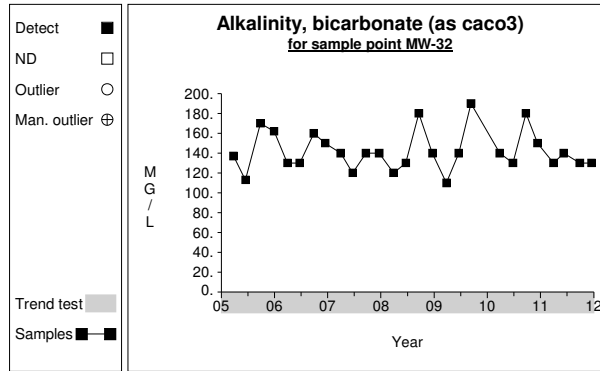


Graph 9

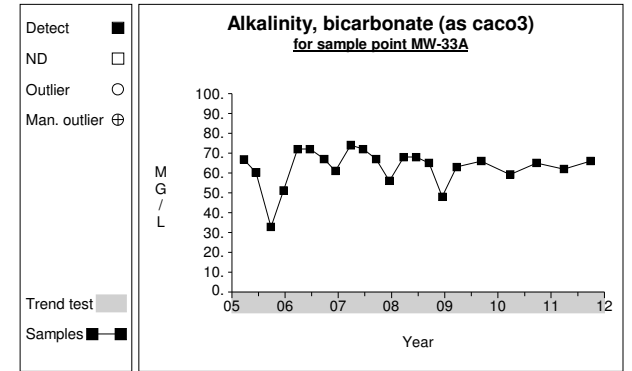
# Time Series



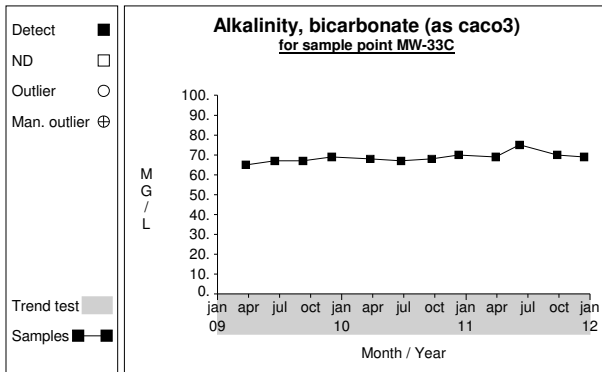
**Graph 10**



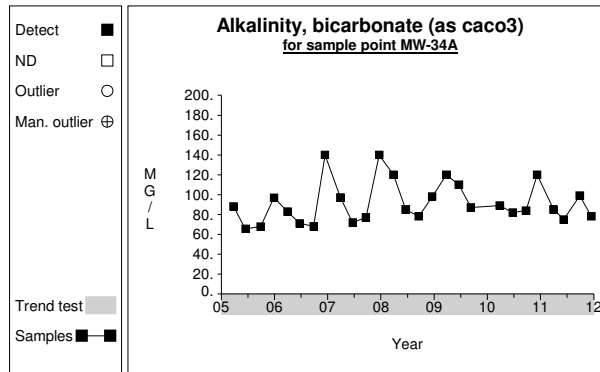
**Graph 11**



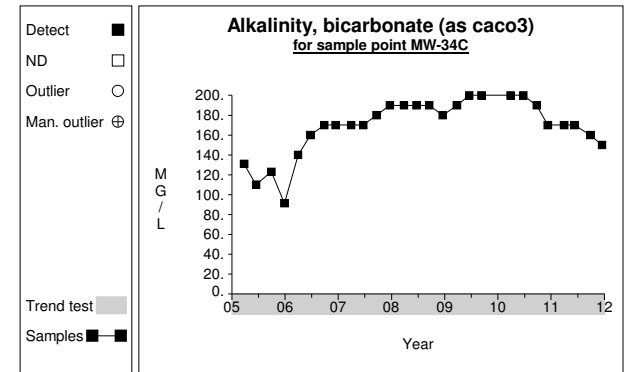
**Graph 12**



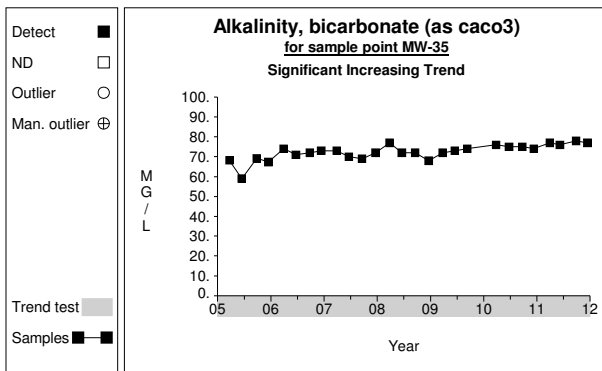
**Graph 13**



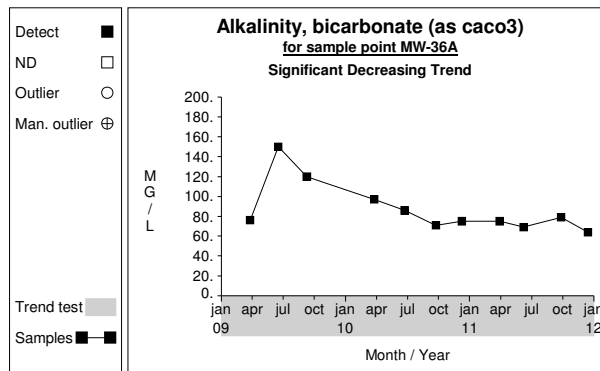
**Graph 14**



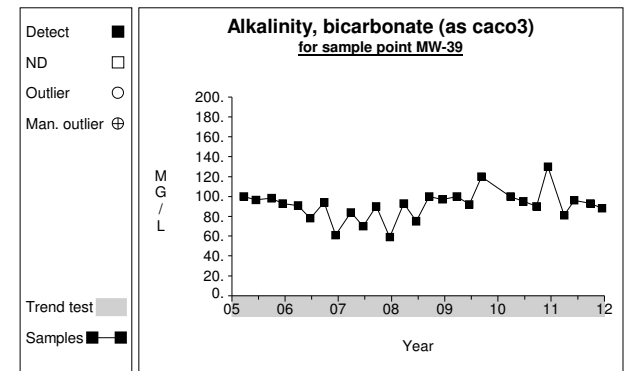
**Graph 15**



**Graph 16**

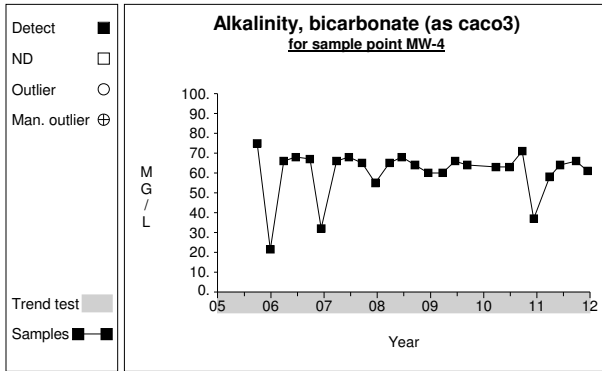


**Graph 17**

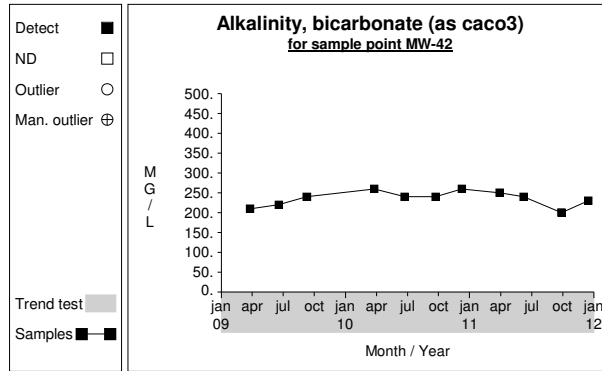


**Graph 18**

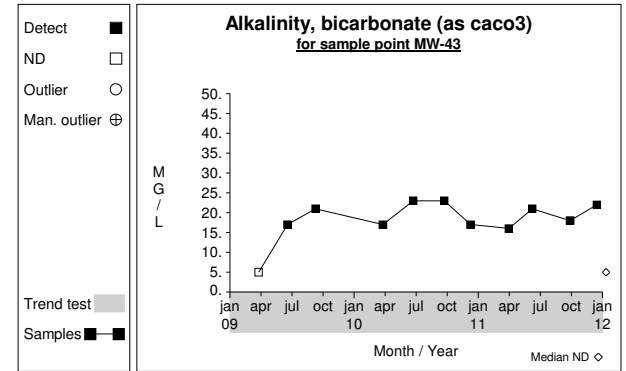
# Time Series



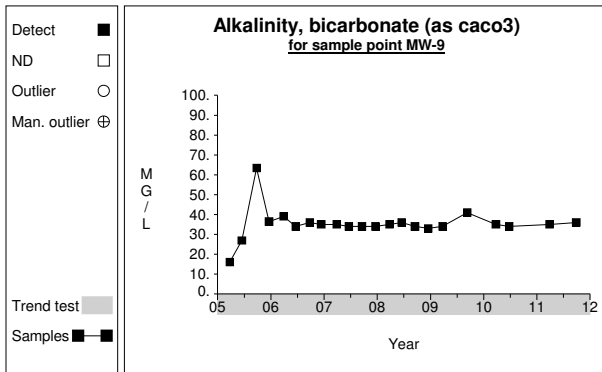
Graph 19



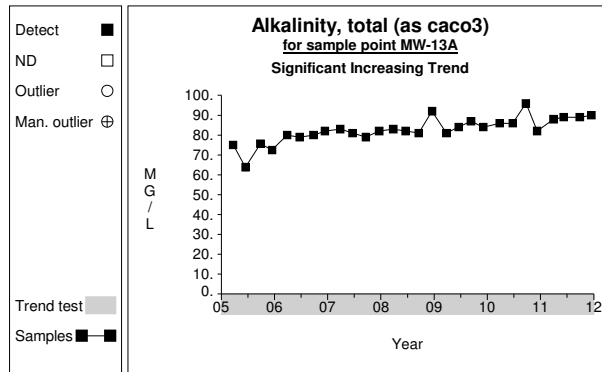
Graph 20



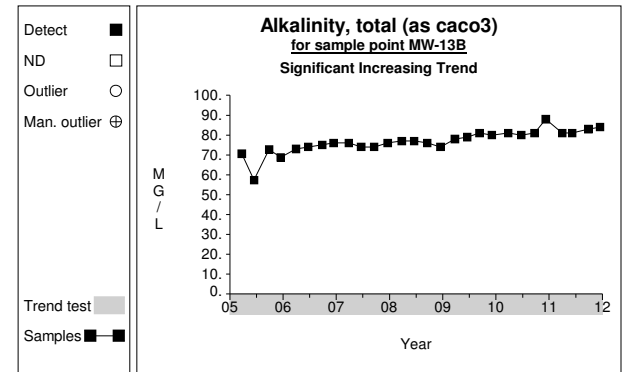
Graph 21



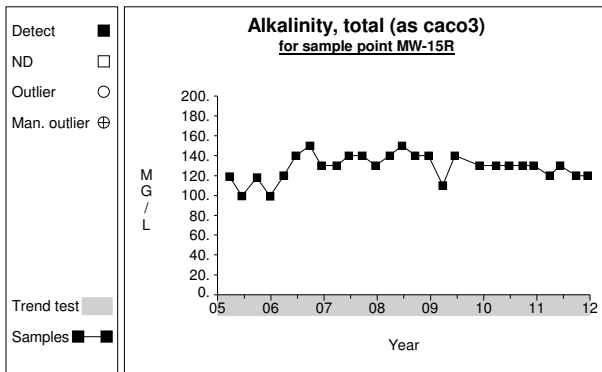
Graph 22



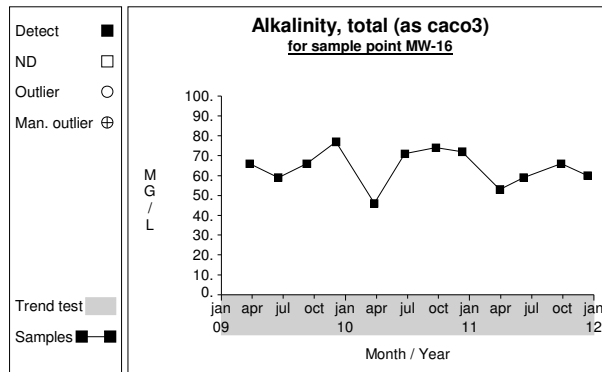
Graph 23



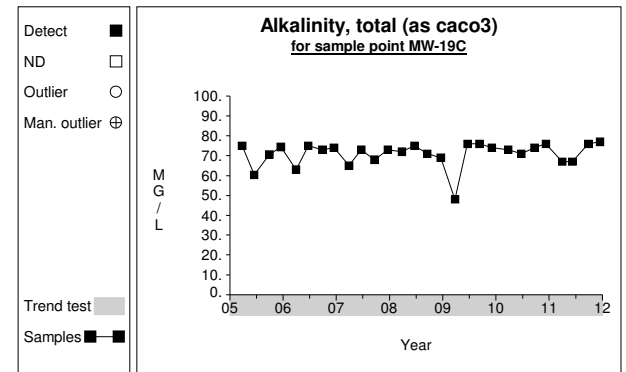
Graph 24



Graph 25

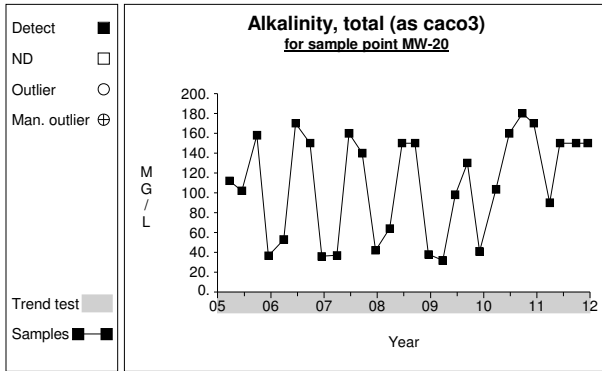


Graph 26

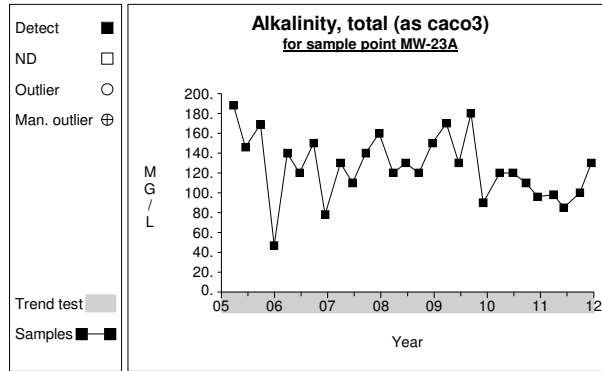


Graph 27

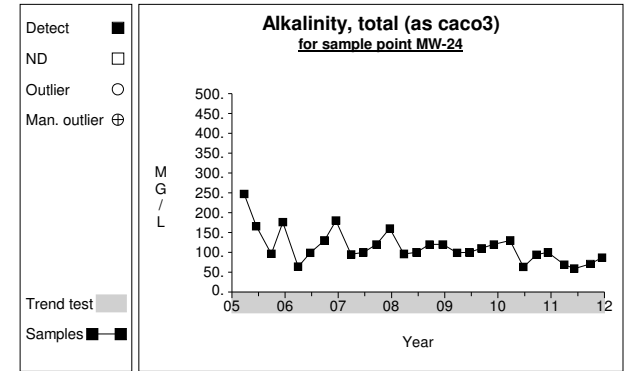
# Time Series



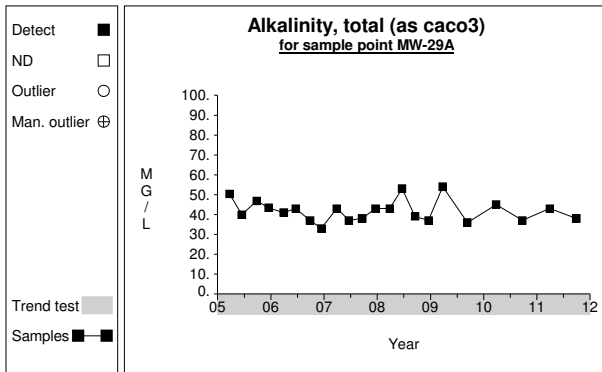
Graph 28



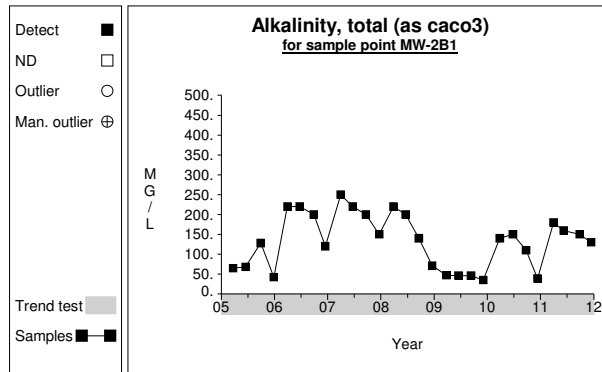
Graph 29



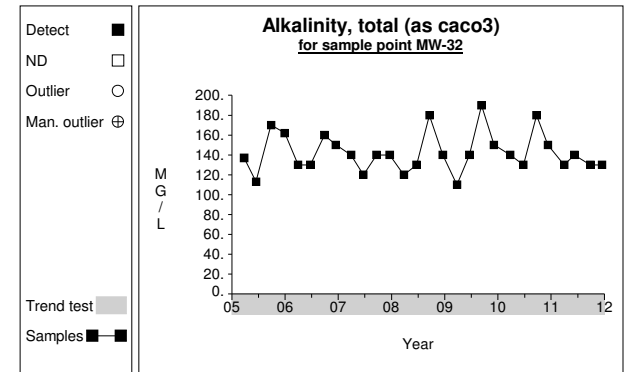
Graph 30



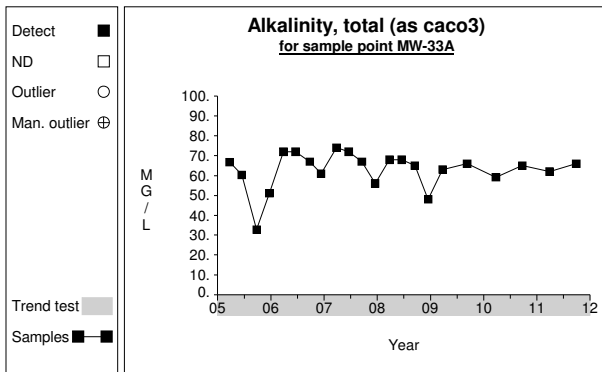
Graph 31



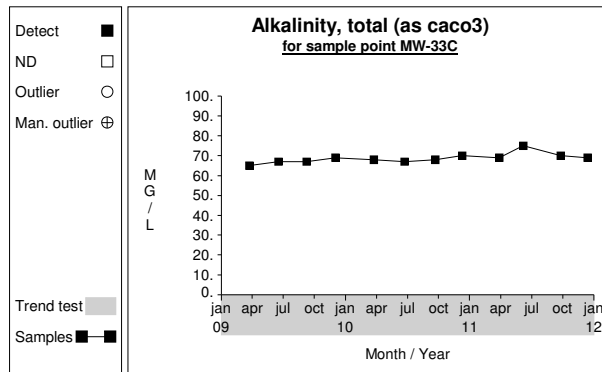
Graph 32



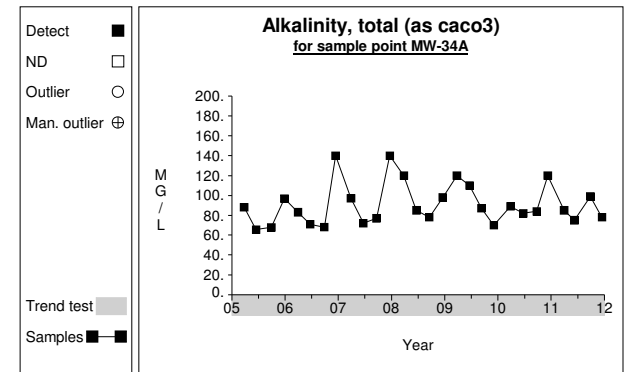
Graph 33



Graph 34

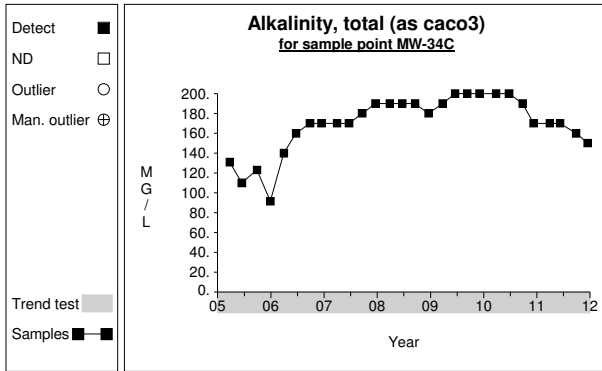


Graph 35

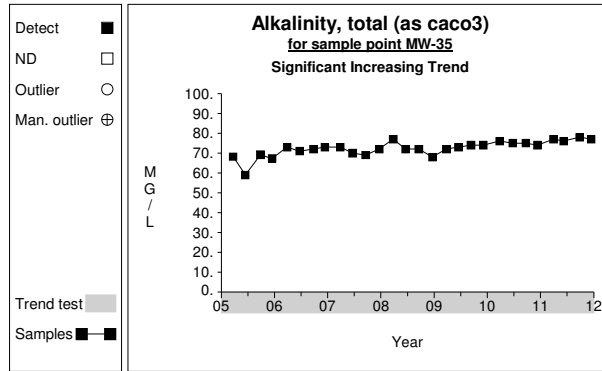


Graph 36

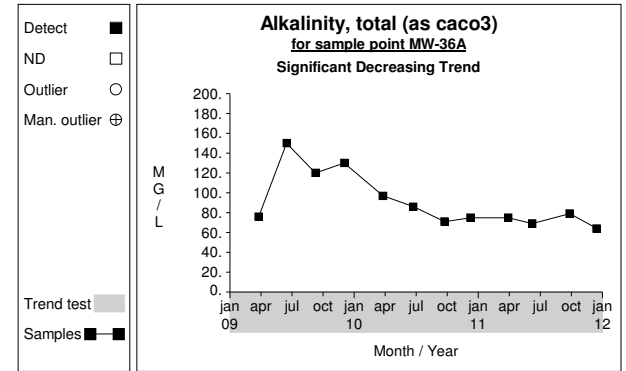
# Time Series



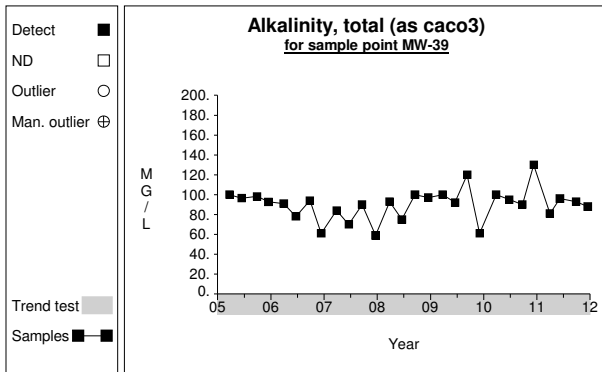
Graph 37



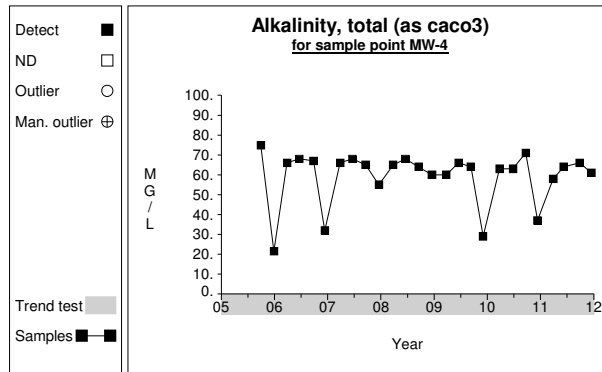
Graph 38



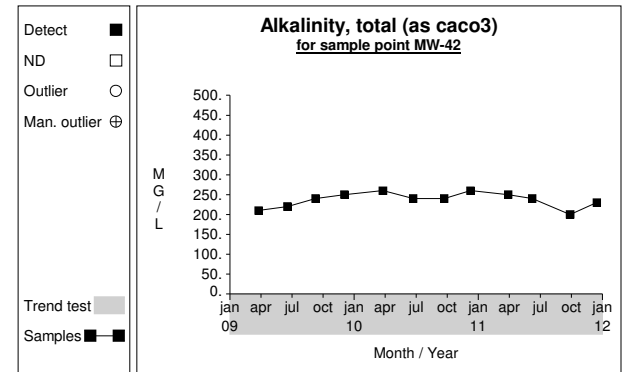
Graph 39



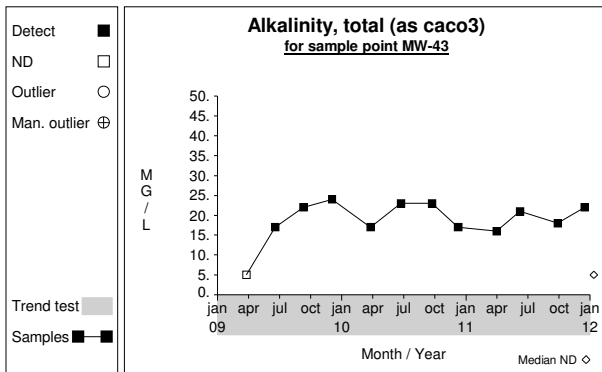
Graph 40



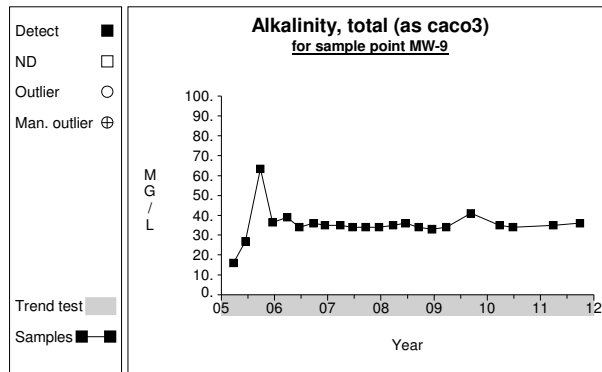
Graph 41



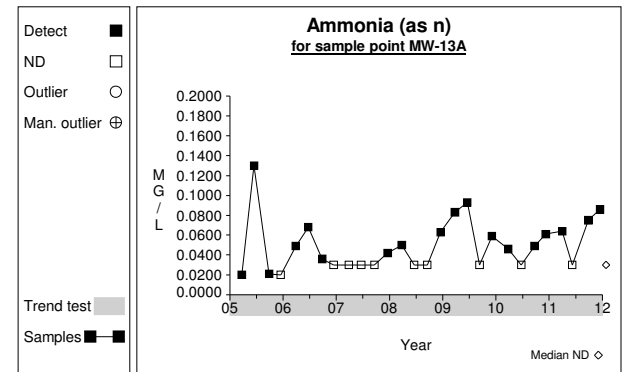
Graph 42



Graph 43

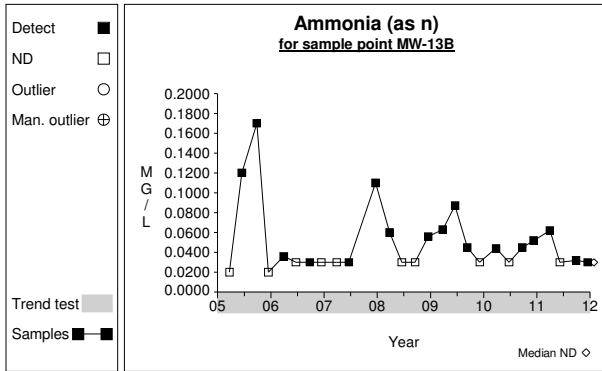


Graph 44

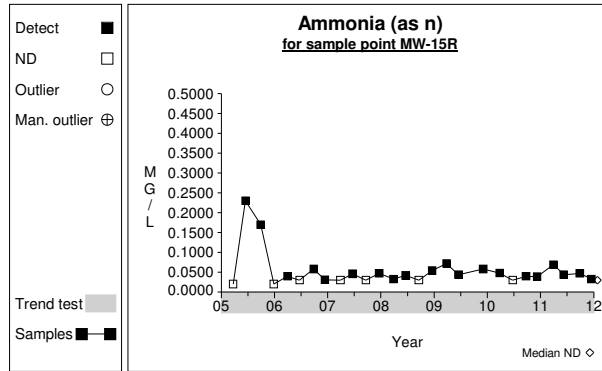


Graph 45

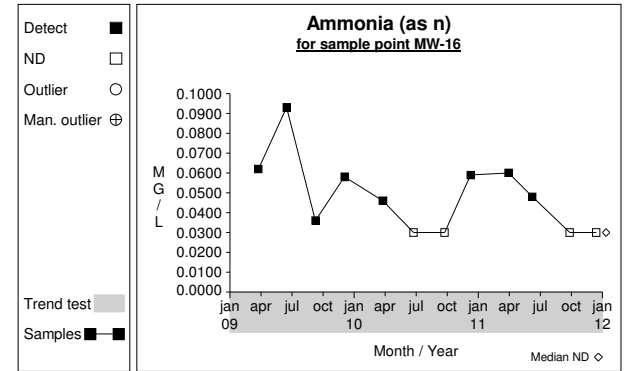
# Time Series



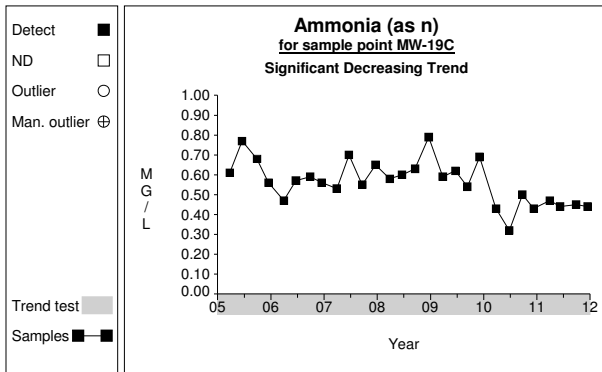
Graph 46



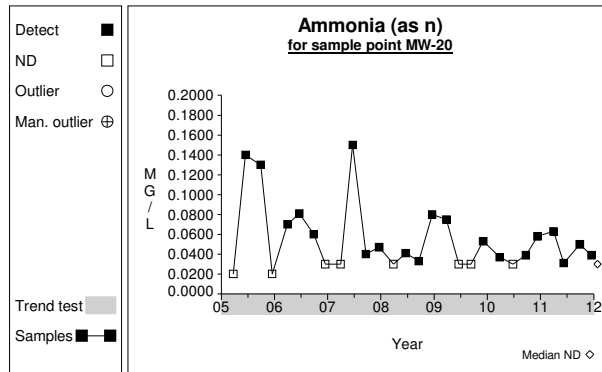
Graph 47



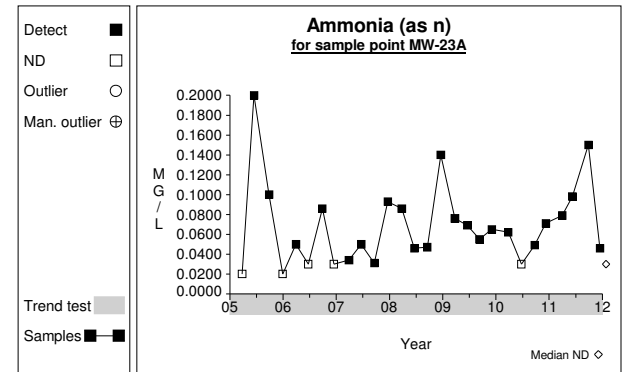
Graph 48



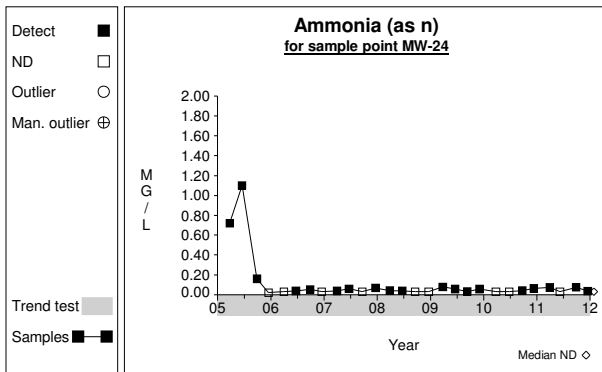
Graph 49



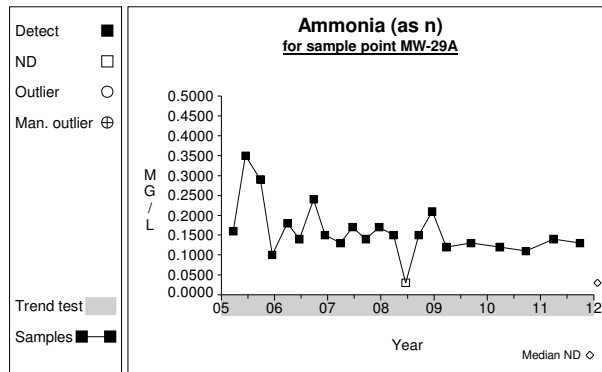
Graph 50



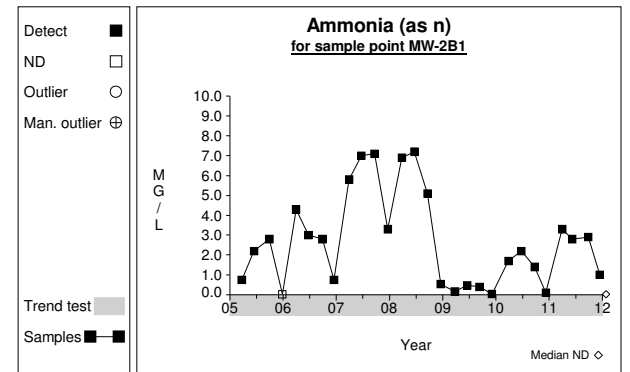
Graph 51



Graph 52



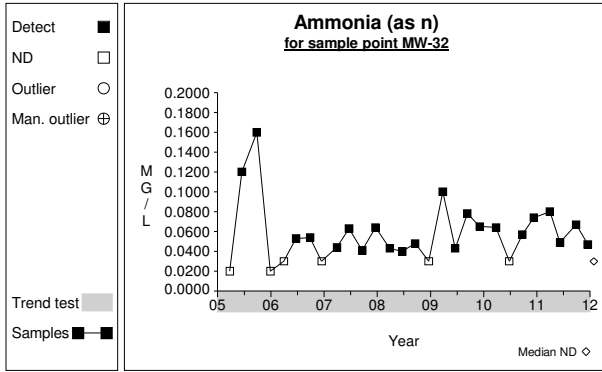
Graph 53



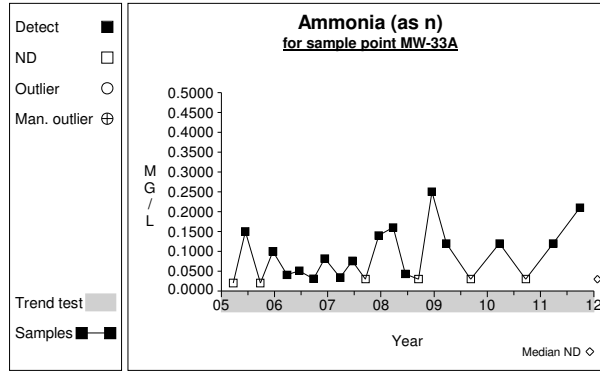
Graph 54



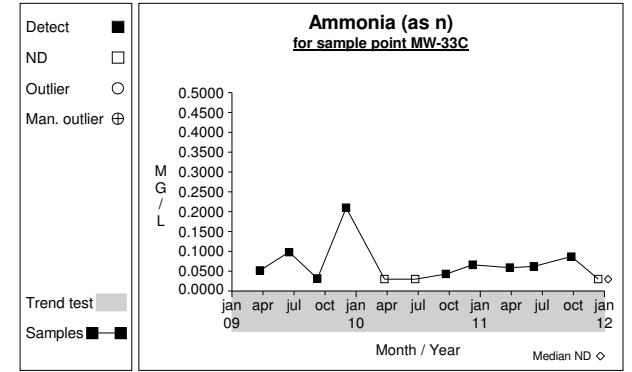
# Time Series



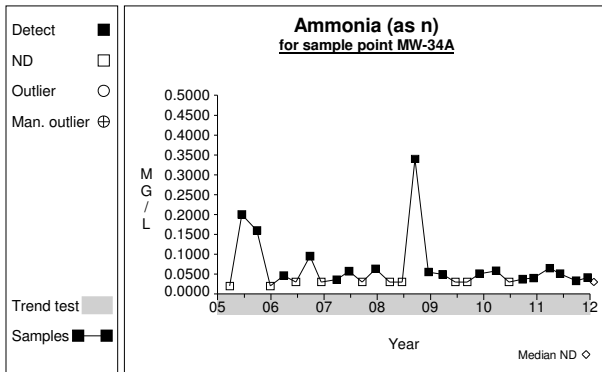
**Graph 55**



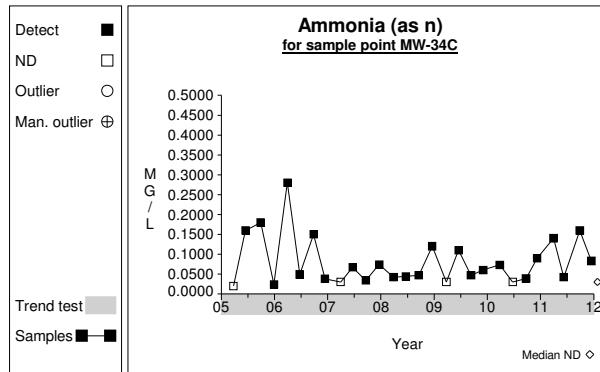
**Graph 56**



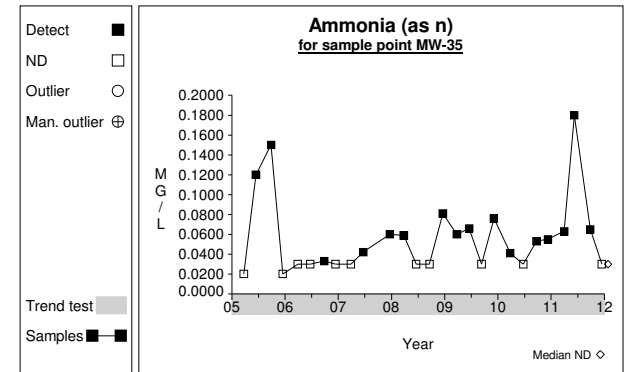
**Graph 57**



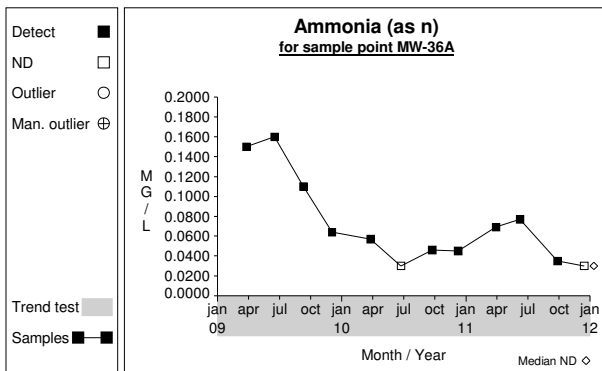
**Graph 58**



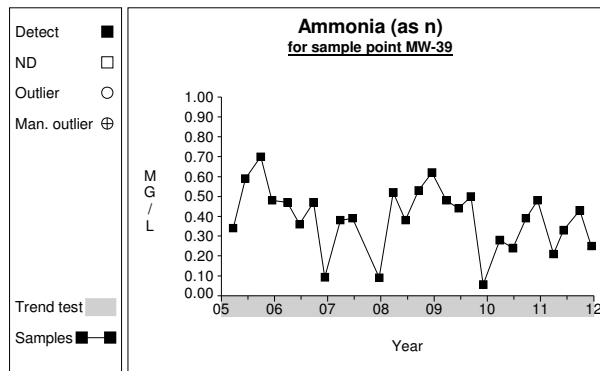
**Graph 59**



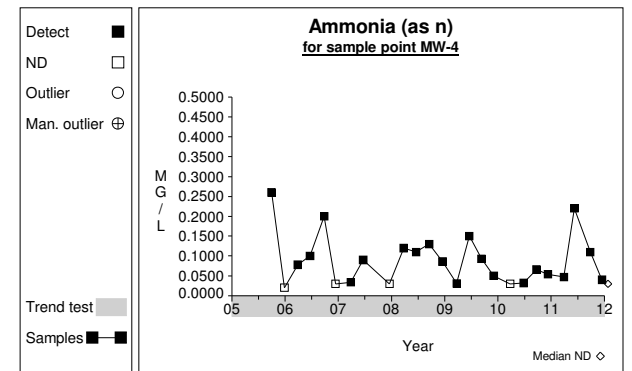
**Graph 60**



**Graph 61**

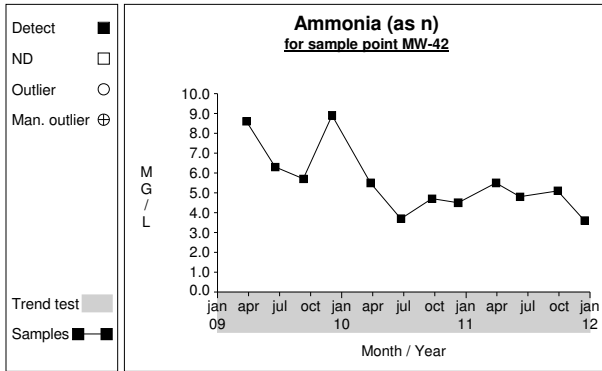


**Graph 62**

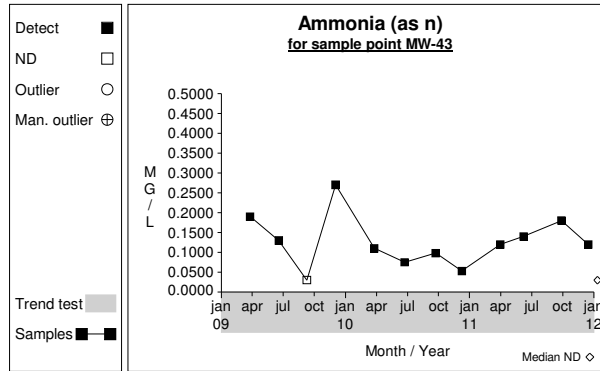


**Graph 63**

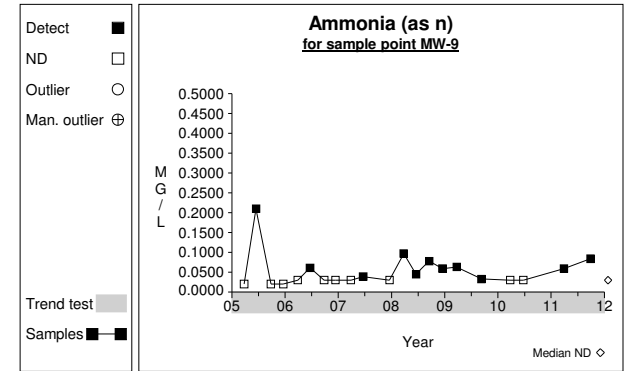
# Time Series



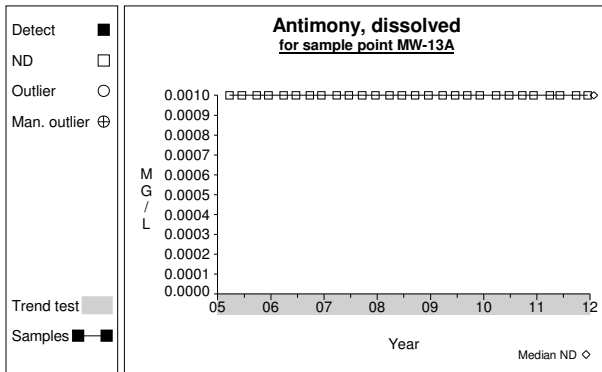
**Graph 64**



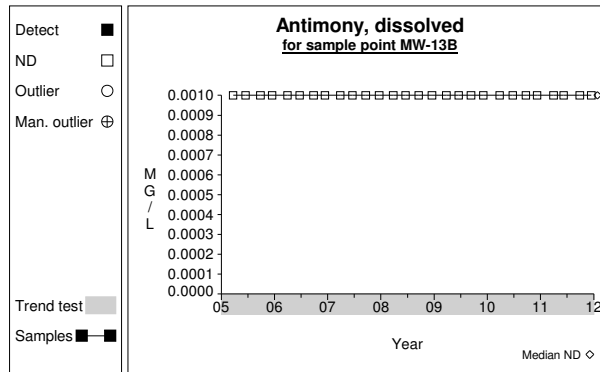
**Graph 65**



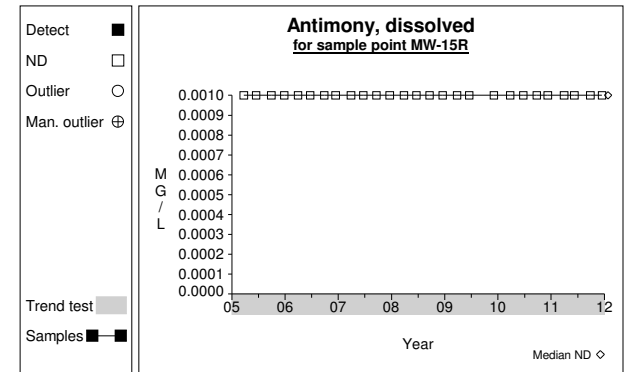
**Graph 66**



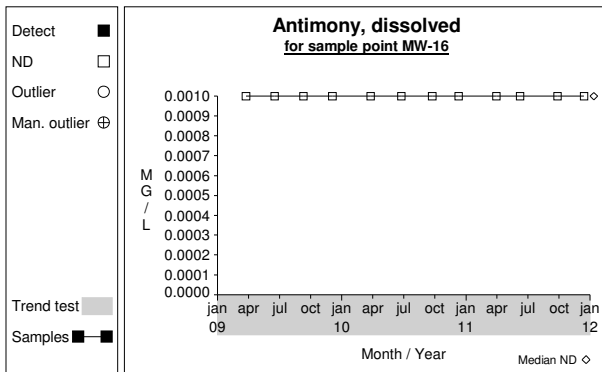
**Graph 67**



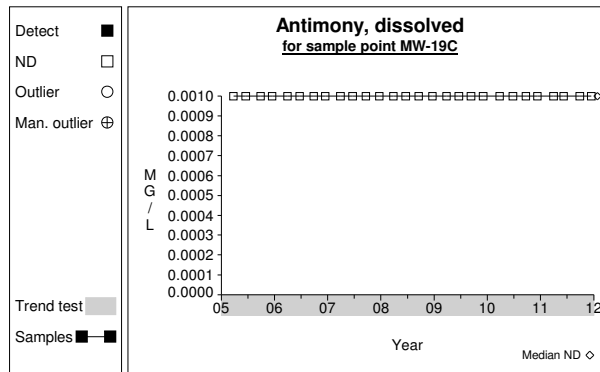
**Graph 68**



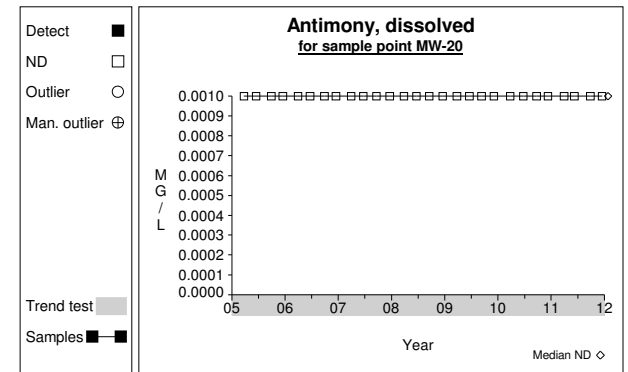
**Graph 69**



**Graph 70**

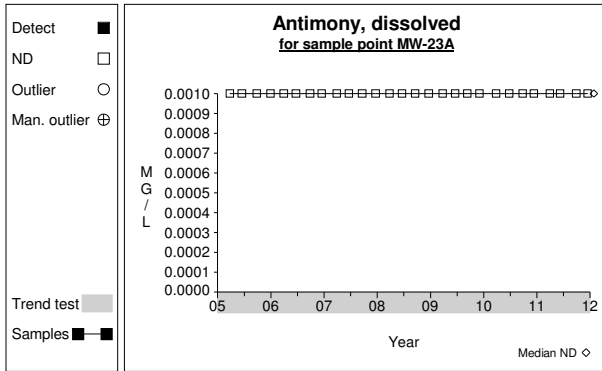


**Graph 71**

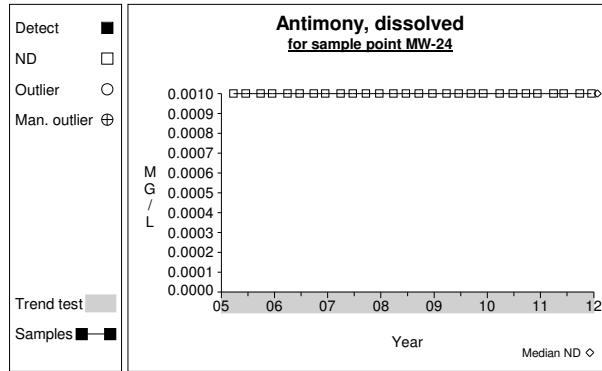


**Graph 72**

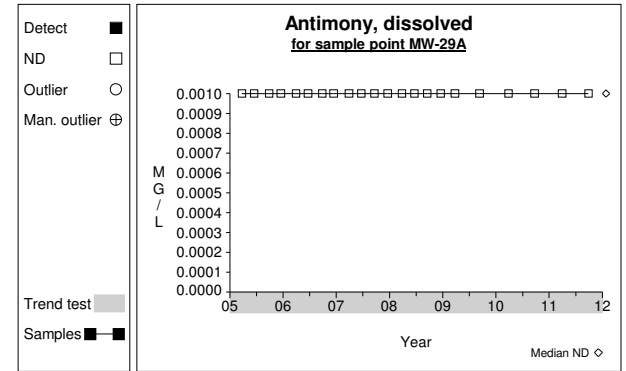
# Time Series



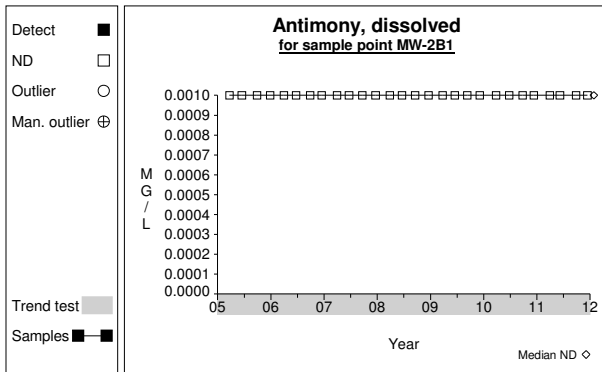
Graph 73



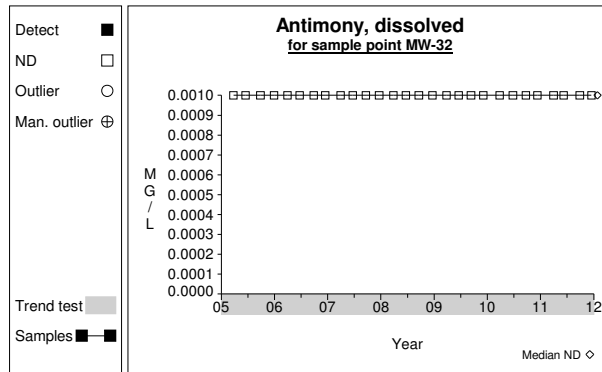
Graph 74



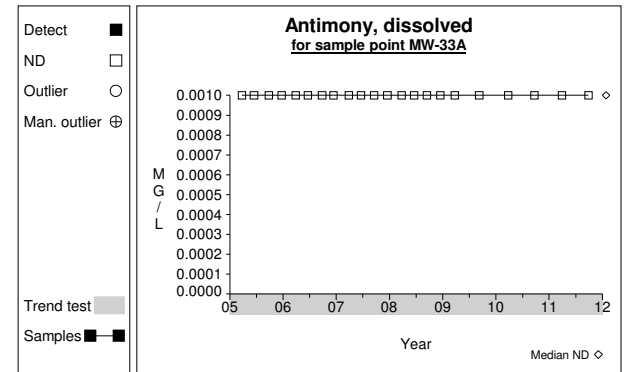
Graph 75



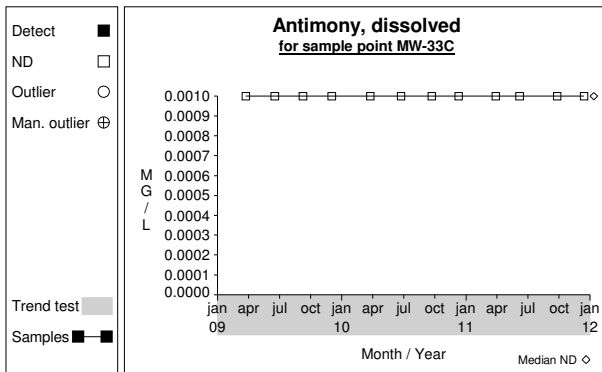
Graph 76



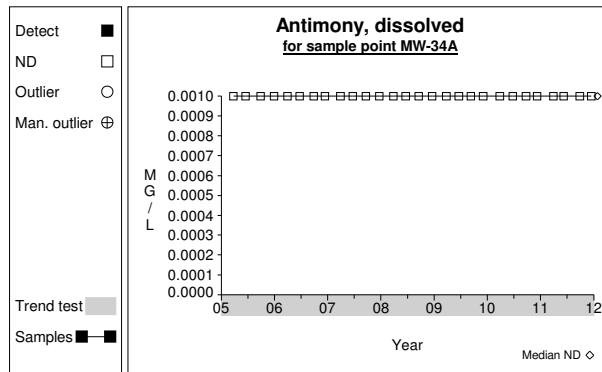
Graph 77



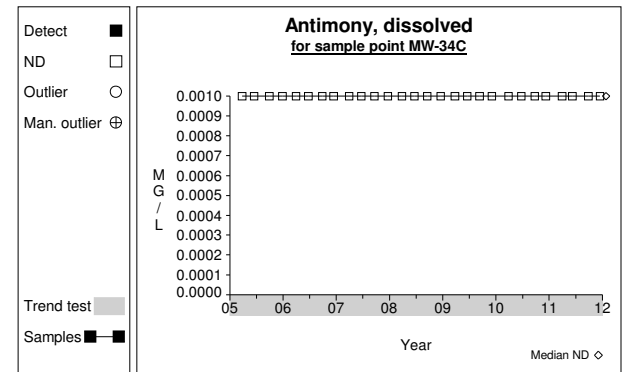
Graph 78



Graph 79

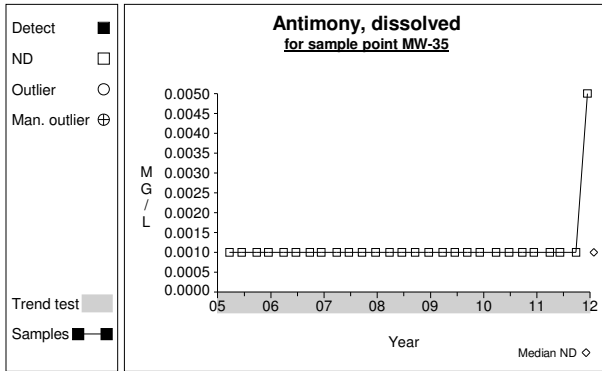


Graph 80

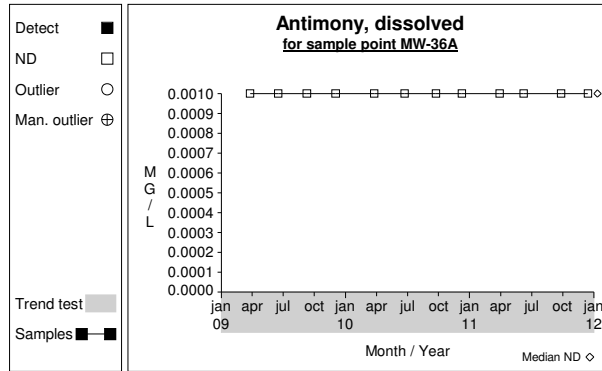


Graph 81

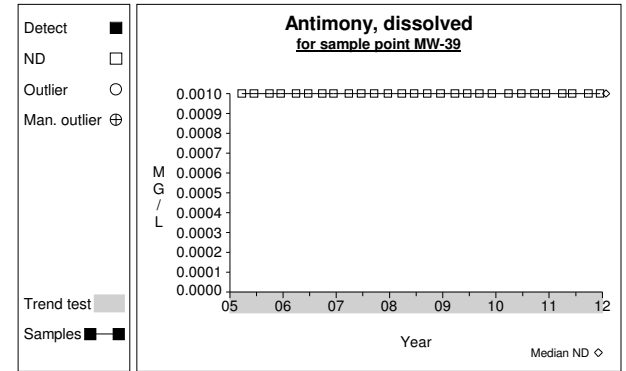
# Time Series



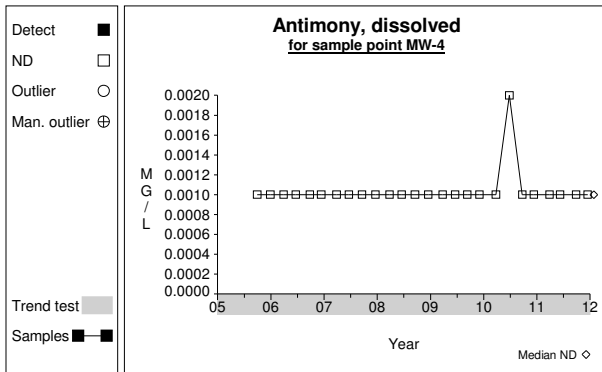
**Graph 82**



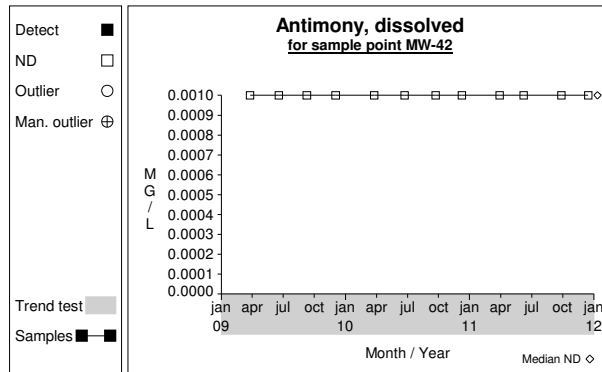
**Graph 83**



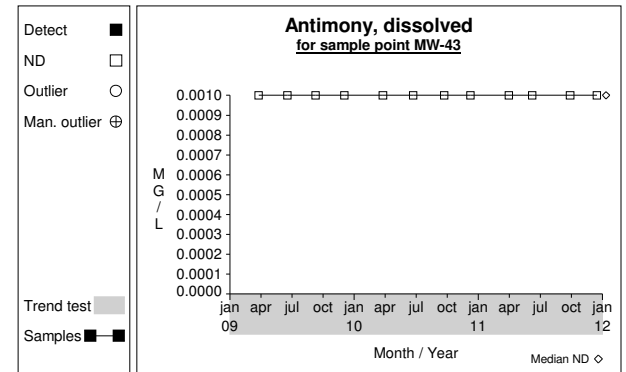
**Graph 84**



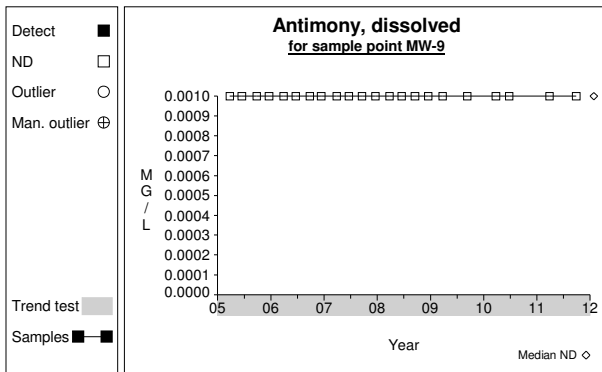
**Graph 85**



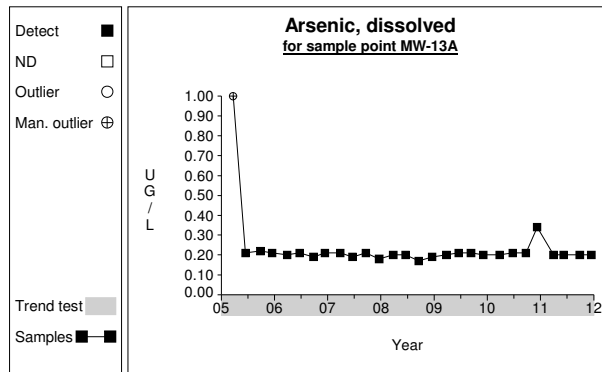
**Graph 86**



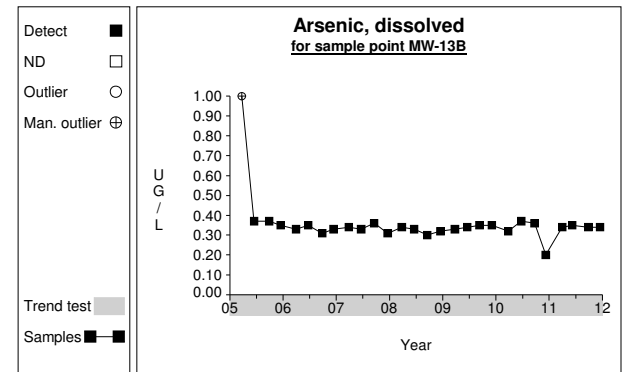
**Graph 87**



**Graph 88**

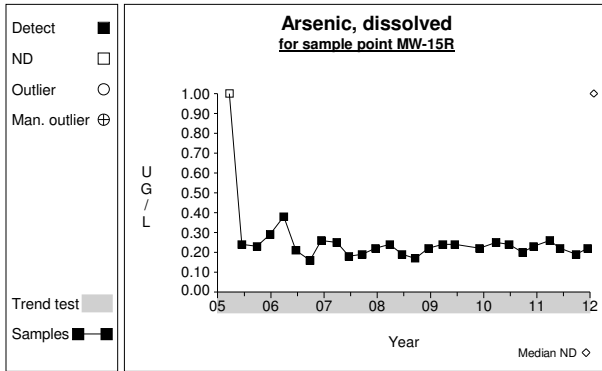


**Graph 89**

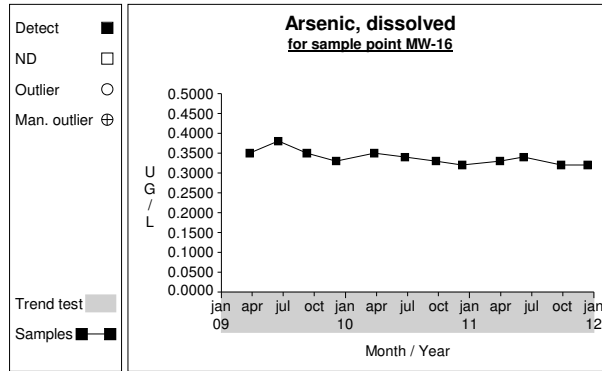


**Graph 90**

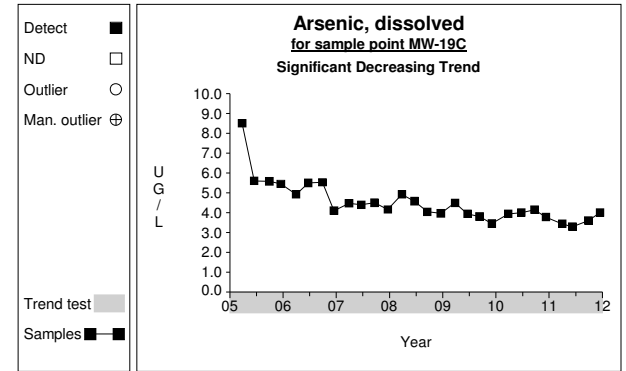
# Time Series



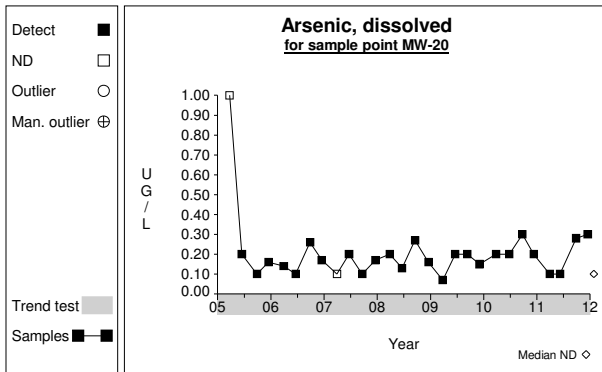
**Graph 91**



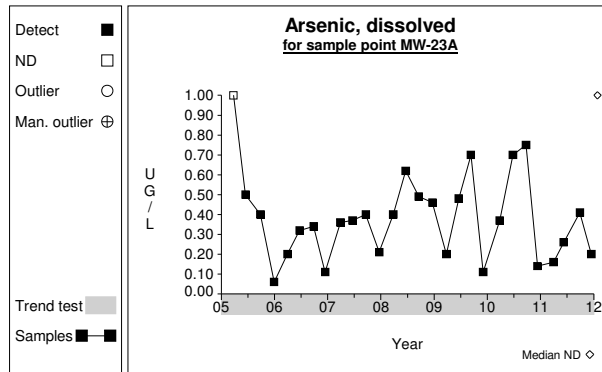
**Graph 92**



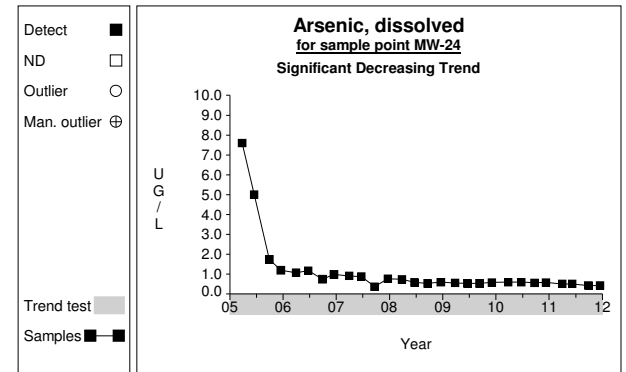
**Graph 93**



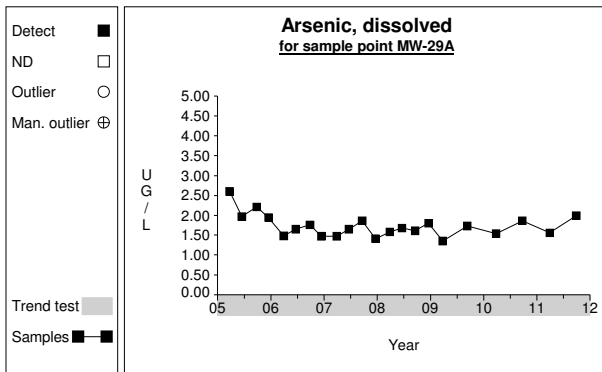
**Graph 94**



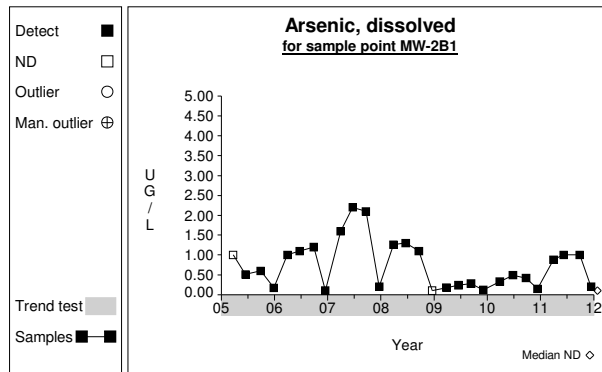
**Graph 95**



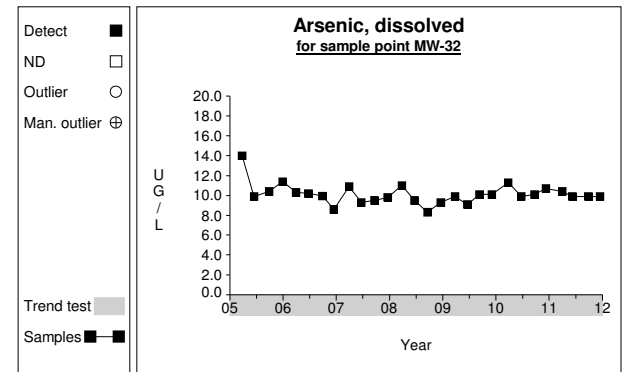
**Graph 96**



**Graph 97**

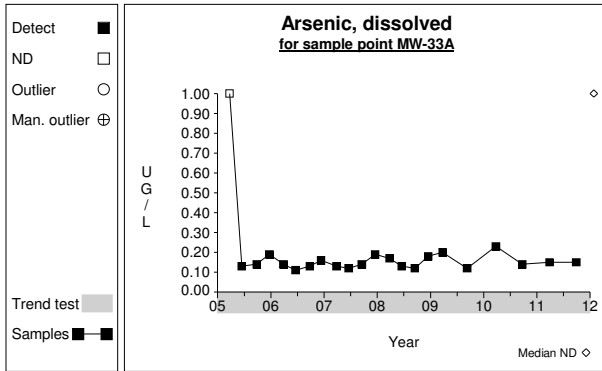


**Graph 98**

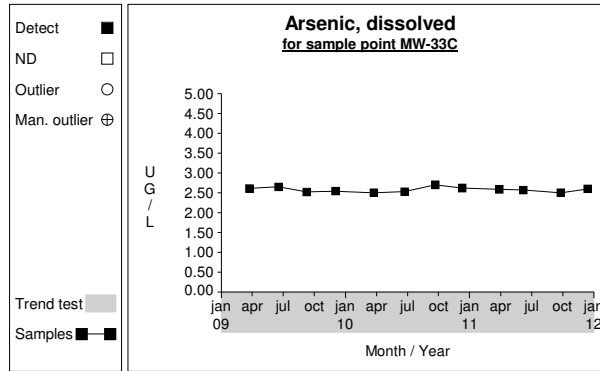


**Graph 99**

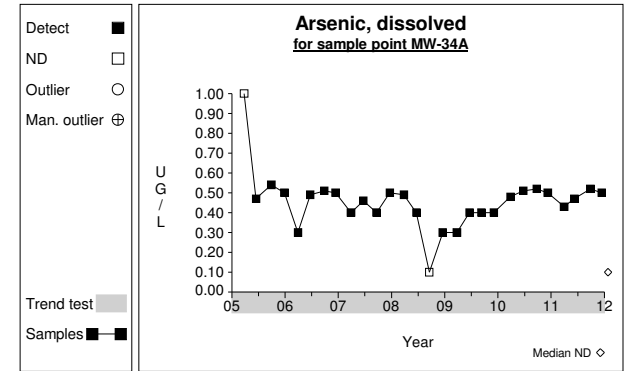
# Time Series



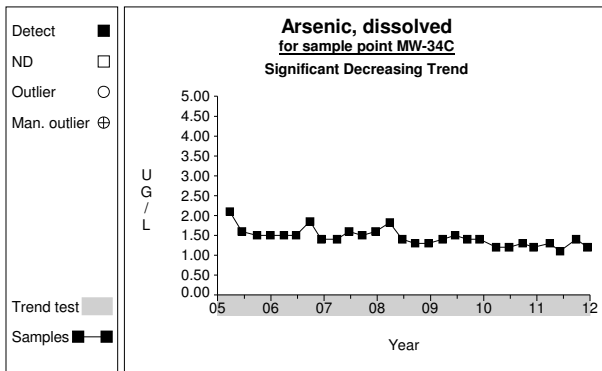
Graph 100



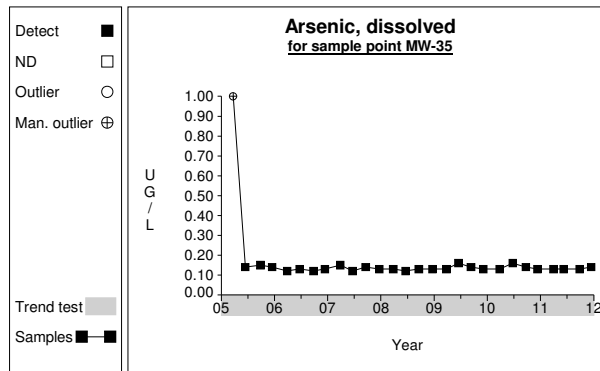
Graph 101



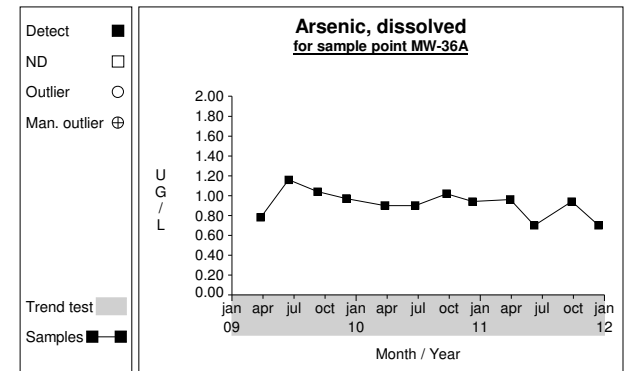
Graph 102



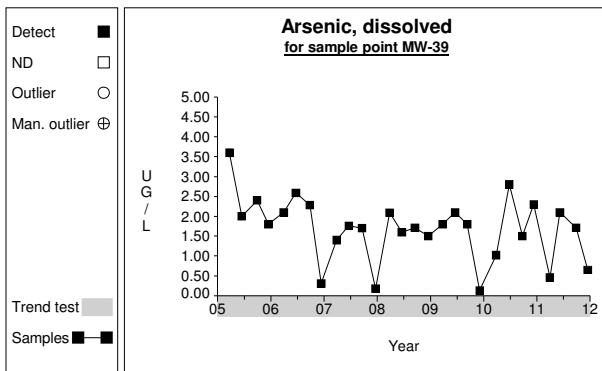
Graph 103



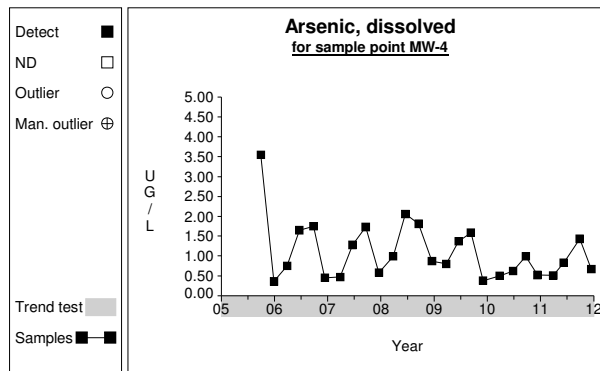
Graph 104



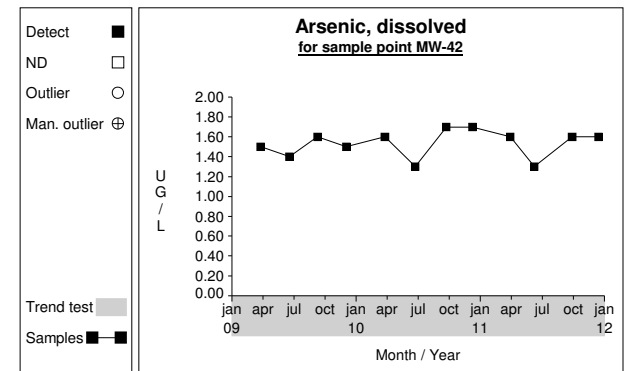
Graph 105



Graph 106

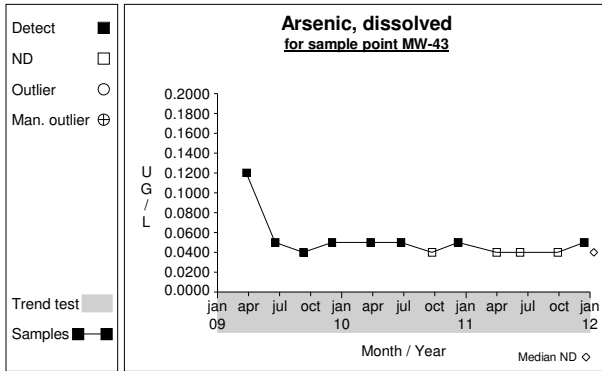


Graph 107

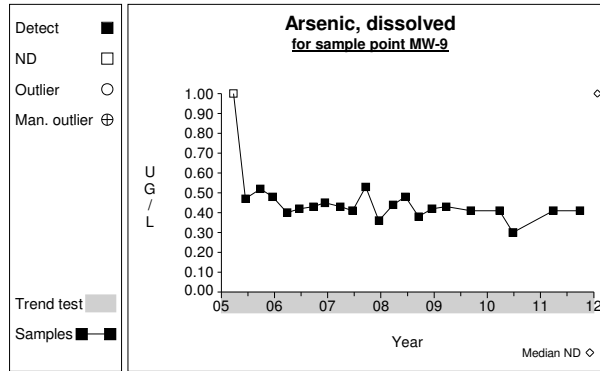


Graph 108

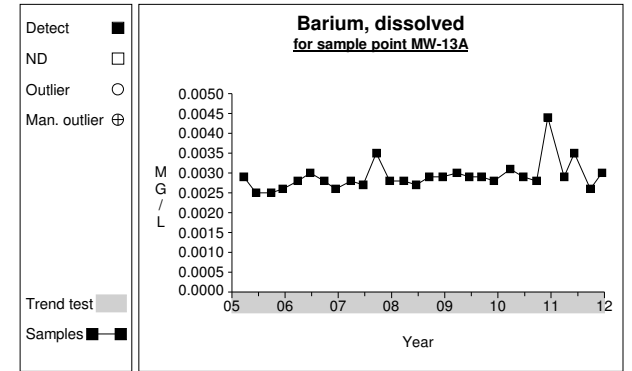
# Time Series



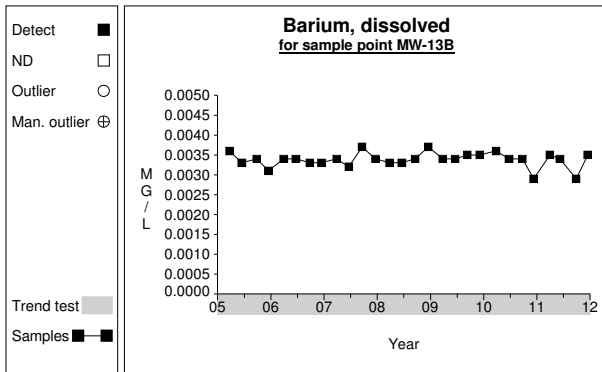
Graph 109



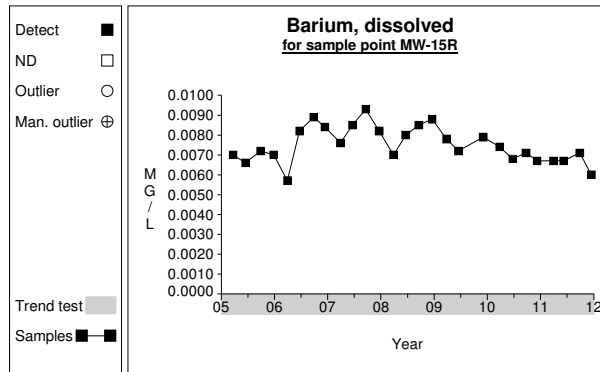
Graph 110



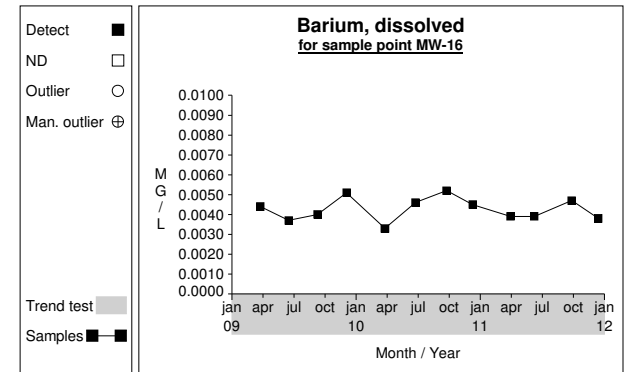
Graph 111



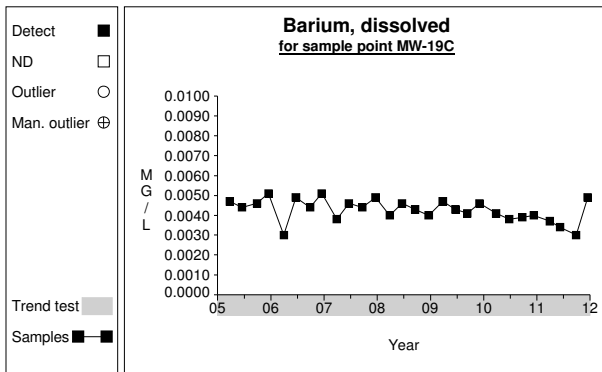
Graph 112



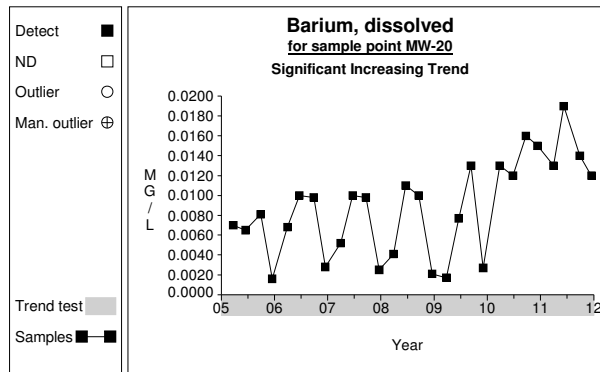
Graph 113



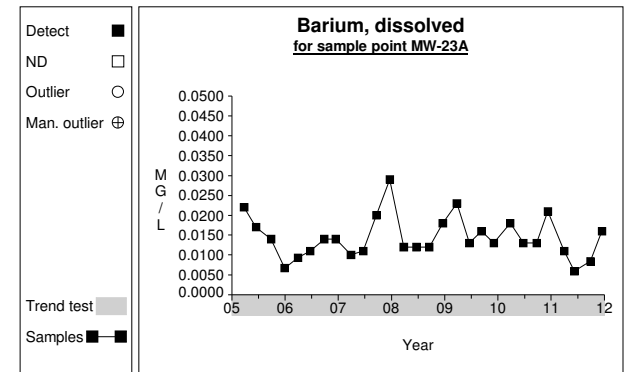
Graph 114



Graph 115

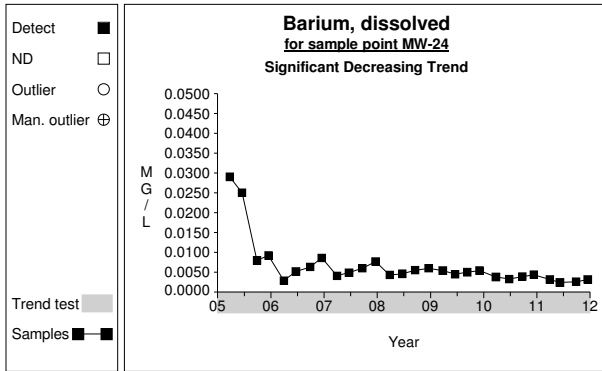


Graph 116

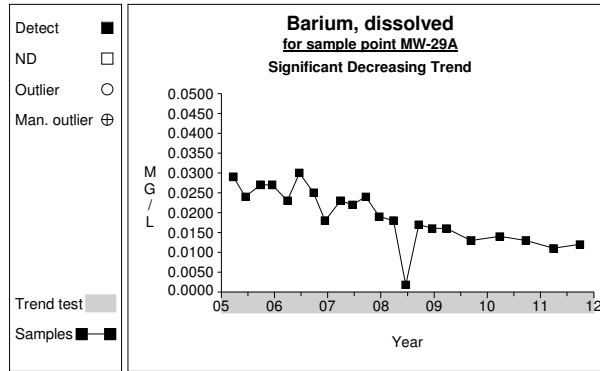


Graph 117

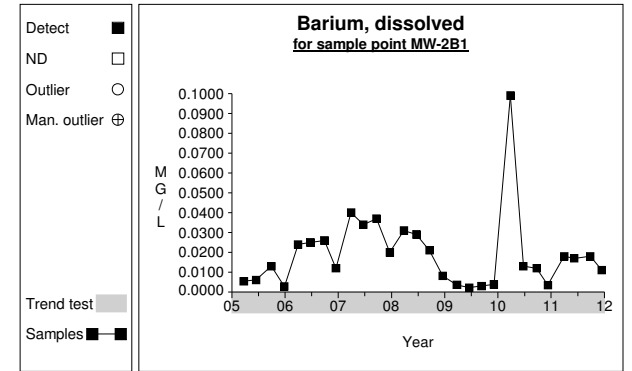
# Time Series



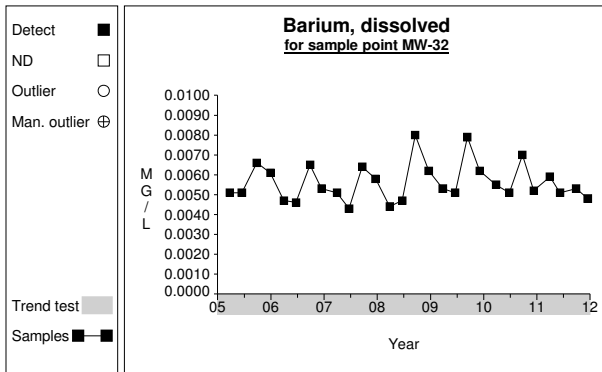
Graph 118



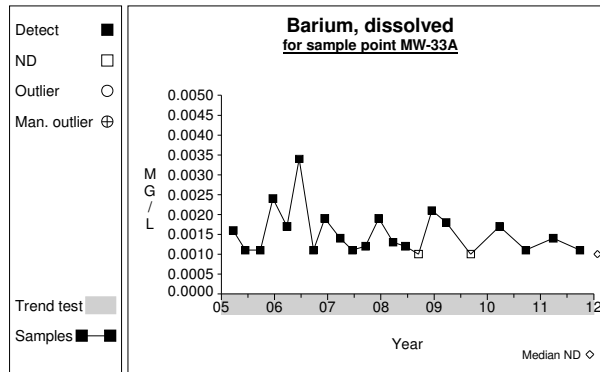
Graph 119



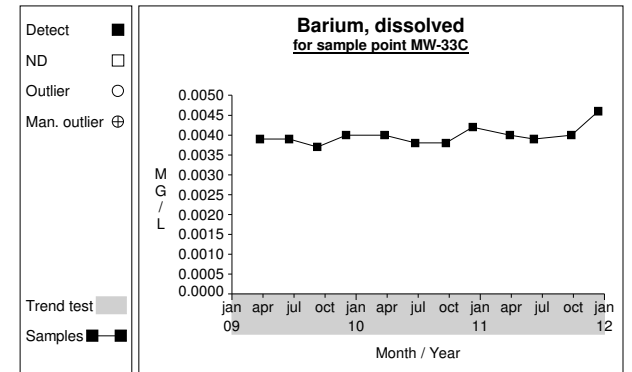
Graph 120



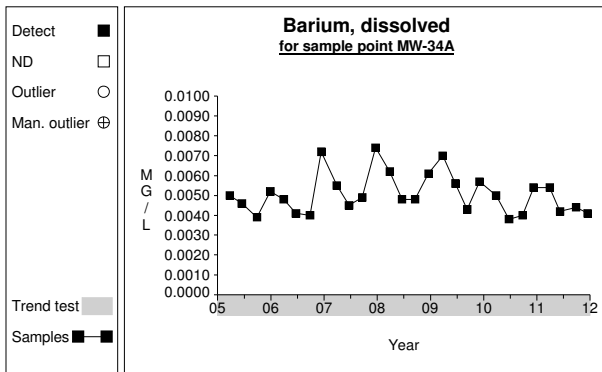
Graph 121



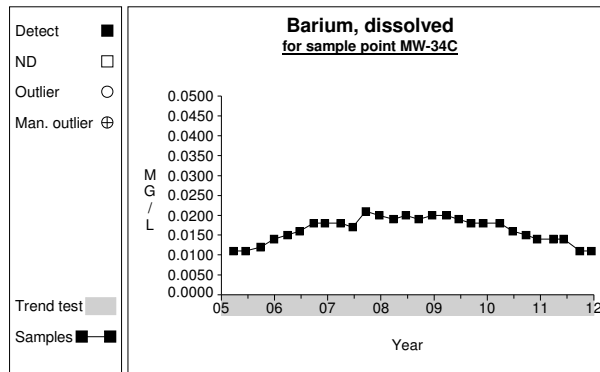
Graph 122



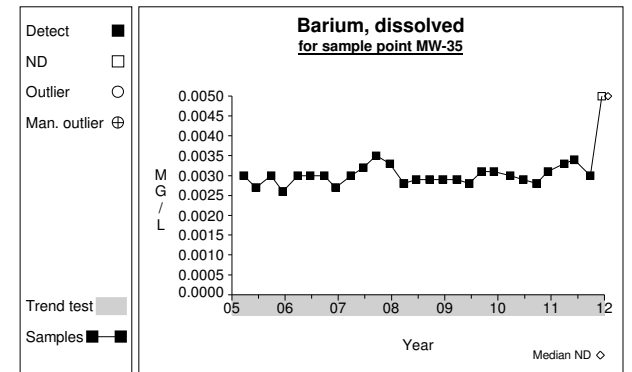
Graph 123



Graph 124



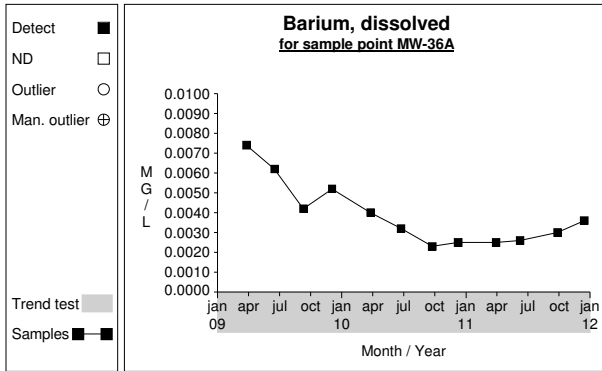
Graph 125



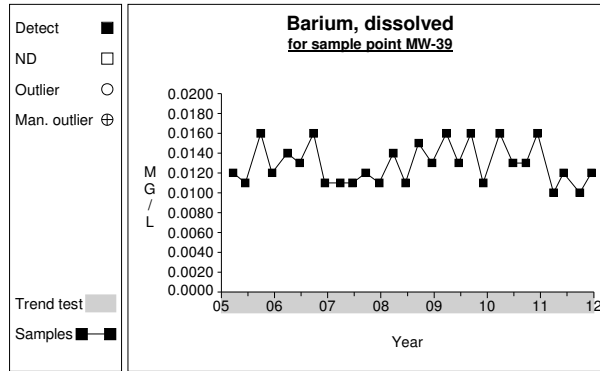
Graph 126



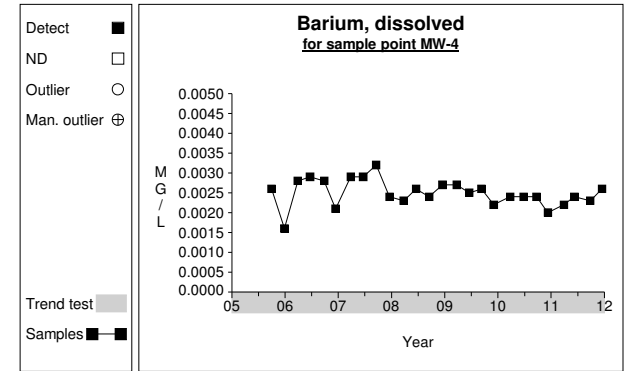
# Time Series



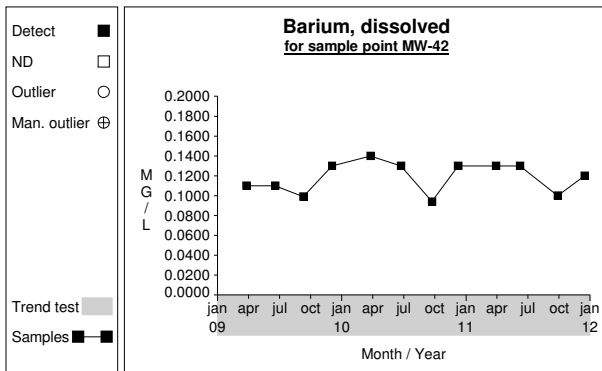
Graph 127



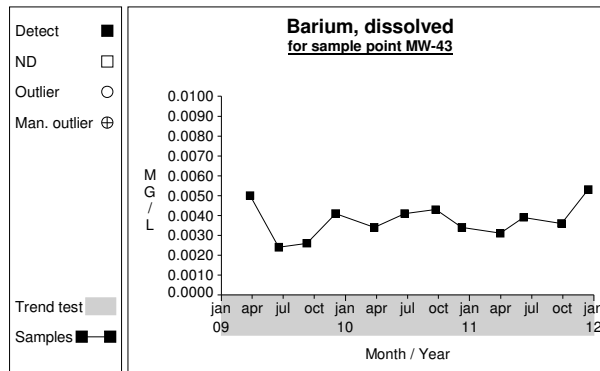
Graph 128



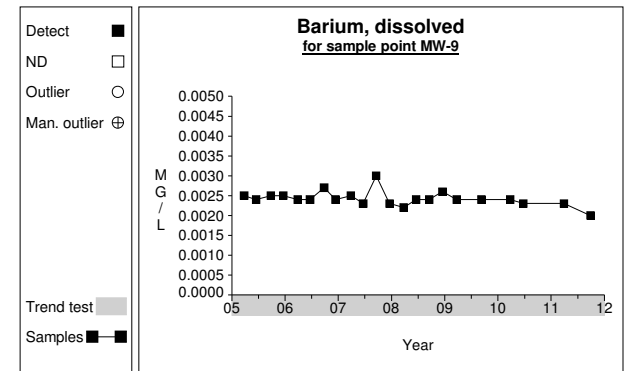
Graph 129



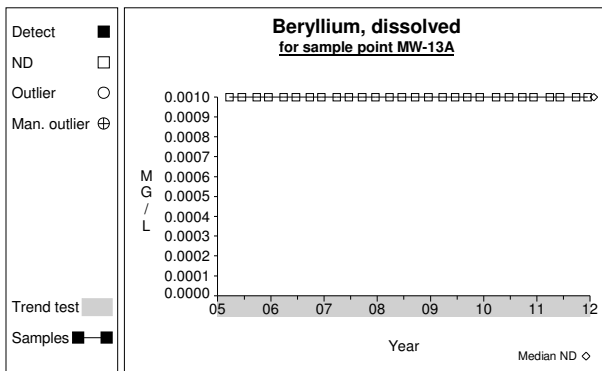
Graph 130



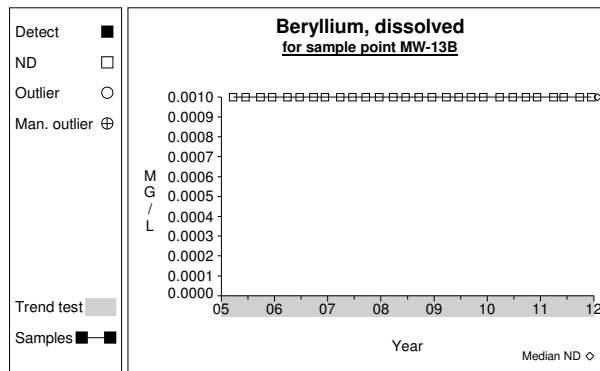
Graph 131



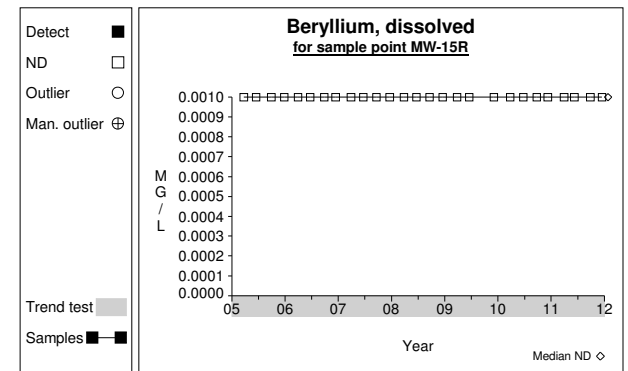
Graph 132



Graph 133

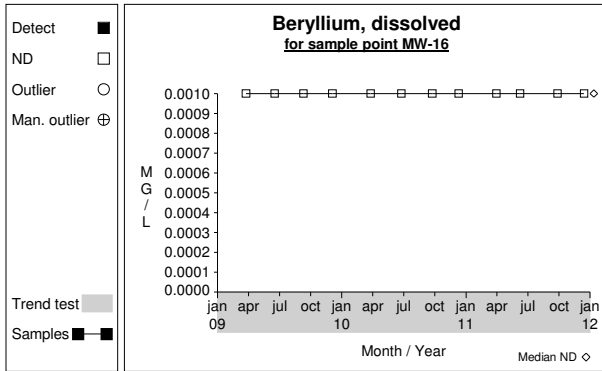


Graph 134

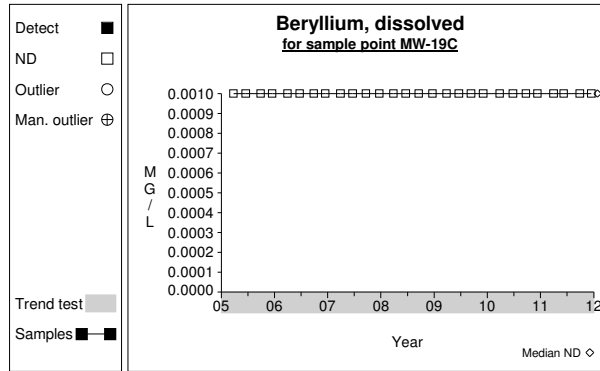


Graph 135

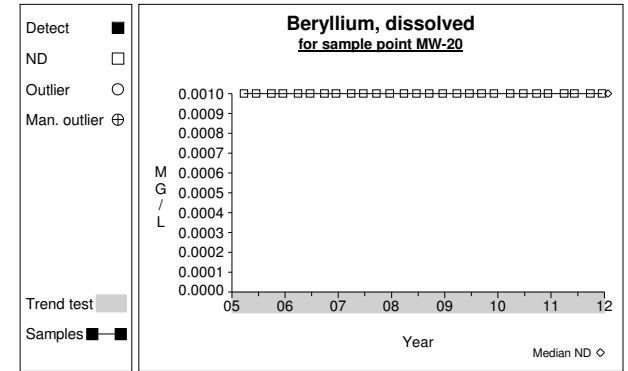
# Time Series



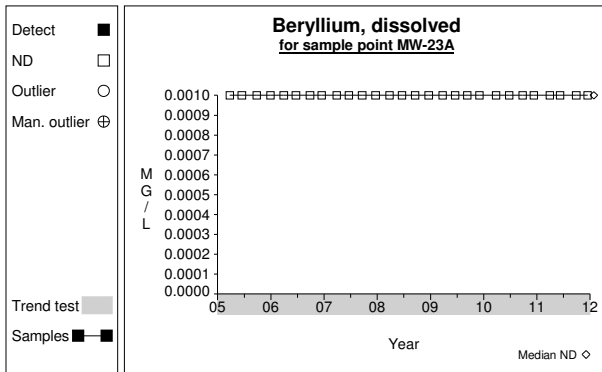
Graph 136



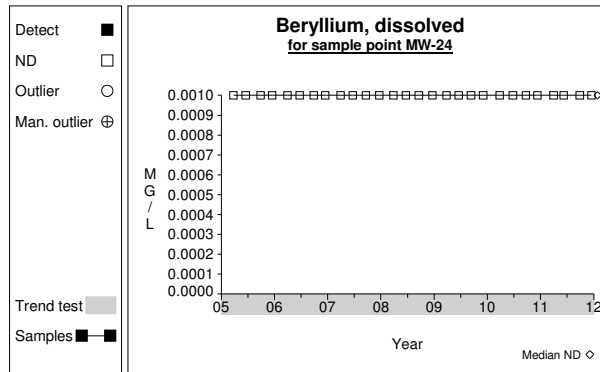
Graph 137



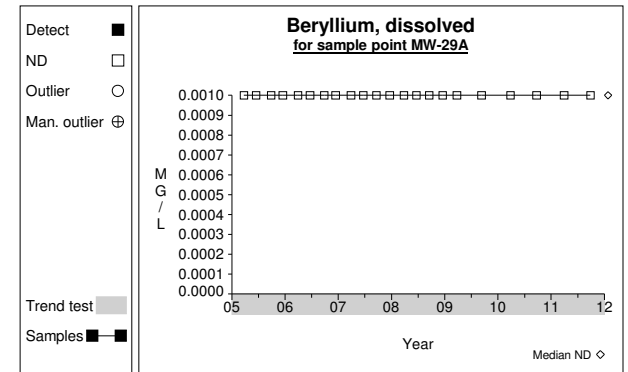
Graph 138



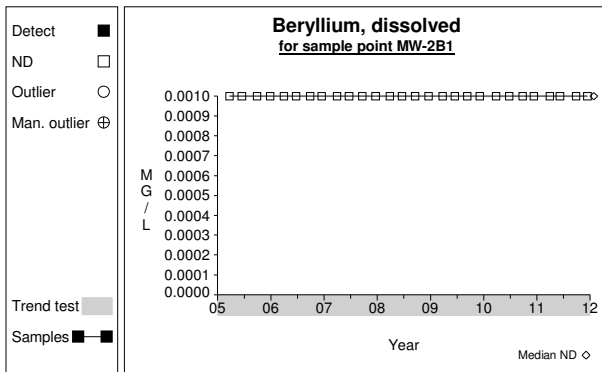
Graph 139



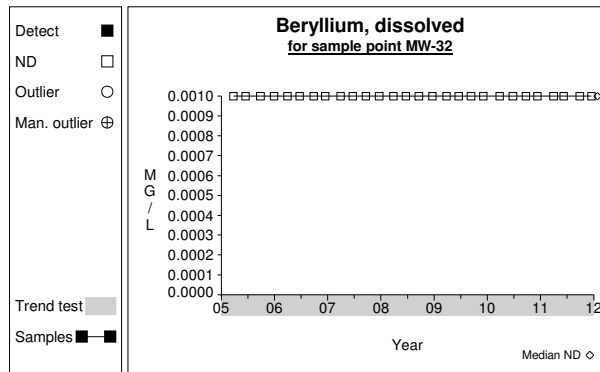
Graph 140



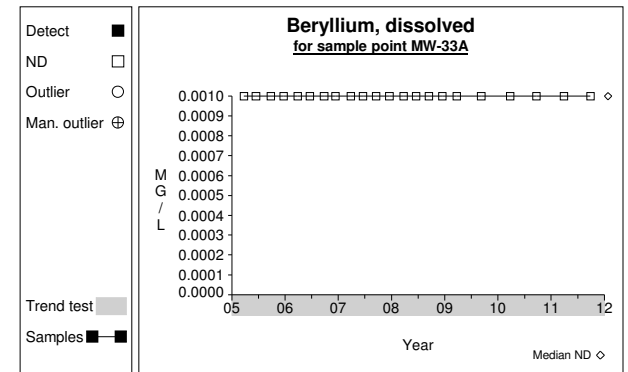
Graph 141



Graph 142

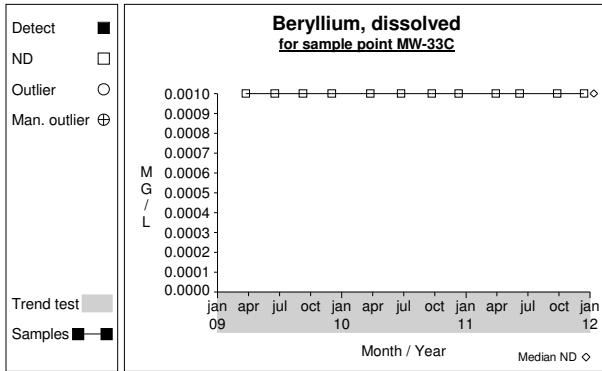


Graph 143

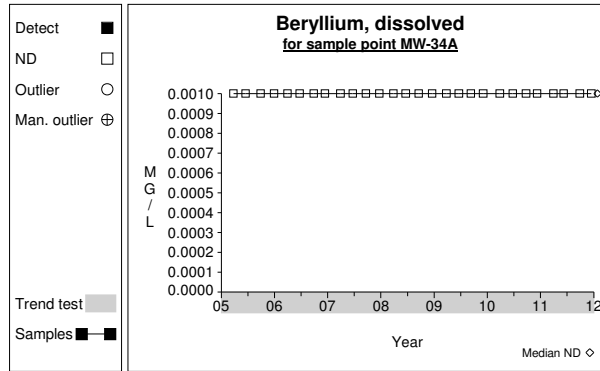


Graph 144

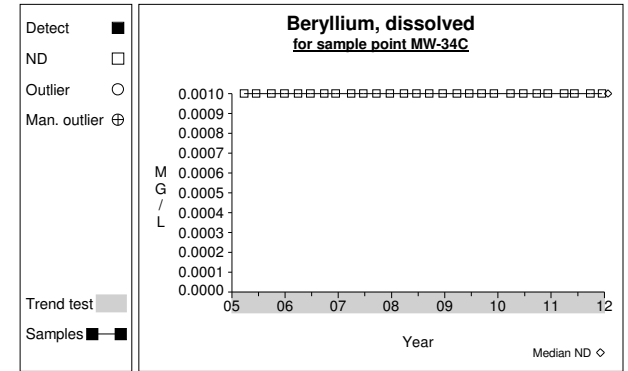
# Time Series



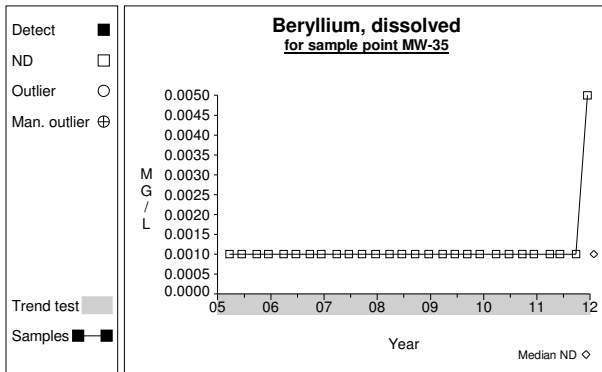
Graph 145



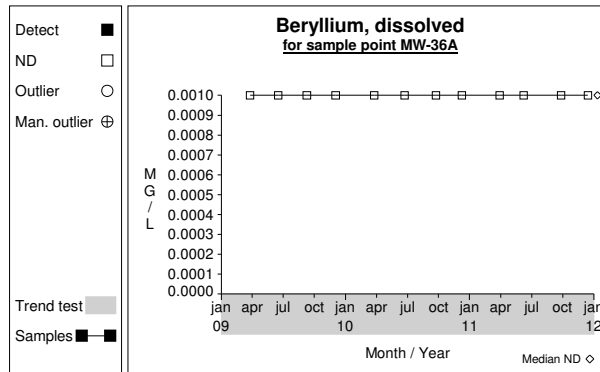
Graph 146



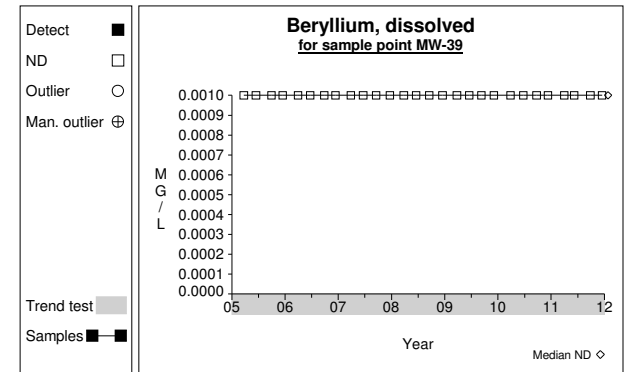
Graph 147



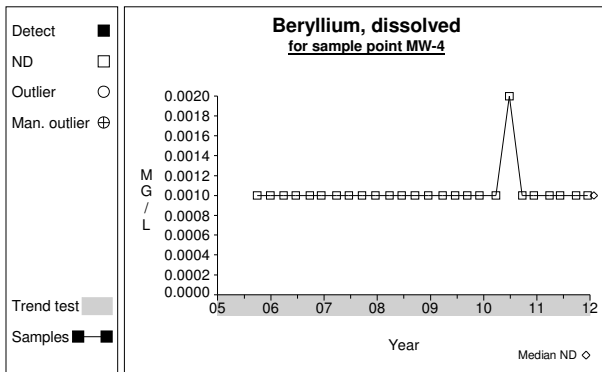
Graph 148



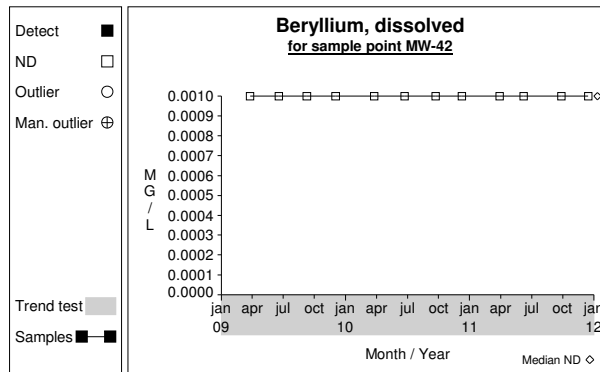
Graph 149



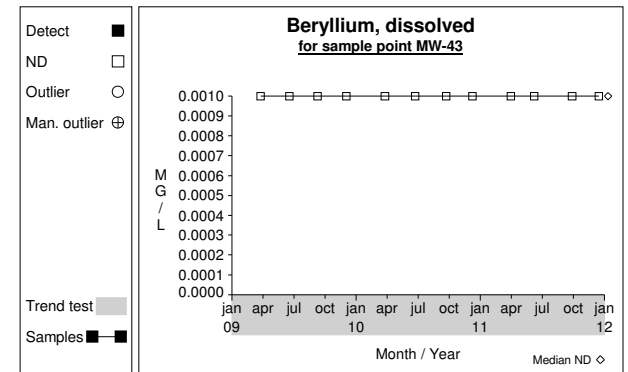
Graph 150



Graph 151

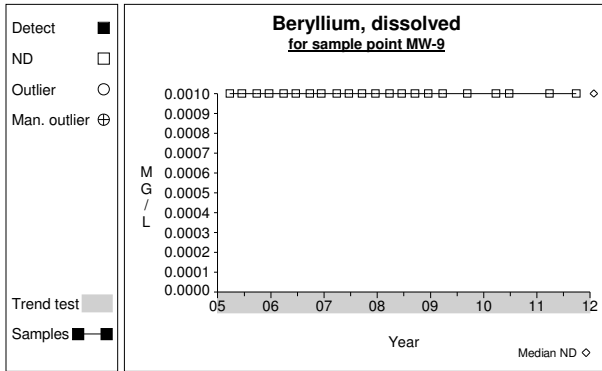


Graph 152

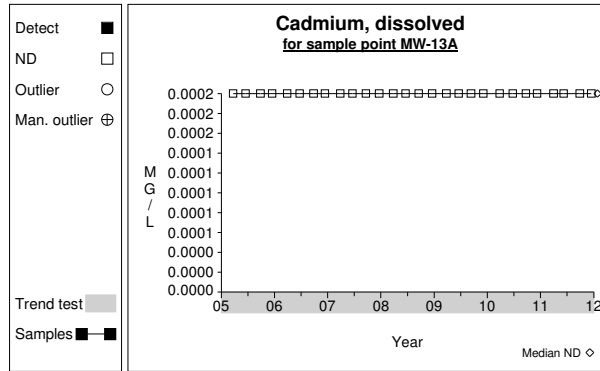


Graph 153

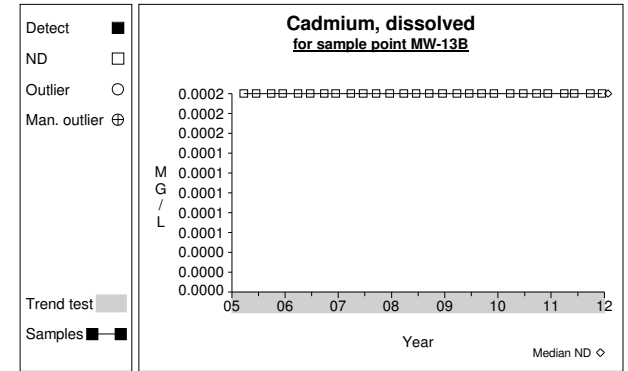
# Time Series



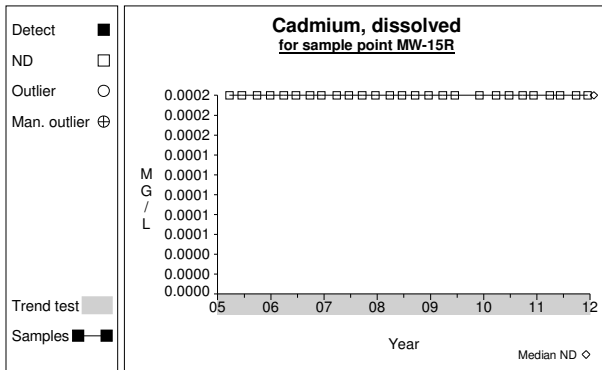
Graph 154



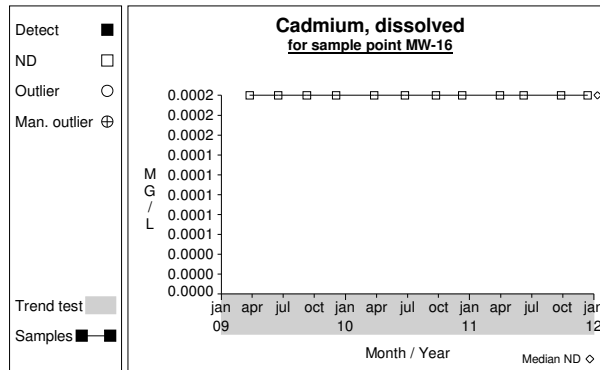
Graph 155



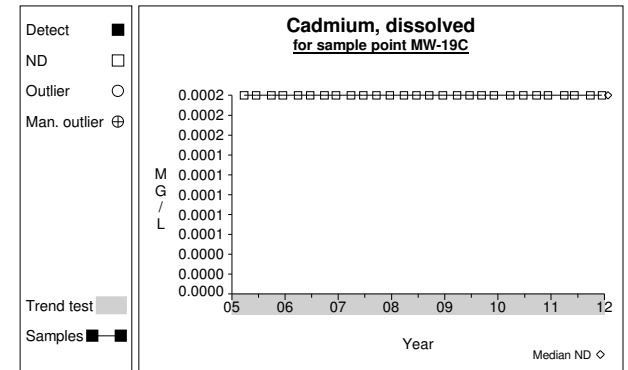
Graph 156



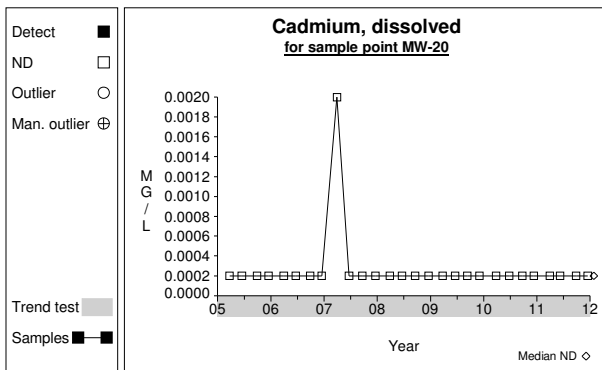
Graph 157



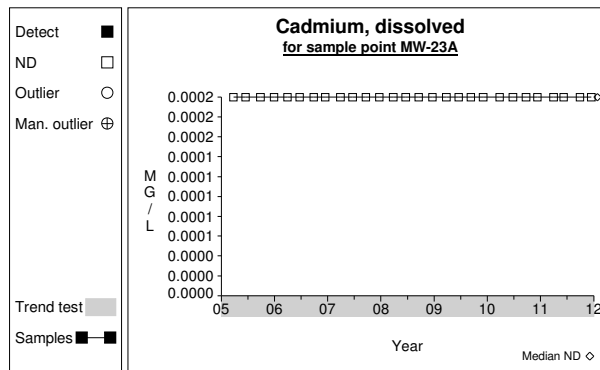
Graph 158



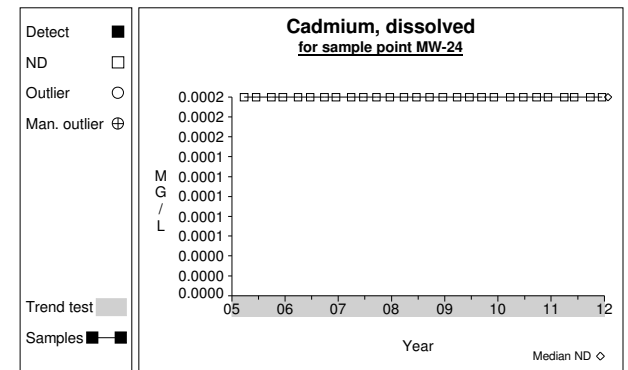
Graph 159



Graph 160

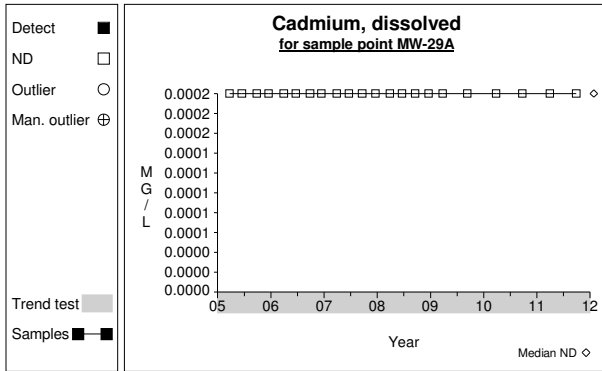


Graph 161

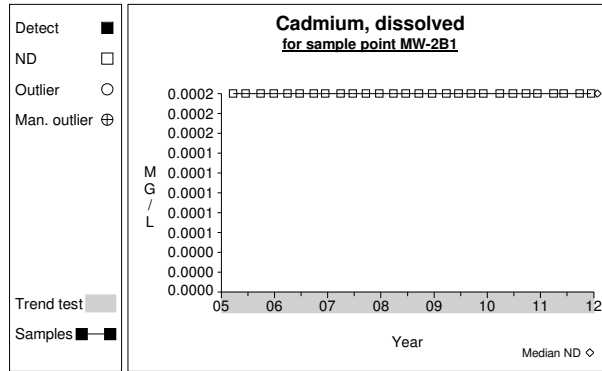


Graph 162

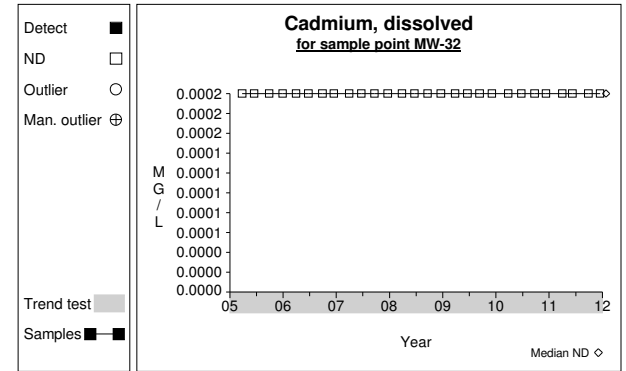
# Time Series



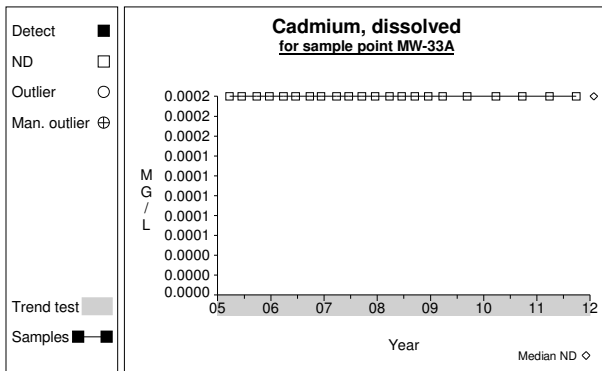
Graph 163



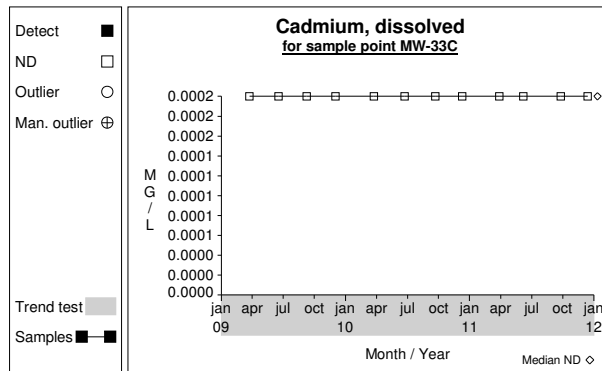
Graph 164



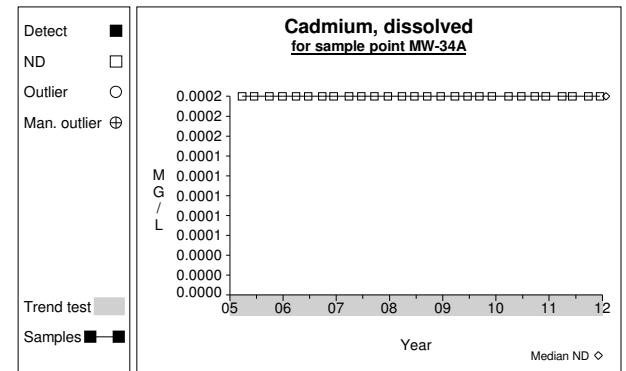
Graph 165



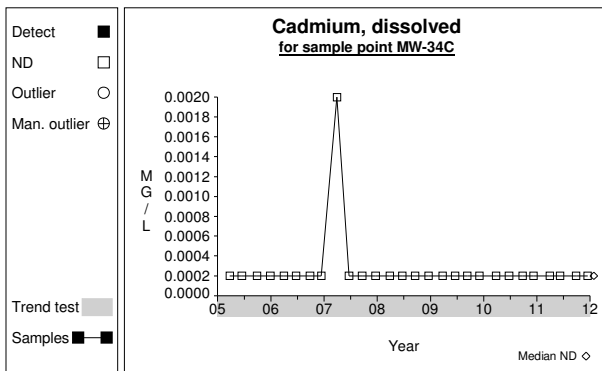
Graph 166



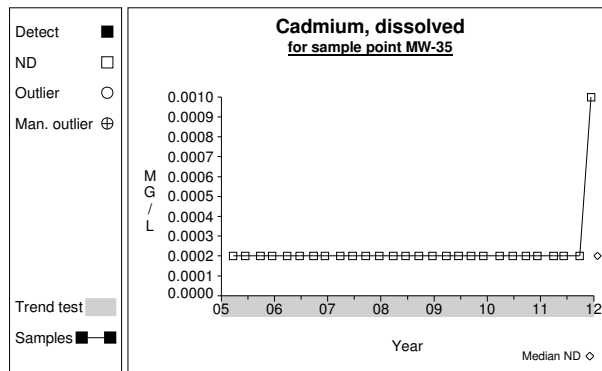
Graph 167



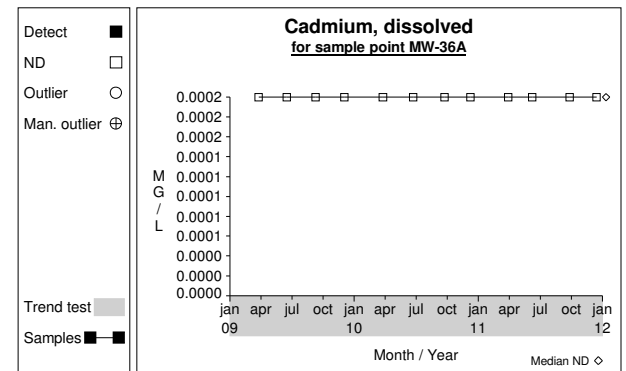
Graph 168



Graph 169

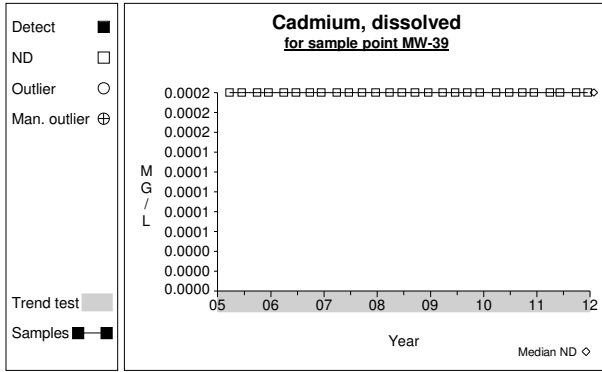


Graph 170

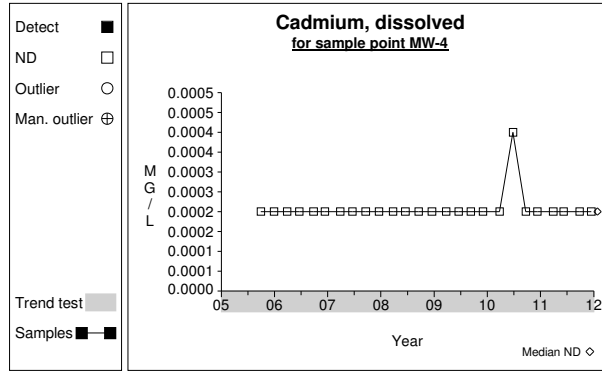


Graph 171

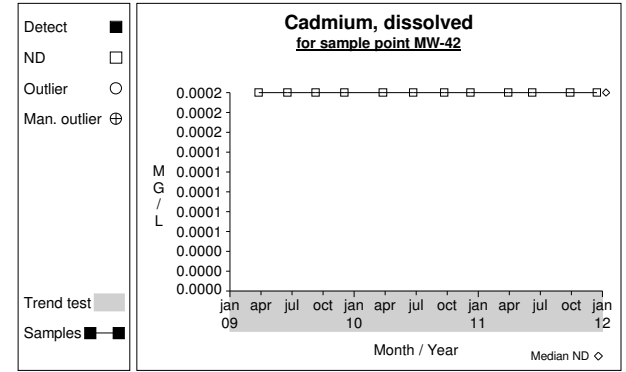
# Time Series



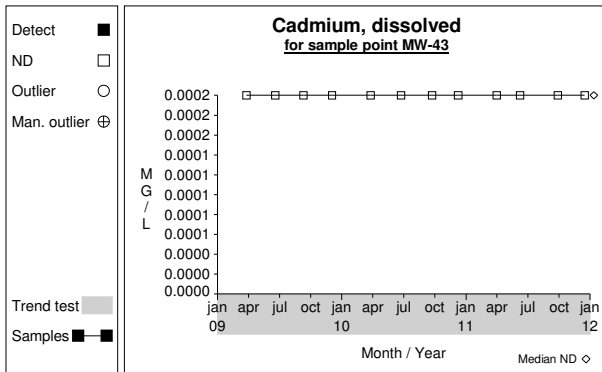
**Graph 172**



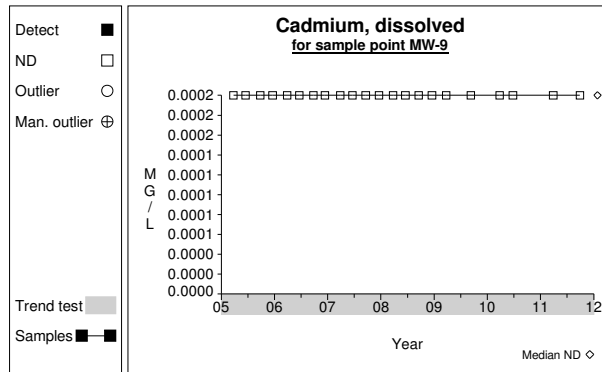
**Graph 173**



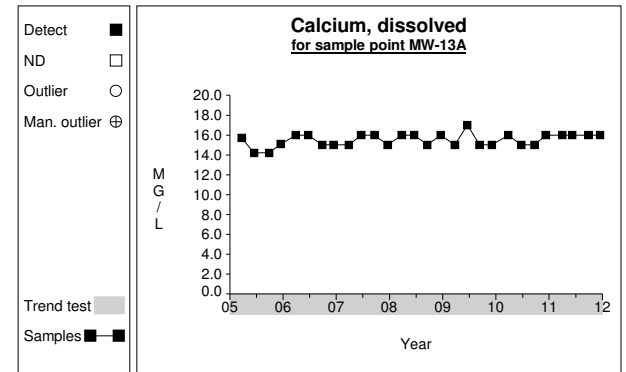
**Graph 174**



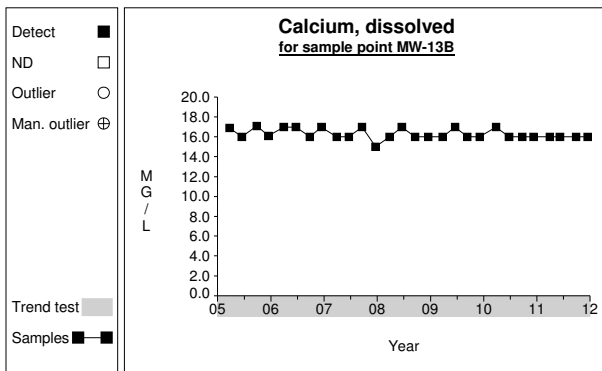
**Graph 175**



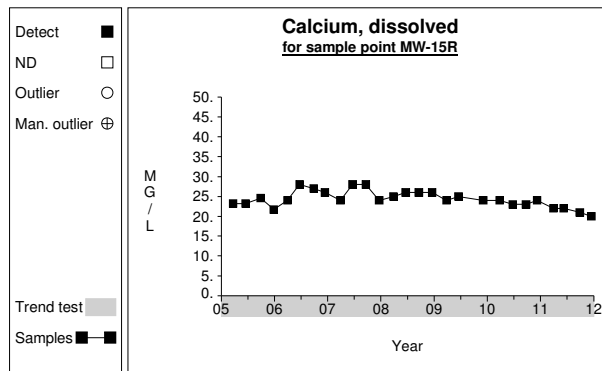
**Graph 176**



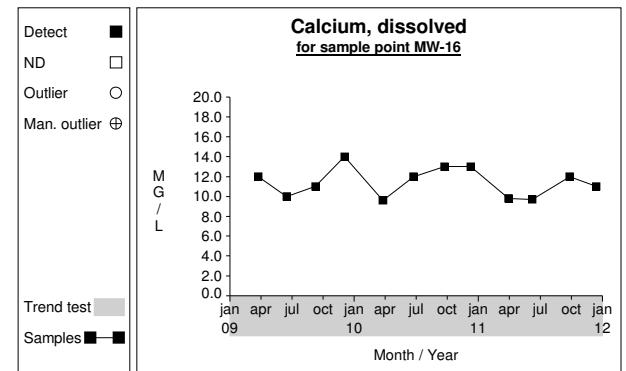
**Graph 177**



**Graph 178**

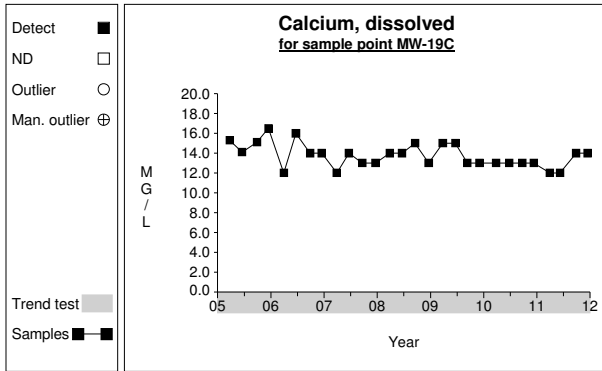


**Graph 179**

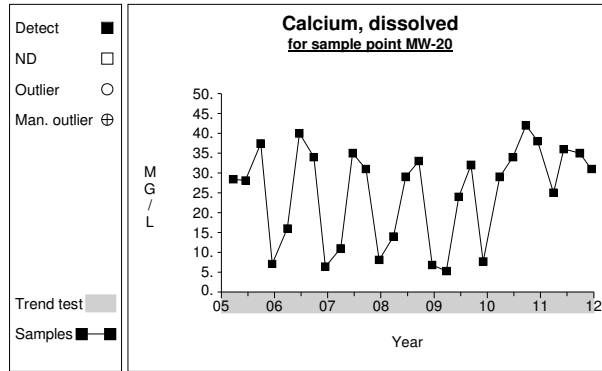


**Graph 180**

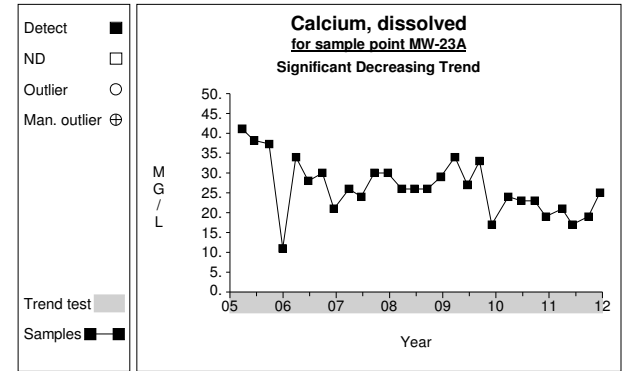
# Time Series



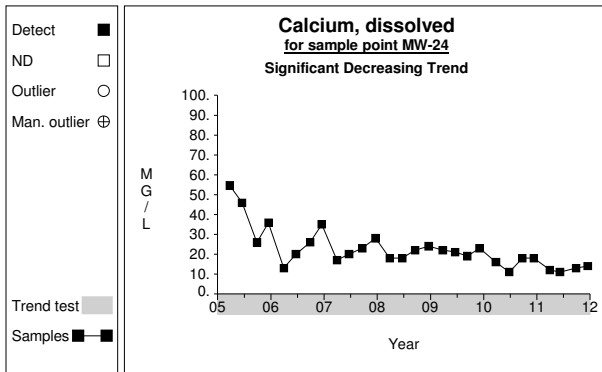
Graph 181



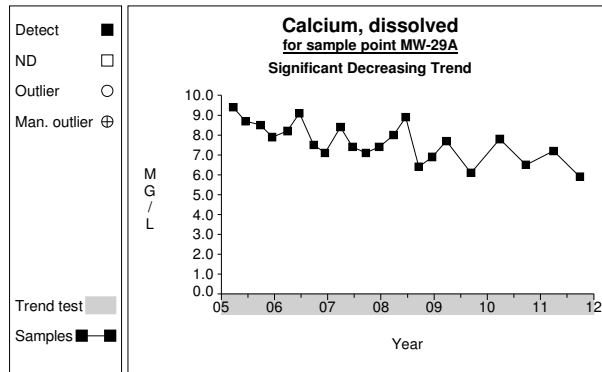
Graph 182



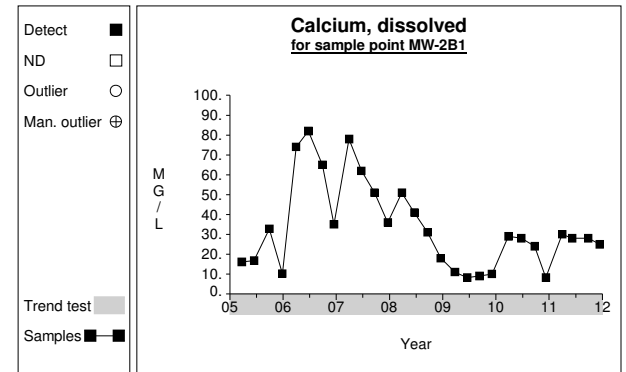
Graph 183



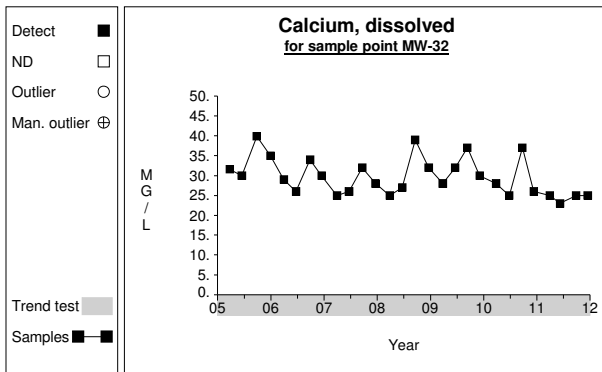
Graph 184



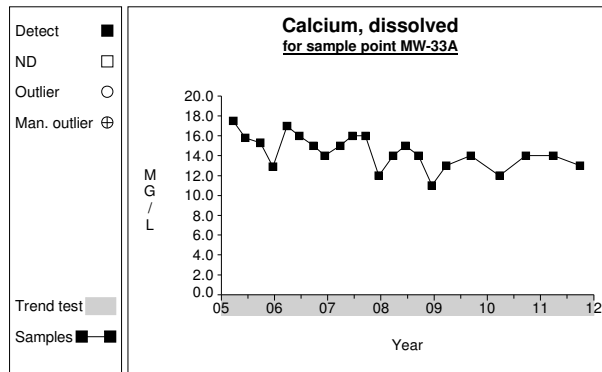
Graph 185



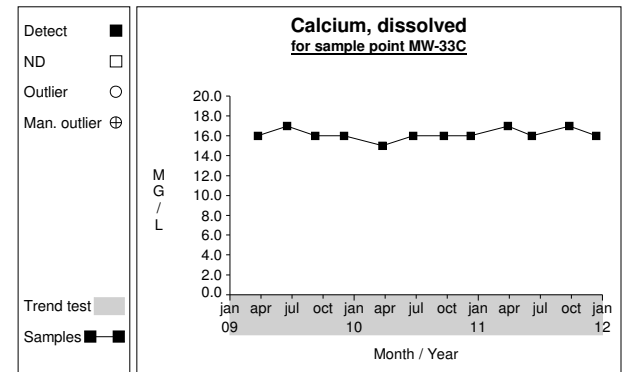
Graph 186



Graph 187

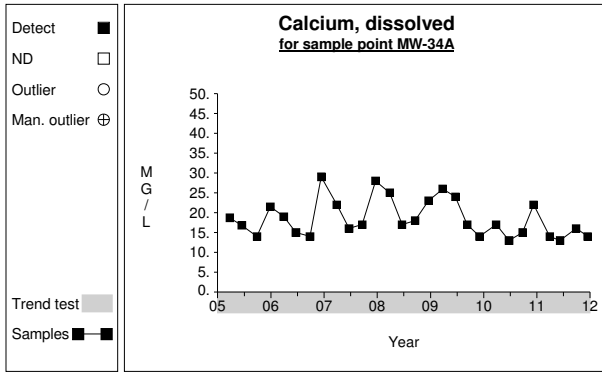


Graph 188

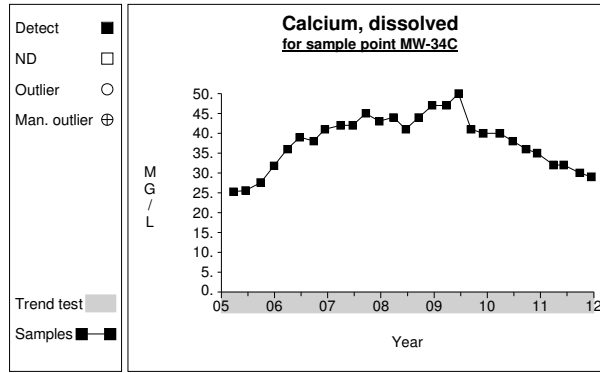


Graph 189

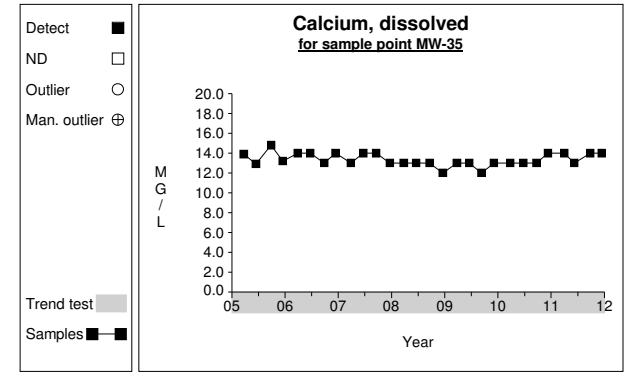
# Time Series



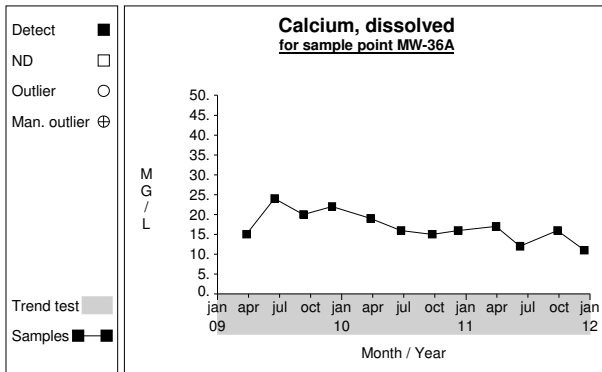
**Graph 190**



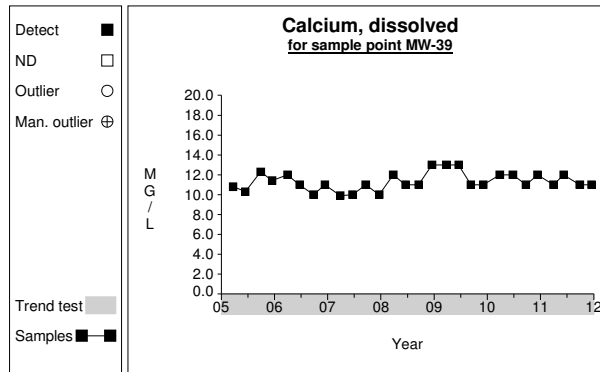
**Graph 191**



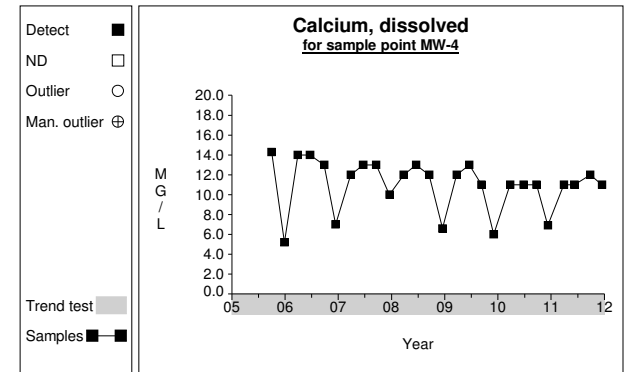
**Graph 192**



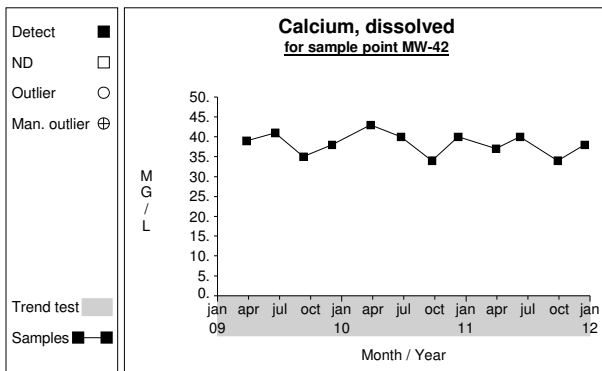
**Graph 193**



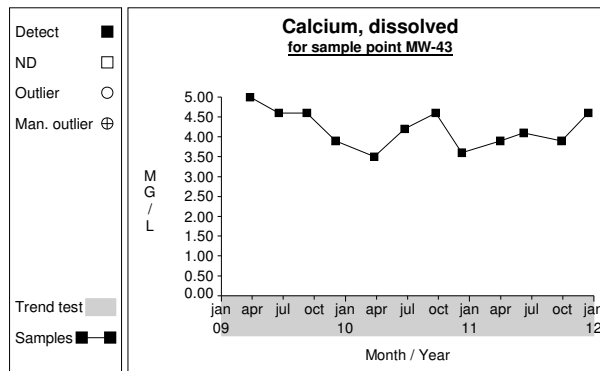
**Graph 194**



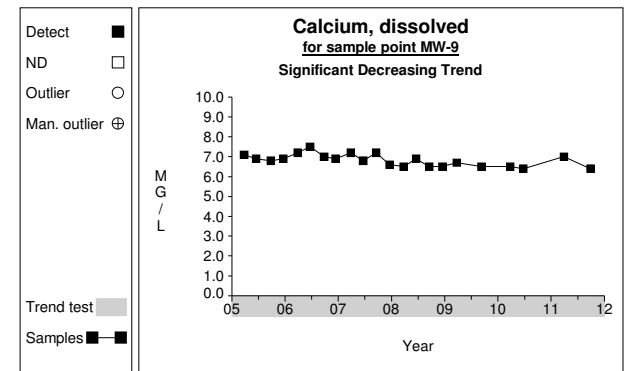
**Graph 195**



**Graph 196**



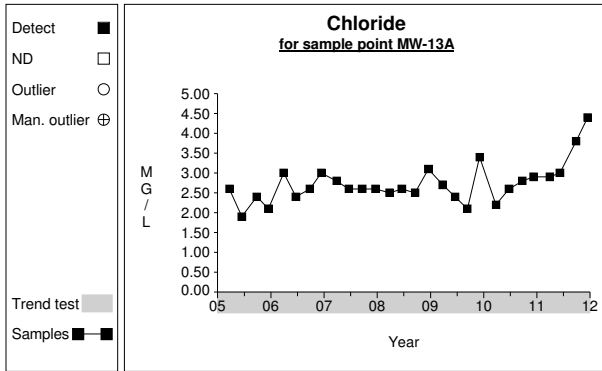
**Graph 197**



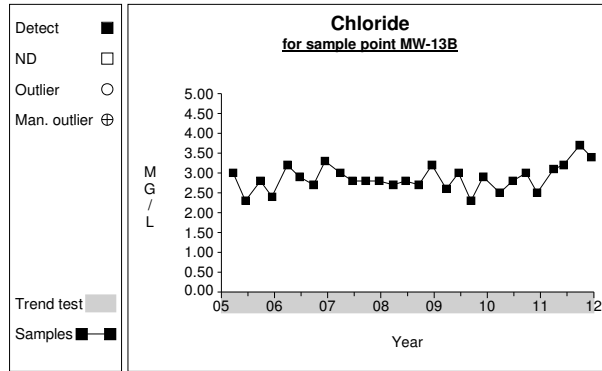
**Graph 198**



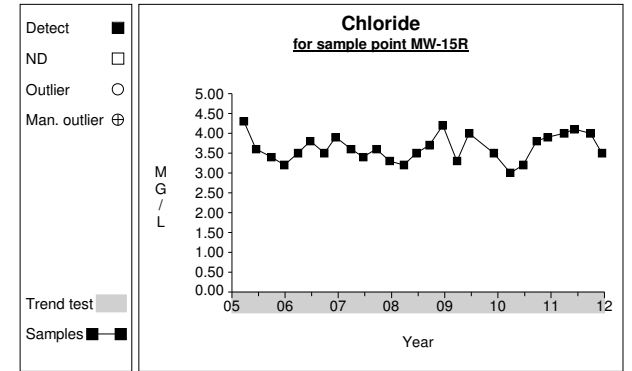
# Time Series



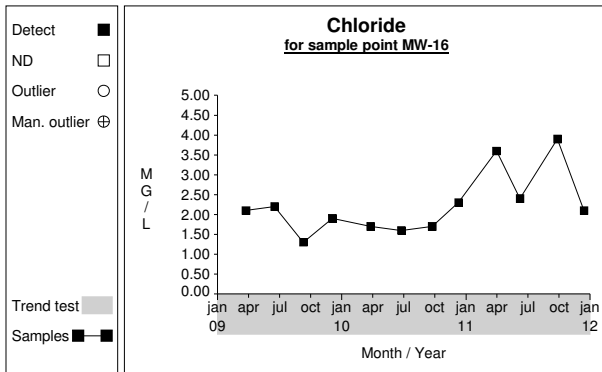
Graph 199



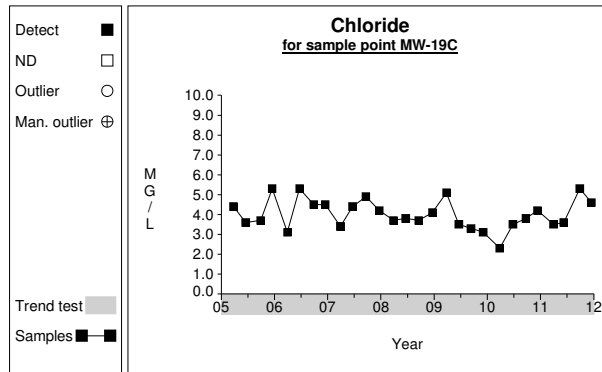
Graph 200



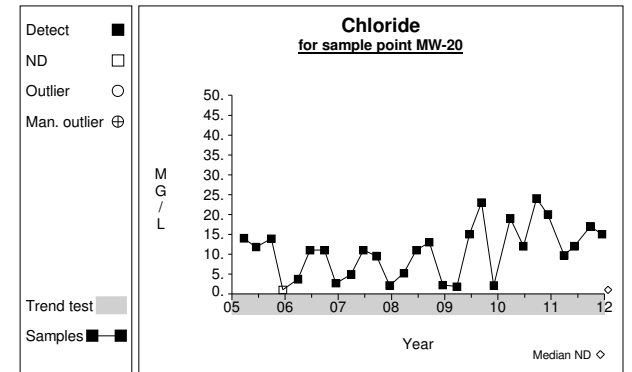
Graph 201



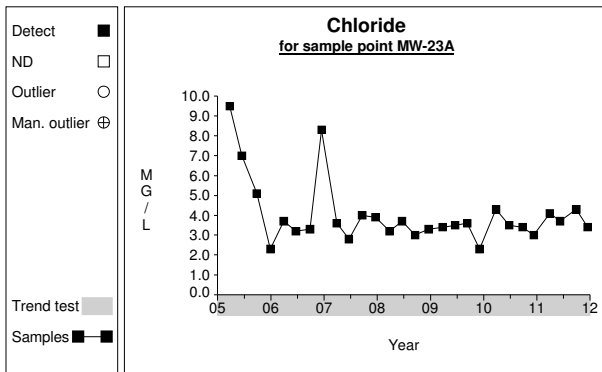
Graph 202



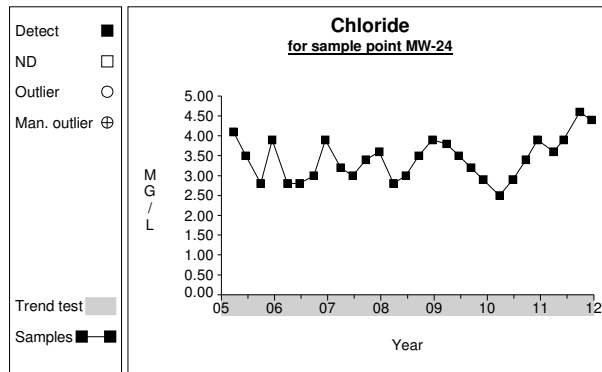
Graph 203



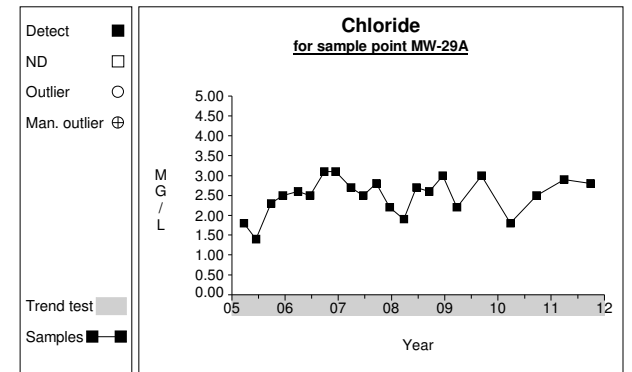
Graph 204



Graph 205

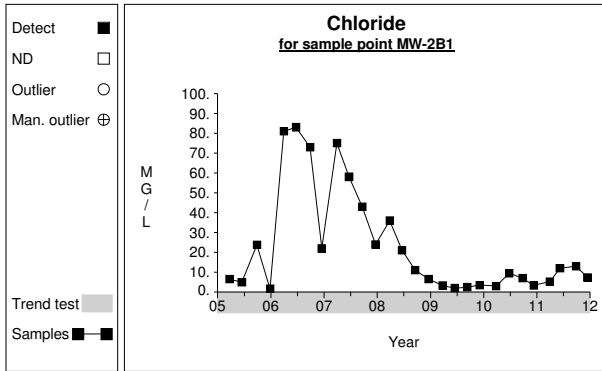


Graph 206

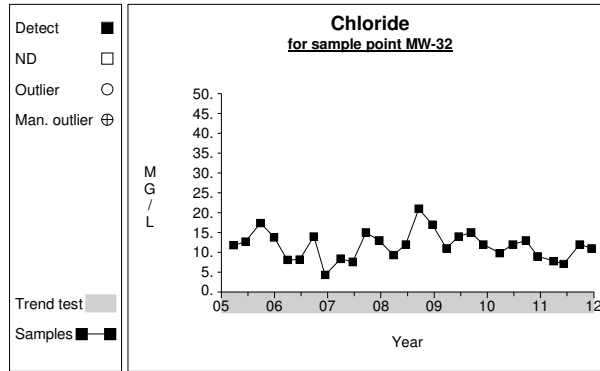


Graph 207

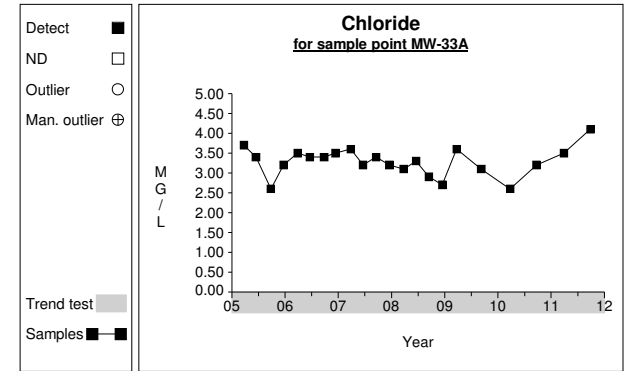
# Time Series



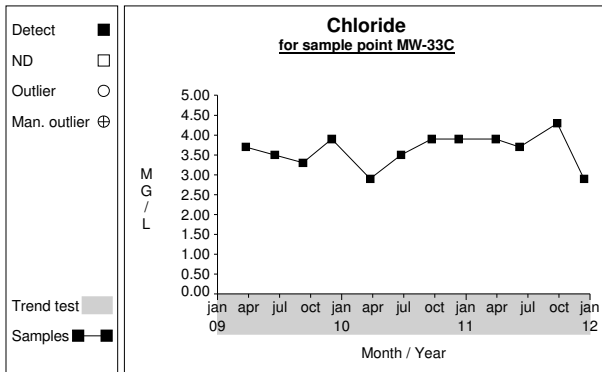
**Graph 208**



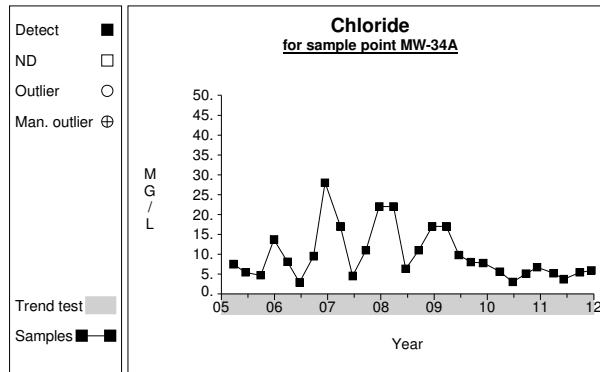
**Graph 209**



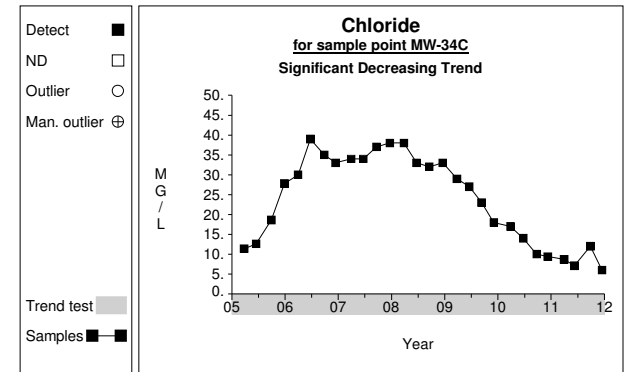
**Graph 210**



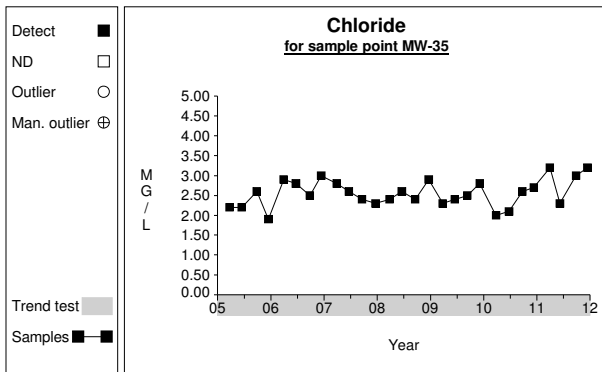
**Graph 211**



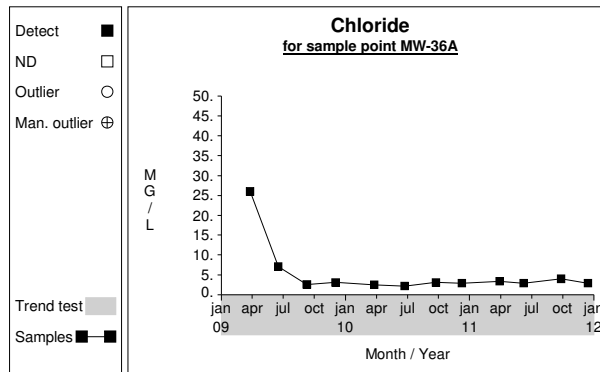
**Graph 212**



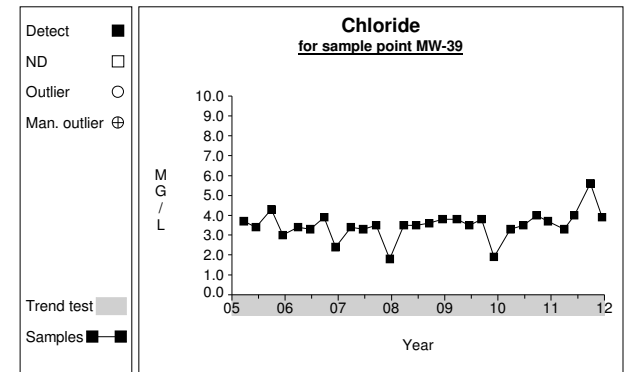
**Graph 213**



**Graph 214**

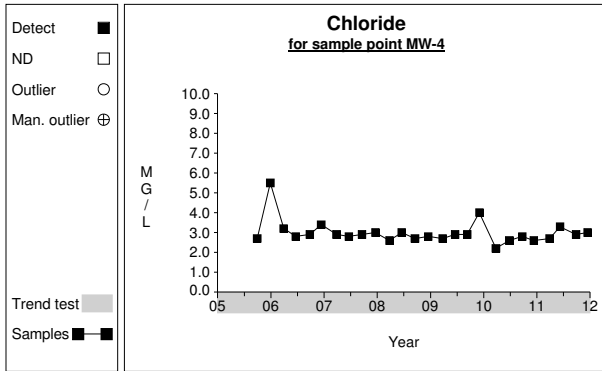


**Graph 215**

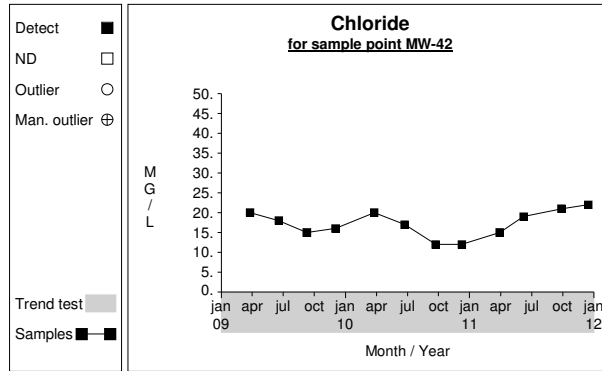


**Graph 216**

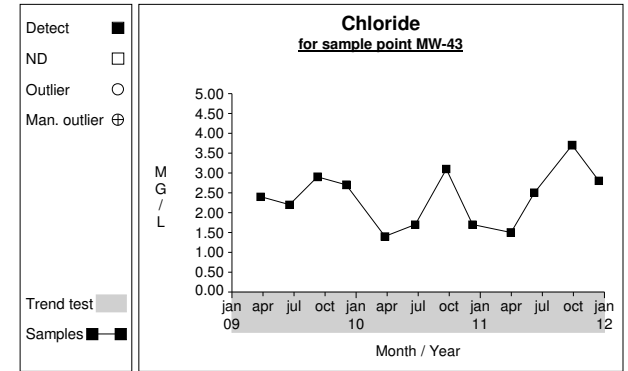
# Time Series



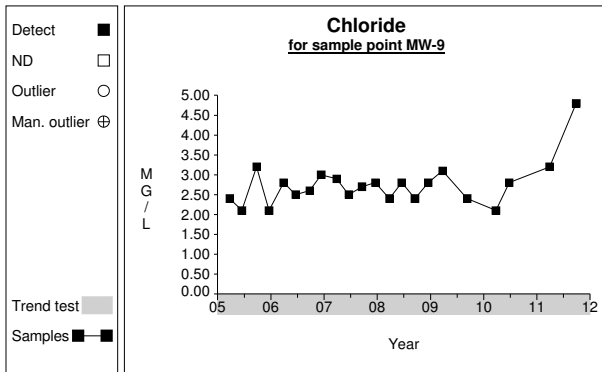
Graph 217



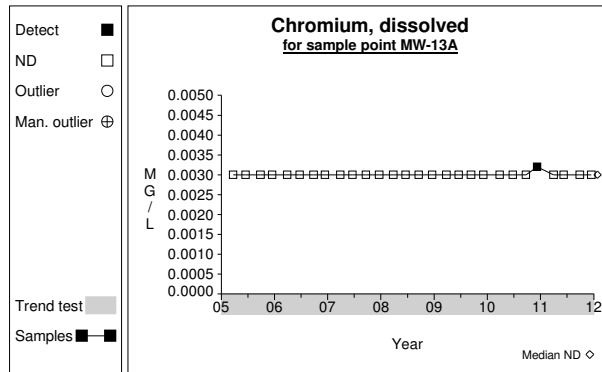
Graph 218



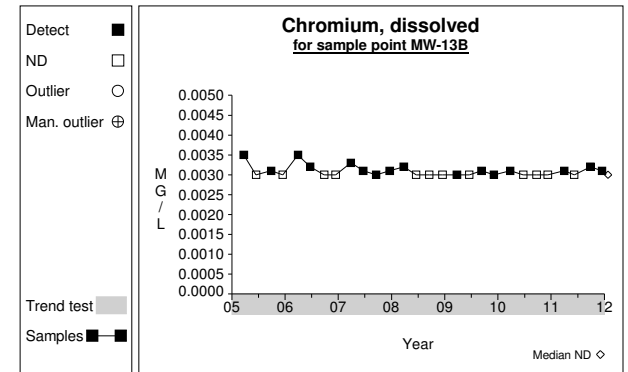
Graph 219



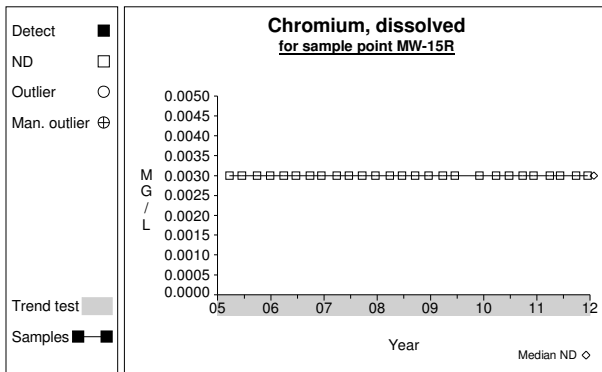
Graph 220



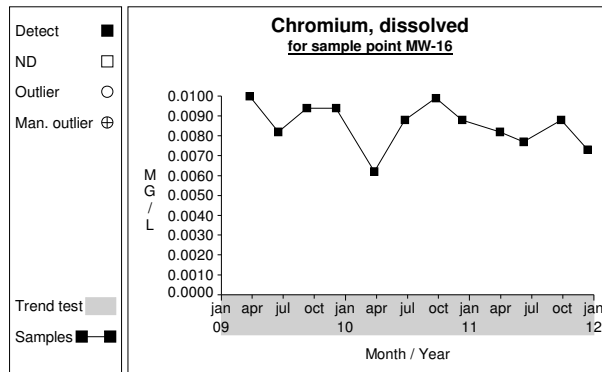
Graph 221



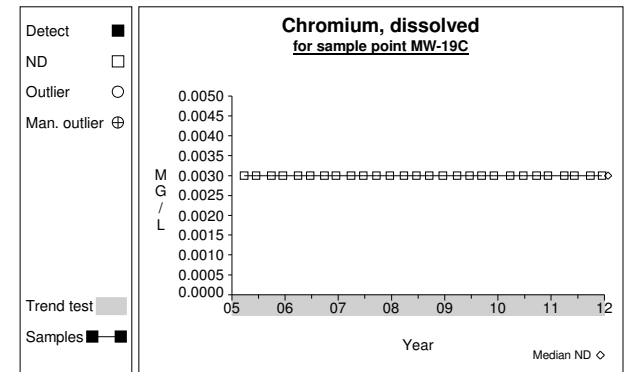
Graph 222



Graph 223

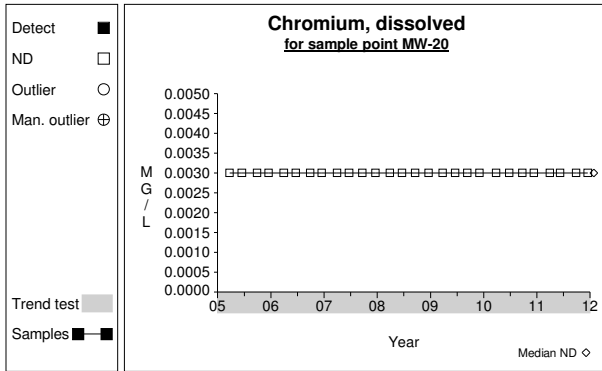


Graph 224

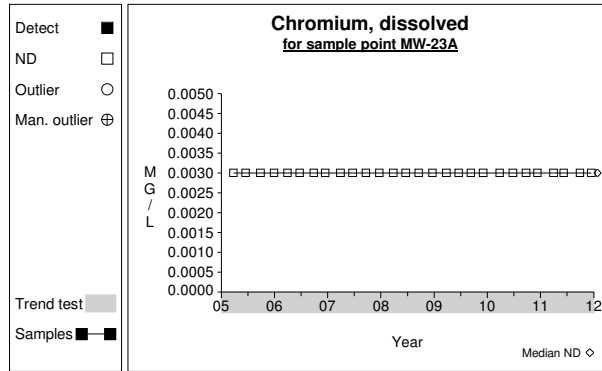


Graph 225

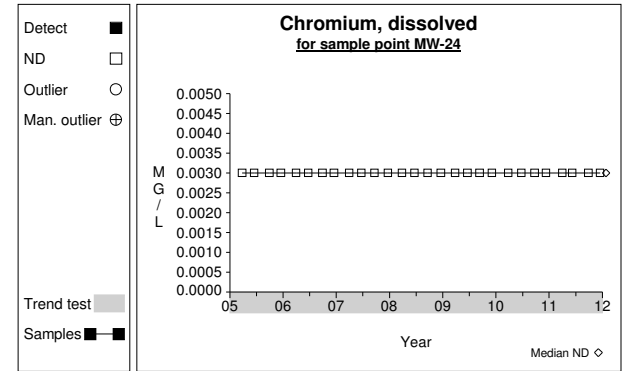
# Time Series



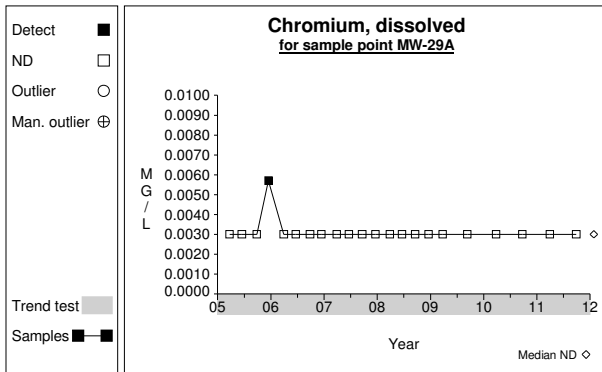
Graph 226



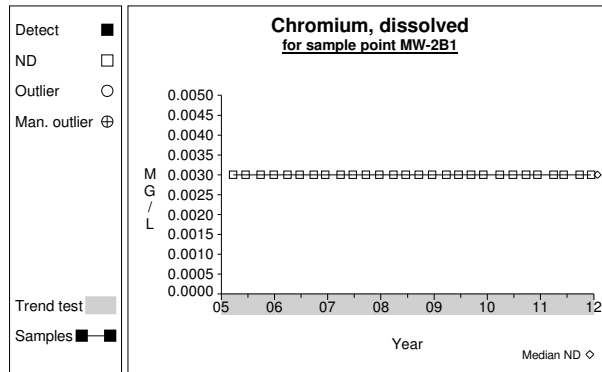
Graph 227



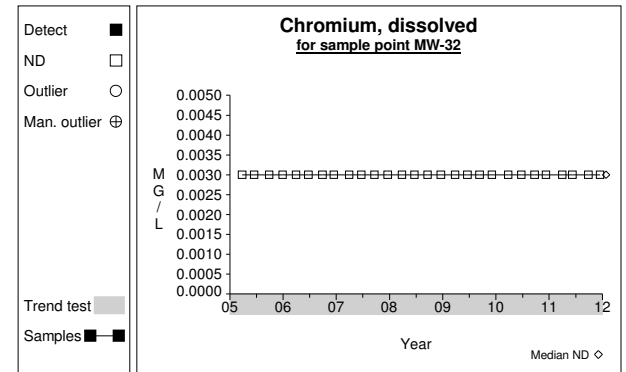
Graph 228



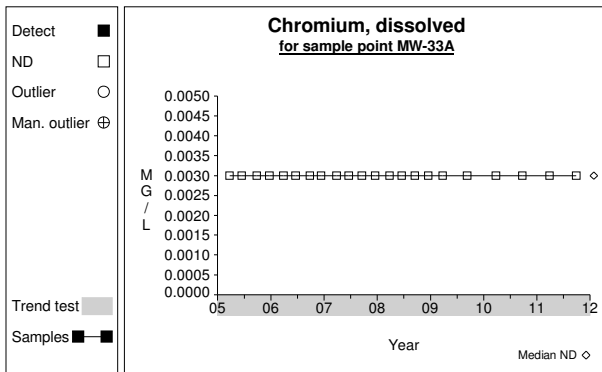
Graph 229



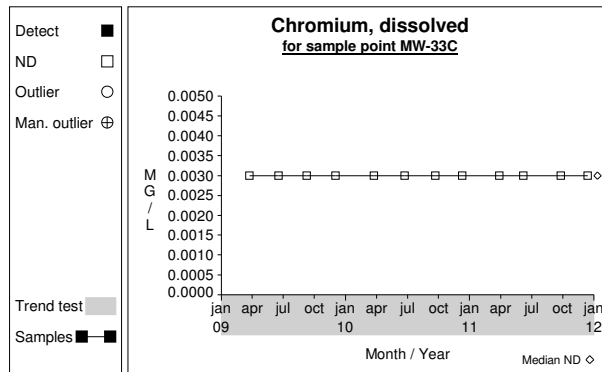
Graph 230



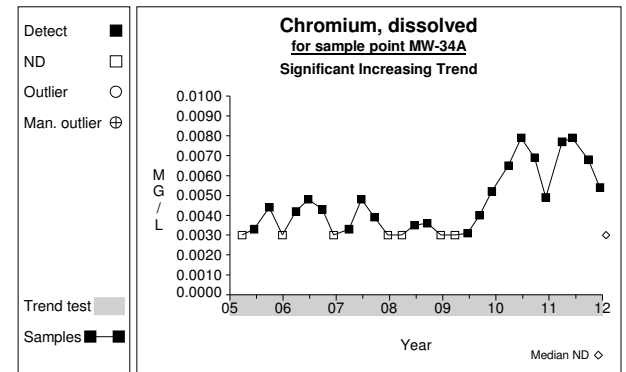
Graph 231



Graph 232

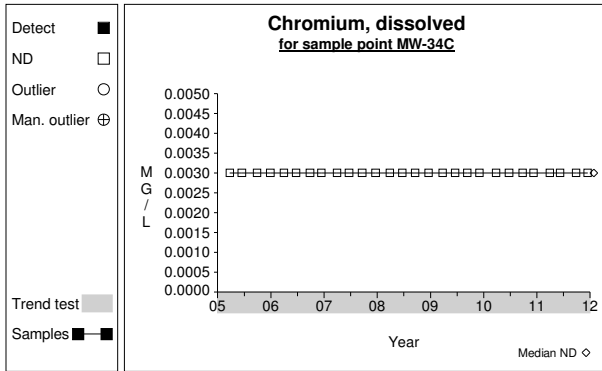


Graph 233

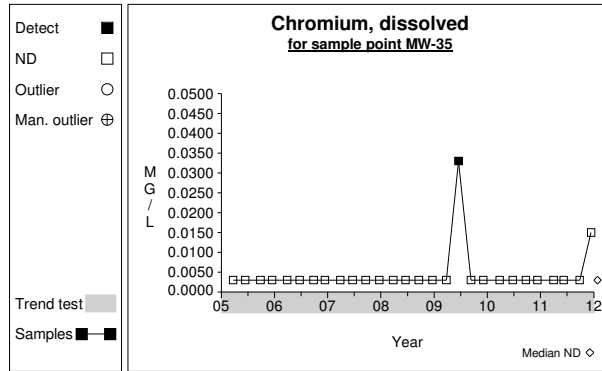


Graph 234

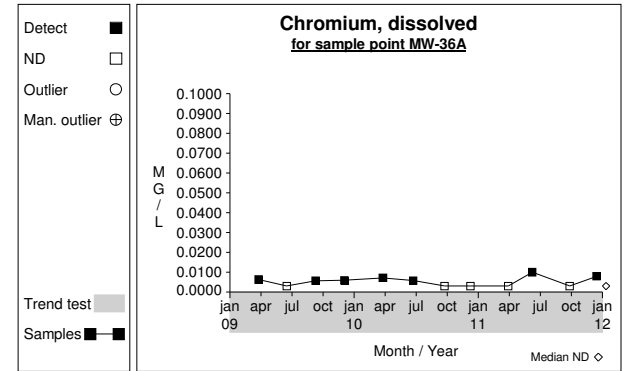
# Time Series



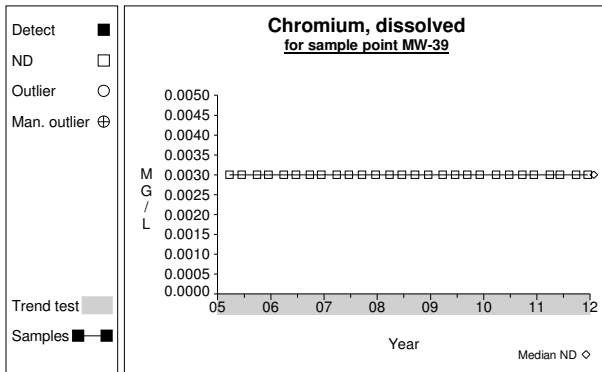
Graph 235



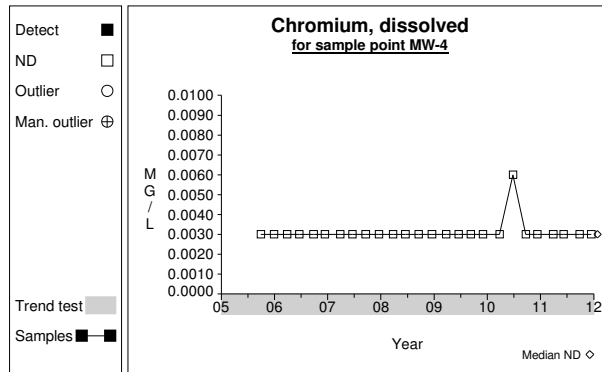
Graph 236



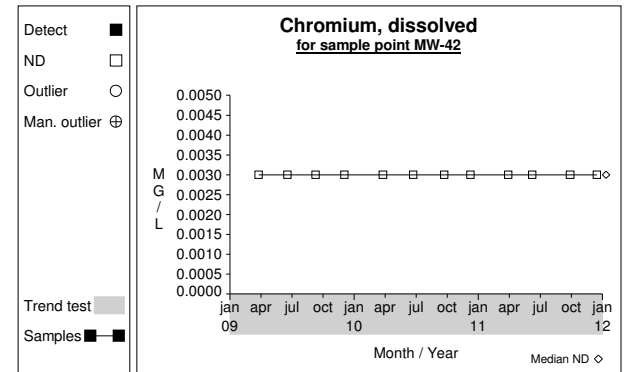
Graph 237



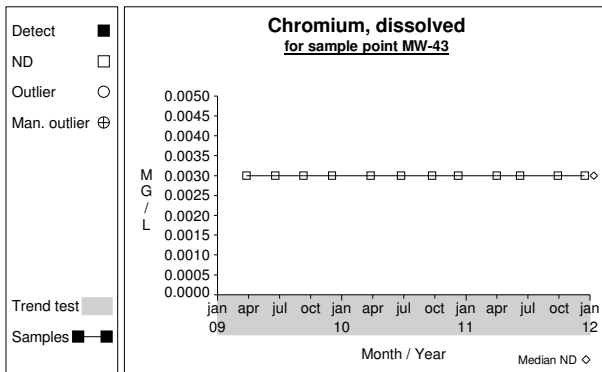
Graph 238



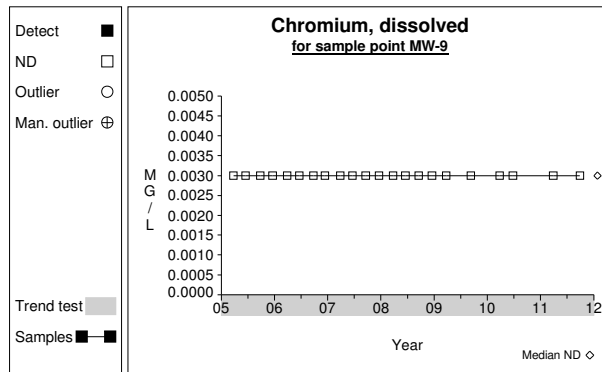
Graph 239



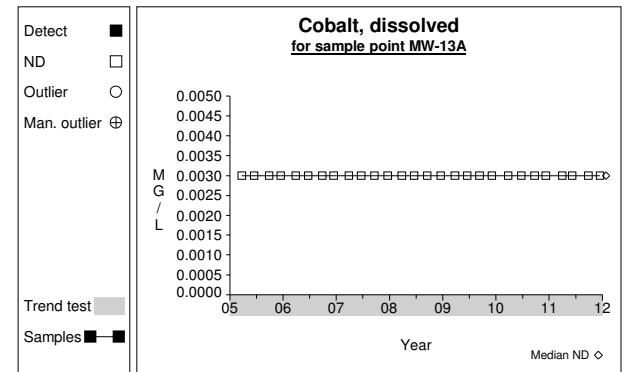
Graph 240



Graph 241

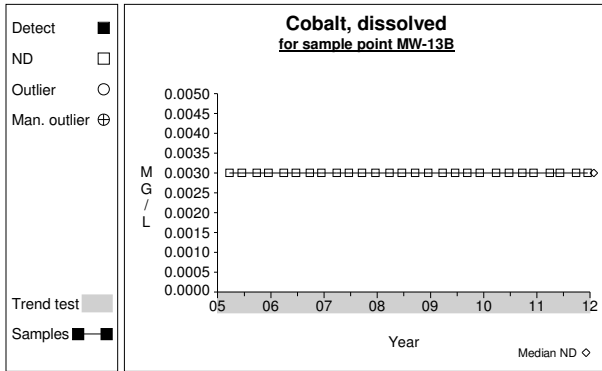


Graph 242

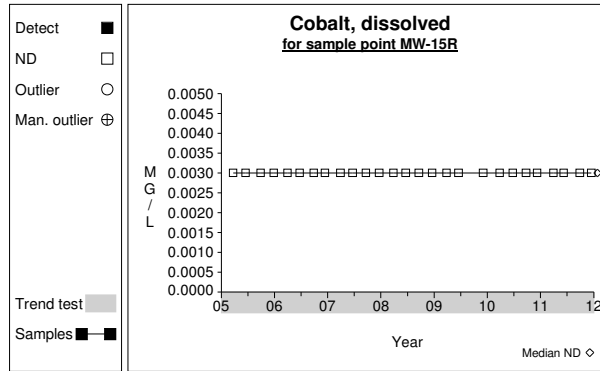


Graph 243

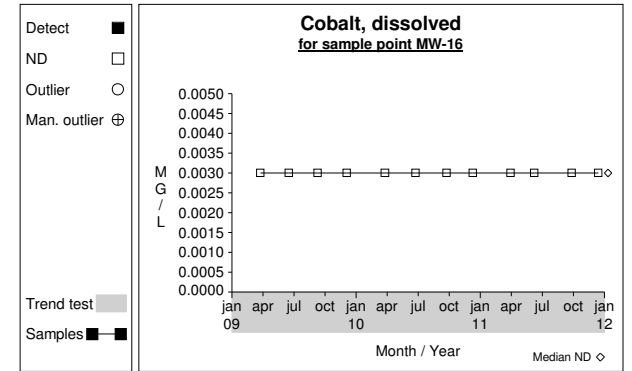
# Time Series



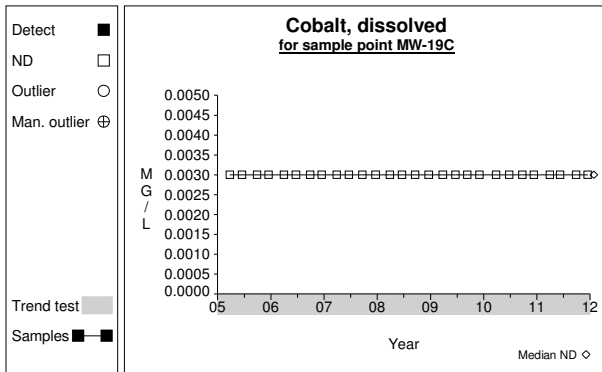
Graph 244



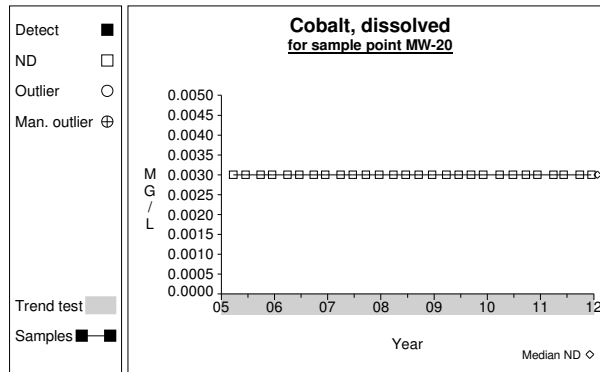
Graph 245



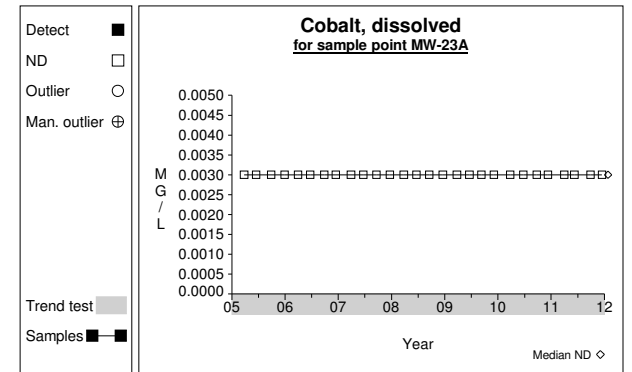
Graph 246



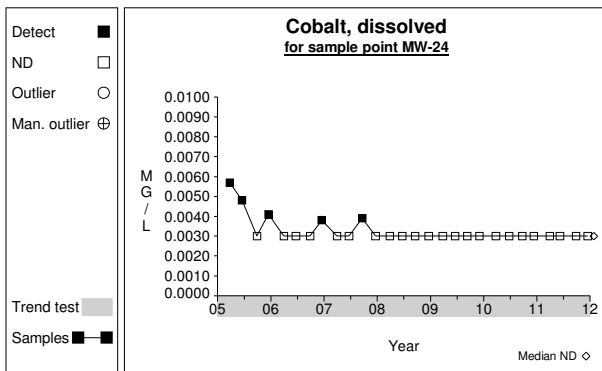
Graph 247



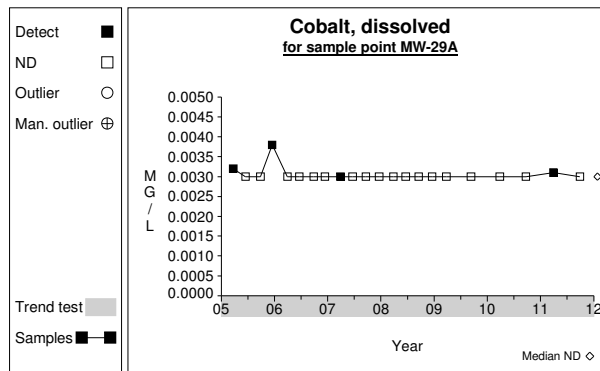
Graph 248



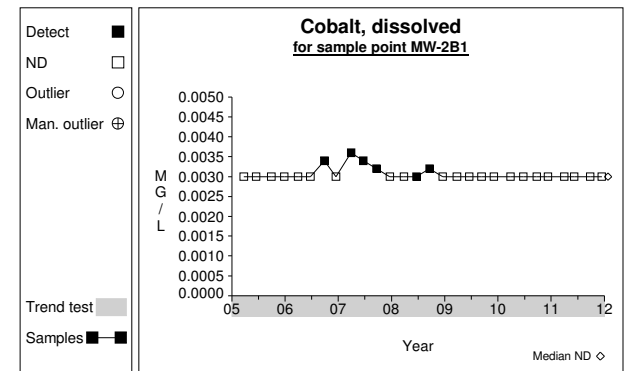
Graph 249



Graph 250

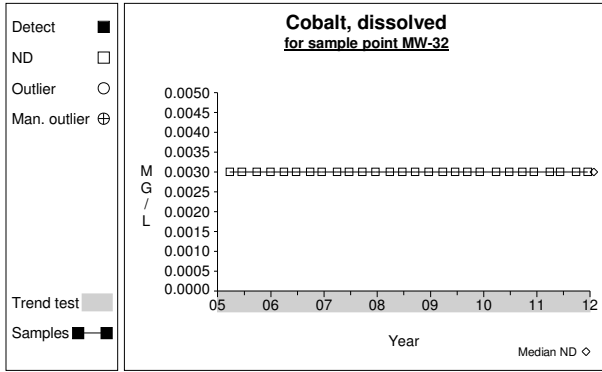


Graph 251

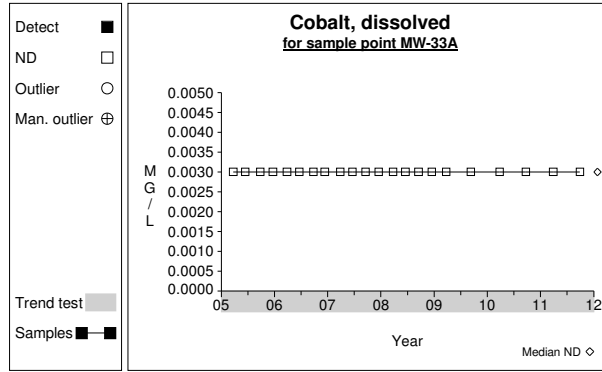


Graph 252

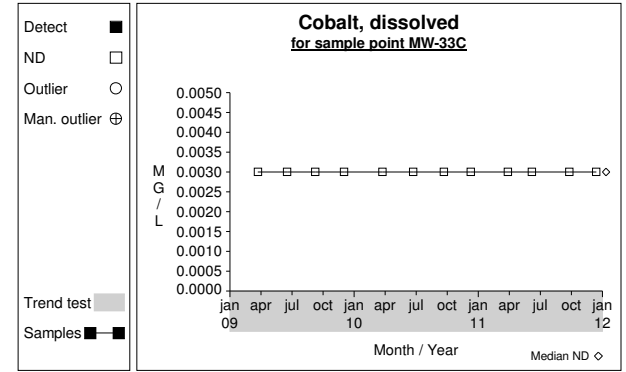
# Time Series



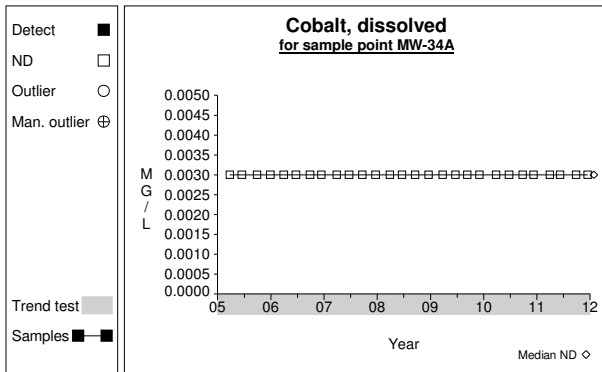
Graph 253



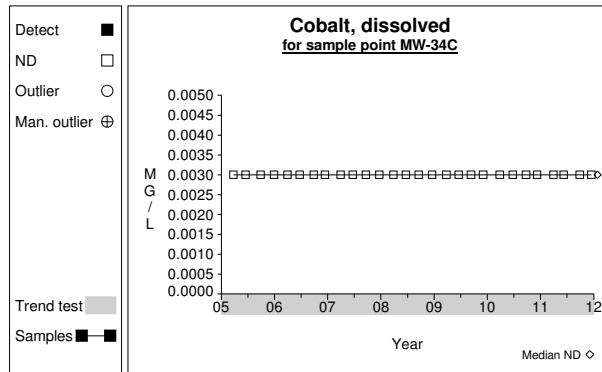
Graph 254



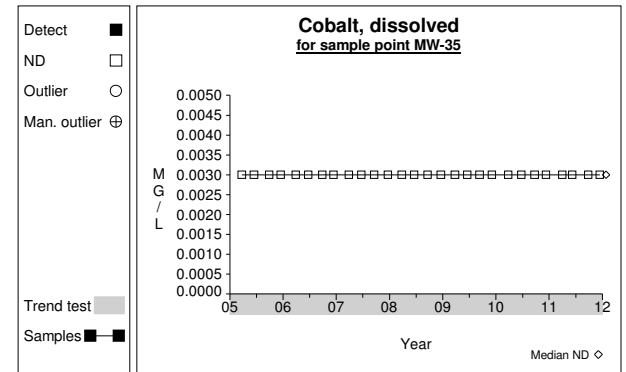
Graph 255



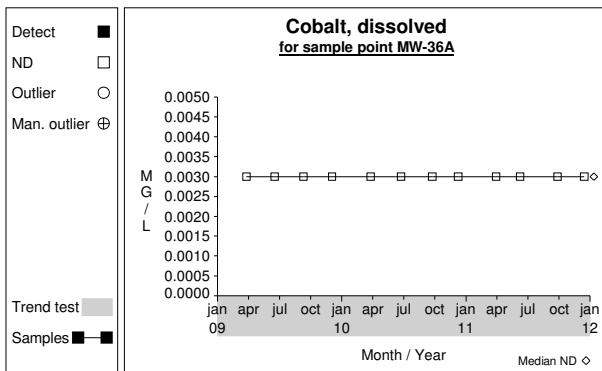
Graph 256



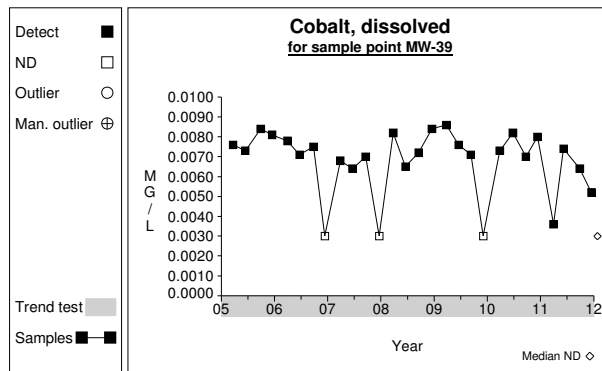
Graph 257



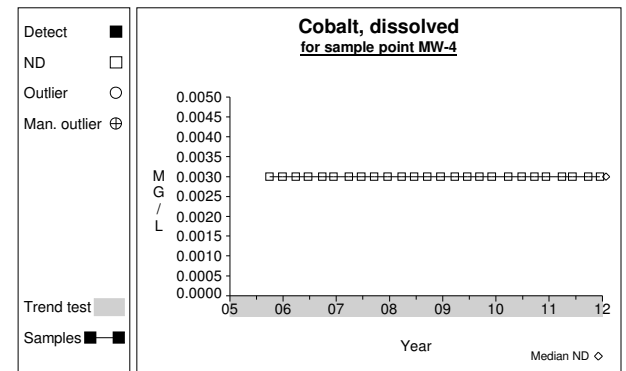
Graph 258



Graph 259

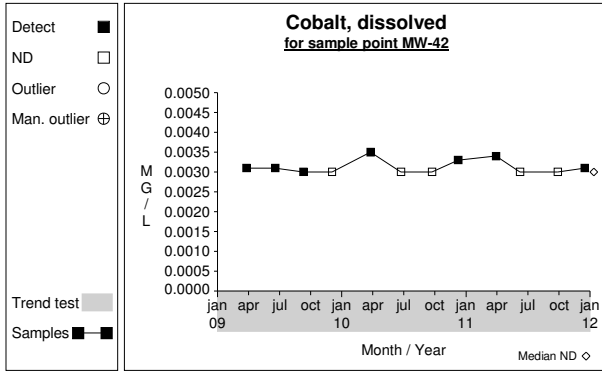


Graph 260

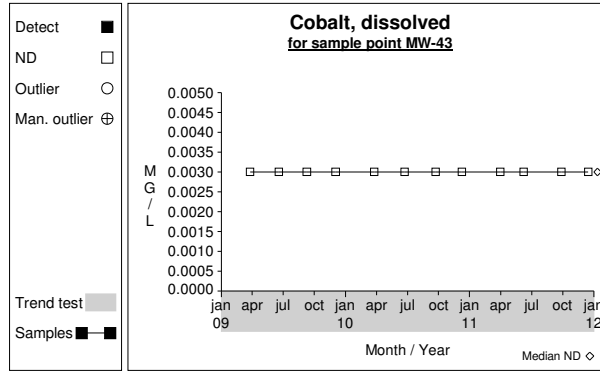


Graph 261

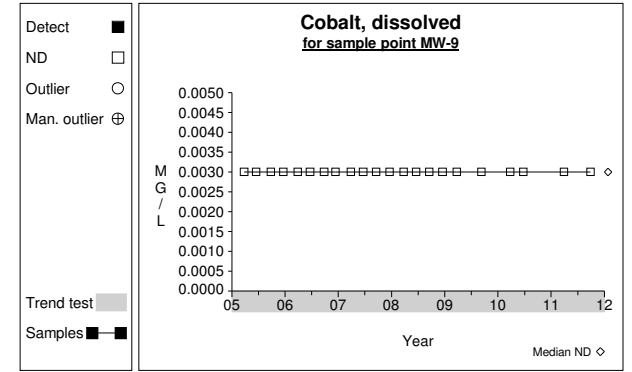
# Time Series



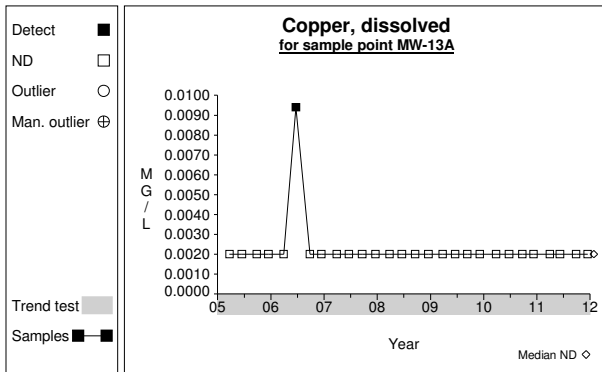
**Graph 262**



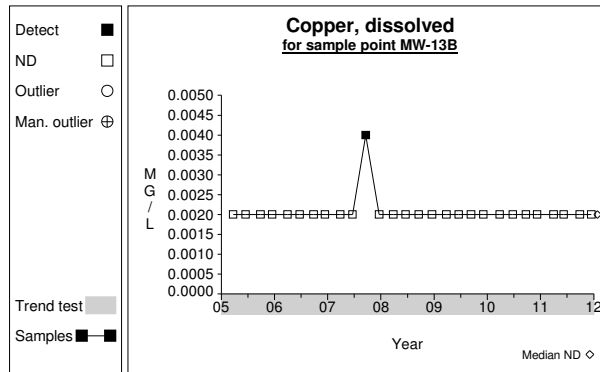
**Graph 263**



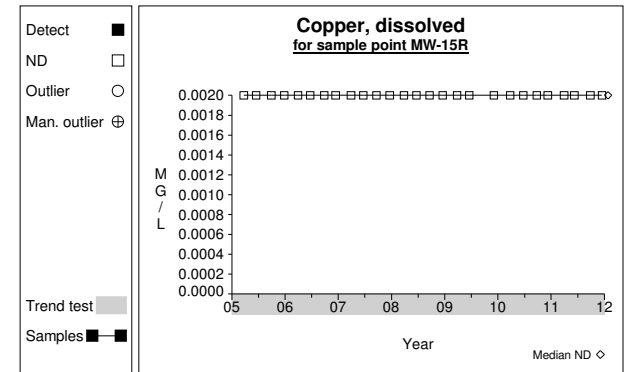
**Graph 264**



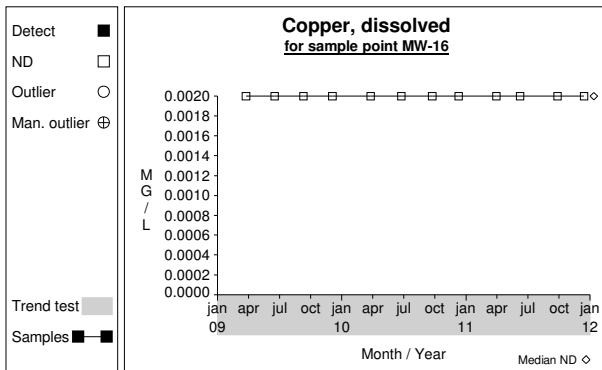
**Graph 265**



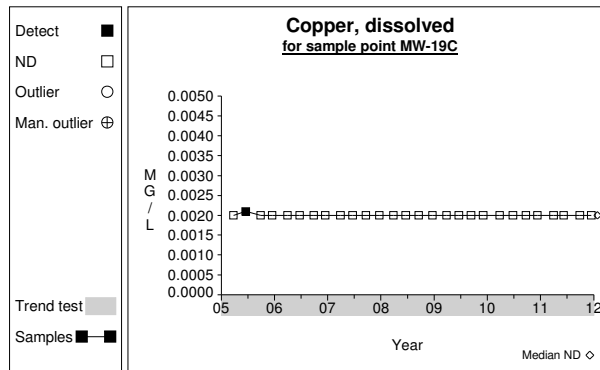
**Graph 266**



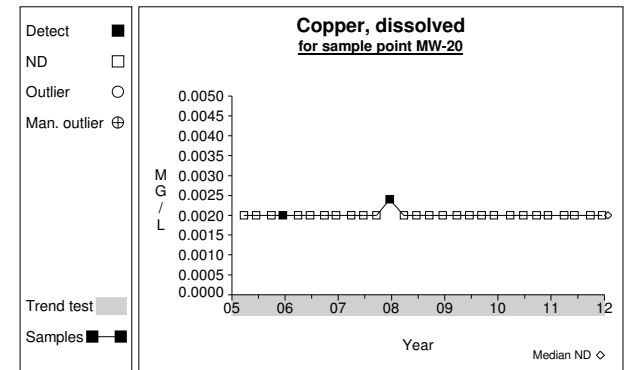
**Graph 267**



**Graph 268**



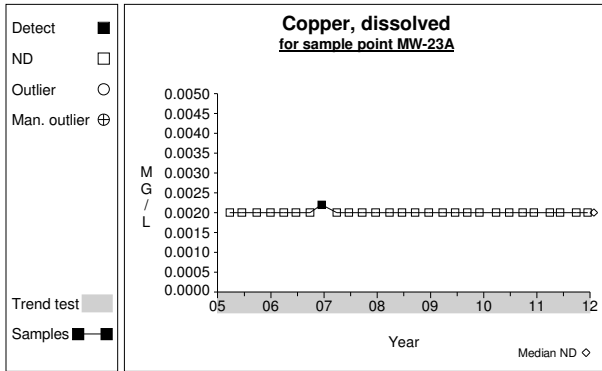
**Graph 269**



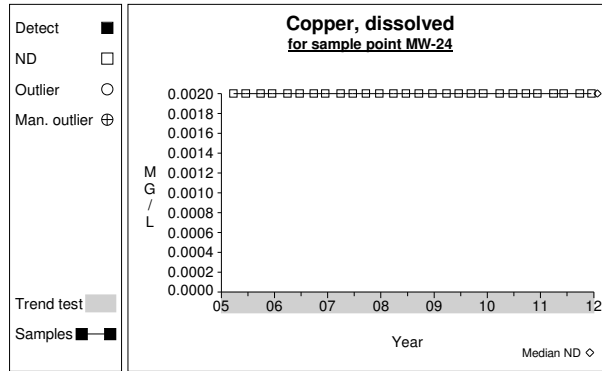
**Graph 270**



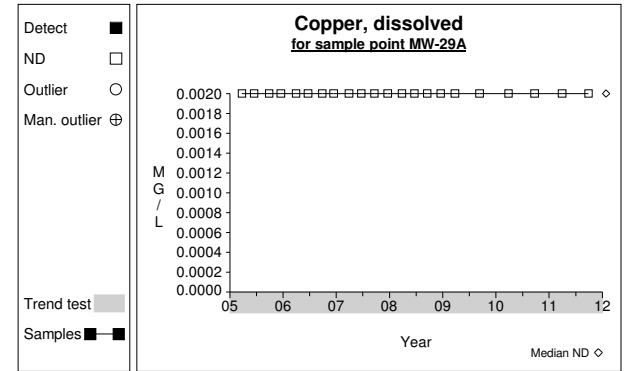
# Time Series



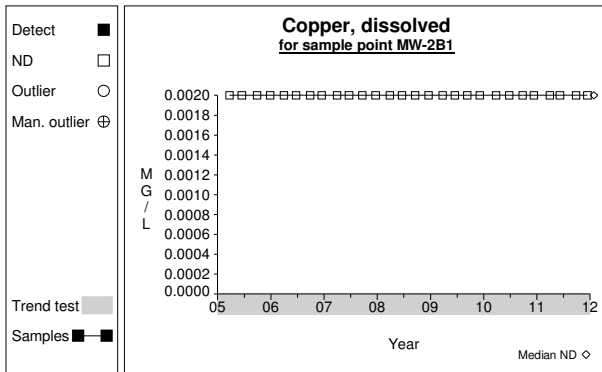
Graph 271



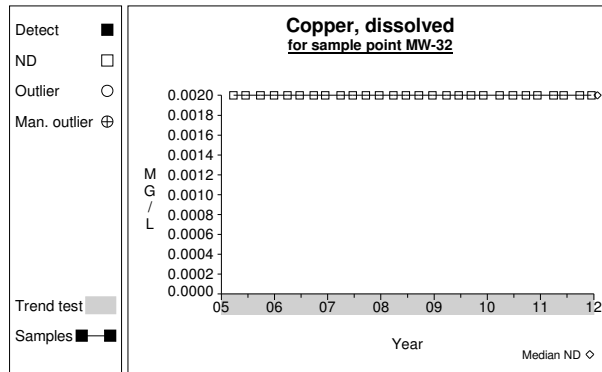
Graph 272



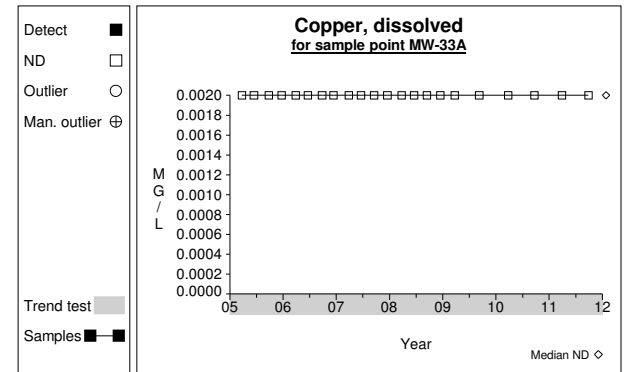
Graph 273



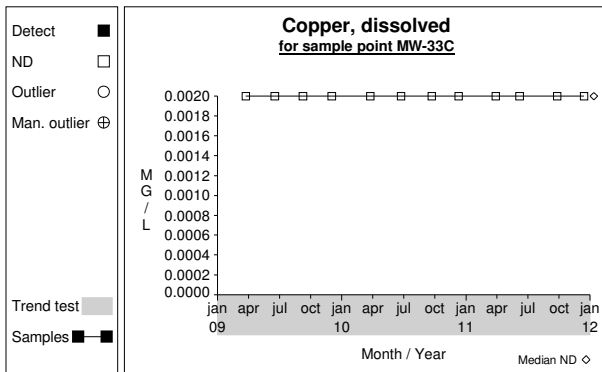
Graph 274



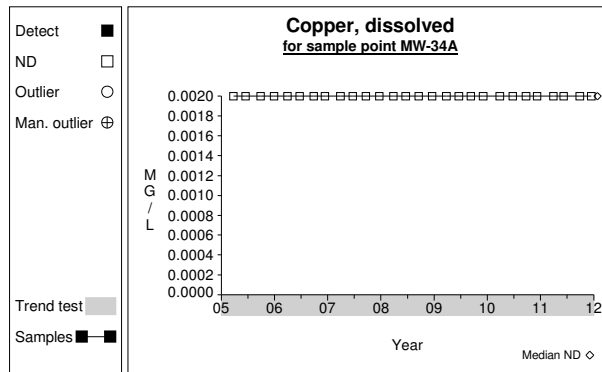
Graph 275



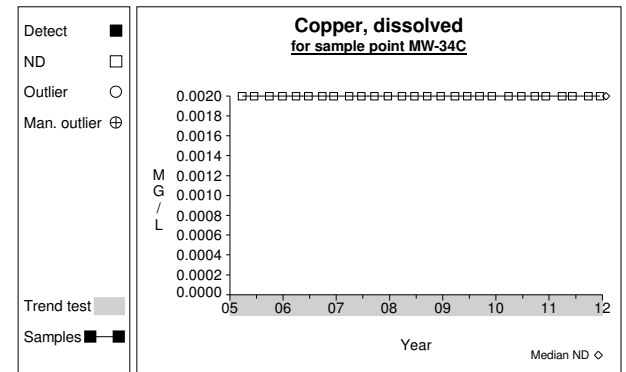
Graph 276



Graph 277

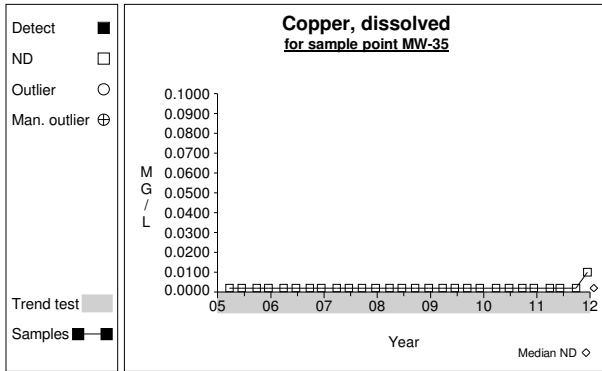


Graph 278

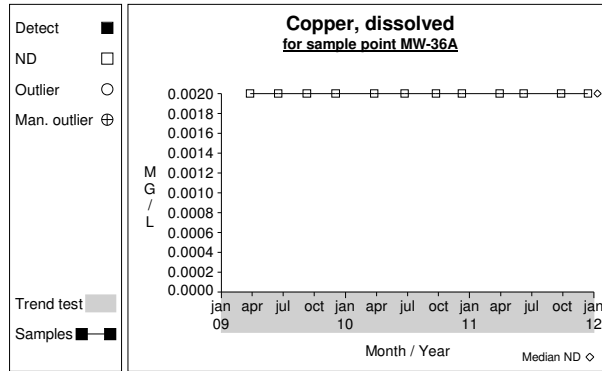


Graph 279

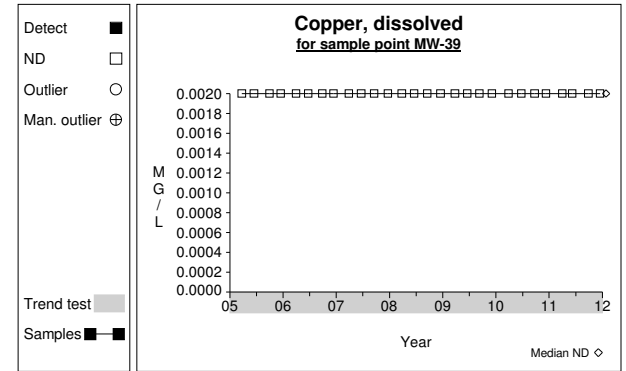
# Time Series



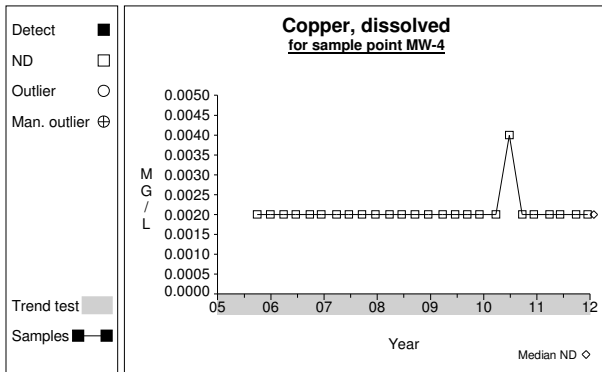
Graph 280



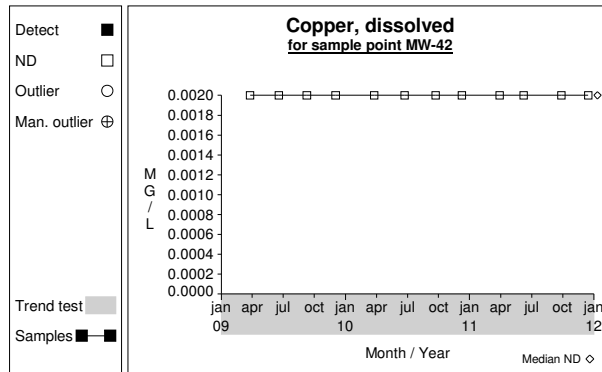
Graph 281



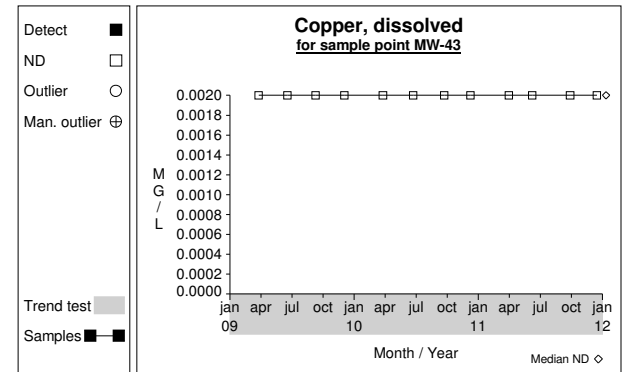
Graph 282



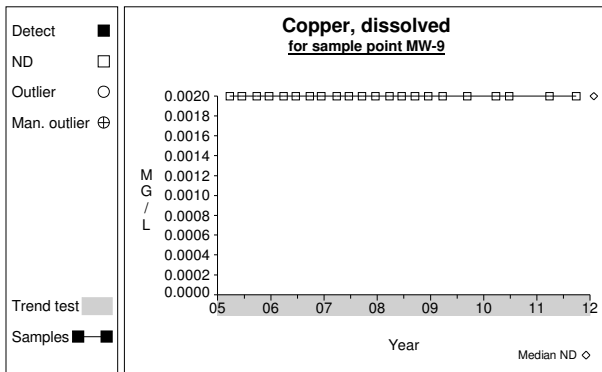
Graph 283



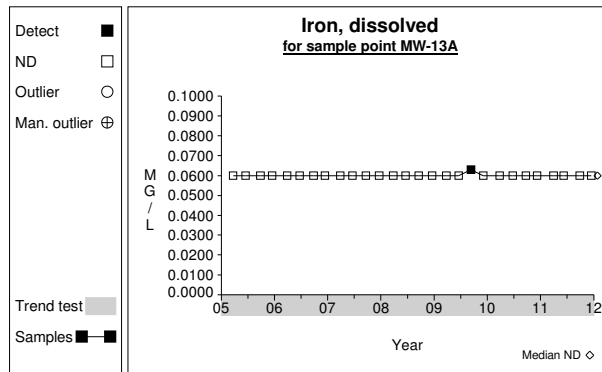
Graph 284



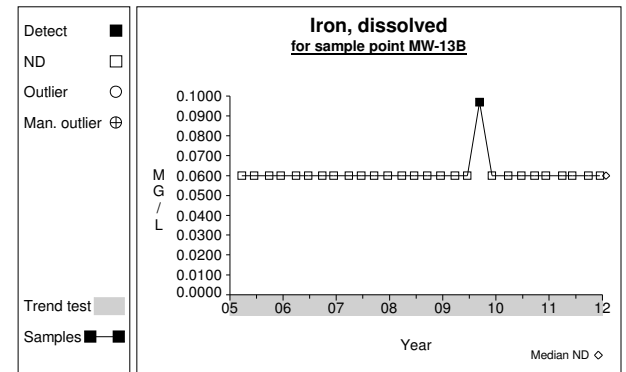
Graph 285



Graph 286

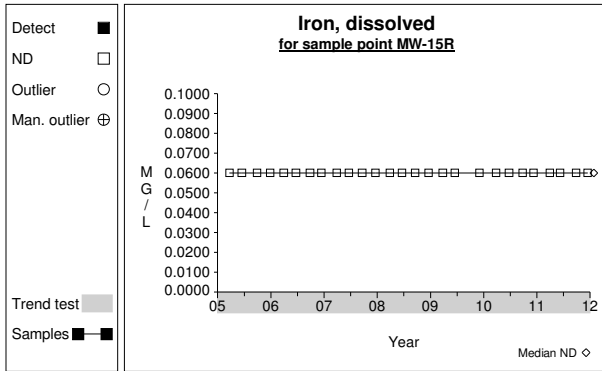


Graph 287

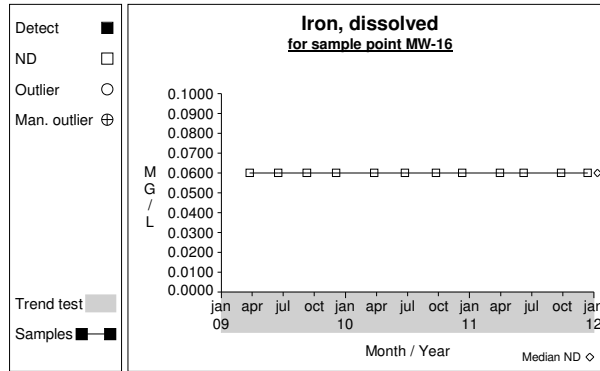


Graph 288

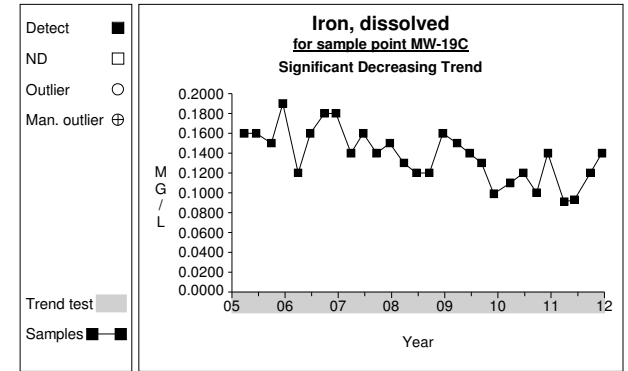
# Time Series



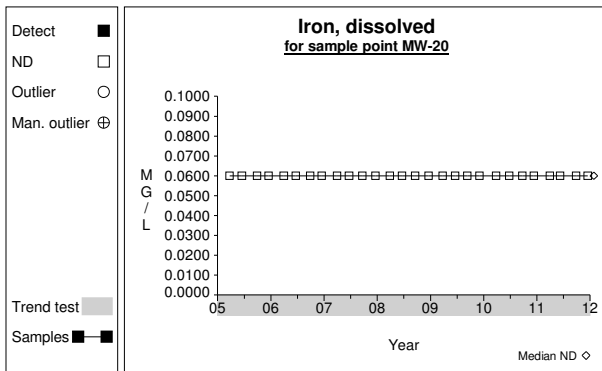
**Graph 289**



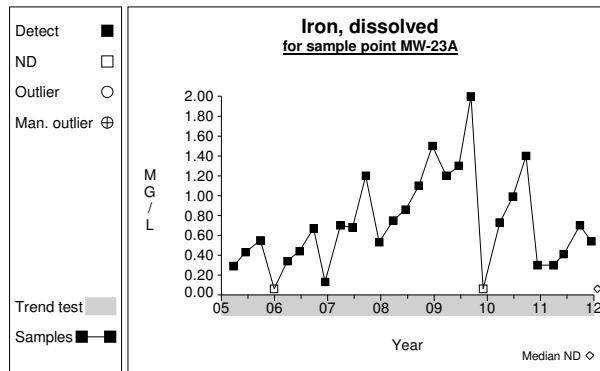
**Graph 290**



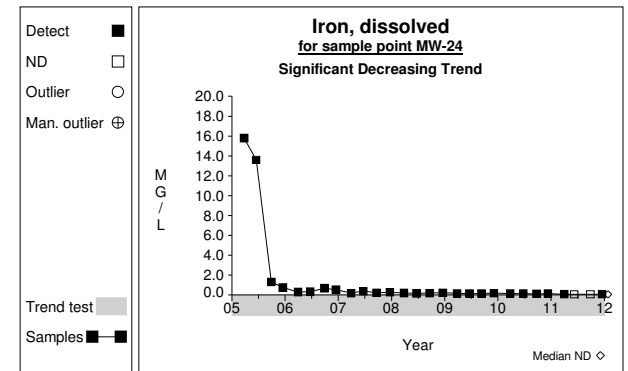
**Graph 291**



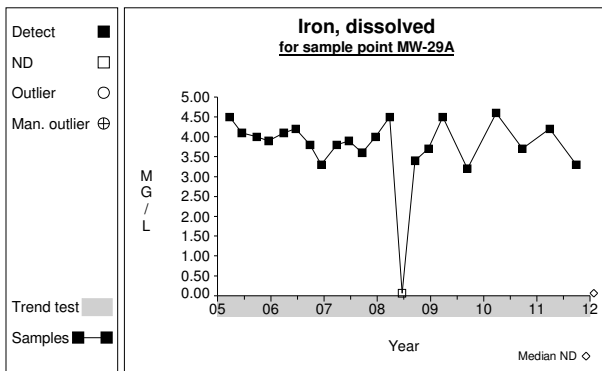
**Graph 292**



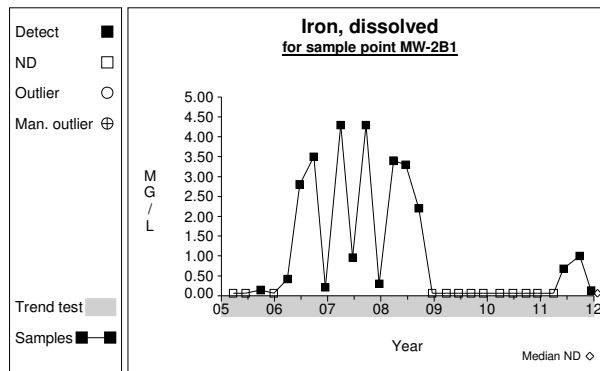
**Graph 293**



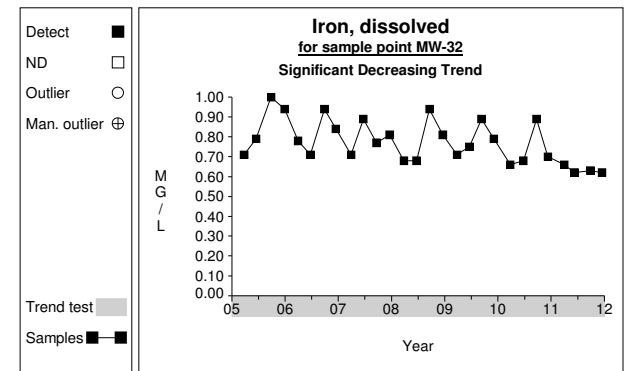
**Graph 294**



**Graph 295**

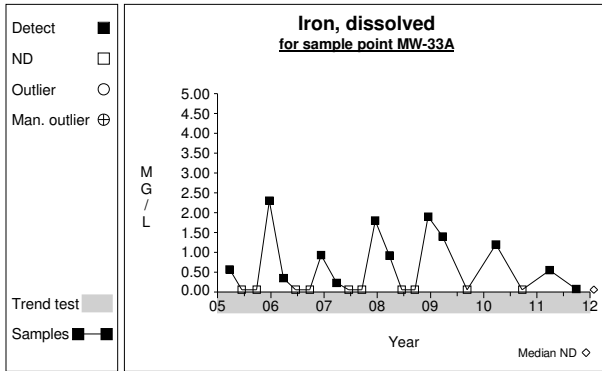


**Graph 296**

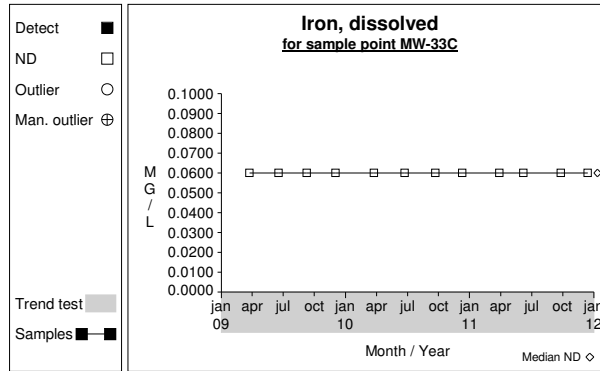


**Graph 297**

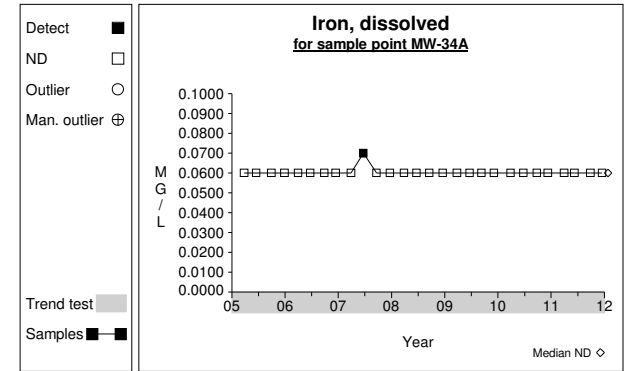
# Time Series



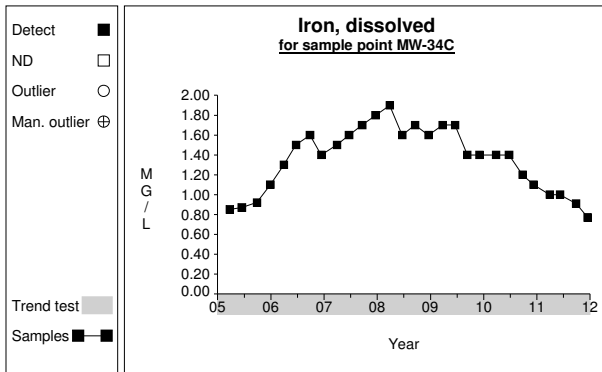
Graph 298



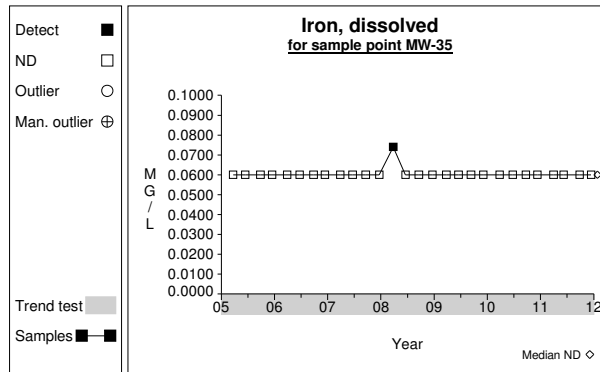
Graph 299



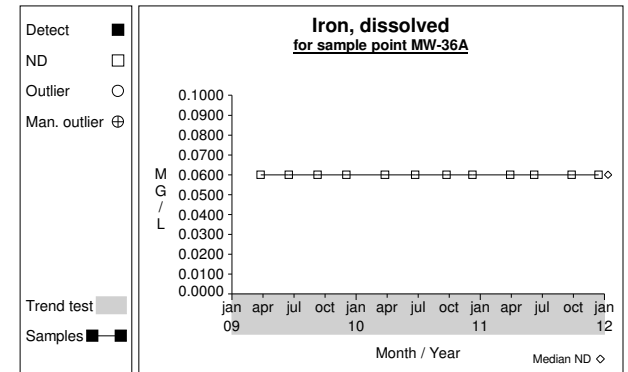
Graph 300



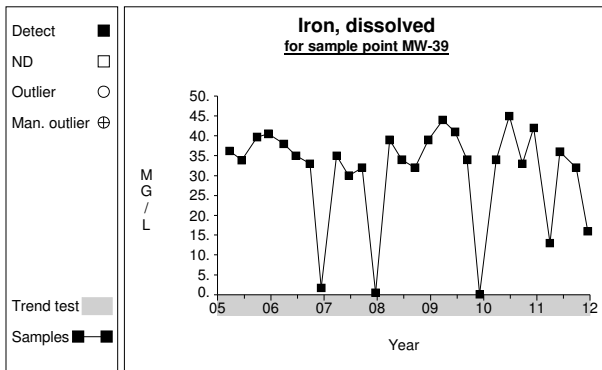
Graph 301



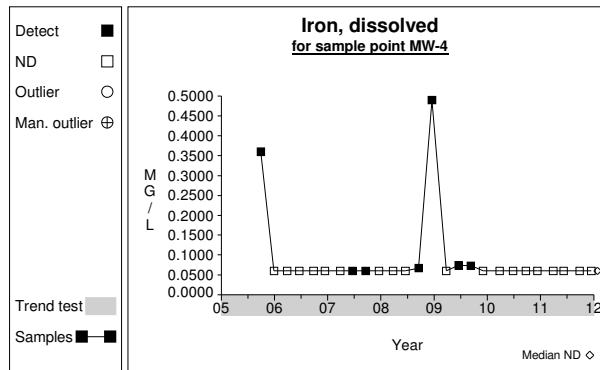
Graph 302



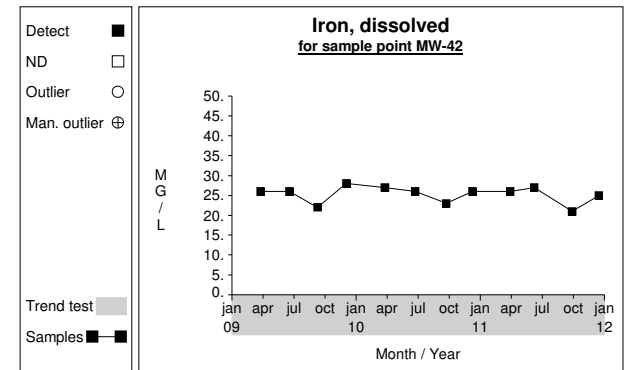
Graph 303



Graph 304

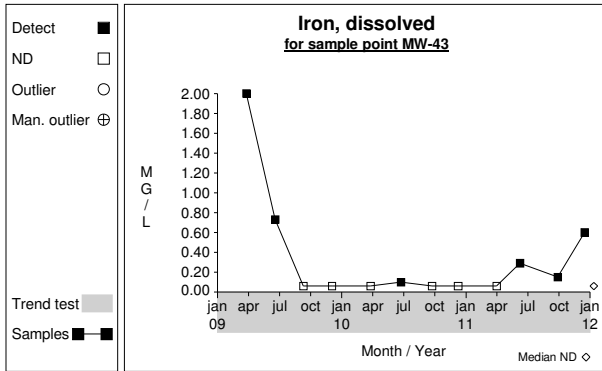


Graph 305

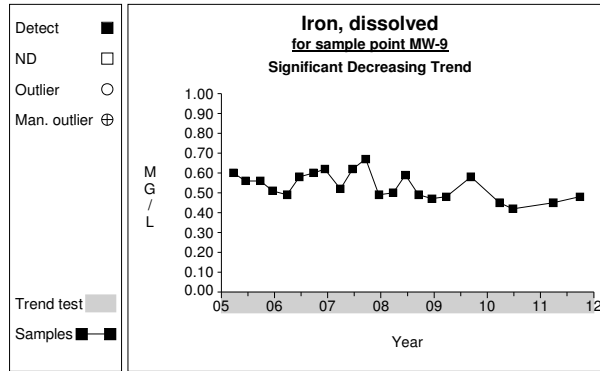


Graph 306

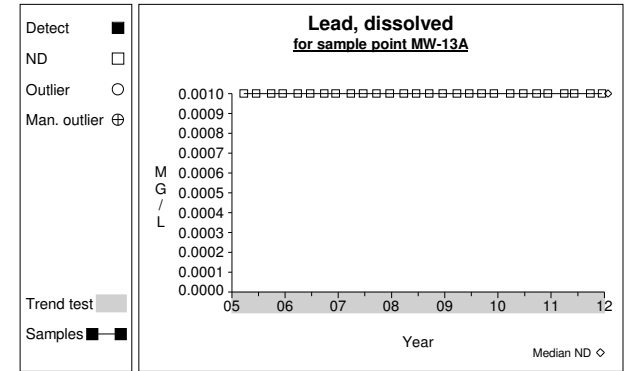
# Time Series



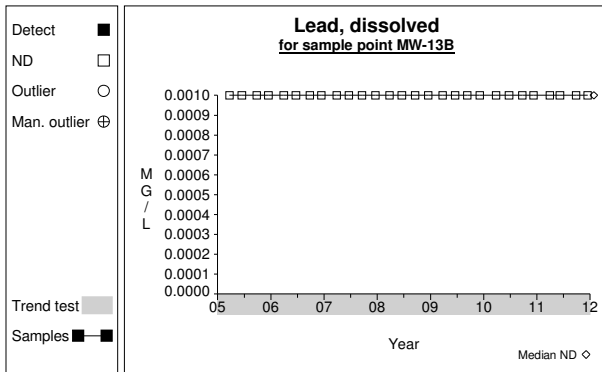
**Graph 307**



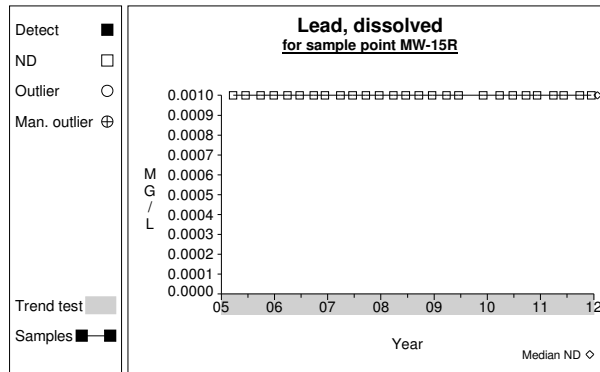
**Graph 308**



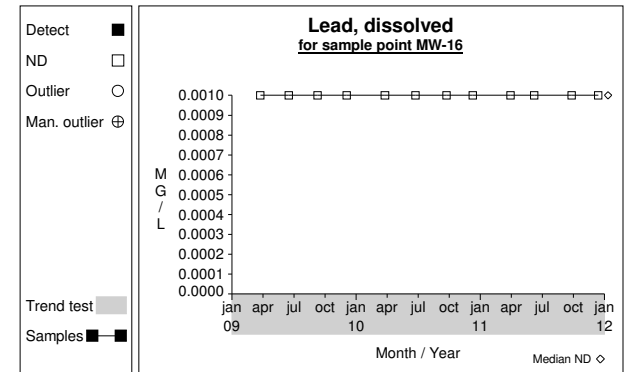
**Graph 309**



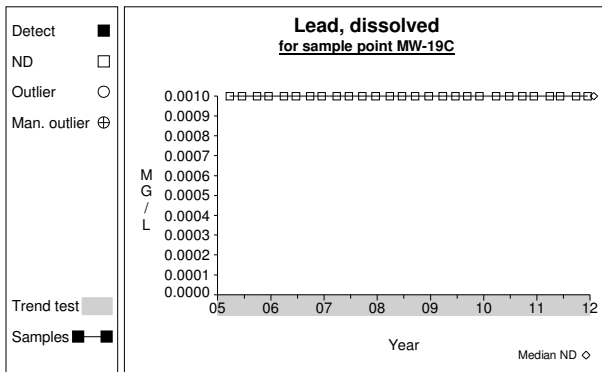
**Graph 310**



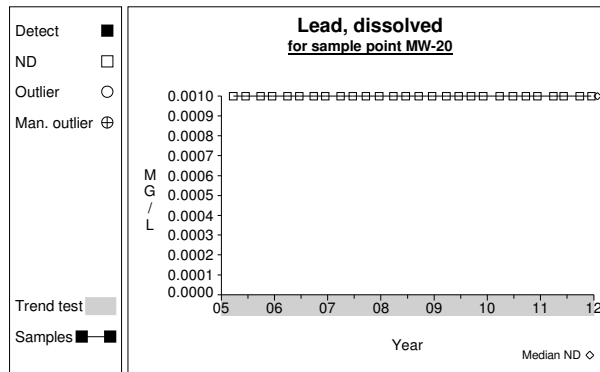
**Graph 311**



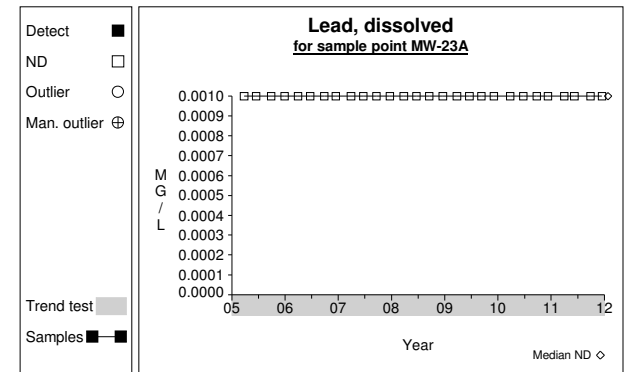
**Graph 312**



**Graph 313**

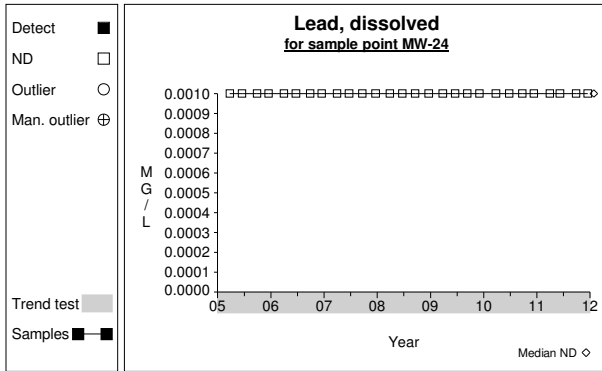


**Graph 314**

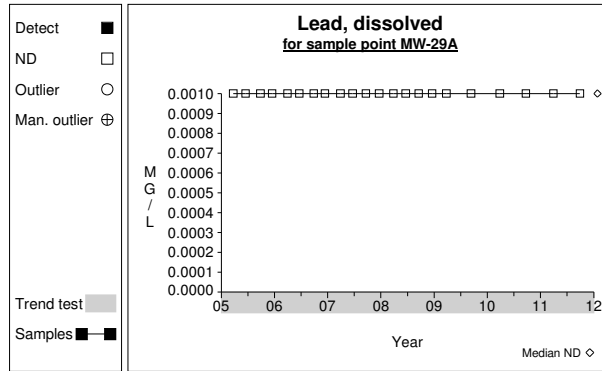


**Graph 315**

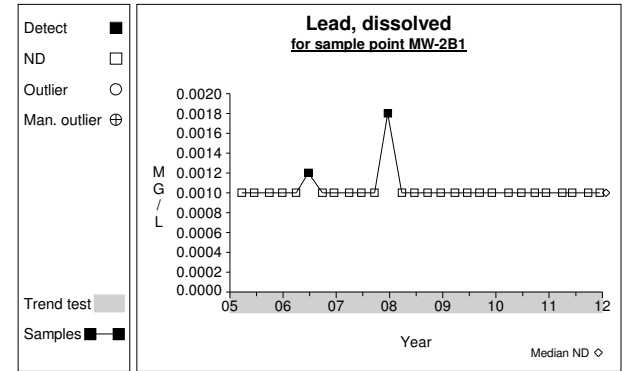
# Time Series



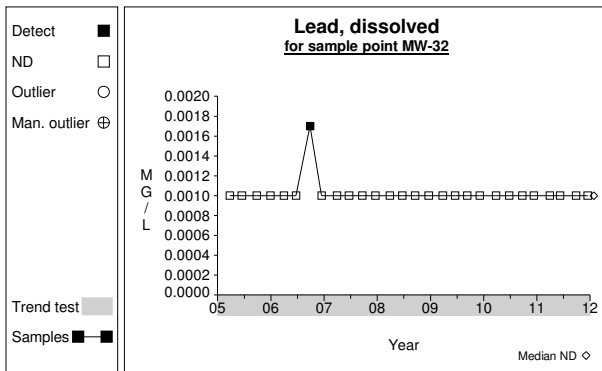
Graph 316



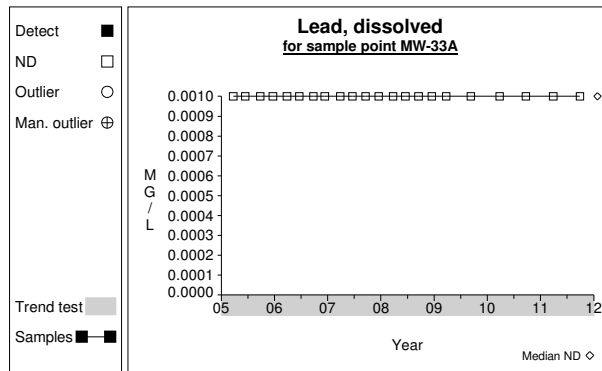
Graph 317



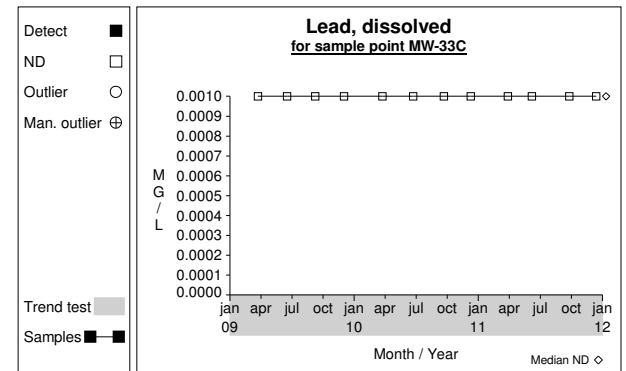
Graph 318



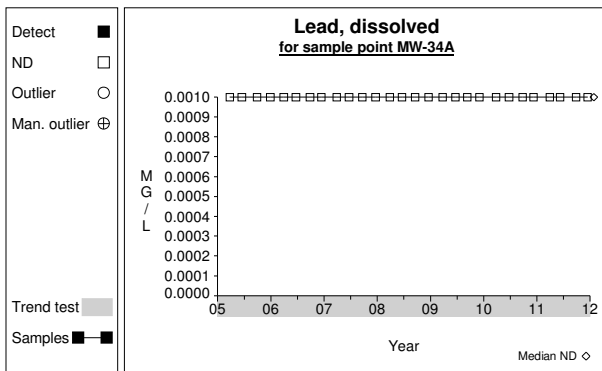
Graph 319



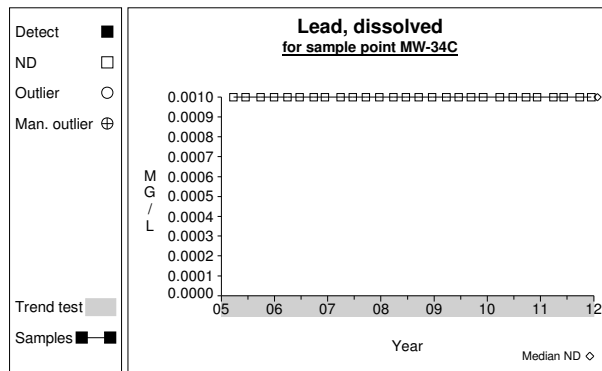
Graph 320



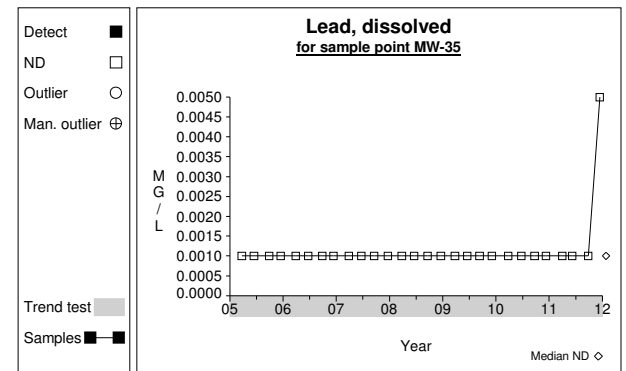
Graph 321



Graph 322

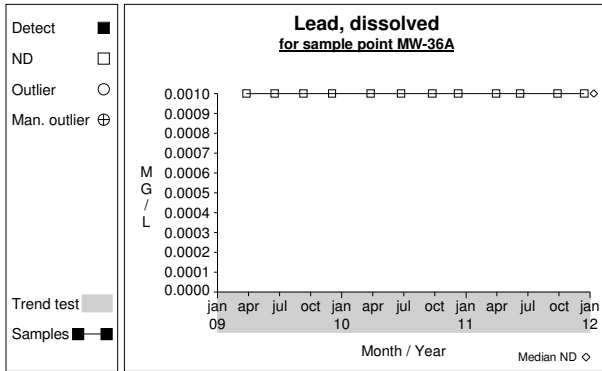


Graph 323

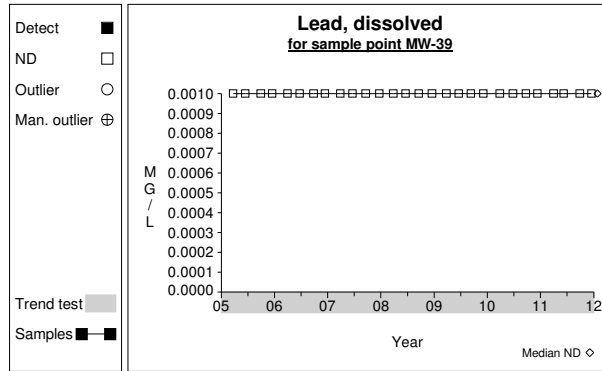


Graph 324

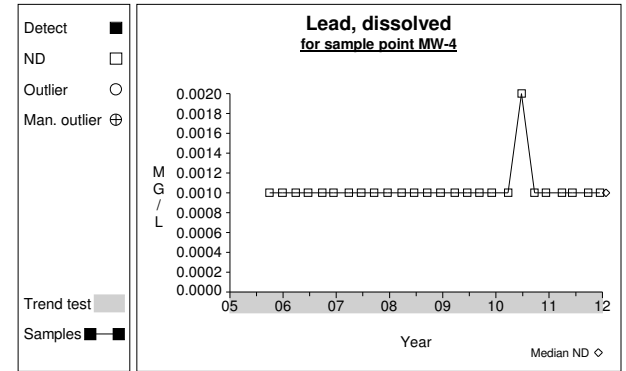
# Time Series



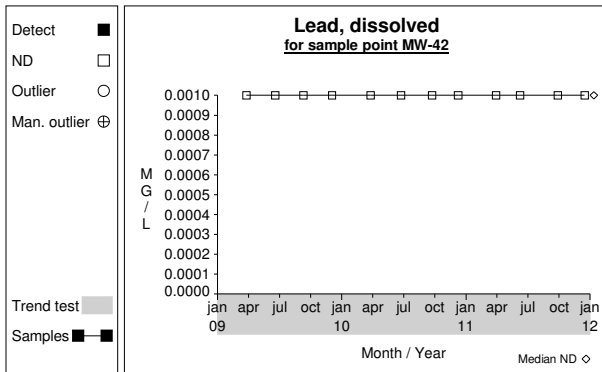
Graph 325



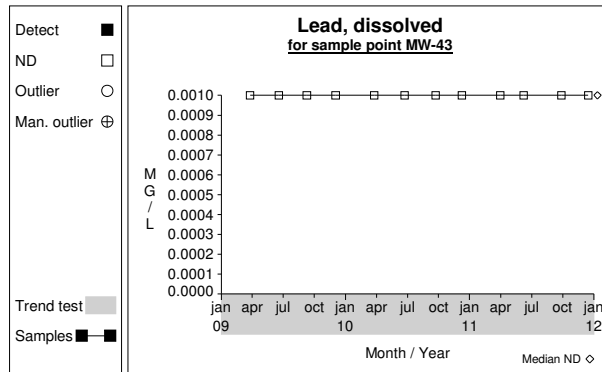
Graph 326



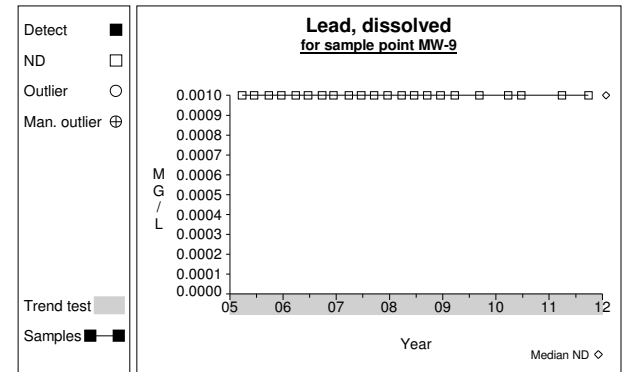
Graph 327



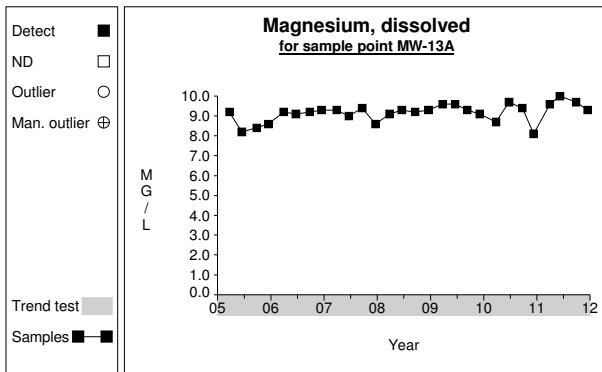
Graph 328



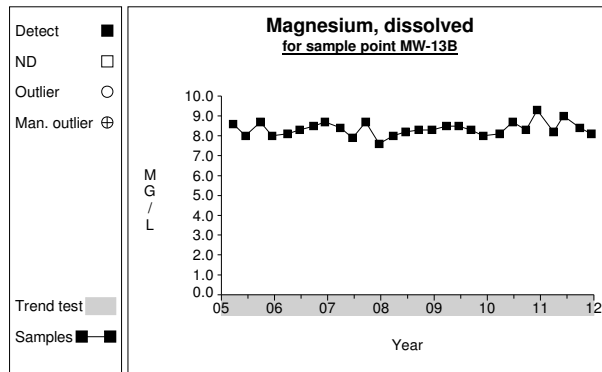
Graph 329



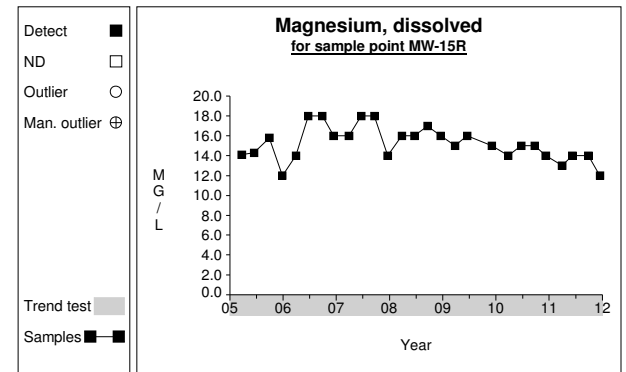
Graph 330



Graph 331

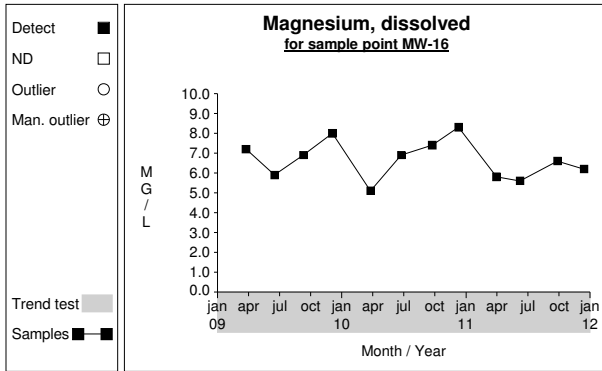


Graph 332

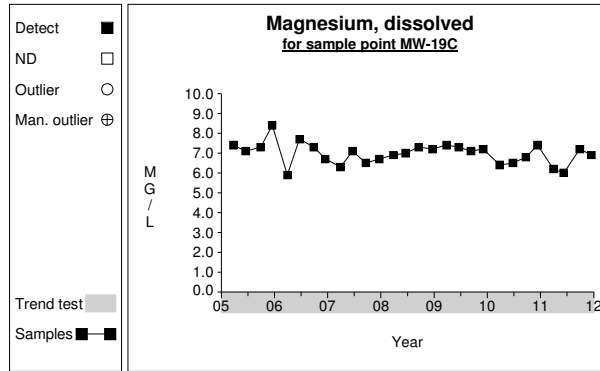


Graph 333

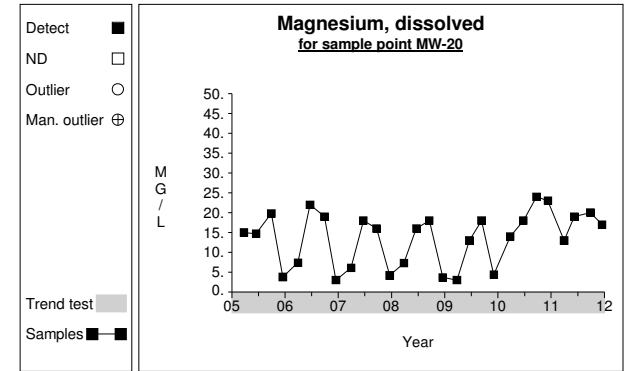
# Time Series



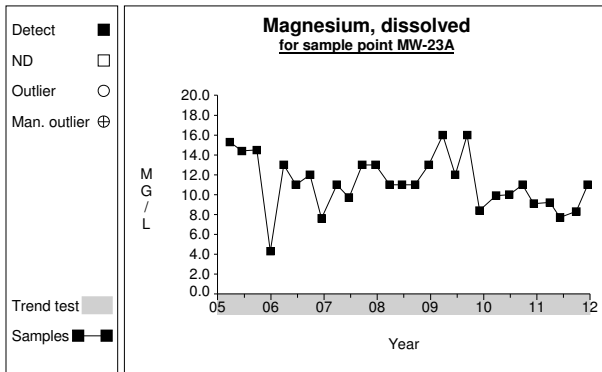
Graph 334



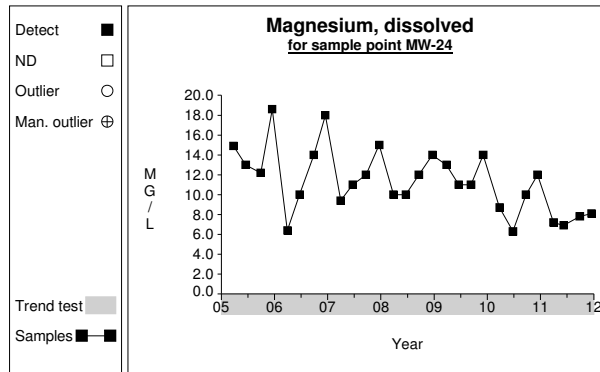
Graph 335



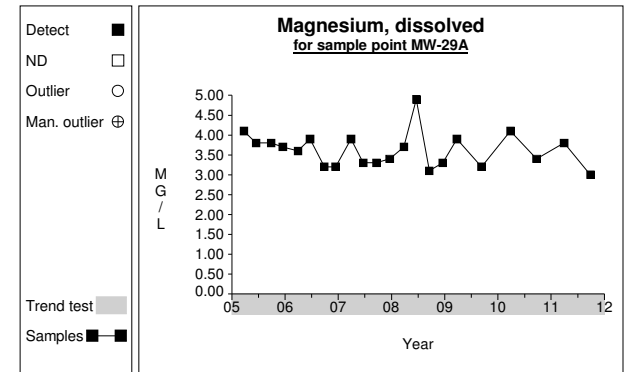
Graph 336



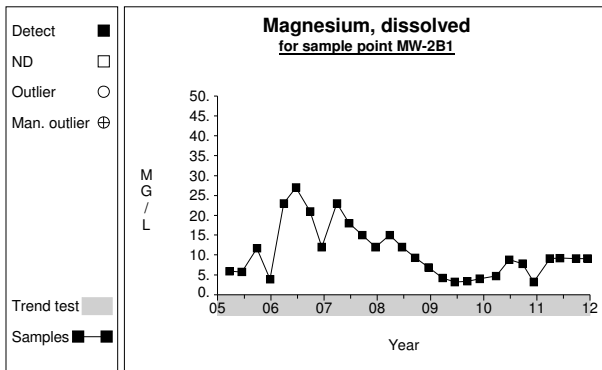
Graph 337



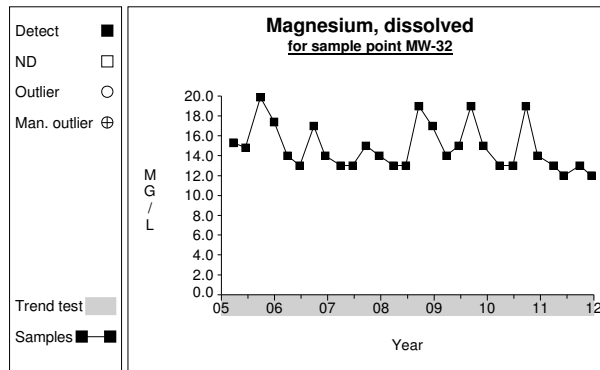
Graph 338



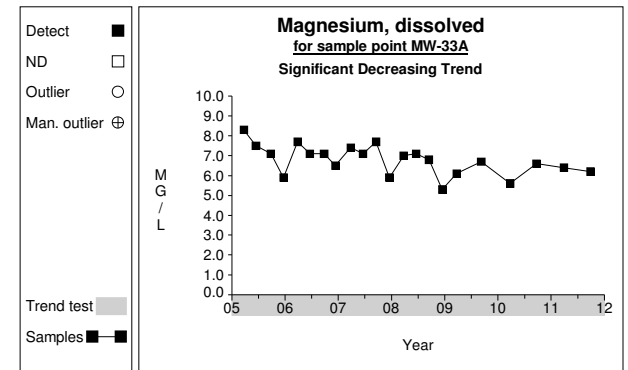
Graph 339



Graph 340



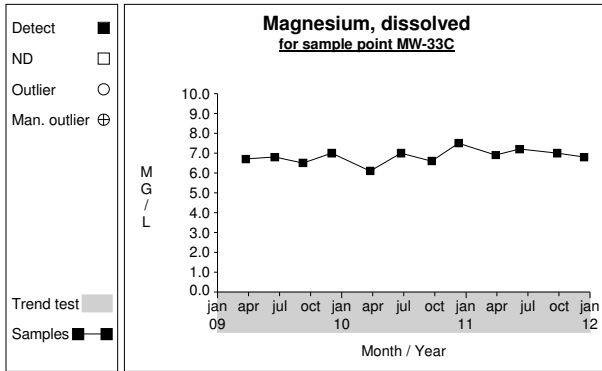
Graph 341



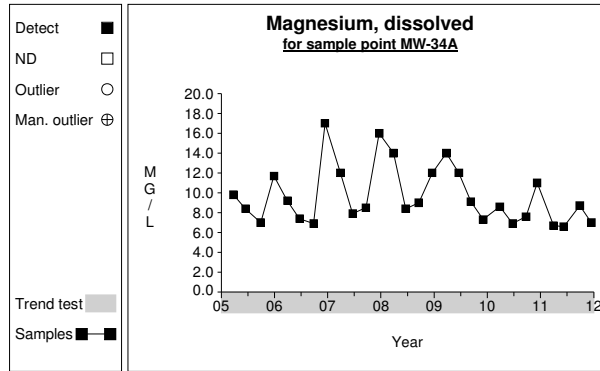
Graph 342



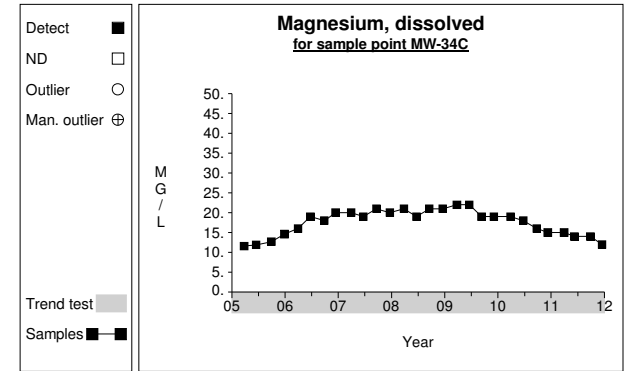
# Time Series



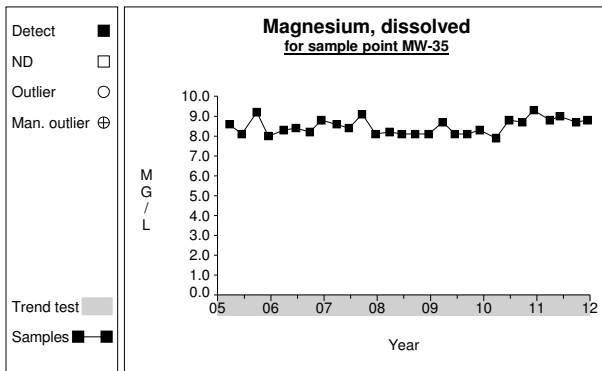
**Graph 343**



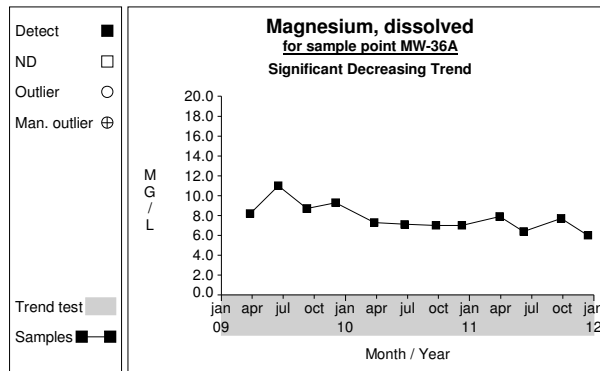
**Graph 344**



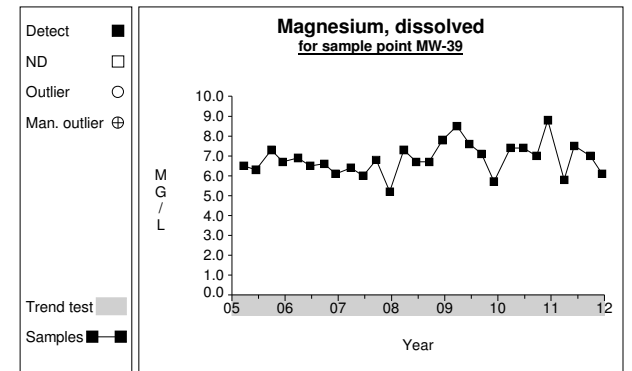
**Graph 345**



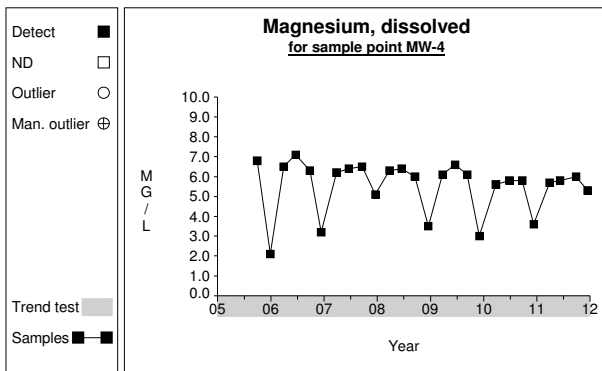
**Graph 346**



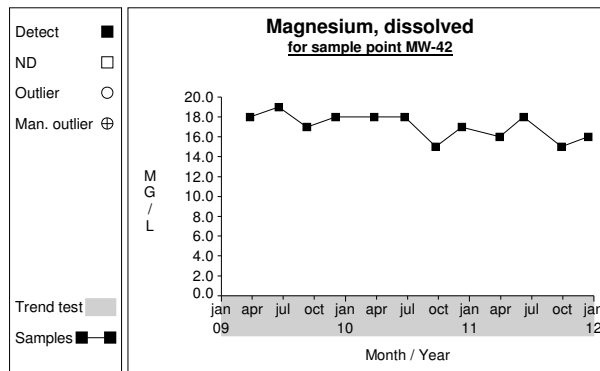
**Graph 347**



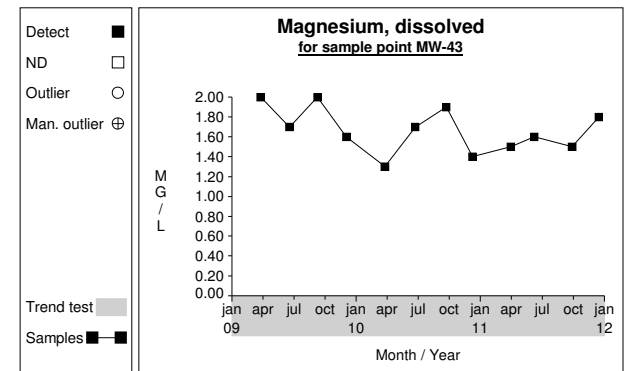
**Graph 348**



**Graph 349**

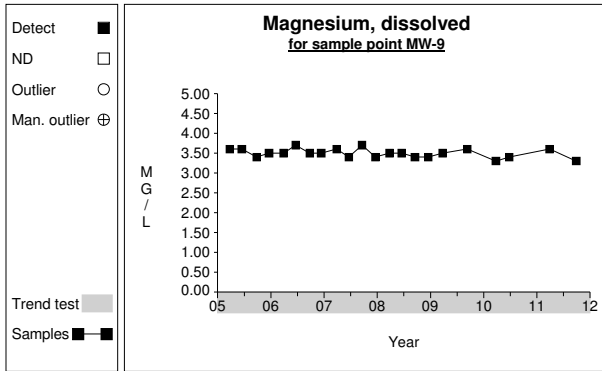


**Graph 350**

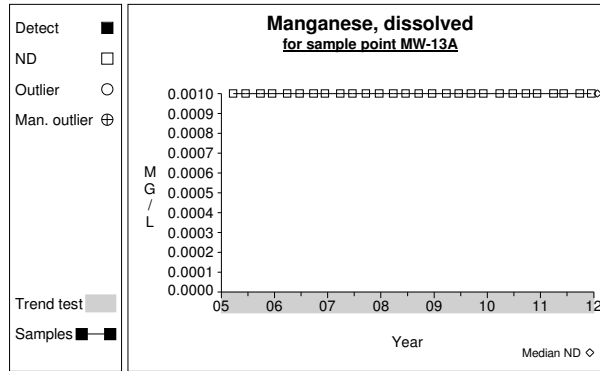


**Graph 351**

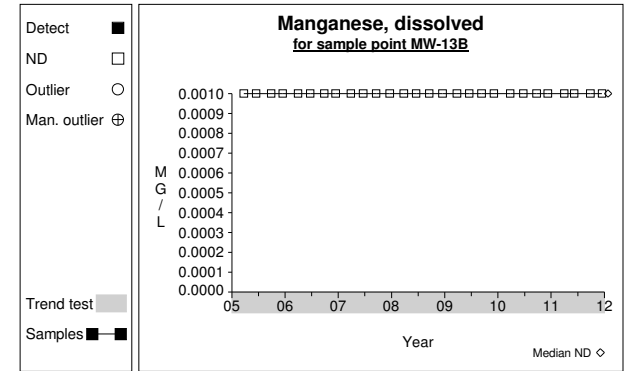
# Time Series



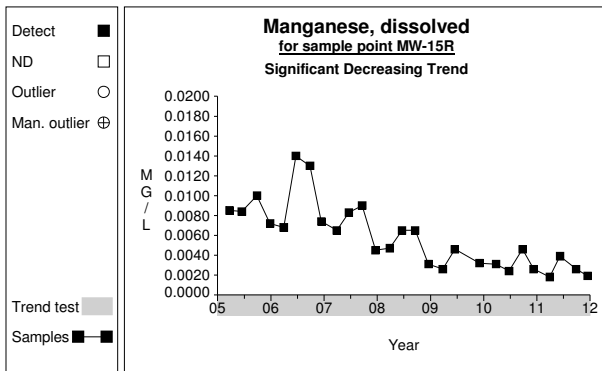
**Graph 352**



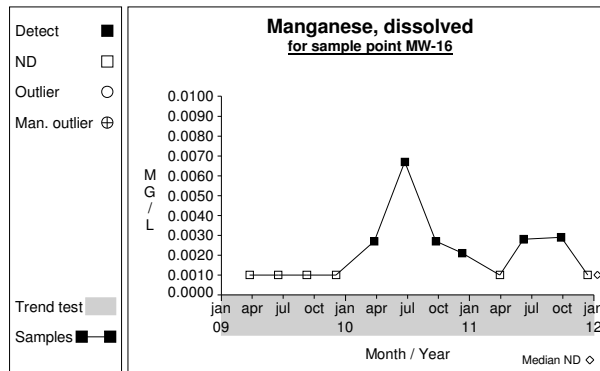
**Graph 353**



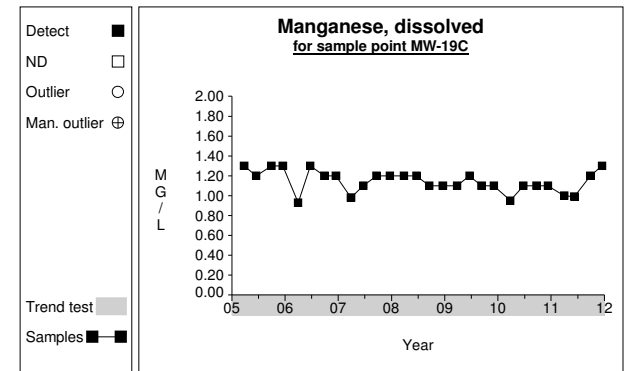
**Graph 354**



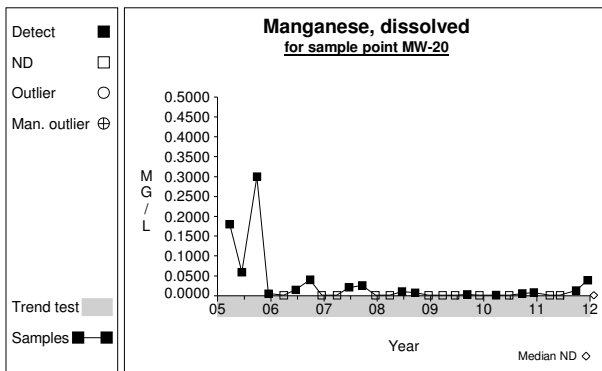
**Graph 355**



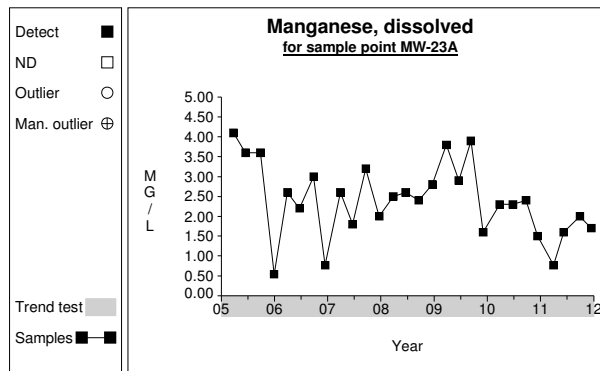
**Graph 356**



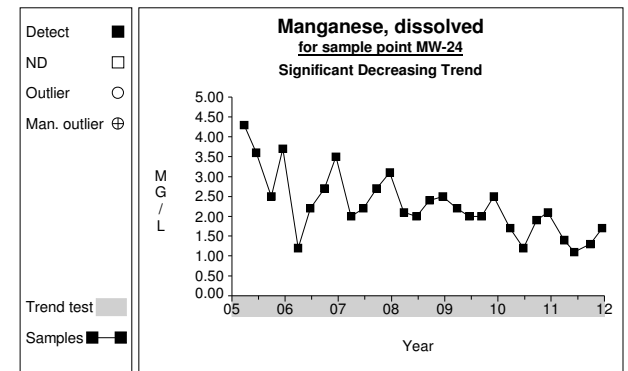
**Graph 357**



**Graph 358**

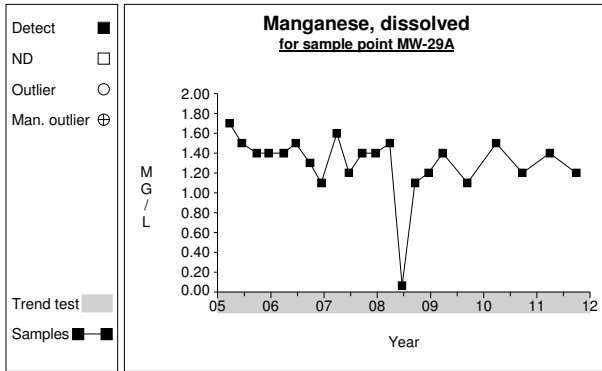


**Graph 359**

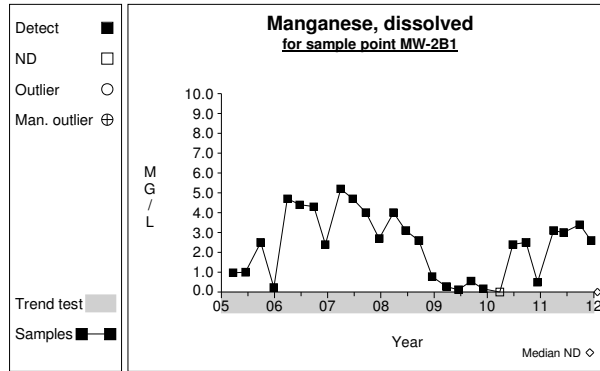


**Graph 360**

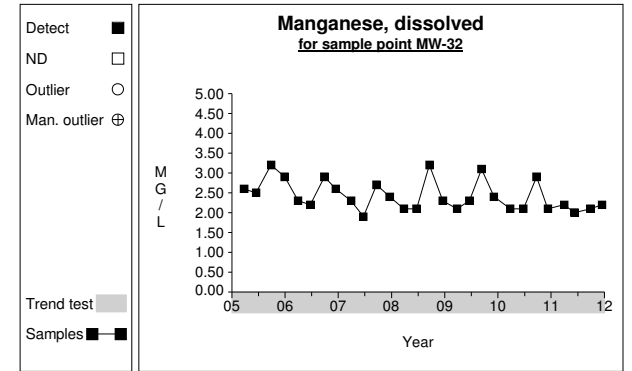
# Time Series



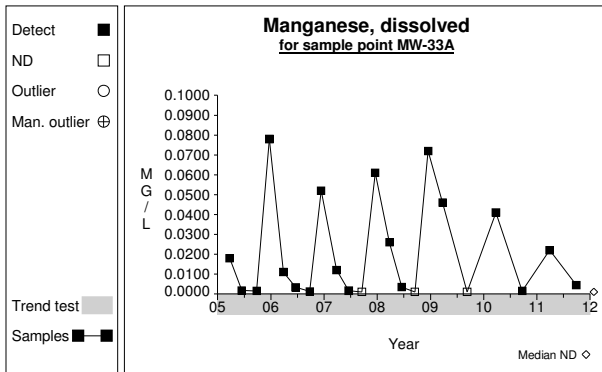
Graph 361



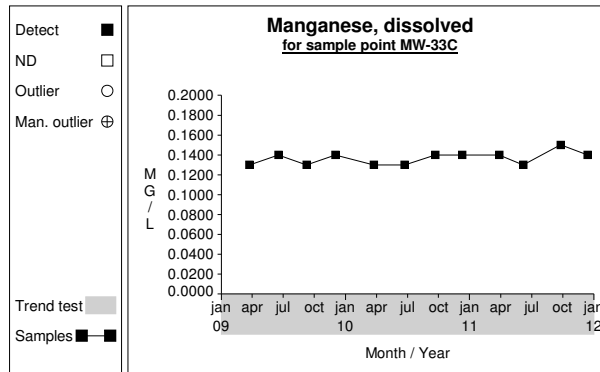
Graph 362



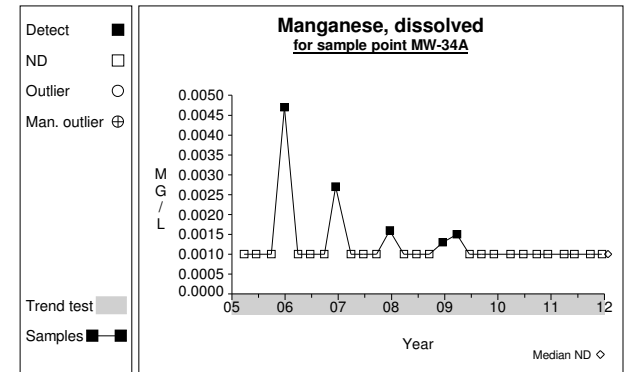
Graph 363



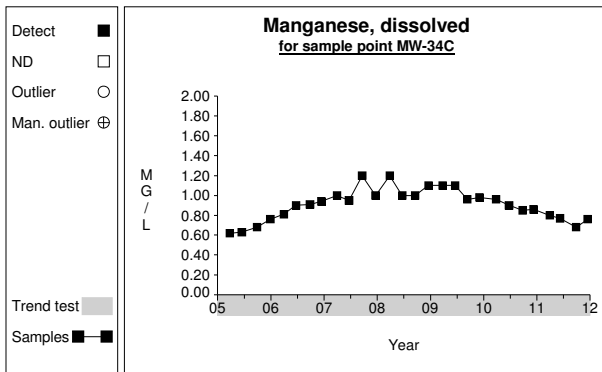
Graph 364



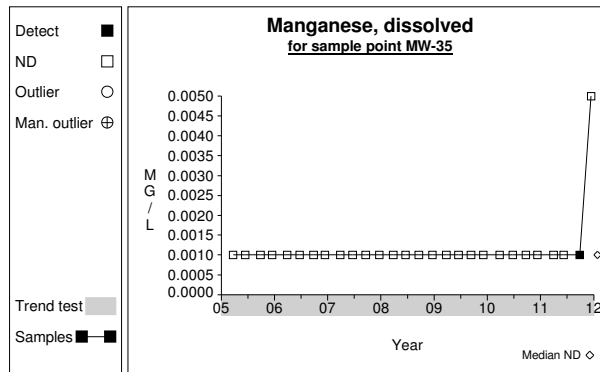
Graph 365



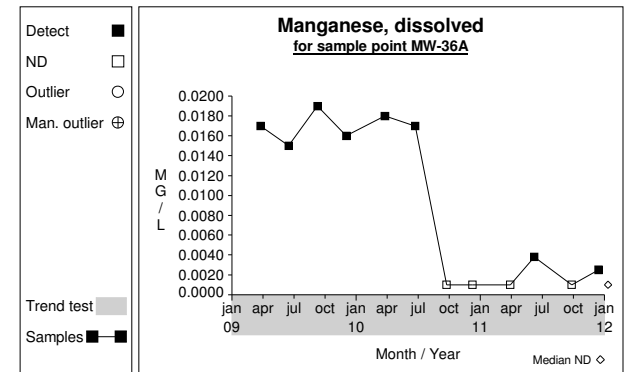
Graph 366



Graph 367

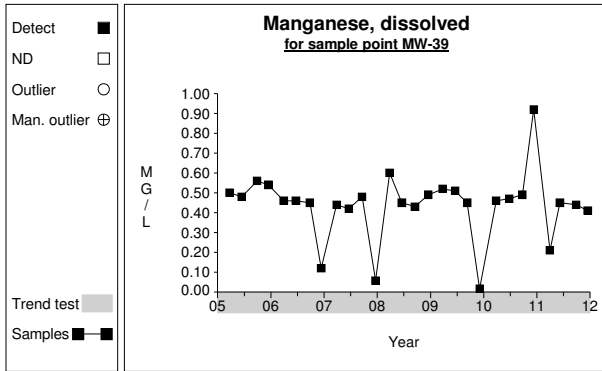


Graph 368

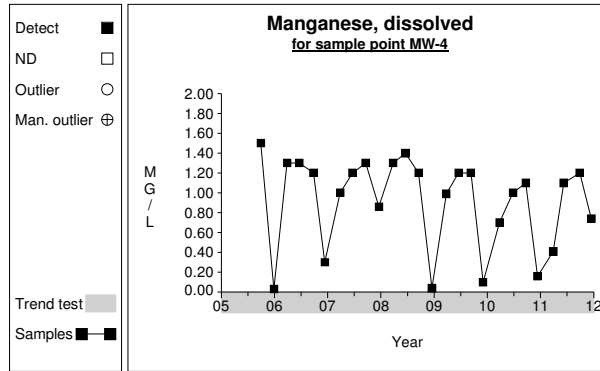


Graph 369

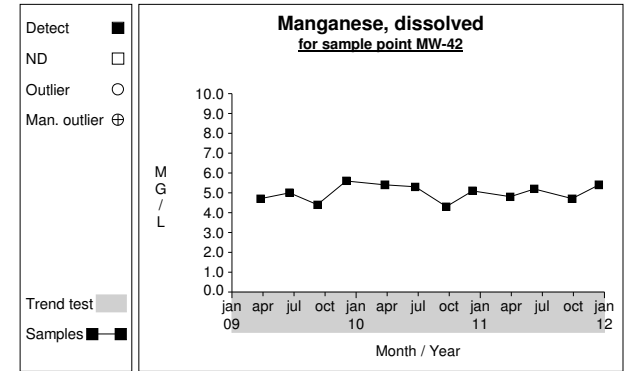
# Time Series



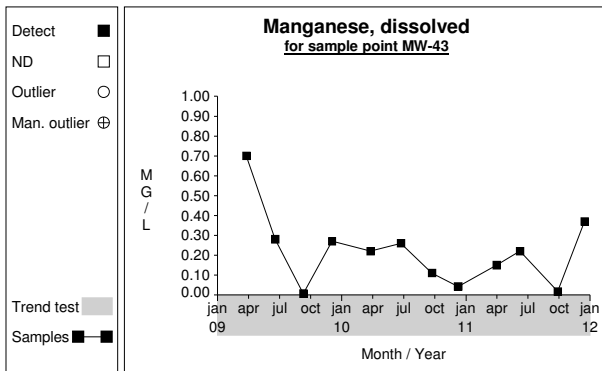
Graph 370



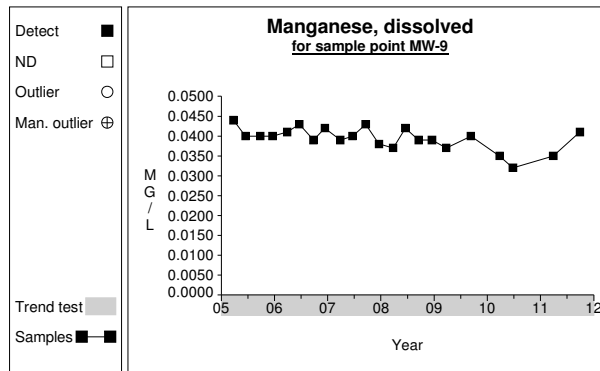
Graph 371



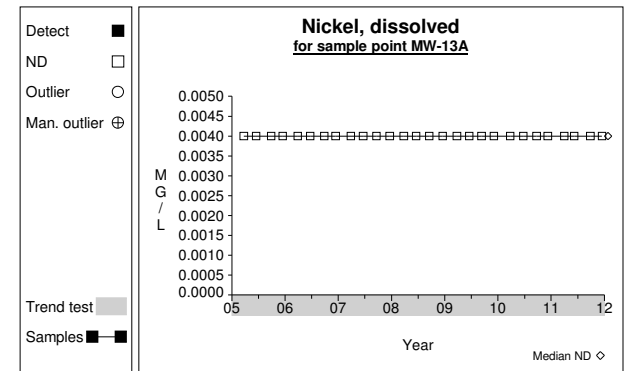
Graph 372



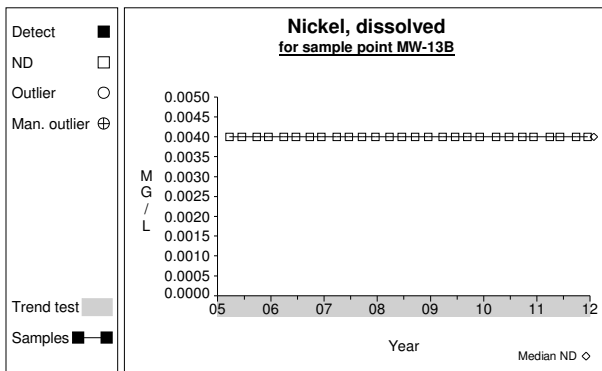
Graph 373



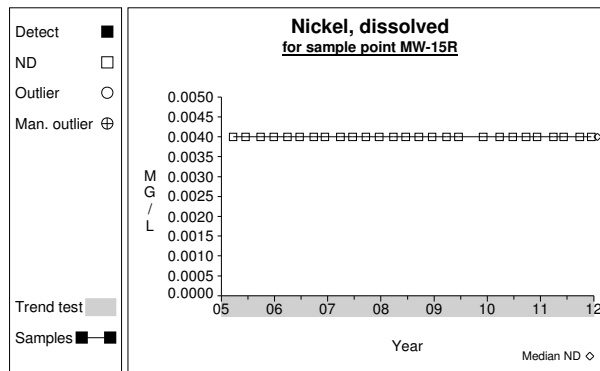
Graph 374



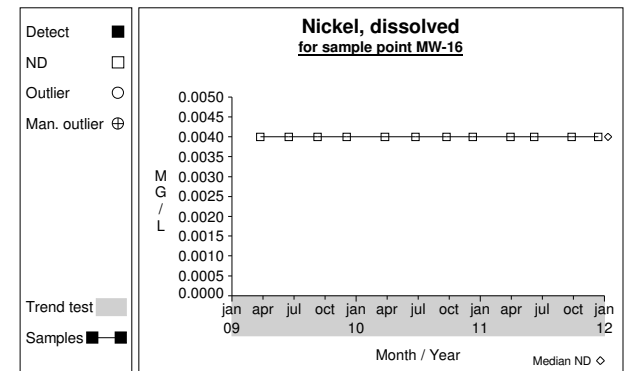
Graph 375



Graph 376

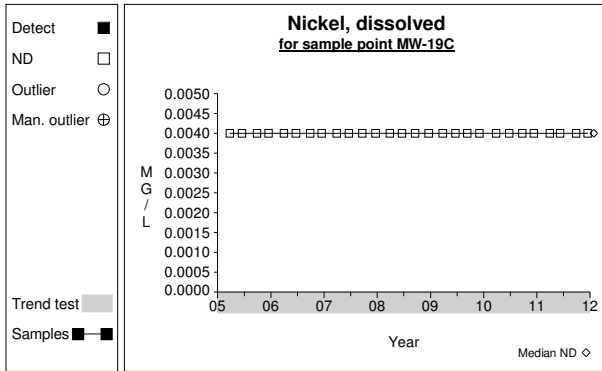


Graph 377

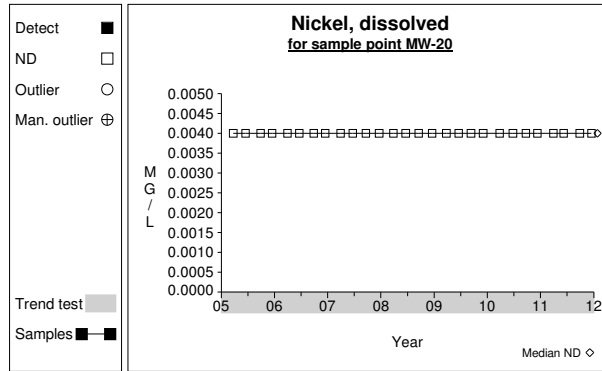


Graph 378

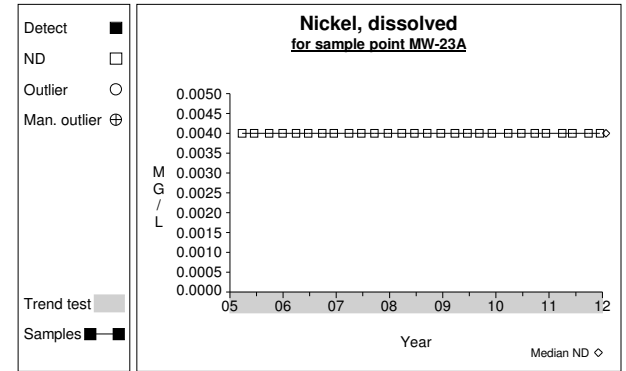
# Time Series



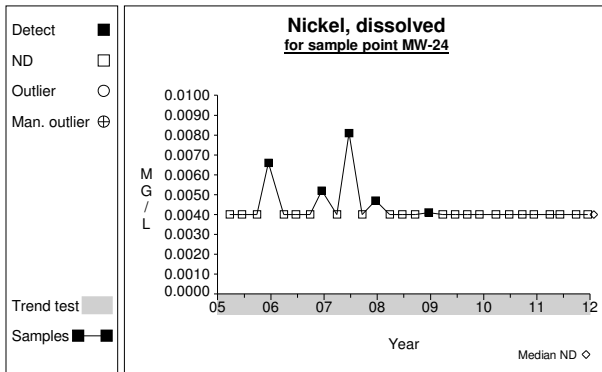
**Graph 379**



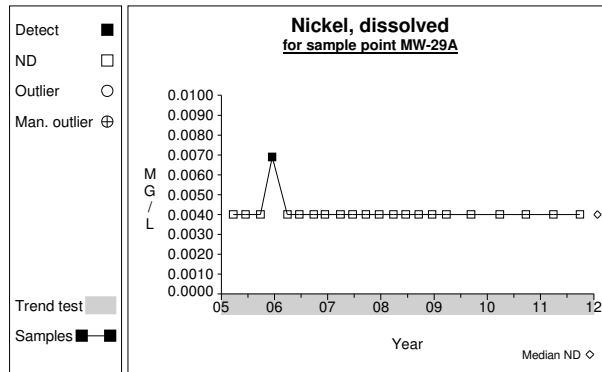
**Graph 380**



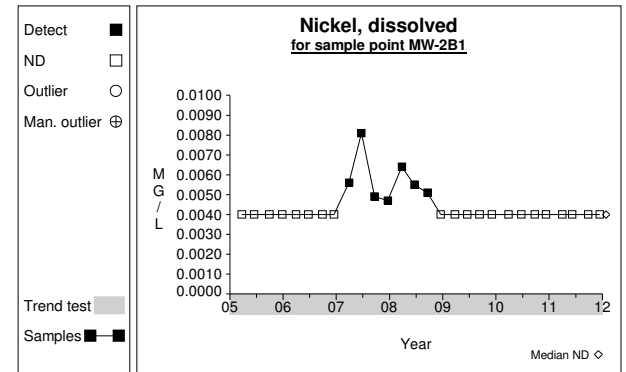
**Graph 381**



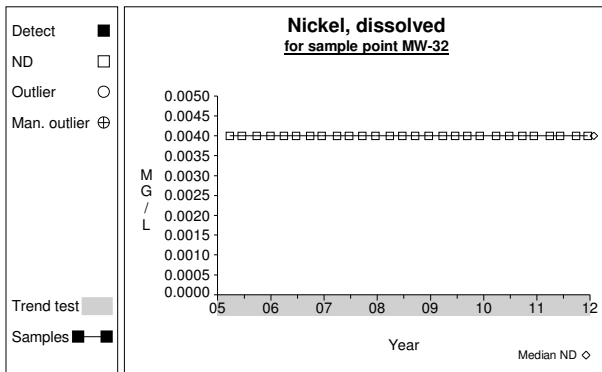
**Graph 382**



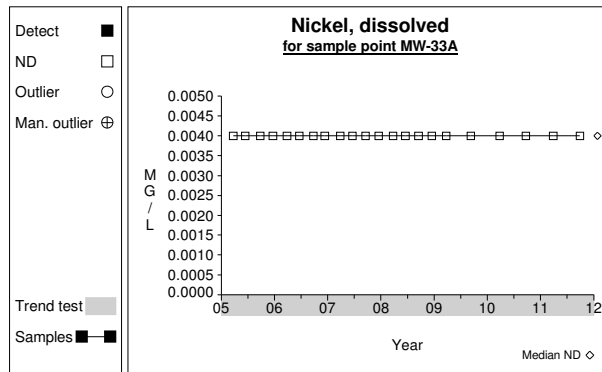
**Graph 383**



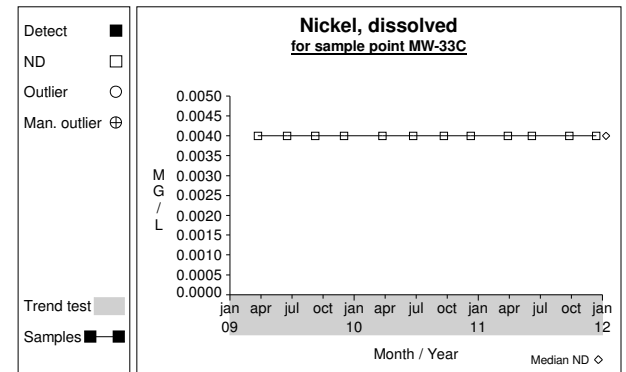
**Graph 384**



**Graph 385**

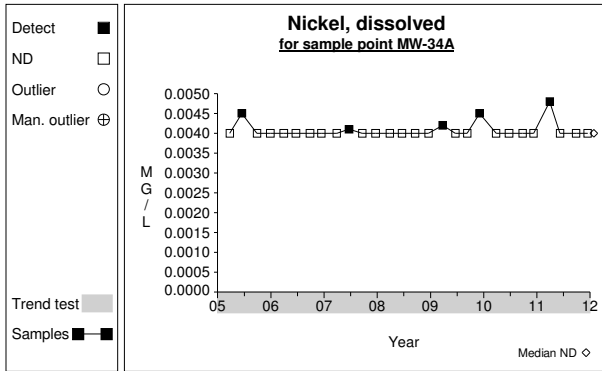


**Graph 386**

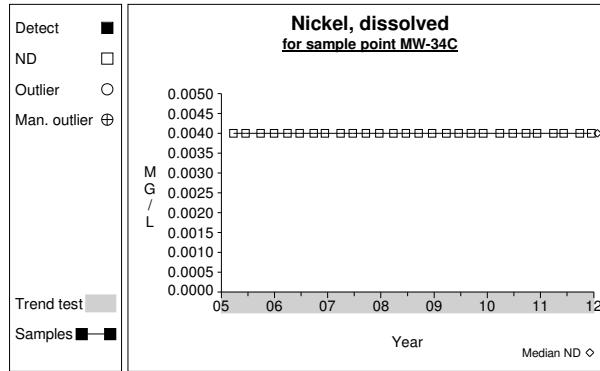


**Graph 387**

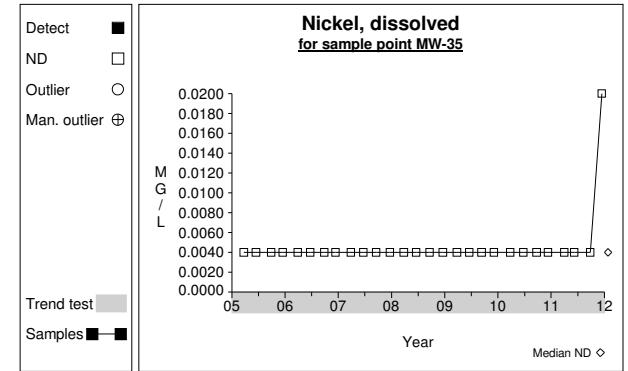
# Time Series



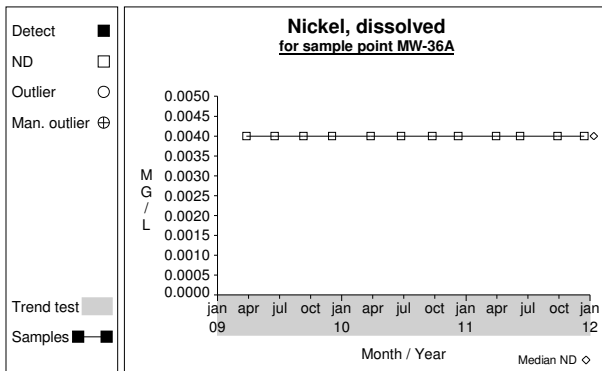
Graph 388



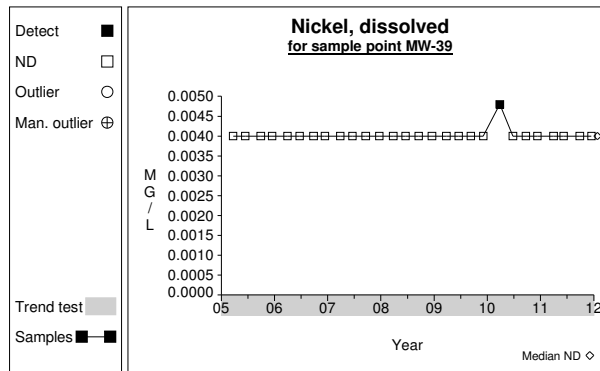
Graph 389



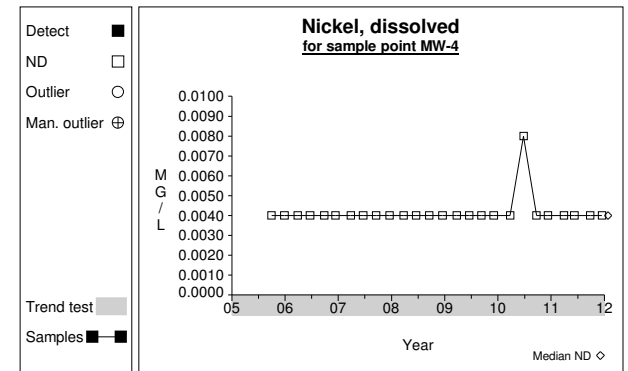
Graph 390



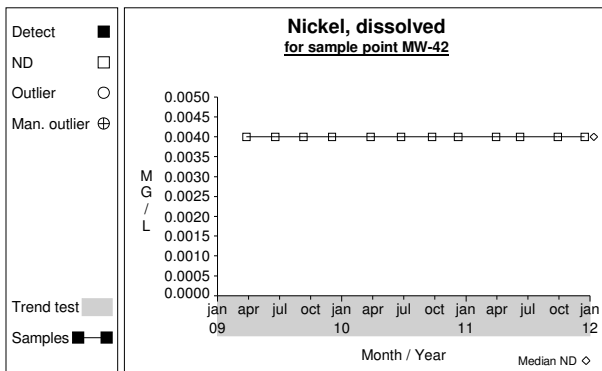
Graph 391



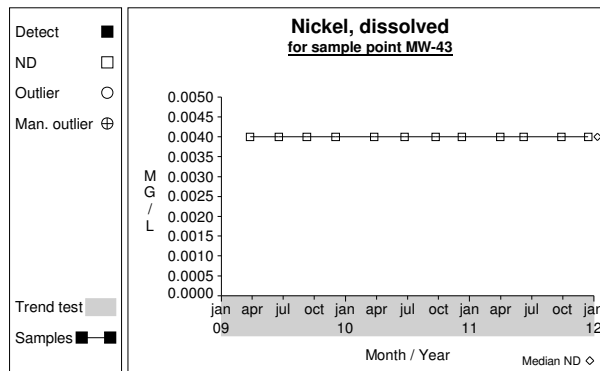
Graph 392



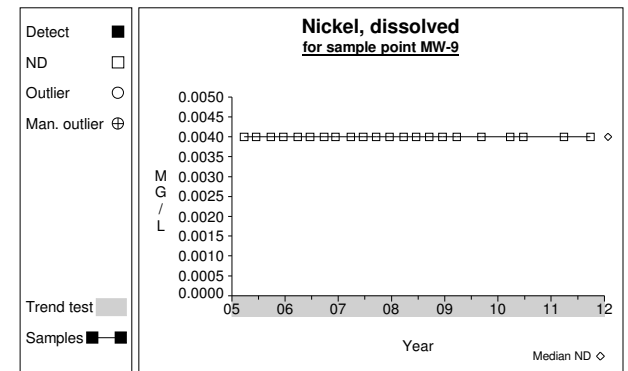
Graph 393



Graph 394

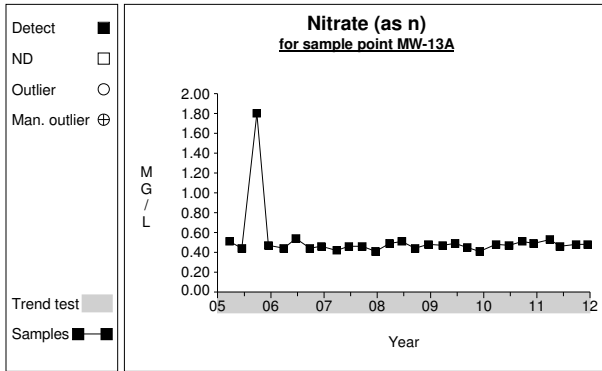


Graph 395

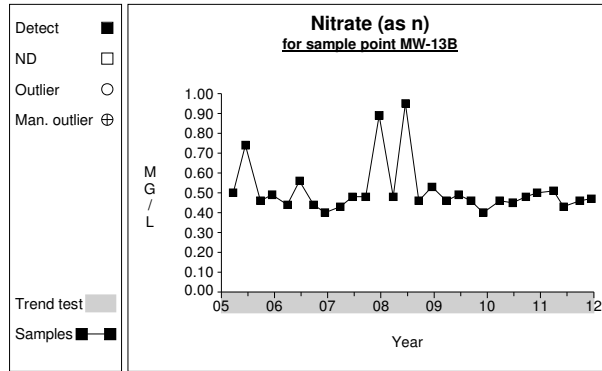


Graph 396

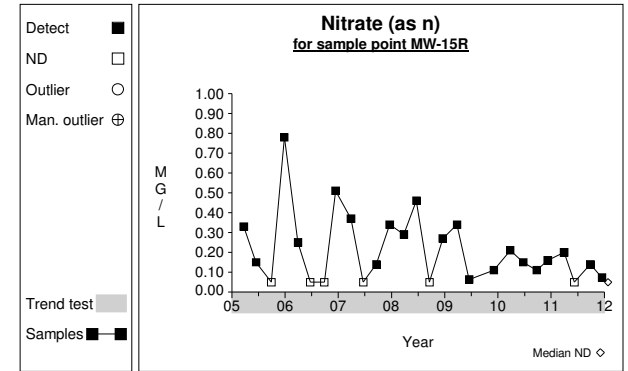
# Time Series



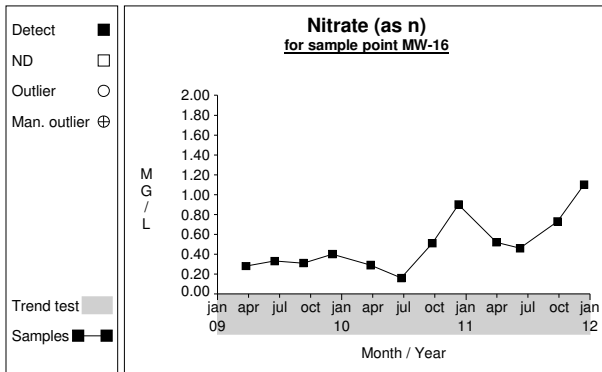
Graph 397



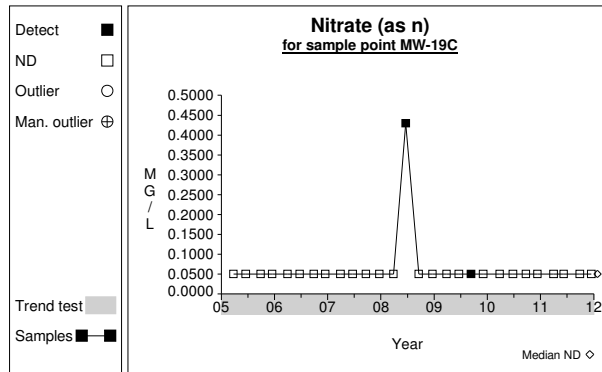
Graph 398



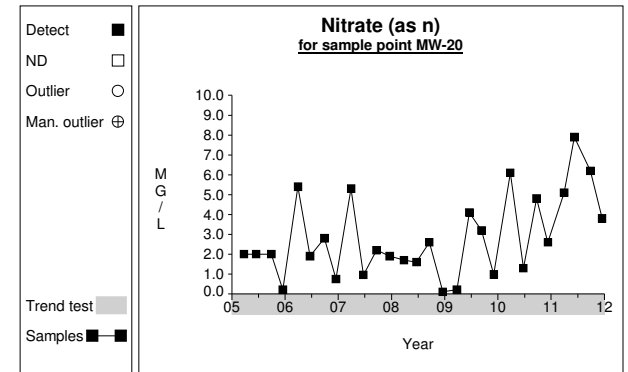
Graph 399



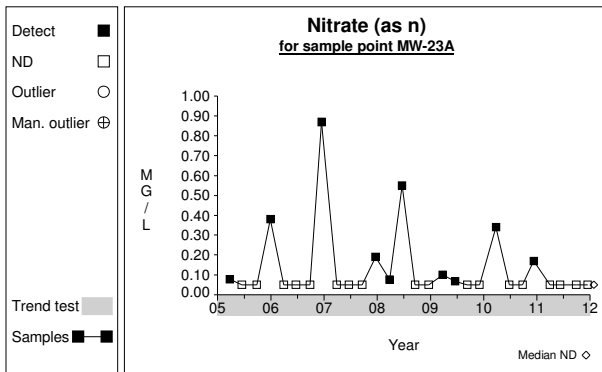
Graph 400



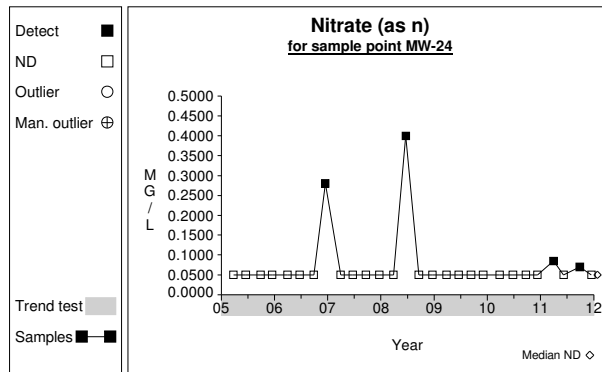
Graph 401



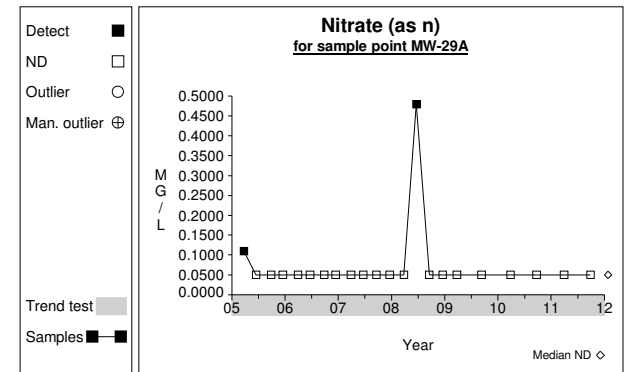
Graph 402



Graph 403

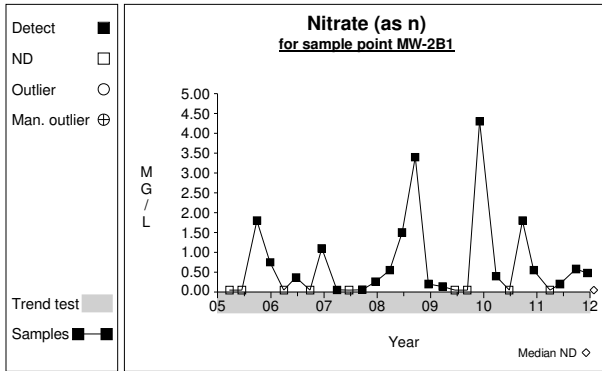


Graph 404

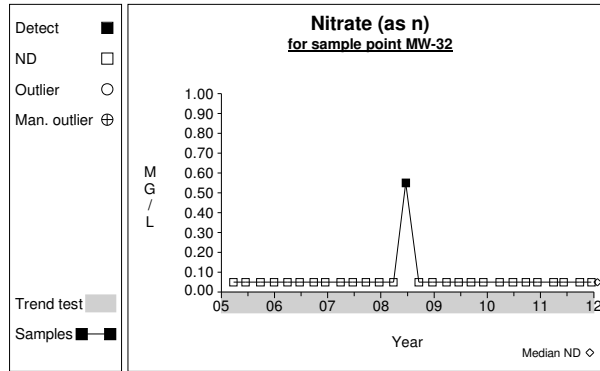


Graph 405

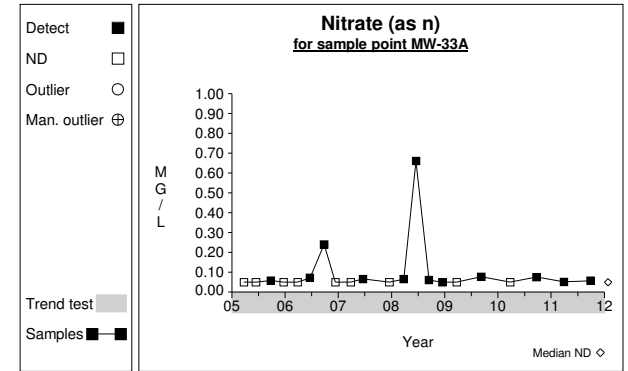
# Time Series



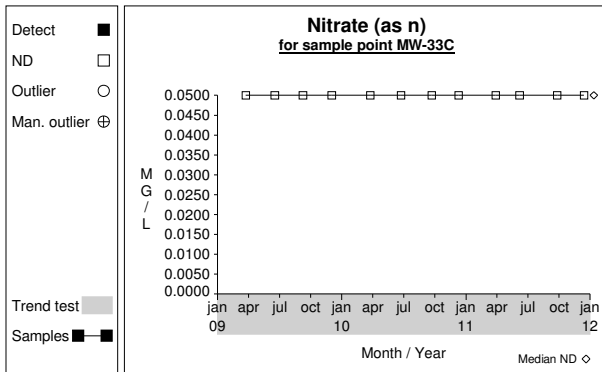
Graph 406



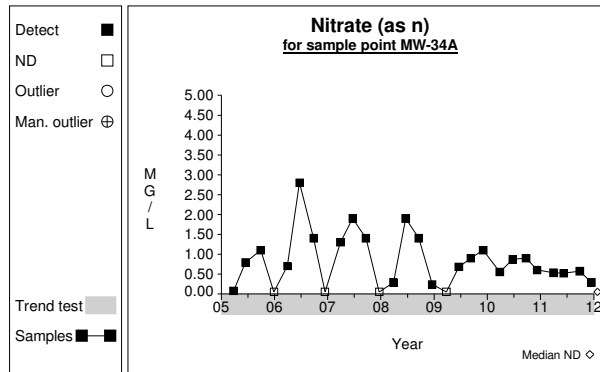
Graph 407



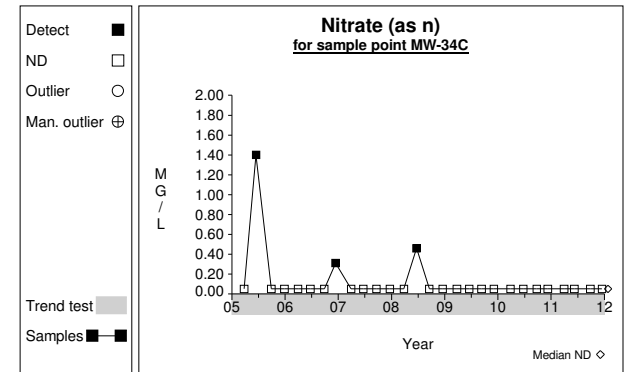
Graph 408



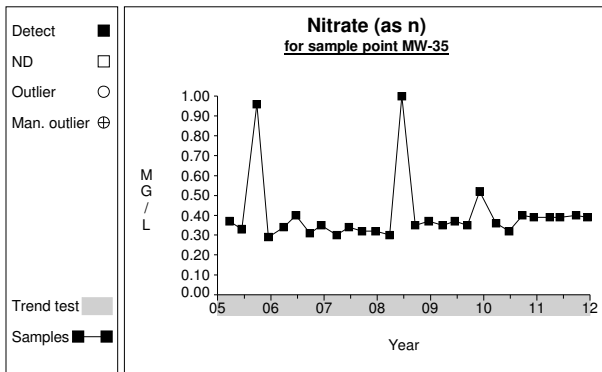
Graph 409



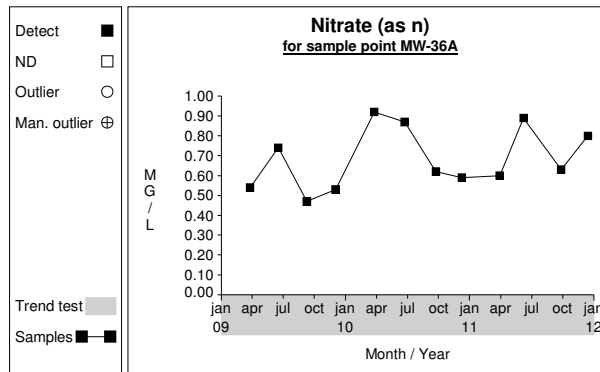
Graph 410



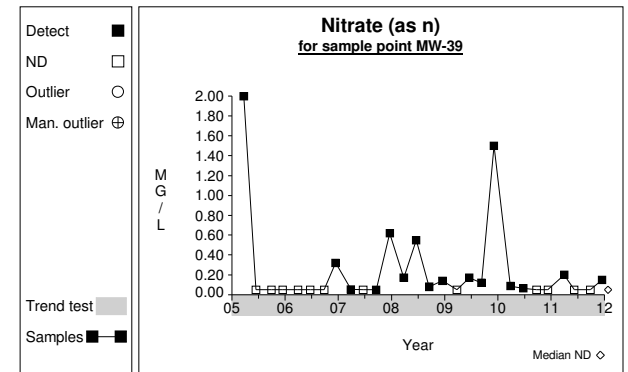
Graph 411



Graph 412



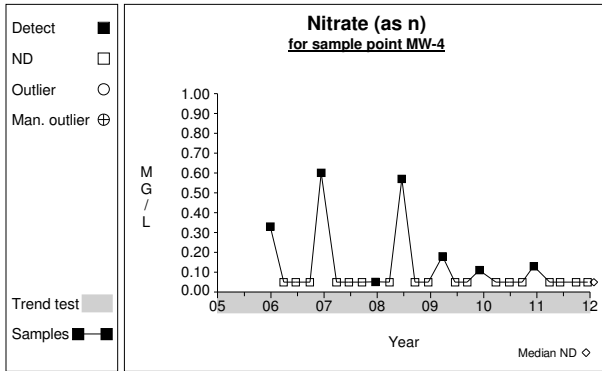
Graph 413



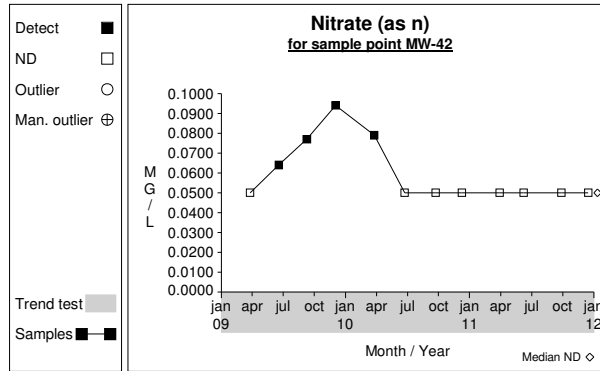
Graph 414



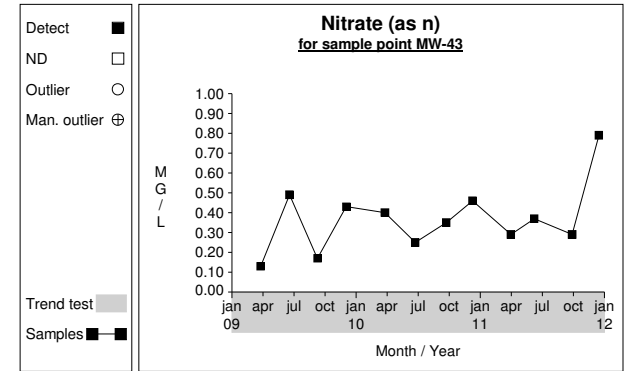
# Time Series



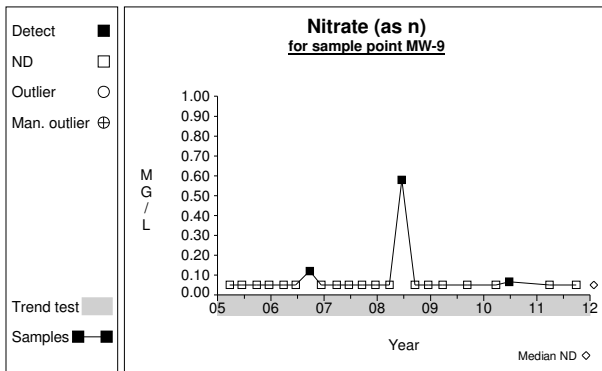
Graph 415



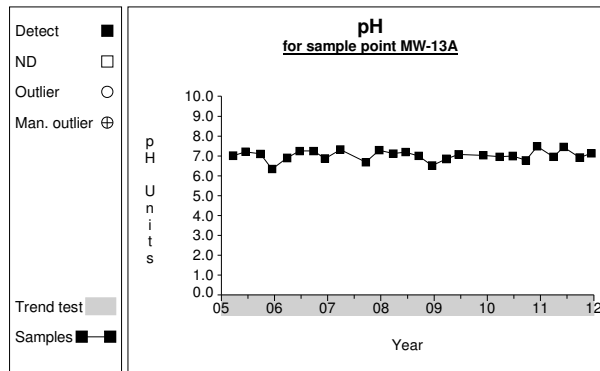
Graph 416



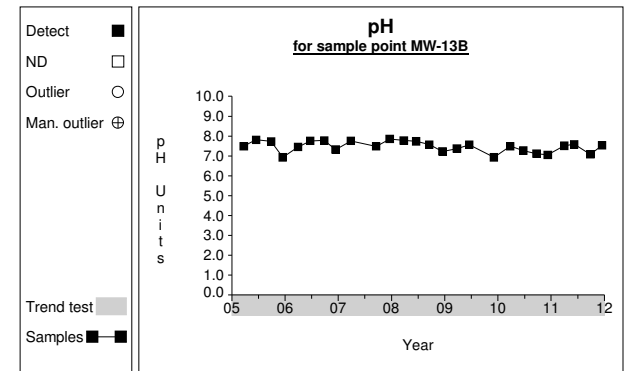
Graph 417



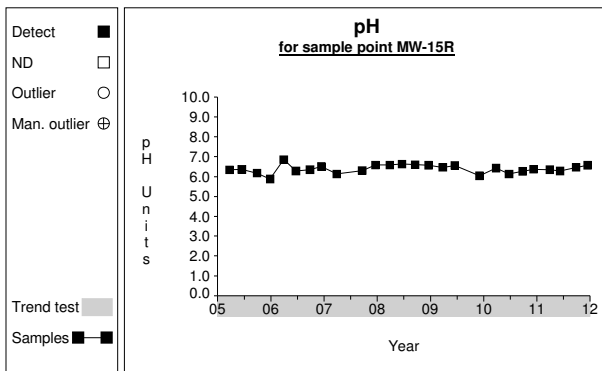
Graph 418



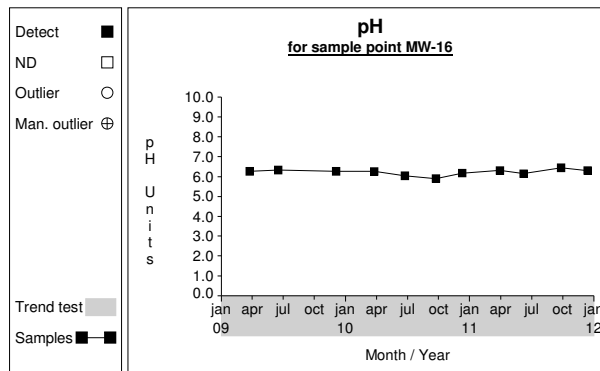
Graph 419



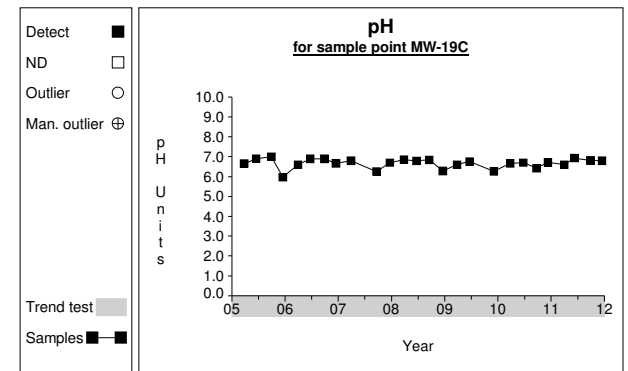
Graph 420



Graph 421

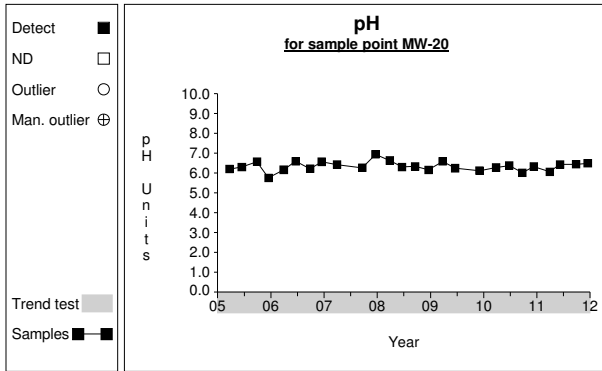


Graph 422

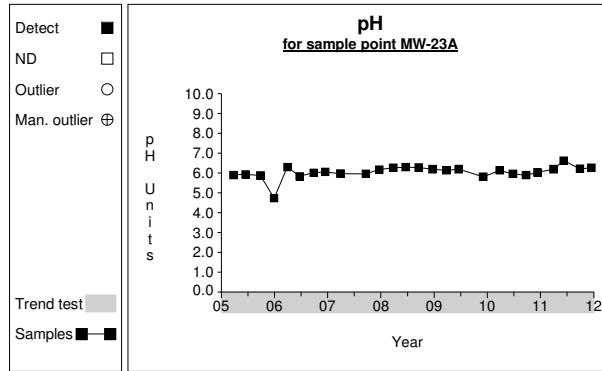


Graph 423

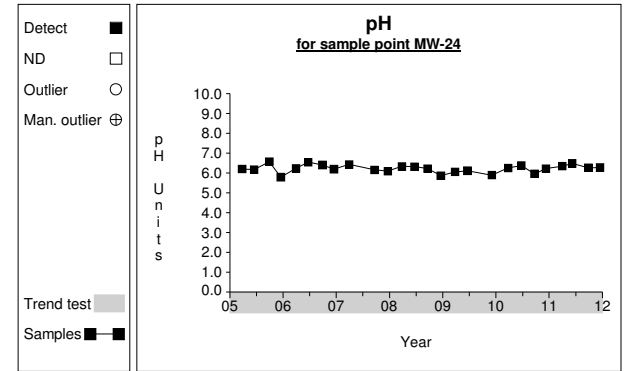
# Time Series



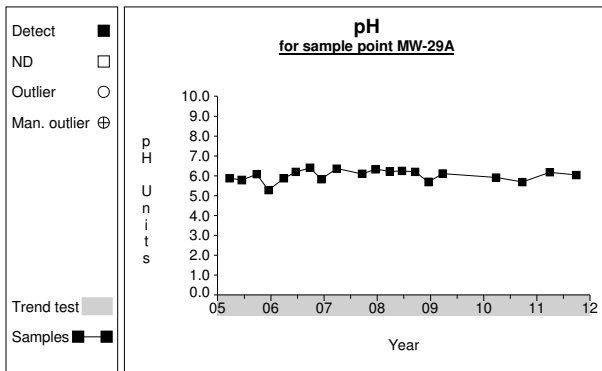
Graph 424



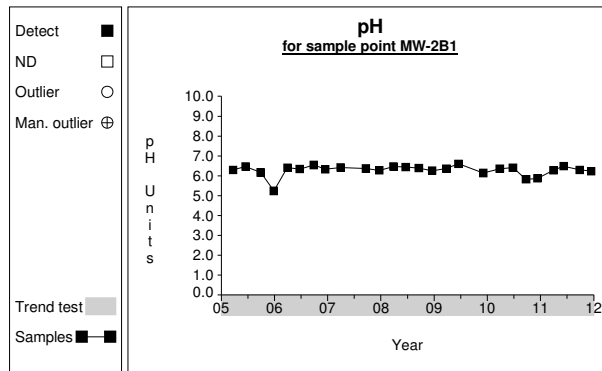
Graph 425



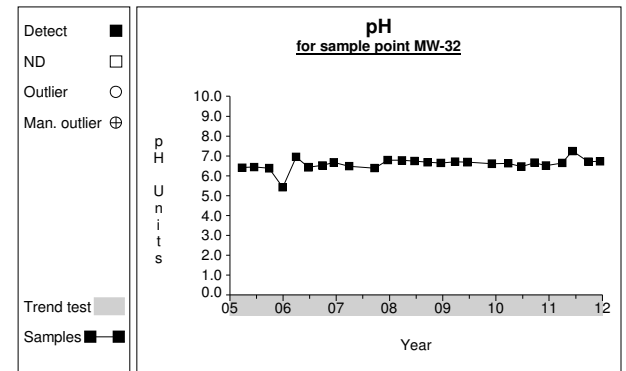
Graph 426



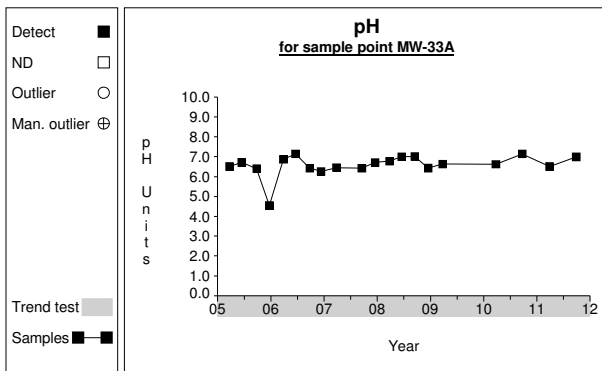
Graph 427



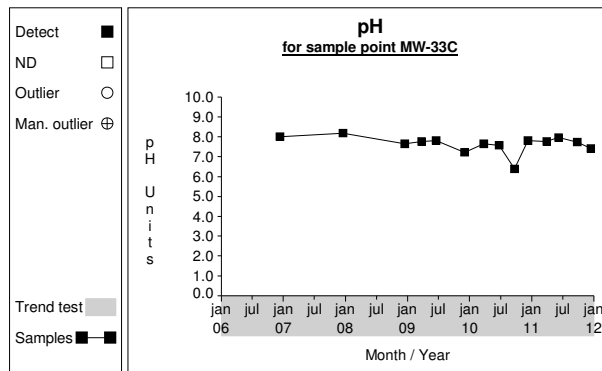
Graph 428



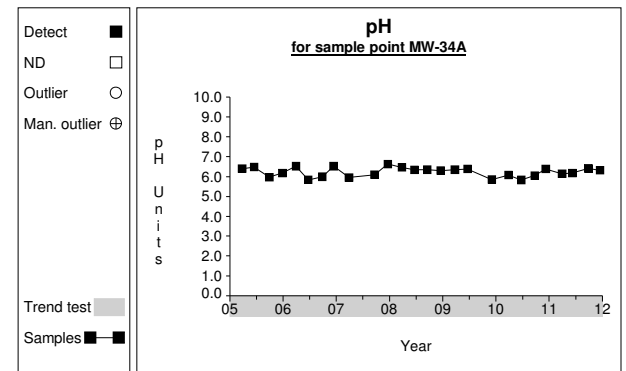
Graph 429



Graph 430

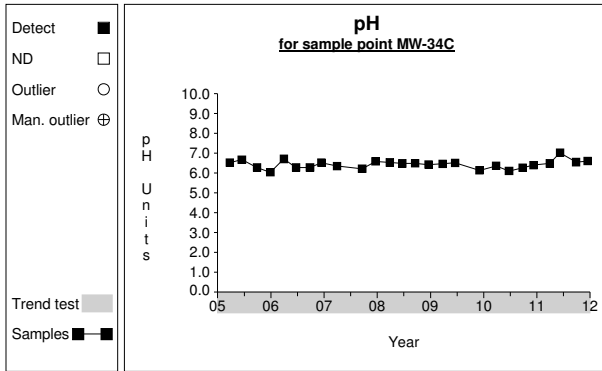


Graph 431

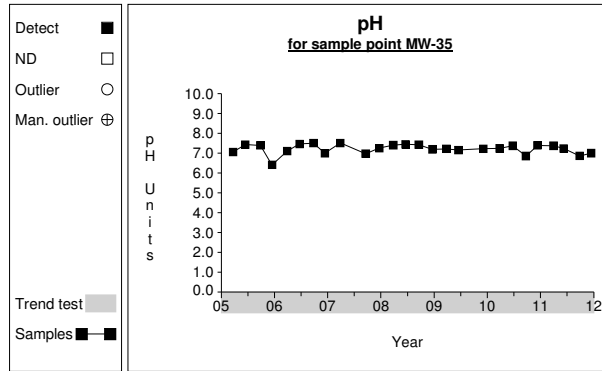


Graph 432

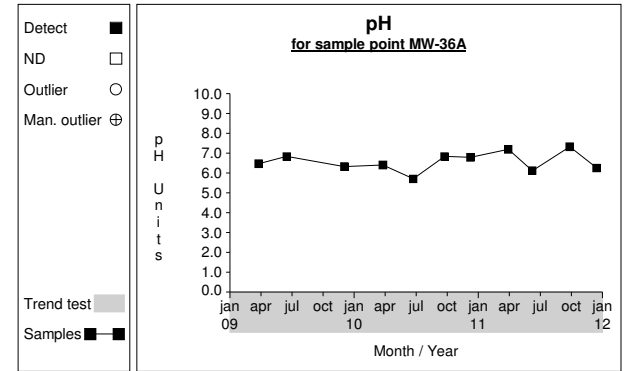
# Time Series



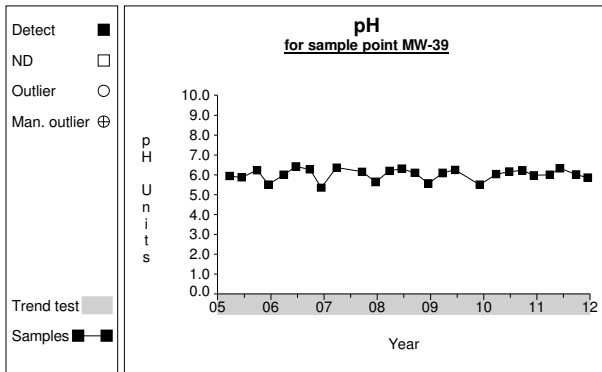
Graph 433



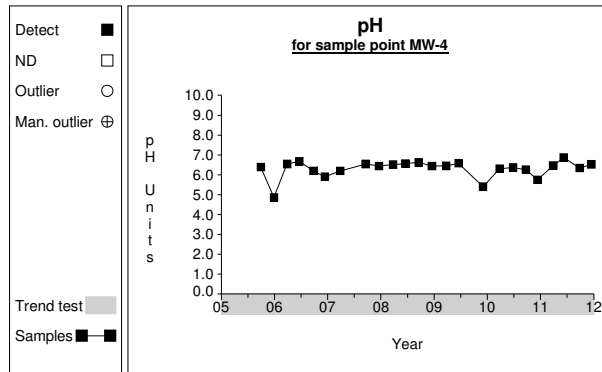
Graph 434



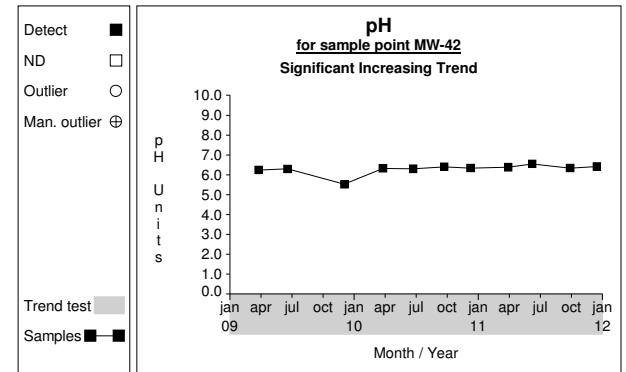
Graph 435



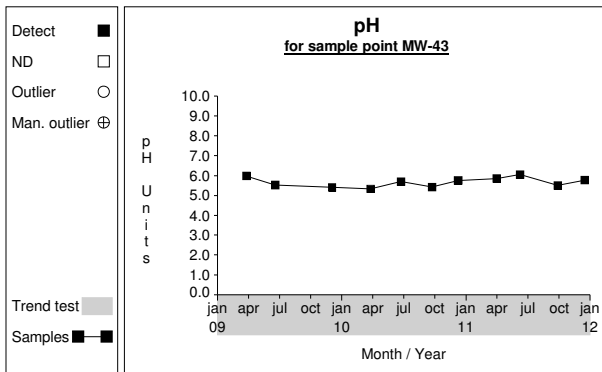
Graph 436



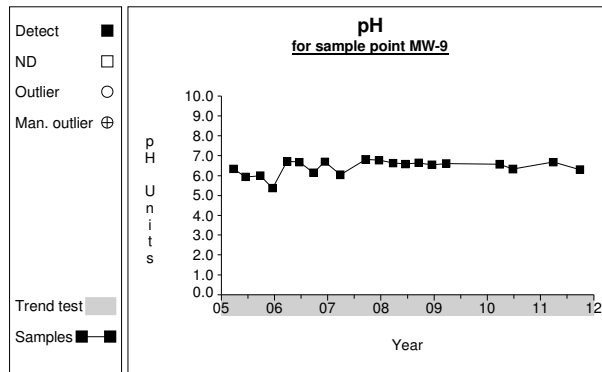
Graph 437



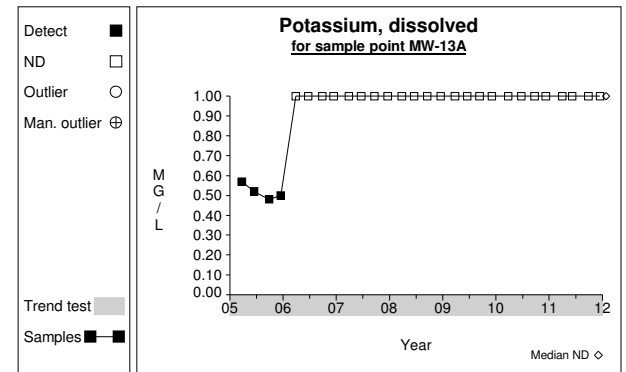
Graph 438



Graph 439

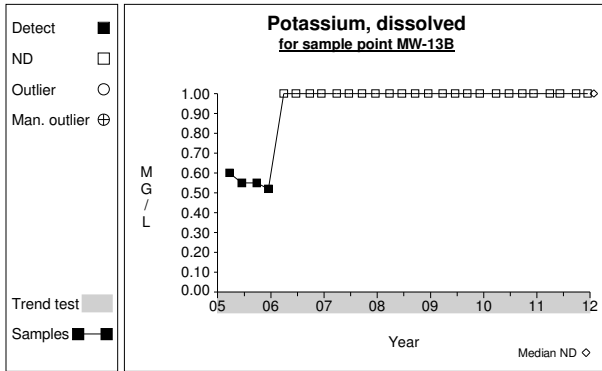


Graph 440

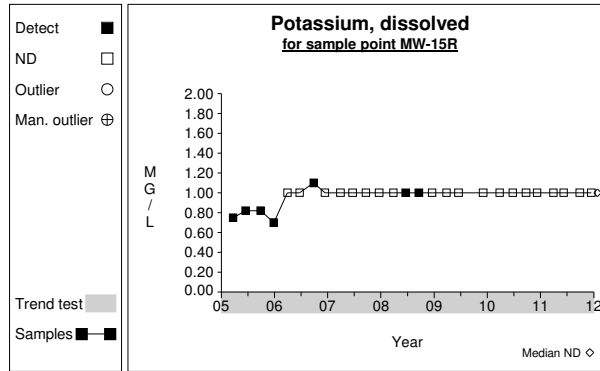


Graph 441

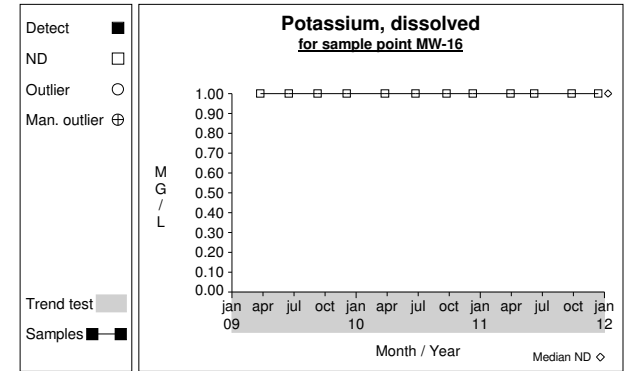
# Time Series



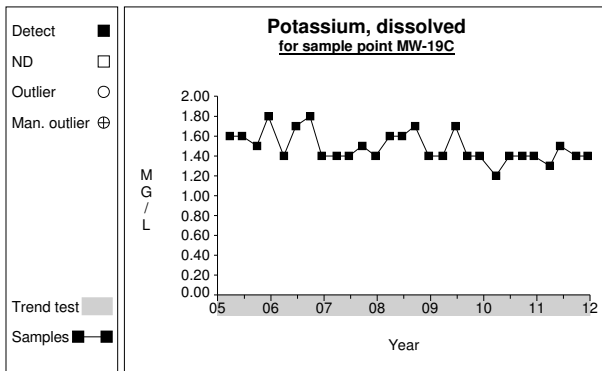
**Graph 442**



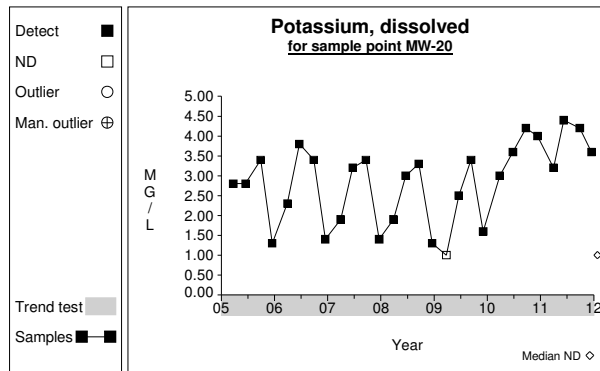
**Graph 443**



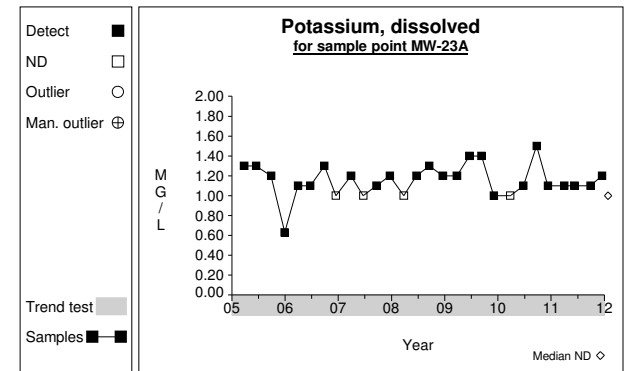
**Graph 444**



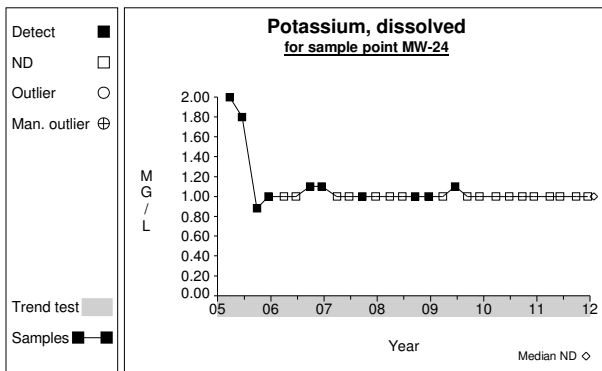
**Graph 445**



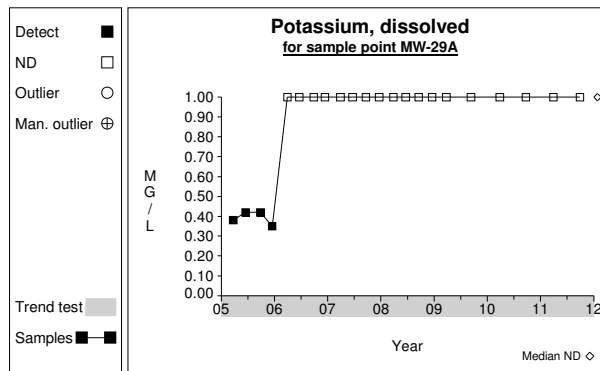
**Graph 446**



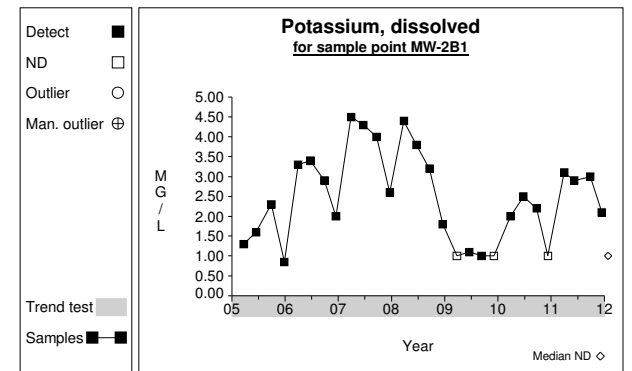
**Graph 447**



**Graph 448**

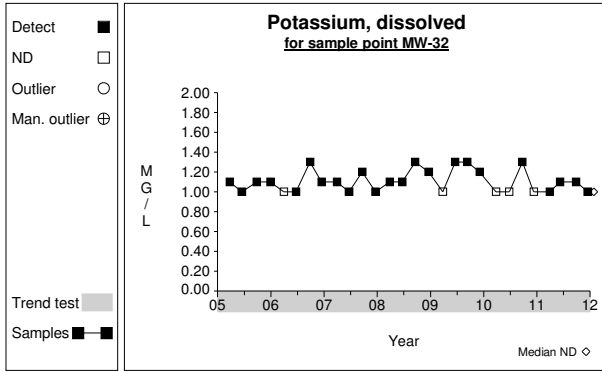


**Graph 449**

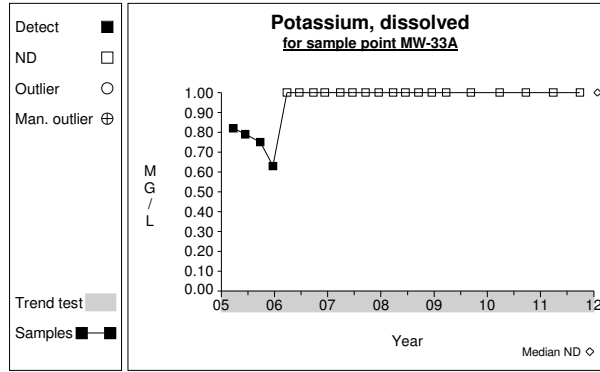


**Graph 450**

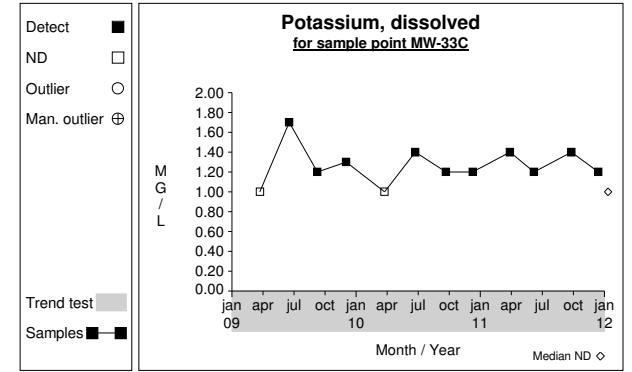
# Time Series



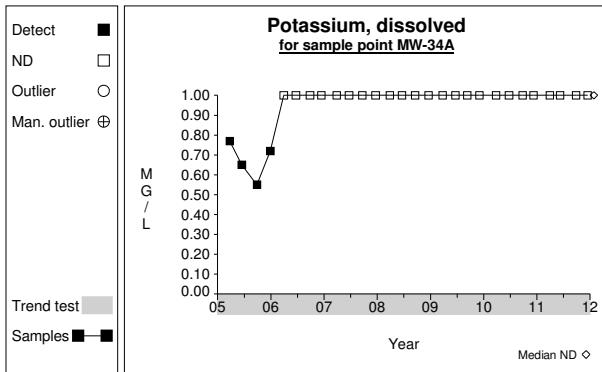
**Graph 451**



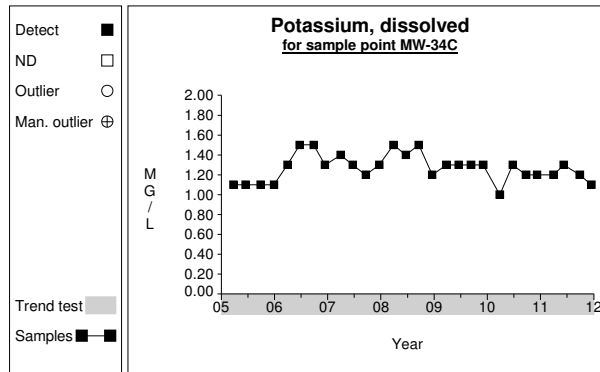
**Graph 452**



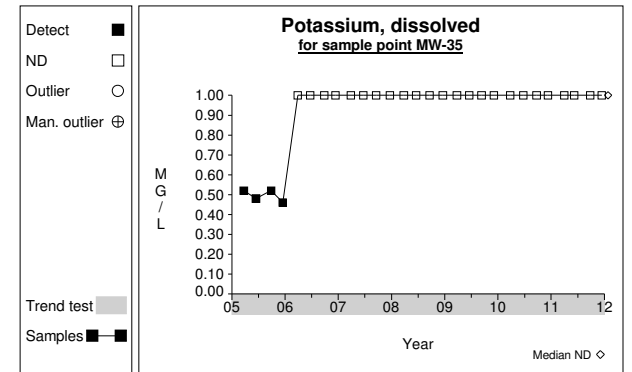
**Graph 453**



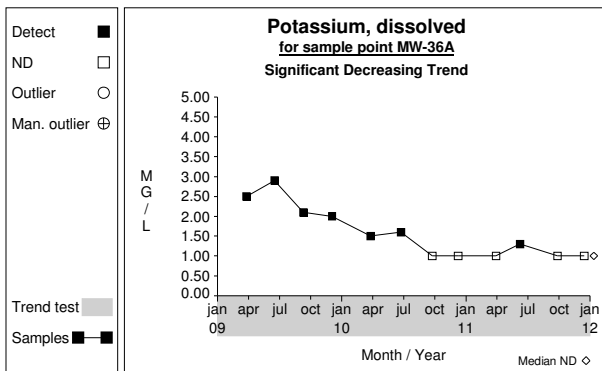
**Graph 454**



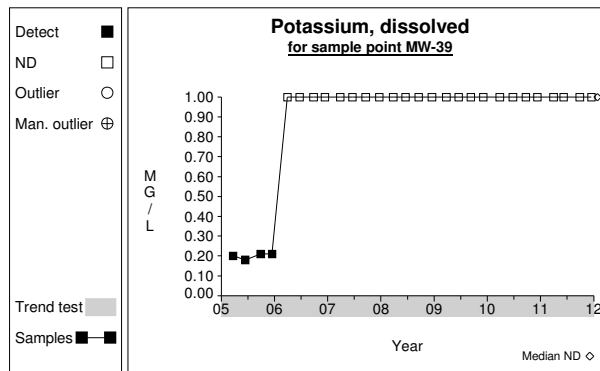
**Graph 455**



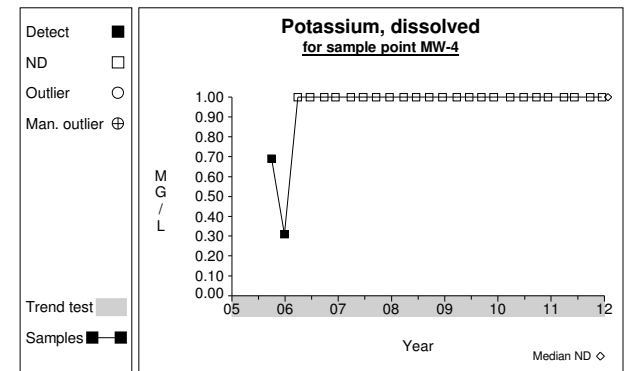
**Graph 456**



**Graph 457**

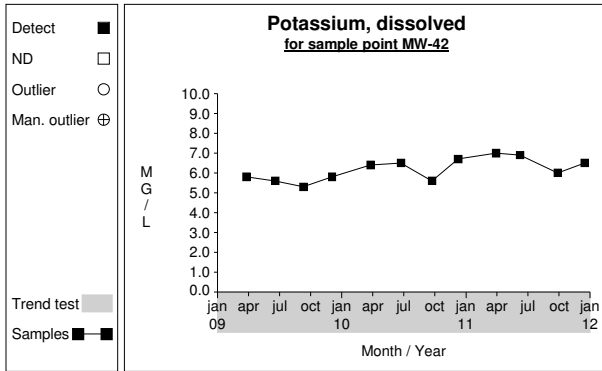


**Graph 458**

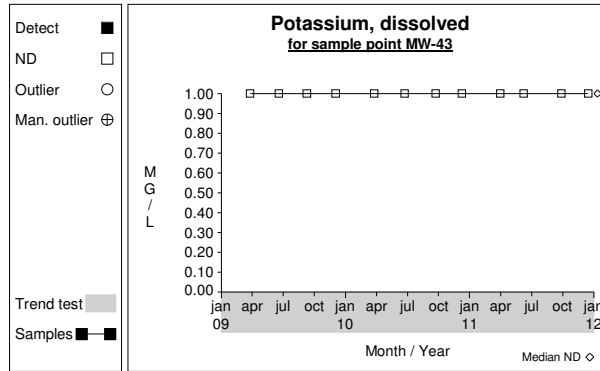


**Graph 459**

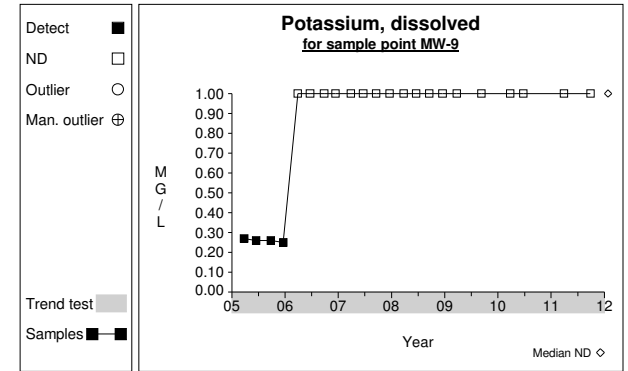
# Time Series



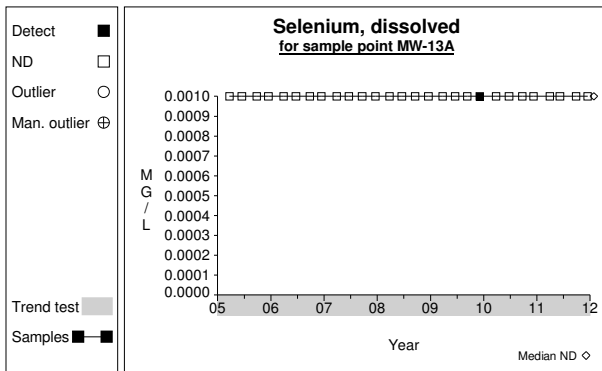
**Graph 460**



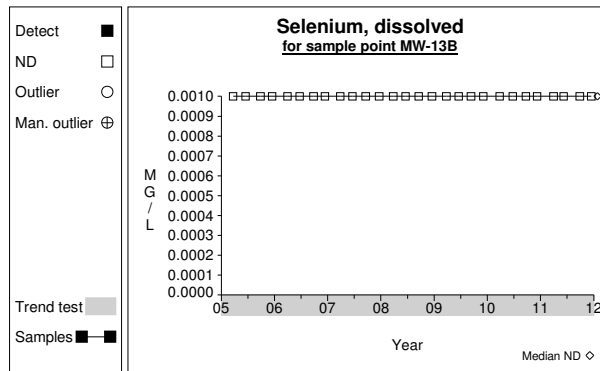
**Graph 461**



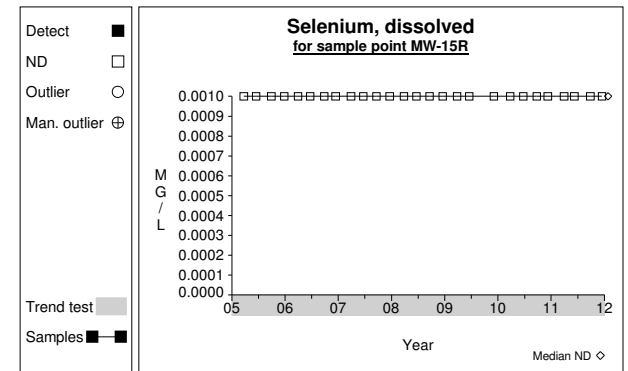
**Graph 462**



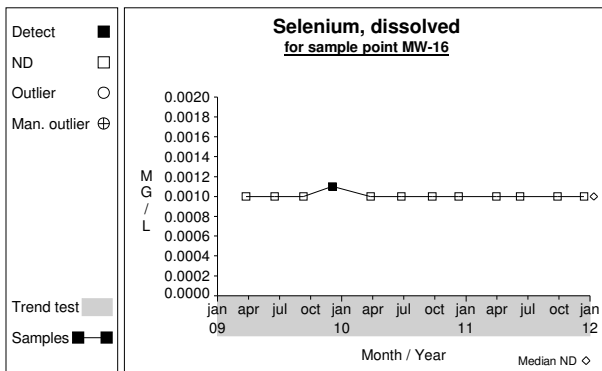
**Graph 463**



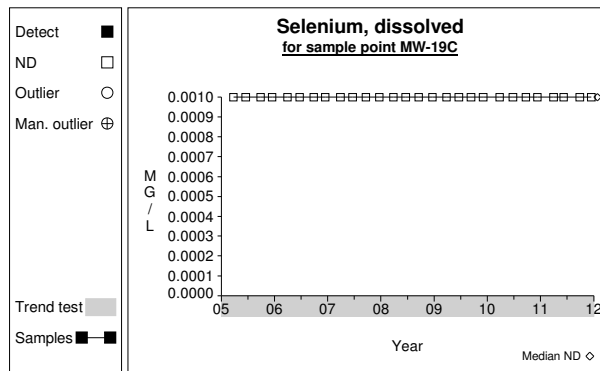
**Graph 464**



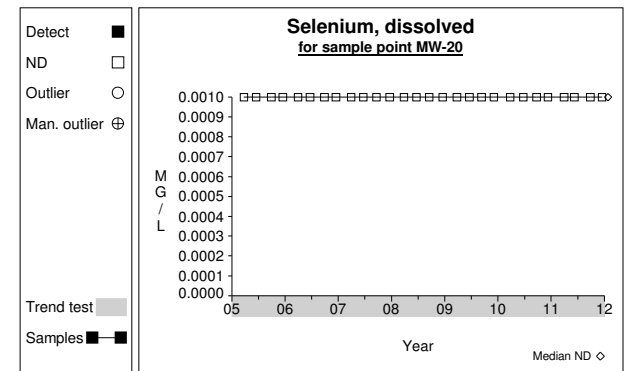
**Graph 465**



**Graph 466**

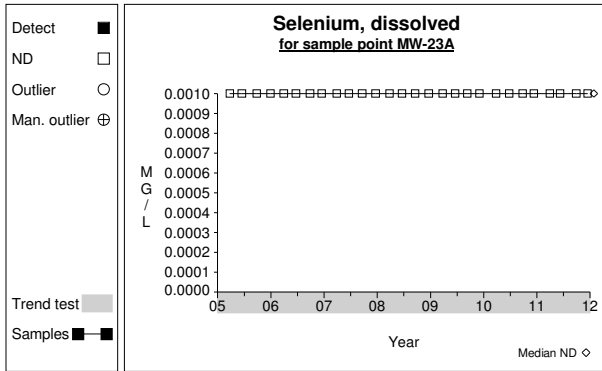


**Graph 467**

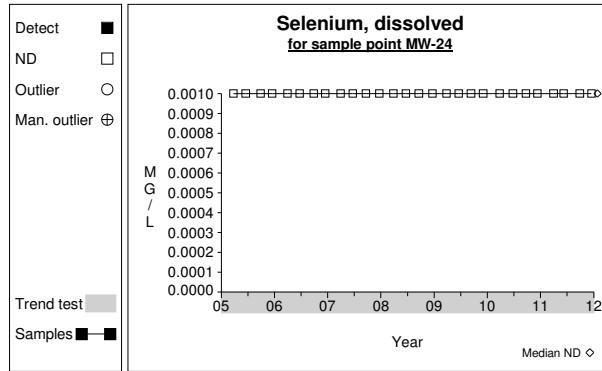


**Graph 468**

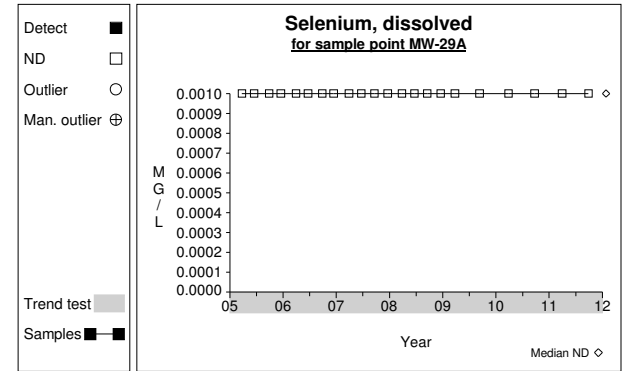
# Time Series



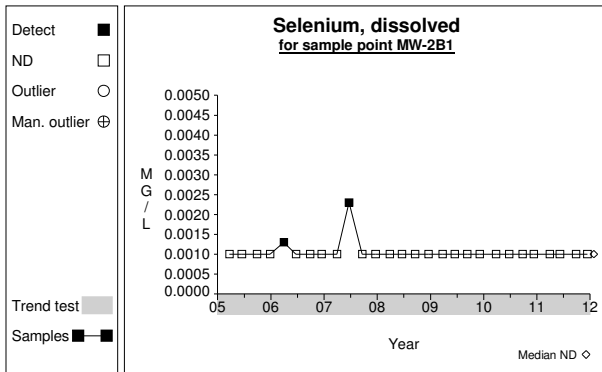
Graph 469



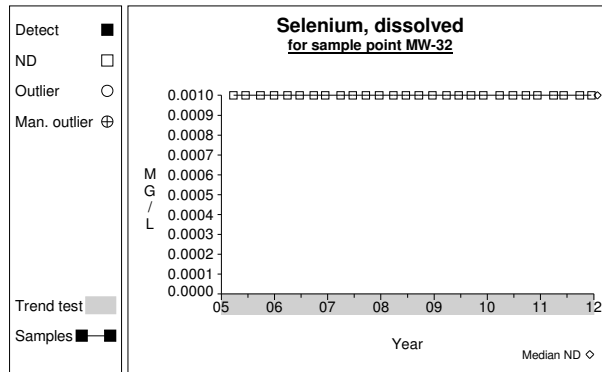
Graph 470



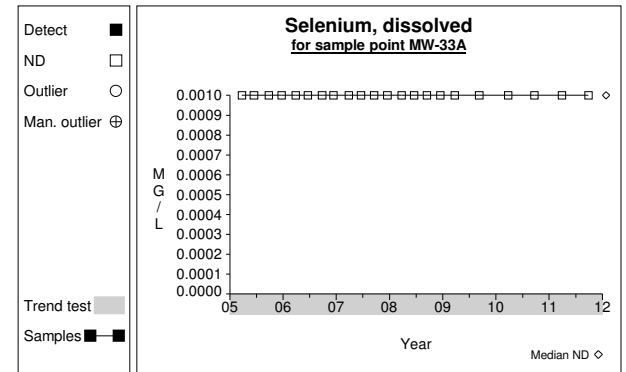
Graph 471



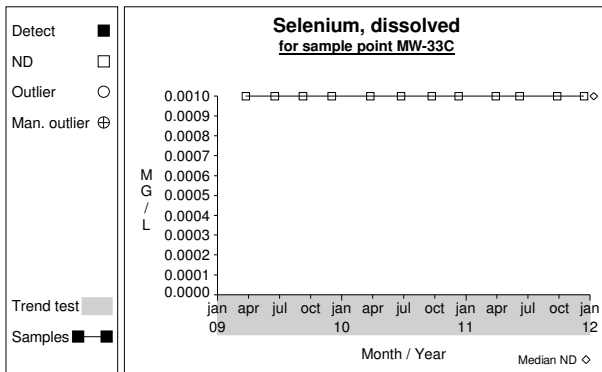
Graph 472



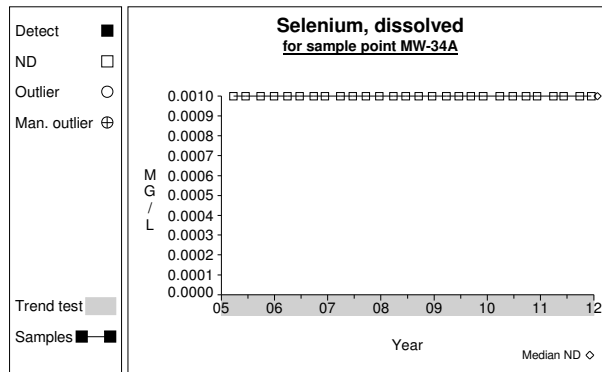
Graph 473



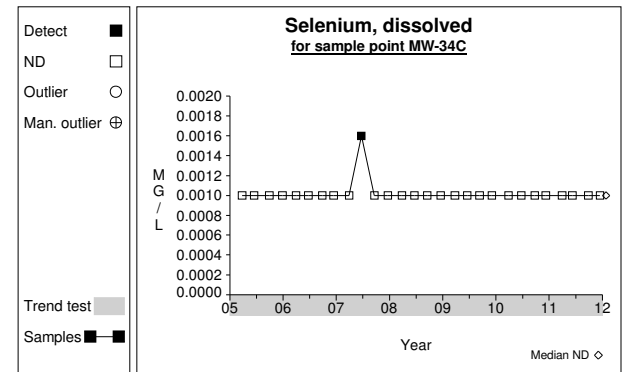
Graph 474



Graph 475

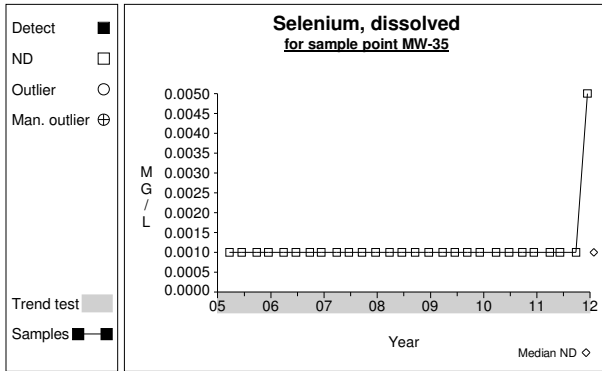


Graph 476

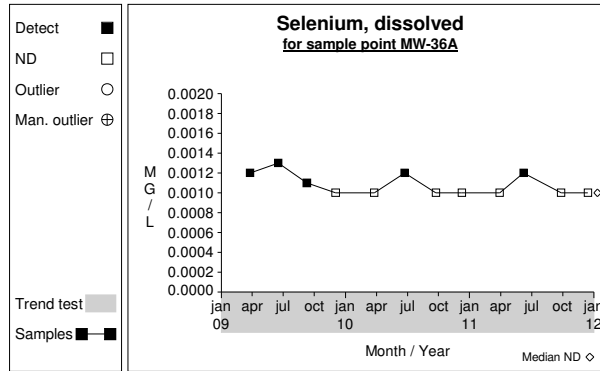


Graph 477

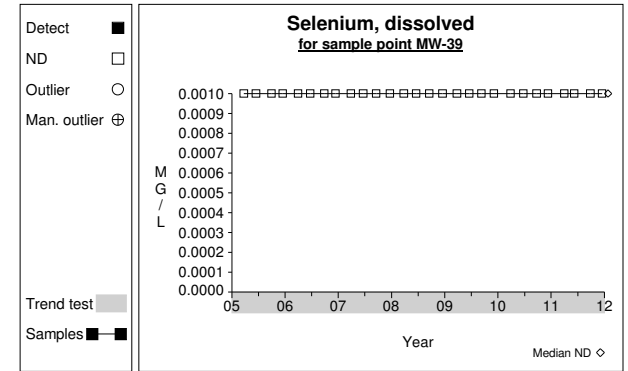
# Time Series



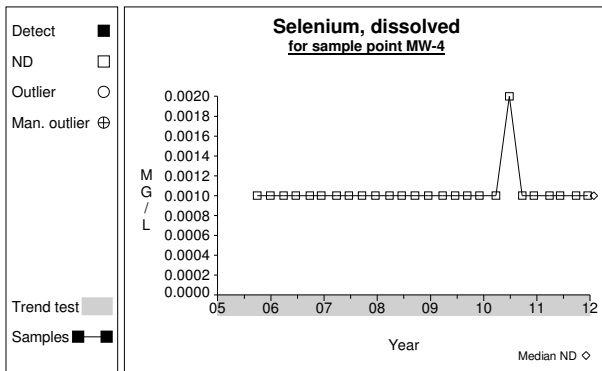
Graph 478



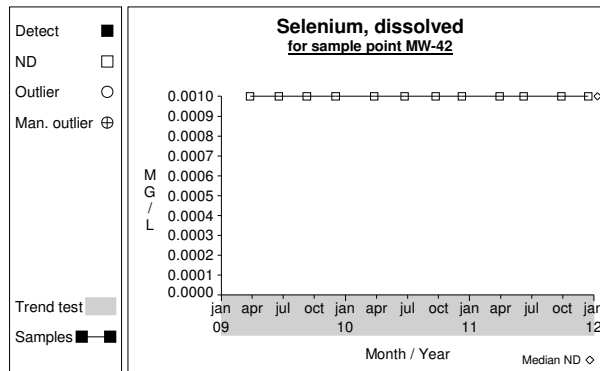
Graph 479



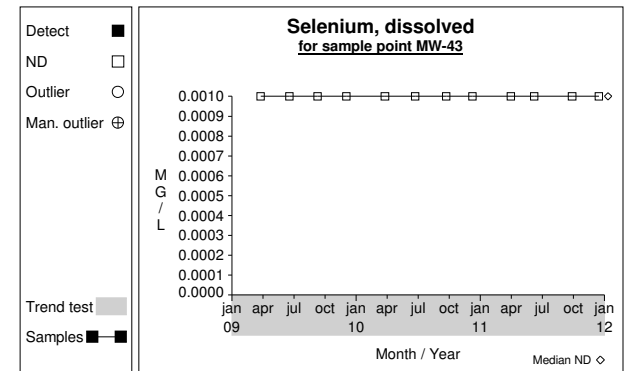
Graph 480



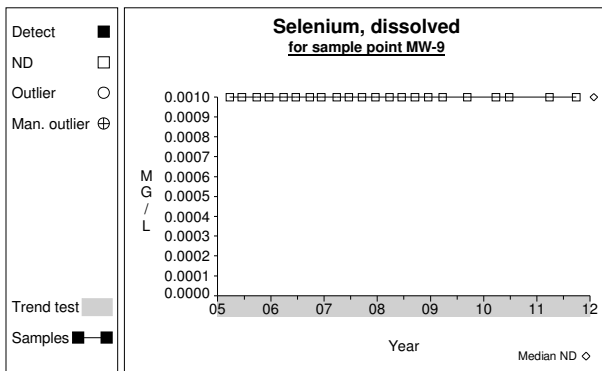
Graph 481



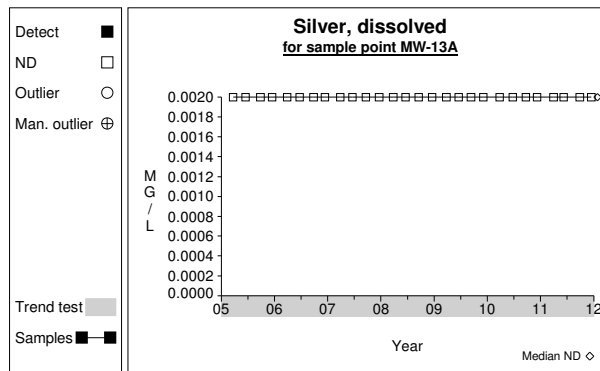
Graph 482



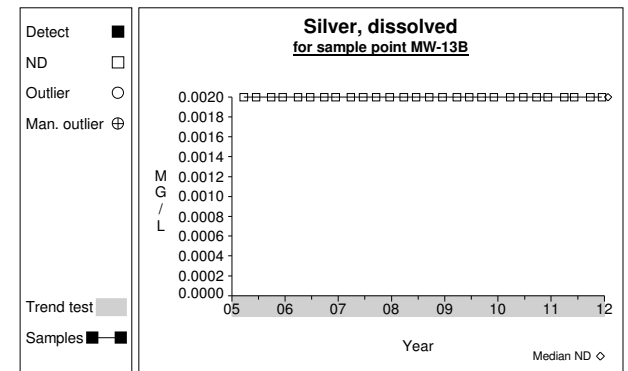
Graph 483



Graph 484



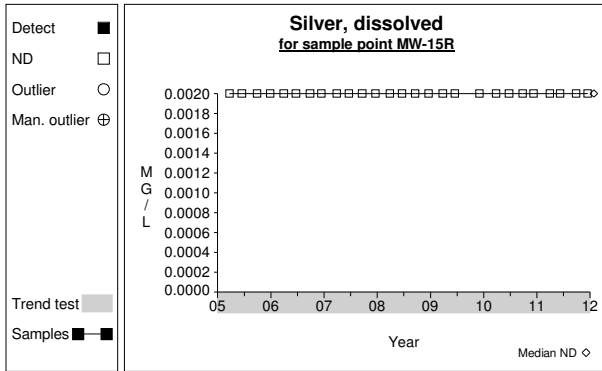
Graph 485



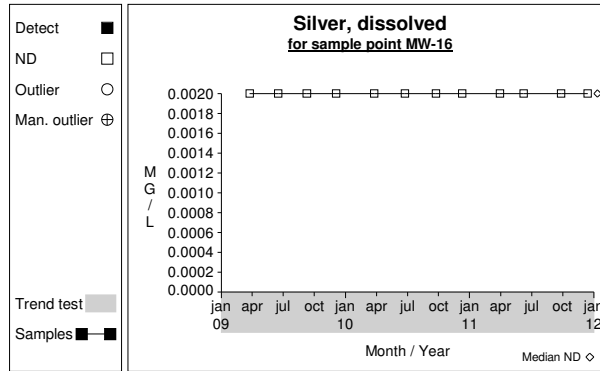
Graph 486



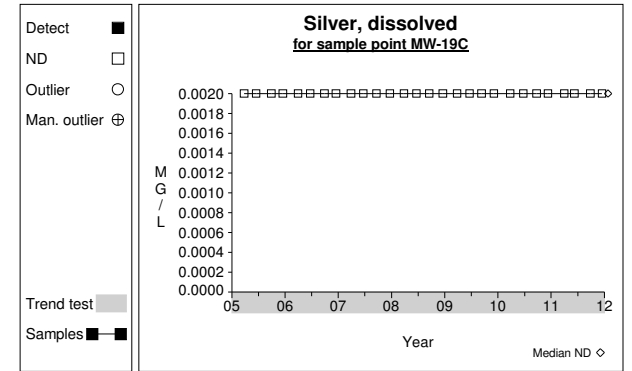
# Time Series



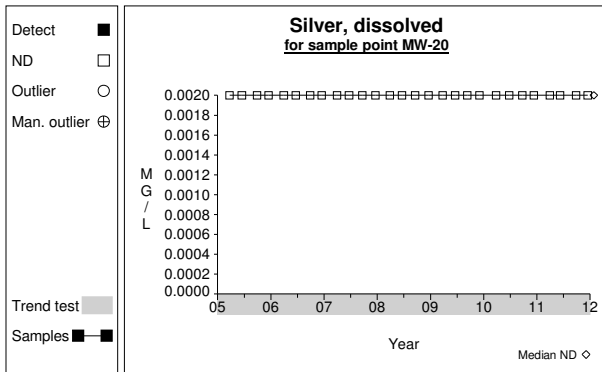
Graph 487



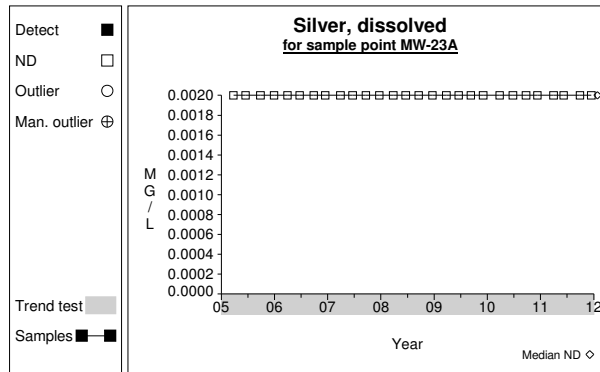
Graph 488



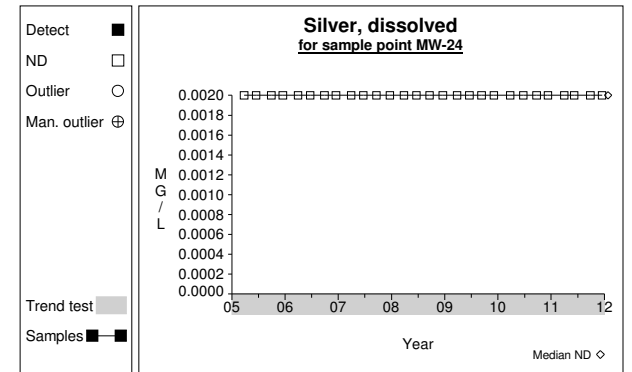
Graph 489



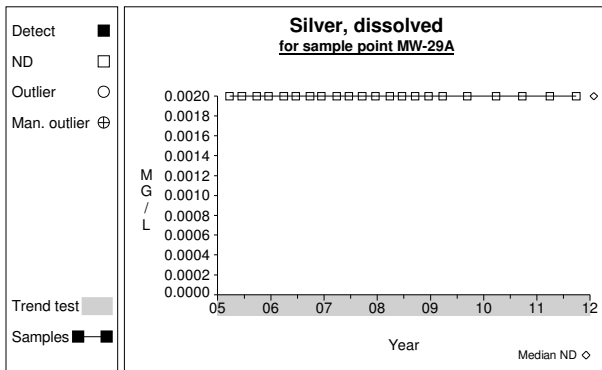
Graph 490



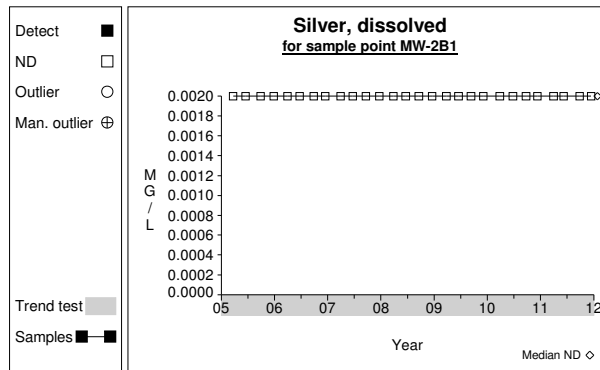
Graph 491



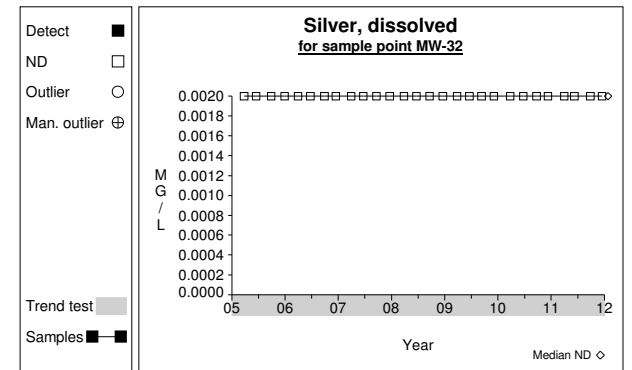
Graph 492



Graph 493

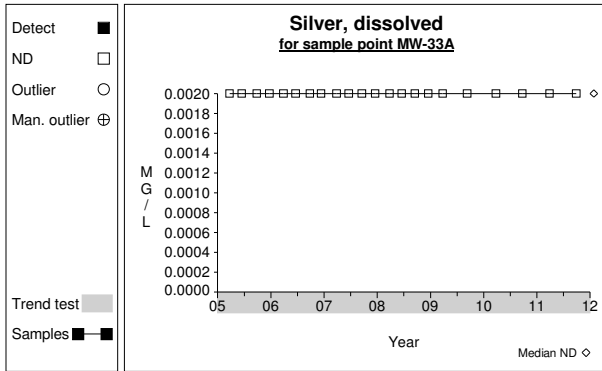


Graph 494

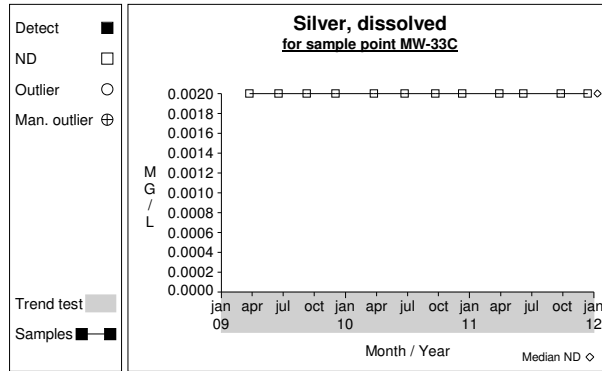


Graph 495

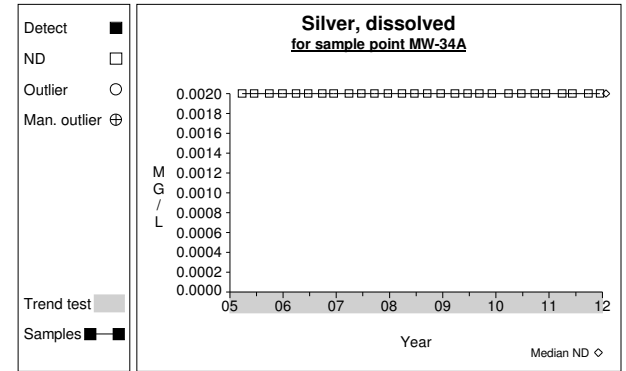
# Time Series



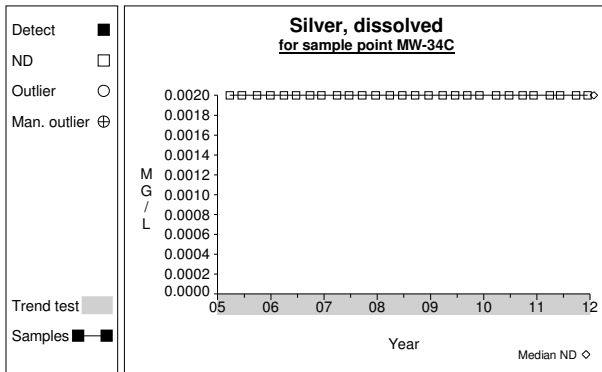
Graph 496



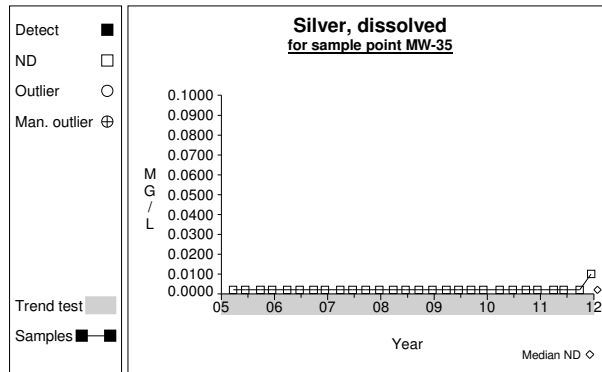
Graph 497



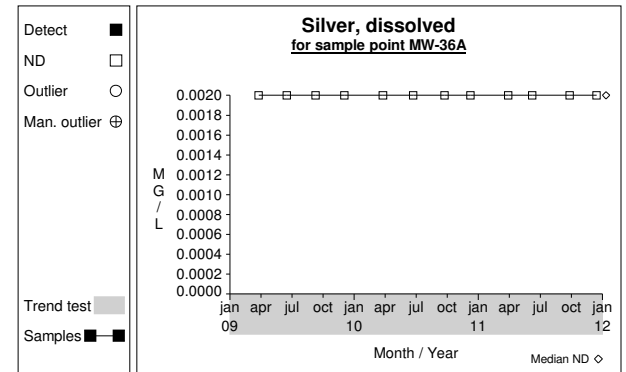
Graph 498



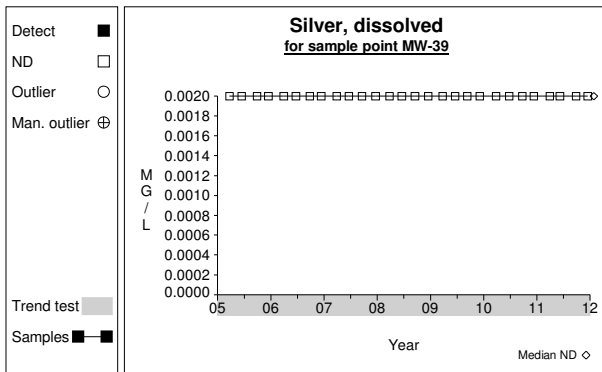
Graph 499



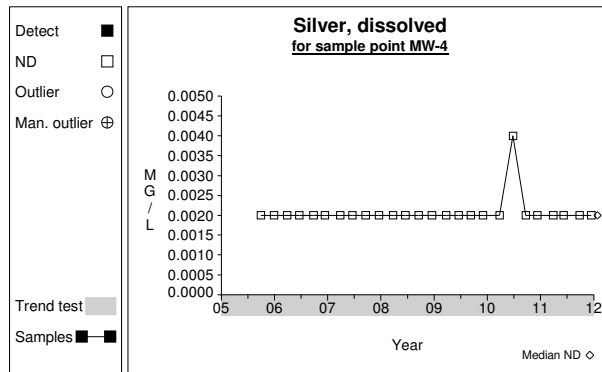
Graph 500



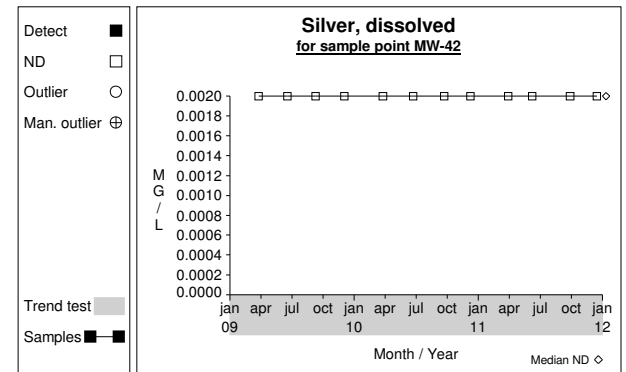
Graph 501



Graph 502

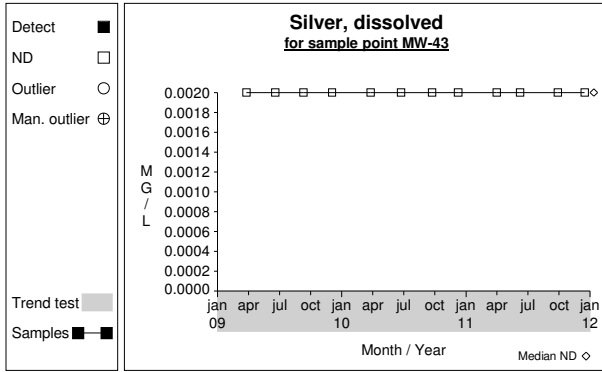


Graph 503

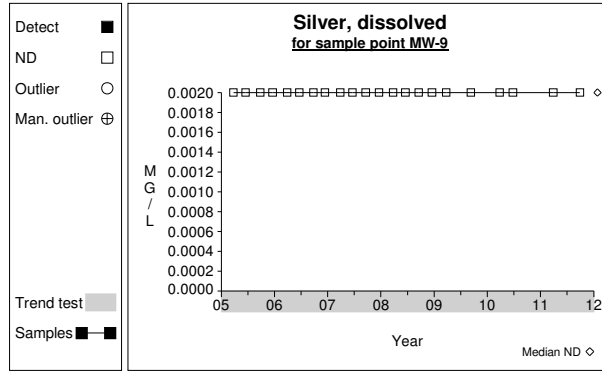


Graph 504

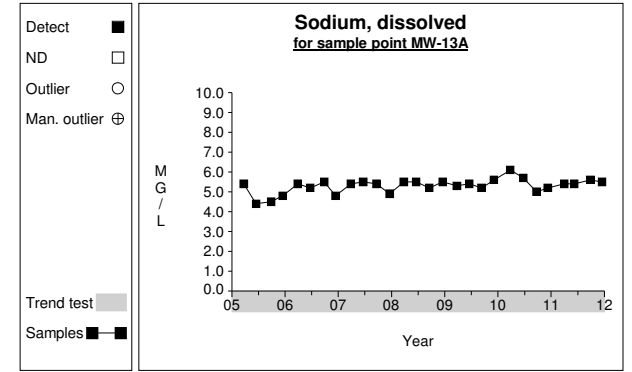
# Time Series



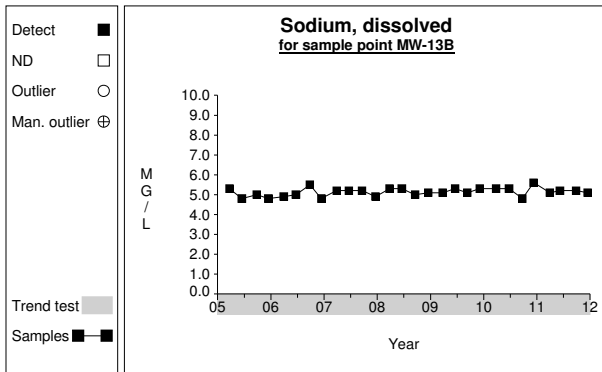
Graph 505



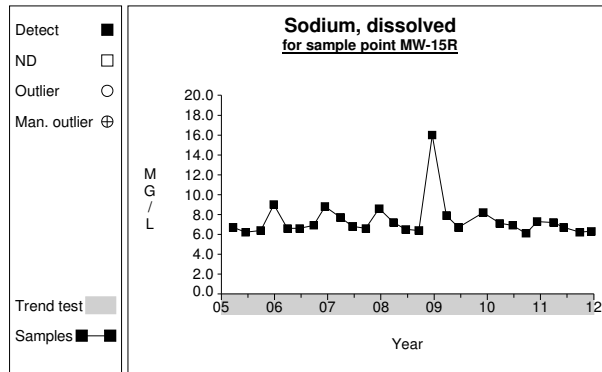
Graph 506



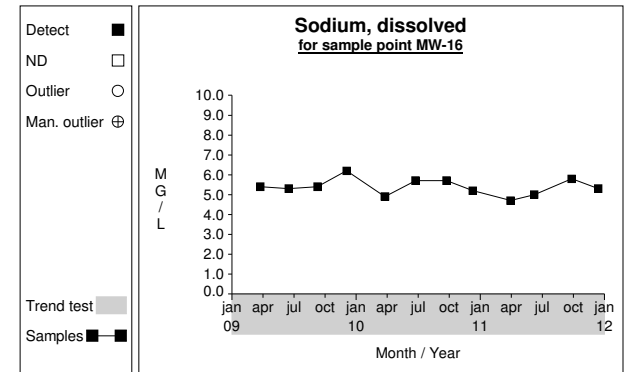
Graph 507



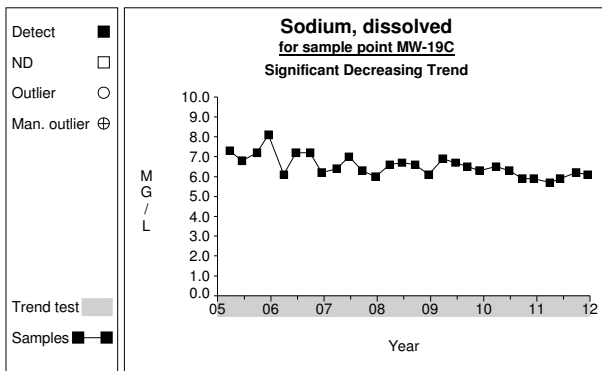
Graph 508



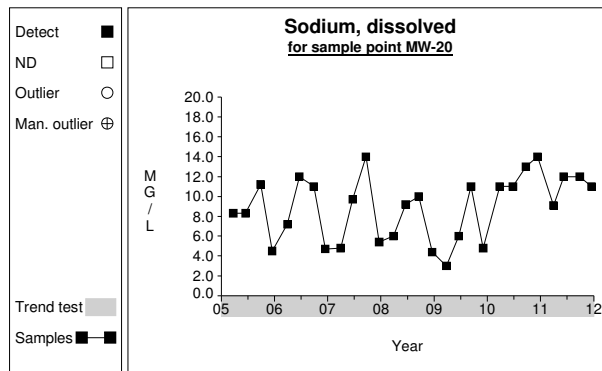
Graph 509



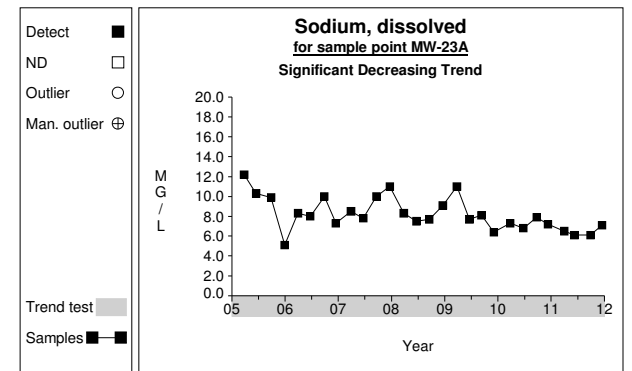
Graph 510



Graph 511

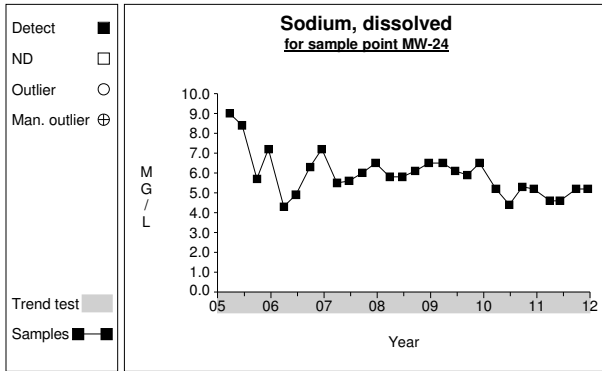


Graph 512

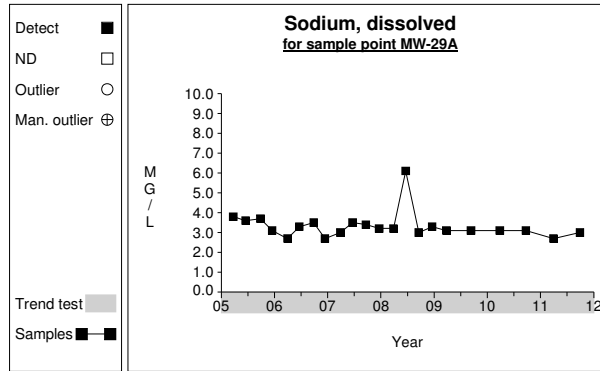


Graph 513

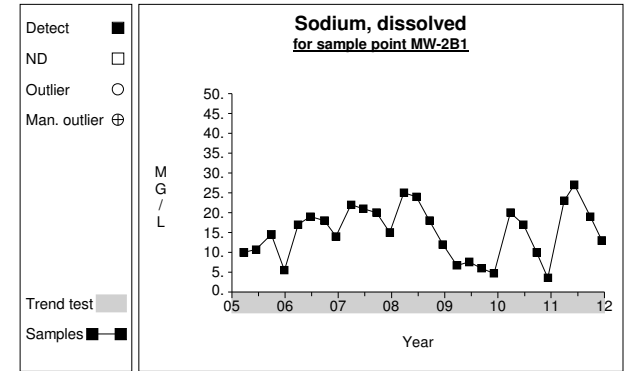
# Time Series



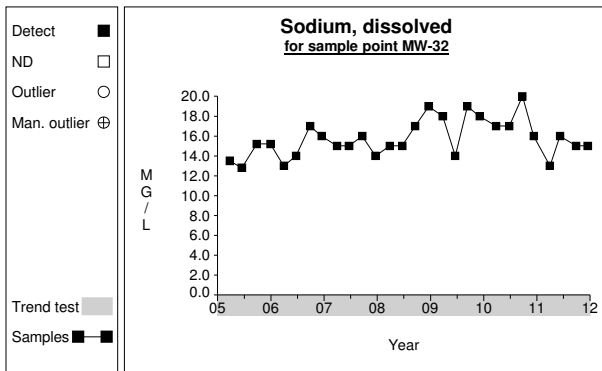
**Graph 514**



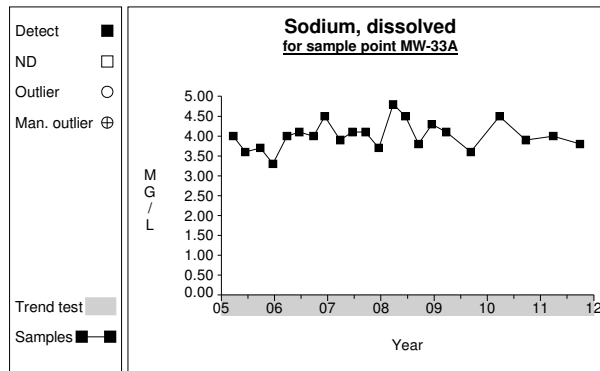
**Graph 515**



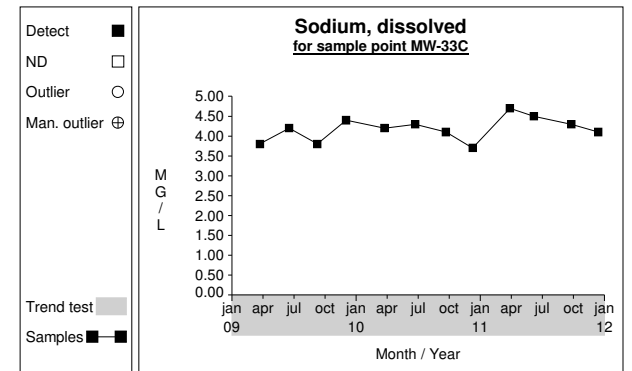
**Graph 516**



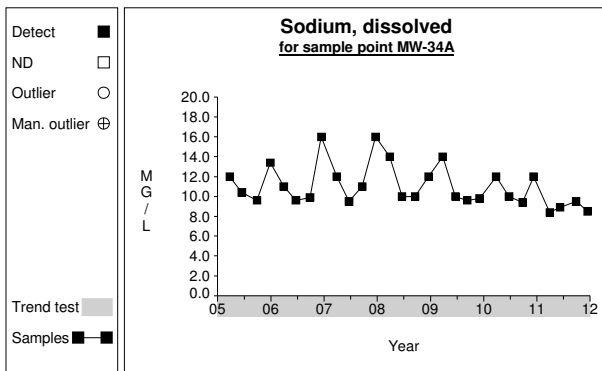
**Graph 517**



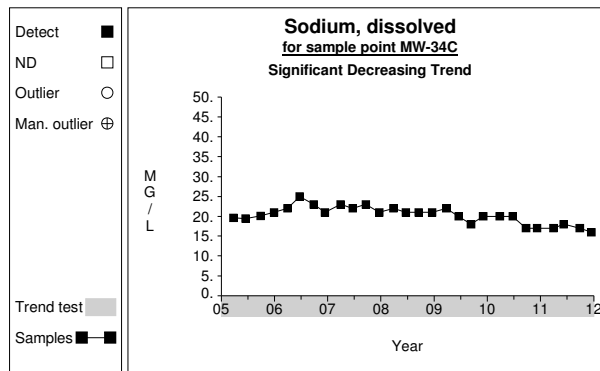
**Graph 518**



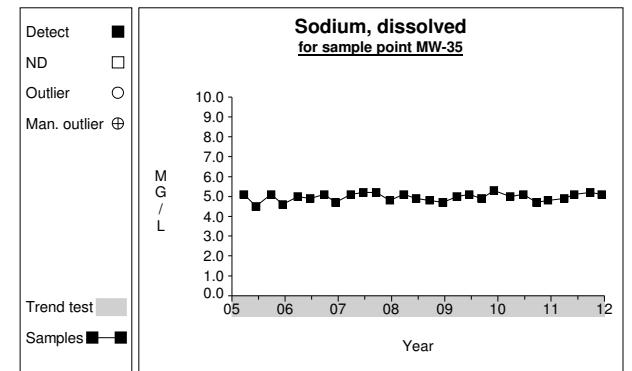
**Graph 519**



**Graph 520**

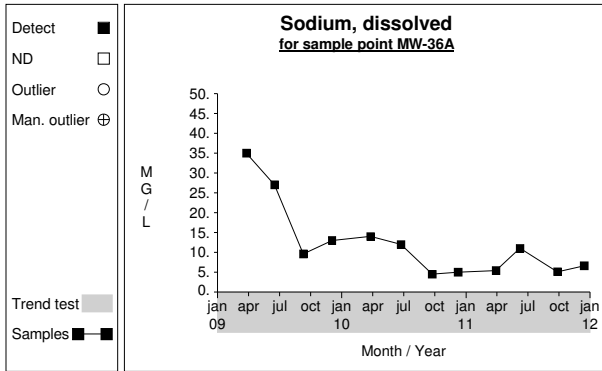


**Graph 521**

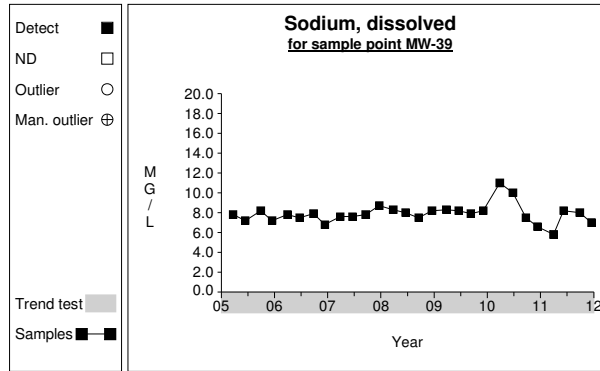


**Graph 522**

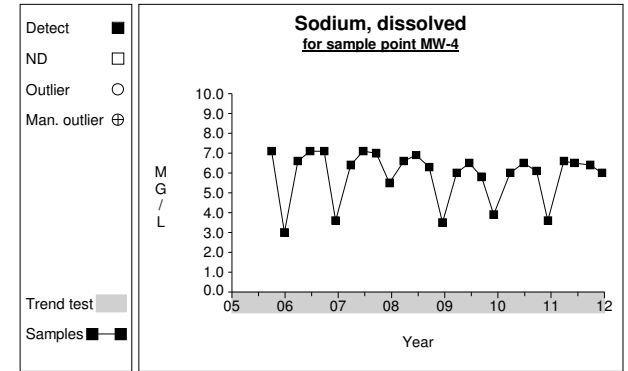
# Time Series



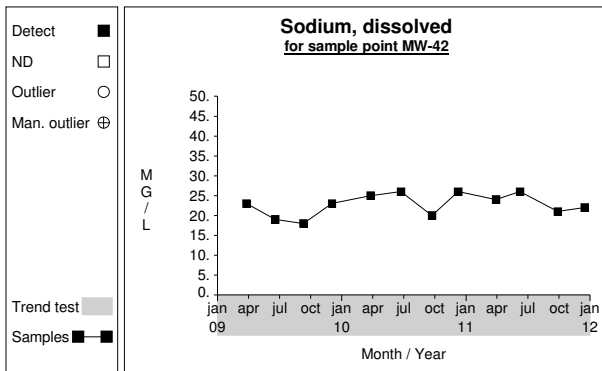
**Graph 523**



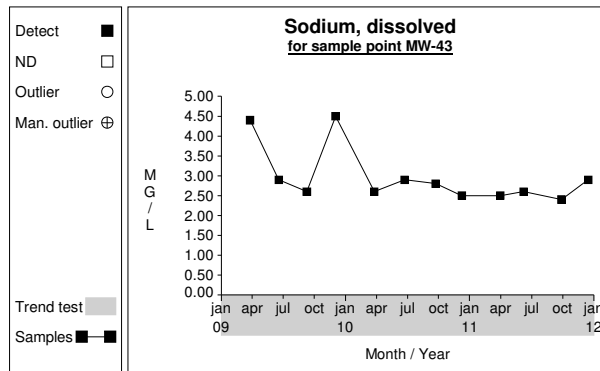
**Graph 524**



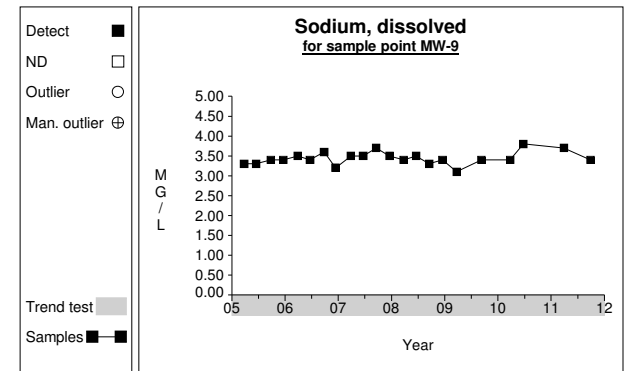
**Graph 525**



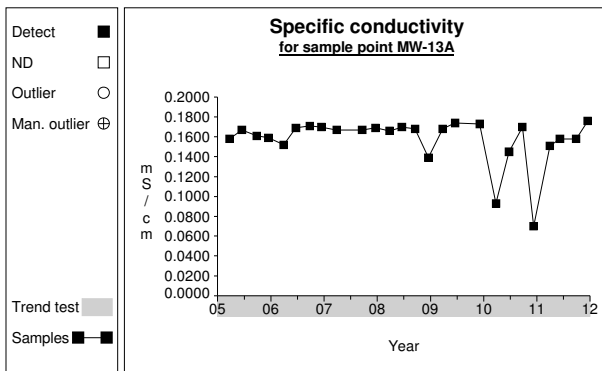
**Graph 526**



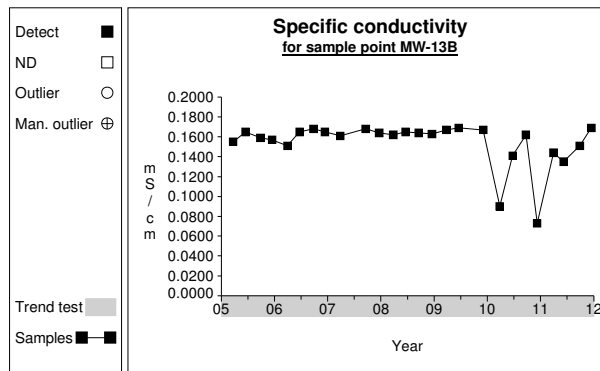
**Graph 527**



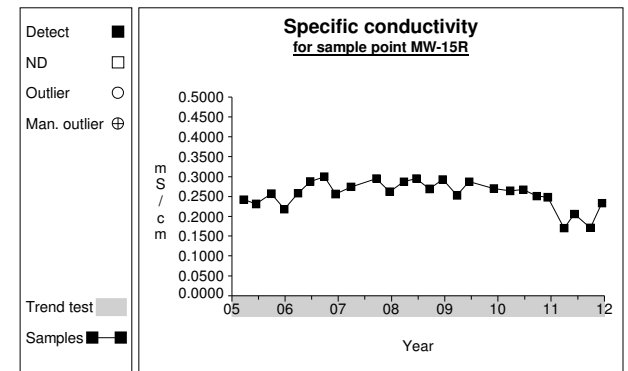
**Graph 528**



**Graph 529**

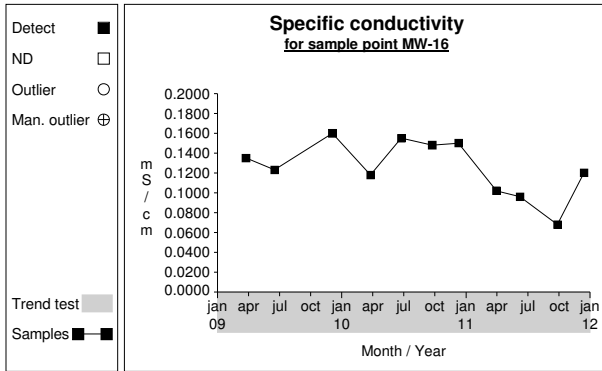


**Graph 530**

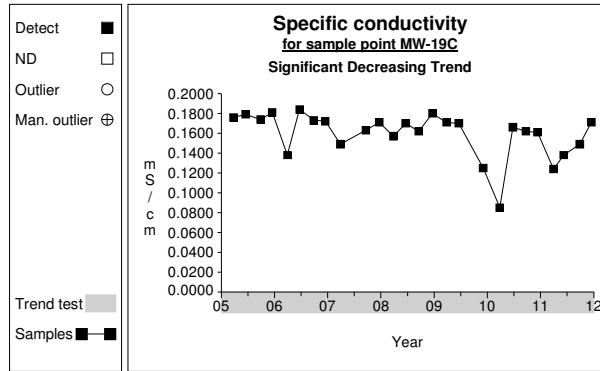


**Graph 531**

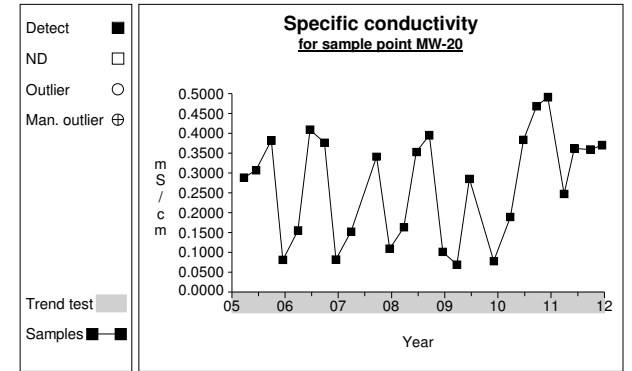
# Time Series



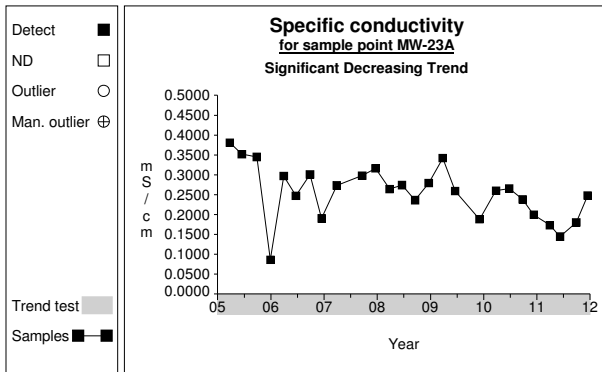
Graph 532



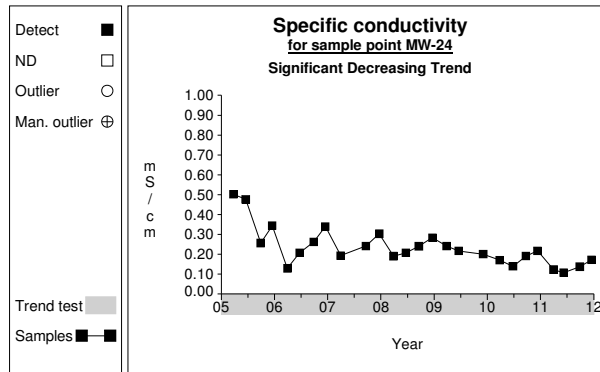
Graph 533



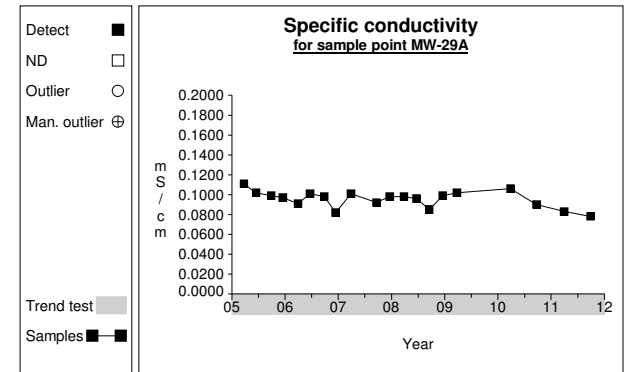
Graph 534



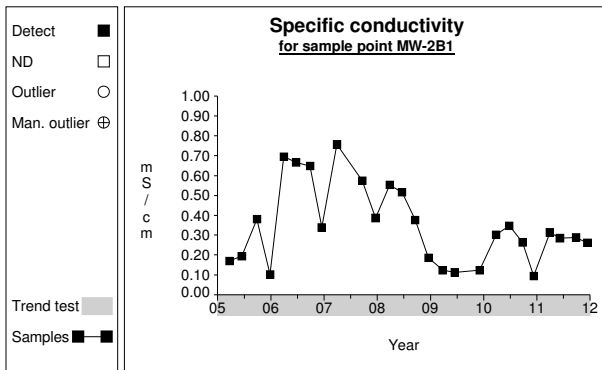
Graph 535



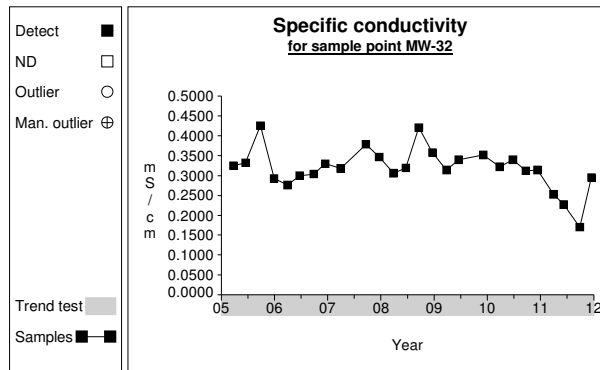
Graph 536



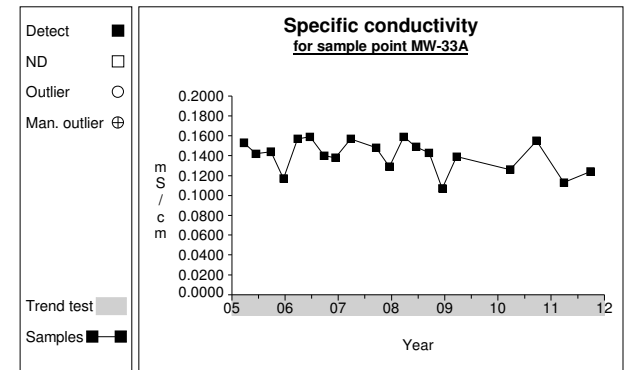
Graph 537



Graph 538

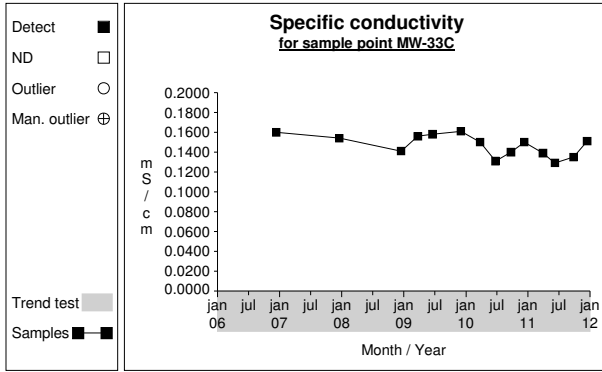


Graph 539

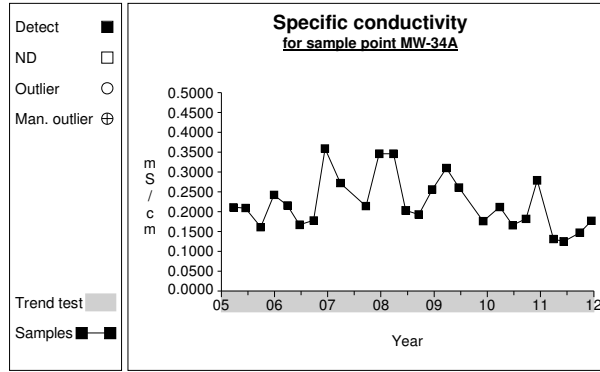


Graph 540

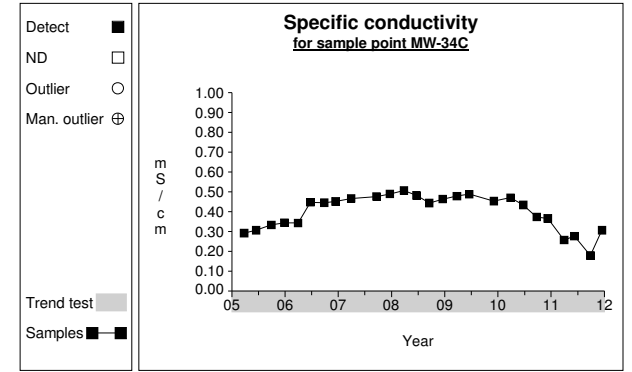
# Time Series



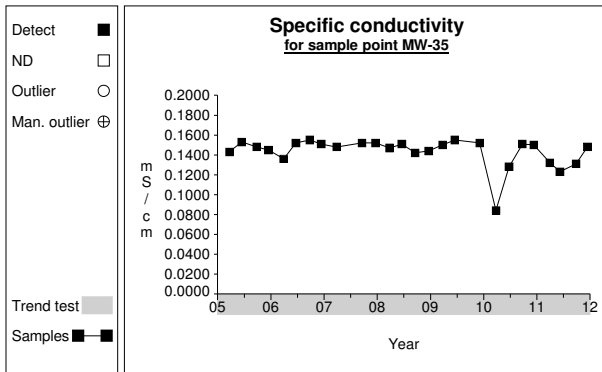
Graph 541



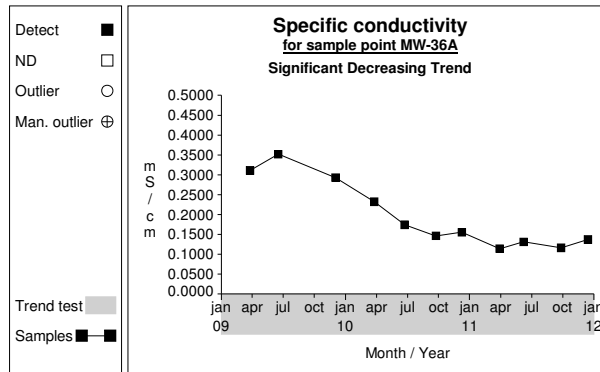
Graph 542



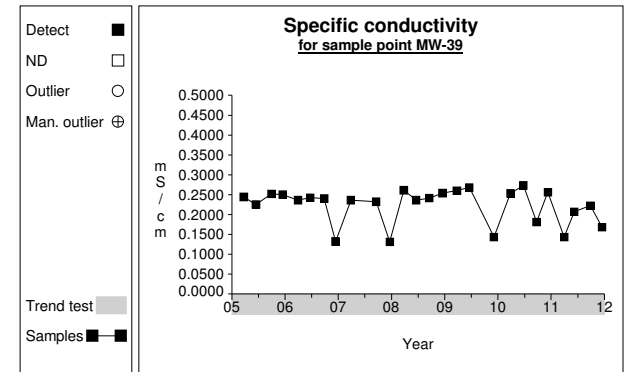
Graph 543



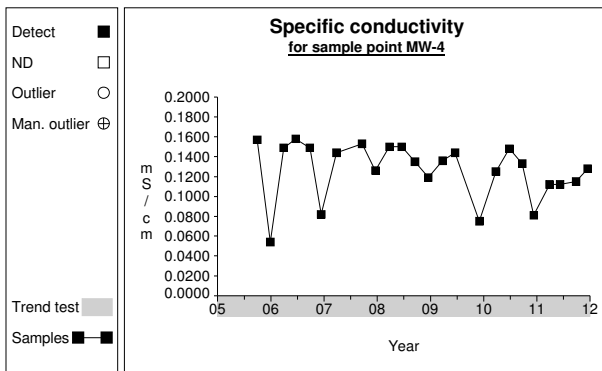
Graph 544



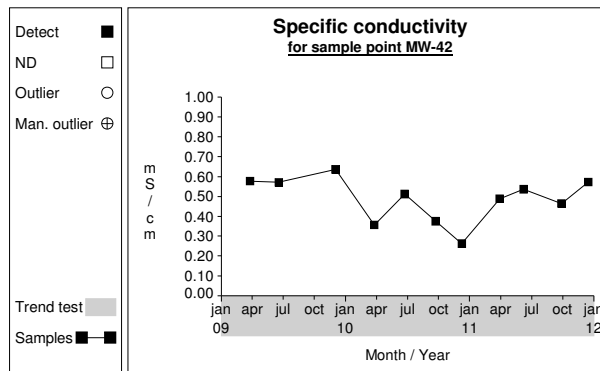
Graph 545



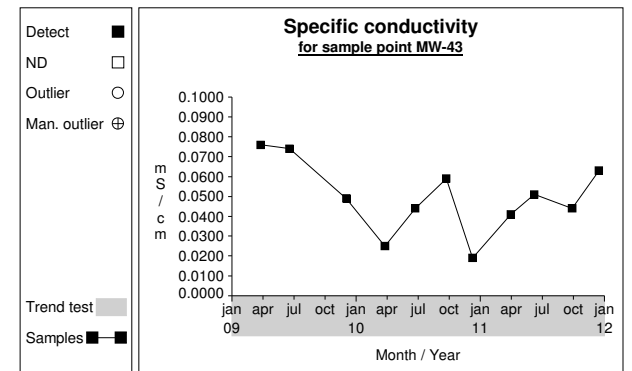
Graph 546



Graph 547

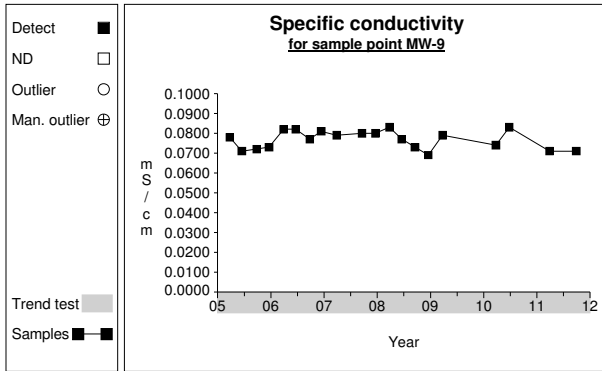


Graph 548

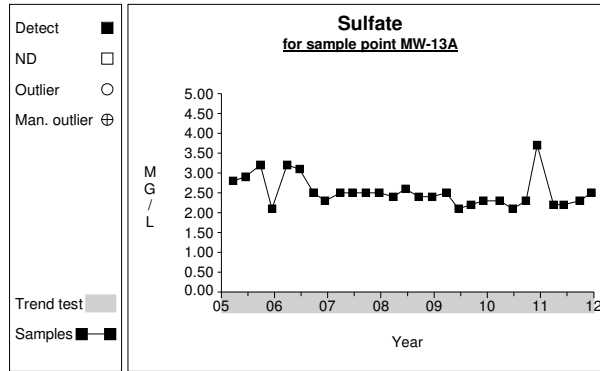


Graph 549

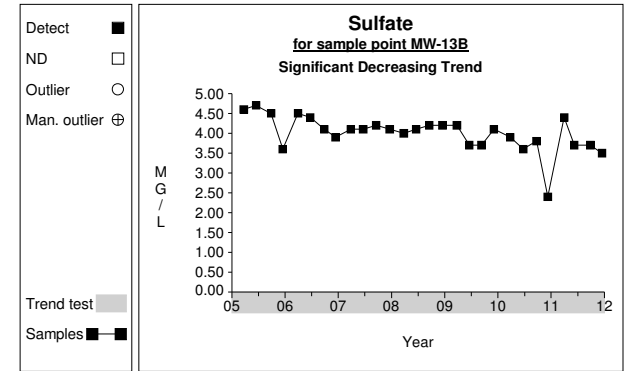
# Time Series



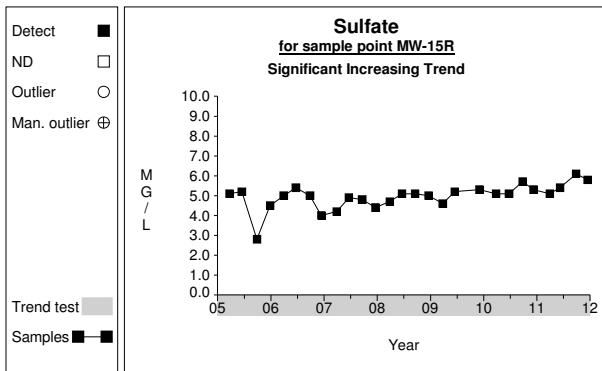
Graph 550



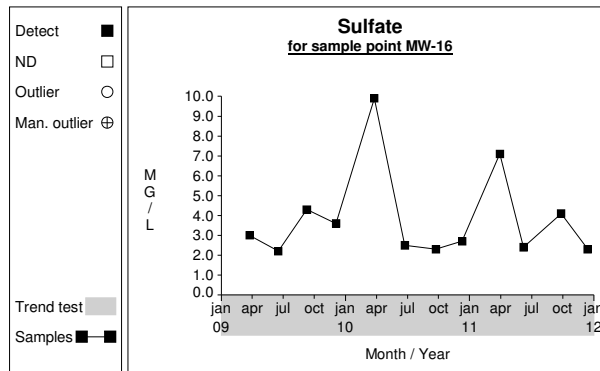
Graph 551



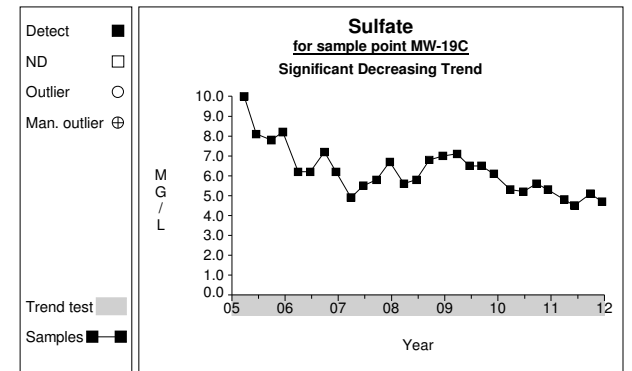
Graph 552



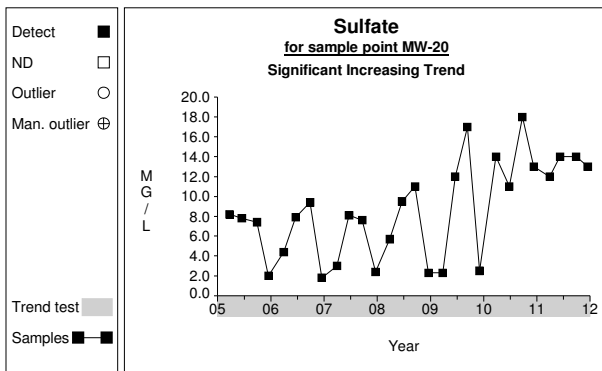
Graph 553



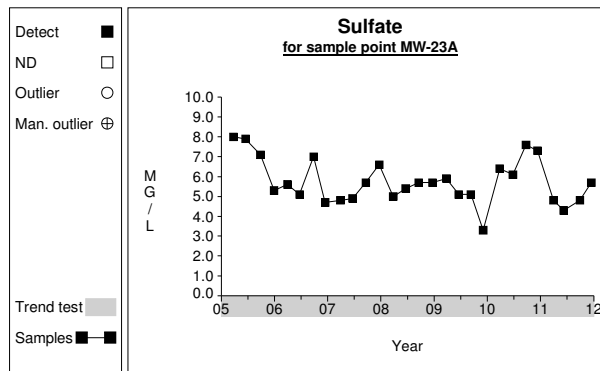
Graph 554



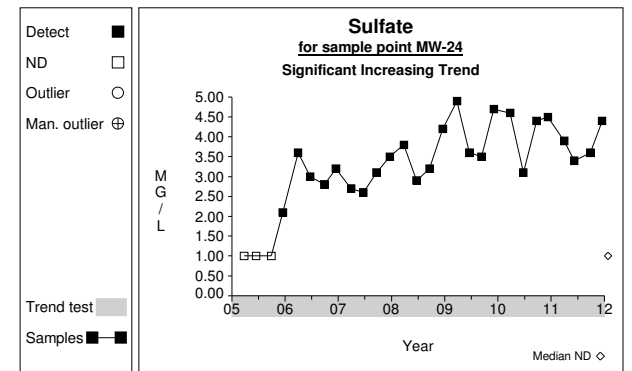
Graph 555



Graph 556



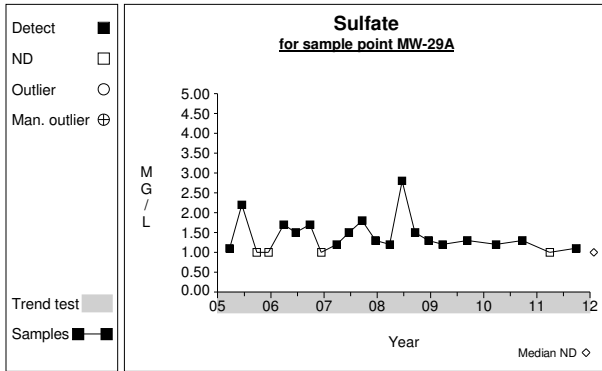
Graph 557



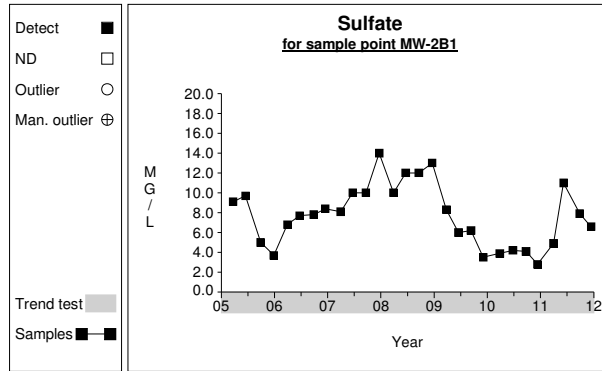
Graph 558



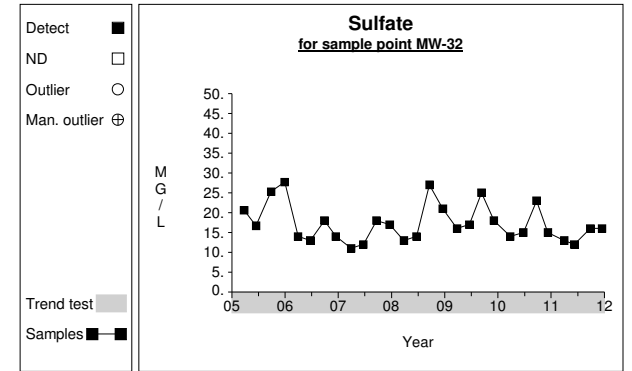
# Time Series



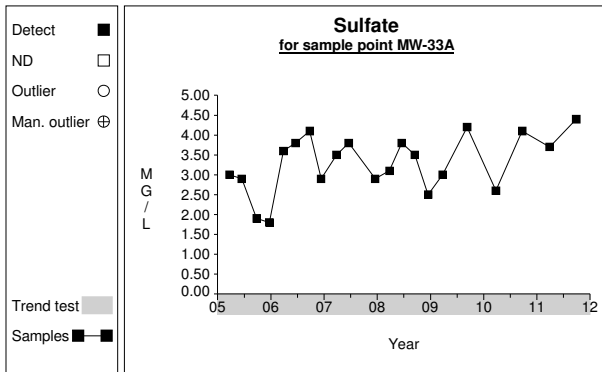
Graph 559



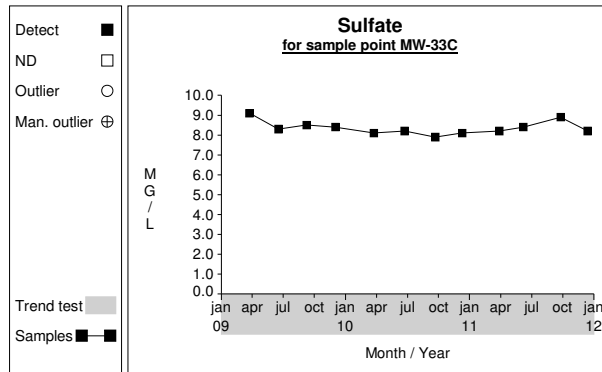
Graph 560



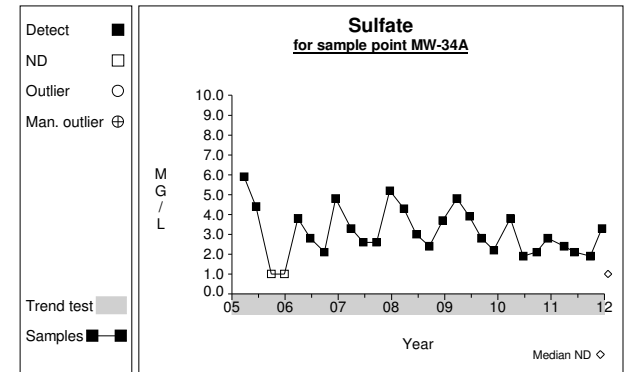
Graph 561



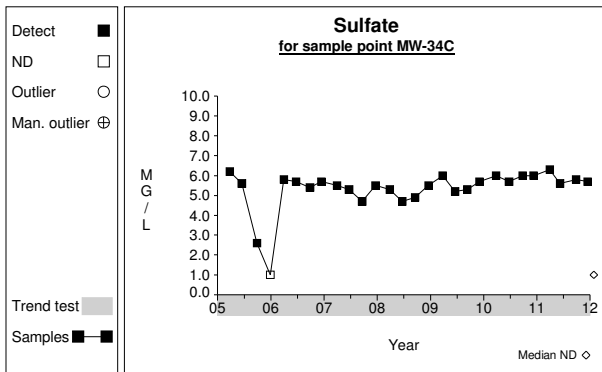
Graph 562



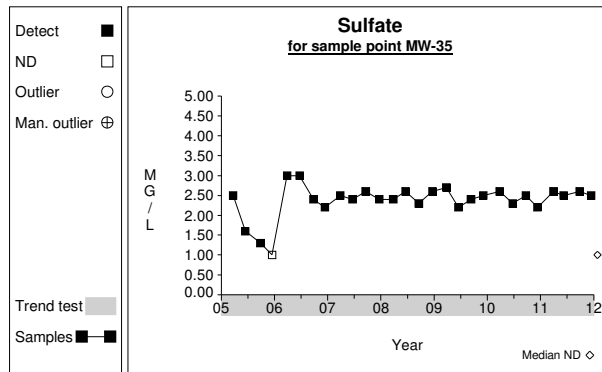
Graph 563



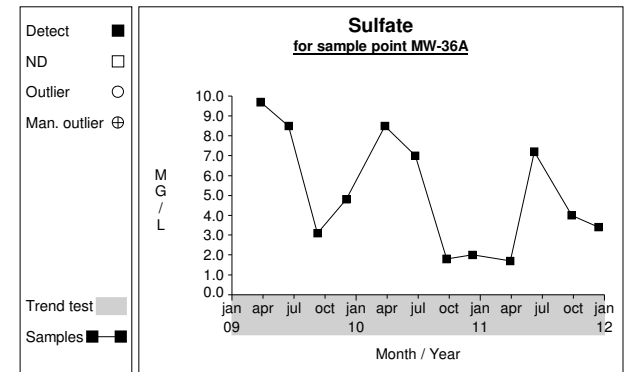
Graph 564



Graph 565

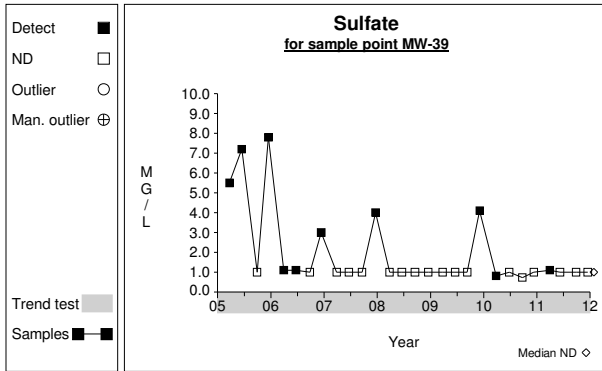


Graph 566

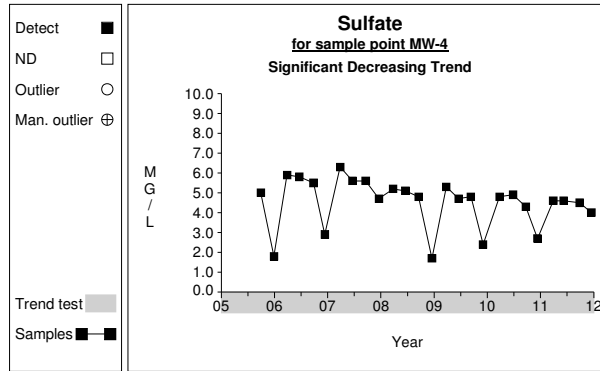


Graph 567

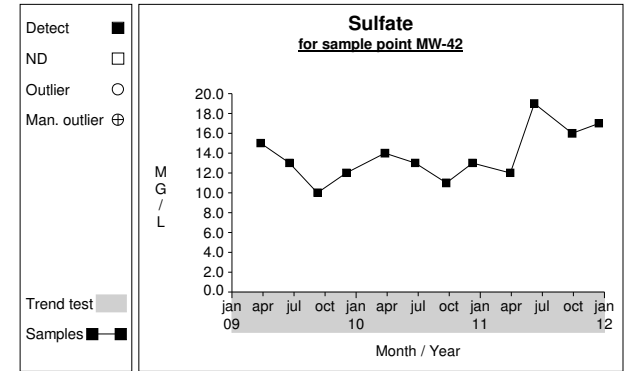
# Time Series



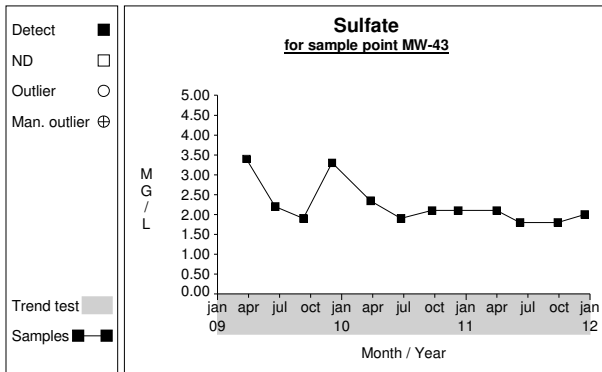
Graph 568



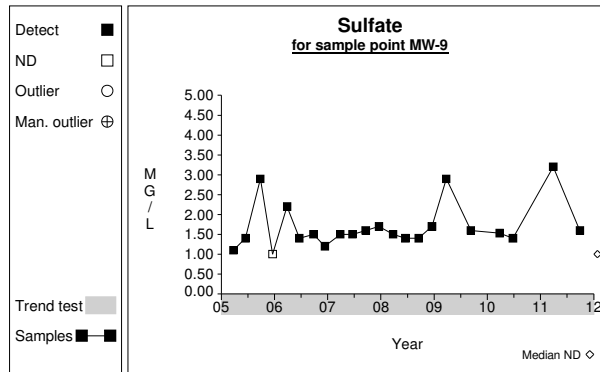
Graph 569



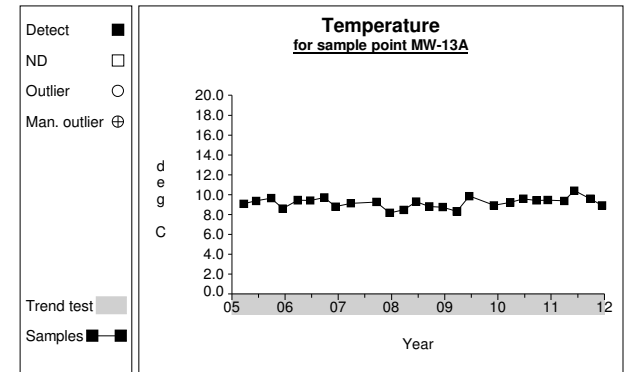
Graph 570



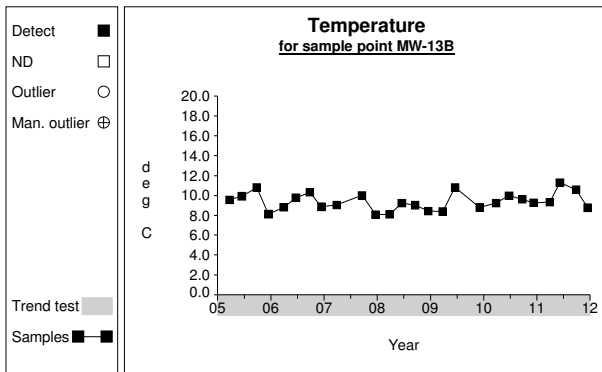
Graph 571



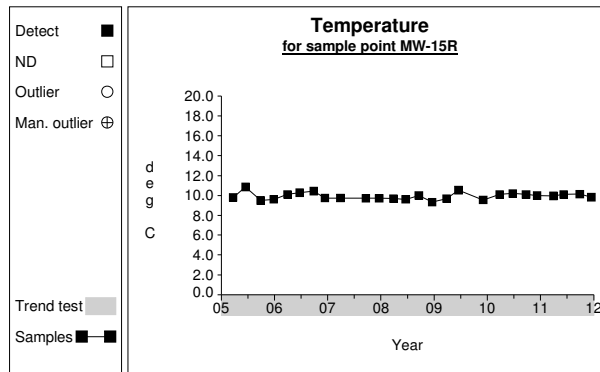
Graph 572



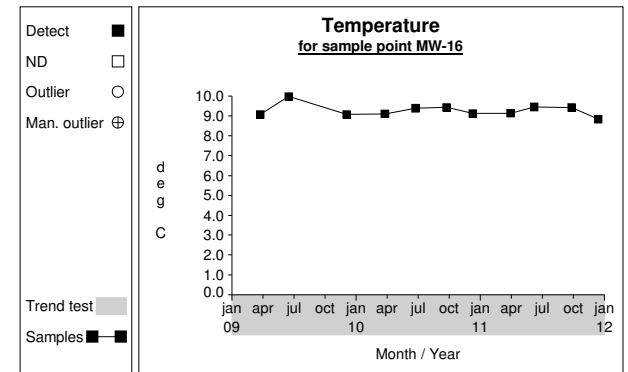
Graph 573



Graph 574

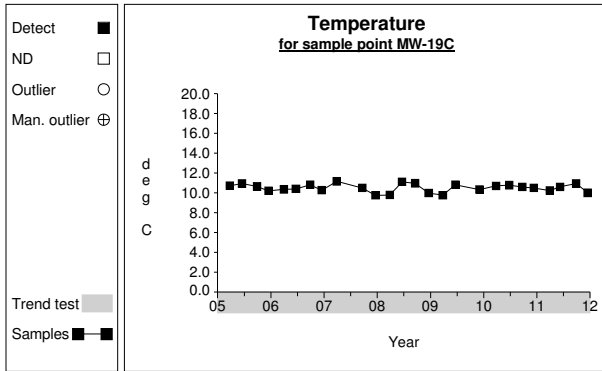


Graph 575

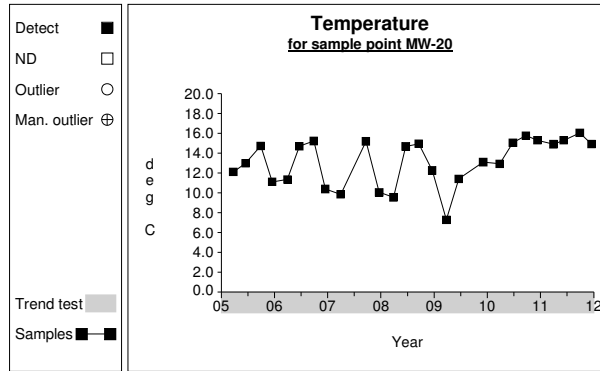


Graph 576

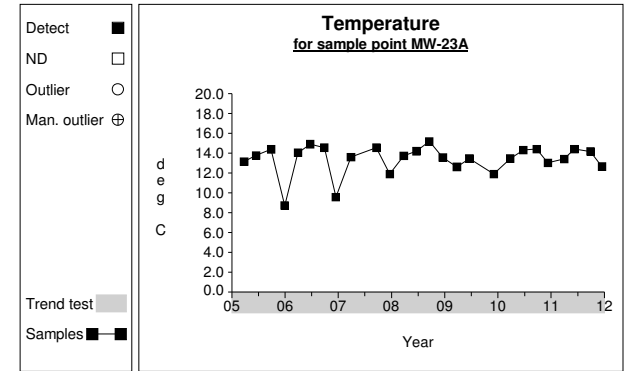
# Time Series



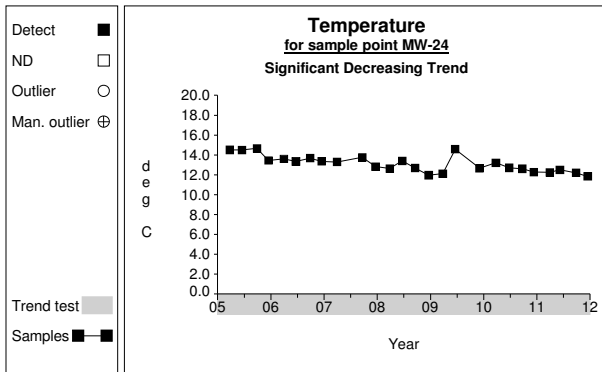
Graph 577



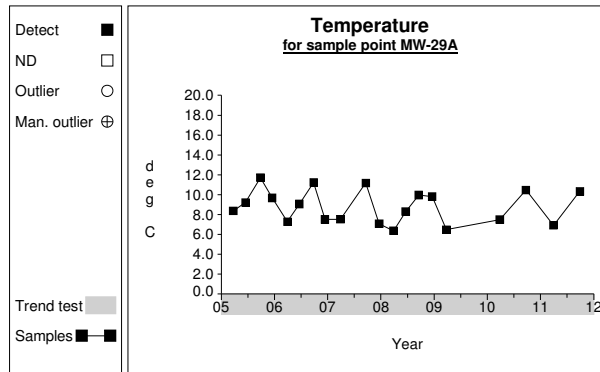
Graph 578



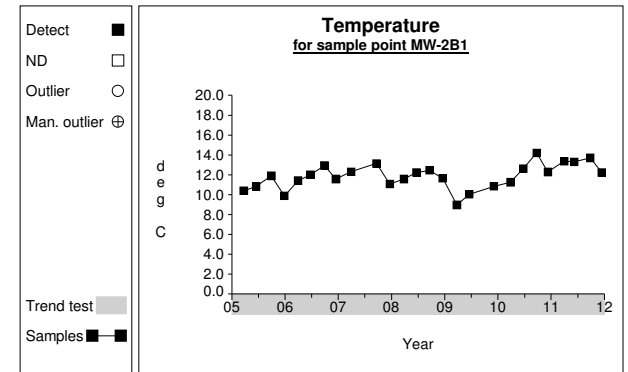
Graph 579



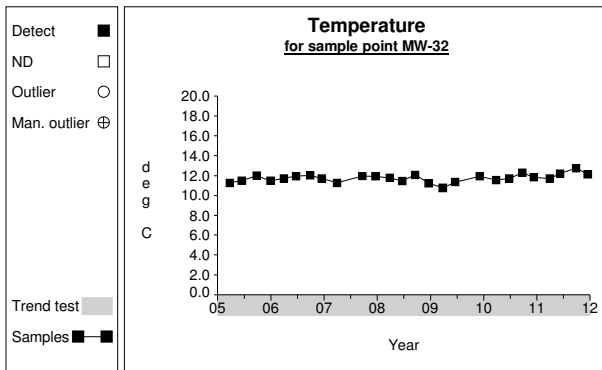
Graph 580



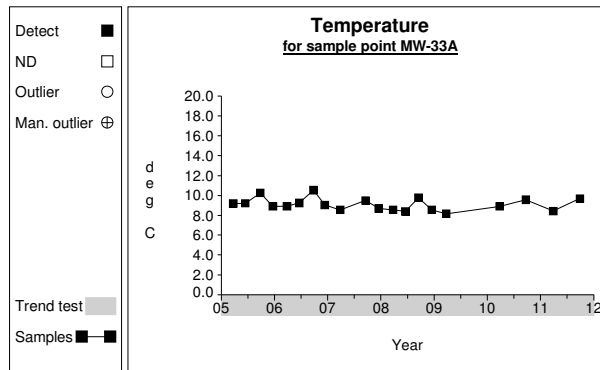
Graph 581



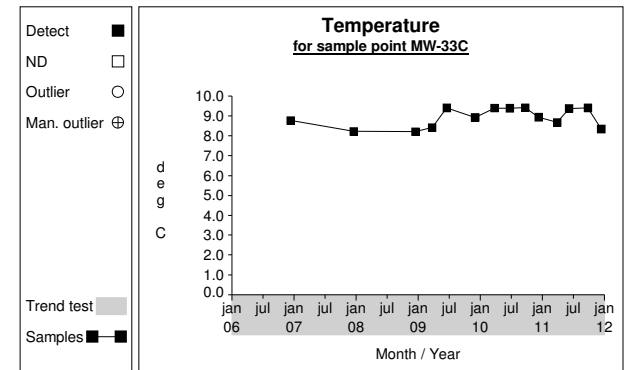
Graph 582



Graph 583

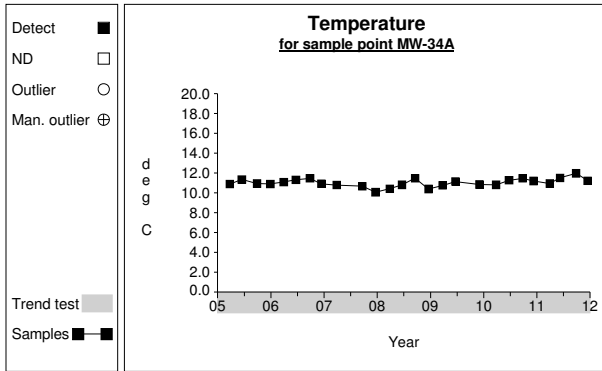


Graph 584

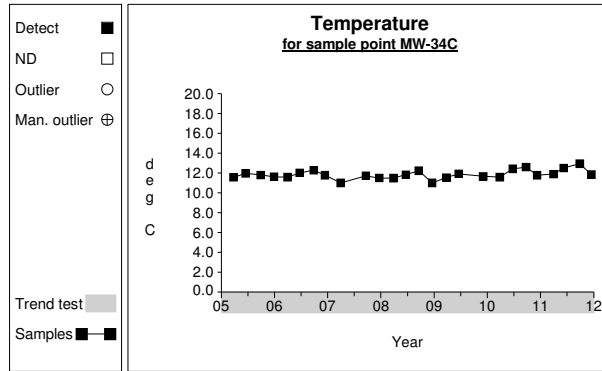


Graph 585

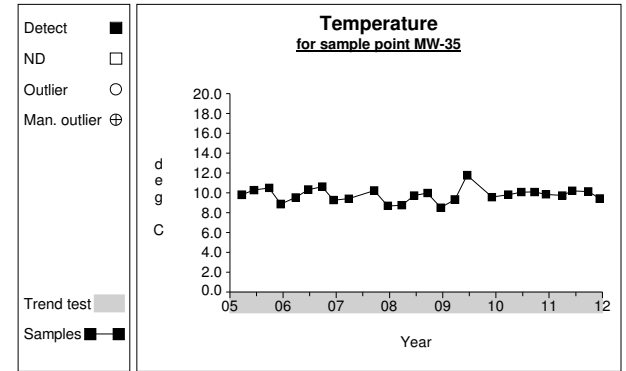
# Time Series



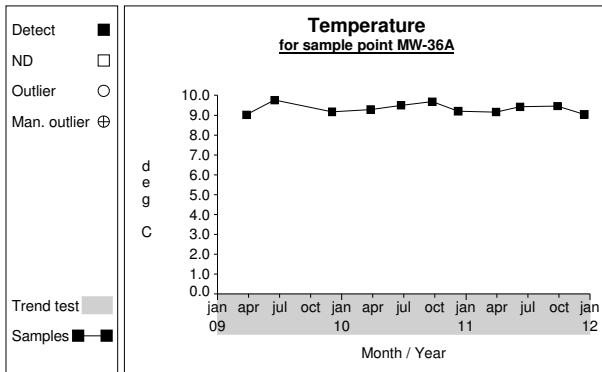
Graph 586



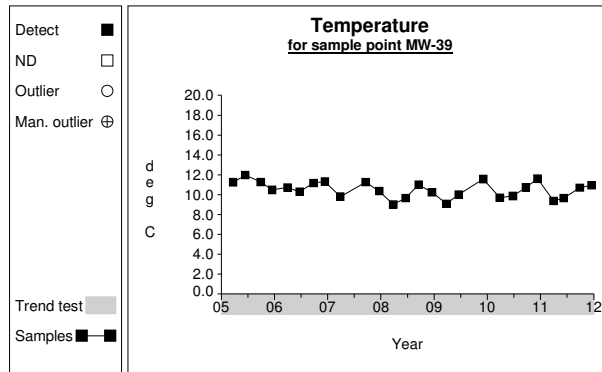
Graph 587



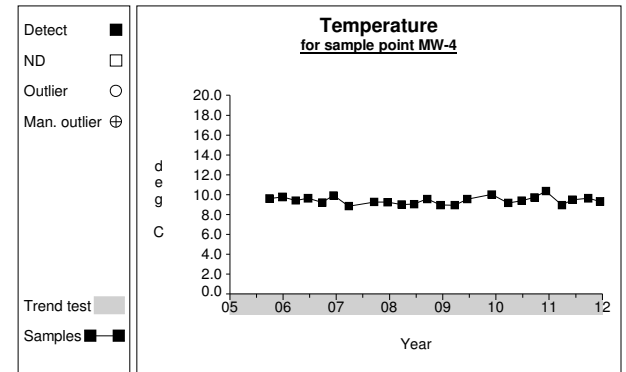
Graph 588



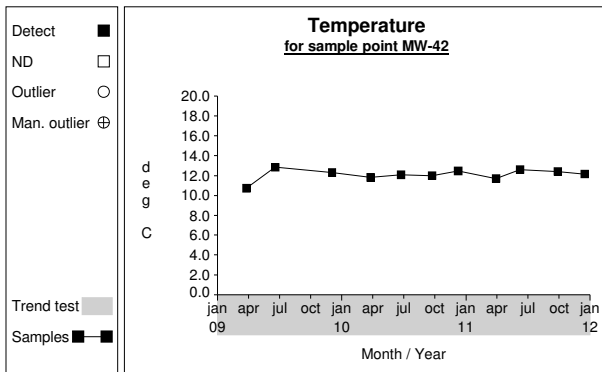
Graph 589



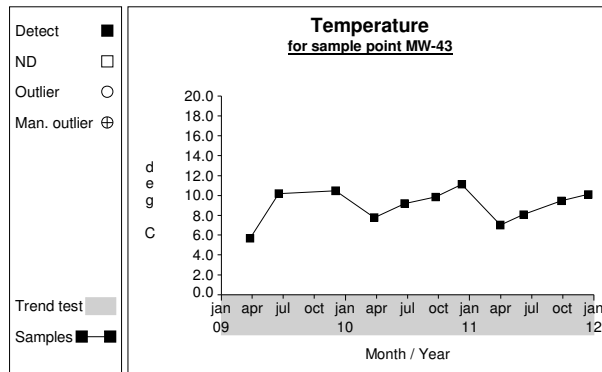
Graph 590



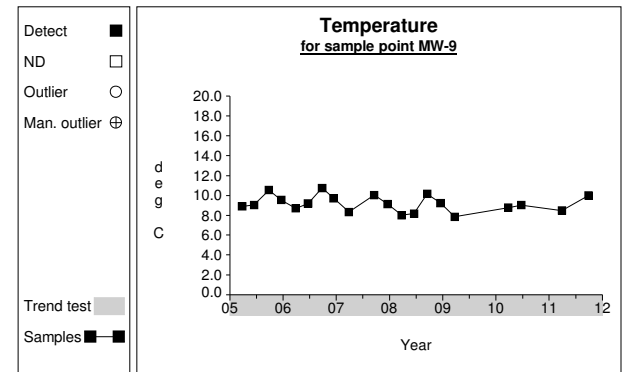
Graph 591



Graph 592

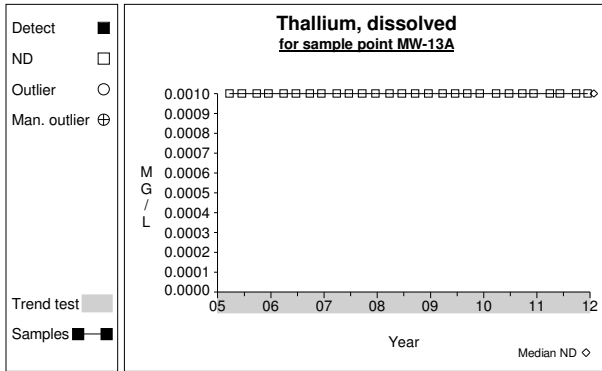


Graph 593

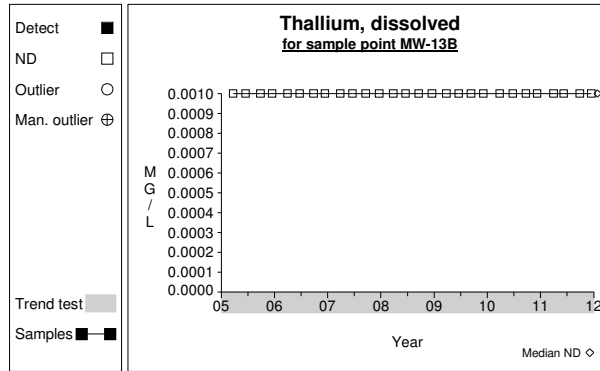


Graph 594

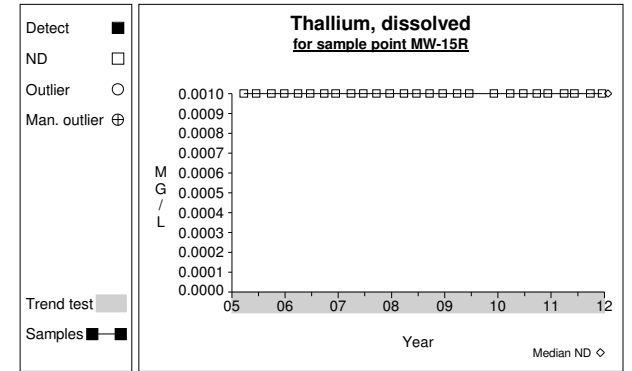
# Time Series



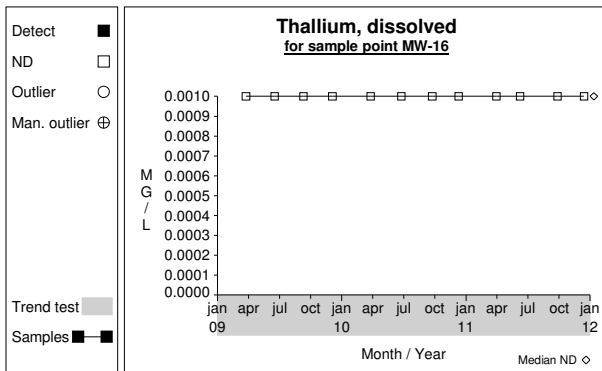
Graph 595



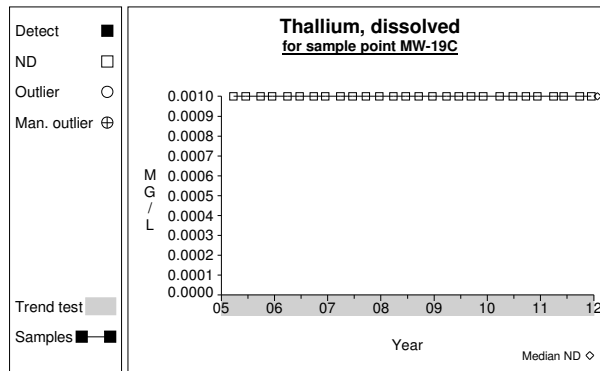
Graph 596



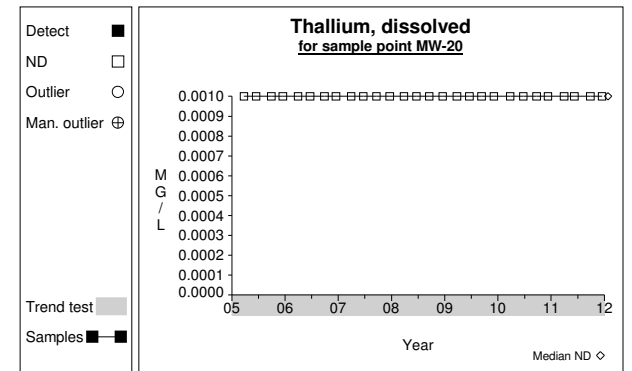
Graph 597



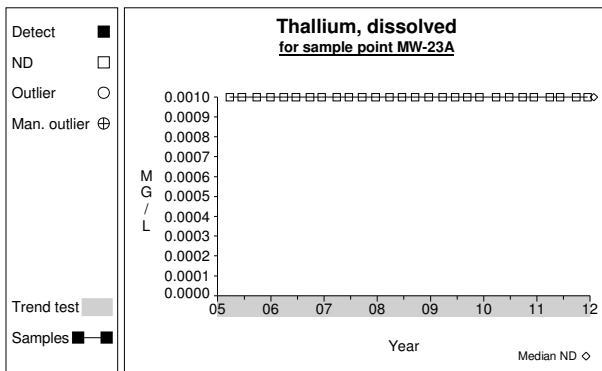
Graph 598



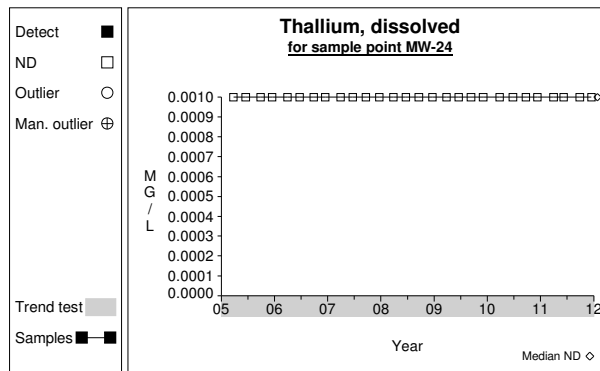
Graph 599



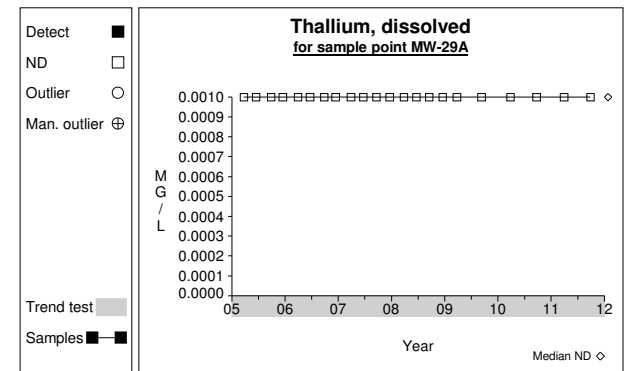
Graph 600



Graph 601

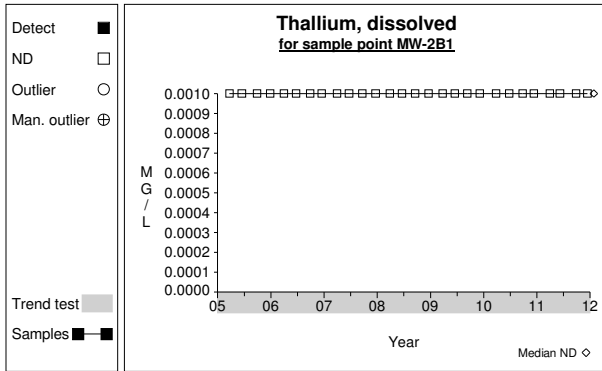


Graph 602

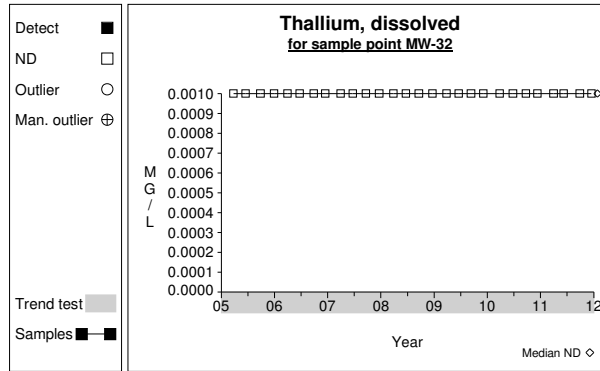


Graph 603

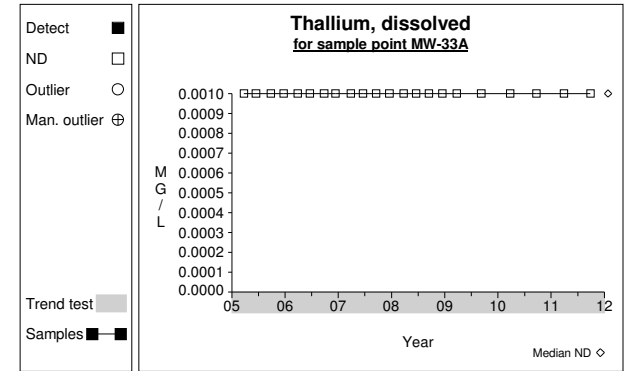
# Time Series



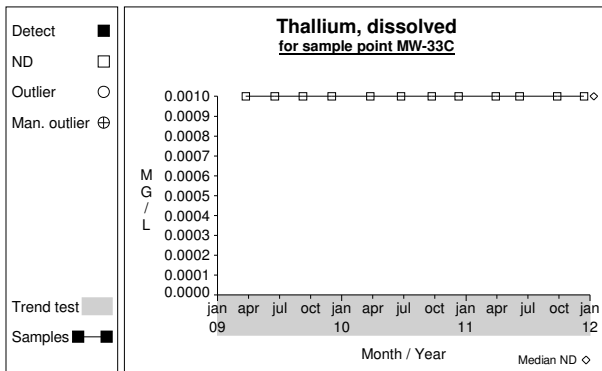
Graph 604



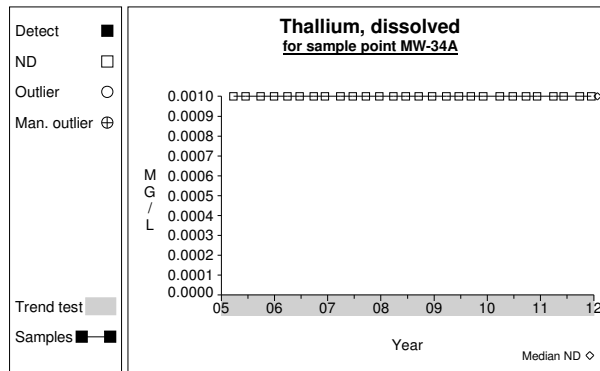
Graph 605



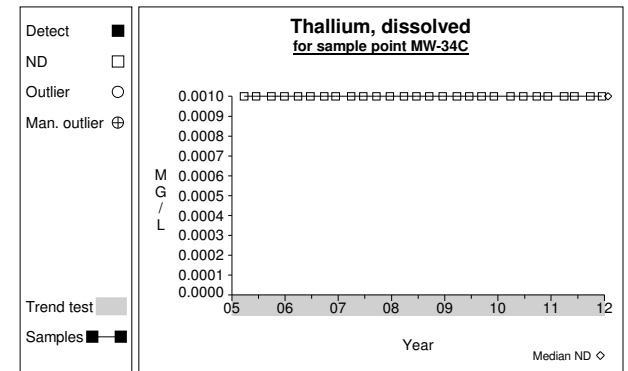
Graph 606



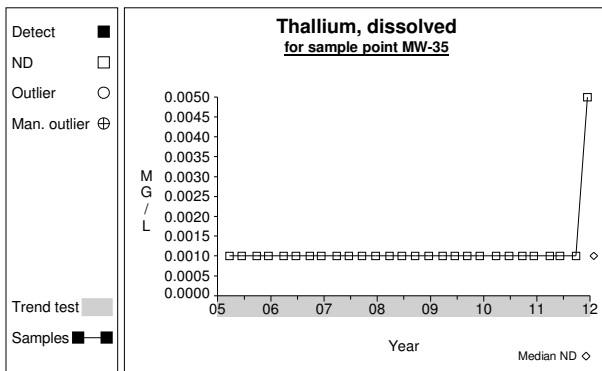
Graph 607



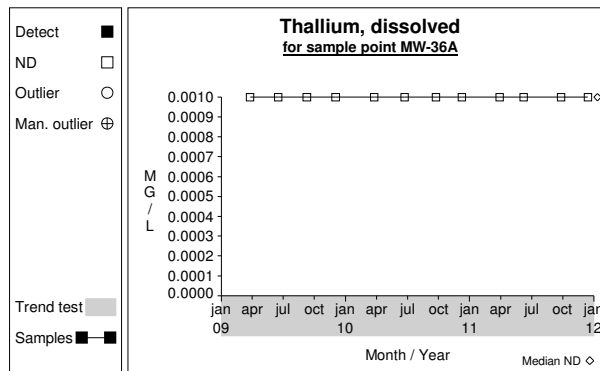
Graph 608



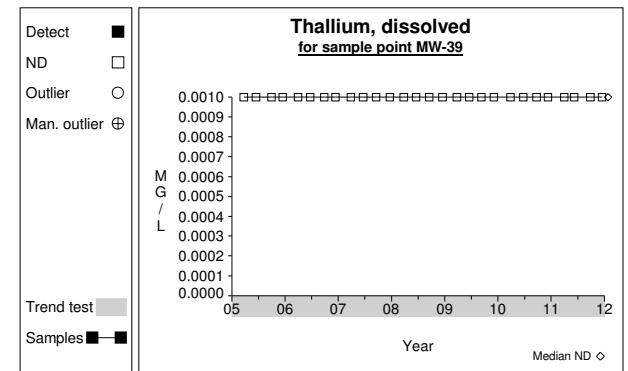
Graph 609



Graph 610

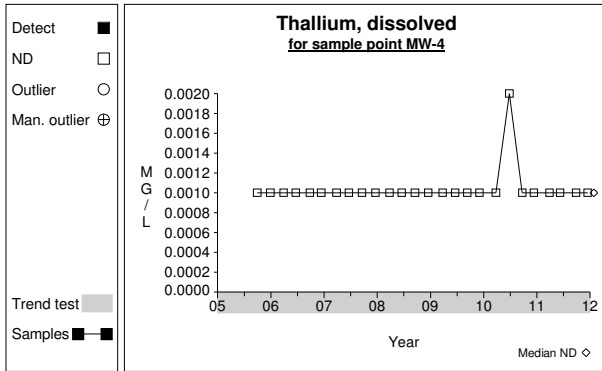


Graph 611

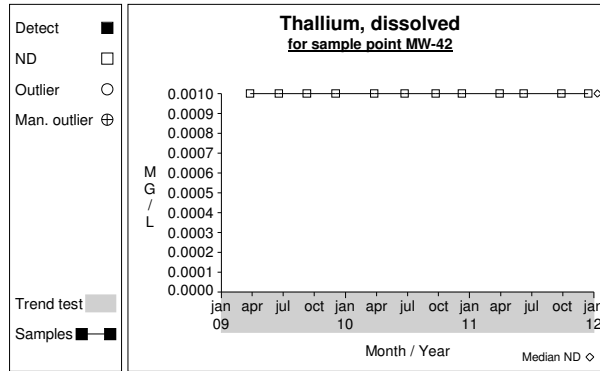


Graph 612

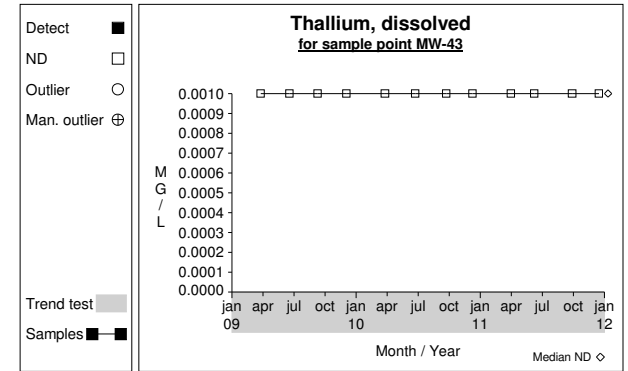
# Time Series



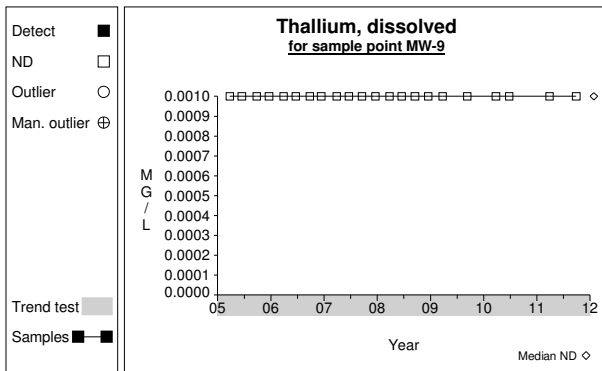
Graph 613



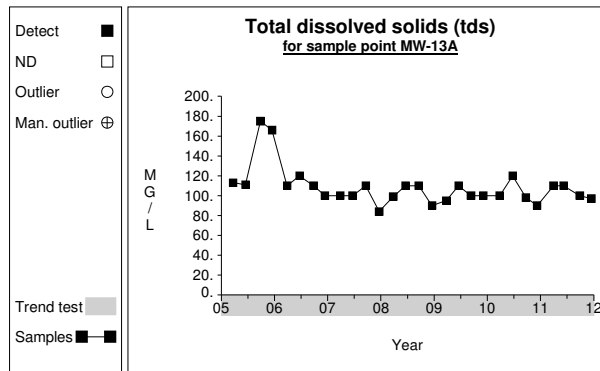
Graph 614



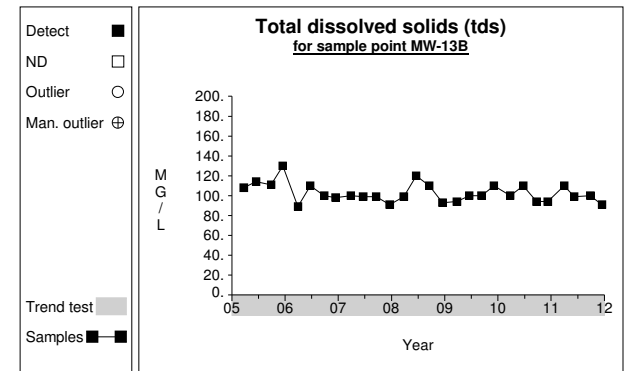
Graph 615



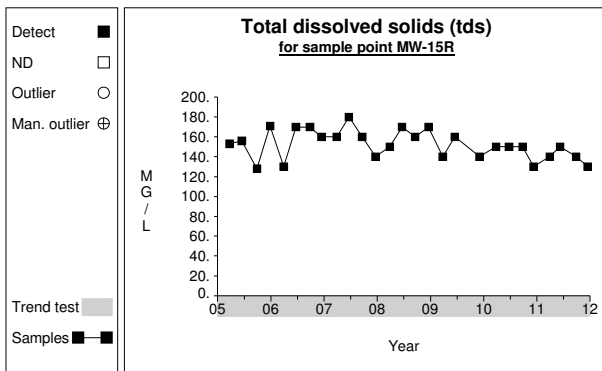
Graph 616



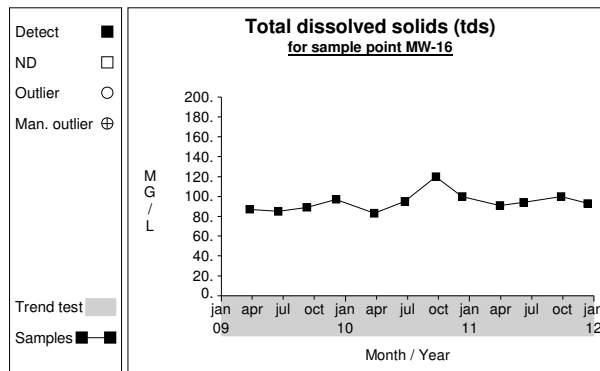
Graph 617



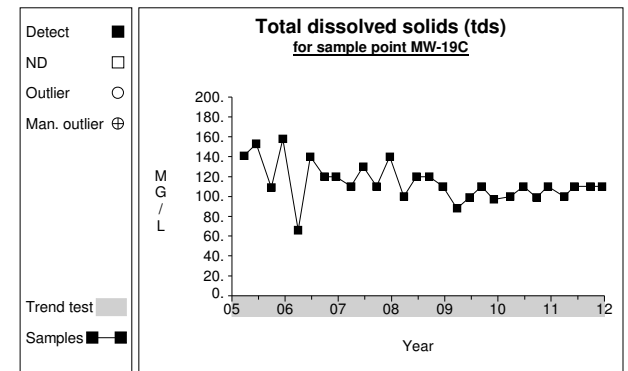
Graph 618



Graph 619

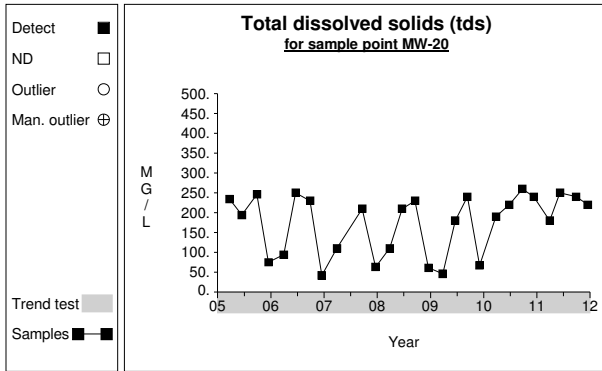


Graph 620

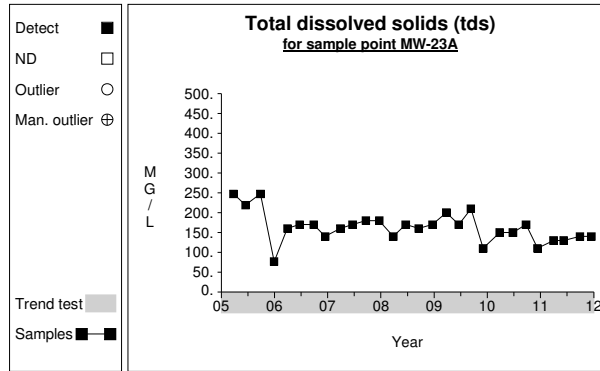


Graph 621

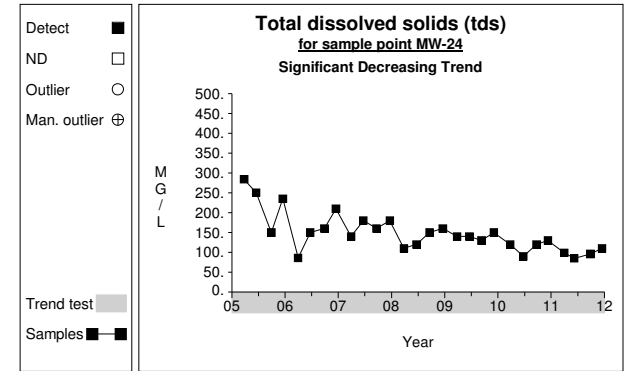
# Time Series



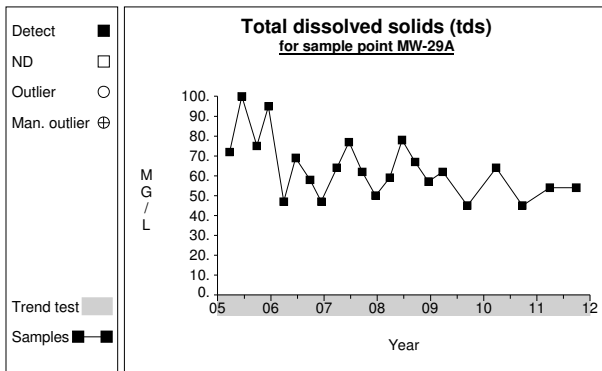
**Graph 622**



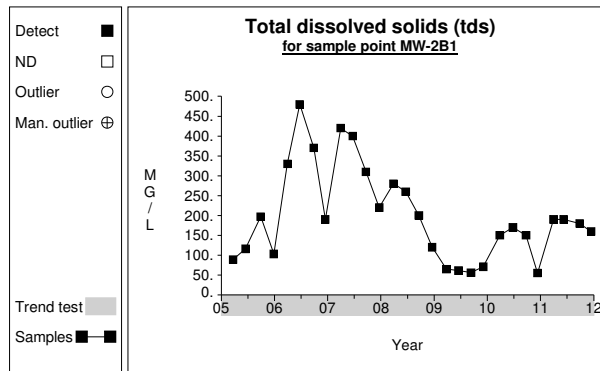
**Graph 623**



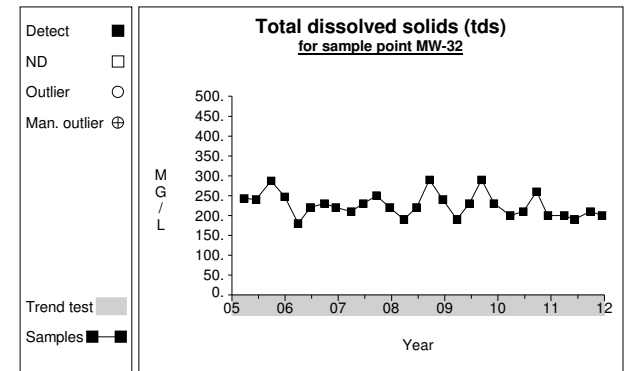
**Graph 624**



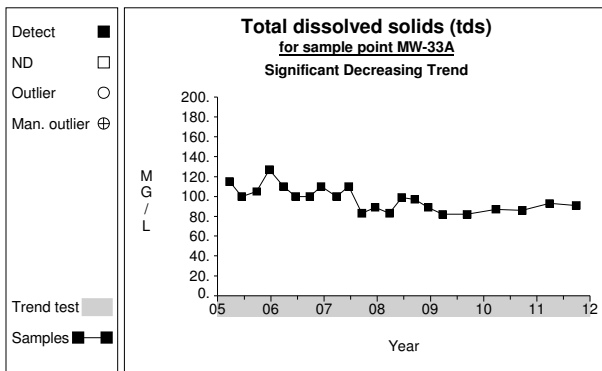
**Graph 625**



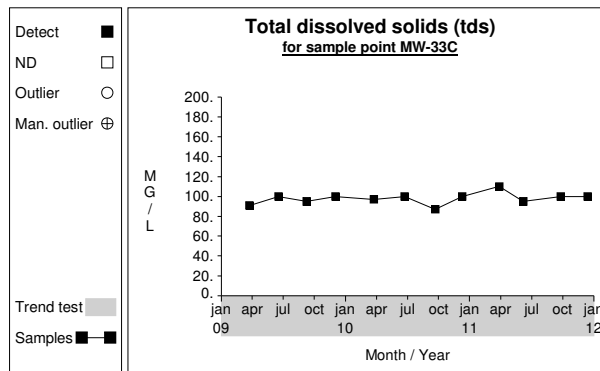
**Graph 626**



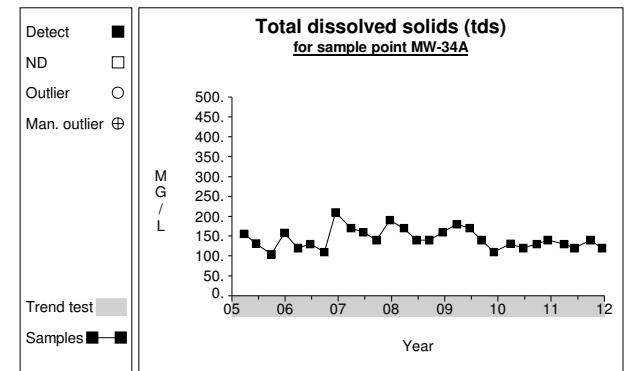
**Graph 627**



**Graph 628**



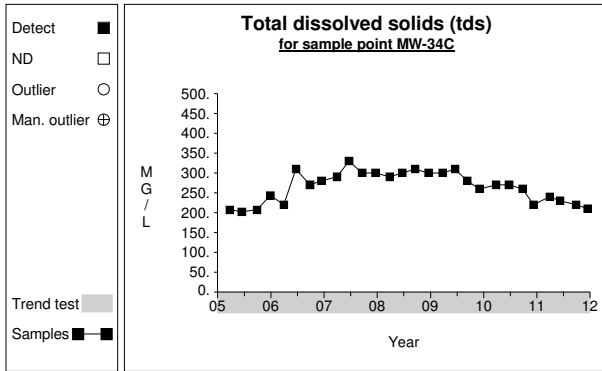
**Graph 629**



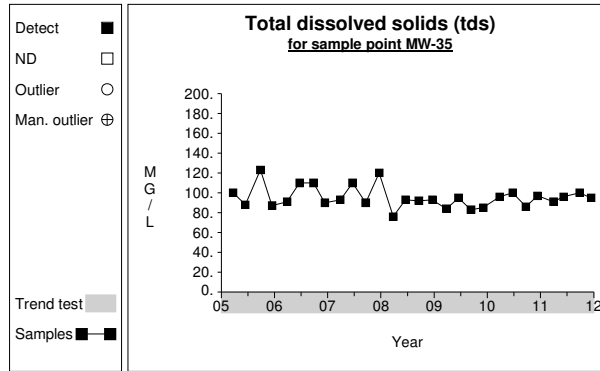
**Graph 630**



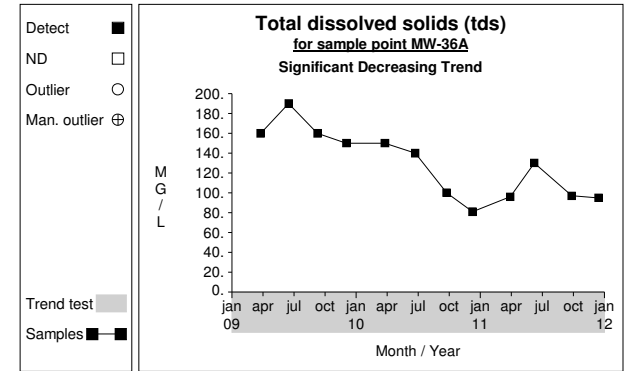
# Time Series



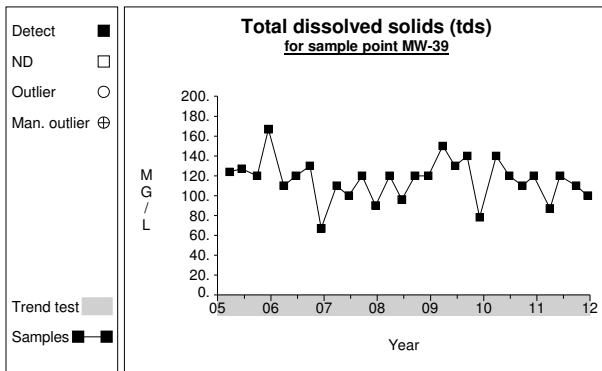
Graph 631



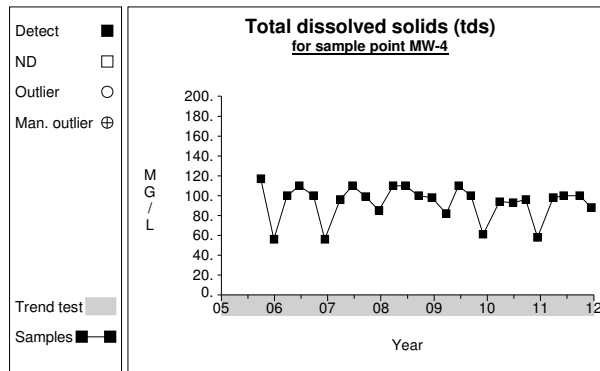
Graph 632



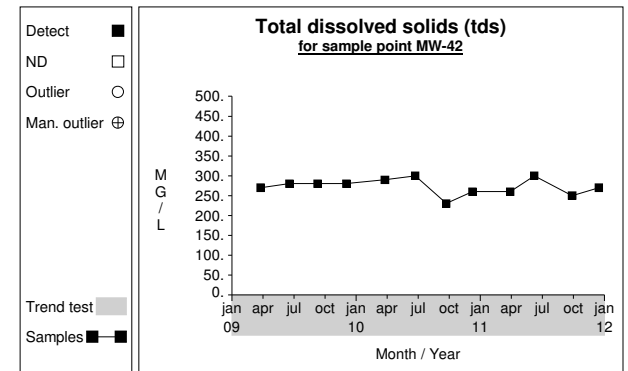
Graph 633



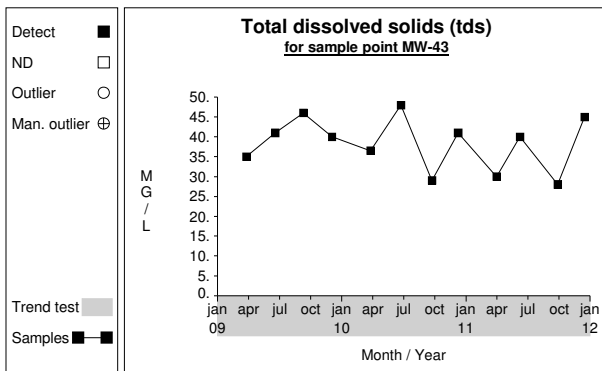
Graph 634



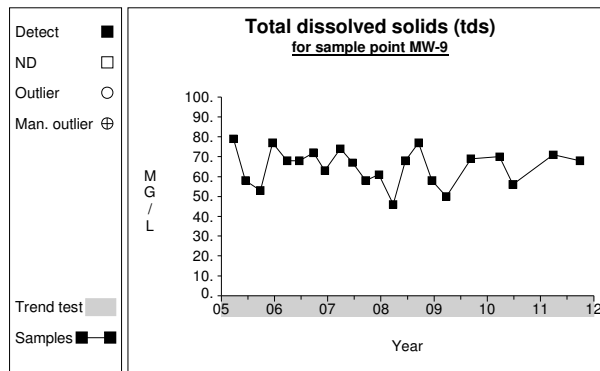
Graph 635



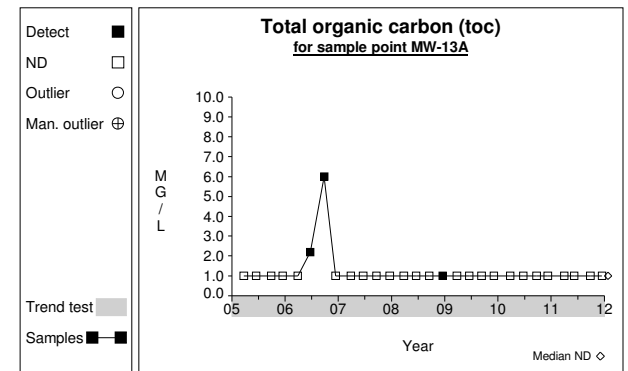
Graph 636



Graph 637

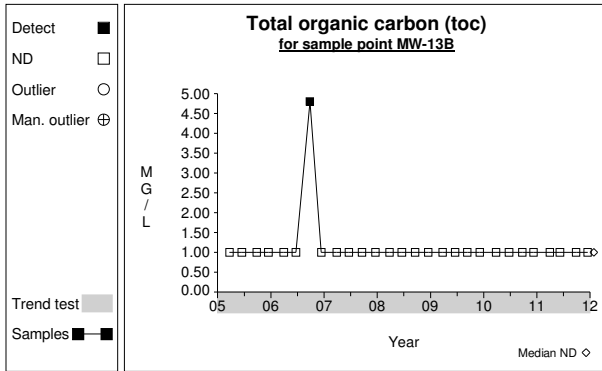


Graph 638

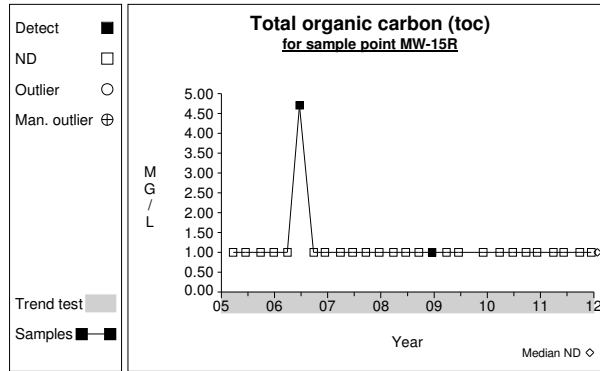


Graph 639

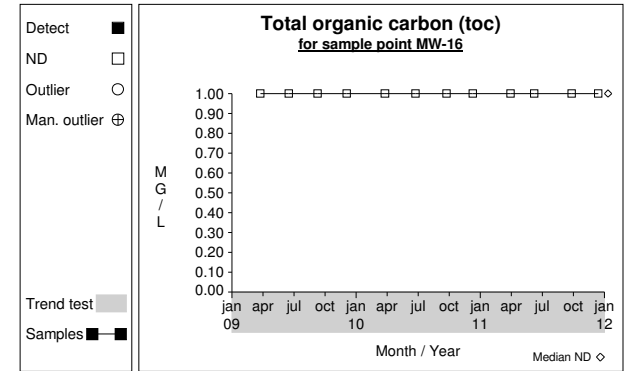
# Time Series



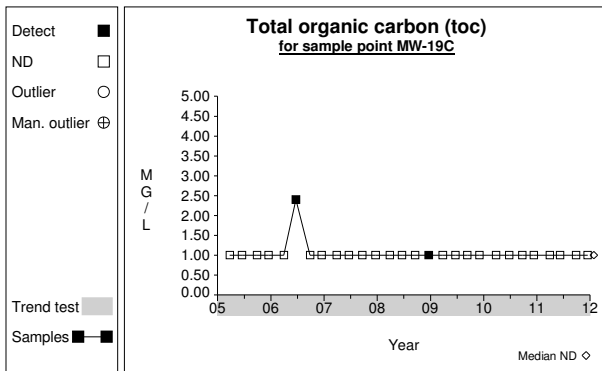
Graph 640



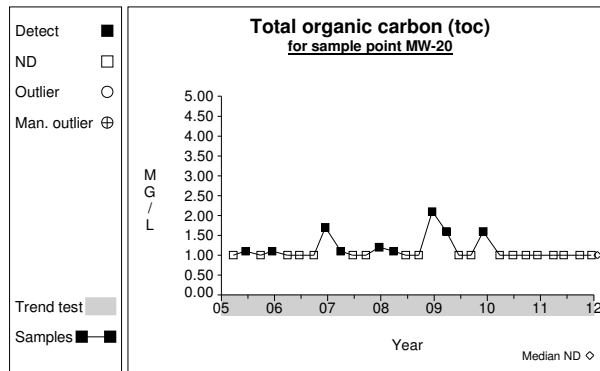
Graph 641



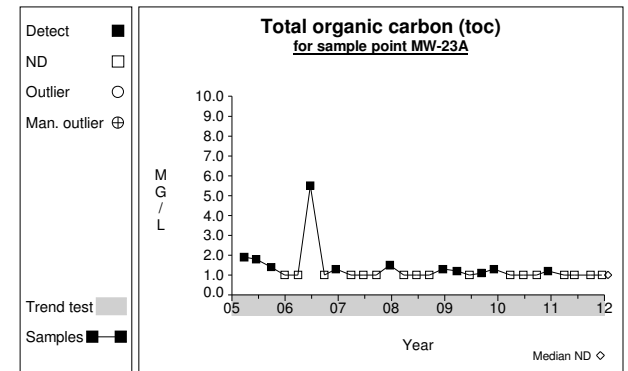
Graph 642



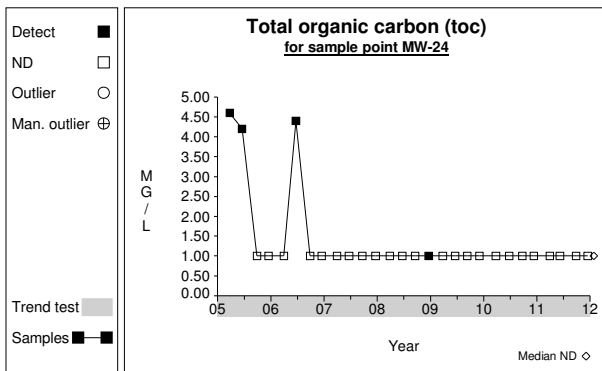
Graph 643



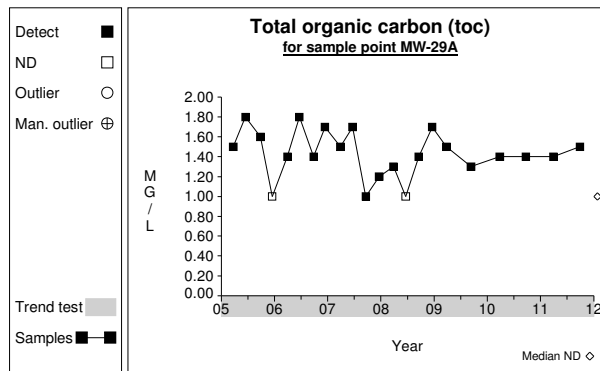
Graph 644



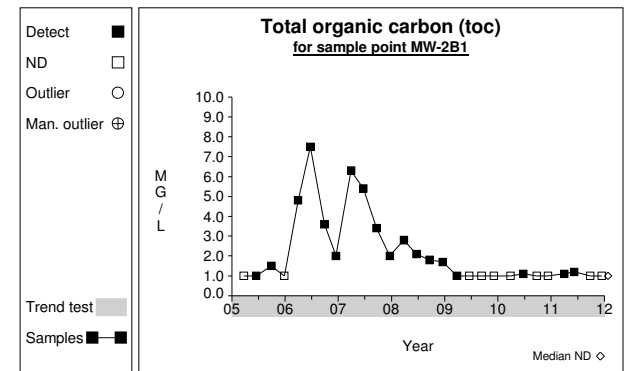
Graph 645



Graph 646

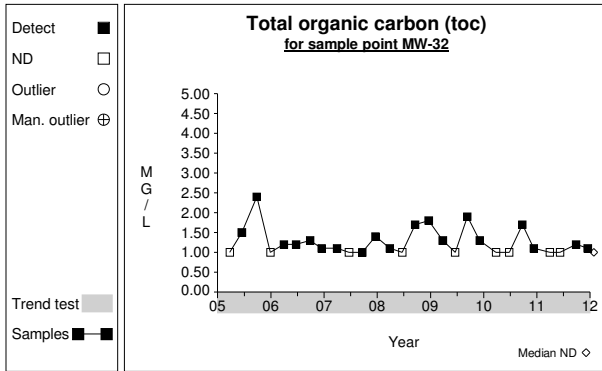


Graph 647

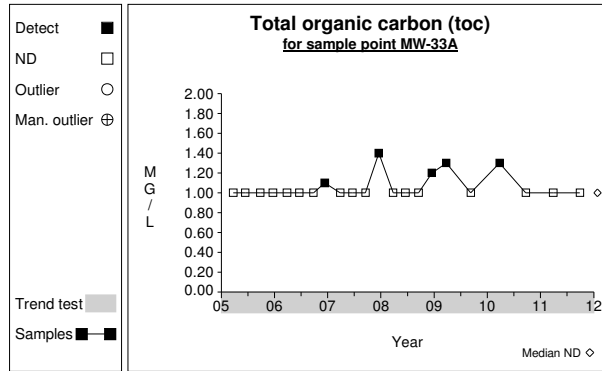


Graph 648

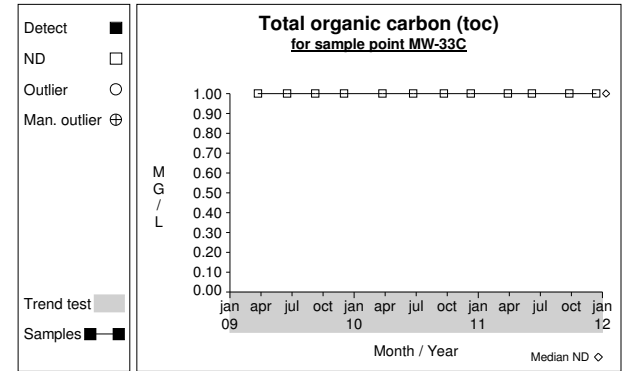
# Time Series



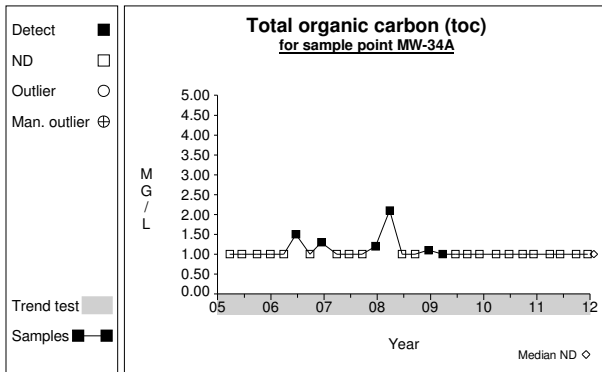
Graph 649



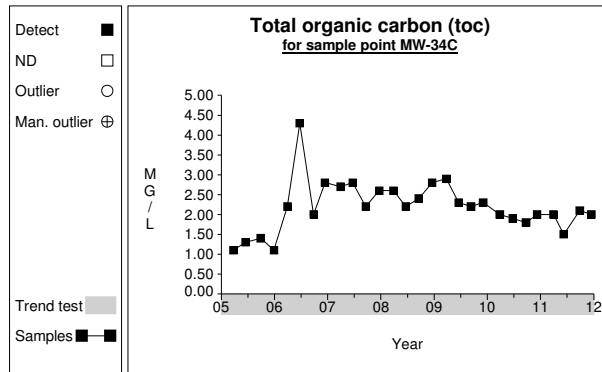
Graph 650



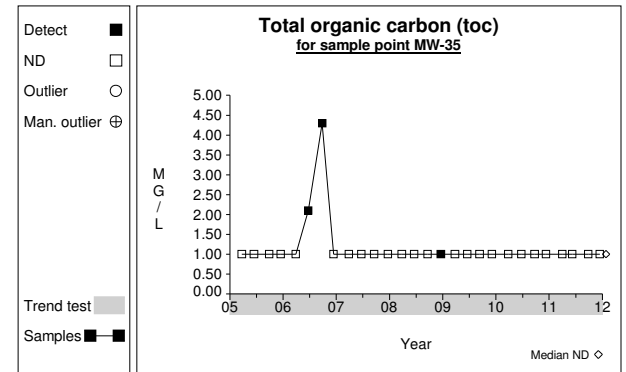
Graph 651



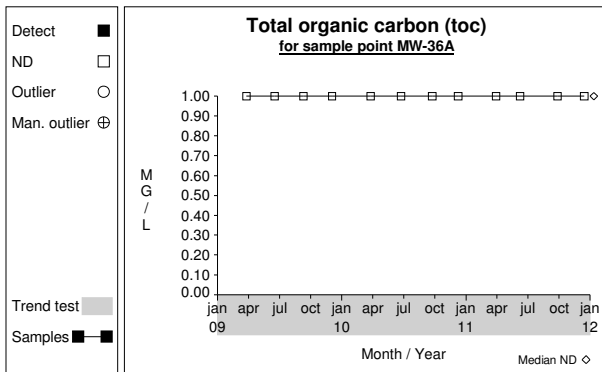
Graph 652



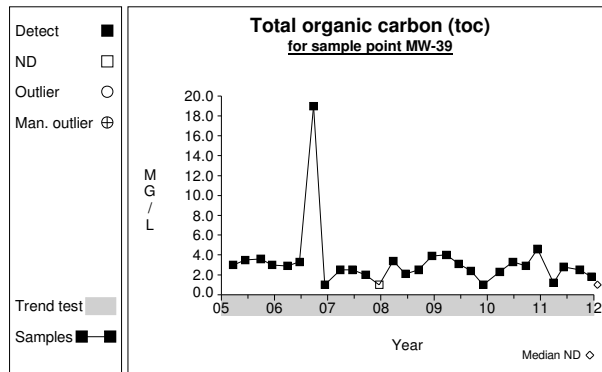
Graph 653



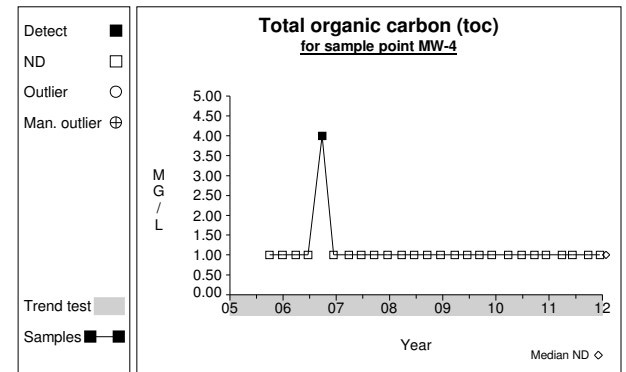
Graph 654



Graph 655

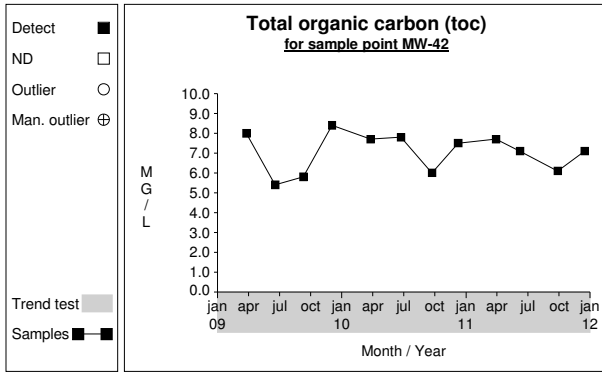


Graph 656

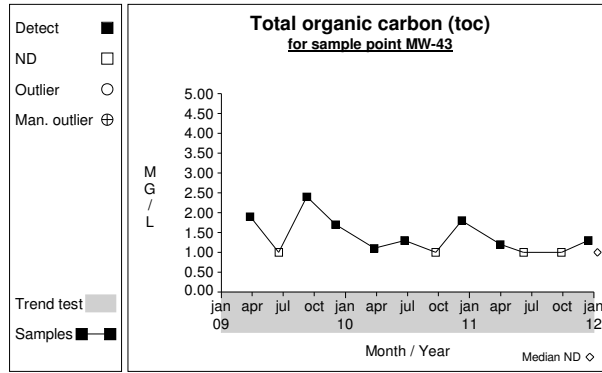


Graph 657

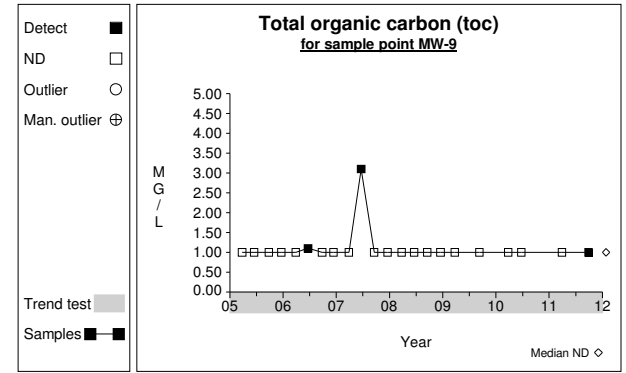
# Time Series



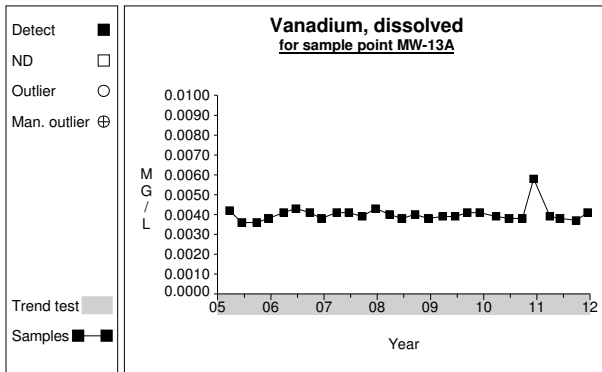
Graph 658



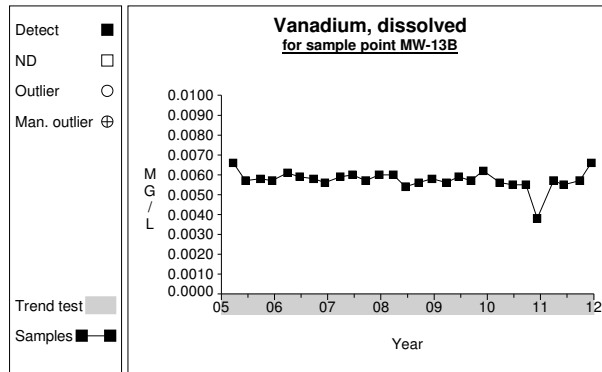
Graph 659



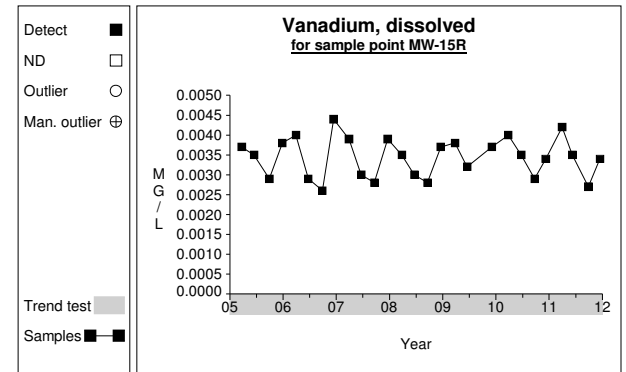
Graph 660



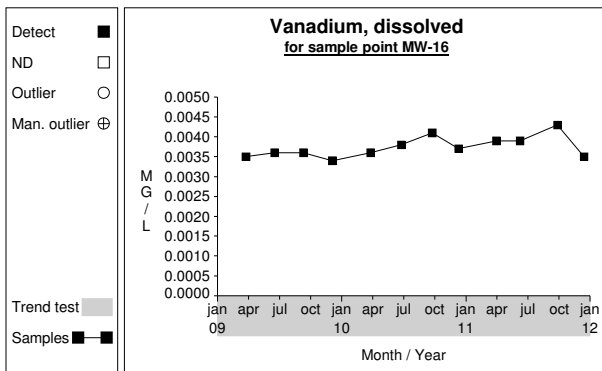
Graph 661



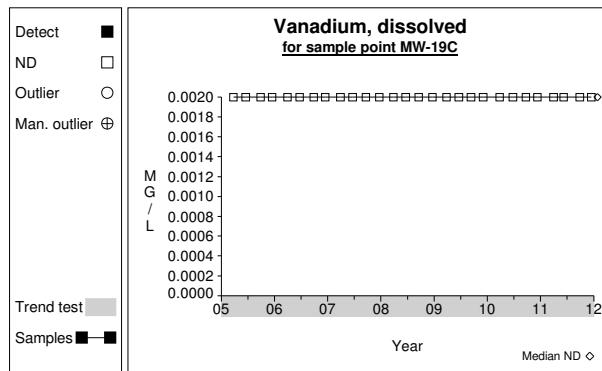
Graph 662



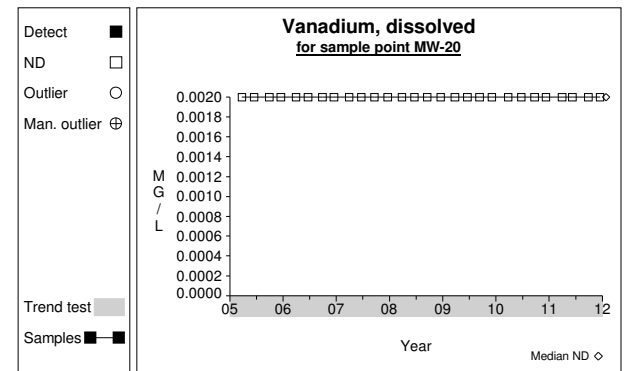
Graph 663



Graph 664

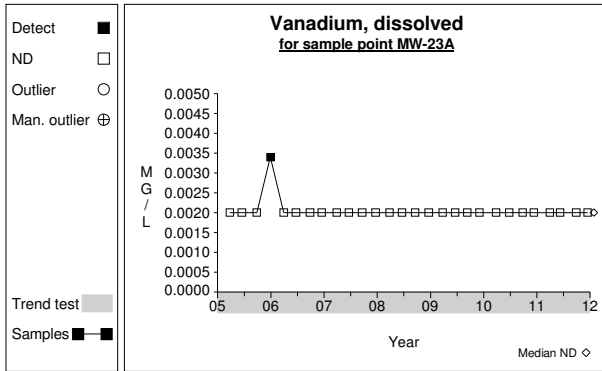


Graph 665

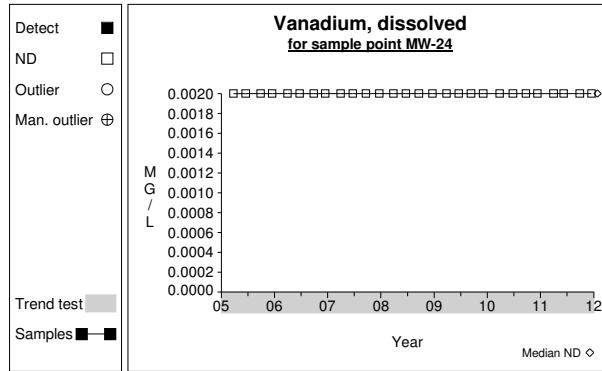


Graph 666

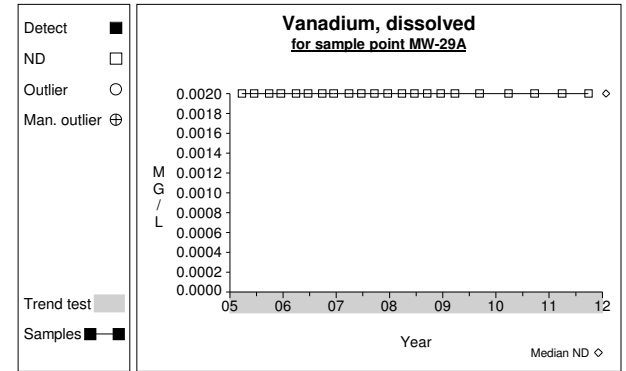
# Time Series



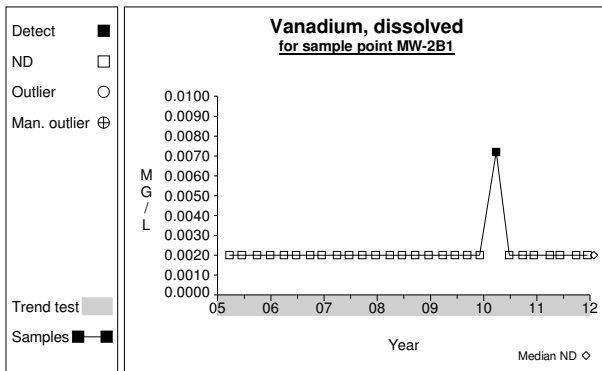
Graph 667



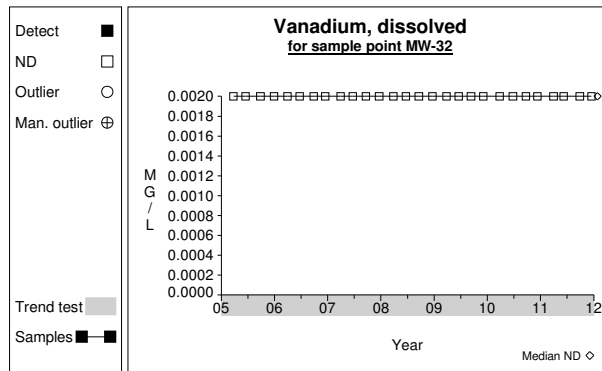
Graph 668



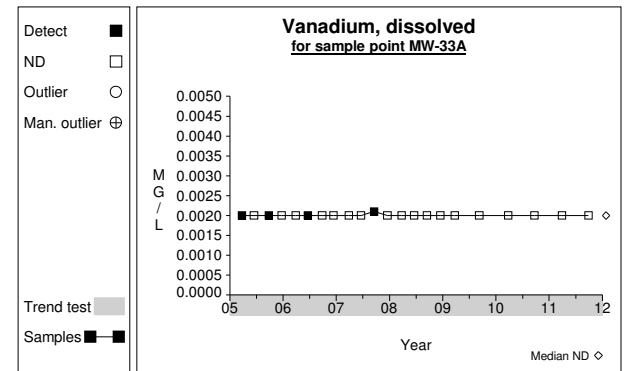
Graph 669



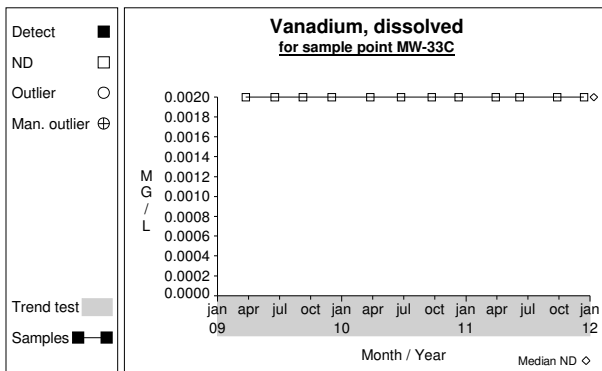
Graph 670



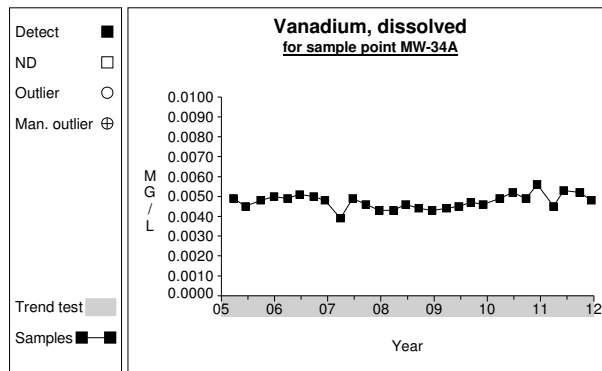
Graph 671



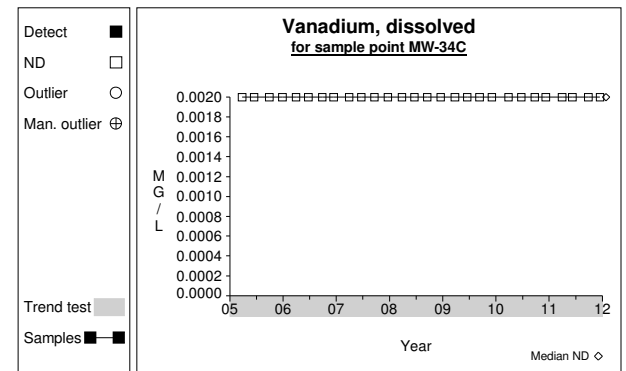
Graph 672



Graph 673

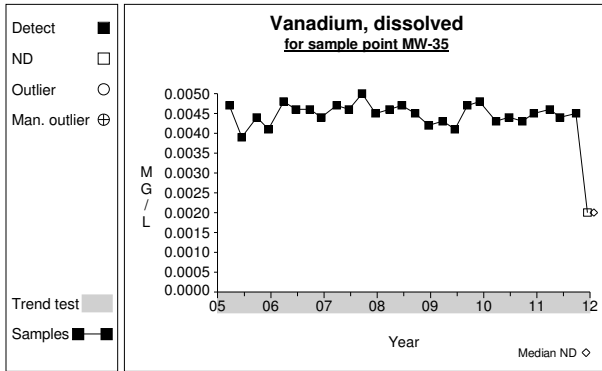


Graph 674

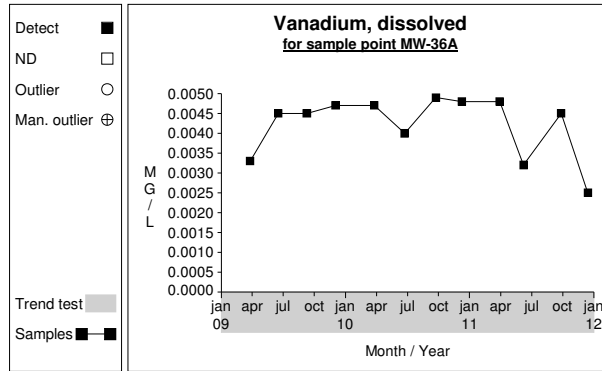


Graph 675

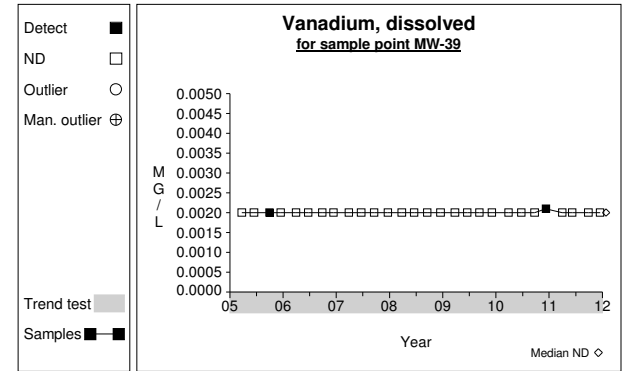
# Time Series



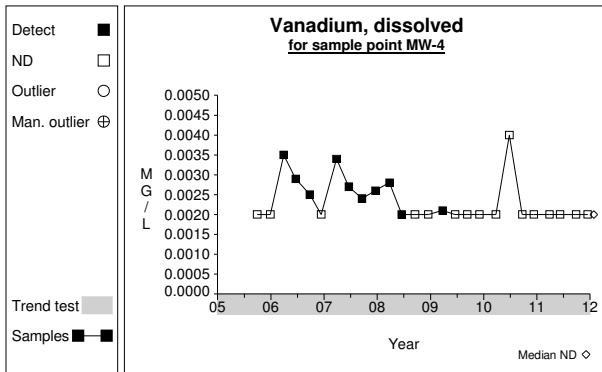
Graph 676



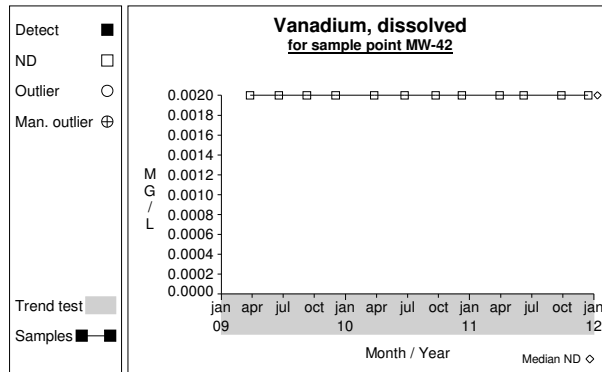
Graph 677



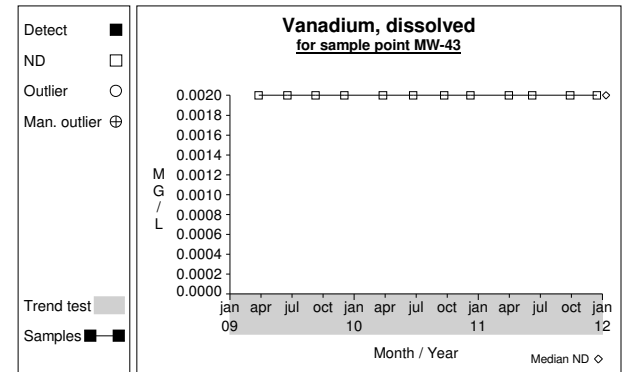
Graph 678



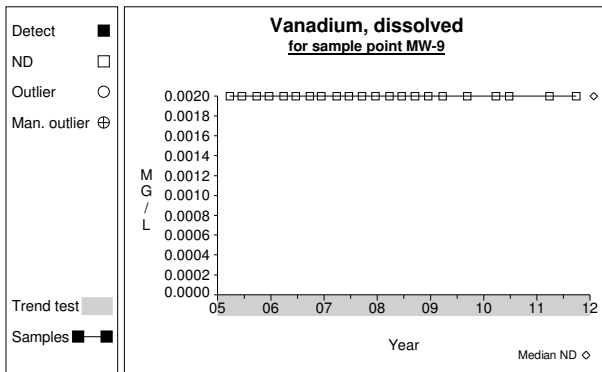
Graph 679



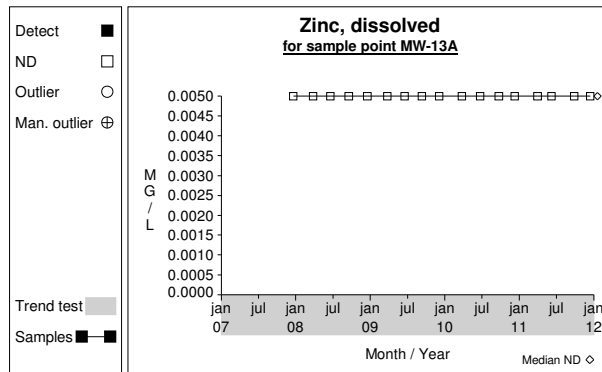
Graph 680



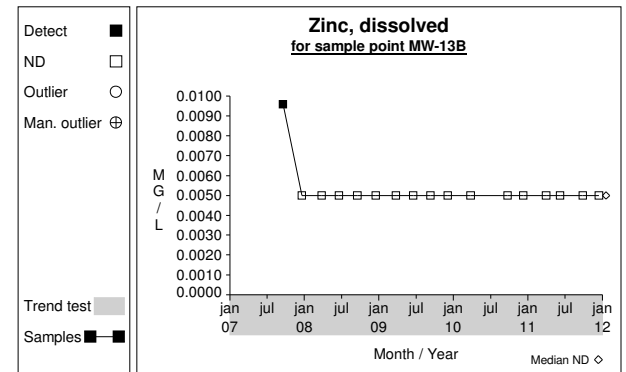
Graph 681



Graph 682

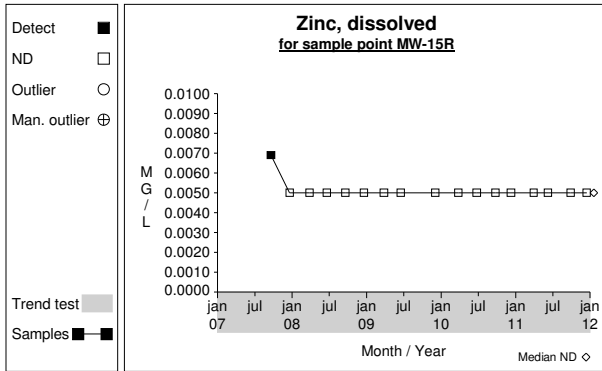


Graph 683

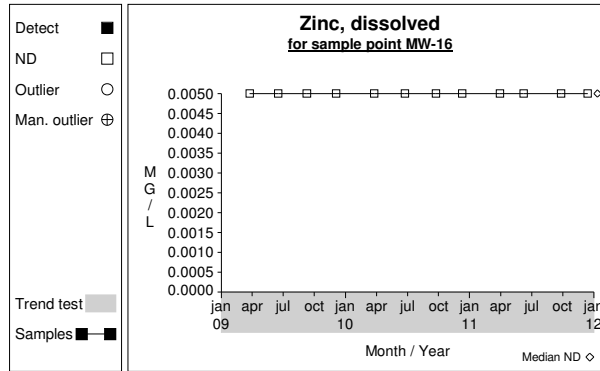


Graph 684

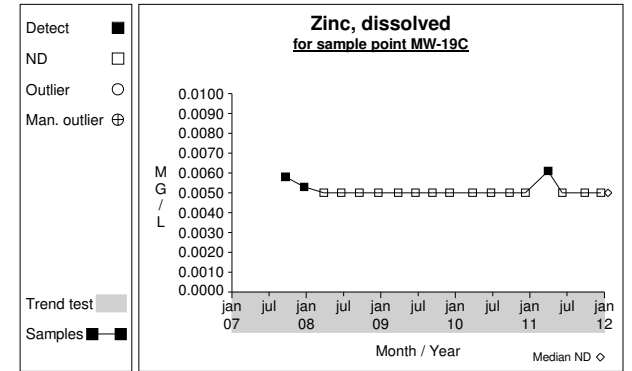
# Time Series



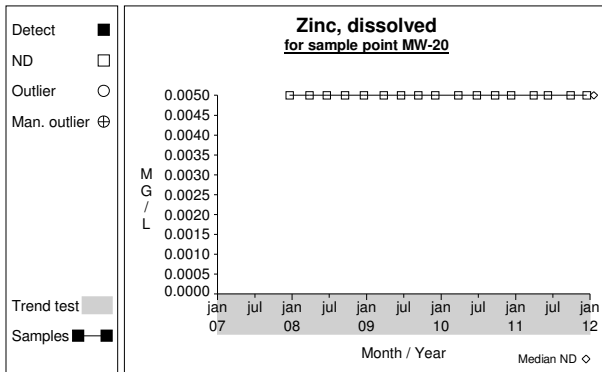
**Graph 685**



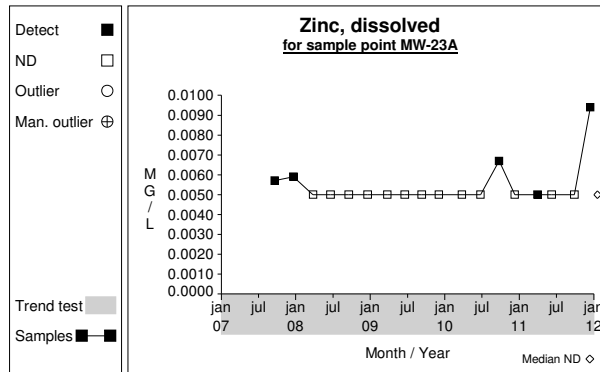
**Graph 686**



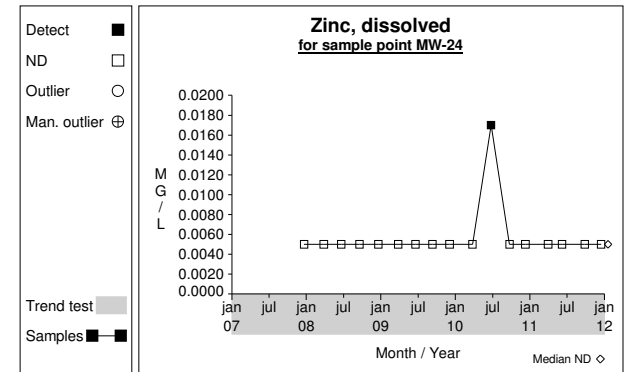
**Graph 687**



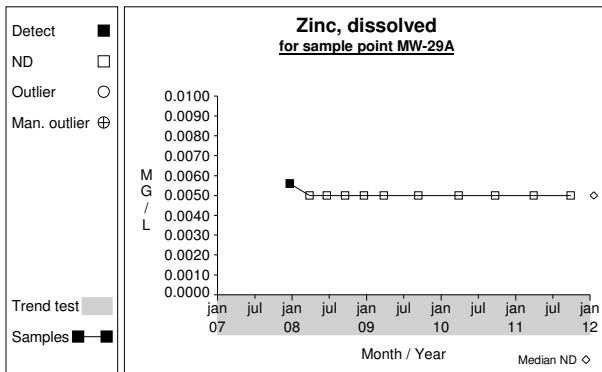
**Graph 688**



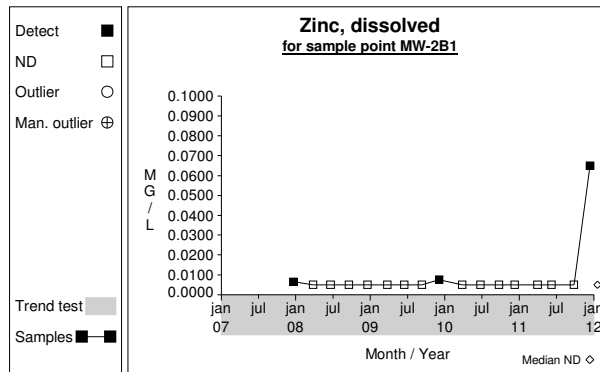
**Graph 689**



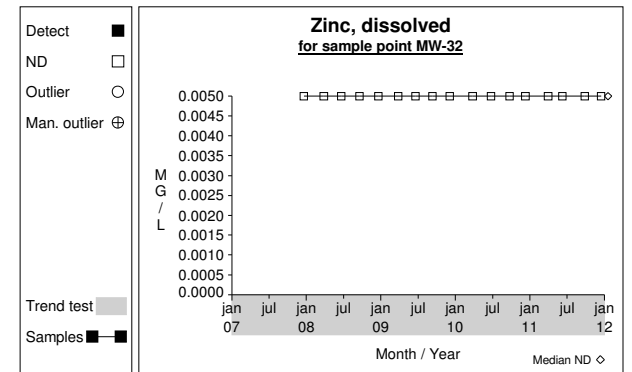
**Graph 690**



**Graph 691**

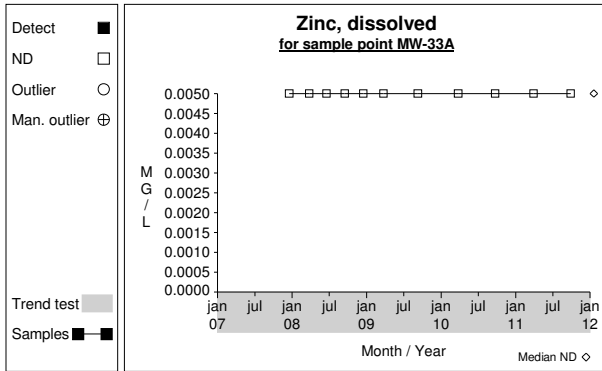


**Graph 692**

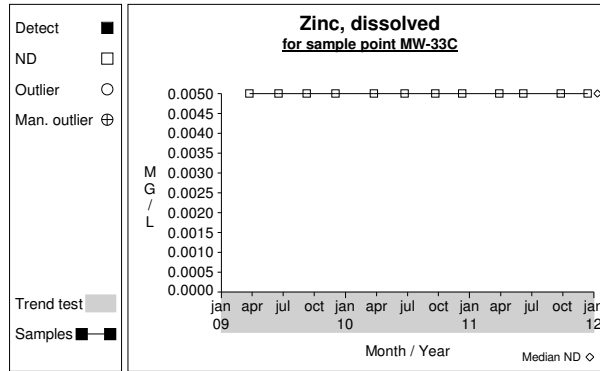


**Graph 693**

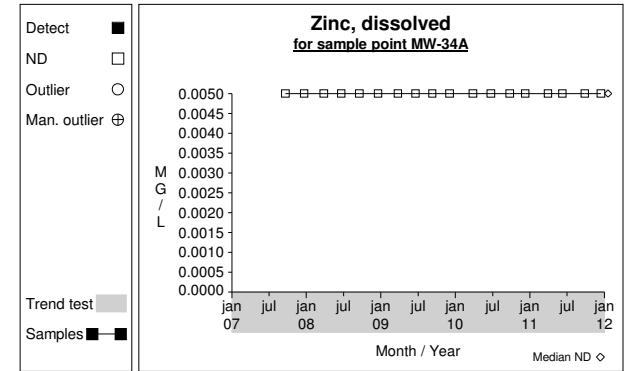
# Time Series



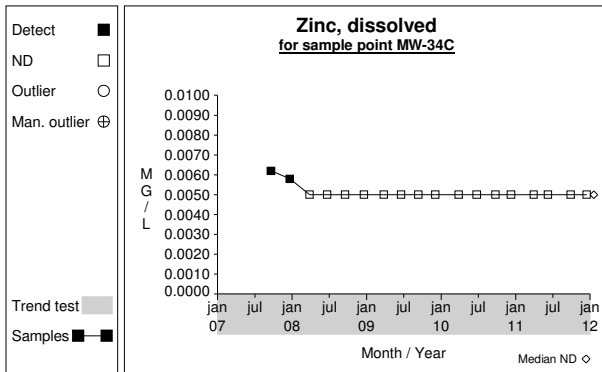
Graph 694



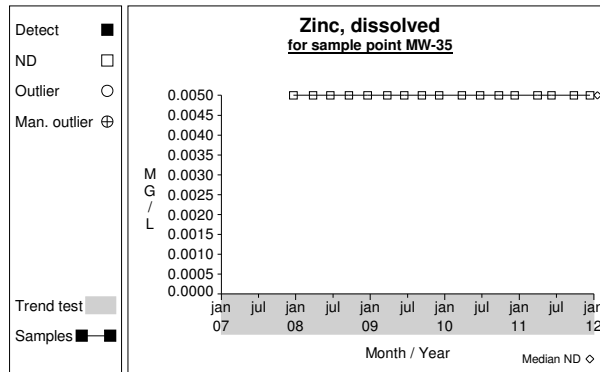
Graph 695



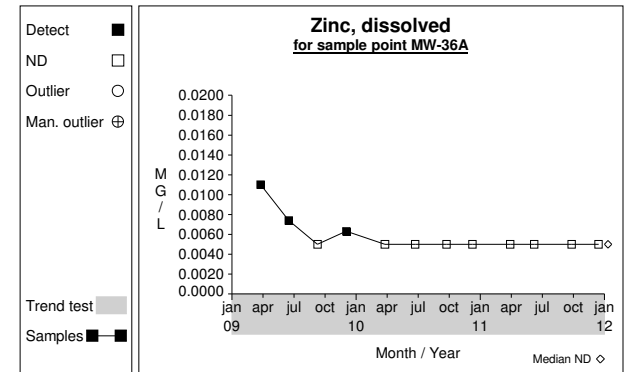
Graph 696



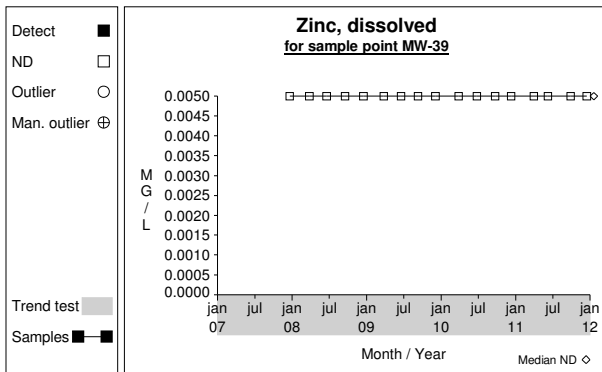
Graph 697



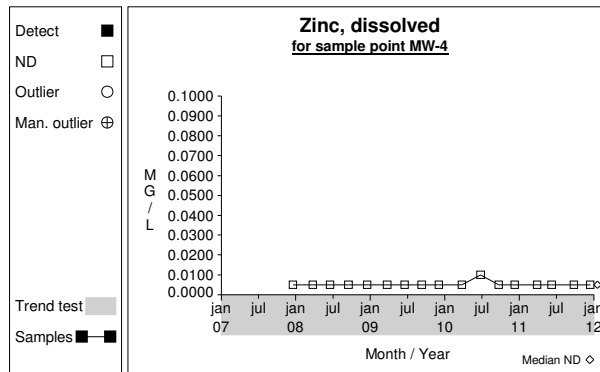
Graph 698



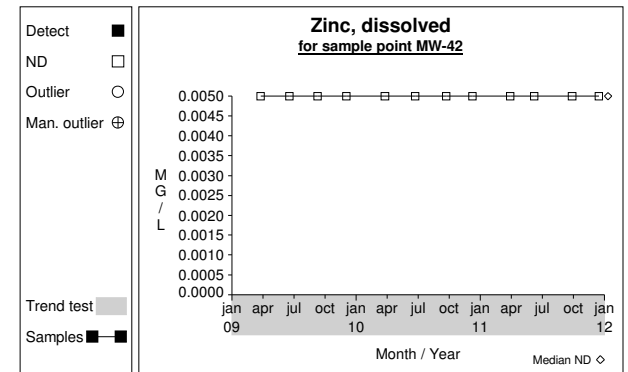
Graph 699



Graph 700



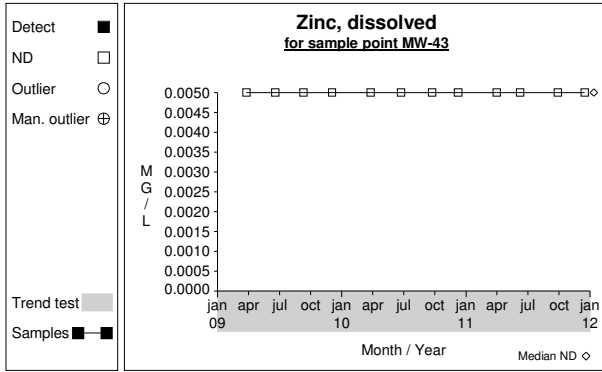
Graph 701



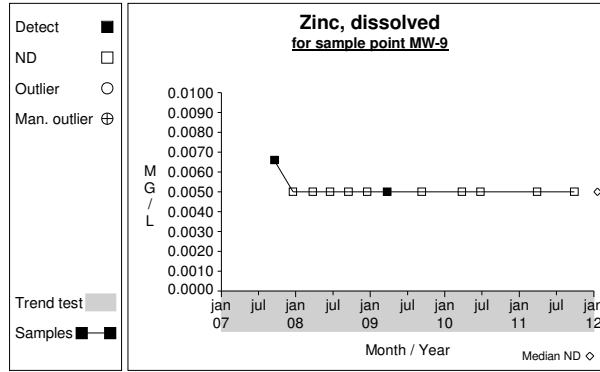
Graph 702



## Time Series



**Graph 703**



**Graph 704**

APPENDIX D  
LABORATORY DATA REPORTS  
AND DATA VALIDATION

*{Appendix D is included on the attached data CD to conserve paper}*

---

## Data Validation Report

### 1 Introduction

This memo presents the results of data validation on the reports for lot numbers 280-23764-1, 280-23838-1, 280-23869-1, by Test America (TA) Denver, Colorado. Reports by TA Buffalo, New York and Analytical Resources, Inc. (ARI), Tukwila, Washington (jobs UB71 and UB72) are included in the TA Denver Report. Sample identifications and the analyses requested are provided in the following table.

Sample Location	SCS Sample Identification	TA Sample Identification	ARI Sample Identification	Analysis
MW-13A	1211-01	280-23838-8	UB71N	<b>TA Denver:</b> Dissolved Metals (Be, Cr, Cu, Sb, Cd, Pb, Se, Ag, Tl, V, Zn, Ni, Mn, Hg, Sn): 6020; (Ba, Ca, Co, Fe, Mg, K, Na): 6010B General Chemistry (NO <sub>3</sub> , Cl, SO <sub>4</sub> ): 353.2, 9251, 300.0A; (NH <sub>3</sub> ): 350.1; (TOC): 5310B; (Bicarbonate, Carbonate, Total Alkalinity, TDS, Total Sulfide): 2320B, 2540C PCBs, Chlorinated Herbicides <b>ARI Tukwila</b> Dissolved Arsenic <b>TA Buffalo</b> Volatile Organic Compounds (VOCs, Selective Ion Monitoring): 8260B, 8260 B SIM
MW-13B	1211-02	280-23838-9	UB71O	
MW-15R	1211-03	280-23838-4	UB71J	
MW-16	1211-04	280-23764-3	UB71C	
MW-19C	1211-05	280-23838-7	UB71M	
MW-20	1211-06	280-23869-3	UB72C	
MW-23A	1211-07	280-23838-5	UB71K	
MW-24	1211-08	280-23869-5	UB72E	
MW-2B1	1211-09	280-23764-2	UB71B	
MW-32	1211-10	280-23869-6	UB72F	
MW-33C	1211-11	280-23764-1	UB71A	
MW-34A	1211-12	280-23838-2	UB71H	
MW-34C	1211-13	280-23838-1	UB71G	
MW-35	1211-14	280-23764-6	UB71F	
MW-36A	1211-15	280-23838-3	UB71I	
MW-39	1211-16	280-23869-4	UB72D	
MW-4	1211-17	280-23838-6	UB71L	



MW-42	1211-18	280-23869-2	UB72B	
MW-43	1211-19	280-23869-1	UB72A	

All samples were collected December 13 through 15, 2011.

## 2 Sample Handling and Custody Requirements

Samples were sent off site for analysis. Custody of the samples was controlled and documented on chain-of-custody forms. Unique sample identification numbers were recorded on the chain-of-custody forms along with date, time, matrix type, preservative, analyses required for each sample, and other required information. Sample custody was maintained throughout sample collection, transport, and laboratory receipt.

## 3 Holding Time

All analyses were performed within the recommended maximum holding time.

## 4 Method Blanks

The assessment of blank analysis results is to determine the existence and magnitude of contamination resulting from laboratory activities.

Alkalinity, Bicarbonate (As CaCO<sub>3</sub>), Alkalinity Total (As CaCO<sub>3</sub>), Manganese, Dissolved, Sodium, Dissolve, were recorded above the MDL but below the RL. These results were flagged by Test America with a "B". These detections did not adversely affect the data, so no further action was taken.

## 5 Laboratory Control Samples

Data for laboratory control samples (LCS) were provided in order to evaluate the accuracy and performance of the analytical method. GC and GC/MS method performance on individual samples is established by means of spiking system-monitoring compounds (surrogates) and internal standards, which are added just prior to analyses. Conformance with performance criteria ensures that instrument sensitivity and responses are stable throughout analysis.

Goals for LCS recovery were met for all methods except for 2-Chloroethyl vinyl ether, which was flagged by Test America with a "\*". These detections did not adversely affect the data, so no further action was taken.

## 6 Matrix Spike and Duplicate Analyses

The MS/MSDs on samples and batch blanks were out of control in several instances.

Ammonia (as N) recorded as greater than the MS/MSD spike amount. Test America has applied "F" flags to the associated data. No further action has been taken.



## 7 Laboratory Duplicate Precision

Laboratory duplicates were in control for all lots.

## 8 Field Duplicates

The following table summarizes the results from the field duplicate samples and their associated primary samples:

PARAMETER	MW-2B1	DUP1	RPD	MW-16	DUP2	RPD
Ammonia as N	1.1	1	9	ND	ND	
Barium, Dissolved	0.013	0.011	17	0.0062	0.0038	<b>48</b>
Alkalinity, Bicarbonate (As CaCO <sub>3</sub> )	150	130	14	65	60	8
Calcium, Dissolved	25	25	0	11	11	0
Chloride	7.7	7.4	4	2.3	2.1	9
Cobalt, Dissolved	ND	ND	NC	ND	ND	NC
Iron, Dissolved	0.13	0.13	0	ND	ND	NC
Magnesium, Dissolved	9	9.1	1	6.1	6.2	2
Manganese, Dissolved	2.6	2.6	0	0.00066	0.00052	<b>24</b>
Nitrate (as N)	0.48	0.48	0	1.1	1.1	0
Sodium, Dissolved	14	13	7	5.1	5.3	4
Sulfate	6.6	6.6	0	2.3	2.3	0
Alkalinity, Total (As CaCO <sub>3</sub> )	150	130	14	65	60	8
Total Dissolved Solids (TDS)	150	160	6	88	93	6
Total Organic Carbon (TOC)	0.88	0.86	2	0.29	0.26	11
Vanadium, Dissolved	0.00036	ND	NC	0.0037	0.0035	6
Numbers in bold are RPDs over acceptable limit of 20% J: result is estimated U: reporting limit (RL) is given as result						



## 8 Relative Percent Difference (RPD)

The RPDs for all analytes between duplicate sample MW-2B1 and DUP1, and MW-16 and DUP2 were within  $\leq 20\%$  RPD with the exception of Manganese, Dissolved and Barium, Dissolved. No flags have been applied, as all other QC requirements for manganese and barium were within control limits.

## Detection Limits

Analysis provided detection limits sufficiently low to allow site data to be compared to the Primary and Secondary Maximum Contaminant Level (MCL) standards, the WAC 173-200 Groundwater Quality Criterion and the Model Toxics Control Act: Method A Cleanup Level (MTCAA).

Detection limit goals were met for all results; analysis provided detection limits sufficiently low to allow site data to be compared to the applicable groundwater criteria or maximum contaminant level (MCL) standards.

## 9 Data Validation and Usability

With the exception of the above noted anomalies, standard analytical protocols were followed in the analysis of the samples and all laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits. Limitations are stated and clearly identified where applicable. When detected parameters were below the associated MRL, the value is changed to the MRL and flagged “U” or as a non-detect. As a result of this review, the data are found to be acceptable as reported by the laboratory for the intended use in this project.

Copper, Dissolved, were recorded above the MDL but below the RL. These results were flagged by Test America with a “^”. These detections did not adversely affect the data, so no further action was taken.



## ANALYTICAL REPORT

Job Number: 280-23764-1

Job Description: WA02|Olympic View Sanitary LF

For:

Waste Management  
2400 West Union Avenue  
Englewood, CO 80110

Attention: Mr. Steve Richtel



Approved for release.  
Betsy A Sara  
Project Manager II  
1/3/2012 9:01 AM

---

Betsy A Sara  
Project Manager II  
betsy.sara@testamericainc.com  
01/03/2012

cc: Mr. Sam Adlington  
Mr. Charles Luckie  
Ms. Emily Smart  
Mr. Dan Venchiarutti

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

**TestAmerica Laboratories, Inc.**

TestAmerica Denver 4955 Yarrow Street, Arvada, CO 80002  
Tel (303) 736-0100 Fax (303) 431-7171 [www.testamericainc.com](http://www.testamericainc.com)



# Table of Contents

Cover Title Page . . . . .	1
Report Narrative . . . . .	3
Executive Summary . . . . .	4
Method Summary . . . . .	9
Method / Analyst Summary . . . . .	10
Sample Summary . . . . .	11
Sample Results . . . . .	12
Sample Datasheets . . . . .	13
Data Qualifiers . . . . .	60
QC Results . . . . .	61
Qc Association Summary . . . . .	62
Surrogate Recovery Report . . . . .	68
Qc Reports . . . . .	69
Laboratory Chronicle . . . . .	96
Client Chain of Custody . . . . .	103
Sample Receipt Checklist . . . . .	108



## CASE NARRATIVE

Client: Waste Management

Project: WA02|Olympic View Sanitary LF

Report Number: 280-23764-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

This report may include reporting limits (RLs) less than TestAmerica's standard reporting limit. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

### Sample Receiving

The samples were received on 12/14/2011; the samples arrived in good condition, properly preserved and on ice. The temperatures of the cooler at receipt were 2.8C and 3.0C.

### Holding Times

All holding times were within established control limits.

### Method Blanks

Dissolved Sodium Method 6010B, Total Alkalinity and Bicarbonate Alkalinity Method 2320B were detected in the Method Blanks below the project established reporting limits. No corrective action is taken for any values in Method Blanks that are below the requested reporting limits. The Method Blank data are included at the end of this report.

All other Method Blank recoveries were within established control limits.

### Laboratory Control Samples (LCS)

All Laboratory Control Samples were within established control limits.

### Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

Sample MW-35 was selected to fulfill the laboratory batch quality control requirements for Method 350.1. Analysis of the laboratory generated MS/MSD for this sample exhibited recoveries of Ammonia above the upper control limit indicating the possible presence of a matrix interference.

All other MS and MSD samples were within established control limits.

### Metals

The Method 6020 continuing calibration verification (CCV) for Dissolved Copper associated with batch 100456 recovered above the upper control limit. The samples associated with this CCV were non-detect for Dissolved Copper; therefore, the data have been reported.

### General Comments

The analyses for Volatile Organics by Method 8260B and Volatile Organics by Method 8260B SIM were performed by TestAmerica Buffalo. Their address and phone number are:

TestAmerica Buffalo  
10 Hazelwood Drive, Suite 106  
Amherst, NY 14228  
716-691-2600

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-23764-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-23764-1</b>	<b>MW-33C</b>					
Depth to water		2.27			ft	Field Sampling
Specific Conductivity		151.0			umhos/cm	Field Sampling
Dissolved Oxygen		0.71			mg/L	Field Sampling
eH		-87.0			millivolts	Field Sampling
Turbidity		1.52			NTU	Field Sampling
Temperature		8.34			Degrees C	Field Sampling
pH		7.42			SU	Field Sampling
Sulfate		8.2		1.0	mg/L	300.0
Chloride		2.9		1.0	mg/L	9251
Alkalinity, Total (As CaCO3)		69	B	5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		69	B	5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		100		5.0	mg/L	SM 2540C
Total Organic Carbon - Average		0.21	J	1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		16		0.040	mg/L	6010B
Iron, Dissolved		0.035	J	0.060	mg/L	6010B
Magnesium, Dissolved		6.8		0.050	mg/L	6010B
Potassium, Dissolved		1.2		1.0	mg/L	6010B
Sodium, Dissolved		4.1	B	1.0	mg/L	6010B
Barium, Dissolved		0.0046		0.0010	mg/L	6020
Manganese, Dissolved		0.14		0.0010	mg/L	6020
Thallium, Dissolved		0.000040	J	0.0010	mg/L	6020

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-23764-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-23764-2</b>	<b>MW-2B1</b>					
Vinyl chloride		0.012	J	0.020	ug/L	8260B SIM
Depth to water		7.61			ft	Field Sampling
Specific Conductivity		261			umhos/cm	Field Sampling
Dissolved Oxygen		0.10			mg/L	Field Sampling
eH		72.0			millivolts	Field Sampling
Turbidity		2.76			NTU	Field Sampling
Temperature		12.22			Degrees C	Field Sampling
pH		6.23			SU	Field Sampling
Sulfate		6.6		1.0	mg/L	300.0
Ammonia (as N)		1.0		0.030	mg/L	350.1
Nitrate as N		0.48		0.050	mg/L	353.2
Chloride		7.4		1.0	mg/L	9251
Alkalinity, Total (As CaCO3)		130	B	5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		130	B	5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		160		5.0	mg/L	SM 2540C
Total Organic Carbon - Average		0.86	J	1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		25		0.040	mg/L	6010B
Iron, Dissolved		0.13		0.060	mg/L	6010B
Magnesium, Dissolved		9.1		0.050	mg/L	6010B
Potassium, Dissolved		2.1		1.0	mg/L	6010B
Sodium, Dissolved		13	B	1.0	mg/L	6010B
Barium, Dissolved		0.011		0.0010	mg/L	6020
Manganese, Dissolved		2.6		0.0010	mg/L	6020
Nickel, Dissolved		0.0017	J	0.0040	mg/L	6020
Zinc, Dissolved		0.065		0.0050	mg/L	6020

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-23764-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-23764-3</b>	<b>MW-16</b>					
Depth to water		61.02			ft	Field Sampling
Specific Conductivity		120.0			umhos/cm	Field Sampling
Dissolved Oxygen		3.80			mg/L	Field Sampling
eH		141.0			millivolts	Field Sampling
Turbidity		4.73			NTU	Field Sampling
Temperature		8.84			Degrees C	Field Sampling
pH		6.30			SU	Field Sampling
Sulfate		2.3		1.0	mg/L	300.0
Nitrate as N		1.1		0.050	mg/L	353.2
Chloride		2.1		1.0	mg/L	9251
Alkalinity, Total (As CaCO3)		60	B	5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		60	B	5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		93		5.0	mg/L	SM 2540C
Total Organic Carbon - Average		0.26	J	1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		11		0.040	mg/L	6010B
Magnesium, Dissolved		6.2		0.050	mg/L	6010B
Potassium, Dissolved		0.76	J	1.0	mg/L	6010B
Sodium, Dissolved		5.3	B	1.0	mg/L	6010B
Barium, Dissolved		0.0038		0.0010	mg/L	6020
Cadmium, Dissolved		0.000050	J	0.00020	mg/L	6020
Chromium, Dissolved		0.0073		0.0030	mg/L	6020
Manganese, Dissolved		0.00052	J	0.0010	mg/L	6020
Nickel, Dissolved		0.0015	J	0.0040	mg/L	6020
Vanadium, Dissolved		0.0035		0.0020	mg/L	6020

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-23764-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-23764-4FD</b>	<b>DUP1</b>					
Vinyl chloride		0.012	J	0.020	ug/L	8260B SIM
Sulfate		6.6		1.0	mg/L	300.0
Ammonia (as N)		1.1		0.030	mg/L	350.1
Nitrate as N		0.48		0.050	mg/L	353.2
Chloride		7.7		1.0	mg/L	9251
Alkalinity, Total (As CaCO3)		150	B	5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		150	B	5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		150		5.0	mg/L	SM 2540C
Total Organic Carbon - Average		0.88	J	1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		25		0.040	mg/L	6010B
Iron, Dissolved		0.13		0.060	mg/L	6010B
Magnesium, Dissolved		9.0		0.050	mg/L	6010B
Potassium, Dissolved		2.0		1.0	mg/L	6010B
Sodium, Dissolved		14	B	1.0	mg/L	6010B
Barium, Dissolved		0.013		0.0010	mg/L	6020
Manganese, Dissolved		2.6		0.0010	mg/L	6020
Nickel, Dissolved		0.0015	J	0.0040	mg/L	6020
Vanadium, Dissolved		0.00036	J	0.0020	mg/L	6020
<b>280-23764-5FD</b>	<b>DUP2</b>					
Sulfate		2.3		1.0	mg/L	300.0
Nitrate as N		1.1		0.050	mg/L	353.2
Chloride		2.3		1.0	mg/L	9251
Alkalinity, Total (As CaCO3)		65	B	5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		65	B	5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		88		5.0	mg/L	SM 2540C
Total Organic Carbon - Average		0.29	J	1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		11		0.040	mg/L	6010B
Magnesium, Dissolved		6.1		0.050	mg/L	6010B
Potassium, Dissolved		0.72	J	1.0	mg/L	6010B
Sodium, Dissolved		5.1	B	1.0	mg/L	6010B
Barium, Dissolved		0.0062		0.0010	mg/L	6020
Chromium, Dissolved		0.0072		0.0030	mg/L	6020
Manganese, Dissolved		0.00066	J	0.0010	mg/L	6020
Nickel, Dissolved		0.0016	J	0.0040	mg/L	6020
Vanadium, Dissolved		0.0037		0.0020	mg/L	6020

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-23764-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-23764-6</b>	<b>MW-35</b>					
Depth to water		72.37			ft	Field Sampling
Specific Conductivity		148.0			umhos/cm	Field Sampling
Dissolved Oxygen		4.42			mg/L	Field Sampling
eH		133.0			millivolts	Field Sampling
Turbidity		1.04			NTU	Field Sampling
Temperature		9.41			Degrees C	Field Sampling
pH		7.00			SU	Field Sampling
Sulfate		2.5		1.0	mg/L	300.0
Nitrate as N		0.39		0.050	mg/L	353.2
Chloride		3.2		1.0	mg/L	9251
Alkalinity, Total (As CaCO3)		77	B	5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		77	B	5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		95		5.0	mg/L	SM 2540C
Total Organic Carbon - Average		0.36	J	1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		14		0.040	mg/L	6010B
Magnesium, Dissolved		8.8		0.050	mg/L	6010B
Potassium, Dissolved		0.47	J	1.0	mg/L	6010B
Sodium, Dissolved		5.1	B	1.0	mg/L	6010B
Barium, Dissolved		0.0033	J	0.0050	mg/L	6020
Vanadium, Dissolved		0.0044	J	0.010	mg/L	6020

## METHOD SUMMARY

Client: Waste Management

Job Number: 280-23764-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals			SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Metals (ICP/MS)	TAL DEN	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals			SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Anions, Ion Chromatography	TAL DEN	MCAWW 300.0	
Nitrogen, Ammonia	TAL DEN	MCAWW 350.1	
Nitrate	TAL DEN	EPA 353.2	
Chloride	TAL DEN	SW846 9251	
Alkalinity	TAL DEN	SM SM 2320B	
Solids, Total Dissolved (TDS)	TAL DEN	SM SM 2540C	
Organic Carbon, Total (TOC)	TAL DEN	SM SM 5310B	
Field Sampling	TAL DEN	EPA Field Sampling	
Volatile Organic Compounds (GC/MS)	TAL BUF	SW846 8260B	
Purge and Trap	TAL BUF		SW846 5030B
Volatile Organic Compounds (GC/MS)	TAL BUF	SW846 8260B SIM	
Purge and Trap	TAL BUF		SW846 5030B

**Lab References:**

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver

**Method References:**

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

## METHOD / ANALYST SUMMARY

Client: Waste Management

Job Number: 280-23764-1

<b>Method</b>	<b>Analyst</b>	<b>Analyst ID</b>
SW846 8260B	Cwiklinski, Charles D	CDC
SW846 8260B SIM	Brandt, Todd R	TRB
SW846 6010B	Bowen, Heidi E	HEB
SW846 6020	Trudell, Lynn-Anne	LT
EPA Field Sampling	Field, Sampler	FS
MCAWW 300.0	Kudla, Ewa	EK
MCAWW 350.1	Doherty, Jillian A	JAD
EPA 353.2	Sullivan, Roxanne	RS
SW846 9251	Allen, Andrew J	AJA
SM SM 2320B	Elkin, David	DE
SM SM 2540C	Domnick, Brandon J	BJD
SM SM 5310B	Yates, George E	GEY



## SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-23764-1

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
280-23764-1	MW-33C	Water	12/13/2011 1149	12/14/2011 1114
280-23764-2	MW-2B1	Water	12/13/2011 1255	12/14/2011 1114
280-23764-3	MW-16	Water	12/13/2011 1339	12/14/2011 1114
280-23764-4FD	DUP1	Water	12/13/2011 1255	12/14/2011 1114
280-23764-5FD	DUP2	Water	12/13/2011 1339	12/14/2011 1114
280-23764-6	MW-35	Water	12/13/2011 1442	12/14/2011 1114
280-23764-6MS	MW-35	Water	12/13/2011 1442	12/14/2011 1114
280-23764-6MSD	MW-35	Water	12/13/2011 1442	12/14/2011 1114
280-23764-7TB	TRIP BLANK	Water	12/13/2011 1149	12/14/2011 1114

# SAMPLE RESULTS

## Analytical Data

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID:** MW-33C

Lab Sample ID: 280-23764-1

Date Sampled: 12/13/2011 1149

Client Matrix: Water

Date Received: 12/14/2011 1114

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4681.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1320			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1320				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

## Analytical Data

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID:** MW-33C

Lab Sample ID: 280-23764-1

Date Sampled: 12/13/2011 1149

Client Matrix: Water

Date Received: 12/14/2011 1114

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4681.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1320			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1320				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0

**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: MW-33C**

Lab Sample ID: 280-23764-1

Date Sampled: 12/13/2011 1149

Client Matrix: Water

Date Received: 12/14/2011 1114

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4681.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1320			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1320				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	104		66 - 137
4-Bromofluorobenzene (Surr)	98		73 - 120
Toluene-d8 (Surr)	103		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: MW-33C**

Lab Sample ID: 280-23764-1

Date Sampled: 12/13/2011 1149

Client Matrix: Water

Date Received: 12/14/2011 1114

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4681.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1320			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1320				

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

## Analytical Data

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: MW-2B1**

Lab Sample ID: 280-23764-2

Date Sampled: 12/13/2011 1255

Client Matrix: Water

Date Received: 12/14/2011 1114

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4682.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1343			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1343				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

## Analytical Data

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID:** MW-2B1

Lab Sample ID: 280-23764-2

Date Sampled: 12/13/2011 1255

Client Matrix: Water

Date Received: 12/14/2011 1114

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4682.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1343			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1343				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0



**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: MW-2B1**

Lab Sample ID: 280-23764-2

Date Sampled: 12/13/2011 1255

Client Matrix: Water

Date Received: 12/14/2011 1114

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4682.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1343			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1343				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100		66 - 137
4-Bromofluorobenzene (Surr)	96		73 - 120
Toluene-d8 (Surr)	103		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: MW-2B1**

Lab Sample ID: 280-23764-2

Date Sampled: 12/13/2011 1255

Client Matrix: Water

Date Received: 12/14/2011 1114

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4682.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1343			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1343				

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

## Analytical Data

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: MW-16**

Lab Sample ID: 280-23764-3

Date Sampled: 12/13/2011 1339

Client Matrix: Water

Date Received: 12/14/2011 1114

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4683.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1406			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1406				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

## Analytical Data

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: MW-16**

Lab Sample ID: 280-23764-3

Date Sampled: 12/13/2011 1339

Client Matrix: Water

Date Received: 12/14/2011 1114

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4683.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1406			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1406				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0

**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: MW-16**

Lab Sample ID: 280-23764-3

Date Sampled: 12/13/2011 1339

Client Matrix: Water

Date Received: 12/14/2011 1114

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4683.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1406			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1406				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	104		66 - 137
4-Bromofluorobenzene (Surr)	100		73 - 120
Toluene-d8 (Surr)	107		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: MW-16**

Lab Sample ID: 280-23764-3

Date Sampled: 12/13/2011 1339

Client Matrix: Water

Date Received: 12/14/2011 1114

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4683.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1406			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1406				

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

## Analytical Data

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID:** DUP1

Lab Sample ID: 280-23764-4FD

Date Sampled: 12/13/2011 1255

Client Matrix: Water

Date Received: 12/14/2011 1114

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4684.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1429			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1429				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

## Analytical Data

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID:** DUP1

Lab Sample ID: 280-23764-4FD

Date Sampled: 12/13/2011 1255

Client Matrix: Water

Date Received: 12/14/2011 1114

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4684.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1429			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1429				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0



**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: DUP1**

Lab Sample ID: 280-23764-4FD

Date Sampled: 12/13/2011 1255

Client Matrix: Water

Date Received: 12/14/2011 1114

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4684.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1429			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1429				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102		66 - 137
4-Bromofluorobenzene (Surr)	98		73 - 120
Toluene-d8 (Surr)	103		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: DUP1**

Lab Sample ID: 280-23764-4FD

Date Sampled: 12/13/2011 1255

Client Matrix: Water

Date Received: 12/14/2011 1114

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4684.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1429			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1429				

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

## Analytical Data

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID:** DUP2

Lab Sample ID: 280-23764-5FD

Date Sampled: 12/13/2011 1339

Client Matrix: Water

Date Received: 12/14/2011 1114

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4685.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1452			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1452				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

## Analytical Data

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID:** DUP2

Lab Sample ID: 280-23764-5FD

Date Sampled: 12/13/2011 1339

Client Matrix: Water

Date Received: 12/14/2011 1114

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4685.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1452			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1452				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0

**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: DUP2**

Lab Sample ID: 280-23764-5FD

Date Sampled: 12/13/2011 1339

Client Matrix: Water

Date Received: 12/14/2011 1114

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4685.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1452			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1452				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	104		66 - 137
4-Bromofluorobenzene (Surr)	95		73 - 120
Toluene-d8 (Surr)	103		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: DUP2**

Lab Sample ID: 280-23764-5FD

Date Sampled: 12/13/2011 1339

Client Matrix: Water

Date Received: 12/14/2011 1114

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method: 8260B

Analysis Batch: 480-45687

Instrument ID: HP5973N

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: N4685.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Analysis Date: 12/22/2011 1452

Final Weight/Volume: 5 mL

Prep Date: 12/22/2011 1452

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

## Analytical Data

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID:** MW-35

Lab Sample ID: 280-23764-6

Date Sampled: 12/13/2011 1442

Client Matrix: Water

Date Received: 12/14/2011 1114

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4686.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1516			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1516				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

## Analytical Data

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: MW-35**

Lab Sample ID: 280-23764-6

Date Sampled: 12/13/2011 1442

Client Matrix: Water

Date Received: 12/14/2011 1114

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4686.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1516			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1516				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0



**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: MW-35**

Lab Sample ID: 280-23764-6

Date Sampled: 12/13/2011 1442

Client Matrix: Water

Date Received: 12/14/2011 1114

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4686.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1516			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1516				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	103		66 - 137
4-Bromofluorobenzene (Surr)	96		73 - 120
Toluene-d8 (Surr)	102		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: MW-35**

Lab Sample ID: 280-23764-6

Date Sampled: 12/13/2011 1442

Client Matrix: Water

Date Received: 12/14/2011 1114

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N4686.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1516			Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1516				

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: MW-33C**

Lab Sample ID: 280-23764-1

Date Sampled: 12/13/2011 1149

Client Matrix: Water

Date Received: 12/14/2011 1114

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3706.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 1419			Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 1419				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.0040	0.020

**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: MW-2B1**

Lab Sample ID: 280-23764-2

Date Sampled: 12/13/2011 1255

Client Matrix: Water

Date Received: 12/14/2011 1114

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3707.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 1442			Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 1442				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.012	J	0.0040	0.020

**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: MW-16**

Lab Sample ID: 280-23764-3

Date Sampled: 12/13/2011 1339

Client Matrix: Water

Date Received: 12/14/2011 1114

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3708.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 1506			Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 1506				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.0040	0.020

**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: DUP1**

Lab Sample ID: 280-23764-4FD

Date Sampled: 12/13/2011 1255

Client Matrix: Water

Date Received: 12/14/2011 1114

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3709.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 1530			Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 1530				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.012	J	0.0040	0.020

**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: DUP2**

Lab Sample ID: 280-23764-5FD

Date Sampled: 12/13/2011 1339

Client Matrix: Water

Date Received: 12/14/2011 1114

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3710.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 1554			Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 1554				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.0040	0.020

**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: MW-35**

Lab Sample ID: 280-23764-6

Date Sampled: 12/13/2011 1442

Client Matrix: Water

Date Received: 12/14/2011 1114

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3711.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 1617			Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 1617				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.0040	0.020



**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 280-23764-7TB

Date Sampled: 12/13/2011 1149

Client Matrix: Water

Date Received: 12/14/2011 1114

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3714.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 1729			Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 1729				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.0040	0.020

**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: MW-33C**

Lab Sample ID: 280-23764-1

Date Sampled: 12/13/2011 1149

Client Matrix: Water

Date Received: 12/14/2011 1114

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-100469	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-100021	Lab File ID:	26c121611.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/16/2011 2039			Final Weight/Volume:	50 mL
Prep Date:	12/16/2011 0645				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Dissolved	16		0.035	0.040
Cobalt, Dissolved	ND		0.0012	0.0030
Iron, Dissolved	0.035	J	0.022	0.060
Magnesium, Dissolved	6.8		0.011	0.050
Potassium, Dissolved	1.2		0.24	1.0
Sodium, Dissolved	4.1	B	0.092	1.0

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-100456	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-100099	Lab File ID:	115SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/16/2011 1800			Final Weight/Volume:	50 mL
Prep Date:	12/16/2011 0645				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Antimony, Dissolved	ND		0.00020	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	ND		0.000040	0.00020
Chromium, Dissolved	ND		0.00050	0.0030
Copper, Dissolved	ND	^	0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	0.14		0.00031	0.0010
Nickel, Dissolved	ND		0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	0.000040	J	0.000033	0.0010
Vanadium, Dissolved	ND		0.00033	0.0020
Zinc, Dissolved	ND		0.0020	0.0050

Analysis Method:	6020	Analysis Batch:	280-101236	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-100099	Lab File ID:	023SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/22/2011 1659			Final Weight/Volume:	50 mL
Prep Date:	12/16/2011 0645				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Barium, Dissolved	0.0046		0.00029	0.0010

**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID:** MW-2B1

Lab Sample ID: 280-23764-2

Date Sampled: 12/13/2011 1255

Client Matrix: Water

Date Received: 12/14/2011 1114

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-100469	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-100021	Lab File ID:	26c121611.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/16/2011 2042			Final Weight/Volume:	50 mL
Prep Date:	12/16/2011 0645				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Dissolved	25		0.035	0.040
Cobalt, Dissolved	ND		0.0012	0.0030
Iron, Dissolved	0.13		0.022	0.060
Magnesium, Dissolved	9.1		0.011	0.050
Potassium, Dissolved	2.1		0.24	1.0
Sodium, Dissolved	13	B	0.092	1.0

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-100456	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-100099	Lab File ID:	116SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/16/2011 1803			Final Weight/Volume:	50 mL
Prep Date:	12/16/2011 0645				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Antimony, Dissolved	ND		0.00020	0.0010
Barium, Dissolved	0.011		0.00029	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	ND		0.000040	0.00020
Chromium, Dissolved	ND		0.00050	0.0030
Copper, Dissolved	ND	^	0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	2.6		0.00031	0.0010
Nickel, Dissolved	0.0017	J	0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	ND		0.000033	0.0010
Vanadium, Dissolved	ND		0.00033	0.0020
Zinc, Dissolved	0.065		0.0020	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: MW-16**

Lab Sample ID: 280-23764-3

Date Sampled: 12/13/2011 1339

Client Matrix: Water

Date Received: 12/14/2011 1114

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-100469	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-100021	Lab File ID:	26c121611.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/16/2011 2044			Final Weight/Volume:	50 mL
Prep Date:	12/16/2011 0645				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Dissolved	11		0.035	0.040
Cobalt, Dissolved	ND		0.0012	0.0030
Iron, Dissolved	ND		0.022	0.060
Magnesium, Dissolved	6.2		0.011	0.050
Potassium, Dissolved	0.76	J	0.24	1.0
Sodium, Dissolved	5.3	B	0.092	1.0

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-100456	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-100099	Lab File ID:	117SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/16/2011 1805			Final Weight/Volume:	50 mL
Prep Date:	12/16/2011 0645				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Antimony, Dissolved	ND		0.00020	0.0010
Barium, Dissolved	0.0038		0.00029	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	0.000050	J	0.000040	0.00020
Chromium, Dissolved	0.0073		0.00050	0.0030
Copper, Dissolved	ND	^	0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	0.00052	J	0.00031	0.0010
Nickel, Dissolved	0.0015	J	0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	ND		0.000033	0.0010
Vanadium, Dissolved	0.0035		0.00033	0.0020
Zinc, Dissolved	ND		0.0020	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID:** DUP1

Lab Sample ID: 280-23764-4FD

Date Sampled: 12/13/2011 1255

Client Matrix: Water

Date Received: 12/14/2011 1114

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-100469	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-100021	Lab File ID:	26c121611.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/16/2011 2047			Final Weight/Volume:	50 mL
Prep Date:	12/16/2011 0645				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Dissolved	25		0.035	0.040
Cobalt, Dissolved	ND		0.0012	0.0030
Iron, Dissolved	0.13		0.022	0.060
Magnesium, Dissolved	9.0		0.011	0.050
Potassium, Dissolved	2.0		0.24	1.0
Sodium, Dissolved	14	B	0.092	1.0

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-100456	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-100099	Lab File ID:	118SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/16/2011 1808			Final Weight/Volume:	50 mL
Prep Date:	12/16/2011 0645				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Antimony, Dissolved	ND		0.00020	0.0010
Barium, Dissolved	0.013		0.00029	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	ND		0.000040	0.00020
Chromium, Dissolved	ND		0.00050	0.0030
Copper, Dissolved	ND	^	0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	2.6		0.00031	0.0010
Nickel, Dissolved	0.0015	J	0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	ND		0.000033	0.0010
Vanadium, Dissolved	0.00036	J	0.00033	0.0020
Zinc, Dissolved	ND		0.0020	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: DUP2**

Lab Sample ID: 280-23764-5FD

Date Sampled: 12/13/2011 1339

Client Matrix: Water

Date Received: 12/14/2011 1114

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-100469	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-100021	Lab File ID:	26c121611.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/16/2011 2049			Final Weight/Volume:	50 mL
Prep Date:	12/16/2011 0645				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Dissolved	11		0.035	0.040
Cobalt, Dissolved	ND		0.0012	0.0030
Iron, Dissolved	ND		0.022	0.060
Magnesium, Dissolved	6.1		0.011	0.050
Potassium, Dissolved	0.72	J	0.24	1.0
Sodium, Dissolved	5.1	B	0.092	1.0

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-100456	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-100099	Lab File ID:	119SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/16/2011 1811			Final Weight/Volume:	50 mL
Prep Date:	12/16/2011 0645				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Antimony, Dissolved	ND		0.00020	0.0010
Barium, Dissolved	0.0062		0.00029	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	ND		0.000040	0.00020
Chromium, Dissolved	0.0072		0.00050	0.0030
Copper, Dissolved	ND	^	0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	0.00066	J	0.00031	0.0010
Nickel, Dissolved	0.0016	J	0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	ND		0.000033	0.0010
Vanadium, Dissolved	0.0037		0.00033	0.0020
Zinc, Dissolved	ND		0.0020	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-23764-1

**Client Sample ID: MW-35**

Lab Sample ID: 280-23764-6

Date Sampled: 12/13/2011 1442

Client Matrix: Water

Date Received: 12/14/2011 1114

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-100469	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-100021	Lab File ID:	26c121611.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/16/2011 2102			Final Weight/Volume:	50 mL
Prep Date:	12/16/2011 0645				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Dissolved	14		0.035	0.040
Cobalt, Dissolved	ND		0.0012	0.0030
Iron, Dissolved	ND		0.022	0.060
Magnesium, Dissolved	8.8		0.011	0.050
Potassium, Dissolved	0.47	J	0.24	1.0
Sodium, Dissolved	5.1	B	0.092	1.0

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-100456	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-100099	Lab File ID:	231SMPL.D
Dilution:	5.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/16/2011 2318			Final Weight/Volume:	50 mL
Prep Date:	12/16/2011 0645				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Antimony, Dissolved	ND		0.0010	0.0050
Barium, Dissolved	0.0033	J	0.0015	0.0050
Beryllium, Dissolved	ND		0.00040	0.0050
Cadmium, Dissolved	ND		0.00020	0.0010
Chromium, Dissolved	ND		0.0025	0.015
Copper, Dissolved	ND	^	0.0028	0.010
Lead, Dissolved	ND		0.00090	0.0050
Manganese, Dissolved	ND		0.0016	0.0050
Nickel, Dissolved	ND		0.0015	0.020
Selenium, Dissolved	ND		0.0035	0.0050
Silver, Dissolved	ND		0.00017	0.010
Thallium, Dissolved	ND		0.00017	0.0050
Vanadium, Dissolved	0.0044	J	0.0017	0.010
Zinc, Dissolved	ND		0.010	0.025

Client: Waste Management

Job Number: 280-23764-1

General Chemistry

Client Sample ID: MW-33C

Lab Sample ID: 280-23764-1

Date Sampled: 12/13/2011 1149

Client Matrix: Water

Date Received: 12/14/2011 1114

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	8.2		mg/L	0.23	1.0	1.0	300.0
	Analysis Batch: 280-100649	Analysis Date: 12/19/2011 2356					
Ammonia (as N)	ND		mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-100405	Analysis Date: 12/16/2011 1314					
Nitrate as N	ND		mg/L	0.019	0.050	1.0	353.2
	Analysis Batch: 280-101231	Analysis Date: 12/23/2011 0737					
Chloride	2.9		mg/L	1.0	1.0	1.0	9251
	Analysis Batch: 280-100757	Analysis Date: 12/20/2011 1158					
Alkalinity, Total (As CaCO <sub>3</sub> )	69	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-100873	Analysis Date: 12/20/2011 1720					
Alkalinity, Bicarbonate (As CaCO <sub>3</sub> )	69	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-100873	Analysis Date: 12/20/2011 1720					
Alkalinity, Carbonate (As CaCO <sub>3</sub> )	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-100873	Analysis Date: 12/20/2011 1720					
Total Dissolved Solids (TDS)	100		mg/L	4.7	5.0	1.0	SM 2540C
	Analysis Batch: 280-100527	Analysis Date: 12/19/2011 1127					
Total Organic Carbon - Average	0.21	J	mg/L	0.16	1.0	1.0	SM 5310B
	Analysis Batch: 280-100763	Analysis Date: 12/16/2011 1947					



Client: Waste Management

Job Number: 280-23764-1

General Chemistry

Client Sample ID: MW-2B1

Lab Sample ID: 280-23764-2

Date Sampled: 12/13/2011 1255

Client Matrix: Water

Date Received: 12/14/2011 1114

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	6.6		mg/L	0.23	1.0	1.0	300.0
	Analysis Batch: 280-100649	Analysis Date: 12/20/2011 0029					
Ammonia (as N)	1.0		mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-100405	Analysis Date: 12/16/2011 1316					
Nitrate as N	0.48		mg/L	0.019	0.050	1.0	353.2
	Analysis Batch: 280-101231	Analysis Date: 12/23/2011 0737					
Chloride	7.4		mg/L	1.0	1.0	1.0	9251
	Analysis Batch: 280-100757	Analysis Date: 12/20/2011 1209					
Alkalinity, Total (As CaCO <sub>3</sub> )	130	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-100873	Analysis Date: 12/20/2011 1734					
Alkalinity, Bicarbonate (As CaCO <sub>3</sub> )	130	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-100873	Analysis Date: 12/20/2011 1734					
Alkalinity, Carbonate (As CaCO <sub>3</sub> )	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-100873	Analysis Date: 12/20/2011 1734					
Total Dissolved Solids (TDS)	160		mg/L	4.7	5.0	1.0	SM 2540C
	Analysis Batch: 280-100527	Analysis Date: 12/19/2011 1127					
Total Organic Carbon - Average	0.86	J	mg/L	0.16	1.0	1.0	SM 5310B
	Analysis Batch: 280-100763	Analysis Date: 12/16/2011 2002					

Client: Waste Management

Job Number: 280-23764-1

General Chemistry

Client Sample ID: MW-16

Lab Sample ID: 280-23764-3

Date Sampled: 12/13/2011 1339

Client Matrix: Water

Date Received: 12/14/2011 1114

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	2.3		mg/L	0.23	1.0	1.0	300.0
	Analysis Batch: 280-100649	Analysis Date: 12/20/2011 0046					
Ammonia (as N)	ND		mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-100405	Analysis Date: 12/16/2011 1449					
Nitrate as N	1.1		mg/L	0.019	0.050	1.0	353.2
	Analysis Batch: 280-101231	Analysis Date: 12/23/2011 0737					
Chloride	2.1		mg/L	1.0	1.0	1.0	9251
	Analysis Batch: 280-100757	Analysis Date: 12/20/2011 1210					
Alkalinity, Total (As CaCO <sub>3</sub> )	60	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-100873	Analysis Date: 12/20/2011 1742					
Alkalinity, Bicarbonate (As CaCO <sub>3</sub> )	60	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-100873	Analysis Date: 12/20/2011 1742					
Alkalinity, Carbonate (As CaCO <sub>3</sub> )	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-100873	Analysis Date: 12/20/2011 1742					
Total Dissolved Solids (TDS)	93		mg/L	4.7	5.0	1.0	SM 2540C
	Analysis Batch: 280-100527	Analysis Date: 12/19/2011 1127					
Total Organic Carbon - Average	0.26	J	mg/L	0.16	1.0	1.0	SM 5310B
	Analysis Batch: 280-100763	Analysis Date: 12/16/2011 2017					

Client: Waste Management

Job Number: 280-23764-1

General Chemistry

Client Sample ID: DUP1

Lab Sample ID: 280-23764-4FD

Date Sampled: 12/13/2011 1255

Client Matrix: Water

Date Received: 12/14/2011 1114

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	6.6		mg/L	0.23	1.0	1.0	300.0
	Analysis Batch: 280-100649	Analysis Date: 12/20/2011 0102					
Ammonia (as N)	1.1		mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-100405	Analysis Date: 12/16/2011 1451					
Nitrate as N	0.48		mg/L	0.019	0.050	1.0	353.2
	Analysis Batch: 280-101231	Analysis Date: 12/23/2011 0737					
Chloride	7.7		mg/L	1.0	1.0	1.0	9251
	Analysis Batch: 280-100757	Analysis Date: 12/20/2011 1211					
Alkalinity, Total (As CaCO3)	150	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-100873	Analysis Date: 12/20/2011 1751					
Alkalinity, Bicarbonate (As CaCO3)	150	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-100873	Analysis Date: 12/20/2011 1751					
Alkalinity, Carbonate (As CaCO3)	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-100873	Analysis Date: 12/20/2011 1751					
Total Dissolved Solids (TDS)	150		mg/L	4.7	5.0	1.0	SM 2540C
	Analysis Batch: 280-100527	Analysis Date: 12/19/2011 1127					
Total Organic Carbon - Average	0.88	J	mg/L	0.16	1.0	1.0	SM 5310B
	Analysis Batch: 280-100763	Analysis Date: 12/16/2011 2031					

Client: Waste Management

Job Number: 280-23764-1

General Chemistry

Client Sample ID: DUP2

Lab Sample ID: 280-23764-5FD

Date Sampled: 12/13/2011 1339

Client Matrix: Water

Date Received: 12/14/2011 1114

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	2.3		mg/L	0.23	1.0	1.0	300.0
	Analysis Batch: 280-100649	Analysis Date: 12/20/2011 0119					
Ammonia (as N)	ND		mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-100405	Analysis Date: 12/16/2011 1452					
Nitrate as N	1.1		mg/L	0.019	0.050	1.0	353.2
	Analysis Batch: 280-101231	Analysis Date: 12/23/2011 0737					
Chloride	2.3		mg/L	1.0	1.0	1.0	9251
	Analysis Batch: 280-100757	Analysis Date: 12/20/2011 1213					
Alkalinity, Total (As CaCO <sub>3</sub> )	65	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-100873	Analysis Date: 12/20/2011 1757					
Alkalinity, Bicarbonate (As CaCO <sub>3</sub> )	65	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-100873	Analysis Date: 12/20/2011 1757					
Alkalinity, Carbonate (As CaCO <sub>3</sub> )	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-100873	Analysis Date: 12/20/2011 1757					
Total Dissolved Solids (TDS)	88		mg/L	4.7	5.0	1.0	SM 2540C
	Analysis Batch: 280-100527	Analysis Date: 12/19/2011 1127					
Total Organic Carbon - Average	0.29	J	mg/L	0.16	1.0	1.0	SM 5310B
	Analysis Batch: 280-100763	Analysis Date: 12/16/2011 2116					

Client: Waste Management

Job Number: 280-23764-1

General Chemistry

Client Sample ID: MW-35

Lab Sample ID: 280-23764-6

Date Sampled: 12/13/2011 1442

Client Matrix: Water

Date Received: 12/14/2011 1114

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	2.5		mg/L	0.23	1.0	1.0	300.0
	Analysis Batch: 280-100649	Analysis Date: 12/20/2011 0135					
Ammonia (as N)	ND		mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-100405	Analysis Date: 12/16/2011 1454					
Nitrate as N	0.39		mg/L	0.019	0.050	1.0	353.2
	Analysis Batch: 280-101231	Analysis Date: 12/23/2011 0737					
Chloride	3.2		mg/L	1.0	1.0	1.0	9251
	Analysis Batch: 280-100757	Analysis Date: 12/20/2011 1214					
Alkalinity, Total (As CaCO <sub>3</sub> )	77	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-100873	Analysis Date: 12/20/2011 1803					
Alkalinity, Bicarbonate (As CaCO <sub>3</sub> )	77	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-100873	Analysis Date: 12/20/2011 1803					
Alkalinity, Carbonate (As CaCO <sub>3</sub> )	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-100873	Analysis Date: 12/20/2011 1803					
Total Dissolved Solids (TDS)	95		mg/L	4.7	5.0	1.0	SM 2540C
	Analysis Batch: 280-100527	Analysis Date: 12/19/2011 1127					
Total Organic Carbon - Average	0.36	J	mg/L	0.16	1.0	1.0	SM 5310B
	Analysis Batch: 280-100763	Analysis Date: 12/16/2011 1903					

Client: Waste Management

Job Number: 280-23764-1

Field Service / Mobile Lab

Client Sample ID: MW-33C

Lab Sample ID: 280-23764-1

Client Matrix: Water

Date Sampled: 12/13/2011 1149

Date Received: 12/14/2011 1114

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed	Date Prepared
Depth to water	2.27		ft	1.0	Field Sampling	280-101457	12/13/2011	1149
Specific Conductivity	151.0		umhos/cm	1.0	Field Sampling	280-101457	12/13/2011	1149
Dissolved Oxygen	0.71		mg/L	1.0	Field Sampling	280-101457	12/13/2011	1149
eH	-87.0		millivolts	1.0	Field Sampling	280-101457	12/13/2011	1149
Turbidity	1.52		NTU	1.0	Field Sampling	280-101457	12/13/2011	1149
Temperature	8.34		Degrees C	1.0	Field Sampling	280-101457	12/13/2011	1149
pH	7.42		SU	1.0	Field Sampling	280-101457	12/13/2011	1149

Client: Waste Management

Job Number: 280-23764-1

Field Service / Mobile Lab

Client Sample ID: MW-2B1

Lab Sample ID: 280-23764-2

Client Matrix: Water

Date Sampled: 12/13/2011 1255

Date Received: 12/14/2011 1114

Analyte	Result	Qual	Units	Dil	Method	Analysis	Date Analyzed	
						Batch	Date Prepared	
Depth to water	7.61		ft	1.0	Field Sampling	280-101457	12/13/2011	1255
Specific Conductivity	261		umhos/cm	1.0	Field Sampling	280-101457	12/13/2011	1255
Dissolved Oxygen	0.10		mg/L	1.0	Field Sampling	280-101457	12/13/2011	1255
eH	72.0		millivolts	1.0	Field Sampling	280-101457	12/13/2011	1255
Turbidity	2.76		NTU	1.0	Field Sampling	280-101457	12/13/2011	1255
Temperature	12.22		Degrees C	1.0	Field Sampling	280-101457	12/13/2011	1255
pH	6.23		SU	1.0	Field Sampling	280-101457	12/13/2011	1255

Client: Waste Management

Job Number: 280-23764-1

Field Service / Mobile Lab

Client Sample ID: MW-16

Lab Sample ID: 280-23764-3

Client Matrix: Water

Date Sampled: 12/13/2011 1339

Date Received: 12/14/2011 1114

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed	Date Prepared
Depth to water	61.02		ft	1.0	Field Sampling	280-101457	12/13/2011	1339
Specific Conductivity	120.0		umhos/cm	1.0	Field Sampling	280-101457	12/13/2011	1339
Dissolved Oxygen	3.80		mg/L	1.0	Field Sampling	280-101457	12/13/2011	1339
eH	141.0		millivolts	1.0	Field Sampling	280-101457	12/13/2011	1339
Turbidity	4.73		NTU	1.0	Field Sampling	280-101457	12/13/2011	1339
Temperature	8.84		Degrees C	1.0	Field Sampling	280-101457	12/13/2011	1339
pH	6.30		SU	1.0	Field Sampling	280-101457	12/13/2011	1339



Client: Waste Management

Job Number: 280-23764-1

Field Service / Mobile Lab

Client Sample ID: MW-35

Lab Sample ID: 280-23764-6

Client Matrix: Water

Date Sampled: 12/13/2011 1442

Date Received: 12/14/2011 1114

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed	Date Prepared
Depth to water	72.37		ft	1.0	Field Sampling	280-101457	12/13/2011	1442
Specific Conductivity	148.0		umhos/cm	1.0	Field Sampling	280-101457	12/13/2011	1442
Dissolved Oxygen	4.42		mg/L	1.0	Field Sampling	280-101457	12/13/2011	1442
eH	133.0		millivolts	1.0	Field Sampling	280-101457	12/13/2011	1442
Turbidity	1.04		NTU	1.0	Field Sampling	280-101457	12/13/2011	1442
Temperature	9.41		Degrees C	1.0	Field Sampling	280-101457	12/13/2011	1442
pH	7.00		SU	1.0	Field Sampling	280-101457	12/13/2011	1442

## DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-23764-1

<b>Lab Section</b>	<b>Qualifier</b>	<b>Description</b>
GC/MS VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	B	Compound was found in the blank and sample.
	F	MS or MSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

# QUALITY CONTROL RESULTS

## Quality Control Results

Client: Waste Management

Job Number: 280-23764-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Analysis Batch:480-44856</b>					
LCS 480-44856/2	Lab Control Sample	T	Water	8260B SIM	
MB 480-44856/3	Method Blank	T	Water	8260B SIM	
280-23764-1	MW-33C	T	Water	8260B SIM	
280-23764-2	MW-2B1	T	Water	8260B SIM	
280-23764-3	MW-16	T	Water	8260B SIM	
280-23764-4FD	DUP1	T	Water	8260B SIM	
280-23764-5FD	DUP2	T	Water	8260B SIM	
280-23764-6	MW-35	T	Water	8260B SIM	
280-23764-6MS	Matrix Spike	T	Water	8260B SIM	
280-23764-6MSD	Matrix Spike Duplicate	T	Water	8260B SIM	
280-23764-7TB	TRIP BLANK	T	Water	8260B SIM	
<b>Analysis Batch:480-45687</b>					
LCS 480-45687/4	Lab Control Sample	T	Water	8260B	
MB 480-45687/5	Method Blank	T	Water	8260B	
280-23764-1	MW-33C	T	Water	8260B	
280-23764-2	MW-2B1	T	Water	8260B	
280-23764-3	MW-16	T	Water	8260B	
280-23764-4FD	DUP1	T	Water	8260B	
280-23764-5FD	DUP2	T	Water	8260B	
280-23764-6	MW-35	T	Water	8260B	
280-23764-6MS	Matrix Spike	T	Water	8260B	
280-23764-6MSD	Matrix Spike Duplicate	T	Water	8260B	

**Report Basis**

T = Total

## Quality Control Results

Client: Waste Management

Job Number: 280-23764-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
<b>Metals</b>					
<b>Prep Batch: 280-100021</b>					
LCS 280-100021/2-A	Lab Control Sample	R	Water	3005A	
MB 280-100021/1-A	Method Blank	R	Water	3005A	
280-23764-1	MW-33C	D	Water	3005A	
280-23764-2	MW-2B1	D	Water	3005A	
280-23764-3	MW-16	D	Water	3005A	
280-23764-4FD	DUP1	D	Water	3005A	
280-23764-5FD	DUP2	D	Water	3005A	
280-23764-6	MW-35	D	Water	3005A	
280-23764-6MS	Matrix Spike	D	Water	3005A	
280-23764-6MSD	Matrix Spike Duplicate	D	Water	3005A	
<b>Prep Batch: 280-100099</b>					
LCS 280-100099/2-A	Lab Control Sample	R	Water	3005A	
MB 280-100099/1-A	Method Blank	R	Water	3005A	
280-23764-1	MW-33C	D	Water	3005A	
280-23764-2	MW-2B1	D	Water	3005A	
280-23764-3	MW-16	D	Water	3005A	
280-23764-4FD	DUP1	D	Water	3005A	
280-23764-5FD	DUP2	D	Water	3005A	
280-23764-6	MW-35	D	Water	3005A	
280-23764-6MS	Matrix Spike	D	Water	3005A	
280-23764-6MSD	Matrix Spike Duplicate	D	Water	3005A	
<b>Analysis Batch:280-100456</b>					
LCS 280-100099/2-A	Lab Control Sample	R	Water	6020	280-100099
MB 280-100099/1-A	Method Blank	R	Water	6020	280-100099
280-23764-1	MW-33C	D	Water	6020	280-100099
280-23764-2	MW-2B1	D	Water	6020	280-100099
280-23764-3	MW-16	D	Water	6020	280-100099
280-23764-4FD	DUP1	D	Water	6020	280-100099
280-23764-5FD	DUP2	D	Water	6020	280-100099
280-23764-6	MW-35	D	Water	6020	280-100099
280-23764-6MS	Matrix Spike	D	Water	6020	280-100099
280-23764-6MSD	Matrix Spike Duplicate	D	Water	6020	280-100099

## Quality Control Results

Client: Waste Management

Job Number: 280-23764-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Analysis Batch:280-100469</b>					
LCS 280-100021/2-A	Lab Control Sample	R	Water	6010B	280-100021
MB 280-100021/1-A	Method Blank	R	Water	6010B	280-100021
280-23764-1	MW-33C	D	Water	6010B	280-100021
280-23764-2	MW-2B1	D	Water	6010B	280-100021
280-23764-3	MW-16	D	Water	6010B	280-100021
280-23764-4FD	DUP1	D	Water	6010B	280-100021
280-23764-5FD	DUP2	D	Water	6010B	280-100021
280-23764-6	MW-35	D	Water	6010B	280-100021
280-23764-6MS	Matrix Spike	D	Water	6010B	280-100021
280-23764-6MSD	Matrix Spike Duplicate	D	Water	6010B	280-100021
<b>Analysis Batch:280-101236</b>					
280-23764-1	MW-33C	D	Water	6020	280-100099

**Report Basis**

D = Dissolved

R = Total Recoverable

**Field Service / Mobile Lab**

<b>Analysis Batch:280-101457</b>					
280-23764-1	MW-33C	T	Water	Field Sampling	
280-23764-2	MW-2B1	T	Water	Field Sampling	
280-23764-3	MW-16	T	Water	Field Sampling	
280-23764-6	MW-35	T	Water	Field Sampling	

**Report Basis**

T = Total

## Quality Control Results

Client: Waste Management

Job Number: 280-23764-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-100405</b>					
LCS 280-100405/69	Lab Control Sample	T	Water	350.1	
LCSD 280-100405/70	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-100405/68	Method Blank	T	Water	350.1	
280-23764-1	MW-33C	T	Water	350.1	
280-23764-2	MW-2B1	T	Water	350.1	
280-23764-3	MW-16	T	Water	350.1	
280-23764-4FD	DUP1	T	Water	350.1	
280-23764-5FD	DUP2	T	Water	350.1	
280-23764-6	MW-35	T	Water	350.1	
280-23764-6MSMS	Matrix Spike	T	Water	350.1	
280-23764-6MSDMSD	Matrix Spike Duplicate	T	Water	350.1	
<b>Analysis Batch:280-100527</b>					
LCS 280-100527/2	Lab Control Sample	T	Water	SM 2540C	
LCSD 280-100527/3	Lab Control Sample Duplicate	T	Water	SM 2540C	
MB 280-100527/1	Method Blank	T	Water	SM 2540C	
280-23764-1	MW-33C	T	Water	SM 2540C	
280-23764-2	MW-2B1	T	Water	SM 2540C	
280-23764-2DU	Duplicate	T	Water	SM 2540C	
280-23764-3	MW-16	T	Water	SM 2540C	
280-23764-4FD	DUP1	T	Water	SM 2540C	
280-23764-5FD	DUP2	T	Water	SM 2540C	
280-23764-6	MW-35	T	Water	SM 2540C	
<b>Analysis Batch:280-100649</b>					
LCS 280-100649/12	Lab Control Sample	T	Water	300.0	
LCSD 280-100649/13	Lab Control Sample Duplicate	T	Water	300.0	
MB 280-100649/14	Method Blank	T	Water	300.0	
280-23764-1	MW-33C	T	Water	300.0	
280-23764-1DU	Duplicate	T	Water	300.0	
280-23764-2	MW-2B1	T	Water	300.0	
280-23764-3	MW-16	T	Water	300.0	
280-23764-4FD	DUP1	T	Water	300.0	
280-23764-5FD	DUP2	T	Water	300.0	
280-23764-6	MW-35	T	Water	300.0	
280-23764-6DU	Duplicate	T	Water	300.0	
280-23764-6MS	Matrix Spike	T	Water	300.0	
280-23764-6MSD	Matrix Spike Duplicate	T	Water	300.0	

## Quality Control Results

Client: Waste Management

Job Number: 280-23764-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
<b>General Chemistry</b>					
<b>Analysis Batch:280-100757</b>					
LCS 280-100757/99	Lab Control Sample	T	Water	9251	
LCSD 280-100757/100	Lab Control Sample Duplicate	T	Water	9251	
MB 280-100757/101	Method Blank	T	Water	9251	
280-23764-1	MW-33C	T	Water	9251	
280-23764-2	MW-2B1	T	Water	9251	
280-23764-3	MW-16	T	Water	9251	
280-23764-4FD	DUP1	T	Water	9251	
280-23764-5FD	DUP2	T	Water	9251	
280-23764-6	MW-35	T	Water	9251	
280-23764-6MS	Matrix Spike	T	Water	9251	
280-23764-6MSD	Matrix Spike Duplicate	T	Water	9251	
<b>Analysis Batch:280-100763</b>					
LCS 280-100763/3	Lab Control Sample	T	Water	SM 5310B	
LCSD 280-100763/4	Lab Control Sample Duplicate	T	Water	SM 5310B	
MB 280-100763/5	Method Blank	T	Water	SM 5310B	
280-23764-1	MW-33C	T	Water	SM 5310B	
280-23764-2	MW-2B1	T	Water	SM 5310B	
280-23764-3	MW-16	T	Water	SM 5310B	
280-23764-4FD	DUP1	T	Water	SM 5310B	
280-23764-5FD	DUP2	T	Water	SM 5310B	
280-23764-6	MW-35	T	Water	SM 5310B	
280-23764-6MS	Matrix Spike	T	Water	SM 5310B	
280-23764-6MSD	Matrix Spike Duplicate	T	Water	SM 5310B	
<b>Analysis Batch:280-100873</b>					
LCS 280-100873/4	Lab Control Sample	T	Water	SM 2320B	
LCSD 280-100873/5	Lab Control Sample Duplicate	T	Water	SM 2320B	
MB 280-100873/6	Method Blank	T	Water	SM 2320B	
280-23764-1	MW-33C	T	Water	SM 2320B	
280-23764-1DU	Duplicate	T	Water	SM 2320B	
280-23764-2	MW-2B1	T	Water	SM 2320B	
280-23764-3	MW-16	T	Water	SM 2320B	
280-23764-4FD	DUP1	T	Water	SM 2320B	
280-23764-5FD	DUP2	T	Water	SM 2320B	
280-23764-6	MW-35	T	Water	SM 2320B	
<b>Analysis Batch:280-101231</b>					
MB 280-101231/1	Method Blank	T	Water	353.2	
280-23764-1	MW-33C	T	Water	353.2	
280-23764-2	MW-2B1	T	Water	353.2	
280-23764-3	MW-16	T	Water	353.2	
280-23764-4FD	DUP1	T	Water	353.2	
280-23764-5FD	DUP2	T	Water	353.2	
280-23764-6	MW-35	T	Water	353.2	

TestAmerica Denver



**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**QC Association Summary**

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Report Basis</b>	<b>Client Matrix</b>	<b>Method</b>	<b>Prep Batch</b>
----------------------	-------------------------	---------------------	----------------------	---------------	-------------------

---

**Report Basis**

T = Total

Client: Waste Management

Job Number: 280-23764-1

**Surrogate Recovery Report**

**8260B Volatile Organic Compounds (GC/MS)**

**Client Matrix: Water**

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec
280-23764-1	MW-33C	104	98	103
280-23764-2	MW-2B1	100	96	103
280-23764-3	MW-16	104	100	107
280-23764-4	DUP1	102	98	103
280-23764-5	DUP2	104	95	103
280-23764-6	MW-35	103	96	102
MB 480-45687/5		104	99	104
LCS 480-45687/4		100	98	104
280-23764-6 MS	MW-35 MS	104	101	104
280-23764-6 MSD	MW-35 MSD	105	99	102

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	66-137
BFB = 4-Bromofluorobenzene (Surr)	73-120
TOL = Toluene-d8 (Surr)	71-126

## Quality Control Results

Client: Waste Management

Job Number: 280-23764-1

**Method Blank - Batch: 480-45687**

**Method: 8260B  
Preparation: 5030B**

Lab Sample ID: MB 480-45687/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/22/2011 1138  
 Prep Date: 12/22/2011 1138  
 Leach Date: N/A

Analysis Batch: 480-45687  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973N  
 Lab File ID: N4677.D  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0

## Quality Control Results

Client: Waste Management

Job Number: 280-23764-1

**Method Blank - Batch: 480-45687**

**Method: 8260B  
Preparation: 5030B**

Lab Sample ID: MB 480-45687/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/22/2011 1138  
 Prep Date: 12/22/2011 1138  
 Leach Date: N/A

Analysis Batch: 480-45687  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973N  
 Lab File ID: N4677.D  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0

**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Method Blank - Batch: 480-45687**

**Method: 8260B  
Preparation: 5030B**

Lab Sample ID:	MB 480-45687/5	Analysis Batch:	480-45687	Instrument ID:	HP5973N
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N4677.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/22/2011 1138	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/22/2011 1138				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	104	66 - 137
4-Bromofluorobenzene (Surr)	99	73 - 120
Toluene-d8 (Surr)	104	71 - 126

**Method Blank TICs- Batch: 480-45687**

Cas Number	Analyte	RT	Est. Result	Qual
67-72-1	Hexachloroethane TIC	0.00	ND	

## Quality Control Results

Client: Waste Management

Job Number: 280-23764-1

**Lab Control Sample - Batch: 480-45687**

**Method: 8260B  
Preparation: 5030B**

Lab Sample ID: LCS 480-45687/4	Analysis Batch: 480-45687	Instrument ID: HP5973N
Client Matrix: Water	Prep Batch: N/A	Lab File ID: N4676.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/22/2011 1115	Units: ug/L	Final Weight/Volume: 5 mL
Prep Date: 12/22/2011 1115		
Leach Date: N/A		

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethane	25.0	23.1	92	71 - 129	
1,1-Dichloroethene	25.0	18.3	73	65 - 138	
1,2,4-Trimethylbenzene	25.0	24.6	98	76 - 121	
1,2-Dichlorobenzene	25.0	23.2	93	77 - 120	
1,2-Dichloroethane	25.0	23.5	94	75 - 127	
Benzene	25.0	22.4	90	71 - 124	
Chlorobenzene	25.0	23.7	95	72 - 120	
cis-1,2-Dichloroethene	25.0	22.2	89	74 - 124	
Ethylbenzene	25.0	23.8	95	77 - 123	
Methyl tert-butyl ether	25.0	20.8	83	64 - 127	
m-Xylene & p-Xylene	50.0	47.2	94	76 - 122	
o-Xylene	25.0	23.2	93	76 - 122	
Tetrachloroethene	25.0	24.2	97	74 - 122	
Toluene	25.0	23.0	92	70 - 122	
trans-1,2-Dichloroethene	25.0	22.7	91	73 - 127	
Trichloroethene	25.0	22.7	91	74 - 123	
Surrogate	% Rec	Acceptance Limits			
1,2-Dichloroethane-d4 (Surr)	100	66 - 137			
4-Bromofluorobenzene (Surr)	98	73 - 120			
Toluene-d8 (Surr)	104	71 - 126			

## Quality Control Results

Client: Waste Management

Job Number: 280-23764-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-45687**

**Method: 8260B  
Preparation: 5030B**

MS Lab Sample ID: 280-23764-6	Analysis Batch: 480-45687	Instrument ID: HP5973N
Client Matrix: Water	Prep Batch: N/A	Lab File ID: N4687.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/22/2011 1539		Final Weight/Volume: 5 mL
Prep Date: 12/22/2011 1539		
Leach Date: N/A		

MSD Lab Sample ID: 280-23764-6	Analysis Batch: 480-45687	Instrument ID: HP5973N
Client Matrix: Water	Prep Batch: N/A	Lab File ID: N4688.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/22/2011 1602		Final Weight/Volume: 5 mL
Prep Date: 12/22/2011 1602		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
1,1-Dichloroethane	102	102	71 - 129	0	20		
1,1-Dichloroethene	81	82	65 - 138	0	16		
1,2,4-Trimethylbenzene	111	109	76 - 121	2	20		
1,2-Dichlorobenzene	104	100	77 - 120	4	20		
1,2-Dichloroethane	102	101	75 - 127	1	20		
Benzene	99	98	71 - 124	1	13		
Chlorobenzene	105	102	72 - 120	2	25		
cis-1,2-Dichloroethene	98	94	74 - 124	3	15		
Ethylbenzene	108	106	77 - 123	3	15		
Methyl tert-butyl ether	88	90	64 - 127	2	37		
m-Xylene & p-Xylene	109	105	76 - 122	3	16		
o-Xylene	106	103	76 - 122	3	16		
Tetrachloroethene	112	110	74 - 122	2	20		
Toluene	106	100	70 - 122	5	15		
trans-1,2-Dichloroethene	102	102	73 - 127	1	20		
Trichloroethene	104	102	74 - 123	2	16		
Surrogate		MS % Rec	MSD % Rec			Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		104	105			66 - 137	
4-Bromofluorobenzene (Surr)		101	99			73 - 120	
Toluene-d8 (Surr)		104	102			71 - 126	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-45687**

**Method: 8260B  
Preparation: 5030B**

MS Lab Sample ID: 280-23764-6                      Units: ug/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/22/2011 1539  
 Prep Date: 12/22/2011 1539  
 Leach Date: N/A

MSD Lab Sample ID: 280-23764-6  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/22/2011 1602  
 Prep Date: 12/22/2011 1602  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
1,1-Dichloroethane	ND	25.0	25.0	25.5	25.5
1,1-Dichloroethene	ND	25.0	25.0	20.3	20.4
1,2,4-Trimethylbenzene	ND	25.0	25.0	27.8	27.3
1,2-Dichlorobenzene	ND	25.0	25.0	26.0	25.1
1,2-Dichloroethane	ND	25.0	25.0	25.5	25.3
Benzene	ND	25.0	25.0	24.7	24.5
Chlorobenzene	ND	25.0	25.0	26.2	25.6
cis-1,2-Dichloroethene	ND	25.0	25.0	24.4	23.6
Ethylbenzene	ND	25.0	25.0	27.1	26.4
Methyl tert-butyl ether	ND	25.0	25.0	22.1	22.5
m-Xylene & p-Xylene	ND	50.0	50.0	54.3	52.5
o-Xylene	ND	25.0	25.0	26.4	25.7
Tetrachloroethene	ND	25.0	25.0	27.9	27.4
Toluene	ND	25.0	25.0	26.4	25.1
trans-1,2-Dichloroethene	ND	25.0	25.0	25.4	25.6
Trichloroethene	ND	25.0	25.0	25.9	25.5



**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Method Blank - Batch: 480-44856**

**Method: 8260B SIM  
Preparation: 5030B**

Lab Sample ID:	MB 480-44856/3	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J3705.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 1353	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 1353				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Vinyl chloride	ND		0.0040	0.020

**Lab Control Sample - Batch: 480-44856**

**Method: 8260B SIM  
Preparation: 5030B**

Lab Sample ID:	LCS 480-44856/2	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J3704.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 1330	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 1330				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Vinyl chloride	0.200	0.168	84	60 - 140	

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-44856**

**Method: 8260B SIM  
Preparation: 5030B**

MS Lab Sample ID:	280-23764-6	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J3712.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 1641			Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 1641				
Leach Date:	N/A				

MSD Lab Sample ID:	280-23764-6	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J3713.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 1705			Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 1705				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Vinyl chloride	90	91	60 - 140	1	30		

**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-44856**

**Method: 8260B SIM  
Preparation: 5030B**

MS Lab Sample ID: 280-23764-6                      Units: ug/L  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/16/2011 1641  
Prep Date: 12/16/2011 1641  
Leach Date: N/A

MSD Lab Sample ID: 280-23764-6  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/16/2011 1705  
Prep Date: 12/16/2011 1705  
Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Vinyl chloride	ND	0.200	0.200	0.179	0.181

**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Method Blank - Batch: 280-100021**

Lab Sample ID: MB 280-100021/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2011 2034  
 Prep Date: 12/16/2011 0645  
 Leach Date: N/A

Analysis Batch: 280-100469  
 Prep Batch: 280-100021  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26c121611.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Calcium, Dissolved	ND		0.035	0.040
Cobalt, Dissolved	ND		0.0012	0.0030
Iron, Dissolved	ND		0.022	0.060
Magnesium, Dissolved	ND		0.011	0.050
Potassium, Dissolved	ND		0.24	1.0
Sodium, Dissolved	0.217	J	0.092	1.0

**Lab Control Sample - Batch: 280-100021**

Lab Sample ID: LCS 280-100021/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2011 2037  
 Prep Date: 12/16/2011 0645  
 Leach Date: N/A

Analysis Batch: 280-100469  
 Prep Batch: 280-100021  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26c121611.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Calcium, Dissolved	50.0	48.7	97	90 - 111	
Cobalt, Dissolved	0.500	0.482	96	89 - 111	
Iron, Dissolved	1.00	0.965	96	89 - 115	
Magnesium, Dissolved	50.0	49.1	98	90 - 113	
Potassium, Dissolved	50.0	49.2	98	89 - 114	
Sodium, Dissolved	50.0	49.7	99	90 - 115	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100021**

**Method: 6010B  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID:	280-23764-6	Analysis Batch:	280-100469	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-100021	Lab File ID:	26c121611.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/16/2011 2107			Final Weight/Volume:	50 mL
Prep Date:	12/16/2011 0645				
Leach Date:	N/A				

MSD Lab Sample ID:	280-23764-6	Analysis Batch:	280-100469	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-100021	Lab File ID:	26c121611.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/16/2011 2109			Final Weight/Volume:	50 mL
Prep Date:	12/16/2011 0645				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Calcium, Dissolved	95	91	48 - 153	3	20		
Cobalt, Dissolved	95	92	82 - 119	3	20		
Iron, Dissolved	95	92	52 - 155	3	20		
Magnesium, Dissolved	96	92	62 - 146	4	20		
Potassium, Dissolved	98	94	76 - 132	3	20		
Sodium, Dissolved	98	94	70 - 203	4	20		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100021**

**Method: 6010B  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID:	280-23764-6	Units:	mg/L	MSD Lab Sample ID:	280-23764-6
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/16/2011 2107			Analysis Date:	12/16/2011 2109
Prep Date:	12/16/2011 0645			Prep Date:	12/16/2011 0645
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Calcium, Dissolved	14	50.0	50.0	61.3	59.4
Cobalt, Dissolved	ND	0.500	0.500	0.475	0.461
Iron, Dissolved	ND	1.00	1.00	0.949	0.919
Magnesium, Dissolved	8.8	50.0	50.0	56.9	54.8
Potassium, Dissolved	0.47	J	50.0	49.3	47.6
Sodium, Dissolved	5.1	50.0	50.0	54.1	52.1

## Quality Control Results

Client: Waste Management

Job Number: 280-23764-1

**Method Blank - Batch: 280-100099**

Lab Sample ID: MB 280-100099/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2011 1754  
 Prep Date: 12/16/2011 0645  
 Leach Date: N/A

Analysis Batch: 280-100456  
 Prep Batch: 280-100099  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_077  
 Lab File ID: 113BLNK.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Antimony, Dissolved	ND		0.00020	0.0010
Barium, Dissolved	ND		0.00029	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	ND		0.000040	0.00020
Chromium, Dissolved	ND		0.00050	0.0030
Copper, Dissolved	ND	^	0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	ND		0.00031	0.0010
Nickel, Dissolved	ND		0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	ND		0.000033	0.0010
Vanadium, Dissolved	ND		0.00033	0.0020
Zinc, Dissolved	ND		0.0020	0.0050

**Lab Control Sample - Batch: 280-100099**

Lab Sample ID: LCS 280-100099/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2011 1757  
 Prep Date: 12/16/2011 0645  
 Leach Date: N/A

Analysis Batch: 280-100456  
 Prep Batch: 280-100099  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_077  
 Lab File ID: 114\_LCS.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony, Dissolved	0.0400	0.0372	93	85 - 115	
Barium, Dissolved	0.0400	0.0394	98	85 - 118	
Beryllium, Dissolved	0.0400	0.0388	97	80 - 125	
Cadmium, Dissolved	0.0400	0.0386	96	85 - 115	
Chromium, Dissolved	0.0400	0.0395	99	84 - 121	
Copper, Dissolved	0.0400	0.0390	97	85 - 119	
Lead, Dissolved	0.0400	0.0394	99	85 - 118	
Manganese, Dissolved	0.0400	0.0406	102	85 - 117	
Nickel, Dissolved	0.0400	0.0384	96	85 - 119	
Selenium, Dissolved	0.0400	0.0371	93	77 - 122	
Silver, Dissolved	0.0400	0.0378	95	85 - 115	
Thallium, Dissolved	0.0400	0.0391	98	85 - 118	
Vanadium, Dissolved	0.0400	0.0390	98	85 - 120	
Zinc, Dissolved	0.0400	0.0359	90	83 - 122	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100099**

**Method: 6020  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-23764-6  
Client Matrix: Water  
Dilution: 5.0  
Analysis Date: 12/16/2011 2324  
Prep Date: 12/16/2011 0645  
Leach Date: N/A

Analysis Batch: 280-100456  
Prep Batch: 280-100099  
Leach Batch: N/A

Instrument ID: MT\_077  
Lab File ID: 233SMPL.D  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-23764-6  
Client Matrix: Water  
Dilution: 5.0  
Analysis Date: 12/16/2011 2327  
Prep Date: 12/16/2011 0645  
Leach Date: N/A

Analysis Batch: 280-100456  
Prep Batch: 280-100099  
Leach Batch: N/A

Instrument ID: MT\_077  
Lab File ID: 234SMPL.D  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Antimony, Dissolved	100	91	85 - 115	10	20		
Barium, Dissolved	90	105	85 - 118	15	20		
Beryllium, Dissolved	110	104	80 - 125	5	20		
Cadmium, Dissolved	108	102	85 - 115	6	20		
Chromium, Dissolved	104	105	84 - 121	1	20		
Copper, Dissolved	97	98	85 - 119	2	20	^	^
Lead, Dissolved	102	99	85 - 118	3	20		
Manganese, Dissolved	107	101	85 - 117	6	20		
Nickel, Dissolved	103	90	85 - 119	13	20		
Selenium, Dissolved	103	104	77 - 122	1	20		
Silver, Dissolved	99	98	85 - 115	1	20		
Thallium, Dissolved	101	100	85 - 118	1	20		
Vanadium, Dissolved	101	103	85 - 120	2	20		
Zinc, Dissolved	88	94	83 - 122	6	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100099**

**Method: 6020  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-23764-6                      Units: mg/L  
 Client Matrix: Water  
 Dilution: 5.0  
 Analysis Date: 12/16/2011 2324  
 Prep Date: 12/16/2011 0645  
 Leach Date: N/A

MSD Lab Sample ID: 280-23764-6  
 Client Matrix: Water  
 Dilution: 5.0  
 Analysis Date: 12/16/2011 2327  
 Prep Date: 12/16/2011 0645  
 Leach Date: N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Antimony, Dissolved	ND		0.0400	0.0400	0.0400	0.0363
Barium, Dissolved	0.0033	J	0.0400	0.0400	0.0393	0.0454
Beryllium, Dissolved	ND		0.0400	0.0400	0.0438	0.0416
Cadmium, Dissolved	ND		0.0400	0.0400	0.0433	0.0406
Chromium, Dissolved	ND		0.0400	0.0400	0.0414	0.0421
Copper, Dissolved	ND		0.0400	0.0400	0.0387	0.0394
Lead, Dissolved	ND		0.0400	0.0400	0.0408	0.0395
Manganese, Dissolved	ND		0.0400	0.0400	0.0428	0.0403
Nickel, Dissolved	ND		0.0400	0.0400	0.0411	0.0360
Selenium, Dissolved	ND		0.0400	0.0400	0.0413	0.0416
Silver, Dissolved	ND		0.0400	0.0400	0.0397	0.0393
Thallium, Dissolved	ND		0.0400	0.0400	0.0405	0.0401
Vanadium, Dissolved	0.0044	J	0.0400	0.0400	0.0450	0.0457
Zinc, Dissolved	ND		0.0400	0.0400	0.0351	0.0374

**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Method Blank - Batch: 280-100649**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	MB 280-100649/14	Analysis Batch:	280-100649	Instrument ID:	WC_IC3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	113.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/19/2011 1609	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Sulfate	ND		0.23	1.0

**Method Reporting Limit Check - Batch: 280-100649**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	MRL 280-100649/11	Analysis Batch:	280-100649	Instrument ID:	WC_IC3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	110.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/19/2011 1519	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sulfate	1.00	1.04	104	50 - 150	

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-100649**

**Method: 300.0**  
**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100649/12	Analysis Batch:	280-100649	Instrument ID:	WC_IC3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	111.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/19/2011 1536	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-100649/13	Analysis Batch:	280-100649	Instrument ID:	WC_IC3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	112.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/19/2011 1553	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Sulfate	100	100	90 - 110	0	10		



**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-100649**

**Method: 300.0  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-100649/12 Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/19/2011 1536  
 Prep Date: N/A  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 280-100649/13  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/19/2011 1553  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Sulfate	25.0	25.0	25.0	25.0

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100649**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 280-23764-6 Analysis Batch: 280-100649  
 Client Matrix: Water Prep Batch: N/A  
 Dilution: 1.0 Leach Batch: N/A  
 Analysis Date: 12/20/2011 0242  
 Prep Date: N/A  
 Leach Date: N/A

Instrument ID: WC\_IC3  
 Lab File ID: 151.TXT  
 Initial Weight/Volume: 1.0 mL  
 Final Weight/Volume: 5 mL

MSD Lab Sample ID: 280-23764-6 Analysis Batch: 280-100649  
 Client Matrix: Water Prep Batch: N/A  
 Dilution: 1.0 Leach Batch: N/A  
 Analysis Date: 12/20/2011 0259  
 Prep Date: N/A  
 Leach Date: N/A

Instrument ID: WC\_IC3  
 Lab File ID: 152.TXT  
 Initial Weight/Volume: 1.0 mL  
 Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Sulfate	107	107	80 - 120	0	20		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100649**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 280-23764-6 Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 0242  
 Prep Date: N/A  
 Leach Date: N/A

MSD Lab Sample ID: 280-23764-6  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 0259  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Sulfate	2.5	25.0	25.0	29.2	29.2

**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Duplicate - Batch: 280-100649**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	280-23764-1	Analysis Batch:	280-100649	Instrument ID:	WC_IC3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	142.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 0012	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Sulfate	8.2	8.12	0.7	15	

**Duplicate - Batch: 280-100649**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	280-23764-6	Analysis Batch:	280-100649	Instrument ID:	WC_IC3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	150.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 0225	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Sulfate	2.5	2.42	4	15	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Method Blank - Batch: 280-100405**

Lab Sample ID: MB 280-100405/68  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2011 1238  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-100405  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

**Method: 350.1  
 Preparation: N/A**

Instrument ID: WC\_Alph 2  
 Lab File ID: C:\FLOW\_4\1216NXNB  
 Initial Weight/Volume: 1.0 mL  
 Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Ammonia (as N)	ND		0.022	0.030

**Lab Control Sample/  
 Lab Control Sample Duplicate Recovery Report - Batch: 280-100405**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-100405/69  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2011 1240  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-100405  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 2  
 Lab File ID: C:\FLOW\_4\1216NXNB  
 Initial Weight/Volume: 100 mL  
 Final Weight/Volume: 100 mL

LCSD Lab Sample ID: LCSD 280-100405/70  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2011 1241  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-100405  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 2  
 Lab File ID: C:\FLOW\_4\1216NXNB  
 Initial Weight/Volume: 100 mL  
 Final Weight/Volume: 100 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Ammonia (as N)	104	104	90 - 110	0	10		

**Laboratory Control/  
 Laboratory Duplicate Data Report - Batch: 280-100405**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-100405/69  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2011 1240  
 Prep Date: N/A  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-100405/70  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2011 1241  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia (as N)	5.00	5.00	5.21	5.18

**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100405**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-23764-6MS	Analysis Batch: 280-100405	Instrument ID: WC_Alph 2
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C:\FLOW_4\1216NXNB
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/16/2011 1455		Final Weight/Volume: 5 mL
Prep Date: N/A		
Leach Date: N/A		

MSD Lab Sample ID: 280-23764-6MSD	Analysis Batch: 280-100405	Instrument ID: WC_Alph 2
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C:\FLOW_4\1216NXNB
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/16/2011 1457		Final Weight/Volume: 5 mL
Prep Date: N/A		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Ammonia (as N)	114	113	90 - 110	1	20	F	F

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100405**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-23764-6MS	Units: mg/L	MSD Lab Sample ID: 280-23764-6MSD
Client Matrix: Water		Client Matrix: Water
Dilution: 1.0		Dilution: 1.0
Analysis Date: 12/16/2011 1455		Analysis Date: 12/16/2011 1457
Prep Date: N/A		Prep Date: N/A
Leach Date: N/A		Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Ammonia (as N)	ND	4.00	4.00	4.55 F	4.51 F

**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Method Blank - Batch: 280-101231**

**Method: 353.2  
Preparation: N/A**

Lab Sample ID: MB 280-101231/1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/23/2011 0737  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-101231  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: No Equipment  
Lab File ID: N/A  
Initial Weight/Volume: 1.0 mL  
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Nitrate as N	ND		0.019	0.050

**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Method Blank - Batch: 280-100757**

**Method: 9251  
Preparation: N/A**

Lab Sample ID:	MB 280-100757/101	Analysis Batch:	280-100757	Instrument ID:	WC_Alph 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL122011.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1132	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chloride	ND		1.0	1.0

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-100757**

**Method: 9251  
Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100757/99	Analysis Batch:	280-100757	Instrument ID:	WC_Alph 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL122011.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1129	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-100757/100	Analysis Batch:	280-100757	Instrument ID:	WC_Alph 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL122011.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1130	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Chloride	103	102	90 - 110	1	10		

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-100757**

**Method: 9251  
Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100757/99	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-100757/100
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/20/2011 1129			Analysis Date:	12/20/2011 1130
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Chloride	25.0	25.0	25.8	25.4

**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100757**

**Method: 9251  
Preparation: N/A**

MS Lab Sample ID:	280-23764-6	Analysis Batch:	280-100757	Instrument ID:	WC_Alph 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL122011.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1133			Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-23764-6	Analysis Batch:	280-100757	Instrument ID:	WC_Alph 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL122011.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1134			Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chloride	98	98	90 - 110	0	10		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100757**

**Method: 9251  
Preparation: N/A**

MS Lab Sample ID:	280-23764-6	Units:	mg/L	MSD Lab Sample ID:	280-23764-6
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/20/2011 1133			Analysis Date:	12/20/2011 1134
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chloride	3.2	50.0	50.0	52.3	52.4

**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Method Blank - Batch: 280-100873**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID:	MB 280-100873/6	Analysis Batch:	280-100873	Instrument ID:	WC_AT2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122011b.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1712	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Alkalinity, Total (As CaCO3)	1.34	J	1.1	5.0
Alkalinity, Bicarbonate (As CaCO3)	1.34	J	1.1	5.0
Alkalinity, Carbonate (As CaCO3)	ND		1.1	5.0

**Lab Control Sample/**

**Method: SM 2320B**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-100873**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100873/4	Analysis Batch:	280-100873	Instrument ID:	WC_AT2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122011b.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1654	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-100873/5	Analysis Batch:	280-100873	Instrument ID:	WC_AT2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122011b.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1704	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Alkalinity, Total (As CaCO3)	103	104	90 - 110	0	10		

**Laboratory Control/**

**Method: SM 2320B**

**Laboratory Duplicate Data Report - Batch: 280-100873**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100873/4	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-100873/5
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/20/2011 1654			Analysis Date:	12/20/2011 1704
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Alkalinity, Total (As CaCO3)	200	200	207	208



**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Duplicate - Batch: 280-100873**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID:	280-23764-1	Analysis Batch:	280-100873	Instrument ID:	WC_AT2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122011b.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1728	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Alkalinity, Total (As CaCO3)	69	70.5	3	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Method Blank - Batch: 280-100527**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	MB 280-100527/1	Analysis Batch:	280-100527	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/19/2011 1127	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Dissolved Solids (TDS)	ND		4.7	5.0

**Lab Control Sample/**

**Method: SM 2540C**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-100527**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100527/2	Analysis Batch:	280-100527	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/19/2011 1127	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-100527/3	Analysis Batch:	280-100527	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/19/2011 1127	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Dissolved Solids (TDS)	95	98	86 - 110	3	20		

**Laboratory Control/**

**Method: SM 2540C**

**Laboratory Duplicate Data Report - Batch: 280-100527**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100527/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-100527/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/19/2011 1127			Analysis Date:	12/19/2011 1127
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Dissolved Solids (TDS)	500	500	476	489

**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Duplicate - Batch: 280-100527**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	280-23764-2	Analysis Batch:	280-100527	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/19/2011 1127	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Dissolved Solids (TDS)	160	151	3	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Method Blank - Batch: 280-100763**

Lab Sample ID: MB 280-100763/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2011 1701  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-100763  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

**Method: SM 5310B  
 Preparation: N/A**

Instrument ID: WC\_SHI3  
 Lab File ID: 121611.txt  
 Initial Weight/Volume: 20 mL  
 Final Weight/Volume: 20 mL

Analyte	Result	Qual	MDL	RL
Total Organic Carbon - Average	ND		0.16	1.0

**Lab Control Sample/  
 Lab Control Sample Duplicate Recovery Report - Batch: 280-100763**

**Method: SM 5310B  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-100763/3  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2011 1630  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-100763  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_SHI3  
 Lab File ID: 121611.txt  
 Initial Weight/Volume: 20 mL  
 Final Weight/Volume: 20 mL

LCSD Lab Sample ID: LCSD 280-100763/4  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2011 1644  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-100763  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_SHI3  
 Lab File ID: 121611.txt  
 Initial Weight/Volume: 20 mL  
 Final Weight/Volume: 20 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Organic Carbon - Average	96	97	88 - 112	0	15		

**Laboratory Control/  
 Laboratory Duplicate Data Report - Batch: 280-100763**

**Method: SM 5310B  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-100763/3  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2011 1630  
 Prep Date: N/A  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-100763/4  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2011 1644  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Organic Carbon - Average	25.0	25.0	24.1	24.1

**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100763**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID:	280-23764-6	Analysis Batch:	280-100763	Instrument ID:	WC_SHI3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121611.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/16/2011 1918			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-23764-6	Analysis Batch:	280-100763	Instrument ID:	WC_SHI3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121611.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/16/2011 1933			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Total Organic Carbon - Average	98	99	88 - 112	0	15		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100763**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID:	280-23764-6	Units:	mg/L	MSD Lab Sample ID:	280-23764-6
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/16/2011 1918			Analysis Date:	12/16/2011 1933
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Total Organic Carbon - Average	0.36	J	25.0	25.0	25.0	25.0

## Quality Control Results

Client: Waste Management

Job Number: 280-23764-1

### Laboratory Chronicle

Lab ID: 280-23764-1

Client ID: MW-33C

Sample Date/Time: 12/13/2011 11:49

Received Date/Time: 12/14/2011 11:14

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23764-D-1		480-45687		12/22/2011 13:20	1	TAL BUF	CDC
A:8260B	280-23764-D-1		480-45687		12/22/2011 13:20	1	TAL BUF	CDC
P:5030B	280-23764-D-1		480-44856		12/16/2011 14:19	1	TAL BUF	TRB
A:8260B SIM	280-23764-D-1		480-44856		12/16/2011 14:19	1	TAL BUF	TRB
P:3005A	280-23764-C-1-A		280-100469	280-100021	12/16/2011 06:45	1	TAL DEN	CLI
A:6010B	280-23764-C-1-A		280-100469	280-100021	12/16/2011 20:39	1	TAL DEN	HEB
P:3005A	280-23764-C-1-B		280-100456	280-100099	12/16/2011 06:45	1	TAL DEN	CLI
A:6020	280-23764-C-1-B		280-100456	280-100099	12/16/2011 18:00	1	TAL DEN	LT
P:3005A	280-23764-C-1-B		280-101236	280-100099	12/16/2011 06:45	1	TAL DEN	CLI
A:6020	280-23764-C-1-B		280-101236	280-100099	12/22/2011 16:59	1	TAL DEN	LT
A:300.0	280-23764-A-1		280-100649		12/19/2011 23:56	1	TAL DEN	EK
A:350.1	280-23764-B-1		280-100405		12/16/2011 13:14	1	TAL DEN	JAD
A:353.2	280-23764-A-1		280-101231		12/23/2011 07:37	1	TAL DEN	RS
A:9251	280-23764-A-1		280-100757		12/20/2011 11:58	1	TAL DEN	AJA
A:SM 2320B	280-23764-A-1		280-100873		12/20/2011 17:20	1	TAL DEN	DE
A:SM 2540C	280-23764-A-1		280-100527		12/19/2011 11:27	1	TAL DEN	BJD
A:SM 5310B	280-23764-B-1		280-100763		12/16/2011 19:47	1	TAL DEN	GEY
A:Field Sampling	280-23764-A-1		280-101457		12/13/2011 11:49	1	TAL DEN	FS

Lab ID: 280-23764-1 DU

Client ID: MW-33C

Sample Date/Time: 12/13/2011 11:49

Received Date/Time: 12/14/2011 11:14

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-23764-A-1 DU		280-100649		12/20/2011 00:12	1	TAL DEN	EK
A:SM 2320B	280-23764-A-1 DU		280-100873		12/20/2011 17:28	1	TAL DEN	DE

## Quality Control Results

Client: Waste Management

Job Number: 280-23764-1

### Laboratory Chronicle

Lab ID: 280-23764-2

Client ID: MW-2B1

Sample Date/Time: 12/13/2011 12:55

Received Date/Time: 12/14/2011 11:14

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23764-D-2		480-45687		12/22/2011 13:43	1	TAL BUF	CDC
A:8260B	280-23764-D-2		480-45687		12/22/2011 13:43	1	TAL BUF	CDC
P:5030B	280-23764-D-2		480-44856		12/16/2011 14:42	1	TAL BUF	TRB
A:8260B SIM	280-23764-D-2		480-44856		12/16/2011 14:42	1	TAL BUF	TRB
P:3005A	280-23764-C-2-A		280-100469	280-100021	12/16/2011 06:45	1	TAL DEN	CLI
A:6010B	280-23764-C-2-A		280-100469	280-100021	12/16/2011 20:42	1	TAL DEN	HEB
P:3005A	280-23764-C-2-B		280-100456	280-100099	12/16/2011 06:45	1	TAL DEN	CLI
A:6020	280-23764-C-2-B		280-100456	280-100099	12/16/2011 18:03	1	TAL DEN	LT
A:300.0	280-23764-A-2		280-100649		12/20/2011 00:29	1	TAL DEN	EK
A:350.1	280-23764-B-2		280-100405		12/16/2011 13:16	1	TAL DEN	JAD
A:353.2	280-23764-A-2		280-101231		12/23/2011 07:37	1	TAL DEN	RS
A:9251	280-23764-A-2		280-100757		12/20/2011 12:09	1	TAL DEN	AJA
A:SM 2320B	280-23764-A-2		280-100873		12/20/2011 17:34	1	TAL DEN	DE
A:SM 2540C	280-23764-A-2		280-100527		12/19/2011 11:27	1	TAL DEN	BJD
A:SM 5310B	280-23764-B-2		280-100763		12/16/2011 20:02	1	TAL DEN	GEY
A:Field Sampling	280-23764-A-2		280-101457		12/13/2011 12:55	1	TAL DEN	FS

Lab ID: 280-23764-2 DU

Client ID: MW-2B1

Sample Date/Time: 12/13/2011 12:55

Received Date/Time: 12/14/2011 11:14

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2540C	280-23764-A-2 DU		280-100527		12/19/2011 11:27	1	TAL DEN	BJD

## Quality Control Results

Client: Waste Management

Job Number: 280-23764-1

### Laboratory Chronicle

Lab ID: 280-23764-3

Client ID: MW-16

Sample Date/Time: 12/13/2011 13:39

Received Date/Time: 12/14/2011 11:14

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23764-D-3		480-45687		12/22/2011 14:06	1	TAL BUF	CDC
A:8260B	280-23764-D-3		480-45687		12/22/2011 14:06	1	TAL BUF	CDC
P:5030B	280-23764-D-3		480-44856		12/16/2011 15:06	1	TAL BUF	TRB
A:8260B SIM	280-23764-D-3		480-44856		12/16/2011 15:06	1	TAL BUF	TRB
P:3005A	280-23764-C-3-A		280-100469	280-100021	12/16/2011 06:45	1	TAL DEN	CLI
A:6010B	280-23764-C-3-A		280-100469	280-100021	12/16/2011 20:44	1	TAL DEN	HEB
P:3005A	280-23764-C-3-B		280-100456	280-100099	12/16/2011 06:45	1	TAL DEN	CLI
A:6020	280-23764-C-3-B		280-100456	280-100099	12/16/2011 18:05	1	TAL DEN	LT
A:300.0	280-23764-A-3		280-100649		12/20/2011 00:46	1	TAL DEN	EK
A:350.1	280-23764-B-3		280-100405		12/16/2011 14:49	1	TAL DEN	JAD
A:353.2	280-23764-A-3		280-101231		12/23/2011 07:37	1	TAL DEN	RS
A:9251	280-23764-A-3		280-100757		12/20/2011 12:10	1	TAL DEN	AJA
A:SM 2320B	280-23764-A-3		280-100873		12/20/2011 17:42	1	TAL DEN	DE
A:SM 2540C	280-23764-A-3		280-100527		12/19/2011 11:27	1	TAL DEN	BJD
A:SM 5310B	280-23764-B-3		280-100763		12/16/2011 20:17	1	TAL DEN	GEY
A:Field Sampling	280-23764-A-3		280-101457		12/13/2011 13:39	1	TAL DEN	FS

Lab ID: 280-23764-4

Client ID: DUP1

Sample Date/Time: 12/13/2011 12:55

Received Date/Time: 12/14/2011 11:14

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23764-D-4		480-45687		12/22/2011 14:29	1	TAL BUF	CDC
A:8260B	280-23764-D-4		480-45687		12/22/2011 14:29	1	TAL BUF	CDC
P:5030B	280-23764-D-4		480-44856		12/16/2011 15:30	1	TAL BUF	TRB
A:8260B SIM	280-23764-D-4		480-44856		12/16/2011 15:30	1	TAL BUF	TRB
P:3005A	280-23764-C-4-A		280-100469	280-100021	12/16/2011 06:45	1	TAL DEN	CLI
A:6010B	280-23764-C-4-A		280-100469	280-100021	12/16/2011 20:47	1	TAL DEN	HEB
P:3005A	280-23764-C-4-B		280-100456	280-100099	12/16/2011 06:45	1	TAL DEN	CLI
A:6020	280-23764-C-4-B		280-100456	280-100099	12/16/2011 18:08	1	TAL DEN	LT
A:300.0	280-23764-A-4		280-100649		12/20/2011 01:02	1	TAL DEN	EK
A:350.1	280-23764-B-4		280-100405		12/16/2011 14:51	1	TAL DEN	JAD
A:353.2	280-23764-A-4		280-101231		12/23/2011 07:37	1	TAL DEN	RS
A:9251	280-23764-A-4		280-100757		12/20/2011 12:11	1	TAL DEN	AJA
A:SM 2320B	280-23764-A-4		280-100873		12/20/2011 17:51	1	TAL DEN	DE
A:SM 2540C	280-23764-A-4		280-100527		12/19/2011 11:27	1	TAL DEN	BJD
A:SM 5310B	280-23764-B-4		280-100763		12/16/2011 20:31	1	TAL DEN	GEY



## Quality Control Results

Client: Waste Management

Job Number: 280-23764-1

### Laboratory Chronicle

Lab ID: 280-23764-5

Client ID: DUP2

Sample Date/Time: 12/13/2011 13:39

Received Date/Time: 12/14/2011 11:14

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23764-D-5		480-45687		12/22/2011 14:52	1	TAL BUF	CDC
A:8260B	280-23764-D-5		480-45687		12/22/2011 14:52	1	TAL BUF	CDC
P:5030B	280-23764-D-5		480-44856		12/16/2011 15:54	1	TAL BUF	TRB
A:8260B SIM	280-23764-D-5		480-44856		12/16/2011 15:54	1	TAL BUF	TRB
P:3005A	280-23764-C-5-A		280-100469	280-100021	12/16/2011 06:45	1	TAL DEN	CLI
A:6010B	280-23764-C-5-A		280-100469	280-100021	12/16/2011 20:49	1	TAL DEN	HEB
P:3005A	280-23764-C-5-B		280-100456	280-100099	12/16/2011 06:45	1	TAL DEN	CLI
A:6020	280-23764-C-5-B		280-100456	280-100099	12/16/2011 18:11	1	TAL DEN	LT
A:300.0	280-23764-A-5		280-100649		12/20/2011 01:19	1	TAL DEN	EK
A:350.1	280-23764-B-5		280-100405		12/16/2011 14:52	1	TAL DEN	JAD
A:353.2	280-23764-A-5		280-101231		12/23/2011 07:37	1	TAL DEN	RS
A:9251	280-23764-A-5		280-100757		12/20/2011 12:13	1	TAL DEN	AJA
A:SM 2320B	280-23764-A-5		280-100873		12/20/2011 17:57	1	TAL DEN	DE
A:SM 2540C	280-23764-A-5		280-100527		12/19/2011 11:27	1	TAL DEN	BJD
A:SM 5310B	280-23764-B-5		280-100763		12/16/2011 21:16	1	TAL DEN	GEY

Lab ID: 280-23764-6

Client ID: MW-35

Sample Date/Time: 12/13/2011 14:42

Received Date/Time: 12/14/2011 11:14

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23764-J-6		480-45687		12/22/2011 15:16	1	TAL BUF	CDC
A:8260B	280-23764-J-6		480-45687		12/22/2011 15:16	1	TAL BUF	CDC
P:5030B	280-23764-J-6		480-44856		12/16/2011 16:17	1	TAL BUF	TRB
A:8260B SIM	280-23764-J-6		480-44856		12/16/2011 16:17	1	TAL BUF	TRB
P:3005A	280-23764-G-6-A		280-100469	280-100021	12/16/2011 06:45	1	TAL DEN	CLI
A:6010B	280-23764-G-6-A		280-100469	280-100021	12/16/2011 21:02	1	TAL DEN	HEB
P:3005A	280-23764-I-6-A		280-100456	280-100099	12/16/2011 06:45	5	TAL DEN	CLI
A:6020	280-23764-I-6-A		280-100456	280-100099	12/16/2011 23:18	5	TAL DEN	LT
A:300.0	280-23764-B-6		280-100649		12/20/2011 01:35	1	TAL DEN	EK
A:350.1	280-23764-E-6		280-100405		12/16/2011 14:54	1	TAL DEN	JAD
A:353.2	280-23764-A-6		280-101231		12/23/2011 07:37	1	TAL DEN	RS
A:9251	280-23764-B-6		280-100757		12/20/2011 12:14	1	TAL DEN	AJA
A:SM 2320B	280-23764-B-6		280-100873		12/20/2011 18:03	1	TAL DEN	DE
A:SM 2540C	280-23764-B-6		280-100527		12/19/2011 11:27	1	TAL DEN	BJD
A:SM 5310B	280-23764-D-6		280-100763		12/16/2011 19:03	1	TAL DEN	GEY
A:Field Sampling	280-23764-A-6		280-101457		12/13/2011 14:42	1	TAL DEN	FS

**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Laboratory Chronicle**

Lab ID: 280-23764-6

Client ID: MW-35

Sample Date/Time: 12/13/2011 14:42

Received Date/Time: 12/14/2011 11:14

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23764-A-6 MS		480-45687		12/22/2011 15:39	1	TAL BUF	CDC
A:8260B	280-23764-A-6 MS		480-45687		12/22/2011 15:39	1	TAL BUF	CDC
P:5030B	280-23764-A-6 MS		480-44856		12/16/2011 16:41	1	TAL BUF	TRB
A:8260B SIM	280-23764-A-6 MS		480-44856		12/16/2011 16:41	1	TAL BUF	TRB
P:3005A	280-23764-G-6-B MS		280-100469	280-100021	12/16/2011 06:45	1	TAL DEN	CLI
A:6010B	280-23764-G-6-B MS		280-100469	280-100021	12/16/2011 21:07	1	TAL DEN	HEB
P:3005A	280-23764-I-6-B MS		280-100456	280-100099	12/16/2011 06:45	5	TAL DEN	CLI
A:6020	280-23764-I-6-B MS		280-100456	280-100099	12/16/2011 23:24	5	TAL DEN	LT
A:300.0	280-23764-B-6 MS		280-100649		12/20/2011 02:42	1	TAL DEN	EK
A:350.1	280-23764-E-6 MS		280-100405		12/16/2011 14:55	1	TAL DEN	JAD
A:9251	280-23764-B-6 MS		280-100757		12/20/2011 11:33	1	TAL DEN	AJA
A:SM 5310B	280-23764-D-6 MS		280-100763		12/16/2011 19:18	1	TAL DEN	GEY

Lab ID: 280-23764-6

Client ID: MW-35

Sample Date/Time: 12/13/2011 14:42

Received Date/Time: 12/14/2011 11:14

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23764-A-6 MSD		480-45687		12/22/2011 16:02	1	TAL BUF	CDC
A:8260B	280-23764-A-6 MSD		480-45687		12/22/2011 16:02	1	TAL BUF	CDC
P:5030B	280-23764-A-6 MSD		480-44856		12/16/2011 17:05	1	TAL BUF	TRB
A:8260B SIM	280-23764-A-6 MSD		480-44856		12/16/2011 17:05	1	TAL BUF	TRB
P:3005A	280-23764-G-6-C		280-100469	280-100021	12/16/2011 06:45	1	TAL DEN	CLI
A:6010B	280-23764-G-6-C		280-100469	280-100021	12/16/2011 21:09	1	TAL DEN	HEB
P:3005A	280-23764-I-6-C MSD		280-100456	280-100099	12/16/2011 06:45	5	TAL DEN	CLI
A:6020	280-23764-I-6-C MSD		280-100456	280-100099	12/16/2011 23:27	5	TAL DEN	LT
A:300.0	280-23764-B-6 MSD		280-100649		12/20/2011 02:59	1	TAL DEN	EK
A:350.1	280-23764-E-6 MSD		280-100405		12/16/2011 14:57	1	TAL DEN	JAD
A:9251	280-23764-B-6 MSD		280-100757		12/20/2011 11:34	1	TAL DEN	AJA
A:SM 5310B	280-23764-D-6 MSD		280-100763		12/16/2011 19:33	1	TAL DEN	GEY

Lab ID: 280-23764-6 DU

Client ID: MW-35

Sample Date/Time: 12/13/2011 14:42

Received Date/Time: 12/14/2011 11:14

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-23764-B-6 DU		280-100649		12/20/2011 02:25	1	TAL DEN	EK

Quality Control Results

Client: Waste Management

Job Number: 280-23764-1

Laboratory Chronicle

Lab ID: 280-23764-7

Client ID: TRIP BLANK

Sample Date/Time: 12/13/2011 11:49

Received Date/Time: 12/14/2011 11:14

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23764-A-7		480-44856		12/16/2011 17:29	1	TAL BUF	TRB
A:8260B SIM	280-23764-A-7		480-44856		12/16/2011 17:29	1	TAL BUF	TRB

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MB 480-45687/5		480-45687		12/22/2011 11:38	1	TAL BUF	CDC
A:8260B	MB 480-45687/5		480-45687		12/22/2011 11:38	1	TAL BUF	CDC
P:5030B	MB 480-44856/3		480-44856		12/16/2011 13:53	1	TAL BUF	TRB
A:8260B SIM	MB 480-44856/3		480-44856		12/16/2011 13:53	1	TAL BUF	TRB
P:3005A	MB 280-100021/1-A		280-100469	280-100021	12/16/2011 06:45	1	TAL DEN	CLI
A:6010B	MB 280-100021/1-A		280-100469	280-100021	12/16/2011 20:34	1	TAL DEN	HEB
P:3005A	MB 280-100099/1-A		280-100456	280-100099	12/16/2011 06:45	1	TAL DEN	CLI
A:6020	MB 280-100099/1-A		280-100456	280-100099	12/16/2011 17:54	1	TAL DEN	LT
A:300.0	MB 280-100649/14		280-100649		12/19/2011 16:09	1	TAL DEN	EK
A:350.1	MB 280-100405/68		280-100405		12/16/2011 12:38	1	TAL DEN	JAD
A:353.2	MB 280-101231/1		280-101231		12/23/2011 07:37	1	TAL DEN	RS
A:9251	MB 280-100757/101		280-100757		12/20/2011 11:32	1	TAL DEN	AJA
A:SM 2320B	MB 280-100873/6		280-100873		12/20/2011 17:12	1	TAL DEN	DE
A:SM 2540C	MB 280-100527/1		280-100527		12/19/2011 11:27	1	TAL DEN	BJD
A:SM 5310B	MB 280-100763/5		280-100763		12/16/2011 17:01	1	TAL DEN	GEY

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCS 480-45687/4		480-45687		12/22/2011 11:15	1	TAL BUF	CDC
A:8260B	LCS 480-45687/4		480-45687		12/22/2011 11:15	1	TAL BUF	CDC
P:5030B	LCS 480-44856/2		480-44856		12/16/2011 13:30	1	TAL BUF	TRB
A:8260B SIM	LCS 480-44856/2		480-44856		12/16/2011 13:30	1	TAL BUF	TRB
P:3005A	LCS 280-100021/2-A		280-100469	280-100021	12/16/2011 06:45	1	TAL DEN	CLI
A:6010B	LCS 280-100021/2-A		280-100469	280-100021	12/16/2011 20:37	1	TAL DEN	HEB
P:3005A	LCS 280-100099/2-A		280-100456	280-100099	12/16/2011 06:45	1	TAL DEN	CLI
A:6020	LCS 280-100099/2-A		280-100456	280-100099	12/16/2011 17:57	1	TAL DEN	LT
A:300.0	LCS 280-100649/12		280-100649		12/19/2011 15:36	1	TAL DEN	EK
A:350.1	LCS 280-100405/69		280-100405		12/16/2011 12:40	1	TAL DEN	JAD
A:9251	LCS 280-100757/99		280-100757		12/20/2011 11:29	1	TAL DEN	AJA
A:SM 2320B	LCS 280-100873/4		280-100873		12/20/2011 16:54	1	TAL DEN	DE
A:SM 2540C	LCS 280-100527/2		280-100527		12/19/2011 11:27	1	TAL DEN	BJD
A:SM 5310B	LCS 280-100763/3		280-100763		12/16/2011 16:30	1	TAL DEN	GEY

**Quality Control Results**

Client: Waste Management

Job Number: 280-23764-1

**Laboratory Chronicle**

Lab ID: LCSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	LCSD 280-100649/13		280-100649		12/19/2011 15:53	1	TAL DEN	EK
A:350.1	LCSD 280-100405/70		280-100405		12/16/2011 12:41	1	TAL DEN	JAD
A:9251	LCSD 280-100757/100		280-100757		12/20/2011 11:30	1	TAL DEN	AJA
A:SM 2320B	LCSD 280-100873/5		280-100873		12/20/2011 17:04	1	TAL DEN	DE
A:SM 2540C	LCSD 280-100527/3		280-100527		12/19/2011 11:27	1	TAL DEN	BJD
A:SM 5310B	LCSD 280-100763/4		280-100763		12/16/2011 16:44	1	TAL DEN	GEY

Lab ID: MRL

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	MRL 280-100649/11		280-100649		12/19/2011 15:19	1	TAL DEN	EK

**Lab References:**

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver













## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-23764-1

**Login Number: 23764**

**List Source: TestAmerica Denver**

**List Number: 1**

**Creator: Paulsen, Lindsay T**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-23764-1

**Login Number: 23764**  
**List Number: 1**  
**Creator: Kinecki, Kenneth**

**List Source: TestAmerica Buffalo**  
**List Creation: 12/15/11 06:16 PM**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	3.0 C
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-23764-1

Login Number: 23764

List Number: 2

Creator: Kinecki, Kenneth

List Source: TestAmerica Buffalo

List Creation: 12/20/11 04:46 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

## ANALYTICAL REPORT

Job Number: 280-23838-1

Job Description: WA02|Olympic View Sanitary LF

For:

Waste Management  
2400 West Union Avenue  
Englewood, CO 80110

Attention: Mr. Steve Richtel



Approved for release.  
Katie Abbott  
Project Mgmt. Assistant  
1/4/2012 4:10 PM

---

Designee for  
Betsy A Sara  
Project Manager II  
betsy.sara@testamericainc.com  
01/04/2012

cc: Mr. Sam Adlington  
Mr. Charles Luckie  
Ms. Emily Smart  
Mr. Dan Venchiarutti

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

**TestAmerica Laboratories, Inc.**

TestAmerica Denver 4955 Yarrow Street, Arvada, CO 80002  
Tel (303) 736-0100 Fax (303) 431-7171 [www.testamericainc.com](http://www.testamericainc.com)



# Table of Contents

Cover Title Page . . . . .	1
Report Narrative . . . . .	3
Executive Summary . . . . .	5
Method Summary . . . . .	14
Method / Analyst Summary . . . . .	15
Sample Summary . . . . .	16
Sample Results . . . . .	17
Sample Datasheets . . . . .	18
Data Qualifiers . . . . .	90
QC Results . . . . .	91
Qc Association Summary . . . . .	92
Surrogate Recovery Report . . . . .	98
Qc Reports . . . . .	99
Laboratory Chronicle . . . . .	128
Client Chain of Custody . . . . .	137
Sample Receipt Checklist . . . . .	147

## CASE NARRATIVE

Client: Waste Management

Project: WA02|Olympic View Sanitary LF

Report Number: 280-23838-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

This report may include reporting limits (RLs) less than TestAmerica's standard reporting limit. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

### Sample Receiving

The samples were received on 12/15/2011; the samples arrived in good condition, properly preserved and on ice. The temperatures of the cooler at receipt were 1.4°C and 0.2°C.

The collection time for sample MW-19C was changed to 13:56 per notation on the Chain of Custody. The client was notified 12/15/2011.

### Holding Times

All holding times were within established control limits.

### Method Blanks

Dissolved Antimony, Dissolved Manganese, Dissolved Thallium Method 6020, Total Alkalinity and Bicarbonate Alkalinity Method 2320B were detected in the Method Blanks below the project established reporting limits. No corrective action is taken for any values in Method Blanks that are below the requested reporting limits. The Method Blank data are included at the end of this report.

Dissolved Copper Method 6020 was detected in the Method Blank above the client requested reporting limit and at the laboratory standard reporting limit. Because the associated samples are non-detect for Dissolved Copper, corrective action was deemed unnecessary.

All other Method Blank recoveries were within established control limits.

### Laboratory Control Samples (LCS)

All Laboratory Control Samples were within established control limits.

### Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

The method required MS/MSD could not be performed for Method 8260 due to insufficient sample volume.

The Matrix Spike and Matrix Spike Duplicate performed on a sample from another client exhibited recoveries outside control limits for Dissolved Barium, Dissolved Cadmium, Dissolved Nickel, and Dissolved Zinc Method 6020. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, this anomaly may be due to matrix interference and no corrective action was taken.

Samples MW-34C and MW-4 were selected to fulfill the laboratory batch quality control requirements for Method 350.1. Analysis of the laboratory generated MS/MSD for these samples exhibited recoveries of Ammonia above the below control limit indicating the possible presence of a matrix interference.

All other MS and MSD samples were within established control limits.

### Metals

The Method 6020 continuing calibration blank (CCB) and continuing calibration verification (CCV) for Dissolved Antimony associated with batch 280-100876 recovered above the upper control limit. Associated sample results are still considered valid because Dissolved Antimony was not detected above the respective reporting limits.

**General Comments**

The analyses for Volatile Organics by Method 8260B and Volatile Organics by Method 8260B SIM were performed by TestAmerica Buffalo. Their address and phone number are:

TestAmerica Buffalo

10 Hazelwood Drive, Suite 106

Amherst, NY 14228

716-691-2600



## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-23838-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-23838-1</b>	<b>MW-34C</b>					
Vinyl chloride		0.12		0.020	ug/L	8260B SIM
Depth to water		41.80			ft	Field Sampling
Specific Conductivity		306.0			umhos/cm	Field Sampling
Dissolved Oxygen		0.14			mg/L	Field Sampling
eH		-13.0			millivolts	Field Sampling
Turbidity		52.70			NTU	Field Sampling
Temperature		11.83			Degrees C	Field Sampling
pH		6.60			SU	Field Sampling
Sulfate		5.7		1.0	mg/L	300.0
Ammonia (as N)		0.083		0.030	mg/L	350.1
Chloride		6.0		1.0	mg/L	9251
Alkalinity, Total (As CaCO3)		150	B	5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		150	B	5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		210		5.0	mg/L	SM 2540C
Total Organic Carbon - Average		2.0		1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		29		0.040	mg/L	6010B
Iron, Dissolved		0.77		0.060	mg/L	6010B
Magnesium, Dissolved		12		0.050	mg/L	6010B
Potassium, Dissolved		1.1		1.0	mg/L	6010B
Sodium, Dissolved		16		1.0	mg/L	6010B
Antimony, Dissolved		0.00070	J B	0.0010	mg/L	6020
Barium, Dissolved		0.011		0.0010	mg/L	6020
Manganese, Dissolved		0.76	B	0.0010	mg/L	6020
Nickel, Dissolved		0.0030	J	0.0040	mg/L	6020
Thallium, Dissolved		0.000077	J B	0.0010	mg/L	6020
Vanadium, Dissolved		0.00035	J	0.0020	mg/L	6020

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-23838-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-23838-2</b>	<b>MW-34A</b>					
Vinyl chloride		0.015	J	0.020	ug/L	8260B SIM
Depth to water		40.00			ft	Field Sampling
Specific Conductivity		177.0			umhos/cm	Field Sampling
Dissolved Oxygen		0.90			mg/L	Field Sampling
eH		139.0			millivolts	Field Sampling
Turbidity		0.55			NTU	Field Sampling
Temperature		11.22			Degrees C	Field Sampling
pH		6.32			SU	Field Sampling
Sulfate		3.3		1.0	mg/L	300.0
Ammonia (as N)		0.041		0.030	mg/L	350.1
Nitrate as N		0.29		0.050	mg/L	353.2
Chloride		5.9		1.0	mg/L	9251
Alkalinity, Total (As CaCO3)		78	B	5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		78	B	5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		120		5.0	mg/L	SM 2540C
Total Organic Carbon - Average		0.67	J	1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		14		0.040	mg/L	6010B
Magnesium, Dissolved		7.0		0.050	mg/L	6010B
Potassium, Dissolved		0.64	J	1.0	mg/L	6010B
Sodium, Dissolved		8.5		1.0	mg/L	6010B
Antimony, Dissolved		0.00060	J B	0.0010	mg/L	6020
Barium, Dissolved		0.0041		0.0010	mg/L	6020
Chromium, Dissolved		0.0054		0.0030	mg/L	6020
Manganese, Dissolved		0.00043	J B	0.0010	mg/L	6020
Nickel, Dissolved		0.0029	J	0.0040	mg/L	6020
Vanadium, Dissolved		0.0048		0.0020	mg/L	6020

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-23838-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-23838-3</b>	<b>MW-36A</b>					
Depth to water		31.47			ft	Field Sampling
Specific Conductivity		137.0			umhos/cm	Field Sampling
Dissolved Oxygen		1.16			mg/L	Field Sampling
eH		151.0			millivolts	Field Sampling
Turbidity		1.23			NTU	Field Sampling
Temperature		9.04			Degrees C	Field Sampling
pH		6.25			SU	Field Sampling
Sulfate		3.4		1.0	mg/L	300.0
Ammonia (as N)		0.028	J	0.030	mg/L	350.1
Nitrate as N		0.80		0.050	mg/L	353.2
Chloride		2.9		1.0	mg/L	9251
Alkalinity, Total (As CaCO3)		64	B	5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		64	B	5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		95		5.0	mg/L	SM 2540C
Total Organic Carbon - Average		0.42	J	1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		11		0.040	mg/L	6010B
Magnesium, Dissolved		6.0		0.050	mg/L	6010B
Potassium, Dissolved		0.98	J	1.0	mg/L	6010B
Sodium, Dissolved		6.6		1.0	mg/L	6010B
Antimony, Dissolved		0.00046	J B	0.0010	mg/L	6020
Barium, Dissolved		0.0036		0.0010	mg/L	6020
Chromium, Dissolved		0.0080		0.0030	mg/L	6020
Manganese, Dissolved		0.0025	B	0.0010	mg/L	6020
Nickel, Dissolved		0.0027	J	0.0040	mg/L	6020
Selenium, Dissolved		0.00088	J	0.0010	mg/L	6020
Vanadium, Dissolved		0.0025		0.0020	mg/L	6020
Zinc, Dissolved		0.0031	J	0.0050	mg/L	6020

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-23838-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-23838-4</b>	<b>MW-15R</b>					
Vinyl chloride		0.046		0.020	ug/L	8260B SIM
Depth to water		19.15			ft	Field Sampling
Specific Conductivity		233.0			umhos/cm	Field Sampling
Dissolved Oxygen		0.20			mg/L	Field Sampling
eH		147.0			millivolts	Field Sampling
Turbidity		0.22			NTU	Field Sampling
Temperature		9.82			Degrees C	Field Sampling
pH		6.57			SU	Field Sampling
Sulfate		5.8		1.0	mg/L	300.0
Ammonia (as N)		0.033		0.030	mg/L	350.1
Nitrate as N		0.073		0.050	mg/L	353.2
Chloride		3.5		1.0	mg/L	9251
Alkalinity, Total (As CaCO3)		120	B	5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		120	B	5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		130		5.0	mg/L	SM 2540C
Total Organic Carbon - Average		0.36	J	1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		20		0.040	mg/L	6010B
Iron, Dissolved		0.042	J	0.060	mg/L	6010B
Magnesium, Dissolved		12		0.050	mg/L	6010B
Potassium, Dissolved		0.77	J	1.0	mg/L	6010B
Sodium, Dissolved		6.3		1.0	mg/L	6010B
Antimony, Dissolved		0.00024	J B	0.0010	mg/L	6020
Barium, Dissolved		0.0060		0.0010	mg/L	6020
Cadmium, Dissolved		0.000086	J	0.00020	mg/L	6020
Manganese, Dissolved		0.0019	B	0.0010	mg/L	6020
Nickel, Dissolved		0.0020	J	0.0040	mg/L	6020
Vanadium, Dissolved		0.0034		0.0020	mg/L	6020
Zinc, Dissolved		0.0027	J	0.0050	mg/L	6020

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-23838-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-23838-5</b>	<b>MW-23A</b>					
Vinyl chloride		0.032		0.020	ug/L	8260B SIM
Depth to water		13.60			ft	Field Sampling
Specific Conductivity		248.0			umhos/cm	Field Sampling
Dissolved Oxygen		0.13			mg/L	Field Sampling
eH		65.0			millivolts	Field Sampling
Turbidity		14.72			NTU	Field Sampling
Temperature		12.64			Degrees C	Field Sampling
pH		6.26			SU	Field Sampling
Sulfate		5.7		1.0	mg/L	300.0
Ammonia (as N)		0.046		0.030	mg/L	350.1
Chloride		3.4		1.0	mg/L	9251
Alkalinity, Total (As CaCO3)		130	B	5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		130	B	5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		140		5.0	mg/L	SM 2540C
Total Organic Carbon - Average		0.56	J	1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		25		0.040	mg/L	6010B
Iron, Dissolved		0.54		0.060	mg/L	6010B
Magnesium, Dissolved		11		0.050	mg/L	6010B
Potassium, Dissolved		1.2		1.0	mg/L	6010B
Sodium, Dissolved		7.1		1.0	mg/L	6010B
Antimony, Dissolved		0.00036	J B	0.0010	mg/L	6020
Barium, Dissolved		0.016		0.0010	mg/L	6020
Copper, Dissolved		0.00056	J B	0.0020	mg/L	6020
Manganese, Dissolved		1.7	B	0.0010	mg/L	6020
Nickel, Dissolved		0.00039	J	0.0040	mg/L	6020
Vanadium, Dissolved		0.00052	J	0.0020	mg/L	6020
Zinc, Dissolved		0.0094		0.0050	mg/L	6020

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-23838-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-23838-6</b>	<b>MW-4</b>					
Vinyl chloride		0.040		0.020	ug/L	8260B SIM
Depth to water		15.35			ft	Field Sampling
Specific Conductivity		128.0			umhos/cm	Field Sampling
Dissolved Oxygen		0.16			mg/L	Field Sampling
eH		133.0			millivolts	Field Sampling
Turbidity		1.34			NTU	Field Sampling
Temperature		9.31			Degrees C	Field Sampling
pH		6.53			SU	Field Sampling
Sulfate		4.0		1.0	mg/L	300.0
Ammonia (as N)		0.040		0.030	mg/L	350.1
Chloride		3.0		1.0	mg/L	9251
Alkalinity, Total (As CaCO3)		61	B	5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		61	B	5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		88		5.0	mg/L	SM 2540C
Total Organic Carbon - Average		0.49	J	1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		11		0.040	mg/L	6010B
Magnesium, Dissolved		5.3		0.050	mg/L	6010B
Potassium, Dissolved		0.54	J	1.0	mg/L	6010B
Sodium, Dissolved		6.0		1.0	mg/L	6010B
Antimony, Dissolved		0.00036	J B	0.0010	mg/L	6020
Barium, Dissolved		0.0026		0.0010	mg/L	6020
Manganese, Dissolved		0.74	B	0.0010	mg/L	6020
Nickel, Dissolved		0.0014	J	0.0040	mg/L	6020
Vanadium, Dissolved		0.0011	J	0.0020	mg/L	6020

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-23838-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-23838-7</b>	<b>MW-19C</b>					
Trichloroethene		1.4		1.0	ug/L	8260B
Vinyl chloride		0.073		0.020	ug/L	8260B SIM
Depth to water		34.63			ft	Field Sampling
Specific Conductivity		171.0			umhos/cm	Field Sampling
Dissolved Oxygen		0.20			mg/L	Field Sampling
eH		22.0			millivolts	Field Sampling
Turbidity		0.33			NTU	Field Sampling
Temperature		9.99			Degrees C	Field Sampling
pH		6.80			SU	Field Sampling
Sulfate		4.7		1.0	mg/L	300.0
Ammonia (as N)		0.44		0.030	mg/L	350.1
Chloride		4.6		1.0	mg/L	9251
Alkalinity, Total (As CaCO3)		77	B	5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		77	B	5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		110		5.0	mg/L	SM 2540C
Total Organic Carbon - Average		0.58	J	1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		14		0.040	mg/L	6010B
Iron, Dissolved		0.14		0.060	mg/L	6010B
Magnesium, Dissolved		6.9		0.050	mg/L	6010B
Potassium, Dissolved		1.4		1.0	mg/L	6010B
Sodium, Dissolved		6.1		1.0	mg/L	6010B
Antimony, Dissolved		0.00033	J B	0.0010	mg/L	6020
Barium, Dissolved		0.0049		0.0010	mg/L	6020
Manganese, Dissolved		1.3	B	0.0010	mg/L	6020
Nickel, Dissolved		0.00070	J	0.0040	mg/L	6020

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-23838-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-23838-8</b>	<b>MW-13A</b>					
Depth to water		48.80			ft	Field Sampling
Specific Conductivity		176.0			umhos/cm	Field Sampling
Dissolved Oxygen		4.30			mg/L	Field Sampling
eH		89.0			millivolts	Field Sampling
Turbidity		0.00			NTU	Field Sampling
Temperature		8.92			Degrees C	Field Sampling
pH		7.13			SU	Field Sampling
Sulfate		2.5		1.0	mg/L	300.0
Ammonia (as N)		0.086		0.030	mg/L	350.1
Nitrate as N		0.48		0.050	mg/L	353.2
Chloride		4.4		1.0	mg/L	9251
Alkalinity, Total (As CaCO3)		90	B	5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		90	B	5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		97		5.0	mg/L	SM 2540C
Total Organic Carbon - Average		0.20	J	1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		16		0.040	mg/L	6010B
Magnesium, Dissolved		9.3		0.050	mg/L	6010B
Potassium, Dissolved		0.56	J	1.0	mg/L	6010B
Sodium, Dissolved		5.5		1.0	mg/L	6010B
Antimony, Dissolved		0.00025	J B	0.0010	mg/L	6020
Barium, Dissolved		0.0030		0.0010	mg/L	6020
Chromium, Dissolved		0.0021	J	0.0030	mg/L	6020
Silver, Dissolved		0.000033	J	0.0020	mg/L	6020
Vanadium, Dissolved		0.0041		0.0020	mg/L	6020



## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-23838-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-23838-9</b>	<b>MW-13B</b>					
Vinyl chloride		0.020		0.020	ug/L	8260B SIM
Depth to water		61.68			ft	Field Sampling
Specific Conductivity		169			umhos/cm	Field Sampling
Dissolved Oxygen		4.59			mg/L	Field Sampling
eH		89.0			millivolts	Field Sampling
Turbidity		0.00			NTU	Field Sampling
Temperature		8.76			Degrees C	Field Sampling
pH		7.53			SU	Field Sampling
Sulfate		3.5		1.0	mg/L	300.0
Ammonia (as N)		0.030		0.030	mg/L	350.1
Nitrate as N		0.47		0.050	mg/L	353.2
Chloride		3.4		1.0	mg/L	9251
Alkalinity, Total (As CaCO3)		84	B	5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		84	B	5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		91		5.0	mg/L	SM 2540C
<b><i>Dissolved</i></b>						
Calcium, Dissolved		16		0.040	mg/L	6010B
Magnesium, Dissolved		8.1		0.050	mg/L	6010B
Potassium, Dissolved		0.58	J	1.0	mg/L	6010B
Sodium, Dissolved		5.1		1.0	mg/L	6010B
Antimony, Dissolved		0.00031	J B	0.0010	mg/L	6020
Barium, Dissolved		0.0035		0.0010	mg/L	6020
Chromium, Dissolved		0.0031		0.0030	mg/L	6020
Vanadium, Dissolved		0.0066		0.0020	mg/L	6020

## METHOD SUMMARY

Client: Waste Management

Job Number: 280-23838-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals			SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Metals (ICP/MS)	TAL DEN	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals			SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Anions, Ion Chromatography	TAL DEN	MCAWW 300.0	
Nitrogen, Ammonia	TAL DEN	MCAWW 350.1	
Nitrate	TAL DEN	EPA 353.2	
Chloride	TAL DEN	SW846 9251	
Alkalinity	TAL DEN	SM SM 2320B	
Solids, Total Dissolved (TDS)	TAL DEN	SM SM 2540C	
Organic Carbon, Total (TOC)	TAL DEN	SM SM 5310B	
Field Sampling	TAL DEN	EPA Field Sampling	
Volatile Organic Compounds (GC/MS)	TAL BUF	SW846 8260B	
Purge and Trap	TAL BUF		SW846 5030B
Volatile Organic Compounds (GC/MS)	TAL BUF	SW846 8260B SIM	
Purge and Trap	TAL BUF		SW846 5030B

**Lab References:**

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver

**Method References:**

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

## METHOD / ANALYST SUMMARY

Client: Waste Management

Job Number: 280-23838-1

<b>Method</b>	<b>Analyst</b>	<b>Analyst ID</b>
SW846 8260B	Coder, David	DC
SW846 8260B SIM	Brandt, Todd R	TRB
SW846 6010B	Harre, John K	JKH
SW846 6020	Trudell, Lynn-Anne	LT
EPA Field Sampling	Field, Sampler	FS
MCAWW 300.0	Kudla, Ewa	EK
MCAWW 350.1	Doherty, Jillian A	JAD
EPA 353.2	Sullivan, Roxanne	RS
SW846 9251	Allen, Andrew J	AJA
SM SM 2320B	Elkin, David	DE
SM SM 2540C	Domnick, Brandon J	BJD
SM SM 5310B	Yates, George E	GEY

## SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-23838-1

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
280-23838-1	MW-34C	Water	12/14/2011 0900	12/15/2011 0930
280-23838-2	MW-34A	Water	12/14/2011 1000	12/15/2011 0930
280-23838-3	MW-36A	Water	12/14/2011 1032	12/15/2011 0930
280-23838-4	MW-15R	Water	12/14/2011 1103	12/15/2011 0930
280-23838-5	MW-23A	Water	12/14/2011 1147	12/15/2011 0930
280-23838-6	MW-4	Water	12/14/2011 1314	12/15/2011 0930
280-23838-7	MW-19C	Water	12/14/2011 1356	12/15/2011 0930
280-23838-8	MW-13A	Water	12/14/2011 1430	12/15/2011 0930
280-23838-9	MW-13B	Water	12/14/2011 1502	12/15/2011 0930

# **SAMPLE RESULTS**

## Analytical Data

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-34C**

Lab Sample ID: 280-23838-1

Date Sampled: 12/14/2011 0900

Client Matrix: Water

Date Received: 12/15/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B	Analysis Batch: 480-45894	Instrument ID: HP5973S	
Prep Method: 5030B	Prep Batch: N/A	Lab File ID: S9948.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/23/2011 1221		Final Weight/Volume: 5 mL	
Prep Date: 12/23/2011 1221			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

## Analytical Data

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-34C**

Lab Sample ID: 280-23838-1

Date Sampled: 12/14/2011 0900

Client Matrix: Water

Date Received: 12/15/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9948.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1221			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1221				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-34C**

Lab Sample ID: 280-23838-1

Date Sampled: 12/14/2011 0900

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9948.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1221			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1221				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	115		66 - 137
4-Bromofluorobenzene (Surr)	84		73 - 120
Toluene-d8 (Surr)	95		71 - 126



**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-34C**

Lab Sample ID: 280-23838-1

Date Sampled: 12/14/2011 0900

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9948.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1221			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1221				

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

## Analytical Data

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID:** MW-34A

Lab Sample ID: 280-23838-2

Date Sampled: 12/14/2011 1000

Client Matrix: Water

Date Received: 12/15/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9949.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1243			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1243				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

## Analytical Data

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID:** MW-34A

Lab Sample ID: 280-23838-2

Date Sampled: 12/14/2011 1000

Client Matrix: Water

Date Received: 12/15/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9949.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1243			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1243				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-34A**

Lab Sample ID: 280-23838-2

Date Sampled: 12/14/2011 1000

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9949.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1243			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1243				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	116		66 - 137
4-Bromofluorobenzene (Surr)	84		73 - 120
Toluene-d8 (Surr)	96		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-34A**

Lab Sample ID: 280-23838-2

Date Sampled: 12/14/2011 1000

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9949.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1243			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1243				

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

## Analytical Data

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID:** MW-36A

Lab Sample ID: 280-23838-3

Date Sampled: 12/14/2011 1032

Client Matrix: Water

Date Received: 12/15/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9950.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1306			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1306				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

## Analytical Data

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID:** MW-36A

Lab Sample ID: 280-23838-3

Date Sampled: 12/14/2011 1032

Client Matrix: Water

Date Received: 12/15/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9950.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1306			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1306				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-36A**

Lab Sample ID: 280-23838-3

Date Sampled: 12/14/2011 1032

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9950.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1306			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1306				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	115		66 - 137
4-Bromofluorobenzene (Surr)	84		73 - 120
Toluene-d8 (Surr)	96		71 - 126



**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-36A**

Lab Sample ID: 280-23838-3

Date Sampled: 12/14/2011 1032

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9950.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1306			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1306				

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

## Analytical Data

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-15R**

Lab Sample ID: 280-23838-4

Date Sampled: 12/14/2011 1103

Client Matrix: Water

Date Received: 12/15/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B	Analysis Batch: 480-45894	Instrument ID: HP5973S	
Prep Method: 5030B	Prep Batch: N/A	Lab File ID: S9951.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/23/2011 1328		Final Weight/Volume: 5 mL	
Prep Date: 12/23/2011 1328			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

## Analytical Data

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-15R**

Lab Sample ID: 280-23838-4

Date Sampled: 12/14/2011 1103

Client Matrix: Water

Date Received: 12/15/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9951.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1328			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1328				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-15R**

Lab Sample ID: 280-23838-4

Date Sampled: 12/14/2011 1103

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9951.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1328			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1328				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	120		66 - 137
4-Bromofluorobenzene (Surr)	85		73 - 120
Toluene-d8 (Surr)	97		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-15R**

Lab Sample ID: 280-23838-4

Date Sampled: 12/14/2011 1103

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9951.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1328			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1328				

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

## Analytical Data

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID:** MW-23A

Lab Sample ID: 280-23838-5

Date Sampled: 12/14/2011 1147

Client Matrix: Water

Date Received: 12/15/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9952.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1350			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1350				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

## Analytical Data

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID:** MW-23A

Lab Sample ID: 280-23838-5

Date Sampled: 12/14/2011 1147

Client Matrix: Water

Date Received: 12/15/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9952.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1350			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1350				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-23A**

Lab Sample ID: 280-23838-5

Date Sampled: 12/14/2011 1147

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9952.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1350			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1350				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	117		66 - 137
4-Bromofluorobenzene (Surr)	83		73 - 120
Toluene-d8 (Surr)	96		71 - 126



**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-23A**

Lab Sample ID: 280-23838-5

Date Sampled: 12/14/2011 1147

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9952.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1350			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1350				

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

## Analytical Data

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID:** MW-4

Lab Sample ID: 280-23838-6

Date Sampled: 12/14/2011 1314

Client Matrix: Water

Date Received: 12/15/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9953.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1412			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1412				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

## Analytical Data

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID:** MW-4

Lab Sample ID: 280-23838-6

Date Sampled: 12/14/2011 1314

Client Matrix: Water

Date Received: 12/15/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9953.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1412			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1412				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

Client Sample ID: MW-4

Lab Sample ID: 280-23838-6

Date Sampled: 12/14/2011 1314

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9953.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1412			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1412				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	120		66 - 137
4-Bromofluorobenzene (Surr)	84		73 - 120
Toluene-d8 (Surr)	97		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-4**

Lab Sample ID: 280-23838-6

Date Sampled: 12/14/2011 1314

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9953.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1412			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1412				

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

## Analytical Data

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-19C**

Lab Sample ID: 280-23838-7

Date Sampled: 12/14/2011 1356

Client Matrix: Water

Date Received: 12/15/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B	Analysis Batch: 480-45894	Instrument ID: HP5973S	
Prep Method: 5030B	Prep Batch: N/A	Lab File ID: S9954.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/23/2011 1434		Final Weight/Volume: 5 mL	
Prep Date: 12/23/2011 1434			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

## Analytical Data

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-19C**

Lab Sample ID: 280-23838-7

Date Sampled: 12/14/2011 1356

Client Matrix: Water

Date Received: 12/15/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9954.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1434			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1434				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	1.4		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-19C**

Lab Sample ID: 280-23838-7

Date Sampled: 12/14/2011 1356

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9954.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1434			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1434				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	118		66 - 137
4-Bromofluorobenzene (Surr)	84		73 - 120
Toluene-d8 (Surr)	97		71 - 126



**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-19C**

Lab Sample ID: 280-23838-7

Date Sampled: 12/14/2011 1356

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9954.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1434			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1434				

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

## Analytical Data

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID:** MW-13A

Lab Sample ID: 280-23838-8

Date Sampled: 12/14/2011 1430

Client Matrix: Water

Date Received: 12/15/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9955.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1456			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1456				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

## Analytical Data

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID:** MW-13A

Lab Sample ID: 280-23838-8

Date Sampled: 12/14/2011 1430

Client Matrix: Water

Date Received: 12/15/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9955.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1456			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1456				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-13A**

Lab Sample ID: 280-23838-8

Date Sampled: 12/14/2011 1430

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9955.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1456			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1456				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	122		66 - 137
4-Bromofluorobenzene (Surr)	85		73 - 120
Toluene-d8 (Surr)	98		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-13A**

Lab Sample ID: 280-23838-8

Date Sampled: 12/14/2011 1430

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9955.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1456			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1456				

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

## Analytical Data

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-13B**

Lab Sample ID: 280-23838-9

Date Sampled: 12/14/2011 1502

Client Matrix: Water

Date Received: 12/15/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9956.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1518			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1518				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

## Analytical Data

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-13B**

Lab Sample ID: 280-23838-9

Date Sampled: 12/14/2011 1502

Client Matrix: Water

Date Received: 12/15/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9956.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1518			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1518				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-13B**

Lab Sample ID: 280-23838-9

Date Sampled: 12/14/2011 1502

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S9956.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1518			Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1518				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	121		66 - 137
4-Bromofluorobenzene (Surr)	84		73 - 120
Toluene-d8 (Surr)	97		71 - 126



**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-13B**

Lab Sample ID: 280-23838-9

Date Sampled: 12/14/2011 1502

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method: 8260B

Analysis Batch: 480-45894

Instrument ID: HP5973S

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: S9956.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Analysis Date: 12/23/2011 1518

Final Weight/Volume: 5 mL

Prep Date: 12/23/2011 1518

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-34C**

Lab Sample ID: 280-23838-1

Date Sampled: 12/14/2011 0900

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3715.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 1752			Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 1752				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.12		0.0040	0.020

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID:** MW-34A

Lab Sample ID: 280-23838-2

Date Sampled: 12/14/2011 1000

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3716.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 1816			Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 1816				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.015	J	0.0040	0.020

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-36A**

Lab Sample ID: 280-23838-3

Date Sampled: 12/14/2011 1032

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3717.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 1840			Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 1840				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.0040	0.020

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-15R**

Lab Sample ID: 280-23838-4

Date Sampled: 12/14/2011 1103

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3718.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 1904			Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 1904				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.046		0.0040	0.020

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-23A**

Lab Sample ID: 280-23838-5

Date Sampled: 12/14/2011 1147

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3719.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 1928			Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 1928				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.032		0.0040	0.020

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-4**

Lab Sample ID: 280-23838-6

Date Sampled: 12/14/2011 1314

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3720.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 1951			Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 1951				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.040		0.0040	0.020

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-19C**

Lab Sample ID: 280-23838-7

Date Sampled: 12/14/2011 1356

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3721.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 2016			Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 2016				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.073		0.0040	0.020



**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-13A**

Lab Sample ID: 280-23838-8

Date Sampled: 12/14/2011 1430

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3722.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 2039			Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 2039				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.0040	0.020

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-13B**

Lab Sample ID: 280-23838-9

Date Sampled: 12/14/2011 1502

Client Matrix: Water

Date Received: 12/15/2011 0930

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3723.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 2103			Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 2103				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.020		0.0040	0.020

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID:** MW-34C

Lab Sample ID: 280-23838-1

Date Sampled: 12/14/2011 0900

Client Matrix: Water

Date Received: 12/15/2011 0930

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-100645	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-100270	Lab File ID:	25A4121911.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/19/2011 2014			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 0615				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Dissolved	29		0.035	0.040
Cobalt, Dissolved	ND		0.0012	0.0030
Iron, Dissolved	0.77		0.022	0.060
Magnesium, Dissolved	12		0.011	0.050
Potassium, Dissolved	1.1		0.24	1.0
Sodium, Dissolved	16		0.092	1.0

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-100876	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-100267	Lab File ID:	034SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 1542			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 0615				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Antimony, Dissolved	0.00070	J B	0.00020	0.0010
Barium, Dissolved	0.011		0.00029	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	ND		0.000040	0.00020
Chromium, Dissolved	ND		0.00050	0.0030
Copper, Dissolved	ND		0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	0.76	B	0.00031	0.0010
Nickel, Dissolved	0.0030	J	0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	0.000077	J B	0.000033	0.0010
Vanadium, Dissolved	0.00035	J	0.00033	0.0020
Zinc, Dissolved	ND		0.0020	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID:** MW-34A

Lab Sample ID: 280-23838-2

Date Sampled: 12/14/2011 1000

Client Matrix: Water

Date Received: 12/15/2011 0930

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-100645	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-100270	Lab File ID:	25A4121911.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/19/2011 2023			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 0615				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Dissolved	14		0.035	0.040
Cobalt, Dissolved	ND		0.0012	0.0030
Iron, Dissolved	ND		0.022	0.060
Magnesium, Dissolved	7.0		0.011	0.050
Potassium, Dissolved	0.64	J	0.24	1.0
Sodium, Dissolved	8.5		0.092	1.0

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-100876	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-100267	Lab File ID:	035SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 1545			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 0615				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Antimony, Dissolved	0.00060	J B	0.00020	0.0010
Barium, Dissolved	0.0041		0.00029	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	ND		0.000040	0.00020
Chromium, Dissolved	0.0054		0.00050	0.0030
Copper, Dissolved	ND		0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	0.00043	J B	0.00031	0.0010
Nickel, Dissolved	0.0029	J	0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	ND		0.000033	0.0010
Vanadium, Dissolved	0.0048		0.00033	0.0020
Zinc, Dissolved	ND		0.0020	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-36A**

Lab Sample ID: 280-23838-3

Date Sampled: 12/14/2011 1032

Client Matrix: Water

Date Received: 12/15/2011 0930

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-100645	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-100270	Lab File ID:	25A4121911.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/19/2011 2035			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 0615				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Dissolved	11		0.035	0.040
Cobalt, Dissolved	ND		0.0012	0.0030
Iron, Dissolved	ND		0.022	0.060
Magnesium, Dissolved	6.0		0.011	0.050
Potassium, Dissolved	0.98	J	0.24	1.0
Sodium, Dissolved	6.6		0.092	1.0

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-100876	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-100267	Lab File ID:	038SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 1553			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 0615				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Antimony, Dissolved	0.00046	J B	0.00020	0.0010
Barium, Dissolved	0.0036		0.00029	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	ND		0.000040	0.00020
Chromium, Dissolved	0.0080		0.00050	0.0030
Copper, Dissolved	ND		0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	0.0025	B	0.00031	0.0010
Nickel, Dissolved	0.0027	J	0.00030	0.0040
Selenium, Dissolved	0.00088	J	0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	ND		0.000033	0.0010
Vanadium, Dissolved	0.0025		0.00033	0.0020
Zinc, Dissolved	0.0031	J	0.0020	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-15R**

Lab Sample ID: 280-23838-4

Date Sampled: 12/14/2011 1103

Client Matrix: Water

Date Received: 12/15/2011 0930

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-100645	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-100270	Lab File ID:	25A4121911.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/19/2011 2037			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 0615				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Dissolved	20		0.035	0.040
Cobalt, Dissolved	ND		0.0012	0.0030
Iron, Dissolved	0.042	J	0.022	0.060
Magnesium, Dissolved	12		0.011	0.050
Potassium, Dissolved	0.77	J	0.24	1.0
Sodium, Dissolved	6.3		0.092	1.0

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-100876	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-100267	Lab File ID:	039SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 1556			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 0615				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Antimony, Dissolved	0.00024	J B	0.00020	0.0010
Barium, Dissolved	0.0060		0.00029	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	0.000086	J	0.000040	0.00020
Chromium, Dissolved	ND		0.00050	0.0030
Copper, Dissolved	ND		0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	0.0019	B	0.00031	0.0010
Nickel, Dissolved	0.0020	J	0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	ND		0.000033	0.0010
Vanadium, Dissolved	0.0034		0.00033	0.0020
Zinc, Dissolved	0.0027	J	0.0020	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID:** MW-23A

Lab Sample ID: 280-23838-5

Date Sampled: 12/14/2011 1147

Client Matrix: Water

Date Received: 12/15/2011 0930

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-100645	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-100270	Lab File ID:	25A4121911.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/19/2011 2040			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 0615				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Dissolved	25		0.035	0.040
Cobalt, Dissolved	ND		0.0012	0.0030
Iron, Dissolved	0.54		0.022	0.060
Magnesium, Dissolved	11		0.011	0.050
Potassium, Dissolved	1.2		0.24	1.0
Sodium, Dissolved	7.1		0.092	1.0

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-100876	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-100267	Lab File ID:	040SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 1558			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 0615				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Antimony, Dissolved	0.00036	J B	0.00020	0.0010
Barium, Dissolved	0.016		0.00029	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	ND		0.000040	0.00020
Chromium, Dissolved	ND		0.00050	0.0030
Copper, Dissolved	0.00056	J B	0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	1.7	B	0.00031	0.0010
Nickel, Dissolved	0.00039	J	0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	ND		0.000033	0.0010
Vanadium, Dissolved	0.00052	J	0.00033	0.0020
Zinc, Dissolved	0.0094		0.0020	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID:** MW-4

Lab Sample ID: 280-23838-6

Date Sampled: 12/14/2011 1314

Client Matrix: Water

Date Received: 12/15/2011 0930

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-100645	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-100270	Lab File ID:	25A4121911.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/19/2011 2042			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 0615				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Dissolved	11		0.035	0.040
Cobalt, Dissolved	ND		0.0012	0.0030
Iron, Dissolved	ND		0.022	0.060
Magnesium, Dissolved	5.3		0.011	0.050
Potassium, Dissolved	0.54	J	0.24	1.0
Sodium, Dissolved	6.0		0.092	1.0

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-100876	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-100267	Lab File ID:	041SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 1601			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 0615				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Antimony, Dissolved	0.00036	J B	0.00020	0.0010
Barium, Dissolved	0.0026		0.00029	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	ND		0.000040	0.00020
Chromium, Dissolved	ND		0.00050	0.0030
Copper, Dissolved	ND		0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	0.74	B	0.00031	0.0010
Nickel, Dissolved	0.0014	J	0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	ND		0.000033	0.0010
Vanadium, Dissolved	0.0011	J	0.00033	0.0020
Zinc, Dissolved	ND		0.0020	0.0050



**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-19C**

Lab Sample ID: 280-23838-7

Date Sampled: 12/14/2011 1356

Client Matrix: Water

Date Received: 12/15/2011 0930

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-100645	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-100270	Lab File ID:	25A4121911.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/19/2011 2044			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 0615				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Dissolved	14		0.035	0.040
Cobalt, Dissolved	ND		0.0012	0.0030
Iron, Dissolved	0.14		0.022	0.060
Magnesium, Dissolved	6.9		0.011	0.050
Potassium, Dissolved	1.4		0.24	1.0
Sodium, Dissolved	6.1		0.092	1.0

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-100876	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-100267	Lab File ID:	042SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 1604			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 0615				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Antimony, Dissolved	0.00033	J B	0.00020	0.0010
Barium, Dissolved	0.0049		0.00029	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	ND		0.000040	0.00020
Chromium, Dissolved	ND		0.00050	0.0030
Copper, Dissolved	ND		0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	1.3	B	0.00031	0.0010
Nickel, Dissolved	0.00070	J	0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	ND		0.000033	0.0010
Vanadium, Dissolved	ND		0.00033	0.0020
Zinc, Dissolved	ND		0.0020	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-13A**

Lab Sample ID: 280-23838-8

Date Sampled: 12/14/2011 1430

Client Matrix: Water

Date Received: 12/15/2011 0930

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-100645	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-100270	Lab File ID:	25A4121911.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/19/2011 2047			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 0615				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Dissolved	16		0.035	0.040
Cobalt, Dissolved	ND		0.0012	0.0030
Iron, Dissolved	ND		0.022	0.060
Magnesium, Dissolved	9.3		0.011	0.050
Potassium, Dissolved	0.56	J	0.24	1.0
Sodium, Dissolved	5.5		0.092	1.0

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-100876	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-100267	Lab File ID:	043SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 1607			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 0615				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Antimony, Dissolved	0.00025	J B	0.00020	0.0010
Barium, Dissolved	0.0030		0.00029	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	ND		0.000040	0.00020
Chromium, Dissolved	0.0021	J	0.00050	0.0030
Copper, Dissolved	ND		0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	ND		0.00031	0.0010
Nickel, Dissolved	ND		0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	0.000033	J	0.000033	0.0020
Thallium, Dissolved	ND		0.000033	0.0010
Vanadium, Dissolved	0.0041		0.00033	0.0020
Zinc, Dissolved	ND		0.0020	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-23838-1

**Client Sample ID: MW-13B**

Lab Sample ID: 280-23838-9

Date Sampled: 12/14/2011 1502

Client Matrix: Water

Date Received: 12/15/2011 0930

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-100645	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-100270	Lab File ID:	25A4121911.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/19/2011 2049			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 0615				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Dissolved	16		0.035	0.040
Cobalt, Dissolved	ND		0.0012	0.0030
Iron, Dissolved	ND		0.022	0.060
Magnesium, Dissolved	8.1		0.011	0.050
Potassium, Dissolved	0.58	J	0.24	1.0
Sodium, Dissolved	5.1		0.092	1.0

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-100876	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-100267	Lab File ID:	044SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 1609			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 0615				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Antimony, Dissolved	0.00031	J B	0.00020	0.0010
Barium, Dissolved	0.0035		0.00029	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	ND		0.000040	0.00020
Chromium, Dissolved	0.0031		0.00050	0.0030
Copper, Dissolved	ND		0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	ND		0.00031	0.0010
Nickel, Dissolved	ND		0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	ND		0.000033	0.0010
Vanadium, Dissolved	0.0066		0.00033	0.0020
Zinc, Dissolved	ND		0.0020	0.0050

Client: Waste Management

Job Number: 280-23838-1

General Chemistry

Client Sample ID: MW-34C

Lab Sample ID: 280-23838-1

Date Sampled: 12/14/2011 0900

Client Matrix: Water

Date Received: 12/15/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	5.7		mg/L	0.23	1.0	1.0	300.0
	Analysis Batch: 280-100881		Analysis Date: 12/20/2011 0832				
Ammonia (as N)	0.083		mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-101025		Analysis Date: 12/21/2011 1206				
Nitrate as N	ND		mg/L	0.019	0.050	1.0	353.2
	Analysis Batch: 280-101440		Analysis Date: 12/27/2011 0901				
Chloride	6.0		mg/L	1.0	1.0	1.0	9251
	Analysis Batch: 280-100757		Analysis Date: 12/20/2011 1135				
Alkalinity, Total (As CaCO3)	150	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067		Analysis Date: 12/21/2011 1253				
Alkalinity, Bicarbonate (As CaCO3)	150	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067		Analysis Date: 12/21/2011 1253				
Alkalinity, Carbonate (As CaCO3)	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067		Analysis Date: 12/21/2011 1253				
Total Dissolved Solids (TDS)	210		mg/L	4.7	5.0	1.0	SM 2540C
	Analysis Batch: 280-100854		Analysis Date: 12/21/2011 0640				
Total Organic Carbon - Average	2.0		mg/L	0.16	1.0	1.0	SM 5310B
	Analysis Batch: 280-100415		Analysis Date: 12/16/2011 2258				

Client: Waste Management

Job Number: 280-23838-1

General Chemistry

Client Sample ID: MW-34A

Lab Sample ID: 280-23838-2

Date Sampled: 12/14/2011 1000

Client Matrix: Water

Date Received: 12/15/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	3.3		mg/L	0.23	1.0	1.0	300.0
	Analysis Batch: 280-100881			Analysis Date: 12/20/2011 0939			
Ammonia (as N)	0.041		mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-101025			Analysis Date: 12/21/2011 1211			
Nitrate as N	0.29		mg/L	0.019	0.050	1.0	353.2
	Analysis Batch: 280-101440			Analysis Date: 12/27/2011 0901			
Chloride	5.9		mg/L	1.0	1.0	1.0	9251
	Analysis Batch: 280-100757			Analysis Date: 12/20/2011 1136			
Alkalinity, Total (As CaCO3)	78	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067			Analysis Date: 12/21/2011 1300			
Alkalinity, Bicarbonate (As CaCO3)	78	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067			Analysis Date: 12/21/2011 1300			
Alkalinity, Carbonate (As CaCO3)	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067			Analysis Date: 12/21/2011 1300			
Total Dissolved Solids (TDS)	120		mg/L	4.7	5.0	1.0	SM 2540C
	Analysis Batch: 280-100854			Analysis Date: 12/21/2011 0640			
Total Organic Carbon - Average	0.67	J	mg/L	0.16	1.0	1.0	SM 5310B
	Analysis Batch: 280-100415			Analysis Date: 12/16/2011 2314			

Client: Waste Management

Job Number: 280-23838-1

General Chemistry

Client Sample ID: MW-36A

Lab Sample ID: 280-23838-3

Date Sampled: 12/14/2011 1032

Client Matrix: Water

Date Received: 12/15/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	3.4		mg/L	0.23	1.0	1.0	300.0
	Analysis Batch: 280-100881			Analysis Date: 12/20/2011 0955			
Ammonia (as N)	0.028	J	mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-101025			Analysis Date: 12/21/2011 1212			
Nitrate as N	0.80		mg/L	0.019	0.050	1.0	353.2
	Analysis Batch: 280-101440			Analysis Date: 12/27/2011 0901			
Chloride	2.9		mg/L	1.0	1.0	1.0	9251
	Analysis Batch: 280-100757			Analysis Date: 12/20/2011 1137			
Alkalinity, Total (As CaCO3)	64	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067			Analysis Date: 12/21/2011 1306			
Alkalinity, Bicarbonate (As CaCO3)	64	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067			Analysis Date: 12/21/2011 1306			
Alkalinity, Carbonate (As CaCO3)	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067			Analysis Date: 12/21/2011 1306			
Total Dissolved Solids (TDS)	95		mg/L	4.7	5.0	1.0	SM 2540C
	Analysis Batch: 280-100854			Analysis Date: 12/21/2011 0640			
Total Organic Carbon - Average	0.42	J	mg/L	0.16	1.0	1.0	SM 5310B
	Analysis Batch: 280-100415			Analysis Date: 12/17/2011 0011			

Client: Waste Management

Job Number: 280-23838-1

General Chemistry

Client Sample ID: MW-15R

Lab Sample ID: 280-23838-4

Date Sampled: 12/14/2011 1103

Client Matrix: Water

Date Received: 12/15/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	5.8		mg/L	0.23	1.0	1.0	300.0
	Analysis Batch: 280-100881	Analysis Date: 12/20/2011 1012					
Ammonia (as N)	0.033		mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-101025	Analysis Date: 12/21/2011 1223					
Nitrate as N	0.073		mg/L	0.019	0.050	1.0	353.2
	Analysis Batch: 280-101440	Analysis Date: 12/27/2011 0901					
Chloride	3.5		mg/L	1.0	1.0	1.0	9251
	Analysis Batch: 280-100757	Analysis Date: 12/20/2011 1139					
Alkalinity, Total (As CaCO3)	120	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067	Analysis Date: 12/21/2011 1313					
Alkalinity, Bicarbonate (As CaCO3)	120	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067	Analysis Date: 12/21/2011 1313					
Alkalinity, Carbonate (As CaCO3)	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067	Analysis Date: 12/21/2011 1313					
Total Dissolved Solids (TDS)	130		mg/L	4.7	5.0	1.0	SM 2540C
	Analysis Batch: 280-100854	Analysis Date: 12/21/2011 0640					
Total Organic Carbon - Average	0.36	J	mg/L	0.16	1.0	1.0	SM 5310B
	Analysis Batch: 280-100415	Analysis Date: 12/17/2011 0026					

Client: Waste Management

Job Number: 280-23838-1

General Chemistry

Client Sample ID: MW-23A

Lab Sample ID: 280-23838-5

Date Sampled: 12/14/2011 1147

Client Matrix: Water

Date Received: 12/15/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	5.7		mg/L	0.23	1.0	1.0	300.0
	Analysis Batch: 280-100881		Analysis Date: 12/20/2011 1029				
Ammonia (as N)	0.046		mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-101025		Analysis Date: 12/21/2011 1224				
Nitrate as N	ND		mg/L	0.019	0.050	1.0	353.2
	Analysis Batch: 280-101440		Analysis Date: 12/27/2011 0901				
Chloride	3.4		mg/L	1.0	1.0	1.0	9251
	Analysis Batch: 280-100757		Analysis Date: 12/20/2011 1140				
Alkalinity, Total (As CaCO3)	130	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067		Analysis Date: 12/21/2011 1321				
Alkalinity, Bicarbonate (As CaCO3)	130	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067		Analysis Date: 12/21/2011 1321				
Alkalinity, Carbonate (As CaCO3)	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067		Analysis Date: 12/21/2011 1321				
Total Dissolved Solids (TDS)	140		mg/L	4.7	5.0	1.0	SM 2540C
	Analysis Batch: 280-100854		Analysis Date: 12/21/2011 0640				
Total Organic Carbon - Average	0.56	J	mg/L	0.16	1.0	1.0	SM 5310B
	Analysis Batch: 280-100415		Analysis Date: 12/17/2011 0043				



Client: Waste Management

Job Number: 280-23838-1

General Chemistry

Client Sample ID: MW-4

Lab Sample ID: 280-23838-6

Date Sampled: 12/14/2011 1314

Client Matrix: Water

Date Received: 12/15/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	4.0		mg/L	0.23	1.0	1.0	300.0
	Analysis Batch: 280-100881	Analysis Date: 12/20/2011 1045					
Ammonia (as N)	0.040		mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-101025	Analysis Date: 12/21/2011 1226					
Nitrate as N	ND		mg/L	0.019	0.050	1.0	353.2
	Analysis Batch: 280-101440	Analysis Date: 12/27/2011 0901					
Chloride	3.0		mg/L	1.0	1.0	1.0	9251
	Analysis Batch: 280-100757	Analysis Date: 12/20/2011 1148					
Alkalinity, Total (As CaCO3)	61	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067	Analysis Date: 12/21/2011 1328					
Alkalinity, Bicarbonate (As CaCO3)	61	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067	Analysis Date: 12/21/2011 1328					
Alkalinity, Carbonate (As CaCO3)	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067	Analysis Date: 12/21/2011 1328					
Total Dissolved Solids (TDS)	88		mg/L	4.7	5.0	1.0	SM 2540C
	Analysis Batch: 280-100854	Analysis Date: 12/21/2011 0640					
Total Organic Carbon - Average	0.49	J	mg/L	0.16	1.0	1.0	SM 5310B
	Analysis Batch: 280-100415	Analysis Date: 12/17/2011 0100					

Client: Waste Management

Job Number: 280-23838-1

General Chemistry

Client Sample ID: MW-19C

Lab Sample ID: 280-23838-7

Date Sampled: 12/14/2011 1356

Client Matrix: Water

Date Received: 12/15/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	4.7		mg/L	0.23	1.0	1.0	300.0
	Analysis Batch: 280-100881		Analysis Date: 12/20/2011 1102				
Ammonia (as N)	0.44		mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-101025		Analysis Date: 12/21/2011 1230				
Nitrate as N	ND		mg/L	0.019	0.050	1.0	353.2
	Analysis Batch: 280-101440		Analysis Date: 12/27/2011 0901				
Chloride	4.6		mg/L	1.0	1.0	1.0	9251
	Analysis Batch: 280-100757		Analysis Date: 12/20/2011 1149				
Alkalinity, Total (As CaCO3)	77	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067		Analysis Date: 12/21/2011 1335				
Alkalinity, Bicarbonate (As CaCO3)	77	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067		Analysis Date: 12/21/2011 1335				
Alkalinity, Carbonate (As CaCO3)	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067		Analysis Date: 12/21/2011 1335				
Total Dissolved Solids (TDS)	110		mg/L	4.7	5.0	1.0	SM 2540C
	Analysis Batch: 280-100854		Analysis Date: 12/21/2011 0640				
Total Organic Carbon - Average	0.58	J	mg/L	0.16	1.0	1.0	SM 5310B
	Analysis Batch: 280-100415		Analysis Date: 12/17/2011 0115				

Client: Waste Management

Job Number: 280-23838-1

General Chemistry

Client Sample ID: MW-13A

Lab Sample ID: 280-23838-8

Date Sampled: 12/14/2011 1430

Client Matrix: Water

Date Received: 12/15/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	2.5		mg/L	0.23	1.0	1.0	300.0
	Analysis Batch: 280-100881		Analysis Date: 12/20/2011 1152				
Ammonia (as N)	0.086		mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-101161		Analysis Date: 12/22/2011 1237				
Nitrate as N	0.48		mg/L	0.019	0.050	1.0	353.2
	Analysis Batch: 280-101440		Analysis Date: 12/27/2011 0901				
Chloride	4.4		mg/L	1.0	1.0	1.0	9251
	Analysis Batch: 280-100757		Analysis Date: 12/20/2011 1150				
Alkalinity, Total (As CaCO3)	90	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067		Analysis Date: 12/21/2011 1344				
Alkalinity, Bicarbonate (As CaCO3)	90	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067		Analysis Date: 12/21/2011 1344				
Alkalinity, Carbonate (As CaCO3)	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067		Analysis Date: 12/21/2011 1344				
Total Dissolved Solids (TDS)	97		mg/L	4.7	5.0	1.0	SM 2540C
	Analysis Batch: 280-100854		Analysis Date: 12/21/2011 0640				
Total Organic Carbon - Average	0.20	J	mg/L	0.16	1.0	1.0	SM 5310B
	Analysis Batch: 280-100415		Analysis Date: 12/17/2011 0207				

Client: Waste Management

Job Number: 280-23838-1

General Chemistry

Client Sample ID: MW-13B

Lab Sample ID: 280-23838-9

Date Sampled: 12/14/2011 1502

Client Matrix: Water

Date Received: 12/15/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	3.5		mg/L	0.23	1.0	1.0	300.0
	Analysis Batch: 280-100881		Analysis Date: 12/20/2011 1209				
Ammonia (as N)	0.030		mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-101025		Analysis Date: 12/21/2011 1233				
Nitrate as N	0.47		mg/L	0.019	0.050	1.0	353.2
	Analysis Batch: 280-101440		Analysis Date: 12/27/2011 0901				
Chloride	3.4		mg/L	1.0	1.0	1.0	9251
	Analysis Batch: 280-100757		Analysis Date: 12/20/2011 1151				
Alkalinity, Total (As CaCO3)	84	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067		Analysis Date: 12/21/2011 1351				
Alkalinity, Bicarbonate (As CaCO3)	84	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067		Analysis Date: 12/21/2011 1351				
Alkalinity, Carbonate (As CaCO3)	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067		Analysis Date: 12/21/2011 1351				
Total Dissolved Solids (TDS)	91		mg/L	4.7	5.0	1.0	SM 2540C
	Analysis Batch: 280-100854		Analysis Date: 12/21/2011 0640				
Total Organic Carbon - Average	ND		mg/L	0.16	1.0	1.0	SM 5310B
	Analysis Batch: 280-100415		Analysis Date: 12/17/2011 0223				

Client: Waste Management

Job Number: 280-23838-1

Field Service / Mobile Lab

Client Sample ID: MW-34C

Lab Sample ID: 280-23838-1

Client Matrix: Water

Date Sampled: 12/14/2011 0900

Date Received: 12/15/2011 0930

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Depth to water	41.80		ft	1.0	Field Sampling	280-101458	12/14/2011 0900
Specific Conductivity	306.0		umhos/cm	1.0	Field Sampling	280-101458	12/14/2011 0900
Dissolved Oxygen	0.14		mg/L	1.0	Field Sampling	280-101458	12/14/2011 0900
eH	-13.0		millivolts	1.0	Field Sampling	280-101458	12/14/2011 0900
Turbidity	52.70		NTU	1.0	Field Sampling	280-101458	12/14/2011 0900
Temperature	11.83		Degrees C	1.0	Field Sampling	280-101458	12/14/2011 0900
pH	6.60		SU	1.0	Field Sampling	280-101458	12/14/2011 0900

Client: Waste Management

Job Number: 280-23838-1

Field Service / Mobile Lab

Client Sample ID: MW-34A

Lab Sample ID: 280-23838-2

Client Matrix: Water

Date Sampled: 12/14/2011 1000

Date Received: 12/15/2011 0930

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed	Date Prepared
Depth to water	40.00		ft	1.0	Field Sampling	280-101458	12/14/2011	1000
Specific Conductivity	177.0		umhos/cm	1.0	Field Sampling	280-101458	12/14/2011	1000
Dissolved Oxygen	0.90		mg/L	1.0	Field Sampling	280-101458	12/14/2011	1000
eH	139.0		millivolts	1.0	Field Sampling	280-101458	12/14/2011	1000
Turbidity	0.55		NTU	1.0	Field Sampling	280-101458	12/14/2011	1000
Temperature	11.22		Degrees C	1.0	Field Sampling	280-101458	12/14/2011	1000
pH	6.32		SU	1.0	Field Sampling	280-101458	12/14/2011	1000

Client: Waste Management

Job Number: 280-23838-1

Field Service / Mobile Lab

Client Sample ID: MW-36A

Lab Sample ID: 280-23838-3

Date Sampled: 12/14/2011 1032

Client Matrix: Water

Date Received: 12/15/2011 0930

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed	Date Prepared
Depth to water	31.47		ft	1.0	Field Sampling	280-101458	12/14/2011	1032
Specific Conductivity	137.0		umhos/cm	1.0	Field Sampling	280-101458	12/14/2011	1032
Dissolved Oxygen	1.16		mg/L	1.0	Field Sampling	280-101458	12/14/2011	1032
eH	151.0		millivolts	1.0	Field Sampling	280-101458	12/14/2011	1032
Turbidity	1.23		NTU	1.0	Field Sampling	280-101458	12/14/2011	1032
Temperature	9.04		Degrees C	1.0	Field Sampling	280-101458	12/14/2011	1032
pH	6.25		SU	1.0	Field Sampling	280-101458	12/14/2011	1032

Client: Waste Management

Job Number: 280-23838-1

Field Service / Mobile Lab

Client Sample ID: MW-15R

Lab Sample ID: 280-23838-4

Client Matrix: Water

Date Sampled: 12/14/2011 1103

Date Received: 12/15/2011 0930

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed	Date Prepared
Depth to water	19.15		ft	1.0	Field Sampling	280-101458	12/14/2011	1103
Specific Conductivity	233.0		umhos/cm	1.0	Field Sampling	280-101458	12/14/2011	1103
Dissolved Oxygen	0.20		mg/L	1.0	Field Sampling	280-101458	12/14/2011	1103
eH	147.0		millivolts	1.0	Field Sampling	280-101458	12/14/2011	1103
Turbidity	0.22		NTU	1.0	Field Sampling	280-101458	12/14/2011	1103
Temperature	9.82		Degrees C	1.0	Field Sampling	280-101458	12/14/2011	1103
pH	6.57		SU	1.0	Field Sampling	280-101458	12/14/2011	1103



Client: Waste Management

Job Number: 280-23838-1

Field Service / Mobile Lab

Client Sample ID: MW-23A

Lab Sample ID: 280-23838-5

Client Matrix: Water

Date Sampled: 12/14/2011 1147

Date Received: 12/15/2011 0930

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed	Date Prepared
Depth to water	13.60		ft	1.0	Field Sampling	280-101458	12/14/2011	1147
Specific Conductivity	248.0		umhos/cm	1.0	Field Sampling	280-101458	12/14/2011	1147
Dissolved Oxygen	0.13		mg/L	1.0	Field Sampling	280-101458	12/14/2011	1147
eH	65.0		millivolts	1.0	Field Sampling	280-101458	12/14/2011	1147
Turbidity	14.72		NTU	1.0	Field Sampling	280-101458	12/14/2011	1147
Temperature	12.64		Degrees C	1.0	Field Sampling	280-101458	12/14/2011	1147
pH	6.26		SU	1.0	Field Sampling	280-101458	12/14/2011	1147

Client: Waste Management

Job Number: 280-23838-1

Field Service / Mobile Lab

Client Sample ID: MW-4

Lab Sample ID: 280-23838-6

Client Matrix: Water

Date Sampled: 12/14/2011 1314

Date Received: 12/15/2011 0930

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed	Date Prepared
Depth to water	15.35		ft	1.0	Field Sampling	280-101458	12/14/2011	1314
Specific Conductivity	128.0		umhos/cm	1.0	Field Sampling	280-101458	12/14/2011	1314
Dissolved Oxygen	0.16		mg/L	1.0	Field Sampling	280-101458	12/14/2011	1314
eH	133.0		millivolts	1.0	Field Sampling	280-101458	12/14/2011	1314
Turbidity	1.34		NTU	1.0	Field Sampling	280-101458	12/14/2011	1314
Temperature	9.31		Degrees C	1.0	Field Sampling	280-101458	12/14/2011	1314
pH	6.53		SU	1.0	Field Sampling	280-101458	12/14/2011	1314

Client: Waste Management

Job Number: 280-23838-1

Field Service / Mobile Lab

Client Sample ID: MW-19C

Lab Sample ID: 280-23838-7

Client Matrix: Water

Date Sampled: 12/14/2011 1356

Date Received: 12/15/2011 0930

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed	Date Prepared
Depth to water	34.63		ft	1.0	Field Sampling	280-101458	12/14/2011	1356
Specific Conductivity	171.0		umhos/cm	1.0	Field Sampling	280-101458	12/14/2011	1356
Dissolved Oxygen	0.20		mg/L	1.0	Field Sampling	280-101458	12/14/2011	1356
eH	22.0		millivolts	1.0	Field Sampling	280-101458	12/14/2011	1356
Turbidity	0.33		NTU	1.0	Field Sampling	280-101458	12/14/2011	1356
Temperature	9.99		Degrees C	1.0	Field Sampling	280-101458	12/14/2011	1356
pH	6.80		SU	1.0	Field Sampling	280-101458	12/14/2011	1356

Client: Waste Management

Job Number: 280-23838-1

Field Service / Mobile Lab

Client Sample ID: MW-13A

Lab Sample ID: 280-23838-8

Client Matrix: Water

Date Sampled: 12/14/2011 1430

Date Received: 12/15/2011 0930

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed	Date Prepared
Depth to water	48.80		ft	1.0	Field Sampling	280-101458	12/14/2011	1430
Specific Conductivity	176.0		umhos/cm	1.0	Field Sampling	280-101458	12/14/2011	1430
Dissolved Oxygen	4.30		mg/L	1.0	Field Sampling	280-101458	12/14/2011	1430
eH	89.0		millivolts	1.0	Field Sampling	280-101458	12/14/2011	1430
Turbidity	0.00		NTU	1.0	Field Sampling	280-101458	12/14/2011	1430
Temperature	8.92		Degrees C	1.0	Field Sampling	280-101458	12/14/2011	1430
pH	7.13		SU	1.0	Field Sampling	280-101458	12/14/2011	1430

Client: Waste Management

Job Number: 280-23838-1

Field Service / Mobile Lab

Client Sample ID: MW-13B

Lab Sample ID: 280-23838-9

Client Matrix: Water

Date Sampled: 12/14/2011 1502

Date Received: 12/15/2011 0930

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed	Date Prepared
Depth to water	61.68		ft	1.0	Field Sampling	280-101458	12/14/2011	1502
Specific Conductivity	169		umhos/cm	1.0	Field Sampling	280-101458	12/14/2011	1502
Dissolved Oxygen	4.59		mg/L	1.0	Field Sampling	280-101458	12/14/2011	1502
eH	89.0		millivolts	1.0	Field Sampling	280-101458	12/14/2011	1502
Turbidity	0.00		NTU	1.0	Field Sampling	280-101458	12/14/2011	1502
Temperature	8.76		Degrees C	1.0	Field Sampling	280-101458	12/14/2011	1502
pH	7.53		SU	1.0	Field Sampling	280-101458	12/14/2011	1502

## DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-23838-1

<b>Lab Section</b>	<b>Qualifier</b>	<b>Description</b>
GC/MS VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	F	MS or MSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	B	Compound was found in the blank and sample.
	F	MS or MSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

# QUALITY CONTROL RESULTS

## Quality Control Results

Client: Waste Management

Job Number: 280-23838-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Analysis Batch:480-44856</b>					
LCS 480-44856/2	Lab Control Sample	T	Water	8260B SIM	
MB 480-44856/3	Method Blank	T	Water	8260B SIM	
280-23764-A-6 MS	Matrix Spike	T	Water	8260B SIM	
280-23764-A-6 MSD	Matrix Spike Duplicate	T	Water	8260B SIM	
280-23838-1	MW-34C	T	Water	8260B SIM	
280-23838-2	MW-34A	T	Water	8260B SIM	
280-23838-3	MW-36A	T	Water	8260B SIM	
280-23838-4	MW-15R	T	Water	8260B SIM	
280-23838-5	MW-23A	T	Water	8260B SIM	
280-23838-6	MW-4	T	Water	8260B SIM	
280-23838-7	MW-19C	T	Water	8260B SIM	
280-23838-8	MW-13A	T	Water	8260B SIM	
280-23838-9	MW-13B	T	Water	8260B SIM	
<b>Analysis Batch:480-45894</b>					
LCS 480-45894/4	Lab Control Sample	T	Water	8260B	
MB 480-45894/5	Method Blank	T	Water	8260B	
280-23838-1	MW-34C	T	Water	8260B	
280-23838-2	MW-34A	T	Water	8260B	
280-23838-3	MW-36A	T	Water	8260B	
280-23838-4	MW-15R	T	Water	8260B	
280-23838-5	MW-23A	T	Water	8260B	
280-23838-6	MW-4	T	Water	8260B	
280-23838-7	MW-19C	T	Water	8260B	
280-23838-8	MW-13A	T	Water	8260B	
280-23838-9	MW-13B	T	Water	8260B	

**Report Basis**

T = Total



## Quality Control Results

Client: Waste Management

Job Number: 280-23838-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
<b>Metals</b>					
<b>Prep Batch: 280-100267</b>					
LCS 280-100267/2-A	Lab Control Sample	R	Water	3005A	
MB 280-100267/1-A	Method Blank	R	Water	3005A	
280-23764-H-6-B MS ^10	Matrix Spike	D	Water	3005A	
280-23764-H-6-C MSD ^10	Matrix Spike Duplicate	D	Water	3005A	
280-23838-1	MW-34C	D	Water	3005A	
280-23838-2	MW-34A	D	Water	3005A	
280-23838-3	MW-36A	D	Water	3005A	
280-23838-4	MW-15R	D	Water	3005A	
280-23838-5	MW-23A	D	Water	3005A	
280-23838-6	MW-4	D	Water	3005A	
280-23838-7	MW-19C	D	Water	3005A	
280-23838-8	MW-13A	D	Water	3005A	
280-23838-9	MW-13B	D	Water	3005A	
<b>Prep Batch: 280-100270</b>					
LCS 280-100270/2-A	Lab Control Sample	R	Water	3005A	
MB 280-100270/1-A	Method Blank	R	Water	3005A	
280-23838-1	MW-34C	D	Water	3005A	
280-23838-1MS	Matrix Spike	D	Water	3005A	
280-23838-1MSD	Matrix Spike Duplicate	D	Water	3005A	
280-23838-2	MW-34A	D	Water	3005A	
280-23838-3	MW-36A	D	Water	3005A	
280-23838-4	MW-15R	D	Water	3005A	
280-23838-5	MW-23A	D	Water	3005A	
280-23838-6	MW-4	D	Water	3005A	
280-23838-7	MW-19C	D	Water	3005A	
280-23838-8	MW-13A	D	Water	3005A	
280-23838-9	MW-13B	D	Water	3005A	
<b>Analysis Batch:280-100645</b>					
LCS 280-100270/2-A	Lab Control Sample	R	Water	6010B	280-100270
MB 280-100270/1-A	Method Blank	R	Water	6010B	280-100270
280-23838-1	MW-34C	D	Water	6010B	280-100270
280-23838-1MS	Matrix Spike	D	Water	6010B	280-100270
280-23838-1MSD	Matrix Spike Duplicate	D	Water	6010B	280-100270
280-23838-2	MW-34A	D	Water	6010B	280-100270
280-23838-3	MW-36A	D	Water	6010B	280-100270
280-23838-4	MW-15R	D	Water	6010B	280-100270
280-23838-5	MW-23A	D	Water	6010B	280-100270
280-23838-6	MW-4	D	Water	6010B	280-100270
280-23838-7	MW-19C	D	Water	6010B	280-100270
280-23838-8	MW-13A	D	Water	6010B	280-100270
280-23838-9	MW-13B	D	Water	6010B	280-100270

## Quality Control Results

Client: Waste Management

Job Number: 280-23838-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Analysis Batch:280-100876</b>					
LCS 280-100267/2-A	Lab Control Sample	R	Water	6020	280-100267
MB 280-100267/1-A	Method Blank	R	Water	6020	280-100267
280-23764-H-6-B MS ^10	Matrix Spike	D	Water	6020	280-100267
280-23764-H-6-C MSD ^10	Matrix Spike Duplicate	D	Water	6020	280-100267
280-23838-1	MW-34C	D	Water	6020	280-100267
280-23838-2	MW-34A	D	Water	6020	280-100267
280-23838-3	MW-36A	D	Water	6020	280-100267
280-23838-4	MW-15R	D	Water	6020	280-100267
280-23838-5	MW-23A	D	Water	6020	280-100267
280-23838-6	MW-4	D	Water	6020	280-100267
280-23838-7	MW-19C	D	Water	6020	280-100267
280-23838-8	MW-13A	D	Water	6020	280-100267
280-23838-9	MW-13B	D	Water	6020	280-100267

**Report Basis**

D = Dissolved

R = Total Recoverable

**Field Service / Mobile Lab**

<b>Analysis Batch:280-101458</b>					
280-23838-1	MW-34C	T	Water	Field Sampling	
280-23838-2	MW-34A	T	Water	Field Sampling	
280-23838-3	MW-36A	T	Water	Field Sampling	
280-23838-4	MW-15R	T	Water	Field Sampling	
280-23838-5	MW-23A	T	Water	Field Sampling	
280-23838-6	MW-4	T	Water	Field Sampling	
280-23838-7	MW-19C	T	Water	Field Sampling	
280-23838-8	MW-13A	T	Water	Field Sampling	
280-23838-9	MW-13B	T	Water	Field Sampling	

**Report Basis**

T = Total

## Quality Control Results

Client: Waste Management

Job Number: 280-23838-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-100415</b>					
LCS 280-100415/3	Lab Control Sample	T	Water	SM 5310B	
LCSD 280-100415/4	Lab Control Sample Duplicate	T	Water	SM 5310B	
MB 280-100415/5	Method Blank	T	Water	SM 5310B	
280-23838-1	MW-34C	T	Water	SM 5310B	
280-23838-2	MW-34A	T	Water	SM 5310B	
280-23838-2MS	Matrix Spike	T	Water	SM 5310B	
280-23838-2MSD	Matrix Spike Duplicate	T	Water	SM 5310B	
280-23838-3	MW-36A	T	Water	SM 5310B	
280-23838-4	MW-15R	T	Water	SM 5310B	
280-23838-5	MW-23A	T	Water	SM 5310B	
280-23838-6	MW-4	T	Water	SM 5310B	
280-23838-7	MW-19C	T	Water	SM 5310B	
280-23838-8	MW-13A	T	Water	SM 5310B	
280-23838-9	MW-13B	T	Water	SM 5310B	
<b>Analysis Batch:280-100757</b>					
LCS 280-100757/99	Lab Control Sample	T	Water	9251	
LCSD 280-100757/100	Lab Control Sample Duplicate	T	Water	9251	
MB 280-100757/101	Method Blank	T	Water	9251	
280-23764-B-6 MS	Matrix Spike	T	Water	9251	
280-23764-B-6 MSD	Matrix Spike Duplicate	T	Water	9251	
280-23838-1	MW-34C	T	Water	9251	
280-23838-2	MW-34A	T	Water	9251	
280-23838-3	MW-36A	T	Water	9251	
280-23838-4	MW-15R	T	Water	9251	
280-23838-5	MW-23A	T	Water	9251	
280-23838-6	MW-4	T	Water	9251	
280-23838-7	MW-19C	T	Water	9251	
280-23838-8	MW-13A	T	Water	9251	
280-23838-9	MW-13B	T	Water	9251	
<b>Analysis Batch:280-100854</b>					
LCS 280-100854/2	Lab Control Sample	T	Water	SM 2540C	
LCSD 280-100854/3	Lab Control Sample Duplicate	T	Water	SM 2540C	
MB 280-100854/1	Method Blank	T	Water	SM 2540C	
280-23838-1	MW-34C	T	Water	SM 2540C	
280-23838-1DU	Duplicate	T	Water	SM 2540C	
280-23838-2	MW-34A	T	Water	SM 2540C	
280-23838-3	MW-36A	T	Water	SM 2540C	
280-23838-4	MW-15R	T	Water	SM 2540C	
280-23838-5	MW-23A	T	Water	SM 2540C	
280-23838-6	MW-4	T	Water	SM 2540C	
280-23838-7	MW-19C	T	Water	SM 2540C	
280-23838-8	MW-13A	T	Water	SM 2540C	
280-23838-9	MW-13B	T	Water	SM 2540C	

TestAmerica Denver

## Quality Control Results

Client: Waste Management

Job Number: 280-23838-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-100881</b>					
LCS 280-100881/4	Lab Control Sample	T	Water	300.0	
LCSD 280-100881/5	Lab Control Sample Duplicate	T	Water	300.0	
MB 280-100881/6	Method Blank	T	Water	300.0	
280-23838-1	MW-34C	T	Water	300.0	
280-23838-1DU	Duplicate	T	Water	300.0	
280-23838-1MS	Matrix Spike	T	Water	300.0	
280-23838-1MSD	Matrix Spike Duplicate	T	Water	300.0	
280-23838-2	MW-34A	T	Water	300.0	
280-23838-3	MW-36A	T	Water	300.0	
280-23838-4	MW-15R	T	Water	300.0	
280-23838-5	MW-23A	T	Water	300.0	
280-23838-6	MW-4	T	Water	300.0	
280-23838-7	MW-19C	T	Water	300.0	
280-23838-8	MW-13A	T	Water	300.0	
280-23838-9	MW-13B	T	Water	300.0	
<b>Analysis Batch:280-101025</b>					
LCS 280-101025/65	Lab Control Sample	T	Water	350.1	
LCSD 280-101025/66	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-101025/64	Method Blank	T	Water	350.1	
280-23838-1	MW-34C	T	Water	350.1	
280-23838-1MS	Matrix Spike	T	Water	350.1	
280-23838-1MSD	Matrix Spike Duplicate	T	Water	350.1	
280-23838-2	MW-34A	T	Water	350.1	
280-23838-3	MW-36A	T	Water	350.1	
280-23838-4	MW-15R	T	Water	350.1	
280-23838-5	MW-23A	T	Water	350.1	
280-23838-6	MW-4	T	Water	350.1	
280-23838-6MS	Matrix Spike	T	Water	350.1	
280-23838-6MSD	Matrix Spike Duplicate	T	Water	350.1	
280-23838-7	MW-19C	T	Water	350.1	
280-23838-9	MW-13B	T	Water	350.1	

## Quality Control Results

Client: Waste Management

Job Number: 280-23838-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-101067</b>					
LCS 280-101067/4	Lab Control Sample	T	Water	SM 2320B	
LCSD 280-101067/5	Lab Control Sample Duplicate	T	Water	SM 2320B	
MB 280-101067/6	Method Blank	T	Water	SM 2320B	
280-23784-A-1 DU	Duplicate	T	Water	SM 2320B	
280-23838-1	MW-34C	T	Water	SM 2320B	
280-23838-2	MW-34A	T	Water	SM 2320B	
280-23838-3	MW-36A	T	Water	SM 2320B	
280-23838-4	MW-15R	T	Water	SM 2320B	
280-23838-5	MW-23A	T	Water	SM 2320B	
280-23838-6	MW-4	T	Water	SM 2320B	
280-23838-7	MW-19C	T	Water	SM 2320B	
280-23838-8	MW-13A	T	Water	SM 2320B	
280-23838-9	MW-13B	T	Water	SM 2320B	
<b>Analysis Batch:280-101161</b>					
LCS 280-101161/21	Lab Control Sample	T	Water	350.1	
LCSD 280-101161/22	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-101161/20	Method Blank	T	Water	350.1	
280-23838-8	MW-13A	T	Water	350.1	
280-23838-8MS	Matrix Spike	T	Water	350.1	
280-23838-8MSD	Matrix Spike Duplicate	T	Water	350.1	
<b>Analysis Batch:280-101440</b>					
MB 280-101440/1	Method Blank	T	Water	353.2	
280-23838-1	MW-34C	T	Water	353.2	
280-23838-2	MW-34A	T	Water	353.2	
280-23838-3	MW-36A	T	Water	353.2	
280-23838-4	MW-15R	T	Water	353.2	
280-23838-5	MW-23A	T	Water	353.2	
280-23838-6	MW-4	T	Water	353.2	
280-23838-7	MW-19C	T	Water	353.2	
280-23838-8	MW-13A	T	Water	353.2	
280-23838-9	MW-13B	T	Water	353.2	

**Report Basis**

T = Total

Client: Waste Management

Job Number: 280-23838-1

**Surrogate Recovery Report**

**8260B Volatile Organic Compounds (GC/MS)**

**Client Matrix: Water**

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec
280-23838-1	MW-34C	115	84	95
280-23838-2	MW-34A	116	84	96
280-23838-3	MW-36A	115	84	96
280-23838-4	MW-15R	120	85	97
280-23838-5	MW-23A	117	83	96
280-23838-6	MW-4	120	84	97
280-23838-7	MW-19C	118	84	97
280-23838-8	MW-13A	122	85	98
280-23838-9	MW-13B	121	84	97
MB 480-45894/5		115	85	99
LCS 480-45894/4		111	95	100

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	66-137
BFB = 4-Bromofluorobenzene (Surr)	73-120
TOL = Toluene-d8 (Surr)	71-126

## Quality Control Results

Client: Waste Management

Job Number: 280-23838-1

**Method Blank - Batch: 480-45894**

**Method: 8260B  
Preparation: 5030B**

Lab Sample ID: MB 480-45894/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/23/2011 1153  
 Prep Date: 12/23/2011 1153  
 Leach Date: N/A

Analysis Batch: 480-45894  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973S  
 Lab File ID: S9947.D  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0

## Quality Control Results

Client: Waste Management

Job Number: 280-23838-1

**Method Blank - Batch: 480-45894**

**Method: 8260B  
Preparation: 5030B**

Lab Sample ID: MB 480-45894/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/23/2011 1153  
 Prep Date: 12/23/2011 1153  
 Leach Date: N/A

Analysis Batch: 480-45894  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973S  
 Lab File ID: S9947.D  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0



**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Method Blank - Batch: 480-45894**

**Method: 8260B  
Preparation: 5030B**

Lab Sample ID:	MB 480-45894/5	Analysis Batch:	480-45894	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S9947.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2011 1153	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/23/2011 1153				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	115	66 - 137
4-Bromofluorobenzene (Surr)	85	73 - 120
Toluene-d8 (Surr)	99	71 - 126

**Method Blank TICs- Batch: 480-45894**

Cas Number	Analyte	RT	Est. Result	Qual
67-72-1	Hexachloroethane TIC	0.00	ND	

## Quality Control Results

Client: Waste Management

Job Number: 280-23838-1

**Lab Control Sample - Batch: 480-45894**

**Method: 8260B**

**Preparation: 5030B**

Lab Sample ID: LCS 480-45894/4	Analysis Batch: 480-45894	Instrument ID: HP5973S
Client Matrix: Water	Prep Batch: N/A	Lab File ID: S9946.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/23/2011 1131	Units: ug/L	Final Weight/Volume: 5 mL
Prep Date: 12/23/2011 1131		
Leach Date: N/A		

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethane	25.0	23.4	94	71 - 129	
1,1-Dichloroethene	25.0	23.5	94	65 - 138	
1,2,4-Trimethylbenzene	25.0	24.4	98	76 - 121	
1,2-Dichlorobenzene	25.0	23.4	94	77 - 120	
1,2-Dichloroethane	25.0	28.7	115	75 - 127	
Benzene	25.0	22.3	89	71 - 124	
Chlorobenzene	25.0	23.8	95	72 - 120	
cis-1,2-Dichloroethene	25.0	21.5	86	74 - 124	
Ethylbenzene	25.0	25.4	102	77 - 123	
Methyl tert-butyl ether	25.0	26.3	105	64 - 127	
m-Xylene & p-Xylene	50.0	52.2	104	76 - 122	
o-Xylene	25.0	25.8	103	76 - 122	
Tetrachloroethene	25.0	24.2	97	74 - 122	
Toluene	25.0	23.2	93	70 - 122	
trans-1,2-Dichloroethene	25.0	24.3	97	73 - 127	
Trichloroethene	25.0	23.8	95	74 - 123	
<hr/>					
Surrogate		% Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		111		66 - 137	
4-Bromofluorobenzene (Surr)		95		73 - 120	
Toluene-d8 (Surr)		100		71 - 126	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Method Blank - Batch: 480-44856**

**Method: 8260B SIM  
Preparation: 5030B**

Lab Sample ID:	MB 480-44856/3	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J3705.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 1353	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 1353				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Vinyl chloride	ND		0.0040	0.020

**Lab Control Sample - Batch: 480-44856**

**Method: 8260B SIM  
Preparation: 5030B**

Lab Sample ID:	LCS 480-44856/2	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J3704.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 1330	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 1330				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Vinyl chloride	0.200	0.168	84	60 - 140	

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-44856**

**Method: 8260B SIM  
Preparation: 5030B**

MS Lab Sample ID:	280-23764-A-6 MS	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J3712.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 1641			Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 1641				
Leach Date:	N/A				

MSD Lab Sample ID:	280-23764-A-6 MSD	Analysis Batch:	480-44856	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J3713.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/16/2011 1705			Final Weight/Volume:	25 mL
Prep Date:	12/16/2011 1705				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Vinyl chloride	90	91	60 - 140	1	30		

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-44856**

**Method: 8260B SIM  
Preparation: 5030B**

MS Lab Sample ID: 280-23764-A-6 MS      Units: ug/L  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/16/2011 1641  
Prep Date: 12/16/2011 1641  
Leach Date: N/A

MSD Lab Sample ID: 280-23764-A-6 MSD  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/16/2011 1705  
Prep Date: 12/16/2011 1705  
Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Vinyl chloride	ND	0.200	0.200	0.179	0.181

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Method Blank - Batch: 280-100270**

Lab Sample ID: MB 280-100270/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/19/2011 2009  
 Prep Date: 12/19/2011 0615  
 Leach Date: N/A

Analysis Batch: 280-100645  
 Prep Batch: 280-100270  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_025  
 Lab File ID: 25A4121911.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Calcium, Dissolved	ND		0.035	0.040
Cobalt, Dissolved	ND		0.0012	0.0030
Iron, Dissolved	ND		0.022	0.060
Magnesium, Dissolved	ND		0.011	0.050
Potassium, Dissolved	ND		0.24	1.0
Sodium, Dissolved	ND		0.092	1.0

**Lab Control Sample - Batch: 280-100270**

Lab Sample ID: LCS 280-100270/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/19/2011 2012  
 Prep Date: 12/19/2011 0615  
 Leach Date: N/A

Analysis Batch: 280-100645  
 Prep Batch: 280-100270  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_025  
 Lab File ID: 25A4121911.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Calcium, Dissolved	50.0	47.0	94	90 - 111	
Cobalt, Dissolved	0.500	0.489	98	89 - 111	
Iron, Dissolved	1.00	0.961	96	89 - 115	
Magnesium, Dissolved	50.0	46.9	94	90 - 113	
Potassium, Dissolved	50.0	48.7	97	89 - 114	
Sodium, Dissolved	50.0	50.2	100	90 - 115	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100270**

**Method: 6010B  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-23838-1	Analysis Batch: 280-100645	Instrument ID: MT_025
Client Matrix: Water	Prep Batch: 280-100270	Lab File ID: 25A4121911.asc
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 50 mL
Analysis Date: 12/19/2011 2019		Final Weight/Volume: 50 mL
Prep Date: 12/19/2011 0615		
Leach Date: N/A		

MSD Lab Sample ID: 280-23838-1	Analysis Batch: 280-100645	Instrument ID: MT_025
Client Matrix: Water	Prep Batch: 280-100270	Lab File ID: 25A4121911.asc
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 50 mL
Analysis Date: 12/19/2011 2021		Final Weight/Volume: 50 mL
Prep Date: 12/19/2011 0615		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Calcium, Dissolved	94	92	48 - 153	2	20		
Cobalt, Dissolved	98	96	82 - 119	2	20		
Iron, Dissolved	95	93	52 - 155	2	20		
Magnesium, Dissolved	96	94	62 - 146	2	20		
Potassium, Dissolved	99	98	76 - 132	2	20		
Sodium, Dissolved	102	100	70 - 203	1	20		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100270**

**Method: 6010B  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-23838-1	Units: mg/L	MSD Lab Sample ID: 280-23838-1
Client Matrix: Water		Client Matrix: Water
Dilution: 1.0		Dilution: 1.0
Analysis Date: 12/19/2011 2019		Analysis Date: 12/19/2011 2021
Prep Date: 12/19/2011 0615		Prep Date: 12/19/2011 0615
Leach Date: N/A		Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Calcium, Dissolved	29	50.0	50.0	76.1	74.8
Cobalt, Dissolved	ND	0.500	0.500	0.490	0.481
Iron, Dissolved	0.77	1.00	1.00	1.72	1.70
Magnesium, Dissolved	12	50.0	50.0	60.5	59.2
Potassium, Dissolved	1.1	50.0	50.0	50.8	50.0
Sodium, Dissolved	16	50.0	50.0	67.3	66.3

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Method Blank - Batch: 280-100267**

Lab Sample ID: MB 280-100267/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 1512  
 Prep Date: 12/19/2011 0615  
 Leach Date: N/A

Analysis Batch: 280-100876  
 Prep Batch: 280-100267  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_077  
 Lab File ID: 023BLNK.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Barium, Dissolved	ND		0.00029	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	ND		0.000040	0.00020
Chromium, Dissolved	ND		0.00050	0.0030
Copper, Dissolved	0.0224		0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	0.000417	J	0.00031	0.0010
Nickel, Dissolved	ND		0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	0.0000410	J	0.000033	0.0010
Vanadium, Dissolved	ND		0.00033	0.0020
Zinc, Dissolved	ND		0.0020	0.0050

**Method Blank - Batch: 280-100267**

Lab Sample ID: MB 280-100267/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 1536  
 Prep Date: 12/19/2011 0615  
 Leach Date: N/A

Analysis Batch: 280-100876  
 Prep Batch: 280-100267  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_077  
 Lab File ID: 032BLNK.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Antimony, Dissolved	0.000806	J	0.00020	0.0010

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Lab Control Sample - Batch: 280-100267**

**Method: 6020**  
**Preparation: 3005A**  
**Total Recoverable**

Lab Sample ID:	LCS 280-100267/2-A	Analysis Batch:	280-100876	Instrument ID:	MT_077
Client Matrix:	Water	Prep Batch:	280-100267	Lab File ID:	024_LCS.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 1514	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 0615				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Barium, Dissolved	0.0400	0.0447	112	85 - 118	
Beryllium, Dissolved	0.0400	0.0450	112	80 - 125	
Cadmium, Dissolved	0.0400	0.0413	103	85 - 115	
Chromium, Dissolved	0.0400	0.0426	107	84 - 121	
Copper, Dissolved	0.0400	0.0435	109	85 - 119	
Lead, Dissolved	0.0400	0.0450	113	85 - 118	
Manganese, Dissolved	0.0400	0.0454	114	85 - 117	
Nickel, Dissolved	0.0400	0.0434	109	85 - 119	
Selenium, Dissolved	0.0400	0.0438	109	77 - 122	
Silver, Dissolved	0.0400	0.0428	107	85 - 115	
Thallium, Dissolved	0.0400	0.0432	108	85 - 118	
Vanadium, Dissolved	0.0400	0.0408	102	85 - 120	
Zinc, Dissolved	0.0400	0.0460	115	83 - 122	

**Lab Control Sample - Batch: 280-100267**

**Method: 6020**  
**Preparation: 3005A**  
**Total Recoverable**

Lab Sample ID:	LCS 280-100267/2-A	Analysis Batch:	280-100876	Instrument ID:	MT_077
Client Matrix:	Water	Prep Batch:	280-100267	Lab File ID:	033_LCS.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 1539	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 0615				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony, Dissolved	0.0400	0.0411	103	85 - 115	



**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100267**

**Method: 6020  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-23764-H-6-B MS ^10	Analysis Batch: 280-100876	Instrument ID: MT_077
Client Matrix: Water	Prep Batch: 280-100267	Lab File ID: 027SMPL.D
Dilution: 10	Leach Batch: N/A	Initial Weight/Volume: 50 mL
Analysis Date: 12/20/2011 1523		Final Weight/Volume: 50 mL
Prep Date: 12/19/2011 0615		
Leach Date: N/A		

MSD Lab Sample ID: 280-23764-H-6-C MSD	Analysis Batch: 280-100876	Instrument ID: MT_077
Client Matrix: Water	Prep Batch: 280-100267	Lab File ID: 028SMPL.D
Dilution: 10	Leach Batch: N/A	Initial Weight/Volume: 50 mL
Analysis Date: 12/20/2011 1525		Final Weight/Volume: 50 mL
Prep Date: 12/19/2011 0615		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Antimony, Dissolved	106	94	85 - 115	8	20		
Barium, Dissolved	130	131	85 - 118	1	20	F	F
Beryllium, Dissolved	106	112	80 - 125	5	20		
Cadmium, Dissolved	112	129	85 - 115	14	20		F
Chromium, Dissolved	108	114	84 - 121	6	20		
Copper, Dissolved	108	109	85 - 119	1	20		
Lead, Dissolved	107	110	85 - 118	3	20		
Manganese, Dissolved	102	113	85 - 117	11	20		
Nickel, Dissolved	120	111	85 - 119	8	20	F	
Selenium, Dissolved	112	117	77 - 122	4	20		
Silver, Dissolved	106	109	85 - 115	2	20		
Thallium, Dissolved	112	110	85 - 118	2	20		
Vanadium, Dissolved	92	100	85 - 120	7	20		
Zinc, Dissolved	137	118	83 - 122	11	20	F	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100267**

**Method: 6020  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-23764-H-6-B MS ^10 Units: mg/L  
 Client Matrix: Water  
 Dilution: 10  
 Analysis Date: 12/20/2011 1523  
 Prep Date: 12/19/2011 0615  
 Leach Date: N/A

MSD Lab Sample ID: 280-23764-H-6-C MSD  
 Client Matrix: Water  
 Dilution: 10  
 Analysis Date: 12/20/2011 1525  
 Prep Date: 12/19/2011 0615  
 Leach Date: N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Antimony, Dissolved	0.016		0.0400	0.0400	0.0583		0.0536	
Barium, Dissolved	0.0030	J	0.0400	0.0400	0.0551	F	0.0555	F
Beryllium, Dissolved	0.0011	J	0.0400	0.0400	0.0435		0.0457	
Cadmium, Dissolved	ND		0.0400	0.0400	0.0449		0.0517	F
Chromium, Dissolved	ND		0.0400	0.0400	0.0430		0.0456	
Copper, Dissolved	ND		0.0400	0.0400	0.0431		0.0435	
Lead, Dissolved	0.0031	J	0.0400	0.0400	0.0457		0.0472	
Manganese, Dissolved	ND		0.0400	0.0400	0.0408		0.0453	
Nickel, Dissolved	ND		0.0400	0.0400	0.0480	F	0.0445	
Selenium, Dissolved	ND		0.0400	0.0400	0.0450		0.0469	
Silver, Dissolved	0.00069	J	0.0400	0.0400	0.0432		0.0442	
Thallium, Dissolved	0.0020	J	0.0400	0.0400	0.0467		0.0460	
Vanadium, Dissolved	0.0055	J	0.0400	0.0400	0.0424		0.0455	
Zinc, Dissolved	0.021	J	0.0400	0.0400	0.0760	F	0.0682	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Method Blank - Batch: 280-100881**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	MB 280-100881/6	Analysis Batch:	280-100881	Instrument ID:	WC_IC3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	115.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 0816	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Sulfate	ND		0.23	1.0

**Method Reporting Limit Check - Batch: 280-100881**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	MRL 280-100881/3	Analysis Batch:	280-100881	Instrument ID:	WC_IC3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	112.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 0726	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sulfate	1.00	1.01	101	50 - 150	J

**Lab Control Sample/**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-100881**

**Method: 300.0**  
**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100881/4	Analysis Batch:	280-100881	Instrument ID:	WC_IC3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	113.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 0742	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-100881/5	Analysis Batch:	280-100881	Instrument ID:	WC_IC3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	114.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 0759	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Sulfate	97	97	90 - 110	1	10		

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-100881**

**Method: 300.0  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-100881/4 Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 0742  
 Prep Date: N/A  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 280-100881/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 0759  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Sulfate	25.0	25.0	24.3	24.1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100881**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 280-23838-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 0905  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-100881  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: WC\_IC3  
 Lab File ID: 118.TXT  
 Initial Weight/Volume: 1.0 mL  
 Final Weight/Volume: 5 mL

MSD Lab Sample ID: 280-23838-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 0922  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-100881  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: WC\_IC3  
 Lab File ID: 119.TXT  
 Initial Weight/Volume: 1.0 mL  
 Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Sulfate	111	113	80 - 120	1	20		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100881**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 280-23838-1 Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 0905  
 Prep Date: N/A  
 Leach Date: N/A

MSD Lab Sample ID: 280-23838-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 0922  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Sulfate	5.7	25.0	25.0	33.5	33.9

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Duplicate - Batch: 280-100881**

**Method: 300.0  
Preparation: N/A**

Lab Sample ID:	280-23838-1	Analysis Batch:	280-100881	Instrument ID:	WC_IC3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	117.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 0849	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Sulfate	5.7	5.74	0.9	15	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Method Blank - Batch: 280-101025**

Lab Sample ID: MB 280-101025/64  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2011 1159  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-101025  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

**Method: 350.1  
 Preparation: N/A**

Instrument ID: WC\_Alph 2  
 Lab File ID: C:\FLOW\_4\1221A.RS  
 Initial Weight/Volume: 1.0 mL  
 Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Ammonia (as N)	ND		0.022	0.030

**Lab Control Sample/  
 Lab Control Sample Duplicate Recovery Report - Batch: 280-101025**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-101025/65  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2011 1200  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-101025  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 2  
 Lab File ID: C:\FLOW\_4\1221A.RS  
 Initial Weight/Volume: 100 mL  
 Final Weight/Volume: 100 mL

LCSD Lab Sample ID: LCSD 280-101025/66  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2011 1202  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-101025  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 2  
 Lab File ID: C:\FLOW\_4\1221A.RS  
 Initial Weight/Volume: 100 mL  
 Final Weight/Volume: 100 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Ammonia (as N)	101	102	90 - 110	1	10		

**Laboratory Control/  
 Laboratory Duplicate Data Report - Batch: 280-101025**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-101025/65  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2011 1200  
 Prep Date: N/A  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-101025/66  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2011 1202  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia (as N)	5.00	5.00	5.06	5.10

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-101025**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-23838-1	Analysis Batch: 280-101025	Instrument ID: WC_Alph 2
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C:\FLOW_4\1221A.RS
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/21/2011 1208		Final Weight/Volume: 5 mL
Prep Date: N/A		
Leach Date: N/A		

MSD Lab Sample ID: 280-23838-1	Analysis Batch: 280-101025	Instrument ID: WC_Alph 2
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C:\FLOW_4\1221A.RS
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/21/2011 1209		Final Weight/Volume: 5 mL
Prep Date: N/A		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Ammonia (as N)	70	72	90 - 110	2	20	F	F

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-101025**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-23838-6	Analysis Batch: 280-101025	Instrument ID: WC_Alph 2
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C:\FLOW_4\1221A.RS
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/21/2011 1227		Final Weight/Volume: 5 mL
Prep Date: N/A		
Leach Date: N/A		

MSD Lab Sample ID: 280-23838-6	Analysis Batch: 280-101025	Instrument ID: WC_Alph 2
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C:\FLOW_4\1221A.RS
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/21/2011 1229		Final Weight/Volume: 5 mL
Prep Date: N/A		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Ammonia (as N)	73	75	90 - 110	3	20	F	F

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-101025**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-23838-1                      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2011 1208  
 Prep Date: N/A  
 Leach Date: N/A

MSD Lab Sample ID: 280-23838-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2011 1209  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Ammonia (as N)	0.083	4.00	4.00	2.88 F	2.95 F

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-101025**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-23838-6                      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2011 1227  
 Prep Date: N/A  
 Leach Date: N/A

MSD Lab Sample ID: 280-23838-6  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2011 1229  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Ammonia (as N)	0.040	4.00	4.00	2.95 F	3.04 F



**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Method Blank - Batch: 280-101161**

Lab Sample ID: MB 280-101161/20  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/22/2011 1232  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-101161  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

**Method: 350.1  
 Preparation: N/A**

Instrument ID: WC\_Alph 2  
 Lab File ID: C:\FLOW\_4\1222A.RS  
 Initial Weight/Volume: 1.0 mL  
 Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Ammonia (as N)	ND		0.022	0.030

**Lab Control Sample/  
 Lab Control Sample Duplicate Recovery Report - Batch: 280-101161**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-101161/21  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/22/2011 1234  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-101161  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 2  
 Lab File ID: C:\FLOW\_4\1222A.RS  
 Initial Weight/Volume: 100 mL  
 Final Weight/Volume: 100 mL

LCSD Lab Sample ID: LCSD 280-101161/22  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/22/2011 1235  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-101161  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 2  
 Lab File ID: C:\FLOW\_4\1222A.RS  
 Initial Weight/Volume: 100 mL  
 Final Weight/Volume: 100 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Ammonia (as N)	99	101	90 - 110	2	10		

**Laboratory Control/  
 Laboratory Duplicate Data Report - Batch: 280-101161**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-101161/21  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/22/2011 1234  
 Prep Date: N/A  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-101161/22  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/22/2011 1235  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia (as N)	5.00	5.00	4.96	5.05

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-101161**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-23838-8	Analysis Batch: 280-101161	Instrument ID: WC_Alp 2
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C:\FLOW_4\1222A.RS
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/22/2011 1238		Final Weight/Volume: 5 mL
Prep Date: N/A		
Leach Date: N/A		

MSD Lab Sample ID: 280-23838-8	Analysis Batch: 280-101161	Instrument ID: WC_Alp 2
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C:\FLOW_4\1222A.RS
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/22/2011 1240		Final Weight/Volume: 5 mL
Prep Date: N/A		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Ammonia (as N)	78	78	90 - 110	0	20	F	F

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-101161**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-23838-8	Units: mg/L	MSD Lab Sample ID: 280-23838-8
Client Matrix: Water		Client Matrix: Water
Dilution: 1.0		Dilution: 1.0
Analysis Date: 12/22/2011 1238		Analysis Date: 12/22/2011 1240
Prep Date: N/A		Prep Date: N/A
Leach Date: N/A		Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Ammonia (as N)	0.086	4.00	4.00	3.19 F	3.19 F

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Method Blank - Batch: 280-101440**

**Method: 353.2  
Preparation: N/A**

Lab Sample ID: MB 280-101440/1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/27/2011 0901  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-101440  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: No Equipment  
Lab File ID: N/A  
Initial Weight/Volume: 1.0 mL  
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Nitrate as N	ND		0.019	0.050

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Method Blank - Batch: 280-100757**

Lab Sample ID: MB 280-100757/101  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 1132  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-100757  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

**Method: 9251  
 Preparation: N/A**

Instrument ID: WC\_Alph 1  
 Lab File ID: C:\FLOW\_4\CL122011.  
 Initial Weight/Volume: 1.0 mL  
 Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Chloride	ND		1.0	1.0

**Lab Control Sample/  
 Lab Control Sample Duplicate Recovery Report - Batch: 280-100757**

**Method: 9251  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-100757/99  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 1129  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-100757  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 1  
 Lab File ID: C:\FLOW\_4\CL122011.  
 Initial Weight/Volume: 1.0 mL  
 Final Weight/Volume: 1.0 mL

LCSD Lab Sample ID: LCSD 280-100757/100  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 1130  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-100757  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 1  
 Lab File ID: C:\FLOW\_4\CL122011.  
 Initial Weight/Volume: 1.0 mL  
 Final Weight/Volume: 1.0 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Chloride	103	102	90 - 110	1	10		

**Laboratory Control/  
 Laboratory Duplicate Data Report - Batch: 280-100757**

**Method: 9251  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-100757/99  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 1129  
 Prep Date: N/A  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-100757/100  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 1130  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Chloride	25.0	25.0	25.8	25.4

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100757**

**Method: 9251  
Preparation: N/A**

MS Lab Sample ID: 280-23764-B-6 MS	Analysis Batch: 280-100757	Instrument ID: WC_Alph 1
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C:\FLOW_4\CL122011.
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 1.0 mL
Analysis Date: 12/20/2011 1133		Final Weight/Volume: 10 mL
Prep Date: N/A		
Leach Date: N/A		

MSD Lab Sample ID: 280-23764-B-6 MSD	Analysis Batch: 280-100757	Instrument ID: WC_Alph 1
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C:\FLOW_4\CL122011.
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 1.0 mL
Analysis Date: 12/20/2011 1134		Final Weight/Volume: 10 mL
Prep Date: N/A		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chloride	98	98	90 - 110	0	10		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100757**

**Method: 9251  
Preparation: N/A**

MS Lab Sample ID: 280-23764-B-6 MS	Units: mg/L	MSD Lab Sample ID: 280-23764-B-6 MSD
Client Matrix: Water		Client Matrix: Water
Dilution: 1.0		Dilution: 1.0
Analysis Date: 12/20/2011 1133		Analysis Date: 12/20/2011 1134
Prep Date: N/A		Prep Date: N/A
Leach Date: N/A		Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chloride	3.2	50.0	50.0	52.3	52.4

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Method Blank - Batch: 280-101067**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID:	MB 280-101067/6	Analysis Batch:	280-101067	Instrument ID:	WC_AT2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122111.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/21/2011 1015	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Alkalinity, Total (As CaCO3)	1.64	J	1.1	5.0
Alkalinity, Bicarbonate (As CaCO3)	1.27	J	1.1	5.0
Alkalinity, Carbonate (As CaCO3)	ND		1.1	5.0

**Lab Control Sample/**

**Method: SM 2320B**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-101067**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-101067/4	Analysis Batch:	280-101067	Instrument ID:	WC_AT2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122111.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/21/2011 0958	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-101067/5	Analysis Batch:	280-101067	Instrument ID:	WC_AT2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122111.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/21/2011 1007	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Alkalinity, Total (As CaCO3)	103	104	90 - 110	0	10		

**Laboratory Control/**

**Method: SM 2320B**

**Laboratory Duplicate Data Report - Batch: 280-101067**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-101067/4	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-101067/5
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/21/2011 0958			Analysis Date:	12/21/2011 1007
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Alkalinity, Total (As CaCO3)	200	200	207	207

## Quality Control Results

Client: Waste Management

Job Number: 280-23838-1

**Duplicate - Batch: 280-101067**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID: 280-23784-A-1 DU  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/21/2011 1039  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-101067  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: WC\_AT2  
Lab File ID: 122111.txt  
Initial Weight/Volume: 1.0 mL  
Final Weight/Volume: 1.0 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Alkalinity, Total (As CaCO3)	790	809	2	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Method Blank - Batch: 280-100854**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	MB 280-100854/1	Analysis Batch:	280-100854	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/21/2011 0640	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Dissolved Solids (TDS)	ND		4.7	5.0

**Lab Control Sample/**

**Method: SM 2540C**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-100854**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100854/2	Analysis Batch:	280-100854	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/21/2011 0640	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-100854/3	Analysis Batch:	280-100854	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/21/2011 0640	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Dissolved Solids (TDS)	97	97	86 - 110	0	20		

**Laboratory Control/**

**Method: SM 2540C**

**Laboratory Duplicate Data Report - Batch: 280-100854**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100854/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-100854/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/21/2011 0640			Analysis Date:	12/21/2011 0640
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Dissolved Solids (TDS)	500	500	485	486



**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Duplicate - Batch: 280-100854**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	280-23838-1	Analysis Batch:	280-100854	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/21/2011 0640	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Dissolved Solids (TDS)	210	205	0	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Method Blank - Batch: 280-100415**

**Method: SM 5310B**

**Preparation: N/A**

Lab Sample ID:	MB 280-100415/5	Analysis Batch:	280-100415	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121611.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	12/16/2011 1856	Units:	mg/L	Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Organic Carbon - Average	ND		0.16	1.0

**Lab Control Sample/**

**Method: SM 5310B**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-100415**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100415/3	Analysis Batch:	280-100415	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121611.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	12/16/2011 1818	Units:	mg/L	Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-100415/4	Analysis Batch:	280-100415	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121611.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	12/16/2011 1837	Units:	mg/L	Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Organic Carbon - Average	97	98	88 - 112	1	15		

**Laboratory Control/**

**Method: SM 5310B**

**Laboratory Duplicate Data Report - Batch: 280-100415**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100415/3	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-100415/4
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/16/2011 1818			Analysis Date:	12/16/2011 1837
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Organic Carbon - Average	25.0	25.0	24.3	24.4

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100415**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID:	280-23838-2	Analysis Batch:	280-100415	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121611.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/16/2011 2334			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-23838-2	Analysis Batch:	280-100415	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121611.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/16/2011 2352			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Total Organic Carbon - Average	96	96	88 - 112	0	15		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100415**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID:	280-23838-2	Units:	mg/L	MSD Lab Sample ID:	280-23838-2
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/16/2011 2334			Analysis Date:	12/16/2011 2352
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Total Organic Carbon - Average	0.67 J	25.0	25.0	24.8	24.7

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Laboratory Chronicle**

Lab ID: 280-23838-1

Client ID: MW-34C

Sample Date/Time: 12/14/2011 09:00

Received Date/Time: 12/15/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23838-G-1		480-45894		12/23/2011 12:21	1	TAL BUF	DC
A:8260B	280-23838-G-1		480-45894		12/23/2011 12:21	1	TAL BUF	DC
P:5030B	280-23838-E-1		480-44856		12/16/2011 17:52	1	TAL BUF	TRB
A:8260B SIM	280-23838-E-1		480-44856		12/16/2011 17:52	1	TAL BUF	TRB
P:3005A	280-23838-C-1-B		280-100645	280-100270	12/19/2011 06:15	1	TAL DEN	CLI
A:6010B	280-23838-C-1-B		280-100645	280-100270	12/19/2011 20:14	1	TAL DEN	JKH
P:3005A	280-23838-C-1-A		280-100876	280-100267	12/19/2011 06:15	1	TAL DEN	CLI
A:6020	280-23838-C-1-A		280-100876	280-100267	12/20/2011 15:42	1	TAL DEN	LT
A:300.0	280-23838-A-1		280-100881		12/20/2011 08:32	1	TAL DEN	EK
A:350.1	280-23838-B-1		280-101025		12/21/2011 12:06	1	TAL DEN	JAD
A:353.2	280-23838-A-1		280-101440		12/27/2011 09:01	1	TAL DEN	RS
A:9251	280-23838-A-1		280-100757		12/20/2011 11:35	1	TAL DEN	AJA
A:SM 2320B	280-23838-A-1		280-101067		12/21/2011 12:53	1	TAL DEN	DE
A:SM 2540C	280-23838-A-1		280-100854		12/21/2011 06:40	1	TAL DEN	BJD
A:SM 5310B	280-23838-B-1		280-100415		12/16/2011 22:58	1	TAL DEN	GEY
A:Field Sampling	280-23838-A-1		280-101458		12/14/2011 09:00	1	TAL DEN	FS

Lab ID: 280-23838-1 MS

Client ID: MW-34C

Sample Date/Time: 12/14/2011 09:00

Received Date/Time: 12/15/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-23838-C-1-C MS		280-100645	280-100270	12/19/2011 06:15	1	TAL DEN	CLI
A:6010B	280-23838-C-1-C MS		280-100645	280-100270	12/19/2011 20:19	1	TAL DEN	JKH
A:300.0	280-23838-A-1 MS		280-100881		12/20/2011 09:05	1	TAL DEN	EK
A:350.1	280-23838-B-1 MS		280-101025		12/21/2011 12:08	1	TAL DEN	JAD

Lab ID: 280-23838-1 MSD

Client ID: MW-34C

Sample Date/Time: 12/14/2011 09:00

Received Date/Time: 12/15/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-23838-C-1-D MSD		280-100645	280-100270	12/19/2011 06:15	1	TAL DEN	CLI
A:6010B	280-23838-C-1-D MSD		280-100645	280-100270	12/19/2011 20:21	1	TAL DEN	JKH
A:300.0	280-23838-A-1 MSD		280-100881		12/20/2011 09:22	1	TAL DEN	EK
A:350.1	280-23838-B-1 MSD		280-101025		12/21/2011 12:09	1	TAL DEN	JAD

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Laboratory Chronicle**

Lab ID: 280-23838-1 DU

Client ID: MW-34C

Sample Date/Time: 12/14/2011 09:00

Received Date/Time: 12/15/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-23838-A-1 DU		280-100881		12/20/2011 08:49	1	TAL DEN	EK
A:SM 2540C	280-23838-A-1 DU		280-100854		12/21/2011 06:40	1	TAL DEN	BJD

Lab ID: 280-23838-2

Client ID: MW-34A

Sample Date/Time: 12/14/2011 10:00

Received Date/Time: 12/15/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23838-I-2		480-45894		12/23/2011 12:43	1	TAL BUF	DC
A:8260B	280-23838-I-2		480-45894		12/23/2011 12:43	1	TAL BUF	DC
P:5030B	280-23838-E-2		480-44856		12/16/2011 18:16	1	TAL BUF	TRB
A:8260B SIM	280-23838-E-2		480-44856		12/16/2011 18:16	1	TAL BUF	TRB
P:3005A	280-23838-C-2-B		280-100645	280-100270	12/19/2011 06:15	1	TAL DEN	CLI
A:6010B	280-23838-C-2-B		280-100645	280-100270	12/19/2011 20:23	1	TAL DEN	JKH
P:3005A	280-23838-C-2-A		280-100876	280-100267	12/19/2011 06:15	1	TAL DEN	CLI
A:6020	280-23838-C-2-A		280-100876	280-100267	12/20/2011 15:45	1	TAL DEN	LT
A:300.0	280-23838-A-2		280-100881		12/20/2011 09:39	1	TAL DEN	EK
A:350.1	280-23838-B-2		280-101025		12/21/2011 12:11	1	TAL DEN	JAD
A:353.2	280-23838-A-2		280-101440		12/27/2011 09:01	1	TAL DEN	RS
A:9251	280-23838-A-2		280-100757		12/20/2011 11:36	1	TAL DEN	AJA
A:SM 2320B	280-23838-A-2		280-101067		12/21/2011 13:00	1	TAL DEN	DE
A:SM 2540C	280-23838-A-2		280-100854		12/21/2011 06:40	1	TAL DEN	BJD
A:SM 5310B	280-23838-B-2		280-100415		12/16/2011 23:14	1	TAL DEN	GEY
A:Field Sampling	280-23838-A-2		280-101458		12/14/2011 10:00	1	TAL DEN	FS

Lab ID: 280-23838-2 MS

Client ID: MW-34A

Sample Date/Time: 12/14/2011 10:00

Received Date/Time: 12/15/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 5310B	280-23838-B-2 MS		280-100415		12/16/2011 23:34	1	TAL DEN	GEY

Lab ID: 280-23838-2 MSD

Client ID: MW-34A

Sample Date/Time: 12/14/2011 10:00

Received Date/Time: 12/15/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 5310B	280-23838-B-2 MSD		280-100415		12/16/2011 23:52	1	TAL DEN	GEY

## Quality Control Results

Client: Waste Management

Job Number: 280-23838-1

### Laboratory Chronicle

Lab ID: 280-23838-3

Client ID: MW-36A

Sample Date/Time: 12/14/2011 10:32

Received Date/Time: 12/15/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23838-E-3		480-45894		12/23/2011 13:06	1	TAL BUF	DC
A:8260B	280-23838-E-3		480-45894		12/23/2011 13:06	1	TAL BUF	DC
P:5030B	280-23838-E-3		480-44856		12/16/2011 18:40	1	TAL BUF	TRB
A:8260B SIM	280-23838-E-3		480-44856		12/16/2011 18:40	1	TAL BUF	TRB
P:3005A	280-23838-C-3-B		280-100645	280-100270	12/19/2011 06:15	1	TAL DEN	CLI
A:6010B	280-23838-C-3-B		280-100645	280-100270	12/19/2011 20:35	1	TAL DEN	JKH
P:3005A	280-23838-C-3-A		280-100876	280-100267	12/19/2011 06:15	1	TAL DEN	CLI
A:6020	280-23838-C-3-A		280-100876	280-100267	12/20/2011 15:53	1	TAL DEN	LT
A:300.0	280-23838-A-3		280-100881		12/20/2011 09:55	1	TAL DEN	EK
A:350.1	280-23838-B-3		280-101025		12/21/2011 12:12	1	TAL DEN	JAD
A:353.2	280-23838-A-3		280-101440		12/27/2011 09:01	1	TAL DEN	RS
A:9251	280-23838-A-3		280-100757		12/20/2011 11:37	1	TAL DEN	AJA
A:SM 2320B	280-23838-A-3		280-101067		12/21/2011 13:06	1	TAL DEN	DE
A:SM 2540C	280-23838-A-3		280-100854		12/21/2011 06:40	1	TAL DEN	BJD
A:SM 5310B	280-23838-B-3		280-100415		12/17/2011 00:11	1	TAL DEN	GEY
A:Field Sampling	280-23838-A-3		280-101458		12/14/2011 10:32	1	TAL DEN	FS

Lab ID: 280-23838-4

Client ID: MW-15R

Sample Date/Time: 12/14/2011 11:03

Received Date/Time: 12/15/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23838-H-4		480-45894		12/23/2011 13:28	1	TAL BUF	DC
A:8260B	280-23838-H-4		480-45894		12/23/2011 13:28	1	TAL BUF	DC
P:5030B	280-23838-E-4		480-44856		12/16/2011 19:04	1	TAL BUF	TRB
A:8260B SIM	280-23838-E-4		480-44856		12/16/2011 19:04	1	TAL BUF	TRB
P:3005A	280-23838-C-4-B		280-100645	280-100270	12/19/2011 06:15	1	TAL DEN	CLI
A:6010B	280-23838-C-4-B		280-100645	280-100270	12/19/2011 20:37	1	TAL DEN	JKH
P:3005A	280-23838-C-4-A		280-100876	280-100267	12/19/2011 06:15	1	TAL DEN	CLI
A:6020	280-23838-C-4-A		280-100876	280-100267	12/20/2011 15:56	1	TAL DEN	LT
A:300.0	280-23838-A-4		280-100881		12/20/2011 10:12	1	TAL DEN	EK
A:350.1	280-23838-B-4		280-101025		12/21/2011 12:23	1	TAL DEN	JAD
A:353.2	280-23838-A-4		280-101440		12/27/2011 09:01	1	TAL DEN	RS
A:9251	280-23838-A-4		280-100757		12/20/2011 11:39	1	TAL DEN	AJA
A:SM 2320B	280-23838-A-4		280-101067		12/21/2011 13:13	1	TAL DEN	DE
A:SM 2540C	280-23838-A-4		280-100854		12/21/2011 06:40	1	TAL DEN	BJD
A:SM 5310B	280-23838-B-4		280-100415		12/17/2011 00:26	1	TAL DEN	GEY
A:Field Sampling	280-23838-A-4		280-101458		12/14/2011 11:03	1	TAL DEN	FS

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Laboratory Chronicle**

Lab ID: 280-23838-5

Client ID: MW-23A

Sample Date/Time: 12/14/2011 11:47

Received Date/Time: 12/15/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23838-D-5		480-45894		12/23/2011 13:50	1	TAL BUF	DC
A:8260B	280-23838-D-5		480-45894		12/23/2011 13:50	1	TAL BUF	DC
P:5030B	280-23838-E-5		480-44856		12/16/2011 19:28	1	TAL BUF	TRB
A:8260B SIM	280-23838-E-5		480-44856		12/16/2011 19:28	1	TAL BUF	TRB
P:3005A	280-23838-C-5-B		280-100645	280-100270	12/19/2011 06:15	1	TAL DEN	CLI
A:6010B	280-23838-C-5-B		280-100645	280-100270	12/19/2011 20:40	1	TAL DEN	JKH
P:3005A	280-23838-C-5-A		280-100876	280-100267	12/19/2011 06:15	1	TAL DEN	CLI
A:6020	280-23838-C-5-A		280-100876	280-100267	12/20/2011 15:58	1	TAL DEN	LT
A:300.0	280-23838-A-5		280-100881		12/20/2011 10:29	1	TAL DEN	EK
A:350.1	280-23838-B-5		280-101025		12/21/2011 12:24	1	TAL DEN	JAD
A:353.2	280-23838-A-5		280-101440		12/27/2011 09:01	1	TAL DEN	RS
A:9251	280-23838-A-5		280-100757		12/20/2011 11:40	1	TAL DEN	AJA
A:SM 2320B	280-23838-A-5		280-101067		12/21/2011 13:21	1	TAL DEN	DE
A:SM 2540C	280-23838-A-5		280-100854		12/21/2011 06:40	1	TAL DEN	BJD
A:SM 5310B	280-23838-B-5		280-100415		12/17/2011 00:43	1	TAL DEN	GEY
A:Field Sampling	280-23838-A-5		280-101458		12/14/2011 11:47	1	TAL DEN	FS

Lab ID: 280-23838-6

Client ID: MW-4

Sample Date/Time: 12/14/2011 13:14

Received Date/Time: 12/15/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23838-I-6		480-45894		12/23/2011 14:12	1	TAL BUF	DC
A:8260B	280-23838-I-6		480-45894		12/23/2011 14:12	1	TAL BUF	DC
P:5030B	280-23838-E-6		480-44856		12/16/2011 19:51	1	TAL BUF	TRB
A:8260B SIM	280-23838-E-6		480-44856		12/16/2011 19:51	1	TAL BUF	TRB
P:3005A	280-23838-C-6-B		280-100645	280-100270	12/19/2011 06:15	1	TAL DEN	CLI
A:6010B	280-23838-C-6-B		280-100645	280-100270	12/19/2011 20:42	1	TAL DEN	JKH
P:3005A	280-23838-C-6-A		280-100876	280-100267	12/19/2011 06:15	1	TAL DEN	CLI
A:6020	280-23838-C-6-A		280-100876	280-100267	12/20/2011 16:01	1	TAL DEN	LT
A:300.0	280-23838-A-6		280-100881		12/20/2011 10:45	1	TAL DEN	EK
A:350.1	280-23838-B-6		280-101025		12/21/2011 12:26	1	TAL DEN	JAD
A:353.2	280-23838-A-6		280-101440		12/27/2011 09:01	1	TAL DEN	RS
A:9251	280-23838-A-6		280-100757		12/20/2011 11:48	1	TAL DEN	AJA
A:SM 2320B	280-23838-A-6		280-101067		12/21/2011 13:28	1	TAL DEN	DE
A:SM 2540C	280-23838-A-6		280-100854		12/21/2011 06:40	1	TAL DEN	BJD
A:SM 5310B	280-23838-B-6		280-100415		12/17/2011 01:00	1	TAL DEN	GEY
A:Field Sampling	280-23838-A-6		280-101458		12/14/2011 13:14	1	TAL DEN	FS

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Laboratory Chronicle**

Lab ID: 280-23838-6 MS

Client ID: MW-4

Sample Date/Time: 12/14/2011 13:14

Received Date/Time: 12/15/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:350.1	280-23838-B-6 MS		280-101025		12/21/2011 12:27	1	TAL DEN	JAD

Lab ID: 280-23838-6 MSD

Client ID: MW-4

Sample Date/Time: 12/14/2011 13:14

Received Date/Time: 12/15/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:350.1	280-23838-B-6 MSD		280-101025		12/21/2011 12:29	1	TAL DEN	JAD

Lab ID: 280-23838-7

Client ID: MW-19C

Sample Date/Time: 12/14/2011 13:56

Received Date/Time: 12/15/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23838-G-7		480-45894		12/23/2011 14:34	1	TAL BUF	DC
A:8260B	280-23838-G-7		480-45894		12/23/2011 14:34	1	TAL BUF	DC
P:5030B	280-23838-E-7		480-44856		12/16/2011 20:16	1	TAL BUF	TRB
A:8260B SIM	280-23838-E-7		480-44856		12/16/2011 20:16	1	TAL BUF	TRB
P:3005A	280-23838-C-7-B		280-100645	280-100270	12/19/2011 06:15	1	TAL DEN	CLI
A:6010B	280-23838-C-7-B		280-100645	280-100270	12/19/2011 20:44	1	TAL DEN	JKH
P:3005A	280-23838-C-7-A		280-100876	280-100267	12/19/2011 06:15	1	TAL DEN	CLI
A:6020	280-23838-C-7-A		280-100876	280-100267	12/20/2011 16:04	1	TAL DEN	LT
A:300.0	280-23838-A-7		280-100881		12/20/2011 11:02	1	TAL DEN	EK
A:350.1	280-23838-B-7		280-101025		12/21/2011 12:30	1	TAL DEN	JAD
A:353.2	280-23838-A-7		280-101440		12/27/2011 09:01	1	TAL DEN	RS
A:9251	280-23838-A-7		280-100757		12/20/2011 11:49	1	TAL DEN	AJA
A:SM 2320B	280-23838-A-7		280-101067		12/21/2011 13:35	1	TAL DEN	DE
A:SM 2540C	280-23838-A-7		280-100854		12/21/2011 06:40	1	TAL DEN	BJD
A:SM 5310B	280-23838-B-7		280-100415		12/17/2011 01:15	1	TAL DEN	GEY
A:Field Sampling	280-23838-A-7		280-101458		12/14/2011 13:56	1	TAL DEN	FS



**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Laboratory Chronicle**

Lab ID: 280-23838-8

Client ID: MW-13A

Sample Date/Time: 12/14/2011 14:30

Received Date/Time: 12/15/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23838-E-8		480-45894		12/23/2011 14:56	1	TAL BUF	DC
A:8260B	280-23838-E-8		480-45894		12/23/2011 14:56	1	TAL BUF	DC
P:5030B	280-23838-E-8		480-44856		12/16/2011 20:39	1	TAL BUF	TRB
A:8260B SIM	280-23838-E-8		480-44856		12/16/2011 20:39	1	TAL BUF	TRB
P:3005A	280-23838-C-8-B		280-100645	280-100270	12/19/2011 06:15	1	TAL DEN	CLI
A:6010B	280-23838-C-8-B		280-100645	280-100270	12/19/2011 20:47	1	TAL DEN	JKH
P:3005A	280-23838-C-8-A		280-100876	280-100267	12/19/2011 06:15	1	TAL DEN	CLI
A:6020	280-23838-C-8-A		280-100876	280-100267	12/20/2011 16:07	1	TAL DEN	LT
A:300.0	280-23838-A-8		280-100881		12/20/2011 11:52	1	TAL DEN	EK
A:350.1	280-23838-B-8		280-101161		12/22/2011 12:37	1	TAL DEN	JAD
A:353.2	280-23838-A-8		280-101440		12/27/2011 09:01	1	TAL DEN	RS
A:9251	280-23838-A-8		280-100757		12/20/2011 11:50	1	TAL DEN	AJA
A:SM 2320B	280-23838-A-8		280-101067		12/21/2011 13:44	1	TAL DEN	DE
A:SM 2540C	280-23838-A-8		280-100854		12/21/2011 06:40	1	TAL DEN	BJD
A:SM 5310B	280-23838-B-8		280-100415		12/17/2011 02:07	1	TAL DEN	GEY
A:Field Sampling	280-23838-A-8		280-101458		12/14/2011 14:30	1	TAL DEN	FS

Lab ID: 280-23838-8 MS

Client ID: MW-13A

Sample Date/Time: 12/14/2011 14:30

Received Date/Time: 12/15/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:350.1	280-23838-B-8 MS		280-101161		12/22/2011 12:38	1	TAL DEN	JAD

Lab ID: 280-23838-8 MSD

Client ID: MW-13A

Sample Date/Time: 12/14/2011 14:30

Received Date/Time: 12/15/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:350.1	280-23838-B-8 MSD		280-101161		12/22/2011 12:40	1	TAL DEN	JAD

## Quality Control Results

Client: Waste Management

Job Number: 280-23838-1

### Laboratory Chronicle

Lab ID: 280-23838-9

Client ID: MW-13B

Sample Date/Time: 12/14/2011 15:02

Received Date/Time: 12/15/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23838-I-9		480-45894		12/23/2011 15:18	1	TAL BUF	DC
A:8260B	280-23838-I-9		480-45894		12/23/2011 15:18	1	TAL BUF	DC
P:5030B	280-23838-E-9		480-44856		12/16/2011 21:03	1	TAL BUF	TRB
A:8260B SIM	280-23838-E-9		480-44856		12/16/2011 21:03	1	TAL BUF	TRB
P:3005A	280-23838-C-9-B		280-100645	280-100270	12/19/2011 06:15	1	TAL DEN	CLI
A:6010B	280-23838-C-9-B		280-100645	280-100270	12/19/2011 20:49	1	TAL DEN	JKH
P:3005A	280-23838-C-9-A		280-100876	280-100267	12/19/2011 06:15	1	TAL DEN	CLI
A:6020	280-23838-C-9-A		280-100876	280-100267	12/20/2011 16:09	1	TAL DEN	LT
A:300.0	280-23838-A-9		280-100881		12/20/2011 12:09	1	TAL DEN	EK
A:350.1	280-23838-B-9		280-101025		12/21/2011 12:33	1	TAL DEN	JAD
A:353.2	280-23838-A-9		280-101440		12/27/2011 09:01	1	TAL DEN	RS
A:9251	280-23838-A-9		280-100757		12/20/2011 11:51	1	TAL DEN	AJA
A:SM 2320B	280-23838-A-9		280-101067		12/21/2011 13:51	1	TAL DEN	DE
A:SM 2540C	280-23838-A-9		280-100854		12/21/2011 06:40	1	TAL DEN	BJD
A:SM 5310B	280-23838-B-9		280-100415		12/17/2011 02:23	1	TAL DEN	GEY
A:Field Sampling	280-23838-A-9		280-101458		12/14/2011 15:02	1	TAL DEN	FS

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MB 480-45894/5		480-45894		12/23/2011 11:53	1	TAL BUF	DC
A:8260B	MB 480-45894/5		480-45894		12/23/2011 11:53	1	TAL BUF	DC
P:5030B	MB 480-44856/3		480-44856		12/16/2011 13:53	1	TAL BUF	TRB
A:8260B SIM	MB 480-44856/3		480-44856		12/16/2011 13:53	1	TAL BUF	TRB
P:3005A	MB 280-100270/1-A		280-100645	280-100270	12/19/2011 06:15	1	TAL DEN	CLI
A:6010B	MB 280-100270/1-A		280-100645	280-100270	12/19/2011 20:09	1	TAL DEN	JKH
P:3005A	MB 280-100267/1-A		280-100876	280-100267	12/19/2011 06:15	1	TAL DEN	CLI
A:6020	MB 280-100267/1-A		280-100876	280-100267	12/20/2011 15:12	1	TAL DEN	LT
P:3005A	MB 280-100267/1-A		280-100876	280-100267	12/19/2011 06:15	1	TAL DEN	CLI
A:6020	MB 280-100267/1-A		280-100876	280-100267	12/20/2011 15:36	1	TAL DEN	LT
A:300.0	MB 280-100881/6		280-100881		12/20/2011 08:16	1	TAL DEN	EK
A:350.1	MB 280-101025/64		280-101025		12/21/2011 11:59	1	TAL DEN	JAD
A:350.1	MB 280-101161/20		280-101161		12/22/2011 12:32	1	TAL DEN	JAD
A:353.2	MB 280-101440/1		280-101440		12/27/2011 09:01	1	TAL DEN	RS
A:9251	MB 280-100757/101		280-100757		12/20/2011 11:32	1	TAL DEN	AJA
A:SM 2320B	MB 280-101067/6		280-101067		12/21/2011 10:15	1	TAL DEN	DE
A:SM 2540C	MB 280-100854/1		280-100854		12/21/2011 06:40	1	TAL DEN	BJD
A:SM 5310B	MB 280-100415/5		280-100415		12/16/2011 18:56	1	TAL DEN	GEY

**Quality Control Results**

Client: Waste Management

Job Number: 280-23838-1

**Laboratory Chronicle**

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCS 480-45894/4		480-45894		12/23/2011 11:31	1	TAL BUF	DC
A:8260B	LCS 480-45894/4		480-45894		12/23/2011 11:31	1	TAL BUF	DC
P:5030B	LCS 480-44856/2		480-44856		12/16/2011 13:30	1	TAL BUF	TRB
A:8260B SIM	LCS 480-44856/2		480-44856		12/16/2011 13:30	1	TAL BUF	TRB
P:3005A	LCS 280-100270/2-A		280-100645	280-100270	12/19/2011 06:15	1	TAL DEN	CLI
A:6010B	LCS 280-100270/2-A		280-100645	280-100270	12/19/2011 20:12	1	TAL DEN	JKH
P:3005A	LCS 280-100267/2-A		280-100876	280-100267	12/19/2011 06:15	1	TAL DEN	CLI
A:6020	LCS 280-100267/2-A		280-100876	280-100267	12/20/2011 15:14	1	TAL DEN	LT
P:3005A	LCS 280-100267/2-A		280-100876	280-100267	12/19/2011 06:15	1	TAL DEN	CLI
A:6020	LCS 280-100267/2-A		280-100876	280-100267	12/20/2011 15:39	1	TAL DEN	LT
A:300.0	LCS 280-100881/4		280-100881		12/20/2011 07:42	1	TAL DEN	EK
A:350.1	LCS 280-101025/65		280-101025		12/21/2011 12:00	1	TAL DEN	JAD
A:350.1	LCS 280-101161/21		280-101161		12/22/2011 12:34	1	TAL DEN	JAD
A:9251	LCS 280-100757/99		280-100757		12/20/2011 11:29	1	TAL DEN	AJA
A:SM 2320B	LCS 280-101067/4		280-101067		12/21/2011 09:58	1	TAL DEN	DE
A:SM 2540C	LCS 280-100854/2		280-100854		12/21/2011 06:40	1	TAL DEN	BJD
A:SM 5310B	LCS 280-100415/3		280-100415		12/16/2011 18:18	1	TAL DEN	GEY

Lab ID: LCSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	LCSD 280-100881/5		280-100881		12/20/2011 07:59	1	TAL DEN	EK
A:350.1	LCSD 280-101025/66		280-101025		12/21/2011 12:02	1	TAL DEN	JAD
A:350.1	LCSD 280-101161/22		280-101161		12/22/2011 12:35	1	TAL DEN	JAD
A:9251	LCSD 280-100757/100		280-100757		12/20/2011 11:30	1	TAL DEN	AJA
A:SM 2320B	LCSD 280-101067/5		280-101067		12/21/2011 10:07	1	TAL DEN	DE
A:SM 2540C	LCSD 280-100854/3		280-100854		12/21/2011 06:40	1	TAL DEN	BJD
A:SM 5310B	LCSD 280-100415/4		280-100415		12/16/2011 18:37	1	TAL DEN	GEY

Lab ID: MRL

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	MRL 280-100881/3		280-100881		12/20/2011 07:26	1	TAL DEN	EK

## Quality Control Results

Client: Waste Management

Job Number: 280-23838-1

### Laboratory Chronicle

Lab ID: MS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23764-A-6 MS		480-44856		12/16/2011 16:41	1	TAL BUF	TRB
A:8260B SIM	280-23764-A-6 MS		480-44856		12/16/2011 16:41	1	TAL BUF	TRB
P:3005A	280-23764-H-6-B MS ^10		280-100876	280-100267	12/19/2011 06:15	10	TAL DEN	CLI
A:6020	280-23764-H-6-B MS ^10		280-100876	280-100267	12/20/2011 15:23	10	TAL DEN	LT
A:9251	280-23764-B-6 MS		280-100757		12/20/2011 11:33	1	TAL DEN	AJA

Lab ID: MSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23764-A-6 MSD		480-44856		12/16/2011 17:05	1	TAL BUF	TRB
A:8260B SIM	280-23764-A-6 MSD		480-44856		12/16/2011 17:05	1	TAL BUF	TRB
P:3005A	280-23764-H-6-C MSD ^10		280-100876	280-100267	12/19/2011 06:15	10	TAL DEN	CLI
A:6020	280-23764-H-6-C MSD ^10		280-100876	280-100267	12/20/2011 15:25	10	TAL DEN	LT
A:9251	280-23764-B-6 MSD		280-100757		12/20/2011 11:34	1	TAL DEN	AJA

Lab ID: DU

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2320B	280-23784-A-1 DU		280-101067		12/21/2011 10:39	1	TAL DEN	DE

**Lab References:**

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver























## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-23838-1

Login Number: 23838

List Source: TestAmerica Denver

List Number: 1

Creator: Philipp, Nicholas A

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-23838-1

**Login Number: 23838**  
**List Number: 1**  
**Creator: Wienke, Robert**

**List Source: TestAmerica Buffalo**  
**List Creation: 12/16/11 04:42 PM**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	False	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	



## ANALYTICAL REPORT

Job Number: 280-23869-1

Job Description: WA02|Olympic View Sanitary LF

For:

Waste Management  
2400 West Union Avenue  
Englewood, CO 80110

Attention: Mr. Steve Richtel



Approved for release.  
Katie Abbott  
Project Mgmt. Assistant  
1/5/2012 2:19 PM

---

Designee for  
Betsy A Sara  
Project Manager II  
betsy.sara@testamericainc.com  
01/05/2012

cc: Mr. Sam Adlington  
Mr. Charles Luckie  
Ms. Emily Smart  
Mr. Dan Venchiarutti

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

**TestAmerica Laboratories, Inc.**

TestAmerica Denver 4955 Yarrow Street, Arvada, CO 80002  
Tel (303) 736-0100 Fax (303) 431-7171 [www.testamericainc.com](http://www.testamericainc.com)



# Table of Contents

Cover Title Page . . . . .	1
Report Narrative . . . . .	3
Executive Summary . . . . .	5
Method Summary . . . . .	11
Method / Analyst Summary . . . . .	12
Sample Summary . . . . .	13
Sample Results . . . . .	14
Sample Datasheets . . . . .	15
Data Qualifiers . . . . .	69
QC Results . . . . .	70
Qc Association Summary . . . . .	71
Surrogate Recovery Report . . . . .	78
Qc Reports . . . . .	79
Laboratory Chronicle . . . . .	122
Client Chain of Custody . . . . .	132
Sample Receipt Checklist . . . . .	133

## CASE NARRATIVE

Client: Waste Management

Project: WA02|Olympic View Sanitary LF

Report Number: 280-23869-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

This report may include reporting limits (RLs) less than TestAmerica's standard reporting limit. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

### Sample Receiving

The samples were received on 12/16/2011; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 2.6°C and 2.9°C.

### Holding Times

All holding times were within established control limits.

### Method Blanks

2-Hexanone Method 8260, Total Alkalinity, Bicarbonate Alkalinity, and Carbonate Alkalinity Method 2320B were detected in the Method Blanks below the project established reporting limits. No corrective action is taken for any values in Method Blanks that are below the requested reporting limits. The Method Blank data are included at the end of this report.

All other Method Blank recoveries were within established control limits.

### Laboratory Control Samples (LCS)

All Laboratory Control Samples were within established control limits.

### Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

The method required MS/MSD could not be performed for Method 8260 and Method 8260 SIM due to insufficient sample volume.

Percent recoveries and RPD data could not be accurately calculated for the Dissolved Nickel Method 6010B MS/MSD, due to the sample concentration reading greater than four times the spike amount.

The Matrix Spike and Matrix Spike Duplicate performed on a sample from another client exhibited recoveries outside control limits for Dissolved Antimony Method 6020 and Ammonia Method 350.1. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, this anomaly may be due to matrix interference and no corrective action was taken.

The Matrix Spike Duplicate performed on a sample from another client exhibited recoveries outside control limits for Chloride Method 925.1. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, this anomaly may be due to matrix interference and no corrective action was taken.

All other MS and MSD samples were within established control limits.

### Organics

The LCS associated with batch 480-46010 was analyzed with a long spike list. As the LCS was evaluated against the long list, 2-Chloroethyl vinyl ether was recovered above the QC control limits, but not included in the LCS short list appearing in this report. Associated sample results are still considered valid because 2-Chloroethyl vinyl ether was not detected above the respective reporting limits. The associated data in the analytical report have been flagged "\*\*".

### General Comments

The analyses for Volatile Organics by Method 8260B and Volatile Organics by Method 8260B SIM were performed by TestAmerica Buffalo. Their address and phone number are:

TestAmerica Buffalo

10 Hazelwood Drive, Suite 106

Amherst, NY 14228

716-691-2600

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-23869-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-23869-1</b>	<b>MW-43</b>					
Depth to water		25.43			ft	Field Sampling
Specific Conductivity		63.0			umhos/cm	Field Sampling
Dissolved Oxygen		1.46			mg/L	Field Sampling
eH		90.0			millivolts	Field Sampling
Turbidity		3.51			NTU	Field Sampling
Temperature		10.11			Degrees C	Field Sampling
pH		5.77			SU	Field Sampling
Sulfate		2.0		1.0	mg/L	300.0
Ammonia (as N)		0.12		0.030	mg/L	350.1
Nitrate as N		0.79		0.050	mg/L	353.2
Chloride		2.8		1.0	mg/L	9251
Alkalinity, Total (As CaCO3)		22	B	5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		22	B	5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		45		5.0	mg/L	SM 2540C
Total Organic Carbon - Average		1.3		1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		4.6		0.040	mg/L	6010B
Iron, Dissolved		0.60		0.060	mg/L	6010B
Magnesium, Dissolved		1.8		0.050	mg/L	6010B
Potassium, Dissolved		0.70	J	1.0	mg/L	6010B
Sodium, Dissolved		2.9		1.0	mg/L	6010B
Barium, Dissolved		0.0053		0.0010	mg/L	6020
Manganese, Dissolved		0.37		0.0010	mg/L	6020
Nickel, Dissolved		0.00037	J	0.0040	mg/L	6020
Thallium, Dissolved		0.000042	J	0.0010	mg/L	6020
Vanadium, Dissolved		0.00065	J	0.0020	mg/L	6020
Zinc, Dissolved		0.0024	J	0.0050	mg/L	6020

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-23869-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-23869-2</b>	<b>MW-42</b>					
Vinyl chloride		0.048		0.020	ug/L	8260B SIM
Depth to water		28.30			ft	Field Sampling
Specific Conductivity		572			umhos/cm	Field Sampling
Dissolved Oxygen		0.13			mg/L	Field Sampling
eH		-78.0			millivolts	Field Sampling
Turbidity		1.57			NTU	Field Sampling
Temperature		12.16			Degrees C	Field Sampling
pH		6.42			SU	Field Sampling
Sulfate		17		1.0	mg/L	300.0
Ammonia (as N)		3.6		0.030	mg/L	350.1
Chloride		22		1.0	mg/L	9251
Alkalinity, Total (As CaCO3)		230	B	5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		230	B	5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		270		5.0	mg/L	SM 2540C
Total Organic Carbon - Average		7.1		1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		38		0.040	mg/L	6010B
Cobalt, Dissolved		0.0031		0.0030	mg/L	6010B
Iron, Dissolved		25		0.060	mg/L	6010B
Magnesium, Dissolved		16		0.050	mg/L	6010B
Potassium, Dissolved		6.5		1.0	mg/L	6010B
Sodium, Dissolved		22		1.0	mg/L	6010B
Barium, Dissolved		0.12		0.0010	mg/L	6020
Chromium, Dissolved		0.00059	J	0.0030	mg/L	6020
Manganese, Dissolved		5.4		0.0010	mg/L	6020
Nickel, Dissolved		0.0019	J	0.0040	mg/L	6020
Vanadium, Dissolved		0.0018	J	0.0020	mg/L	6020
Zinc, Dissolved		0.0026	J	0.0050	mg/L	6020

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-23869-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-23869-3</b>	<b>MW-20</b>					
Vinyl chloride		0.058		0.020	ug/L	8260B SIM
Depth to water		36.68			ft	Field Sampling
Specific Conductivity		370			umhos/cm	Field Sampling
Dissolved Oxygen		0.34			mg/L	Field Sampling
eH		103.0			millivolts	Field Sampling
Turbidity		0.37			NTU	Field Sampling
Temperature		14.92			Degrees C	Field Sampling
pH		6.49			SU	Field Sampling
Sulfate		13		1.0	mg/L	300.0
Ammonia (as N)		0.039		0.030	mg/L	350.1
Nitrate as N		3.8		0.050	mg/L	353.2
Chloride		15		1.0	mg/L	9251
Alkalinity, Total (As CaCO3)		150	B	5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		150	B	5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		220		5.0	mg/L	SM 2540C
Total Organic Carbon - Average		0.76	J	1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		31		0.040	mg/L	6010B
Magnesium, Dissolved		17		0.050	mg/L	6010B
Potassium, Dissolved		3.6		1.0	mg/L	6010B
Sodium, Dissolved		11		1.0	mg/L	6010B
Barium, Dissolved		0.012		0.0010	mg/L	6020
Copper, Dissolved		0.00059	J	0.0020	mg/L	6020
Manganese, Dissolved		0.039		0.0010	mg/L	6020
Nickel, Dissolved		0.0021	J	0.0040	mg/L	6020
Vanadium, Dissolved		0.0019	J	0.0020	mg/L	6020
Zinc, Dissolved		0.0022	J	0.0050	mg/L	6020

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-23869-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-23869-4</b>	<b>MW-39</b>					
Depth to water		19.63			ft	Field Sampling
Specific Conductivity		168			umhos/cm	Field Sampling
Dissolved Oxygen		0.30			mg/L	Field Sampling
eH		32.0			millivolts	Field Sampling
Turbidity		2.92			NTU	Field Sampling
Temperature		10.93			Degrees C	Field Sampling
pH		5.86			SU	Field Sampling
Sulfate		0.66	J	1.0	mg/L	300.0
Ammonia (as N)		0.25		0.030	mg/L	350.1
Nitrate as N		0.15		0.050	mg/L	353.2
Chloride		3.9		1.0	mg/L	9251
Alkalinity, Total (As CaCO3)		88	B	5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		88		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		100		5.0	mg/L	SM 2540C
Total Organic Carbon - Average		1.8		1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		11		0.040	mg/L	6010B
Cobalt, Dissolved		0.0052		0.0030	mg/L	6010B
Iron, Dissolved		16		0.060	mg/L	6010B
Magnesium, Dissolved		6.1		0.050	mg/L	6010B
Potassium, Dissolved		0.33	J	1.0	mg/L	6010B
Sodium, Dissolved		7.0		1.0	mg/L	6010B
Barium, Dissolved		0.012		0.0010	mg/L	6020
Manganese, Dissolved		0.41		0.0010	mg/L	6020
Nickel, Dissolved		0.0027	J	0.0040	mg/L	6020
Vanadium, Dissolved		0.00056	J	0.0020	mg/L	6020
Zinc, Dissolved		0.0023	J	0.0050	mg/L	6020



## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-23869-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-23869-5</b>	<b>MW-24</b>					
Vinyl chloride		0.0077	J	0.020	ug/L	8260B SIM
Depth to water		34.11			ft	Field Sampling
Specific Conductivity		171.0			umhos/cm	Field Sampling
Dissolved Oxygen		0.43			mg/L	Field Sampling
eH		120.0			millivolts	Field Sampling
Turbidity		14.30			NTU	Field Sampling
Temperature		11.83			Degrees C	Field Sampling
pH		6.27			SU	Field Sampling
Sulfate		4.4		1.0	mg/L	300.0
Ammonia (as N)		0.037		0.030	mg/L	350.1
Nitrate as N		0.021	J	0.050	mg/L	353.2
Chloride		4.4		1.0	mg/L	9251
Alkalinity, Total (As CaCO3)		87	B	5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		87		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		110		5.0	mg/L	SM 2540C
Total Organic Carbon - Average		0.35	J	1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		14		0.040	mg/L	6010B
Cobalt, Dissolved		0.0014	J	0.0030	mg/L	6010B
Iron, Dissolved		0.065		0.060	mg/L	6010B
Magnesium, Dissolved		8.1		0.050	mg/L	6010B
Potassium, Dissolved		0.75	J	1.0	mg/L	6010B
Sodium, Dissolved		5.2		1.0	mg/L	6010B
Barium, Dissolved		0.0032		0.0010	mg/L	6020
Manganese, Dissolved		1.7		0.0010	mg/L	6020
Nickel, Dissolved		0.0026	J	0.0040	mg/L	6020
Vanadium, Dissolved		0.0011	J	0.0020	mg/L	6020

**EXECUTIVE SUMMARY - Detections**

Client: Waste Management

Job Number: 280-23869-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-23869-6</b>	<b>MW-32</b>					
Vinyl chloride		0.38		0.020	ug/L	8260B SIM
Depth to water		1.75			ft	Field Sampling
Specific Conductivity		295			umhos/cm	Field Sampling
Dissolved Oxygen		0.13			mg/L	Field Sampling
eH		-10.0			millivolts	Field Sampling
Turbidity		1.57			NTU	Field Sampling
Temperature		12.12			Degrees C	Field Sampling
pH		6.73			SU	Field Sampling
Sulfate		16		1.0	mg/L	300.0
Ammonia (as N)		0.047		0.030	mg/L	350.1
Chloride		11		1.0	mg/L	9251
Alkalinity, Total (As CaCO3)		130	B	5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		130		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		200		5.0	mg/L	SM 2540C
Total Organic Carbon - Average		1.1		1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		25		0.040	mg/L	6010B
Iron, Dissolved		0.62		0.060	mg/L	6010B
Magnesium, Dissolved		12		0.050	mg/L	6010B
Potassium, Dissolved		1.0		1.0	mg/L	6010B
Sodium, Dissolved		15		1.0	mg/L	6010B
Barium, Dissolved		0.0048		0.0010	mg/L	6020
Manganese, Dissolved		2.2		0.0010	mg/L	6020
Nickel, Dissolved		0.0012	J	0.0040	mg/L	6020
Zinc, Dissolved		0.0043	J	0.0050	mg/L	6020
<b>280-23869-7TB</b>	<b>TRIP BLANK</b>					
Acetonitrile		50		40	ug/L	8260B
Methylene Chloride		0.93	J	1.0	ug/L	8260B

## METHOD SUMMARY

Client: Waste Management

Job Number: 280-23869-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals			SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Metals (ICP/MS)	TAL DEN	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals			SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Anions, Ion Chromatography	TAL DEN	MCAWW 300.0	
Nitrogen, Ammonia	TAL DEN	MCAWW 350.1	
Nitrate	TAL DEN	EPA 353.2	
Chloride	TAL DEN	SW846 9251	
Alkalinity	TAL DEN	SM SM 2320B	
Solids, Total Dissolved (TDS)	TAL DEN	SM SM 2540C	
Organic Carbon, Total (TOC)	TAL DEN	SM SM 5310B	
Field Sampling	TAL DEN	EPA Field Sampling	
Volatile Organic Compounds (GC/MS)	TAL BUF	SW846 8260B	
Purge and Trap	TAL BUF		SW846 5030B
Volatile Organic Compounds (GC/MS)	TAL BUF	SW846 8260B SIM	
Purge and Trap	TAL BUF		SW846 5030B

**Lab References:**

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver

**Method References:**

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

## METHOD / ANALYST SUMMARY

Client: Waste Management

Job Number: 280-23869-1

<b>Method</b>	<b>Analyst</b>	<b>Analyst ID</b>
SW846 8260B	Hill, Leah	LH
SW846 8260B	Larson, Renee	RL
SW846 8260B SIM	Brandt, Todd R	TRB
SW846 6010B	Harre, John K	JKH
SW846 6010B	Trudell, Lynn-Anne	LT
SW846 6020	Lill, Thomas E	TEL
EPA Field Sampling	Field, Sampler	FS
MCAWW 300.0	Kudla, Ewa	EK
MCAWW 350.1	Doherty, Jillian A	JAD
EPA 353.2	Sullivan, Roxanne	RS
SW846 9251	Allen, Andrew J	AJA
SM SM 2320B	Elkin, David	DE
SM SM 2540C	Domnick, Brandon J	BJD
SM SM 5310B	Yates, George E	GEY

## SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-23869-1

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
280-23869-1	MW-43	Water	12/15/2011 0800	12/16/2011 0930
280-23869-2	MW-42	Water	12/15/2011 0837	12/16/2011 0930
280-23869-3	MW-20	Water	12/15/2011 0917	12/16/2011 0930
280-23869-4	MW-39	Water	12/15/2011 1017	12/16/2011 0930
280-23869-5	MW-24	Water	12/15/2011 1119	12/16/2011 0930
280-23869-6	MW-32	Water	12/15/2011 1219	12/16/2011 0930
280-23869-7TB	TRIP BLANK	Water	12/15/2011 0800	12/16/2011 0930

# **SAMPLE RESULTS**

## Analytical Data

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-43**

Lab Sample ID: 280-23869-1

Date Sampled: 12/15/2011 0800

Client Matrix: Water

Date Received: 12/16/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-46012	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T4126.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/27/2011 2139			Final Weight/Volume:	5 mL
Prep Date:	12/27/2011 2139				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

## Analytical Data

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-43**

Lab Sample ID: 280-23869-1

Date Sampled: 12/15/2011 0800

Client Matrix: Water

Date Received: 12/16/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B	Analysis Batch: 480-46012	Instrument ID: HP5975T	
Prep Method: 5030B	Prep Batch: N/A	Lab File ID: T4126.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/27/2011 2139		Final Weight/Volume: 5 mL	
Prep Date: 12/27/2011 2139			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0



**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-43**

Lab Sample ID: 280-23869-1

Date Sampled: 12/15/2011 0800

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-46012	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T4126.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/27/2011 2139			Final Weight/Volume:	5 mL
Prep Date:	12/27/2011 2139				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96		66 - 137
4-Bromofluorobenzene (Surr)	84		73 - 120
Toluene-d8 (Surr)	89		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-43**

Lab Sample ID: 280-23869-1

Date Sampled: 12/15/2011 0800

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-46012	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T4126.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/27/2011 2139			Final Weight/Volume:	5 mL
Prep Date:	12/27/2011 2139				

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

## Analytical Data

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID:** MW-42

Lab Sample ID: 280-23869-2

Date Sampled: 12/15/2011 0837

Client Matrix: Water

Date Received: 12/16/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-46012	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T4127.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/27/2011 2203			Final Weight/Volume:	5 mL
Prep Date:	12/27/2011 2203				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

## Analytical Data

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID:** MW-42

Lab Sample ID: 280-23869-2

Date Sampled: 12/15/2011 0837

Client Matrix: Water

Date Received: 12/16/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-46012	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T4127.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/27/2011 2203			Final Weight/Volume:	5 mL
Prep Date:	12/27/2011 2203				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-42**

Lab Sample ID: 280-23869-2

Date Sampled: 12/15/2011 0837

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-46012	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T4127.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/27/2011 2203			Final Weight/Volume:	5 mL
Prep Date:	12/27/2011 2203				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99		66 - 137
4-Bromofluorobenzene (Surr)	87		73 - 120
Toluene-d8 (Surr)	91		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-42**

Lab Sample ID: 280-23869-2

Date Sampled: 12/15/2011 0837

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-46012	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T4127.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/27/2011 2203			Final Weight/Volume:	5 mL
Prep Date:	12/27/2011 2203				

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

## Analytical Data

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID:** MW-20

Lab Sample ID: 280-23869-3

Date Sampled: 12/15/2011 0917

Client Matrix: Water

Date Received: 12/16/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-46012	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T4128.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/27/2011 2227			Final Weight/Volume:	5 mL
Prep Date:	12/27/2011 2227				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

## Analytical Data

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID:** MW-20

Lab Sample ID: 280-23869-3

Date Sampled: 12/15/2011 0917

Client Matrix: Water

Date Received: 12/16/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-46012	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T4128.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/27/2011 2227			Final Weight/Volume:	5 mL
Prep Date:	12/27/2011 2227				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0



**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-20**

Lab Sample ID: 280-23869-3

Date Sampled: 12/15/2011 0917

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-46012	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T4128.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/27/2011 2227			Final Weight/Volume:	5 mL
Prep Date:	12/27/2011 2227				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95		66 - 137
4-Bromofluorobenzene (Surr)	86		73 - 120
Toluene-d8 (Surr)	92		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-20**

Lab Sample ID: 280-23869-3

Date Sampled: 12/15/2011 0917

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-46012	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T4128.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/27/2011 2227			Final Weight/Volume:	5 mL
Prep Date:	12/27/2011 2227				

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

## Analytical Data

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-39**

Lab Sample ID: 280-23869-4

Date Sampled: 12/15/2011 1017

Client Matrix: Water

Date Received: 12/16/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B	Analysis Batch: 480-46174	Instrument ID: HP5975T	
Prep Method: 5030B	Prep Batch: N/A	Lab File ID: T4135.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/28/2011 1351		Final Weight/Volume: 5 mL	
Prep Date: 12/28/2011 1351			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

## Analytical Data

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-39**

Lab Sample ID: 280-23869-4

Date Sampled: 12/15/2011 1017

Client Matrix: Water

Date Received: 12/16/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B	Analysis Batch: 480-46174	Instrument ID: HP5975T	
Prep Method: 5030B	Prep Batch: N/A	Lab File ID: T4135.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/28/2011 1351		Final Weight/Volume: 5 mL	
Prep Date: 12/28/2011 1351			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-39**

Lab Sample ID: 280-23869-4

Date Sampled: 12/15/2011 1017

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-46174	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T4135.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/28/2011 1351			Final Weight/Volume:	5 mL
Prep Date:	12/28/2011 1351				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	93		66 - 137
4-Bromofluorobenzene (Surr)	81		73 - 120
Toluene-d8 (Surr)	85		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-39**

Lab Sample ID: 280-23869-4

Date Sampled: 12/15/2011 1017

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-46174	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T4135.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/28/2011 1351			Final Weight/Volume:	5 mL
Prep Date:	12/28/2011 1351				

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

## Analytical Data

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-24**

Lab Sample ID: 280-23869-5

Date Sampled: 12/15/2011 1119

Client Matrix: Water

Date Received: 12/16/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-46010	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C16611.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/27/2011 2221			Final Weight/Volume:	5 mL
Prep Date:	12/27/2011 2221				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND	*	0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

## Analytical Data

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID:** MW-24

Lab Sample ID: 280-23869-5

Date Sampled: 12/15/2011 1119

Client Matrix: Water

Date Received: 12/16/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-46010	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C16611.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/27/2011 2221			Final Weight/Volume:	5 mL
Prep Date:	12/27/2011 2221				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0



**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-24**

Lab Sample ID: 280-23869-5

Date Sampled: 12/15/2011 1119

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-46010	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C16611.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/27/2011 2221			Final Weight/Volume:	5 mL
Prep Date:	12/27/2011 2221				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	83		66 - 137
4-Bromofluorobenzene (Surr)	93		73 - 120
Toluene-d8 (Surr)	94		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-24**

Lab Sample ID: 280-23869-5

Date Sampled: 12/15/2011 1119

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method: 8260B

Analysis Batch: 480-46010

Instrument ID: HP5973C

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: C16611.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Analysis Date: 12/27/2011 2221

Final Weight/Volume: 5 mL

Prep Date: 12/27/2011 2221

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

## Analytical Data

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-32**

Lab Sample ID: 280-23869-6

Date Sampled: 12/15/2011 1219

Client Matrix: Water

Date Received: 12/16/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B	Analysis Batch: 480-46010	Instrument ID: HP5973C	
Prep Method: 5030B	Prep Batch: N/A	Lab File ID: C16612.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/27/2011 2246		Final Weight/Volume: 5 mL	
Prep Date: 12/27/2011 2246			

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND	*	0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

## Analytical Data

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID:** MW-32

Lab Sample ID: 280-23869-6

Date Sampled: 12/15/2011 1219

Client Matrix: Water

Date Received: 12/16/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-46010	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C16612.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/27/2011 2246			Final Weight/Volume:	5 mL
Prep Date:	12/27/2011 2246				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-32**

Lab Sample ID: 280-23869-6

Date Sampled: 12/15/2011 1219

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-46010	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C16612.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/27/2011 2246			Final Weight/Volume:	5 mL
Prep Date:	12/27/2011 2246				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	80		66 - 137
4-Bromofluorobenzene (Surr)	94		73 - 120
Toluene-d8 (Surr)	94		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-32**

Lab Sample ID: 280-23869-6

Date Sampled: 12/15/2011 1219

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-46010	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C16612.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/27/2011 2246			Final Weight/Volume:	5 mL
Prep Date:	12/27/2011 2246				

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

## Analytical Data

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID:** TRIP BLANK

Lab Sample ID: 280-23869-7TB

Date Sampled: 12/15/2011 0800

Client Matrix: Water

Date Received: 12/16/2011 0930

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-46174	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T4136.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/28/2011 1414			Final Weight/Volume:	5 mL
Prep Date:	12/28/2011 1414				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	50		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0
Chloroethane	ND		0.32	1.0

# Analytical Data

Client: Waste Management

Job Number: 280-23869-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 280-23869-7TB

Date Sampled: 12/15/2011 0800

Client Matrix: Water

Date Received: 12/16/2011 0930

## 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-46174	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T4136.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/28/2011 1414			Final Weight/Volume:	5 mL
Prep Date:	12/28/2011 1414				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	0.93	J	0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0



**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 280-23869-7TB

Date Sampled: 12/15/2011 0800

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-46174	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T4136.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/28/2011 1414			Final Weight/Volume:	5 mL
Prep Date:	12/28/2011 1414				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	93		66 - 137
4-Bromofluorobenzene (Surr)	84		73 - 120
Toluene-d8 (Surr)	90		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 280-23869-7TB

Date Sampled: 12/15/2011 0800

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-46174	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T4136.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/28/2011 1414			Final Weight/Volume:	5 mL
Prep Date:	12/28/2011 1414				

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-43**

Lab Sample ID: 280-23869-1

Date Sampled: 12/15/2011 0800

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-45206	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3718.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/20/2011 1133			Final Weight/Volume:	25 mL
Prep Date:	12/20/2011 1133				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.0040	0.020

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-42**

Lab Sample ID: 280-23869-2

Date Sampled: 12/15/2011 0837

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-45206	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3719.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/20/2011 1157			Final Weight/Volume:	25 mL
Prep Date:	12/20/2011 1157				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.048		0.0040	0.020

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-20**

Lab Sample ID: 280-23869-3

Date Sampled: 12/15/2011 0917

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-45206	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3720.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/20/2011 1221			Final Weight/Volume:	25 mL
Prep Date:	12/20/2011 1221				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.058		0.0040	0.020

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-39**

Lab Sample ID: 280-23869-4

Date Sampled: 12/15/2011 1017

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-45206	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3721.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/20/2011 1246			Final Weight/Volume:	25 mL
Prep Date:	12/20/2011 1246				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.0040	0.020

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-24**

Lab Sample ID: 280-23869-5

Date Sampled: 12/15/2011 1119

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-45206	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3722.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/20/2011 1310			Final Weight/Volume:	25 mL
Prep Date:	12/20/2011 1310				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.0077	J	0.0040	0.020

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID:** MW-32

Lab Sample ID: 280-23869-6

Date Sampled: 12/15/2011 1219

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-45206	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3723.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/20/2011 1334			Final Weight/Volume:	25 mL
Prep Date:	12/20/2011 1334				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.38		0.0040	0.020



**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 280-23869-7TB

Date Sampled: 12/15/2011 0800

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-45206	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J3724.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/20/2011 1358			Final Weight/Volume:	25 mL
Prep Date:	12/20/2011 1358				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.0040	0.020

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-43**

Lab Sample ID: 280-23869-1

Date Sampled: 12/15/2011 0800

Client Matrix: Water

Date Received: 12/16/2011 0930

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-100646	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-100340	Lab File ID:	25A5121911.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 0036			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 1400				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Dissolved	4.6		0.035	0.040
Iron, Dissolved	0.60		0.022	0.060
Magnesium, Dissolved	1.8		0.011	0.050
Potassium, Dissolved	0.70	J	0.24	1.0
Sodium, Dissolved	2.9		0.092	1.0

Analysis Method:	6010B	Analysis Batch:	280-101542	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-100340	Lab File ID:	25A122711.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/27/2011 1435			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 1400				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Cobalt, Dissolved	ND		0.0012	0.0030

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-100900	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-100342	Lab File ID:	048SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 2023			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 1400				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Antimony, Dissolved	ND		0.00020	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	ND		0.000040	0.00020
Chromium, Dissolved	ND		0.00050	0.0030
Copper, Dissolved	ND		0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	0.37		0.00031	0.0010
Nickel, Dissolved	0.00037	J	0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	0.000042	J	0.000033	0.0010
Vanadium, Dissolved	0.00065	J	0.00033	0.0020
Zinc, Dissolved	0.0024	J	0.0020	0.0050

Analysis Method:	6020	Analysis Batch:	280-101247	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-100981	Lab File ID:	170SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2011 0318			Final Weight/Volume:	50 mL
Prep Date:	12/22/2011 1245				

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

Client Sample ID: MW-43

Lab Sample ID: 280-23869-1

Client Matrix: Water

Date Sampled: 12/15/2011 0800

Date Received: 12/16/2011 0930

---

**6020 Metals (ICP/MS)-Dissolved**

Analyte	Result (mg/L)	Qualifier	MDL	RL
Barium, Dissolved	0.0053		0.00029	0.0010

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-42**

Lab Sample ID: 280-23869-2

Date Sampled: 12/15/2011 0837

Client Matrix: Water

Date Received: 12/16/2011 0930

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-100646	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-100340	Lab File ID:	25A5121911.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 0038			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 1400				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Dissolved	38		0.035	0.040
Cobalt, Dissolved	0.0031		0.0012	0.0030
Iron, Dissolved	25		0.022	0.060
Magnesium, Dissolved	16		0.011	0.050
Potassium, Dissolved	6.5		0.24	1.0
Sodium, Dissolved	22		0.092	1.0

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-100900	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-100342	Lab File ID:	049SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 2026			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 1400				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Antimony, Dissolved	ND		0.00020	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	ND		0.000040	0.00020
Chromium, Dissolved	0.00059	J	0.00050	0.0030
Copper, Dissolved	ND		0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	5.4		0.00031	0.0010
Nickel, Dissolved	0.0019	J	0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	ND		0.000033	0.0010
Vanadium, Dissolved	0.0018	J	0.00033	0.0020
Zinc, Dissolved	0.0026	J	0.0020	0.0050

Analysis Method:	6020	Analysis Batch:	280-101247	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-100981	Lab File ID:	171SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2011 0321			Final Weight/Volume:	50 mL
Prep Date:	12/22/2011 1245				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Barium, Dissolved	0.12		0.00029	0.0010

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-20**

Lab Sample ID: 280-23869-3

Date Sampled: 12/15/2011 0917

Client Matrix: Water

Date Received: 12/16/2011 0930

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-100646	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-100340	Lab File ID:	25A5121911.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 0040			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 1400				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Dissolved	31		0.035	0.040
Cobalt, Dissolved	ND		0.0012	0.0030
Iron, Dissolved	ND		0.022	0.060
Magnesium, Dissolved	17		0.011	0.050
Potassium, Dissolved	3.6		0.24	1.0
Sodium, Dissolved	11		0.092	1.0

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-100900	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-100342	Lab File ID:	050SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 2029			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 1400				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Antimony, Dissolved	ND		0.00020	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	ND		0.000040	0.00020
Chromium, Dissolved	ND		0.00050	0.0030
Copper, Dissolved	0.00059	J	0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	0.039		0.00031	0.0010
Nickel, Dissolved	0.0021	J	0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	ND		0.000033	0.0010
Vanadium, Dissolved	0.0019	J	0.00033	0.0020
Zinc, Dissolved	0.0022	J	0.0020	0.0050

Analysis Method:	6020	Analysis Batch:	280-101247	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-100981	Lab File ID:	172SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2011 0324			Final Weight/Volume:	50 mL
Prep Date:	12/22/2011 1245				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Barium, Dissolved	0.012		0.00029	0.0010

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-39**

Lab Sample ID: 280-23869-4

Date Sampled: 12/15/2011 1017

Client Matrix: Water

Date Received: 12/16/2011 0930

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-100646	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-100340	Lab File ID:	25A5121911.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 0043			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 1400				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Dissolved	11		0.035	0.040
Cobalt, Dissolved	0.0052		0.0012	0.0030
Iron, Dissolved	16		0.022	0.060
Magnesium, Dissolved	6.1		0.011	0.050
Potassium, Dissolved	0.33	J	0.24	1.0
Sodium, Dissolved	7.0		0.092	1.0

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-100900	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-100342	Lab File ID:	051SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 2032			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 1400				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Antimony, Dissolved	ND		0.00020	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	ND		0.000040	0.00020
Chromium, Dissolved	ND		0.00050	0.0030
Copper, Dissolved	ND		0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	0.41		0.00031	0.0010
Nickel, Dissolved	0.0027	J	0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	ND		0.000033	0.0010
Vanadium, Dissolved	0.00056	J	0.00033	0.0020
Zinc, Dissolved	0.0023	J	0.0020	0.0050

Analysis Method:	6020	Analysis Batch:	280-101247	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-100981	Lab File ID:	173SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2011 0327			Final Weight/Volume:	50 mL
Prep Date:	12/22/2011 1245				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Barium, Dissolved	0.012		0.00029	0.0010

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-24**

Lab Sample ID: 280-23869-5

Date Sampled: 12/15/2011 1119

Client Matrix: Water

Date Received: 12/16/2011 0930

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-100646	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-100340	Lab File ID:	25A5121911.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 0045			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 1400				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Dissolved	14		0.035	0.040
Cobalt, Dissolved	0.0014	J	0.0012	0.0030
Iron, Dissolved	0.065		0.022	0.060
Magnesium, Dissolved	8.1		0.011	0.050
Potassium, Dissolved	0.75	J	0.24	1.0
Sodium, Dissolved	5.2		0.092	1.0

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-100900	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-100342	Lab File ID:	052SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 2035			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 1400				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Antimony, Dissolved	ND		0.00020	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	ND		0.000040	0.00020
Chromium, Dissolved	ND		0.00050	0.0030
Copper, Dissolved	ND		0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	1.7		0.00031	0.0010
Nickel, Dissolved	0.0026	J	0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	ND		0.000033	0.0010
Vanadium, Dissolved	0.0011	J	0.00033	0.0020
Zinc, Dissolved	ND		0.0020	0.0050

Analysis Method:	6020	Analysis Batch:	280-101247	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-100981	Lab File ID:	174SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2011 0330			Final Weight/Volume:	50 mL
Prep Date:	12/22/2011 1245				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Barium, Dissolved	0.0032		0.00029	0.0010

**Analytical Data**

Client: Waste Management

Job Number: 280-23869-1

**Client Sample ID: MW-32**

Lab Sample ID: 280-23869-6

Date Sampled: 12/15/2011 1219

Client Matrix: Water

Date Received: 12/16/2011 0930

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-100646	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-100340	Lab File ID:	25A5121911.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 0048			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 1400				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Dissolved	25		0.035	0.040
Cobalt, Dissolved	ND		0.0012	0.0030
Iron, Dissolved	0.62		0.022	0.060
Magnesium, Dissolved	12		0.011	0.050
Potassium, Dissolved	1.0		0.24	1.0
Sodium, Dissolved	15		0.092	1.0

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-100900	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-100342	Lab File ID:	053SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 2038			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 1400				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Antimony, Dissolved	ND		0.00020	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	ND		0.000040	0.00020
Chromium, Dissolved	ND		0.00050	0.0030
Copper, Dissolved	ND		0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	2.2		0.00031	0.0010
Nickel, Dissolved	0.0012	J	0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	ND		0.000033	0.0010
Vanadium, Dissolved	ND		0.00033	0.0020
Zinc, Dissolved	0.0043	J	0.0020	0.0050

Analysis Method:	6020	Analysis Batch:	280-101247	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-100981	Lab File ID:	177AREF.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2011 0339			Final Weight/Volume:	50 mL
Prep Date:	12/22/2011 1245				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Barium, Dissolved	0.0048		0.00029	0.0010



Client: Waste Management

Job Number: 280-23869-1

General Chemistry

Client Sample ID: MW-43

Lab Sample ID: 280-23869-1

Date Sampled: 12/15/2011 0800

Client Matrix: Water

Date Received: 12/16/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	2.0		mg/L	0.23	1.0	1.0	300.0
	Analysis Batch: 280-100874	Analysis Date: 12/20/2011 1903					
Ammonia (as N)	0.12		mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-101025	Analysis Date: 12/21/2011 1247					
Nitrate as N	0.79		mg/L	0.019	0.050	1.0	353.2
	Analysis Batch: 280-101463	Analysis Date: 12/27/2011 1028					
Chloride	2.8		mg/L	1.0	1.0	1.0	9251
	Analysis Batch: 280-100757	Analysis Date: 12/20/2011 1056					
Alkalinity, Total (As CaCO3)	22	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067	Analysis Date: 12/21/2011 1704					
Alkalinity, Bicarbonate (As CaCO3)	22	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067	Analysis Date: 12/21/2011 1704					
Alkalinity, Carbonate (As CaCO3)	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067	Analysis Date: 12/21/2011 1704					
Total Dissolved Solids (TDS)	45		mg/L	4.7	5.0	1.0	SM 2540C
	Analysis Batch: 280-100854	Analysis Date: 12/21/2011 0640					
Total Organic Carbon - Average	1.3		mg/L	0.16	1.0	1.0	SM 5310B
	Analysis Batch: 280-100415	Analysis Date: 12/17/2011 0241					

Client: Waste Management

Job Number: 280-23869-1

General Chemistry

Client Sample ID: MW-42

Lab Sample ID: 280-23869-2

Date Sampled: 12/15/2011 0837

Client Matrix: Water

Date Received: 12/16/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	17		mg/L	0.23	1.0	1.0	300.0
	Analysis Batch: 280-100874		Analysis Date: 12/20/2011 2012				
Ammonia (as N)	3.6		mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-101025		Analysis Date: 12/21/2011 1248				
Nitrate as N	ND		mg/L	0.019	0.050	1.0	353.2
	Analysis Batch: 280-101463		Analysis Date: 12/27/2011 1028				
Chloride	22		mg/L	1.0	1.0	1.0	9251
	Analysis Batch: 280-100757		Analysis Date: 12/20/2011 1058				
Alkalinity, Total (As CaCO3)	230	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067		Analysis Date: 12/21/2011 1711				
Alkalinity, Bicarbonate (As CaCO3)	230	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067		Analysis Date: 12/21/2011 1711				
Alkalinity, Carbonate (As CaCO3)	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067		Analysis Date: 12/21/2011 1711				
Total Dissolved Solids (TDS)	270		mg/L	4.7	5.0	1.0	SM 2540C
	Analysis Batch: 280-100858		Analysis Date: 12/21/2011 0656				
Total Organic Carbon - Average	7.1		mg/L	0.16	1.0	1.0	SM 5310B
	Analysis Batch: 280-100415		Analysis Date: 12/17/2011 0258				

Client: Waste Management

Job Number: 280-23869-1

General Chemistry

Client Sample ID: MW-20

Lab Sample ID: 280-23869-3

Date Sampled: 12/15/2011 0917

Client Matrix: Water

Date Received: 12/16/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	13		mg/L	0.23	1.0	1.0	300.0
	Analysis Batch: 280-100874		Analysis Date: 12/20/2011 2030				
Ammonia (as N)	0.039		mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-101025		Analysis Date: 12/21/2011 1250				
Nitrate as N	3.8		mg/L	0.019	0.050	1.0	353.2
	Analysis Batch: 280-101463		Analysis Date: 12/27/2011 1028				
Chloride	15		mg/L	1.0	1.0	1.0	9251
	Analysis Batch: 280-100757		Analysis Date: 12/20/2011 1059				
Alkalinity, Total (As CaCO3)	150	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067		Analysis Date: 12/21/2011 1719				
Alkalinity, Bicarbonate (As CaCO3)	150	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067		Analysis Date: 12/21/2011 1719				
Alkalinity, Carbonate (As CaCO3)	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101067		Analysis Date: 12/21/2011 1719				
Total Dissolved Solids (TDS)	220		mg/L	4.7	5.0	1.0	SM 2540C
	Analysis Batch: 280-100858		Analysis Date: 12/21/2011 0656				
Total Organic Carbon - Average	0.76	J	mg/L	0.16	1.0	1.0	SM 5310B
	Analysis Batch: 280-100415		Analysis Date: 12/17/2011 0409				

Client: Waste Management

Job Number: 280-23869-1

General Chemistry

Client Sample ID: MW-39

Lab Sample ID: 280-23869-4

Date Sampled: 12/15/2011 1017

Client Matrix: Water

Date Received: 12/16/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	0.66	J	mg/L	0.23	1.0	1.0	300.0
	Analysis Batch: 280-100874	Analysis Date: 12/20/2011 2047					
Ammonia (as N)	0.25		mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-101025	Analysis Date: 12/21/2011 1251					
Nitrate as N	0.15		mg/L	0.019	0.050	1.0	353.2
	Analysis Batch: 280-101463	Analysis Date: 12/27/2011 1028					
Chloride	3.9		mg/L	1.0	1.0	1.0	9251
	Analysis Batch: 280-100757	Analysis Date: 12/20/2011 1100					
Alkalinity, Total (As CaCO3)	88	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101151	Analysis Date: 12/22/2011 0915					
Alkalinity, Bicarbonate (As CaCO3)	88		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101151	Analysis Date: 12/22/2011 0915					
Alkalinity, Carbonate (As CaCO3)	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101151	Analysis Date: 12/22/2011 0915					
Total Dissolved Solids (TDS)	100		mg/L	4.7	5.0	1.0	SM 2540C
	Analysis Batch: 280-100858	Analysis Date: 12/21/2011 0656					
Total Organic Carbon - Average	1.8		mg/L	0.16	1.0	1.0	SM 5310B
	Analysis Batch: 280-100415	Analysis Date: 12/17/2011 0538					

Client: Waste Management

Job Number: 280-23869-1

General Chemistry

Client Sample ID: MW-24

Lab Sample ID: 280-23869-5

Date Sampled: 12/15/2011 1119

Client Matrix: Water

Date Received: 12/16/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	4.4		mg/L	0.23	1.0	1.0	300.0
	Analysis Batch: 280-100874		Analysis Date: 12/20/2011 2104				
Ammonia (as N)	0.037		mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-101025		Analysis Date: 12/21/2011 1253				
Nitrate as N	0.021	J	mg/L	0.019	0.050	1.0	353.2
	Analysis Batch: 280-101463		Analysis Date: 12/27/2011 1028				
Chloride	4.4		mg/L	1.0	1.0	1.0	9251
	Analysis Batch: 280-100757		Analysis Date: 12/20/2011 1101				
Alkalinity, Total (As CaCO3)	87	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101151		Analysis Date: 12/22/2011 0927				
Alkalinity, Bicarbonate (As CaCO3)	87		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101151		Analysis Date: 12/22/2011 0927				
Alkalinity, Carbonate (As CaCO3)	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101151		Analysis Date: 12/22/2011 0927				
Total Dissolved Solids (TDS)	110		mg/L	4.7	5.0	1.0	SM 2540C
	Analysis Batch: 280-100858		Analysis Date: 12/21/2011 0656				
Total Organic Carbon - Average	0.35	J	mg/L	0.16	1.0	1.0	SM 5310B
	Analysis Batch: 280-100415		Analysis Date: 12/17/2011 0557				

Client: Waste Management

Job Number: 280-23869-1

General Chemistry

Client Sample ID: MW-32

Lab Sample ID: 280-23869-6

Date Sampled: 12/15/2011 1219

Client Matrix: Water

Date Received: 12/16/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	16		mg/L	0.23	1.0	1.0	300.0
	Analysis Batch: 280-100874		Analysis Date: 12/20/2011 2121				
Ammonia (as N)	0.047		mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-101025		Analysis Date: 12/21/2011 1254				
Nitrate as N	ND		mg/L	0.019	0.050	1.0	353.2
	Analysis Batch: 280-101463		Analysis Date: 12/27/2011 1028				
Chloride	11		mg/L	1.0	1.0	1.0	9251
	Analysis Batch: 280-100757		Analysis Date: 12/20/2011 1102				
Alkalinity, Total (As CaCO3)	130	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101151		Analysis Date: 12/22/2011 0935				
Alkalinity, Bicarbonate (As CaCO3)	130		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101151		Analysis Date: 12/22/2011 0935				
Alkalinity, Carbonate (As CaCO3)	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101151		Analysis Date: 12/22/2011 0935				
Total Dissolved Solids (TDS)	200		mg/L	4.7	5.0	1.0	SM 2540C
	Analysis Batch: 280-100858		Analysis Date: 12/21/2011 0656				
Total Organic Carbon - Average	1.1		mg/L	0.16	1.0	1.0	SM 5310B
	Analysis Batch: 280-100415		Analysis Date: 12/17/2011 0616				

Client: Waste Management

Job Number: 280-23869-1

Field Service / Mobile Lab

Client Sample ID: MW-43

Lab Sample ID: 280-23869-1

Date Sampled: 12/15/2011 0800

Client Matrix: Water

Date Received: 12/16/2011 0930

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Depth to water	25.43		ft	1.0	Field Sampling	280-101454	12/15/2011 0800
Specific Conductivity	63.0		umhos/cm	1.0	Field Sampling	280-101454	12/15/2011 0800
Dissolved Oxygen	1.46		mg/L	1.0	Field Sampling	280-101454	12/15/2011 0800
eH	90.0		millivolts	1.0	Field Sampling	280-101454	12/15/2011 0800
Turbidity	3.51		NTU	1.0	Field Sampling	280-101454	12/15/2011 0800
Temperature	10.11		Degrees C	1.0	Field Sampling	280-101454	12/15/2011 0800
pH	5.77		SU	1.0	Field Sampling	280-101454	12/15/2011 0800

Client: Waste Management

Job Number: 280-23869-1

Field Service / Mobile Lab

Client Sample ID: MW-42

Lab Sample ID: 280-23869-2

Date Sampled: 12/15/2011 0837

Client Matrix: Water

Date Received: 12/16/2011 0930

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Depth to water	28.30		ft	1.0	Field Sampling	280-101454	12/15/2011 0837
Specific Conductivity	572		umhos/cm	1.0	Field Sampling	280-101454	12/15/2011 0837
Dissolved Oxygen	0.13		mg/L	1.0	Field Sampling	280-101454	12/15/2011 0837
eH	-78.0		millivolts	1.0	Field Sampling	280-101454	12/15/2011 0837
Turbidity	1.57		NTU	1.0	Field Sampling	280-101454	12/15/2011 0837
Temperature	12.16		Degrees C	1.0	Field Sampling	280-101454	12/15/2011 0837
pH	6.42		SU	1.0	Field Sampling	280-101454	12/15/2011 0837



Client: Waste Management

Job Number: 280-23869-1

Field Service / Mobile Lab

Client Sample ID: MW-20

Lab Sample ID: 280-23869-3

Client Matrix: Water

Date Sampled: 12/15/2011 0917

Date Received: 12/16/2011 0930

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Depth to water	36.68		ft	1.0	Field Sampling	280-101454	12/15/2011 0917
Specific Conductivity	370		umhos/cm	1.0	Field Sampling	280-101454	12/15/2011 0917
Dissolved Oxygen	0.34		mg/L	1.0	Field Sampling	280-101454	12/15/2011 0917
eH	103.0		millivolts	1.0	Field Sampling	280-101454	12/15/2011 0917
Turbidity	0.37		NTU	1.0	Field Sampling	280-101454	12/15/2011 0917
Temperature	14.92		Degrees C	1.0	Field Sampling	280-101454	12/15/2011 0917
pH	6.49		SU	1.0	Field Sampling	280-101454	12/15/2011 0917

Client: Waste Management

Job Number: 280-23869-1

Field Service / Mobile Lab

Client Sample ID: MW-39

Lab Sample ID: 280-23869-4

Client Matrix: Water

Date Sampled: 12/15/2011 1017

Date Received: 12/16/2011 0930

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed	Date Prepared
Depth to water	19.63		ft	1.0	Field Sampling	280-101454	12/15/2011	1017
Specific Conductivity	168		umhos/cm	1.0	Field Sampling	280-101454	12/15/2011	1017
Dissolved Oxygen	0.30		mg/L	1.0	Field Sampling	280-101454	12/15/2011	1017
eH	32.0		millivolts	1.0	Field Sampling	280-101454	12/15/2011	1017
Turbidity	2.92		NTU	1.0	Field Sampling	280-101454	12/15/2011	1017
Temperature	10.93		Degrees C	1.0	Field Sampling	280-101454	12/15/2011	1017
pH	5.86		SU	1.0	Field Sampling	280-101454	12/15/2011	1017

Client: Waste Management

Job Number: 280-23869-1

Field Service / Mobile Lab

Client Sample ID: MW-24

Lab Sample ID: 280-23869-5

Date Sampled: 12/15/2011 1119

Client Matrix: Water

Date Received: 12/16/2011 0930

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed	Date Prepared
Depth to water	34.11		ft	1.0	Field Sampling	280-101454	12/15/2011	1119
Specific Conductivity	171.0		umhos/cm	1.0	Field Sampling	280-101454	12/15/2011	1119
Dissolved Oxygen	0.43		mg/L	1.0	Field Sampling	280-101454	12/15/2011	1119
eH	120.0		millivolts	1.0	Field Sampling	280-101454	12/15/2011	1119
Turbidity	14.30		NTU	1.0	Field Sampling	280-101454	12/15/2011	1119
Temperature	11.83		Degrees C	1.0	Field Sampling	280-101454	12/15/2011	1119
pH	6.27		SU	1.0	Field Sampling	280-101454	12/15/2011	1119

Client: Waste Management

Job Number: 280-23869-1

Field Service / Mobile Lab

Client Sample ID: MW-32

Lab Sample ID: 280-23869-6

Client Matrix: Water

Date Sampled: 12/15/2011 1219

Date Received: 12/16/2011 0930

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed	Date Prepared
Depth to water	1.75		ft	1.0	Field Sampling	280-101454	12/15/2011	1219
Specific Conductivity	295		umhos/cm	1.0	Field Sampling	280-101454	12/15/2011	1219
Dissolved Oxygen	0.13		mg/L	1.0	Field Sampling	280-101454	12/15/2011	1219
eH	-10.0		millivolts	1.0	Field Sampling	280-101454	12/15/2011	1219
Turbidity	1.57		NTU	1.0	Field Sampling	280-101454	12/15/2011	1219
Temperature	12.12		Degrees C	1.0	Field Sampling	280-101454	12/15/2011	1219
pH	6.73		SU	1.0	Field Sampling	280-101454	12/15/2011	1219

## DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-23869-1

<b>Lab Section</b>	<b>Qualifier</b>	<b>Description</b>
GC/MS VOA		
	*	LCS or LCSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	F	MS or MSD exceeds the control limits
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	B	Compound was found in the blank and sample.
	F	MS or MSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

# QUALITY CONTROL RESULTS

## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Analysis Batch:480-45206</b>					
LCS 480-45206/2	Lab Control Sample	T	Water	8260B SIM	
MB 480-45206/3	Method Blank	T	Water	8260B SIM	
280-23869-1	MW-43	T	Water	8260B SIM	
280-23869-2	MW-42	T	Water	8260B SIM	
280-23869-3	MW-20	T	Water	8260B SIM	
280-23869-4	MW-39	T	Water	8260B SIM	
280-23869-5	MW-24	T	Water	8260B SIM	
280-23869-6	MW-32	T	Water	8260B SIM	
280-23869-7TB	TRIP BLANK	T	Water	8260B SIM	
<b>Analysis Batch:480-46010</b>					
LCS 480-46010/4	Lab Control Sample	T	Water	8260B	
MB 480-46010/5	Method Blank	T	Water	8260B	
280-23869-5	MW-24	T	Water	8260B	
280-23869-6	MW-32	T	Water	8260B	
<b>Analysis Batch:480-46012</b>					
LCS 480-46012/4	Lab Control Sample	T	Water	8260B	
MB 480-46012/5	Method Blank	T	Water	8260B	
280-23869-1	MW-43	T	Water	8260B	
280-23869-2	MW-42	T	Water	8260B	
280-23869-3	MW-20	T	Water	8260B	
<b>Analysis Batch:480-46174</b>					
LCS 480-46174/4	Lab Control Sample	T	Water	8260B	
MB 480-46174/5	Method Blank	T	Water	8260B	
480-14152-H-7 MS	Matrix Spike	T	Water	8260B	
480-14152-H-7 MSD	Matrix Spike Duplicate	T	Water	8260B	
280-23869-4	MW-39	T	Water	8260B	
280-23869-7TB	TRIP BLANK	T	Water	8260B	

**Report Basis**

T = Total

## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
<b>Metals</b>					
<b>Prep Batch: 280-100340</b>					
LCS 280-100340/2-A	Lab Control Sample	R	Water	3005A	
MB 280-100340/1-A	Method Blank	R	Water	3005A	
280-23858-A-47-B MS	Matrix Spike	D	Water	3005A	
280-23858-A-47-C MSD	Matrix Spike Duplicate	D	Water	3005A	
280-23869-1	MW-43	D	Water	3005A	
280-23869-2	MW-42	D	Water	3005A	
280-23869-3	MW-20	D	Water	3005A	
280-23869-4	MW-39	D	Water	3005A	
280-23869-5	MW-24	D	Water	3005A	
280-23869-6	MW-32	D	Water	3005A	
<b>Prep Batch: 280-100342</b>					
LCS 280-100342/2-A	Lab Control Sample	R	Water	3005A	
MB 280-100342/1-A	Method Blank	R	Water	3005A	
280-23858-A-47-E MS	Matrix Spike	D	Water	3005A	
280-23858-A-47-F MSD	Matrix Spike Duplicate	D	Water	3005A	
280-23869-1	MW-43	D	Water	3005A	
280-23869-2	MW-42	D	Water	3005A	
280-23869-3	MW-20	D	Water	3005A	
280-23869-4	MW-39	D	Water	3005A	
280-23869-5	MW-24	D	Water	3005A	
280-23869-6	MW-32	D	Water	3005A	
<b>Analysis Batch:280-100646</b>					
LCS 280-100340/2-A	Lab Control Sample	R	Water	6010B	280-100340
MB 280-100340/1-A	Method Blank	R	Water	6010B	280-100340
280-23858-A-47-B MS	Matrix Spike	D	Water	6010B	280-100340
280-23858-A-47-C MSD	Matrix Spike Duplicate	D	Water	6010B	280-100340
280-23869-1	MW-43	D	Water	6010B	280-100340
280-23869-2	MW-42	D	Water	6010B	280-100340
280-23869-3	MW-20	D	Water	6010B	280-100340
280-23869-4	MW-39	D	Water	6010B	280-100340
280-23869-5	MW-24	D	Water	6010B	280-100340
280-23869-6	MW-32	D	Water	6010B	280-100340



## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
<b>Metals</b>					
<b>Analysis Batch:280-100900</b>					
LCS 280-100342/2-A	Lab Control Sample	R	Water	6020	280-100342
MB 280-100342/1-A	Method Blank	R	Water	6020	280-100342
280-23858-A-47-E MS	Matrix Spike	D	Water	6020	280-100342
280-23858-A-47-F MSD	Matrix Spike Duplicate	D	Water	6020	280-100342
280-23869-1	MW-43	D	Water	6020	280-100342
280-23869-2	MW-42	D	Water	6020	280-100342
280-23869-3	MW-20	D	Water	6020	280-100342
280-23869-4	MW-39	D	Water	6020	280-100342
280-23869-5	MW-24	D	Water	6020	280-100342
280-23869-6	MW-32	D	Water	6020	280-100342
<b>Prep Batch: 280-100981</b>					
LCS 280-100981/2-A	Lab Control Sample	R	Water	3005A	
MB 280-100981/1-A	Method Blank	R	Water	3005A	
280-23869-1	MW-43	D	Water	3005A	
280-23869-2	MW-42	D	Water	3005A	
280-23869-3	MW-20	D	Water	3005A	
280-23869-4	MW-39	D	Water	3005A	
280-23869-5	MW-24	D	Water	3005A	
280-23869-6	MW-32	D	Water	3005A	
280-23869-6MS	Matrix Spike	D	Water	3005A	
280-23869-6MSD	Matrix Spike Duplicate	D	Water	3005A	
<b>Analysis Batch:280-101247</b>					
LCS 280-100981/2-A	Lab Control Sample	R	Water	6020	280-100981
MB 280-100981/1-A	Method Blank	R	Water	6020	280-100981
280-23869-1	MW-43	D	Water	6020	280-100981
280-23869-2	MW-42	D	Water	6020	280-100981
280-23869-3	MW-20	D	Water	6020	280-100981
280-23869-4	MW-39	D	Water	6020	280-100981
280-23869-5	MW-24	D	Water	6020	280-100981
280-23869-6	MW-32	D	Water	6020	280-100981
280-23869-6MS	Matrix Spike	D	Water	6020	280-100981
280-23869-6MSD	Matrix Spike Duplicate	D	Water	6020	280-100981
<b>Analysis Batch:280-101542</b>					
280-23869-1	MW-43	D	Water	6010B	280-100340

**Report Basis**

D = Dissolved

R = Total Recoverable

## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

### QC Association Summary

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Report Basis</u>	<u>Client Matrix</u>	<u>Method</u>	<u>Prep Batch</u>
<b>Field Service / Mobile Lab</b>					
<b>Analysis Batch:280-101454</b>					
280-23869-1	MW-43	T	Water	Field Sampling	
280-23869-2	MW-42	T	Water	Field Sampling	
280-23869-3	MW-20	T	Water	Field Sampling	
280-23869-4	MW-39	T	Water	Field Sampling	
280-23869-5	MW-24	T	Water	Field Sampling	
280-23869-6	MW-32	T	Water	Field Sampling	

#### Report Basis

T = Total

## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-100415</b>					
LCS 280-100415/3	Lab Control Sample	T	Water	SM 5310B	
LCS 280-100415/34	Lab Control Sample	T	Water	SM 5310B	
LCSD 280-100415/35	Lab Control Sample Duplicate	T	Water	SM 5310B	
LCSD 280-100415/4	Lab Control Sample Duplicate	T	Water	SM 5310B	
MB 280-100415/36	Method Blank	T	Water	SM 5310B	
MB 280-100415/5	Method Blank	T	Water	SM 5310B	
280-23838-B-2 MS	Matrix Spike	T	Water	SM 5310B	
280-23838-B-2 MSD	Matrix Spike Duplicate	T	Water	SM 5310B	
280-23869-1	MW-43	T	Water	SM 5310B	
280-23869-2	MW-42	T	Water	SM 5310B	
280-23869-3	MW-20	T	Water	SM 5310B	
280-23869-3MS	Matrix Spike	T	Water	SM 5310B	
280-23869-3MSD	Matrix Spike Duplicate	T	Water	SM 5310B	
280-23869-4	MW-39	T	Water	SM 5310B	
280-23869-5	MW-24	T	Water	SM 5310B	
280-23869-6	MW-32	T	Water	SM 5310B	
<b>Analysis Batch:280-100757</b>					
LCS 280-100757/56	Lab Control Sample	T	Water	9251	
LCSD 280-100757/57	Lab Control Sample Duplicate	T	Water	9251	
MB 280-100757/21	Method Blank	T	Water	9251	
MB 280-100757/58	Method Blank	T	Water	9251	
280-23869-1	MW-43	T	Water	9251	
280-23869-2	MW-42	T	Water	9251	
280-23869-3	MW-20	T	Water	9251	
280-23869-4	MW-39	T	Water	9251	
280-23869-5	MW-24	T	Water	9251	
280-23869-6	MW-32	T	Water	9251	
280-23948-C-2 MS	Matrix Spike	T	Water	9251	
280-23948-C-2 MSD	Matrix Spike Duplicate	T	Water	9251	
<b>Analysis Batch:280-100854</b>					
LCS 280-100854/2	Lab Control Sample	T	Water	SM 2540C	
LCSD 280-100854/3	Lab Control Sample Duplicate	T	Water	SM 2540C	
MB 280-100854/1	Method Blank	T	Water	SM 2540C	
280-23852-B-2 DU	Duplicate	T	Water	SM 2540C	
280-23869-1	MW-43	T	Water	SM 2540C	

## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-100858</b>					
LCS 280-100858/2	Lab Control Sample	T	Water	SM 2540C	
LCSD 280-100858/3	Lab Control Sample Duplicate	T	Water	SM 2540C	
MB 280-100858/1	Method Blank	T	Water	SM 2540C	
280-23869-2	MW-42	T	Water	SM 2540C	
280-23869-2DU	Duplicate	T	Water	SM 2540C	
280-23869-3	MW-20	T	Water	SM 2540C	
280-23869-4	MW-39	T	Water	SM 2540C	
280-23869-5	MW-24	T	Water	SM 2540C	
280-23869-6	MW-32	T	Water	SM 2540C	
<b>Analysis Batch:280-100874</b>					
LCS 280-100874/4	Lab Control Sample	T	Water	300.0	
LCSD 280-100874/5	Lab Control Sample Duplicate	T	Water	300.0	
MB 280-100874/6	Method Blank	T	Water	300.0	
280-23767-A-6 MS	Matrix Spike	T	Water	300.0	
280-23767-A-6 MSD	Matrix Spike Duplicate	T	Water	300.0	
280-23869-1	MW-43	T	Water	300.0	
280-23869-1DU	Duplicate	T	Water	300.0	
280-23869-2	MW-42	T	Water	300.0	
280-23869-3	MW-20	T	Water	300.0	
280-23869-4	MW-39	T	Water	300.0	
280-23869-5	MW-24	T	Water	300.0	
280-23869-6	MW-32	T	Water	300.0	
<b>Analysis Batch:280-101025</b>					
LCS 280-101025/65	Lab Control Sample	T	Water	350.1	
LCSD 280-101025/66	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-101025/64	Method Blank	T	Water	350.1	
280-23838-B-6 MS	Matrix Spike	T	Water	350.1	
280-23838-B-6 MSD	Matrix Spike Duplicate	T	Water	350.1	
280-23869-1	MW-43	T	Water	350.1	
280-23869-2	MW-42	T	Water	350.1	
280-23869-3	MW-20	T	Water	350.1	
280-23869-4	MW-39	T	Water	350.1	
280-23869-5	MW-24	T	Water	350.1	
280-23869-6	MW-32	T	Water	350.1	
<b>Analysis Batch:280-101067</b>					
LCS 280-101067/31	Lab Control Sample	T	Water	SM 2320B	
LCSD 280-101067/32	Lab Control Sample Duplicate	T	Water	SM 2320B	
MB 280-101067/33	Method Blank	T	Water	SM 2320B	
280-23843-A-1 DU	Duplicate	T	Water	SM 2320B	
280-23869-1	MW-43	T	Water	SM 2320B	
280-23869-2	MW-42	T	Water	SM 2320B	
280-23869-3	MW-20	T	Water	SM 2320B	

TestAmerica Denver

## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-101151</b>					
LCS 280-101151/4	Lab Control Sample	T	Water	SM 2320B	
LCSD 280-101151/5	Lab Control Sample Duplicate	T	Water	SM 2320B	
MB 280-101151/6	Method Blank	T	Water	SM 2320B	
280-23869-4	MW-39	T	Water	SM 2320B	
280-23869-4DU	Duplicate	T	Water	SM 2320B	
280-23869-5	MW-24	T	Water	SM 2320B	
280-23869-6	MW-32	T	Water	SM 2320B	
<b>Analysis Batch:280-101463</b>					
MB 280-101463/1	Method Blank	T	Water	353.2	
280-23869-1	MW-43	T	Water	353.2	
280-23869-2	MW-42	T	Water	353.2	
280-23869-3	MW-20	T	Water	353.2	
280-23869-4	MW-39	T	Water	353.2	
280-23869-5	MW-24	T	Water	353.2	
280-23869-6	MW-32	T	Water	353.2	

#### Report Basis

T = Total

Client: Waste Management

Job Number: 280-23869-1

**Surrogate Recovery Report****8260B Volatile Organic Compounds (GC/MS)****Client Matrix: Water**

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec
280-23869-1	MW-43	96	84	89
280-23869-2	MW-42	99	87	91
280-23869-3	MW-20	95	86	92
280-23869-4	MW-39	93	81	85
280-23869-5	MW-24	83	93	94
280-23869-6	MW-32	80	94	94
280-23869-7	TRIP BLANK	93	84	90
MB 480-46010/5		80	95	96
MB 480-46012/5		93	84	92
MB 480-46174/5		94	88	96
LCS 480-46010/4		79	97	95
LCS 480-46012/4		89	88	92
LCS 480-46174/4		90	90	92
480-14152-H-7 MS		92	91	93
480-14152-H-7 MSD		90	89	92

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	66-137
BFB = 4-Bromofluorobenzene (Surr)	73-120
TOL = Toluene-d8 (Surr)	71-126

## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

**Method Blank - Batch: 480-46010**

**Method: 8260B  
Preparation: 5030B**

Lab Sample ID: MB 480-46010/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/27/2011 1325  
 Prep Date: 12/27/2011 1325  
 Leach Date: N/A

Analysis Batch: 480-46010  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973C  
 Lab File ID: C16590.D  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	1.91	J	1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0

## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

**Method Blank - Batch: 480-46010**

**Method: 8260B**

**Preparation: 5030B**

Lab Sample ID: MB 480-46010/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/27/2011 1325  
 Prep Date: 12/27/2011 1325  
 Leach Date: N/A

Analysis Batch: 480-46010  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973C  
 Lab File ID: C16590.D  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0



Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

Method Blank - Batch: 480-46010

Method: 8260B  
Preparation: 5030B

Lab Sample ID:	MB 480-46010/5	Analysis Batch:	480-46010	Instrument ID:	HP5973C
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C16590.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/27/2011 1325	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/27/2011 1325				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	80	66 - 137
4-Bromofluorobenzene (Surr)	95	73 - 120
Toluene-d8 (Surr)	96	71 - 126

Method Blank TICs- Batch: 480-46010

Cas Number	Analyte	RT	Est. Result	Qual
67-72-1	Hexachloroethane TIC	0.00	ND	

## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

**Lab Control Sample - Batch: 480-46010**

**Method: 8260B**

**Preparation: 5030B**

Lab Sample ID: LCS 480-46010/4	Analysis Batch: 480-46010	Instrument ID: HP5973C
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C16589.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/27/2011 1238	Units: ug/L	Final Weight/Volume: 5 mL
Prep Date: 12/27/2011 1238		
Leach Date: N/A		

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethane	25.0	22.5	90	71 - 129	
1,1-Dichloroethene	25.0	23.1	92	65 - 138	
1,2,4-Trimethylbenzene	25.0	23.6	94	76 - 121	
1,2-Dichlorobenzene	25.0	23.8	95	77 - 120	
1,2-Dichloroethane	25.0	22.2	89	75 - 127	
Benzene	25.0	22.0	88	71 - 124	
Chlorobenzene	25.0	22.4	90	72 - 120	
cis-1,2-Dichloroethene	25.0	21.0	84	74 - 124	
Ethylbenzene	25.0	22.3	89	77 - 123	
Methyl tert-butyl ether	25.0	23.3	93	64 - 127	
m-Xylene & p-Xylene	50.0	45.5	91	76 - 122	
o-Xylene	25.0	22.5	90	76 - 122	
Tetrachloroethene	25.0	21.9	88	74 - 122	
Toluene	25.0	23.0	92	70 - 122	
trans-1,2-Dichloroethene	25.0	23.1	92	73 - 127	
Trichloroethene	25.0	21.2	85	74 - 123	
Surrogate		% Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		79		66 - 137	
4-Bromofluorobenzene (Surr)		97		73 - 120	
Toluene-d8 (Surr)		95		71 - 126	

## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

**Method Blank - Batch: 480-46012**

**Method: 8260B  
Preparation: 5030B**

Lab Sample ID: MB 480-46012/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/27/2011 1227  
 Prep Date: 12/27/2011 1227  
 Leach Date: N/A

Analysis Batch: 480-46012  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5975T  
 Lab File ID: T4103.D  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0

## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

**Method Blank - Batch: 480-46012**

**Method: 8260B  
Preparation: 5030B**

Lab Sample ID: MB 480-46012/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/27/2011 1227  
 Prep Date: 12/27/2011 1227  
 Leach Date: N/A

Analysis Batch: 480-46012  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5975T  
 Lab File ID: T4103.D  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Method Blank - Batch: 480-46012**

**Method: 8260B  
Preparation: 5030B**

Lab Sample ID:	MB 480-46012/5	Analysis Batch:	480-46012	Instrument ID:	HP5975T
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	T4103.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/27/2011 1227	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/27/2011 1227				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	93	66 - 137
4-Bromofluorobenzene (Surr)	84	73 - 120
Toluene-d8 (Surr)	92	71 - 126

**Method Blank TICs- Batch: 480-46012**

Cas Number	Analyte	RT	Est. Result	Qual
67-72-1	Hexachloroethane TIC	0.00	ND	

## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

**Lab Control Sample - Batch: 480-46012**

**Method: 8260B**

**Preparation: 5030B**

Lab Sample ID: LCS 480-46012/4	Analysis Batch: 480-46012	Instrument ID: HP5975T
Client Matrix: Water	Prep Batch: N/A	Lab File ID: T4104.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/27/2011 1251	Units: ug/L	Final Weight/Volume: 5 mL
Prep Date: 12/27/2011 1251		
Leach Date: N/A		

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethane	25.0	21.4	86	71 - 129	
1,1-Dichloroethene	25.0	16.7	67	65 - 138	
1,2,4-Trimethylbenzene	25.0	20.6	82	76 - 121	
1,2-Dichlorobenzene	25.0	21.4	86	77 - 120	
1,2-Dichloroethane	25.0	21.0	84	75 - 127	
Benzene	25.0	21.2	85	71 - 124	
Chlorobenzene	25.0	21.8	87	72 - 120	
cis-1,2-Dichloroethene	25.0	20.5	82	74 - 124	
Ethylbenzene	25.0	22.3	89	77 - 123	
Methyl tert-butyl ether	25.0	19.2	77	64 - 127	
m-Xylene & p-Xylene	50.0	48.9	98	76 - 122	
o-Xylene	25.0	23.4	94	76 - 122	
Tetrachloroethene	25.0	21.8	87	74 - 122	
Toluene	25.0	21.7	87	70 - 122	
trans-1,2-Dichloroethene	25.0	20.0	80	73 - 127	
Trichloroethene	25.0	21.0	84	74 - 123	
Surrogate		% Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		89		66 - 137	
4-Bromofluorobenzene (Surr)		88		73 - 120	
Toluene-d8 (Surr)		92		71 - 126	

## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

**Method Blank - Batch: 480-46174**

**Method: 8260B  
Preparation: 5030B**

Lab Sample ID: MB 480-46174/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/28/2011 1321  
 Prep Date: 12/28/2011 1321  
 Leach Date: N/A

Analysis Batch: 480-46174  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5975T  
 Lab File ID: T4134.D  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
1,1,1,2-Tetrachloroethane	ND		0.35	1.0
1,1,1-Trichloroethane	ND		0.82	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.31	1.0
1,1,2-Trichloroethane	ND		0.23	1.0
1,1-Dichloroethane	ND		0.38	1.0
1,1-Dichloroethene	ND		0.29	1.0
1,1-Dichloropropene	ND		0.72	1.0
1,2,3-Trichlorobenzene	ND		0.41	1.0
1,2,3-Trichloropropane	ND		0.89	1.0
1,2,4-Trichlorobenzene	ND		0.41	1.0
1,2,4-Trimethylbenzene	ND		0.75	1.0
1,2-Dibromo-3-Chloropropane	ND		0.39	1.0
1,2-Dibromoethane (EDB)	ND		0.73	1.0
1,2-Dichlorobenzene	ND		0.79	1.0
1,2-Dichloroethane	ND		0.21	1.0
1,2-Dichloroethene, Total	ND		0.70	2.0
1,2-Dichloropropane	ND		0.72	1.0
1,3,5-Trichlorobenzene	ND		0.23	1.0
1,3,5-Trimethylbenzene	ND		0.77	1.0
1,3-Dichlorobenzene	ND		0.78	1.0
1,3-Dichloropropane	ND		0.75	1.0
1,4-Dichlorobenzene	ND		0.84	1.0
1,4-Dioxane	ND		9.3	40
2,2-Dichloropropane	ND		0.40	1.0
2-Butanone (MEK)	ND		1.3	10
2-Chloroethyl vinyl ether	ND		0.96	5.0
o-Chlorotoluene	ND		0.86	1.0
2-Hexanone	ND		1.2	5.0
p-Chlorotoluene	ND		0.84	1.0
4-Methyl-2-pentanone (MIBK)	ND		2.1	5.0
Acetone	ND		3.0	10
Acetonitrile	ND		26	40
Acrolein	ND		18	20
Acrylonitrile	ND		0.83	5.0
Benzene	ND		0.41	1.0
Bromobenzene	ND		0.80	1.0
Bromochloromethane	ND		0.87	1.0
Bromodichloromethane	ND		0.39	1.0
Bromoform	ND		0.26	1.0
Bromomethane	ND		0.69	1.0
Carbon disulfide	ND		0.19	1.0
Carbon tetrachloride	ND		0.27	1.0
Chlorobenzene	ND		0.75	1.0
Chlorodifluoromethane	ND		0.26	1.0

## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

**Method Blank - Batch: 480-46174**

**Method: 8260B**

**Preparation: 5030B**

Lab Sample ID: MB 480-46174/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/28/2011 1321  
 Prep Date: 12/28/2011 1321  
 Leach Date: N/A

Analysis Batch: 480-46174  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5975T  
 Lab File ID: T4134.D  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Chloroethane	ND		0.32	1.0
Chloroform	ND		0.34	1.0
Chloromethane	ND		0.35	1.0
cis-1,2-Dichloroethene	ND		0.81	1.0
cis-1,3-Dichloropropene	ND		0.36	1.0
Cyclohexane	ND		0.18	1.0
Dibromochloromethane	ND		0.32	1.0
Dibromomethane	ND		0.41	1.0
Dichlorodifluoromethane	ND		0.68	1.0
Dichlorofluoromethane	ND		0.34	1.0
Ethyl acetate	ND		0.66	1.0
Ethyl ether	ND		0.72	1.0
Ethyl tert-butyl ether	ND		0.29	1.0
Ethylbenzene	ND		0.74	1.0
Hexachlorobutadiene	ND		0.28	1.0
Hexane	ND		0.40	10
Iodomethane	ND		0.30	1.0
Isobutanol	ND		20	40
Isopropyl ether	ND		0.59	1.0
Isopropylbenzene	ND		0.79	1.0
Methacrylonitrile	ND		0.69	5.0
Methyl acetate	ND		0.50	1.0
Methyl tert-butyl ether	ND		0.16	1.0
Methylcyclohexane	ND		0.16	1.0
Methylene Chloride	ND		0.44	1.0
m-Xylene & p-Xylene	ND		0.66	2.0
Naphthalene	ND		0.43	1.0
Butyl alcohol, n-	ND		8.9	40
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Xylene	ND		0.76	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
Butyl alcohol, tert-	ND		14	20
Tert-amyl methyl ether	ND		0.27	1.0
tert-Butylbenzene	ND		0.81	1.0
Tetrachloroethene	ND		0.36	1.0
Tetrahydrofuran	ND		1.3	5.0
Toluene	ND		0.51	1.0
trans-1,2-Dichloroethene	ND		0.90	1.0
trans-1,3-Dichloropropene	ND		0.37	1.0
trans-1,4-Dichloro-2-butene	ND		2.1	5.0
Trichloroethene	ND		0.46	1.0
Trichlorofluoromethane	ND		0.88	1.0



**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Method Blank - Batch: 480-46174**

**Method: 8260B  
Preparation: 5030B**

Lab Sample ID:	MB 480-46174/5	Analysis Batch:	480-46174	Instrument ID:	HP5975T
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	T4134.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/28/2011 1321	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/28/2011 1321				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Vinyl acetate	ND		0.85	5.0
Vinyl chloride	ND		0.90	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94	66 - 137
4-Bromofluorobenzene (Surr)	88	73 - 120
Toluene-d8 (Surr)	96	71 - 126

**Method Blank TICs- Batch: 480-46174**

Cas Number	Analyte	RT	Est. Result	Qual
67-72-1	Hexachloroethane TIC	0.00	ND	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Lab Control Sample - Batch: 480-46174**

**Method: 8260B  
Preparation: 5030B**

Lab Sample ID:	LCS 480-46174/4	Analysis Batch:	480-46174	Instrument ID:	HP5975T
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	T4133.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/28/2011 1257	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/28/2011 1257				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethane	25.0	22.2	89	71 - 129	
1,1-Dichloroethene	25.0	17.7	71	65 - 138	
1,2,4-Trimethylbenzene	25.0	21.6	86	76 - 121	
1,2-Dichlorobenzene	25.0	22.2	89	77 - 120	
1,2-Dichloroethane	25.0	20.9	84	75 - 127	
Benzene	25.0	22.2	89	71 - 124	
Chlorobenzene	25.0	22.3	89	72 - 120	
cis-1,2-Dichloroethene	25.0	21.6	86	74 - 124	
Ethylbenzene	25.0	23.5	94	77 - 123	
Methyl tert-butyl ether	25.0	19.5	78	64 - 127	
m-Xylene & p-Xylene	50.0	50.0	100	76 - 122	
o-Xylene	25.0	24.0	96	76 - 122	
Tetrachloroethene	25.0	23.0	92	74 - 122	
Toluene	25.0	22.7	91	70 - 122	
trans-1,2-Dichloroethene	25.0	21.5	86	73 - 127	
Trichloroethene	25.0	22.3	89	74 - 123	
Surrogate		% Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		90		66 - 137	
4-Bromofluorobenzene (Surr)		90		73 - 120	
Toluene-d8 (Surr)		92		71 - 126	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-46174**

**Method: 8260B  
Preparation: 5030B**

MS Lab Sample ID:	480-14152-H-7 MS	Analysis Batch:	480-46174	Instrument ID:	HP5975T
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	T4145.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/28/2011 1750			Final Weight/Volume:	5 mL
Prep Date:	12/28/2011 1750				
Leach Date:	N/A				

MSD Lab Sample ID:	480-14152-H-7 MSD	Analysis Batch:	480-46174	Instrument ID:	HP5975T
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	T4146.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/28/2011 1814			Final Weight/Volume:	5 mL
Prep Date:	12/28/2011 1814				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
1,1-Dichloroethane	98	93	71 - 129	5	20		
1,1-Dichloroethene	78	74	65 - 138	6	16		
1,2-Dichlorobenzene	95	93	77 - 120	2	20		
1,2-Dichloroethane	94	90	75 - 127	4	20		
Benzene	100	94	71 - 124	6	13		
Chlorobenzene	100	94	72 - 120	5	25		
cis-1,2-Dichloroethene	94	90	74 - 124	4	15		
Ethylbenzene	103	97	77 - 123	6	15		
m-Xylene & p-Xylene	109	103	76 - 122	6	16		
o-Xylene	104	101	76 - 122	3	16		
Tetrachloroethene	101	95	74 - 122	6	20		
Toluene	102	96	70 - 122	6	15		
trans-1,2-Dichloroethene	98	93	73 - 127	6	20		
Trichloroethene	99	93	74 - 123	3	16		
Surrogate		MS % Rec	MSD % Rec			Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		92	90			66 - 137	
4-Bromofluorobenzene (Surr)		91	89			73 - 120	
Toluene-d8 (Surr)		93	92			71 - 126	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-46174**

**Method: 8260B  
Preparation: 5030B**

MS Lab Sample ID: 480-14152-H-7 MS      Units: ug/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/28/2011 1750  
 Prep Date: 12/28/2011 1750  
 Leach Date: N/A

MSD Lab Sample ID: 480-14152-H-7 MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/28/2011 1814  
 Prep Date: 12/28/2011 1814  
 Leach Date: N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
1,1-Dichloroethane	0.99	J	25.0	25.0	25.6	24.3
1,1-Dichloroethene	0.52	J	25.0	25.0	20.1	19.0
1,2-Dichlorobenzene	1.4		25.0	25.0	25.1	24.6
1,2-Dichloroethane	ND		25.0	25.0	23.5	22.5
Benzene	0.51	J	25.0	25.0	25.6	24.1
Chlorobenzene	5.6		25.0	25.0	30.6	29.0
cis-1,2-Dichloroethene	3.2		25.0	25.0	26.8	25.8
Ethylbenzene	ND		25.0	25.0	25.8	24.3
m-Xylene & p-Xylene	ND		50.0	50.0	54.7	51.3
o-Xylene	ND		25.0	25.0	26.0	25.3
Tetrachloroethene	ND		25.0	25.0	25.2	23.8
Toluene	ND		25.0	25.0	25.6	24.1
trans-1,2-Dichloroethene	ND		25.0	25.0	24.6	23.2
Trichloroethene	21		25.0	25.0	45.7	44.2

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Method Blank - Batch: 480-45206**

**Method: 8260B SIM  
Preparation: 5030B**

Lab Sample ID: MB 480-45206/3  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 1107  
 Prep Date: 12/20/2011 1107  
 Leach Date: N/A

Analysis Batch: 480-45206  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973J  
 Lab File ID: JJ3717.D  
 Initial Weight/Volume: 25 mL  
 Final Weight/Volume: 25 mL

Analyte	Result	Qual	MDL	RL
Vinyl chloride	ND		0.0040	0.020

**Lab Control Sample - Batch: 480-45206**

**Method: 8260B SIM  
Preparation: 5030B**

Lab Sample ID: LCS 480-45206/2  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 0956  
 Prep Date: 12/20/2011 0956  
 Leach Date: N/A

Analysis Batch: 480-45206  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973J  
 Lab File ID: J3716.D  
 Initial Weight/Volume: 25 mL  
 Final Weight/Volume: 25 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Vinyl chloride	0.200	0.208	104	60 - 140	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Method Blank - Batch: 280-100340**

Lab Sample ID: MB 280-100340/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 0031  
 Prep Date: 12/19/2011 1400  
 Leach Date: N/A

Analysis Batch: 280-100646  
 Prep Batch: 280-100340  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_025  
 Lab File ID: 25A5121911.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Calcium, Dissolved	ND		0.035	0.040
Cobalt, Dissolved	ND		0.0012	0.0030
Iron, Dissolved	ND		0.022	0.060
Magnesium, Dissolved	ND		0.011	0.050
Potassium, Dissolved	ND		0.24	1.0
Sodium, Dissolved	ND		0.092	1.0

**Lab Control Sample - Batch: 280-100340**

Lab Sample ID: LCS 280-100340/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 0034  
 Prep Date: 12/19/2011 1400  
 Leach Date: N/A

Analysis Batch: 280-100646  
 Prep Batch: 280-100340  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_025  
 Lab File ID: 25A5121911.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Calcium, Dissolved	50.0	46.9	94	90 - 111	
Cobalt, Dissolved	0.500	0.481	96	89 - 111	
Iron, Dissolved	1.00	0.932	93	89 - 115	
Magnesium, Dissolved	50.0	47.2	94	90 - 113	
Potassium, Dissolved	50.0	49.2	98	89 - 114	
Sodium, Dissolved	50.0	50.0	100	90 - 115	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100340**

**Method: 6010B  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID:	280-23858-A-47-B MS	Analysis Batch:	280-100646	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-100340	Lab File ID:	25A5121911.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 0119			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 1400				
Leach Date:	N/A				

MSD Lab Sample ID:	280-23858-A-47-C MSD	Analysis Batch:	280-100646	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-100340	Lab File ID:	25A5121911.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2011 0122			Final Weight/Volume:	50 mL
Prep Date:	12/19/2011 1400				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Calcium, Dissolved	93	92	48 - 153	0	20		
Cobalt, Dissolved	96	96	82 - 119	1	20		
Iron, Dissolved	96	95	52 - 155	1	20		
Magnesium, Dissolved	93	92	62 - 146	1	20		
Potassium, Dissolved	99	98	76 - 132	1	20		
Sodium, Dissolved	108	108	70 - 203	0	20	4	4

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100340**

**Method: 6010B  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID:	280-23858-A-47-B MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	12/20/2011 0119		
Prep Date:	12/19/2011 1400		
Leach Date:	N/A		

MSD Lab Sample ID:	280-23858-A-47-C MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	12/20/2011 0122
Prep Date:	12/19/2011 1400
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS		MSD	
				Result/Qual	MSD	Result/Qual	MSD
Calcium, Dissolved	17	50.0	50.0	63.3	63.0		
Cobalt, Dissolved	ND	0.500	0.500	0.478	0.481		
Iron, Dissolved	0.10	1.00	1.00	1.06	1.05		
Magnesium, Dissolved	6.1	50.0	50.0	52.4	51.9		
Potassium, Dissolved	17	50.0	50.0	66.9	66.5		
Sodium, Dissolved	360	50.0	50.0	412	412	4	4

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Method Blank - Batch: 280-100342**

Lab Sample ID: MB 280-100342/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 2017  
 Prep Date: 12/19/2011 1400  
 Leach Date: N/A

Analysis Batch: 280-100900  
 Prep Batch: 280-100342  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_024  
 Lab File ID: 046\_BLK.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Antimony, Dissolved	ND		0.00020	0.0010
Beryllium, Dissolved	ND		0.000080	0.0010
Cadmium, Dissolved	ND		0.000040	0.00020
Chromium, Dissolved	ND		0.00050	0.0030
Copper, Dissolved	ND		0.00056	0.0020
Lead, Dissolved	ND		0.00018	0.0010
Manganese, Dissolved	ND		0.00031	0.0010
Nickel, Dissolved	ND		0.00030	0.0040
Selenium, Dissolved	ND		0.00070	0.0010
Silver, Dissolved	ND		0.000033	0.0020
Thallium, Dissolved	ND		0.000033	0.0010
Vanadium, Dissolved	ND		0.00033	0.0020
Zinc, Dissolved	ND		0.0020	0.0050

**Lab Control Sample - Batch: 280-100342**

Lab Sample ID: LCS 280-100342/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 2118  
 Prep Date: 12/19/2011 1400  
 Leach Date: N/A

Analysis Batch: 280-100900  
 Prep Batch: 280-100342  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_024  
 Lab File ID: 067\_LCS.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony, Dissolved	0.0400	0.0408	102	85 - 115	
Beryllium, Dissolved	0.0400	0.0431	108	80 - 125	
Cadmium, Dissolved	0.0400	0.0403	101	85 - 115	
Chromium, Dissolved	0.0400	0.0397	99	84 - 121	
Copper, Dissolved	0.0400	0.0406	101	85 - 119	
Lead, Dissolved	0.0400	0.0405	101	85 - 118	
Manganese, Dissolved	0.0400	0.0392	98	85 - 117	
Nickel, Dissolved	0.0400	0.0370	93	85 - 119	
Selenium, Dissolved	0.0400	0.0427	107	77 - 122	
Silver, Dissolved	0.0400	0.0411	103	85 - 115	
Thallium, Dissolved	0.0400	0.0418	105	85 - 118	
Vanadium, Dissolved	0.0400	0.0400	100	85 - 120	
Zinc, Dissolved	0.0400	0.0413	103	83 - 122	



## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100342**

**Method: 6020  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-23858-A-47-E MS  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/20/2011 2113  
Prep Date: 12/19/2011 1400  
Leach Date: N/A

Analysis Batch: 280-100900  
Prep Batch: 280-100342  
Leach Batch: N/A

Instrument ID: MT\_024  
Lab File ID: 065\_MS.D  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-23858-A-47-F MSD  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/20/2011 2115  
Prep Date: 12/19/2011 1400  
Leach Date: N/A

Analysis Batch: 280-100900  
Prep Batch: 280-100342  
Leach Batch: N/A

Instrument ID: MT\_024  
Lab File ID: 066\_MS.D  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Antimony, Dissolved	117	116	85 - 115	1	20	F	F
Beryllium, Dissolved	121	120	80 - 125	1	20		
Cadmium, Dissolved	107	107	85 - 115	0	20		
Chromium, Dissolved	115	113	84 - 121	1	20		
Copper, Dissolved	103	102	85 - 119	1	20		
Lead, Dissolved	102	101	85 - 118	1	20		
Manganese, Dissolved	111	111	85 - 117	0	20		
Nickel, Dissolved	98	98	85 - 119	1	20		
Selenium, Dissolved	112	113	77 - 122	1	20		
Silver, Dissolved	104	105	85 - 115	1	20		
Thallium, Dissolved	105	105	85 - 118	1	20		
Vanadium, Dissolved	119	119	85 - 120	0	20		
Zinc, Dissolved	110	108	83 - 122	1	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100342**

**Method: 6020  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-23858-A-47-E MS      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 2113  
 Prep Date: 12/19/2011 1400  
 Leach Date: N/A

MSD Lab Sample ID: 280-23858-A-47-F MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 2115  
 Prep Date: 12/19/2011 1400  
 Leach Date: N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Antimony, Dissolved	0.012		0.0400	0.0400	0.0589 F	0.0586 F
Beryllium, Dissolved	ND		0.0400	0.0400	0.0483	0.0479
Cadmium, Dissolved	0.000044	J	0.0400	0.0400	0.0430	0.0430
Chromium, Dissolved	ND		0.0400	0.0400	0.0459	0.0453
Copper, Dissolved	ND		0.0400	0.0400	0.0413	0.0407
Lead, Dissolved	0.00018	J	0.0400	0.0400	0.0407	0.0404
Manganese, Dissolved	0.016		0.0400	0.0400	0.0604	0.0602
Nickel, Dissolved	0.0028	J	0.0400	0.0400	0.0422	0.0419
Selenium, Dissolved	ND		0.0400	0.0400	0.0446	0.0451
Silver, Dissolved	ND		0.0400	0.0400	0.0416	0.0420
Thallium, Dissolved	ND		0.0400	0.0400	0.0421	0.0419
Vanadium, Dissolved	0.0018	J	0.0400	0.0400	0.0494	0.0496
Zinc, Dissolved	0.0020	J	0.0400	0.0400	0.0438	0.0432

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Method Blank - Batch: 280-100981**

Lab Sample ID: MB 280-100981/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/23/2011 0312  
 Prep Date: 12/22/2011 1245  
 Leach Date: N/A

Analysis Batch: 280-101247  
 Prep Batch: 280-100981  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_024  
 Lab File ID: 168\_BLK.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Barium, Dissolved	ND		0.00029	0.0010

**Lab Control Sample - Batch: 280-100981**

Lab Sample ID: LCS 280-100981/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/23/2011 0315  
 Prep Date: 12/22/2011 1245  
 Leach Date: N/A

Analysis Batch: 280-101247  
 Prep Batch: 280-100981  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_024  
 Lab File ID: 169\_LCS.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Barium, Dissolved	0.0400	0.0401	100	85 - 118	

**Matrix Spike/  
 Matrix Spike Duplicate Recovery Report - Batch: 280-100981**

MS Lab Sample ID: 280-23869-6  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/23/2011 0347  
 Prep Date: 12/22/2011 1245  
 Leach Date: N/A

Analysis Batch: 280-101247  
 Prep Batch: 280-100981  
 Leach Batch: N/A

**Method: 6020  
 Preparation: 3005A  
 Dissolved**

Instrument ID: MT\_024  
 Lab File ID: 180\_MS.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-23869-6  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/23/2011 0350  
 Prep Date: 12/22/2011 1245  
 Leach Date: N/A

Analysis Batch: 280-101247  
 Prep Batch: 280-100981  
 Leach Batch: N/A

Instrument ID: MT\_024  
 Lab File ID: 181\_MSD.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Barium, Dissolved	104	103	85 - 118	1	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100981**

**Method: 6020  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-23869-6                      Units: mg/L  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/23/2011 0347  
Prep Date: 12/22/2011 1245  
Leach Date: N/A

MSD Lab Sample ID: 280-23869-6  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/23/2011 0350  
Prep Date: 12/22/2011 1245  
Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Barium, Dissolved	0.0048	0.0400	0.0400	0.0463	0.0460

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Method Blank - Batch: 280-100874**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	MB 280-100874/6	Analysis Batch:	280-100874	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	115.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1155	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Sulfate	ND		0.23	1.0

**Method Reporting Limit Check - Batch: 280-100874**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	MRL 280-100874/3	Analysis Batch:	280-100874	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	112.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1103	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sulfate	1.00	0.984	98	50 - 150	J

**Lab Control Sample/**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-100874**

**Method: 300.0**  
**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100874/4	Analysis Batch:	280-100874	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	113.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1121	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-100874/5	Analysis Batch:	280-100874	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	114.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1138	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Sulfate	99	98	90 - 110	1	10		

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-100874**

**Method: 300.0  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-100874/4 Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 1121  
 Prep Date: N/A  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 280-100874/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 1138  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Sulfate	25.0	25.0	24.8	24.5

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100874**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 280-23767-A-6 MS Analysis Batch: 280-100874  
 Client Matrix: Water Prep Batch: N/A  
 Dilution: 1.0 Leach Batch: N/A  
 Analysis Date: 12/20/2011 1334  
 Prep Date: N/A  
 Leach Date: N/A

Instrument ID: WC\_IC6  
 Lab File ID: 118.TXT  
 Initial Weight/Volume: 1.0 mL  
 Final Weight/Volume: 5 mL

MSD Lab Sample ID: 280-23767-A-6 MSD Analysis Batch: 280-100874  
 Client Matrix: Water Prep Batch: N/A  
 Dilution: 1.0 Leach Batch: N/A  
 Analysis Date: 12/20/2011 1352  
 Prep Date: N/A  
 Leach Date: N/A

Instrument ID: WC\_IC6  
 Lab File ID: 119.TXT  
 Initial Weight/Volume: 1.0 mL  
 Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Sulfate	111	110	80 - 120	0	20		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100874**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 280-23767-A-6 MS Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 1334  
 Prep Date: N/A  
 Leach Date: N/A

MSD Lab Sample ID: 280-23767-A-6 MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 1352  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Sulfate	0.93 J	25.0	25.0	28.7	28.6

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Duplicate - Batch: 280-100874**

**Method: 300.0  
Preparation: N/A**

Lab Sample ID:	280-23869-1	Analysis Batch:	280-100874	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	140.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1955	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Sulfate	2.0	2.01	1	15	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Method Blank - Batch: 280-101025**

Lab Sample ID: MB 280-101025/64  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2011 1159  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-101025  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

**Method: 350.1  
 Preparation: N/A**

Instrument ID: WC\_Alph 2  
 Lab File ID: C:\FLOW\_4\1221A.RS  
 Initial Weight/Volume: 1.0 mL  
 Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Ammonia (as N)	ND		0.022	0.030

**Lab Control Sample/  
 Lab Control Sample Duplicate Recovery Report - Batch: 280-101025**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-101025/65  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2011 1200  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-101025  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 2  
 Lab File ID: C:\FLOW\_4\1221A.RS  
 Initial Weight/Volume: 100 mL  
 Final Weight/Volume: 100 mL

LCSD Lab Sample ID: LCSD 280-101025/66  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2011 1202  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-101025  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 2  
 Lab File ID: C:\FLOW\_4\1221A.RS  
 Initial Weight/Volume: 100 mL  
 Final Weight/Volume: 100 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Ammonia (as N)	101	102	90 - 110	1	10		

**Laboratory Control/  
 Laboratory Duplicate Data Report - Batch: 280-101025**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-101025/65  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2011 1200  
 Prep Date: N/A  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-101025/66  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2011 1202  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia (as N)	5.00	5.00	5.06	5.10



**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-101025**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID:	280-23838-B-6 MS	Analysis Batch:	280-101025	Instrument ID:	WC_Alph 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1221A.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/21/2011 1227			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-23838-B-6 MSD	Analysis Batch:	280-101025	Instrument ID:	WC_Alph 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1221A.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/21/2011 1229			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Ammonia (as N)	73	75	90 - 110	3	20	F	F

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-101025**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID:	280-23838-B-6 MS	Units:	mg/L	MSD Lab Sample ID:	280-23838-B-6 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/21/2011 1227			Analysis Date:	12/21/2011 1229
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Ammonia (as N)	0.040	4.00	4.00	2.95 F	3.04 F

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Method Blank - Batch: 280-101463**

**Method: 353.2**  
**Preparation: N/A**

Lab Sample ID: MB 280-101463/1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/27/2011 1028  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-101463  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: No Equipment  
Lab File ID: N/A  
Initial Weight/Volume: 1.0 mL  
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Nitrate as N	ND		0.019	0.050

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Method Blank - Batch: 280-100757**

**Method: 9251  
Preparation: N/A**

Lab Sample ID:	MB 280-100757/21	Analysis Batch:	280-100757	Instrument ID:	WC_Alph 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL122011.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 0958	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chloride	ND		1.0	1.0

**Method Blank - Batch: 280-100757**

**Method: 9251  
Preparation: N/A**

Lab Sample ID:	MB 280-100757/58	Analysis Batch:	280-100757	Instrument ID:	WC_Alph 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL122011.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1041	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chloride	ND		1.0	1.0

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-100757**

**Method: 9251  
Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100757/56	Analysis Batch:	280-100757	Instrument ID:	WC_Alph 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL122011.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1039	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-100757/57	Analysis Batch:	280-100757	Instrument ID:	WC_Alph 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL122011.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1040	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Chloride	100	99	90 - 110	1	10		

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-100757**

**Method: 9251  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-100757/56 Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 1039  
 Prep Date: N/A  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 280-100757/57  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 1040  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Chloride	25.0	25.0	25.1	24.8

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100757**

**Method: 9251  
Preparation: N/A**

MS Lab Sample ID: 280-23948-C-2 MS Analysis Batch: 280-100757  
 Client Matrix: Water Prep Batch: N/A  
 Dilution: 1.0 Leach Batch: N/A  
 Analysis Date: 12/20/2011 1044  
 Prep Date: N/A  
 Leach Date: N/A

Instrument ID: WC\_Alp 1  
 Lab File ID: C:\FLOW\_4\CL122011.  
 Initial Weight/Volume: 1.0 mL  
 Final Weight/Volume: 10 mL

MSD Lab Sample ID: 280-23948-C-2 MSD Analysis Batch: 280-100757  
 Client Matrix: Water Prep Batch: N/A  
 Dilution: 1.0 Leach Batch: N/A  
 Analysis Date: 12/20/2011 1052  
 Prep Date: N/A  
 Leach Date: N/A

Instrument ID: WC\_Alp 1  
 Lab File ID: C:\FLOW\_4\CL122011.  
 Initial Weight/Volume: 1.0 mL  
 Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chloride	103	119	90 - 110	9	10		F

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100757**

**Method: 9251  
Preparation: N/A**

MS Lab Sample ID: 280-23948-C-2 MS Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 1044  
 Prep Date: N/A  
 Leach Date: N/A

MSD Lab Sample ID: 280-23948-C-2 MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 1052  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chloride	30	50.0	50.0	81.6	89.5 F

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Method Blank - Batch: 280-101067**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID:	MB 280-101067/33	Analysis Batch:	280-101067	Instrument ID:	WC_AT2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122111.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/21/2011 1435	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Alkalinity, Total (As CaCO3)	1.29	J	1.1	5.0
Alkalinity, Bicarbonate (As CaCO3)	1.29	J	1.1	5.0
Alkalinity, Carbonate (As CaCO3)	ND		1.1	5.0

**Lab Control Sample/**

**Method: SM 2320B**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-101067**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-101067/31	Analysis Batch:	280-101067	Instrument ID:	WC_AT2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122111.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/21/2011 1418	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-101067/32	Analysis Batch:	280-101067	Instrument ID:	WC_AT2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122111.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/21/2011 1427	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Alkalinity, Total (As CaCO3)	105	105	90 - 110	0	10		

**Laboratory Control/**

**Method: SM 2320B**

**Laboratory Duplicate Data Report - Batch: 280-101067**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-101067/31	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-101067/32
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/21/2011 1418			Analysis Date:	12/21/2011 1427
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Alkalinity, Total (As CaCO3)	200	200	210	211

## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

**Duplicate - Batch: 280-101067**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID: 280-23843-A-1 DU  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/21/2011 1453  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-101067  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: WC\_AT2  
Lab File ID: 122111.txt  
Initial Weight/Volume: 1.0 mL  
Final Weight/Volume: 1.0 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Alkalinity, Total (As CaCO3)	57	58.0	2	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Method Blank - Batch: 280-101151**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID:	MB 280-101151/6	Analysis Batch:	280-101151	Instrument ID:	WC_AT2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122211.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/22/2011 0909	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Alkalinity, Total (As CaCO3)	1.42	J	1.1	5.0
Alkalinity, Bicarbonate (As CaCO3)	ND		1.1	5.0
Alkalinity, Carbonate (As CaCO3)	1.11	J	1.1	5.0

**Lab Control Sample/**

**Method: SM 2320B**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-101151**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-101151/4	Analysis Batch:	280-101151	Instrument ID:	WC_AT2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122211.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/22/2011 0852	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-101151/5	Analysis Batch:	280-101151	Instrument ID:	WC_AT2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122211.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/22/2011 0902	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Alkalinity, Total (As CaCO3)	104	104	90 - 110	0	10		

**Laboratory Control/**

**Method: SM 2320B**

**Laboratory Duplicate Data Report - Batch: 280-101151**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-101151/4	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-101151/5
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/22/2011 0852			Analysis Date:	12/22/2011 0902
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Alkalinity, Total (As CaCO3)	200	200	208	207

## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

**Duplicate - Batch: 280-101151**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID:	280-23869-4	Analysis Batch:	280-101151	Instrument ID:	WC_AT2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122211.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/22/2011 0921	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Alkalinity, Total (As CaCO3)	88	89.2	1	10	



**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Method Blank - Batch: 280-100854**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	MB 280-100854/1	Analysis Batch:	280-100854	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/21/2011 0640	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Dissolved Solids (TDS)	ND		4.7	5.0

**Lab Control Sample/**

**Method: SM 2540C**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-100854**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100854/2	Analysis Batch:	280-100854	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/21/2011 0640	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-100854/3	Analysis Batch:	280-100854	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/21/2011 0640	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Dissolved Solids (TDS)	97	97	86 - 110	0	20		

**Laboratory Control/**

**Method: SM 2540C**

**Laboratory Duplicate Data Report - Batch: 280-100854**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100854/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-100854/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/21/2011 0640			Analysis Date:	12/21/2011 0640
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Dissolved Solids (TDS)	500	500	485	486

## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

**Duplicate - Batch: 280-100854**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID: 280-23852-B-2 DU  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/21/2011 0640  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-100854  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: No Equipment  
Lab File ID: N/A  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 100 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Dissolved Solids (TDS)	2000	2050	0.5	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Method Blank - Batch: 280-100858**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	MB 280-100858/1	Analysis Batch:	280-100858	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/21/2011 0656	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Dissolved Solids (TDS)	ND		4.7	5.0

**Lab Control Sample/**

**Method: SM 2540C**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-100858**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100858/2	Analysis Batch:	280-100858	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/21/2011 0656	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-100858/3	Analysis Batch:	280-100858	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/21/2011 0656	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Dissolved Solids (TDS)	94	96	86 - 110	2	20		

**Laboratory Control/**

**Method: SM 2540C**

**Laboratory Duplicate Data Report - Batch: 280-100858**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100858/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-100858/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/21/2011 0656			Analysis Date:	12/21/2011 0656
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Dissolved Solids (TDS)	500	500	468	478

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Duplicate - Batch: 280-100858**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	280-23869-2	Analysis Batch:	280-100858	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/21/2011 0656	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Dissolved Solids (TDS)	270	270	1	10	

Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

Method Blank - Batch: 280-100415

Method: SM 5310B

Preparation: N/A

Lab Sample ID: MB 280-100415/5  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/16/2011 1856  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-100415  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: WC\_SHI2  
Lab File ID: 121611.txt  
Initial Weight/Volume: 20 mL  
Final Weight/Volume: 20 mL

Analyte	Result	Qual	MDL	RL
Total Organic Carbon - Average	ND		0.16	1.0

Method Blank - Batch: 280-100415

Method: SM 5310B

Preparation: N/A

Lab Sample ID: MB 280-100415/36  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/17/2011 0354  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-100415  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: WC\_SHI2  
Lab File ID: 121611.txt  
Initial Weight/Volume: 20 mL  
Final Weight/Volume: 20 mL

Analyte	Result	Qual	MDL	RL
Total Organic Carbon - Average	ND		0.16	1.0

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-100415**

**Method: SM 5310B  
Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100415/3	Analysis Batch:	280-100415	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121611.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	12/16/2011 1818	Units:	mg/L	Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-100415/4	Analysis Batch:	280-100415	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121611.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	12/16/2011 1837	Units:	mg/L	Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Organic Carbon - Average	97	98	88 - 112	1	15		

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-100415**

**Method: SM 5310B  
Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100415/34	Analysis Batch:	280-100415	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121611.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	12/17/2011 0315	Units:	mg/L	Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-100415/35	Analysis Batch:	280-100415	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121611.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	12/17/2011 0334	Units:	mg/L	Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Organic Carbon - Average	97	97	88 - 112	0	15		

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-100415**

**Method: SM 5310B  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-100415/3      Units: mg/L  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/16/2011 1818  
Prep Date: N/A  
Leach Date: N/A

LCSD Lab Sample ID: LCSD 280-100415/4  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/16/2011 1837  
Prep Date: N/A  
Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Organic Carbon - Average	25.0	25.0	24.3	24.4

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-100415**

**Method: SM 5310B  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-100415/34      Units: mg/L  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/17/2011 0315  
Prep Date: N/A  
Leach Date: N/A

LCSD Lab Sample ID: LCSD 280-100415/35  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/17/2011 0334  
Prep Date: N/A  
Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Organic Carbon - Average	25.0	25.0	24.2	24.3

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100415**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID:	280-23838-B-2 MS	Analysis Batch:	280-100415	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121611.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/16/2011 2334			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-23838-B-2 MSD	Analysis Batch:	280-100415	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121611.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/16/2011 2352			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Total Organic Carbon - Average	96	96	88 - 112	0	15		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100415**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID:	280-23869-3	Analysis Batch:	280-100415	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121611.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/17/2011 0429			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-23869-3	Analysis Batch:	280-100415	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121611.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/17/2011 0447			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Total Organic Carbon - Average	96	98	88 - 112	1	15		



**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100415**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID: 280-23838-B-2 MS                      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2011 2334  
 Prep Date: N/A  
 Leach Date: N/A

MSD Lab Sample ID: 280-23838-B-2 MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2011 2352  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Total Organic Carbon - Average	0.67	J	25.0	25.0	24.8	24.7

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100415**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID: 280-23869-3                      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/17/2011 0429  
 Prep Date: N/A  
 Leach Date: N/A

MSD Lab Sample ID: 280-23869-3  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/17/2011 0447  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Total Organic Carbon - Average	0.76	J	25.0	25.0	24.9	25.2

## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

### Laboratory Chronicle

Lab ID: 280-23869-1

Client ID: MW-43

Sample Date/Time: 12/15/2011 08:00

Received Date/Time: 12/16/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23869-E-1		480-46012		12/27/2011 21:39	1	TAL BUF	RL
A:8260B	280-23869-E-1		480-46012		12/27/2011 21:39	1	TAL BUF	RL
P:5030B	280-23869-D-1		480-45206		12/20/2011 11:33	1	TAL BUF	TRB
A:8260B SIM	280-23869-D-1		480-45206		12/20/2011 11:33	1	TAL BUF	TRB
P:3005A	280-23869-A-1-A		280-100646	280-100340	12/19/2011 14:00	1	TAL DEN	JM
A:6010B	280-23869-A-1-A		280-100646	280-100340	12/20/2011 00:36	1	TAL DEN	JKH
P:3005A	280-23869-A-1-A		280-101542	280-100340	12/19/2011 14:00	1	TAL DEN	JM
A:6010B	280-23869-A-1-A		280-101542	280-100340	12/27/2011 14:35	1	TAL DEN	LT
P:3005A	280-23869-A-1-B		280-100900	280-100342	12/19/2011 14:00	1	TAL DEN	JM
A:6020	280-23869-A-1-B		280-100900	280-100342	12/20/2011 20:23	1	TAL DEN	TEL
P:3005A	280-23869-A-1-C		280-101247	280-100981	12/22/2011 12:45	1	TAL DEN	NF
A:6020	280-23869-A-1-C		280-101247	280-100981	12/23/2011 03:18	1	TAL DEN	TEL
A:300.0	280-23869-A-1		280-100874		12/20/2011 19:03	1	TAL DEN	EK
A:350.1	280-23869-B-1		280-101025		12/21/2011 12:47	1	TAL DEN	JAD
A:353.2	280-23869-A-1		280-101463		12/27/2011 10:28	1	TAL DEN	RS
A:9251	280-23869-A-1		280-100757		12/20/2011 10:56	1	TAL DEN	AJA
A:SM 2320B	280-23869-A-1		280-101067		12/21/2011 17:04	1	TAL DEN	DE
A:SM 2540C	280-23869-A-1		280-100854		12/21/2011 06:40	1	TAL DEN	BJD
A:SM 5310B	280-23869-B-1		280-100415		12/17/2011 02:41	1	TAL DEN	GEY
A:Field Sampling	280-23869-A-1		280-101454		12/15/2011 08:00	1	TAL DEN	FS

Lab ID: 280-23869-1 DU

Client ID: MW-43

Sample Date/Time: 12/15/2011 08:00

Received Date/Time: 12/16/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-23869-A-1 DU		280-100874		12/20/2011 19:55	1	TAL DEN	EK

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Laboratory Chronicle**

Lab ID: 280-23869-2

Client ID: MW-42

Sample Date/Time: 12/15/2011 08:37

Received Date/Time: 12/16/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23869-F-2		480-46012		12/27/2011 22:03	1	TAL BUF	RL
A:8260B	280-23869-F-2		480-46012		12/27/2011 22:03	1	TAL BUF	RL
P:5030B	280-23869-D-2		480-45206		12/20/2011 11:57	1	TAL BUF	TRB
A:8260B SIM	280-23869-D-2		480-45206		12/20/2011 11:57	1	TAL BUF	TRB
P:3005A	280-23869-A-2-A		280-100646	280-100340	12/19/2011 14:00	1	TAL DEN	JM
A:6010B	280-23869-A-2-A		280-100646	280-100340	12/20/2011 00:38	1	TAL DEN	JKH
P:3005A	280-23869-A-2-B		280-100900	280-100342	12/19/2011 14:00	1	TAL DEN	JM
A:6020	280-23869-A-2-B		280-100900	280-100342	12/20/2011 20:26	1	TAL DEN	TEL
P:3005A	280-23869-A-2-C		280-101247	280-100981	12/22/2011 12:45	1	TAL DEN	NF
A:6020	280-23869-A-2-C		280-101247	280-100981	12/23/2011 03:21	1	TAL DEN	TEL
A:300.0	280-23869-A-2		280-100874		12/20/2011 20:12	1	TAL DEN	EK
A:350.1	280-23869-B-2		280-101025		12/21/2011 12:48	1	TAL DEN	JAD
A:353.2	280-23869-A-2		280-101463		12/27/2011 10:28	1	TAL DEN	RS
A:9251	280-23869-A-2		280-100757		12/20/2011 10:58	1	TAL DEN	AJA
A:SM 2320B	280-23869-A-2		280-101067		12/21/2011 17:11	1	TAL DEN	DE
A:SM 2540C	280-23869-A-2		280-100858		12/21/2011 06:56	1	TAL DEN	BJD
A:SM 5310B	280-23869-B-2		280-100415		12/17/2011 02:58	1	TAL DEN	GEY
A:Field Sampling	280-23869-A-2		280-101454		12/15/2011 08:37	1	TAL DEN	FS

Lab ID: 280-23869-2 DU

Client ID: MW-42

Sample Date/Time: 12/15/2011 08:37

Received Date/Time: 12/16/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2540C	280-23869-A-2 DU		280-100858		12/21/2011 06:56	1	TAL DEN	BJD

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Laboratory Chronicle**

Lab ID: 280-23869-3

Client ID: MW-20

Sample Date/Time: 12/15/2011 09:17

Received Date/Time: 12/16/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23869-D-3		480-46012		12/27/2011 22:27	1	TAL BUF	RL
A:8260B	280-23869-D-3		480-46012		12/27/2011 22:27	1	TAL BUF	RL
P:5030B	280-23869-D-3		480-45206		12/20/2011 12:21	1	TAL BUF	TRB
A:8260B SIM	280-23869-D-3		480-45206		12/20/2011 12:21	1	TAL BUF	TRB
P:3005A	280-23869-A-3-A		280-100646	280-100340	12/19/2011 14:00	1	TAL DEN	JM
A:6010B	280-23869-A-3-A		280-100646	280-100340	12/20/2011 00:40	1	TAL DEN	JKH
P:3005A	280-23869-A-3-B		280-100900	280-100342	12/19/2011 14:00	1	TAL DEN	JM
A:6020	280-23869-A-3-B		280-100900	280-100342	12/20/2011 20:29	1	TAL DEN	TEL
P:3005A	280-23869-A-3-C		280-101247	280-100981	12/22/2011 12:45	1	TAL DEN	NF
A:6020	280-23869-A-3-C		280-101247	280-100981	12/23/2011 03:24	1	TAL DEN	TEL
A:300.0	280-23869-A-3		280-100874		12/20/2011 20:30	1	TAL DEN	EK
A:350.1	280-23869-B-3		280-101025		12/21/2011 12:50	1	TAL DEN	JAD
A:353.2	280-23869-A-3		280-101463		12/27/2011 10:28	1	TAL DEN	RS
A:9251	280-23869-A-3		280-100757		12/20/2011 10:59	1	TAL DEN	AJA
A:SM 2320B	280-23869-A-3		280-101067		12/21/2011 17:19	1	TAL DEN	DE
A:SM 2540C	280-23869-A-3		280-100858		12/21/2011 06:56	1	TAL DEN	BJD
A:SM 5310B	280-23869-B-3		280-100415		12/17/2011 04:09	1	TAL DEN	GEY
A:Field Sampling	280-23869-A-3		280-101454		12/15/2011 09:17	1	TAL DEN	FS

Lab ID: 280-23869-3 MS

Client ID: MW-20

Sample Date/Time: 12/15/2011 09:17

Received Date/Time: 12/16/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 5310B	280-23869-B-3 MS		280-100415		12/17/2011 04:29	1	TAL DEN	GEY

Lab ID: 280-23869-3 MSD

Client ID: MW-20

Sample Date/Time: 12/15/2011 09:17

Received Date/Time: 12/16/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 5310B	280-23869-B-3 MSD		280-100415		12/17/2011 04:47	1	TAL DEN	GEY

## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

### Laboratory Chronicle

Lab ID: 280-23869-4

Client ID: MW-39

Sample Date/Time: 12/15/2011 10:17

Received Date/Time: 12/16/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23869-D-4		480-46174		12/28/2011 13:51	1	TAL BUF	LH
A:8260B	280-23869-D-4		480-46174		12/28/2011 13:51	1	TAL BUF	LH
P:5030B	280-23869-D-4		480-45206		12/20/2011 12:46	1	TAL BUF	TRB
A:8260B SIM	280-23869-D-4		480-45206		12/20/2011 12:46	1	TAL BUF	TRB
P:3005A	280-23869-A-4-A		280-100646	280-100340	12/19/2011 14:00	1	TAL DEN	JM
A:6010B	280-23869-A-4-A		280-100646	280-100340	12/20/2011 00:43	1	TAL DEN	JKH
P:3005A	280-23869-A-4-B		280-100900	280-100342	12/19/2011 14:00	1	TAL DEN	JM
A:6020	280-23869-A-4-B		280-100900	280-100342	12/20/2011 20:32	1	TAL DEN	TEL
P:3005A	280-23869-A-4-C		280-101247	280-100981	12/22/2011 12:45	1	TAL DEN	NF
A:6020	280-23869-A-4-C		280-101247	280-100981	12/23/2011 03:27	1	TAL DEN	TEL
A:300.0	280-23869-A-4		280-100874		12/20/2011 20:47	1	TAL DEN	EK
A:350.1	280-23869-B-4		280-101025		12/21/2011 12:51	1	TAL DEN	JAD
A:353.2	280-23869-A-4		280-101463		12/27/2011 10:28	1	TAL DEN	RS
A:9251	280-23869-A-4		280-100757		12/20/2011 11:00	1	TAL DEN	AJA
A:SM 2320B	280-23869-A-4		280-101151		12/22/2011 09:15	1	TAL DEN	DE
A:SM 2540C	280-23869-A-4		280-100858		12/21/2011 06:56	1	TAL DEN	BJD
A:SM 5310B	280-23869-B-4		280-100415		12/17/2011 05:38	1	TAL DEN	GEY
A:Field Sampling	280-23869-A-4		280-101454		12/15/2011 10:17	1	TAL DEN	FS

Lab ID: 280-23869-4 DU

Client ID: MW-39

Sample Date/Time: 12/15/2011 10:17

Received Date/Time: 12/16/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2320B	280-23869-A-4 DU		280-101151		12/22/2011 09:21	1	TAL DEN	DE

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Laboratory Chronicle**

Lab ID: 280-23869-5

Client ID: MW-24

Sample Date/Time: 12/15/2011 11:19

Received Date/Time: 12/16/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23869-F-5		480-46010		12/27/2011 22:21	1	TAL BUF	RL
A:8260B	280-23869-F-5		480-46010		12/27/2011 22:21	1	TAL BUF	RL
P:5030B	280-23869-D-5		480-45206		12/20/2011 13:10	1	TAL BUF	TRB
A:8260B SIM	280-23869-D-5		480-45206		12/20/2011 13:10	1	TAL BUF	TRB
P:3005A	280-23869-A-5-A		280-100646	280-100340	12/19/2011 14:00	1	TAL DEN	JM
A:6010B	280-23869-A-5-A		280-100646	280-100340	12/20/2011 00:45	1	TAL DEN	JKH
P:3005A	280-23869-A-5-B		280-100900	280-100342	12/19/2011 14:00	1	TAL DEN	JM
A:6020	280-23869-A-5-B		280-100900	280-100342	12/20/2011 20:35	1	TAL DEN	TEL
P:3005A	280-23869-A-5-C		280-101247	280-100981	12/22/2011 12:45	1	TAL DEN	NF
A:6020	280-23869-A-5-C		280-101247	280-100981	12/23/2011 03:30	1	TAL DEN	TEL
A:300.0	280-23869-A-5		280-100874		12/20/2011 21:04	1	TAL DEN	EK
A:350.1	280-23869-B-5		280-101025		12/21/2011 12:53	1	TAL DEN	JAD
A:353.2	280-23869-A-5		280-101463		12/27/2011 10:28	1	TAL DEN	RS
A:9251	280-23869-A-5		280-100757		12/20/2011 11:01	1	TAL DEN	AJA
A:SM 2320B	280-23869-A-5		280-101151		12/22/2011 09:27	1	TAL DEN	DE
A:SM 2540C	280-23869-A-5		280-100858		12/21/2011 06:56	1	TAL DEN	BJD
A:SM 5310B	280-23869-B-5		280-100415		12/17/2011 05:57	1	TAL DEN	GEY
A:Field Sampling	280-23869-A-5		280-101454		12/15/2011 11:19	1	TAL DEN	FS

Lab ID: 280-23869-6

Client ID: MW-32

Sample Date/Time: 12/15/2011 12:19

Received Date/Time: 12/16/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23869-I-6		480-46010		12/27/2011 22:46	1	TAL BUF	RL
A:8260B	280-23869-I-6		480-46010		12/27/2011 22:46	1	TAL BUF	RL
P:5030B	280-23869-D-6		480-45206		12/20/2011 13:34	1	TAL BUF	TRB
A:8260B SIM	280-23869-D-6		480-45206		12/20/2011 13:34	1	TAL BUF	TRB
P:3005A	280-23869-A-6-A		280-100646	280-100340	12/19/2011 14:00	1	TAL DEN	JM
A:6010B	280-23869-A-6-A		280-100646	280-100340	12/20/2011 00:48	1	TAL DEN	JKH
P:3005A	280-23869-A-6-B		280-100900	280-100342	12/19/2011 14:00	1	TAL DEN	JM
A:6020	280-23869-A-6-B		280-100900	280-100342	12/20/2011 20:38	1	TAL DEN	TEL
P:3005A	280-23869-A-6-C		280-101247	280-100981	12/22/2011 12:45	1	TAL DEN	NF
A:6020	280-23869-A-6-C		280-101247	280-100981	12/23/2011 03:39	1	TAL DEN	TEL
A:300.0	280-23869-A-6		280-100874		12/20/2011 21:21	1	TAL DEN	EK
A:350.1	280-23869-B-6		280-101025		12/21/2011 12:54	1	TAL DEN	JAD
A:353.2	280-23869-A-6		280-101463		12/27/2011 10:28	1	TAL DEN	RS
A:9251	280-23869-A-6		280-100757		12/20/2011 11:02	1	TAL DEN	AJA
A:SM 2320B	280-23869-A-6		280-101151		12/22/2011 09:35	1	TAL DEN	DE
A:SM 2540C	280-23869-A-6		280-100858		12/21/2011 06:56	1	TAL DEN	BJD
A:SM 5310B	280-23869-B-6		280-100415		12/17/2011 06:16	1	TAL DEN	GEY
A:Field Sampling	280-23869-A-6		280-101454		12/15/2011 12:19	1	TAL DEN	FS

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Laboratory Chronicle**

Lab ID: 280-23869-6 MS

Client ID: MW-32

Sample Date/Time: 12/15/2011 12:19

Received Date/Time: 12/16/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-23869-A-6-D MS		280-101247	280-100981	12/22/2011 12:45	1	TAL DEN	NF
A:6020	280-23869-A-6-D MS		280-101247	280-100981	12/23/2011 03:47	1	TAL DEN	TEL

Lab ID: 280-23869-6 MSD

Client ID: MW-32

Sample Date/Time: 12/15/2011 12:19

Received Date/Time: 12/16/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-23869-A-6-E MSD		280-101247	280-100981	12/22/2011 12:45	1	TAL DEN	NF
A:6020	280-23869-A-6-E MSD		280-101247	280-100981	12/23/2011 03:50	1	TAL DEN	TEL

Lab ID: 280-23869-7

Client ID: TRIP BLANK

Sample Date/Time: 12/15/2011 08:00

Received Date/Time: 12/16/2011 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-23869-A-7		480-46174		12/28/2011 14:14	1	TAL BUF	LH
A:8260B	280-23869-A-7		480-46174		12/28/2011 14:14	1	TAL BUF	LH
P:5030B	280-23869-A-7		480-45206		12/20/2011 13:58	1	TAL BUF	TRB
A:8260B SIM	280-23869-A-7		480-45206		12/20/2011 13:58	1	TAL BUF	TRB

## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

### Laboratory Chronicle

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MB 480-46012/5		480-46012		12/27/2011 12:27	1	TAL BUF	RL
A:8260B	MB 480-46012/5		480-46012		12/27/2011 12:27	1	TAL BUF	RL
P:5030B	MB 480-46010/5		480-46010		12/27/2011 13:25	1	TAL BUF	RL
A:8260B	MB 480-46010/5		480-46010		12/27/2011 13:25	1	TAL BUF	RL
P:5030B	MB 480-46174/5		480-46174		12/28/2011 13:21	1	TAL BUF	LH
A:8260B	MB 480-46174/5		480-46174		12/28/2011 13:21	1	TAL BUF	LH
P:5030B	MB 480-45206/3		480-45206		12/20/2011 11:07	1	TAL BUF	TRB
A:8260B SIM	MB 480-45206/3		480-45206		12/20/2011 11:07	1	TAL BUF	TRB
P:3005A	MB 280-100340/1-A		280-100646	280-100340	12/19/2011 14:00	1	TAL DEN	JM
A:6010B	MB 280-100340/1-A		280-100646	280-100340	12/20/2011 00:31	1	TAL DEN	JKH
P:3005A	MB 280-100342/1-A		280-100900	280-100342	12/19/2011 14:00	1	TAL DEN	JM
A:6020	MB 280-100342/1-A		280-100900	280-100342	12/20/2011 20:17	1	TAL DEN	TEL
P:3005A	MB 280-100981/1-A		280-101247	280-100981	12/22/2011 12:45	1	TAL DEN	NF
A:6020	MB 280-100981/1-A		280-101247	280-100981	12/23/2011 03:12	1	TAL DEN	TEL
A:300.0	MB 280-100874/6		280-100874		12/20/2011 11:55	1	TAL DEN	EK
A:350.1	MB 280-101025/64		280-101025		12/21/2011 11:59	1	TAL DEN	JAD
A:353.2	MB 280-101463/1		280-101463		12/27/2011 10:28	1	TAL DEN	RS
A:9251	MB 280-100757/21		280-100757		12/20/2011 09:58	1	TAL DEN	AJA
A:9251	MB 280-100757/58		280-100757		12/20/2011 10:41	1	TAL DEN	AJA
A:SM 2320B	MB 280-101067/33		280-101067		12/21/2011 14:35	1	TAL DEN	DE
A:SM 2320B	MB 280-101151/6		280-101151		12/22/2011 09:09	1	TAL DEN	DE
A:SM 2540C	MB 280-100854/1		280-100854		12/21/2011 06:40	1	TAL DEN	BJD
A:SM 2540C	MB 280-100858/1		280-100858		12/21/2011 06:56	1	TAL DEN	BJD
A:SM 5310B	MB 280-100415/5		280-100415		12/16/2011 18:56	1	TAL DEN	GEY
A:SM 5310B	MB 280-100415/36		280-100415		12/17/2011 03:54	1	TAL DEN	GEY



**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Laboratory Chronicle**

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCS 480-46010/4		480-46010		12/27/2011 12:38	1	TAL BUF	RL
A:8260B	LCS 480-46010/4		480-46010		12/27/2011 12:38	1	TAL BUF	RL
P:5030B	LCS 480-46012/4		480-46012		12/27/2011 12:51	1	TAL BUF	RL
A:8260B	LCS 480-46012/4		480-46012		12/27/2011 12:51	1	TAL BUF	RL
P:5030B	LCS 480-46174/4		480-46174		12/28/2011 12:57	1	TAL BUF	LH
A:8260B	LCS 480-46174/4		480-46174		12/28/2011 12:57	1	TAL BUF	LH
P:5030B	LCS 480-45206/2		480-45206		12/20/2011 09:56	1	TAL BUF	TRB
A:8260B SIM	LCS 480-45206/2		480-45206		12/20/2011 09:56	1	TAL BUF	TRB
P:3005A	LCS 280-100340/2-A		280-100646	280-100340	12/19/2011 14:00	1	TAL DEN	JM
A:6010B	LCS 280-100340/2-A		280-100646	280-100340	12/20/2011 00:34	1	TAL DEN	JKH
P:3005A	LCS 280-100342/2-A		280-100900	280-100342	12/19/2011 14:00	1	TAL DEN	JM
A:6020	LCS 280-100342/2-A		280-100900	280-100342	12/20/2011 21:18	1	TAL DEN	TEL
P:3005A	LCS 280-100981/2-A		280-101247	280-100981	12/22/2011 12:45	1	TAL DEN	NF
A:6020	LCS 280-100981/2-A		280-101247	280-100981	12/23/2011 03:15	1	TAL DEN	TEL
A:300.0	LCS 280-100874/4		280-100874		12/20/2011 11:21	1	TAL DEN	EK
A:350.1	LCS 280-101025/65		280-101025		12/21/2011 12:00	1	TAL DEN	JAD
A:9251	LCS 280-100757/56		280-100757		12/20/2011 10:39	1	TAL DEN	AJA
A:SM 2320B	LCS 280-101067/31		280-101067		12/21/2011 14:18	1	TAL DEN	DE
A:SM 2320B	LCS 280-101151/4		280-101151		12/22/2011 08:52	1	TAL DEN	DE
A:SM 2540C	LCS 280-100854/2		280-100854		12/21/2011 06:40	1	TAL DEN	BJD
A:SM 2540C	LCS 280-100858/2		280-100858		12/21/2011 06:56	1	TAL DEN	BJD
A:SM 5310B	LCS 280-100415/3		280-100415		12/16/2011 18:18	1	TAL DEN	GEY
A:SM 5310B	LCS 280-100415/34		280-100415		12/17/2011 03:15	1	TAL DEN	GEY

Lab ID: LCSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	LCSD 280-100874/5		280-100874		12/20/2011 11:38	1	TAL DEN	EK
A:350.1	LCSD 280-101025/66		280-101025		12/21/2011 12:02	1	TAL DEN	JAD
A:9251	LCSD 280-100757/57		280-100757		12/20/2011 10:40	1	TAL DEN	AJA
A:SM 2320B	LCSD 280-101067/32		280-101067		12/21/2011 14:27	1	TAL DEN	DE
A:SM 2320B	LCSD 280-101151/5		280-101151		12/22/2011 09:02	1	TAL DEN	DE
A:SM 2540C	LCSD 280-100854/3		280-100854		12/21/2011 06:40	1	TAL DEN	BJD
A:SM 2540C	LCSD 280-100858/3		280-100858		12/21/2011 06:56	1	TAL DEN	BJD
A:SM 5310B	LCSD 280-100415/4		280-100415		12/16/2011 18:37	1	TAL DEN	GEY
A:SM 5310B	LCSD 280-100415/35		280-100415		12/17/2011 03:34	1	TAL DEN	GEY

**Quality Control Results**

Client: Waste Management

Job Number: 280-23869-1

**Laboratory Chronicle**

Lab ID: MRL

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	MRL 280-100874/3		280-100874		12/20/2011 11:03	1	TAL DEN	EK

Lab ID: MS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	480-14152-H-7 MS		480-46174		12/28/2011 17:50	1	TAL BUF	LH
A:8260B	480-14152-H-7 MS		480-46174		12/28/2011 17:50	1	TAL BUF	LH
P:3005A	280-23858-A-47-B MS		280-100646	280-100340	12/19/2011 14:00	1	TAL DEN	JM
A:6010B	280-23858-A-47-B MS		280-100646	280-100340	12/20/2011 01:19	1	TAL DEN	JKH
P:3005A	280-23858-A-47-E MS		280-100900	280-100342	12/19/2011 14:00	1	TAL DEN	JM
A:6020	280-23858-A-47-E MS		280-100900	280-100342	12/20/2011 21:13	1	TAL DEN	TEL
A:300.0	280-23767-A-6 MS		280-100874		12/20/2011 13:34	1	TAL DEN	EK
A:350.1	280-23838-B-6 MS		280-101025		12/21/2011 12:27	1	TAL DEN	JAD
A:9251	280-23948-C-2 MS		280-100757		12/20/2011 10:44	1	TAL DEN	AJA
A:SM 5310B	280-23838-B-2 MS		280-100415		12/16/2011 23:34	1	TAL DEN	GEY

Lab ID: MSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	480-14152-H-7 MSD		480-46174		12/28/2011 18:14	1	TAL BUF	LH
A:8260B	480-14152-H-7 MSD		480-46174		12/28/2011 18:14	1	TAL BUF	LH
P:3005A	280-23858-A-47-C MSD		280-100646	280-100340	12/19/2011 14:00	1	TAL DEN	JM
A:6010B	280-23858-A-47-C MSD		280-100646	280-100340	12/20/2011 01:22	1	TAL DEN	JKH
P:3005A	280-23858-A-47-F MSD		280-100900	280-100342	12/19/2011 14:00	1	TAL DEN	JM
A:6020	280-23858-A-47-F MSD		280-100900	280-100342	12/20/2011 21:15	1	TAL DEN	TEL
A:300.0	280-23767-A-6 MSD		280-100874		12/20/2011 13:52	1	TAL DEN	EK
A:350.1	280-23838-B-6 MSD		280-101025		12/21/2011 12:29	1	TAL DEN	JAD
A:9251	280-23948-C-2 MSD		280-100757		12/20/2011 10:52	1	TAL DEN	AJA
A:SM 5310B	280-23838-B-2 MSD		280-100415		12/16/2011 23:52	1	TAL DEN	GEY

## Quality Control Results

Client: Waste Management

Job Number: 280-23869-1

### Laboratory Chronicle

Lab ID: DU

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2320B	280-23843-A-1 DU		280-101067		12/21/2011 14:53	1	TAL DEN	DE
A:SM 2540C	280-23852-B-2 DU		280-100854		12/21/2011 06:40	1	TAL DEN	BJD

#### Lab References:

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver



## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-23869-1

**Login Number: 23869**  
**List Number: 1**  
**Creator: Bindel, Aaron M**

**List Source: TestAmerica Denver**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	NONE
There are no discrepancies between the sample IDs on the containers and the COC.	False	RCVD 3 TB'S COC LISTS 4
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	False	UNKNOWN
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-23869-1

**Login Number: 23869**  
**List Number: 1**  
**Creator: Wienke, Robert**

**List Source: TestAmerica Buffalo**  
**List Creation: 12/17/11 12:35 PM**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	False	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

## ANALYTICAL REPORT

Job Number: 280-23895-1

Job Description: WA02|Olympic View Sanitary LF

For:

Waste Management  
2400 West Union Avenue  
Englewood, CO 80110

Attention: Mr. Steve Richtel



Approved for release.  
Betsy A Sara  
Project Manager II  
1/5/2012 9:16 AM

---

Betsy A Sara  
Project Manager II  
betsy.sara@testamericainc.com  
01/05/2012

cc: Mr. Sam Adlington  
Mr. Charles Luckie  
Ms. Emily Smart  
Mr. Dan Venchiarutti

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

**TestAmerica Laboratories, Inc.**

TestAmerica Denver 4955 Yarrow Street, Arvada, CO 80002  
Tel (303) 736-0100 Fax (303) 431-7171 [www.testamericainc.com](http://www.testamericainc.com)



# Table of Contents

Cover Title Page . . . . .	1
Report Narrative . . . . .	3
Executive Summary . . . . .	4
Method Summary . . . . .	5
Method / Analyst Summary . . . . .	6
Sample Summary . . . . .	7
Sample Results . . . . .	8
Sample Datasheets . . . . .	9
Data Qualifiers . . . . .	12
QC Results . . . . .	13
Qc Association Summary . . . . .	14
Qc Reports . . . . .	17
Laboratory Chronicle . . . . .	32
Client Chain of Custody . . . . .	35
Sample Receipt Checklist . . . . .	37



## CASE NARRATIVE

**Client: Waste Management**

**Project: WA02|Olympic View Sanitary LF**

**Report Number: 280-23895-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

This report may include reporting limits (RLs) less than TestAmerica's standard reporting limit. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

### **Sample Receiving**

The sample was received on 12/16/2011; the sample arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 4.1°C.

### **Holding Times**

All holding times were within established control limits.

### **Method Blanks**

Alkalinity Method 2320B was detected in the Method Blank below the project established reporting limits. No corrective action is taken for any values in Method Blanks that are below the requested reporting limits. The Method Blank data are included at the end of this report.

All other Method Blank recoveries were within established control limits.

### **Laboratory Control Samples (LCS)**

All Laboratory Control Samples were within established control limits.

### **Matrix Spike (MS) and Matrix Spike Duplicate (MSD)**

The Matrix Spike and Matrix Spike Duplicate performed on a sample from another client exhibited recoveries outside control limits for Ammonia Method 350.1. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, this anomaly may be due to matrix interference and no corrective action was taken.

All other MS and MSD samples were within established control limits.

### **Sample Duplicate**

The RPD for Alkalinity Method 2320B performed on a sample from another client was outside control limits. Because all other QC and calibration criteria were met no corrective action was needed.

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-23895-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-23895-23</b>	<b>LP-LCD121511</b>					
Specific Conductivity		3641			umhos/cm	Field Sampling
Dissolved Oxygen		9.6			mg/L	Field Sampling
eH		-13.4			millivolts	Field Sampling
Temperature		10.2			Degrees C	Field Sampling
pH		7.16			SU	Field Sampling
Sulfate		200		5.0	mg/L	300.0
Ammonia (as N)		5.8		0.030	mg/L	350.1
Chloride		750		5.0	mg/L	9251
Alkalinity		950	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity as CaCO3		950		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		2600		10	mg/L	SM 2540C
Total Organic Carbon - Average		62		5.0	mg/L	SM 5310B
<b><i>Total Recoverable</i></b>						
Calcium, Total		54		0.040	mg/L	6010B
Iron, Total		2.5		0.060	mg/L	6010B
Magnesium, Total		33		0.050	mg/L	6010B
Manganese, Total		1.6		0.050	mg/L	6010B
Potassium, Total		68		1.0	mg/L	6010B
Sodium, Total		950		1.0	mg/L	6010B

## METHOD SUMMARY

Client: Waste Management

Job Number: 280-23895-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Metals (ICP) Preparation, Total Recoverable or Dissolved Metals	TAL DEN	SW846 6010B	SW846 3005A
Anions, Ion Chromatography	TAL DEN	MCAWW 300.0	
Nitrogen, Ammonia	TAL DEN	MCAWW 350.1	
Chloride	TAL DEN	SW846 9251	
Alkalinity	TAL DEN	SM SM 2320B	
Solids, Total Dissolved (TDS)	TAL DEN	SM SM 2540C	
Organic Carbon, Total (TOC)	TAL DEN	SM SM 5310B	
Field Sampling	TAL DEN	EPA Field Sampling	

### Lab References:

TAL DEN = TestAmerica Denver

### Method References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

## METHOD / ANALYST SUMMARY

Client: Waste Management

Job Number: 280-23895-1

<b>Method</b>	<b>Analyst</b>	<b>Analyst ID</b>
SW846 6010B	Harre, John K	JKH
EPA Field Sampling	Field, Sampler	FS
MCAWW 300.0	Phan, Thu L	TLP
MCAWW 350.1	Doherty, Jillian A	JAD
SW846 9251	Allen, Andrew J	AJA
SM SM 2320B	Elkin, David	DE
SM SM 2540C	Gheorghe, Philip A	PAG
SM SM 5310B	Yates, George E	GEY

## SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-23895-1

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
280-23895-23	LP-LCD121511	Water	12/15/2011 1222	12/16/2011 0930

# SAMPLE RESULTS

**Analytical Data**

Client: Waste Management

Job Number: 280-23895-1

**Client Sample ID:** LP-LCD121511

Lab Sample ID: 280-23895-23

Date Sampled: 12/15/2011 1222

Client Matrix: Water

Date Received: 12/16/2011 0930

---

**6010B Metals (ICP)-Total Recoverable**

Analysis Method:	6010B	Analysis Batch:	280-101275	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-100517	Lab File ID:	25A1122211.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/22/2011 1713			Final Weight/Volume:	50 mL
Prep Date:	12/21/2011 1400				

---

Analyte	Result (mg/L)	Qualifier	MDL	RL
Calcium, Total	54		0.035	0.040
Iron, Total	2.5		0.022	0.060
Magnesium, Total	33		0.011	0.050
Manganese, Total	1.6		0.00025	0.050
Potassium, Total	68		0.24	1.0
Sodium, Total	950		0.092	1.0

Client: Waste Management

Job Number: 280-23895-1

General Chemistry

Client Sample ID: LP-LCD121511

Lab Sample ID: 280-23895-23

Date Sampled: 12/15/2011 1222

Client Matrix: Water

Date Received: 12/16/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Sulfate	200		mg/L	1.2	5.0	5.0	300.0
	Analysis Batch: 280-100996	Analysis Date: 12/21/2011 1021					
Ammonia (as N)	5.8		mg/L	0.022	0.030	1.0	350.1
	Analysis Batch: 280-101195	Analysis Date: 12/22/2011 1512					
Chloride	750		mg/L	5.0	5.0	5.0	9251
	Analysis Batch: 280-100757	Analysis Date: 12/20/2011 1157					
Alkalinity	950	B	mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101225	Analysis Date: 12/22/2011 1514					
Bicarbonate Alkalinity as CaCO3	950		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101225	Analysis Date: 12/22/2011 1514					
Alkalinity, Carbonate (As CaCO3)	ND		mg/L	1.1	5.0	1.0	SM 2320B
	Analysis Batch: 280-101225	Analysis Date: 12/22/2011 1514					
Total Dissolved Solids (TDS)	2600		mg/L	9.4	10	1.0	SM 2540C
	Analysis Batch: 280-101216	Analysis Date: 12/22/2011 1934					
Total Organic Carbon - Average	62		mg/L	0.78	5.0	5.0	SM 5310B
	Analysis Batch: 280-101153	Analysis Date: 12/21/2011 1841					



Client: Waste Management

Job Number: 280-23895-1

Field Service / Mobile Lab

Client Sample ID: LP-LCD121511

Lab Sample ID: 280-23895-23

Date Sampled: 12/15/2011 1222

Client Matrix: Water

Date Received: 12/16/2011 0930

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed	Date Prepared
Specific Conductivity	3641		umhos/cm	1.0	Field Sampling	280-100507	12/15/2011	1222
Dissolved Oxygen	9.6		mg/L	1.0	Field Sampling	280-100507	12/15/2011	1222
eH	-13.4		millivolts	1.0	Field Sampling	280-100507	12/15/2011	1222
Temperature	10.2		Degrees C	1.0	Field Sampling	280-100507	12/15/2011	1222
pH	7.16		SU	1.0	Field Sampling	280-100507	12/15/2011	1222

## DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-23895-1

<b>Lab Section</b>	<b>Qualifier</b>	<b>Description</b>
Metals		
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
General Chemistry		
	B	Compound was found in the blank and sample.
	F	MS or MSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

# QUALITY CONTROL RESULTS

## Quality Control Results

Client: Waste Management

Job Number: 280-23895-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Prep Batch: 280-100517</b>					
LCS 280-100517/2-A	Lab Control Sample	R	Water	3005A	
MB 280-100517/1-A	Method Blank	R	Water	3005A	
280-23877-F-1-C MS	Matrix Spike	R	Water	3005A	
280-23877-F-1-D MSD	Matrix Spike Duplicate	R	Water	3005A	
280-23895-23	LP-LCD121511	R	Water	3005A	
<b>Analysis Batch:280-101275</b>					
LCS 280-100517/2-A	Lab Control Sample	R	Water	6010B	280-100517
MB 280-100517/1-A	Method Blank	R	Water	6010B	280-100517
280-23877-F-1-C MS	Matrix Spike	R	Water	6010B	280-100517
280-23877-F-1-D MSD	Matrix Spike Duplicate	R	Water	6010B	280-100517
280-23895-23	LP-LCD121511	R	Water	6010B	280-100517

**Report Basis**

R = Total Recoverable

**Field Service / Mobile Lab**

<b>Analysis Batch:280-100507</b>					
280-23895-23	LP-LCD121511	T	Water	Field Sampling	

**Report Basis**

T = Total

## Quality Control Results

Client: Waste Management

Job Number: 280-23895-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-100757</b>					
LCS 280-100757/99	Lab Control Sample	T	Water	9251	
LCSD 280-100757/100	Lab Control Sample Duplicate	T	Water	9251	
MB 280-100757/101	Method Blank	T	Water	9251	
280-23764-B-6 MS	Matrix Spike	T	Water	9251	
280-23764-B-6 MSD	Matrix Spike Duplicate	T	Water	9251	
280-23895-23	LP-LCD121511	T	Water	9251	
<b>Analysis Batch:280-100996</b>					
LCS 280-100996/12	Lab Control Sample	T	Water	300.0	
LCSD 280-100996/13	Lab Control Sample Duplicate	T	Water	300.0	
MB 280-100996/14	Method Blank	T	Water	300.0	
280-23878-A-1 DU	Duplicate	T	Water	300.0	
280-23878-A-1 MS	Matrix Spike	T	Water	300.0	
280-23878-A-1 MSD	Matrix Spike Duplicate	T	Water	300.0	
280-23895-23	LP-LCD121511	T	Water	300.0	
<b>Analysis Batch:280-101153</b>					
LCS 280-101153/3	Lab Control Sample	T	Water	SM 5310B	
LCSD 280-101153/4	Lab Control Sample Duplicate	T	Water	SM 5310B	
MB 280-101153/5	Method Blank	T	Water	SM 5310B	
280-23769-A-13 MS	Matrix Spike	T	Water	SM 5310B	
280-23769-A-13 MSD	Matrix Spike Duplicate	T	Water	SM 5310B	
280-23895-23	LP-LCD121511	T	Water	SM 5310B	
<b>Analysis Batch:280-101195</b>					
LCS 280-101195/21	Lab Control Sample	T	Water	350.1	
LCSD 280-101195/22	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-101195/20	Method Blank	T	Water	350.1	
280-23895-23	LP-LCD121511	T	Water	350.1	
280-23943-B-3 MS	Matrix Spike	T	Water	350.1	
280-23943-B-3 MSD	Matrix Spike Duplicate	T	Water	350.1	
<b>Analysis Batch:280-101216</b>					
LCS 280-101216/2	Lab Control Sample	T	Water	SM 2540C	
LCSD 280-101216/3	Lab Control Sample Duplicate	T	Water	SM 2540C	
MB 280-101216/1	Method Blank	T	Water	SM 2540C	
280-23879-B-32 DU	Duplicate	T	Water	SM 2540C	
280-23895-23	LP-LCD121511	T	Water	SM 2540C	
<b>Analysis Batch:280-101225</b>					
LCS 280-101225/4	Lab Control Sample	T	Water	SM 2320B	
LCSD 280-101225/5	Lab Control Sample Duplicate	T	Water	SM 2320B	
MB 280-101225/6	Method Blank	T	Water	SM 2320B	
280-23880-A-1 DU	Duplicate	T	Water	SM 2320B	
280-23895-23	LP-LCD121511	T	Water	SM 2320B	

TestAmerica Denver

**Quality Control Results**

Client: Waste Management

Job Number: 280-23895-1

**QC Association Summary**

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Report Basis</b>	<b>Client Matrix</b>	<b>Method</b>	<b>Prep Batch</b>
----------------------	-------------------------	---------------------	----------------------	---------------	-------------------

---

**Report Basis**

T = Total

**Quality Control Results**

Client: Waste Management

Job Number: 280-23895-1

**Method Blank - Batch: 280-100517**

Lab Sample ID: MB 280-100517/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/22/2011 1659  
 Prep Date: 12/21/2011 1400  
 Leach Date: N/A

Analysis Batch: 280-101275  
 Prep Batch: 280-100517  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_025  
 Lab File ID: 25A1122211.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Calcium, Total	ND		0.035	0.040
Iron, Total	ND		0.022	0.060
Magnesium, Total	ND		0.011	0.050
Manganese, Total	ND		0.00025	0.050
Potassium, Total	ND		0.24	1.0
Sodium, Total	ND		0.092	1.0

**Lab Control Sample - Batch: 280-100517**

Lab Sample ID: LCS 280-100517/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/22/2011 1702  
 Prep Date: 12/21/2011 1400  
 Leach Date: N/A

Analysis Batch: 280-101275  
 Prep Batch: 280-100517  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_025  
 Lab File ID: 25A1122211.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Calcium, Total	50.0	49.5	99	90 - 111	
Iron, Total	1.00	1.01	101	89 - 115	
Magnesium, Total	50.0	50.0	100	90 - 113	
Manganese, Total	0.500	0.501	100	90 - 110	
Potassium, Total	50.0	50.4	101	89 - 114	
Sodium, Total	50.0	51.1	102	90 - 115	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23895-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100517**

**Method: 6010B  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-23877-F-1-C MS  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/22/2011 1709  
Prep Date: 12/21/2011 1400  
Leach Date: N/A

Analysis Batch: 280-101275  
Prep Batch: 280-100517  
Leach Batch: N/A

Instrument ID: MT\_025  
Lab File ID: 25A1122211.asc  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-23877-F-1-D MSD  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/22/2011 1711  
Prep Date: 12/21/2011 1400  
Leach Date: N/A

Analysis Batch: 280-101275  
Prep Batch: 280-100517  
Leach Batch: N/A

Instrument ID: MT\_025  
Lab File ID: 25A1122211.asc  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Calcium, Total	99	98	48 - 153	1	20		
Iron, Total	92	90	52 - 155	0	20	4	4
Magnesium, Total	100	101	62 - 146	0	20		
Manganese, Total	100	99	79 - 121	1	20		
Potassium, Total	101	100	76 - 132	1	20		
Sodium, Total	103	103	70 - 203	1	20		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100517**

**Method: 6010B  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-23877-F-1-C MS      Units: mg/L  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/22/2011 1709  
Prep Date: 12/21/2011 1400  
Leach Date: N/A

MSD Lab Sample ID: 280-23877-F-1-D MSD  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/22/2011 1711  
Prep Date: 12/21/2011 1400  
Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS		MSD	
				Result/Qual		Result/Qual	
Calcium, Total	20	50.0	50.0	69.9		69.2	
Iron, Total	5.2	1.00	1.00	6.08	4	6.06	4
Magnesium, Total	3.7	50.0	50.0	53.9		53.9	
Manganese, Total	0.13	0.500	0.500	0.630		0.625	
Potassium, Total	5.3	50.0	50.0	56.0		55.4	
Sodium, Total	6.2	50.0	50.0	57.9		57.6	



**Quality Control Results**

Client: Waste Management

Job Number: 280-23895-1

**Method Blank - Batch: 280-100996**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	MB 280-100996/14	Analysis Batch:	280-100996	Instrument ID:	WC_IC7
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	113.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1531	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Sulfate	ND		0.23	1.0

**Method Reporting Limit Check - Batch: 280-100996**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	MRL 280-100996/11	Analysis Batch:	280-100996	Instrument ID:	WC_IC7
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	110.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1443	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sulfate	1.00	0.898	90	50 - 150	J

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-100996**

**Method: 300.0**  
**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100996/12	Analysis Batch:	280-100996	Instrument ID:	WC_IC7
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	111.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1459	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-100996/13	Analysis Batch:	280-100996	Instrument ID:	WC_IC7
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	112.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1515	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Sulfate	98	99	90 - 110	0	10		

**Quality Control Results**

Client: Waste Management

Job Number: 280-23895-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-100996**

**Method: 300.0  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-100996/12 Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 1459  
 Prep Date: N/A  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 280-100996/13  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 1515  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Sulfate	25.0	25.0	24.5	24.6

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100996**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 280-23878-A-1 MS Analysis Batch: 280-100996  
 Client Matrix: Water Prep Batch: N/A  
 Dilution: 1.0 Leach Batch: N/A  
 Analysis Date: 12/20/2011 1737  
 Prep Date: N/A  
 Leach Date: N/A

Instrument ID: WC\_IC7  
 Lab File ID: 121.TXT  
 Initial Weight/Volume: 1.0 mL  
 Final Weight/Volume: 5 mL

MSD Lab Sample ID: 280-23878-A-1 MSD Analysis Batch: 280-100996  
 Client Matrix: Water Prep Batch: N/A  
 Dilution: 1.0 Leach Batch: N/A  
 Analysis Date: 12/20/2011 1753  
 Prep Date: N/A  
 Leach Date: N/A

Instrument ID: WC\_IC7  
 Lab File ID: 122.TXT  
 Initial Weight/Volume: 1.0 mL  
 Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Sulfate	97	99	80 - 120	2	20		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100996**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 280-23878-A-1 MS Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 1737  
 Prep Date: N/A  
 Leach Date: N/A

MSD Lab Sample ID: 280-23878-A-1 MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2011 1753  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Sulfate	3.1	25.0	25.0	27.5	27.9

**Quality Control Results**

Client: Waste Management

Job Number: 280-23895-1

**Duplicate - Batch: 280-100996**

**Method: 300.0  
Preparation: N/A**

Lab Sample ID: 280-23878-A-1 DU  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/20/2011 1721  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-100996  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: WC\_IC7  
Lab File ID: 120.TXT  
Initial Weight/Volume: 1.0 mL  
Final Weight/Volume: 1.0 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Sulfate	3.1	3.15	0.9	15	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23895-1

**Method Blank - Batch: 280-101195**

Lab Sample ID: MB 280-101195/20  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/22/2011 1436  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-101195  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

**Method: 350.1  
 Preparation: N/A**

Instrument ID: WC\_Alph 2  
 Lab File ID: C:\FLOW\_4\1222C.RS  
 Initial Weight/Volume: 1.0 mL  
 Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Ammonia (as N)	ND		0.022	0.030

**Lab Control Sample/  
 Lab Control Sample Duplicate Recovery Report - Batch: 280-101195**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-101195/21  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/22/2011 1437  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-101195  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 2  
 Lab File ID: C:\FLOW\_4\1222C.RS  
 Initial Weight/Volume: 100 mL  
 Final Weight/Volume: 100 mL

LCSD Lab Sample ID: LCSD 280-101195/22  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/22/2011 1439  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-101195  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 2  
 Lab File ID: C:\FLOW\_4\1222C.RS  
 Initial Weight/Volume: 100 mL  
 Final Weight/Volume: 100 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Ammonia (as N)	99	100	90 - 110	1	10		

**Laboratory Control/  
 Laboratory Duplicate Data Report - Batch: 280-101195**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-101195/21  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/22/2011 1437  
 Prep Date: N/A  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-101195/22  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/22/2011 1439  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia (as N)	5.00	5.00	4.94	5.00

**Quality Control Results**

Client: Waste Management

Job Number: 280-23895-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-101195**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-23943-B-3 MS	Analysis Batch: 280-101195	Instrument ID: WC_Alph 2
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C:\FLOW_4\1222C.RS
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/22/2011 1504		Final Weight/Volume: 5 mL
Prep Date: N/A		
Leach Date: N/A		

MSD Lab Sample ID: 280-23943-B-3 MSD	Analysis Batch: 280-101195	Instrument ID: WC_Alph 2
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C:\FLOW_4\1222C.RS
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/22/2011 1506		Final Weight/Volume: 5 mL
Prep Date: N/A		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Ammonia (as N)	50	50	90 - 110	2	20	F	F

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-101195**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-23943-B-3 MS	Units: mg/L	MSD Lab Sample ID: 280-23943-B-3 MSD
Client Matrix: Water		Client Matrix: Water
Dilution: 1.0		Dilution: 1.0
Analysis Date: 12/22/2011 1504		Analysis Date: 12/22/2011 1506
Prep Date: N/A		Prep Date: N/A
Leach Date: N/A		Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Ammonia (as N)	0.063	4.00	4.00	2.05 F	2.08 F

**Quality Control Results**

Client: Waste Management

Job Number: 280-23895-1

**Method Blank - Batch: 280-100757**

**Method: 9251  
Preparation: N/A**

Lab Sample ID:	MB 280-100757/101	Analysis Batch:	280-100757	Instrument ID:	WC_Alph 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL122011.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1132	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chloride	ND		1.0	1.0

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-100757**

**Method: 9251  
Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100757/99	Analysis Batch:	280-100757	Instrument ID:	WC_Alph 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL122011.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1129	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-100757/100	Analysis Batch:	280-100757	Instrument ID:	WC_Alph 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL122011.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/20/2011 1130	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Chloride	103	102	90 - 110	1	10		

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-100757**

**Method: 9251  
Preparation: N/A**

LCS Lab Sample ID:	LCS 280-100757/99	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-100757/100
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/20/2011 1129			Analysis Date:	12/20/2011 1130
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Chloride	25.0	25.0	25.8	25.4

**Quality Control Results**

Client: Waste Management

Job Number: 280-23895-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100757**

**Method: 9251  
Preparation: N/A**

MS Lab Sample ID: 280-23764-B-6 MS	Analysis Batch: 280-100757	Instrument ID: WC_Alp 1
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C:\FLOW_4\CL122011.
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 1.0 mL
Analysis Date: 12/20/2011 1133		Final Weight/Volume: 10 mL
Prep Date: N/A		
Leach Date: N/A		

MSD Lab Sample ID: 280-23764-B-6 MSD	Analysis Batch: 280-100757	Instrument ID: WC_Alp 1
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C:\FLOW_4\CL122011.
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 1.0 mL
Analysis Date: 12/20/2011 1134		Final Weight/Volume: 10 mL
Prep Date: N/A		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chloride	98	98	90 - 110	0	10		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-100757**

**Method: 9251  
Preparation: N/A**

MS Lab Sample ID: 280-23764-B-6 MS	Units: mg/L	MSD Lab Sample ID: 280-23764-B-6 MSD
Client Matrix: Water		Client Matrix: Water
Dilution: 1.0		Dilution: 1.0
Analysis Date: 12/20/2011 1133		Analysis Date: 12/20/2011 1134
Prep Date: N/A		Prep Date: N/A
Leach Date: N/A		Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chloride	3.2	50.0	50.0	52.3	52.4

**Quality Control Results**

Client: Waste Management

Job Number: 280-23895-1

**Method Blank - Batch: 280-101225**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID: MB 280-101225/6  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/22/2011 1445  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-101225  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_AT2  
 Lab File ID: 122211a.TXT  
 Initial Weight/Volume: 1.0 mL  
 Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Alkalinity	1.30	J	1.1	5.0
Bicarbonate Alkalinity as CaCO3	ND		1.1	5.0
Alkalinity, Carbonate (As CaCO3)	ND		1.1	5.0

**Lab Control Sample/**

**Method: SM 2320B**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-101225**

**Preparation: N/A**

LCS Lab Sample ID: LCS 280-101225/4  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/22/2011 1427  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-101225  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_AT2  
 Lab File ID: 122211a.TXT  
 Initial Weight/Volume: 1.0 mL  
 Final Weight/Volume: 1.0 mL

LCSD Lab Sample ID: LCSD 280-101225/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/22/2011 1437  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-101225  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_AT2  
 Lab File ID: 122211a.TXT  
 Initial Weight/Volume: 1.0 mL  
 Final Weight/Volume: 1.0 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Alkalinity	103	103	90 - 110	0	10		

**Laboratory Control/**

**Method: SM 2320B**

**Laboratory Duplicate Data Report - Batch: 280-101225**

**Preparation: N/A**

LCS Lab Sample ID: LCS 280-101225/4  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/22/2011 1427  
 Prep Date: N/A  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-101225/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/22/2011 1437  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Alkalinity	200	200	206	206



**Quality Control Results**

Client: Waste Management

Job Number: 280-23895-1

**Duplicate - Batch: 280-101225**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID: 280-23880-A-1 DU  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/22/2011 1455  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-101225  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: WC\_AT2  
Lab File ID: 122211a.TXT  
Initial Weight/Volume: 1.0 mL  
Final Weight/Volume: 1.0 mL

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Alkalinity	2.6	J	2.97	14	10	J

**Quality Control Results**

Client: Waste Management

Job Number: 280-23895-1

**Method Blank - Batch: 280-101216**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	MB 280-101216/1	Analysis Batch:	280-101216	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/22/2011 1934	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Dissolved Solids (TDS)	ND		4.7	5.0

**Lab Control Sample/**

**Method: SM 2540C**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-101216**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-101216/2	Analysis Batch:	280-101216	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/22/2011 1934	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-101216/3	Analysis Batch:	280-101216	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/22/2011 1934	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Dissolved Solids (TDS)	101	99	86 - 110	1	20		

**Laboratory Control/**

**Method: SM 2540C**

**Laboratory Duplicate Data Report - Batch: 280-101216**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-101216/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-101216/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/22/2011 1934			Analysis Date:	12/22/2011 1934
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Dissolved Solids (TDS)	500	500	503	496

## Quality Control Results

Client: Waste Management

Job Number: 280-23895-1

**Duplicate - Batch: 280-101216**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	280-23879-B-32 DU	Analysis Batch:	280-101216	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/22/2011 1934	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Dissolved Solids (TDS)	600	598	0.3	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-23895-1

**Method Blank - Batch: 280-101153**

**Method: SM 5310B**

**Preparation: N/A**

Lab Sample ID:	MB 280-101153/5	Analysis Batch:	280-101153	Instrument ID:	WC_SHI3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122111.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	12/21/2011 1721	Units:	mg/L	Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Organic Carbon - Average	ND		0.16	1.0

**Lab Control Sample/**

**Method: SM 5310B**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-101153**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-101153/3	Analysis Batch:	280-101153	Instrument ID:	WC_SHI3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122111.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	12/21/2011 1652	Units:	mg/L	Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-101153/4	Analysis Batch:	280-101153	Instrument ID:	WC_SHI3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122111.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	12/21/2011 1706	Units:	mg/L	Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Organic Carbon - Average	98	98	88 - 112	0	15		

**Laboratory Control/**

**Method: SM 5310B**

**Laboratory Duplicate Data Report - Batch: 280-101153**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-101153/3	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-101153/4
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/21/2011 1652			Analysis Date:	12/21/2011 1706
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Organic Carbon - Average	25.0	25.0	24.5	24.4

**Quality Control Results**

Client: Waste Management

Job Number: 280-23895-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-101153**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID:	280-23769-A-13 MS	Analysis Batch:	280-101153	Instrument ID:	WC_SHI3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122111.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/21/2011 1752			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-23769-A-13 MSD	Analysis Batch:	280-101153	Instrument ID:	WC_SHI3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122111.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/21/2011 1807			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Total Organic Carbon - Average	98	98	88 - 112	0	15		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-101153**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID:	280-23769-A-13 MS	Units:	mg/L	MSD Lab Sample ID:	280-23769-A-13 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/21/2011 1752			Analysis Date:	12/21/2011 1807
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Total Organic Carbon - Average	3.5	25.0	25.0	27.9	28.0

## Quality Control Results

Client: Waste Management

Job Number: 280-23895-1

### Laboratory Chronicle

Lab ID: 280-23895-23

Client ID: LP-LCD121511

Sample Date/Time: 12/15/2011 12:22

Received Date/Time: 12/16/2011 09:30

Method	Bottle ID	Run	Analysis		Date Prepared /		Dil	Lab	Analyst
			Batch	Prep Batch	AnalYZed				
P:3005A	280-23895-D-23-A		280-101275	280-100517	12/21/2011	14:00	1	TAL DEN	JM
A:6010B	280-23895-D-23-A		280-101275	280-100517	12/22/2011	17:13	1	TAL DEN	JKH
A:300.0	280-23895-A-23		280-100996		12/21/2011	10:21	5	TAL DEN	TLP
A:350.1	280-23895-B-23		280-101195		12/22/2011	15:12	1	TAL DEN	JAD
A:9251	280-23895-A-23		280-100757		12/20/2011	11:57	5	TAL DEN	AJA
A:SM 2320B	280-23895-A-23		280-101225		12/22/2011	15:14	1	TAL DEN	DE
A:SM 2540C	280-23895-A-23		280-101216		12/22/2011	19:34	1	TAL DEN	PAG
A:SM 5310B	280-23895-B-23		280-101153		12/21/2011	18:41	5	TAL DEN	GEY
A:Field Sampling	280-23895-A-23		280-100507		12/15/2011	12:22	1	TAL DEN	FS

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis		Date Prepared /		Dil	Lab	Analyst
			Batch	Prep Batch	AnalYZed				
P:3005A	MB 280-100517/1-A		280-101275	280-100517	12/21/2011	14:00	1	TAL DEN	JM
A:6010B	MB 280-100517/1-A		280-101275	280-100517	12/22/2011	16:59	1	TAL DEN	JKH
A:300.0	MB 280-100996/14		280-100996		12/20/2011	15:31	1	TAL DEN	TLP
A:350.1	MB 280-101195/20		280-101195		12/22/2011	14:36	1	TAL DEN	JAD
A:9251	MB 280-100757/101		280-100757		12/20/2011	11:32	1	TAL DEN	AJA
A:SM 2320B	MB 280-101225/6		280-101225		12/22/2011	14:45	1	TAL DEN	DE
A:SM 2540C	MB 280-101216/1		280-101216		12/22/2011	19:34	1	TAL DEN	PAG
A:SM 5310B	MB 280-101153/5		280-101153		12/21/2011	17:21	1	TAL DEN	GEY

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis		Date Prepared /		Dil	Lab	Analyst
			Batch	Prep Batch	AnalYZed				
P:3005A	LCS 280-100517/2-A		280-101275	280-100517	12/21/2011	14:00	1	TAL DEN	JM
A:6010B	LCS 280-100517/2-A		280-101275	280-100517	12/22/2011	17:02	1	TAL DEN	JKH
A:300.0	LCS 280-100996/12		280-100996		12/20/2011	14:59	1	TAL DEN	TLP
A:350.1	LCS 280-101195/21		280-101195		12/22/2011	14:37	1	TAL DEN	JAD
A:9251	LCS 280-100757/99		280-100757		12/20/2011	11:29	1	TAL DEN	AJA
A:SM 2320B	LCS 280-101225/4		280-101225		12/22/2011	14:27	1	TAL DEN	DE
A:SM 2540C	LCS 280-101216/2		280-101216		12/22/2011	19:34	1	TAL DEN	PAG
A:SM 5310B	LCS 280-101153/3		280-101153		12/21/2011	16:52	1	TAL DEN	GEY

**Quality Control Results**

Client: Waste Management

Job Number: 280-23895-1

**Laboratory Chronicle**

Lab ID: LCSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	LCSD 280-100996/13		280-100996		12/20/2011 15:15	1	TAL DEN	TLP
A:350.1	LCSD 280-101195/22		280-101195		12/22/2011 14:39	1	TAL DEN	JAD
A:9251	LCSD 280-100757/100		280-100757		12/20/2011 11:30	1	TAL DEN	AJA
A:SM 2320B	LCSD 280-101225/5		280-101225		12/22/2011 14:37	1	TAL DEN	DE
A:SM 2540C	LCSD 280-101216/3		280-101216		12/22/2011 19:34	1	TAL DEN	PAG
A:SM 5310B	LCSD 280-101153/4		280-101153		12/21/2011 17:06	1	TAL DEN	GEY

Lab ID: MRL

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	MRL 280-100996/11		280-100996		12/20/2011 14:43	1	TAL DEN	TLP

Lab ID: MS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-23877-F-1-C MS		280-101275	280-100517	12/21/2011 14:00	1	TAL DEN	JM
A:6010B	280-23877-F-1-C MS		280-101275	280-100517	12/22/2011 17:09	1	TAL DEN	JKH
A:300.0	280-23878-A-1 MS		280-100996		12/20/2011 17:37	1	TAL DEN	TLP
A:350.1	280-23943-B-3 MS		280-101195		12/22/2011 15:04	1	TAL DEN	JAD
A:9251	280-23764-B-6 MS		280-100757		12/20/2011 11:33	1	TAL DEN	AJA
A:SM 5310B	280-23769-A-13 MS		280-101153		12/21/2011 17:52	1	TAL DEN	GEY

Lab ID: MSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-23877-F-1-D MSD		280-101275	280-100517	12/21/2011 14:00	1	TAL DEN	JM
A:6010B	280-23877-F-1-D MSD		280-101275	280-100517	12/22/2011 17:11	1	TAL DEN	JKH
A:300.0	280-23878-A-1 MSD		280-100996		12/20/2011 17:53	1	TAL DEN	TLP
A:350.1	280-23943-B-3 MSD		280-101195		12/22/2011 15:06	1	TAL DEN	JAD
A:9251	280-23764-B-6 MSD		280-100757		12/20/2011 11:34	1	TAL DEN	AJA
A:SM 5310B	280-23769-A-13 MSD		280-101153		12/21/2011 18:07	1	TAL DEN	GEY

## Quality Control Results

Client: Waste Management

Job Number: 280-23895-1

### Laboratory Chronicle

Lab ID: DU

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-23878-A-1 DU		280-100996		12/20/2011 17:21	1	TAL DEN	TLP
A:SM 2320B	280-23880-A-1 DU		280-101225		12/22/2011 14:55	1	TAL DEN	DE
A:SM 2540C	280-23879-B-32 DU		280-101216		12/22/2011 19:34	1	TAL DEN	PAG

#### Lab References:

TAL DEN = TestAmerica Denver







## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-23895-1

Login Number: 23895

List Source: TestAmerica Denver

List Number: 1

Creator: Cofoid, Stephen T

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	

## ANALYTICAL REPORT

Job Number: 280-24404-1

Job Description: WA02|Olympic View Sanitary LF

For:

Waste Management  
2400 West Union Avenue  
Englewood, CO 80110

Attention: Mr. Steve Richtel



Approved for release.  
Betsy A Sara  
Project Manager II  
1/6/2012 4:54 PM

---

Betsy A Sara  
Project Manager II  
betsy.sara@testamericainc.com  
01/06/2012

cc: Mr. Sam Adlington  
Mr. Charles Luckie  
Ms. Emily Smart  
Mr. Dan Venchiarutti

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

**TestAmerica Laboratories, Inc.**

TestAmerica Denver 4955 Yarrow Street, Arvada, CO 80002  
Tel (303) 736-0100 Fax (303) 431-7171 [www.testamericainc.com](http://www.testamericainc.com)



# Table of Contents

Cover Title Page .....	1
Subcontracted Data .....	3



**Analytical Resources, Incorporated**  
Analytical Chemists and Consultants

4 January 2012

Betsy Sara  
Test America-Denver  
4955 Yarrow Street  
Arvada, CO 80002

**RE: Project: OVSL**  
**ARI Job Nos.: UB71, UB72**

Dear Betsy:

Please find enclosed the original Chain of Custody (COC) documentation and the final results for the samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted twenty-one water samples on December 16, 2011. The samples were received in good condition. All samples were analyzed for dissolved arsenic as requested.

No analytical complications were noted for these analyses.

Copies of these reports and all associated raw data will be kept on file at ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

*Sub Complete*  
*-FDR-*  
Mark D. Harris  
Project Manager  
206/695-6210  
[markh@arilabs.com](mailto:markh@arilabs.com)

Enclosures

cc: files UB71, UB72

MDH/bc



# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested	Standard
ARI Client Company: <b>SCS ENGINEERS</b>	Phone: <b>425 (206) 289-5443</b>	Date: <b>12/16/11</b>
Client Contact: <b>Emily Smart</b>		Page: <b>2</b> of <b>3</b>
Client Project Name: <b>ONSC</b>		No. of Coolers: _____
Client Project #: <b>04204027115</b>		Temps: _____

Analytical Resources, Incorporated  
Analytical Chemists and Consultants  
4611 South 134th Place, Suite 100  
Tukwila, WA 98168  
206-695-6200 206-695-6201 (fax)



Sample ID	Date	Time	Matrix	No Containers	Analysis Requested				Notes/Comments
					DA	SA	TA	HA	
MW-34C	12/14/11	0900	WATER	1					
MW-34A		1000							
MW-36A		1032							
MW-15R		1103							
MW-23A		1147							
MW-4		1314							
MW-19C		1456							
MW-13A		1430							
MW-13B		1502							
Comments/Special Instructions	Relinquished by (Signature): <i>[Signature]</i>				Received by (Signature): <i>[Signature]</i>	Relinquished by (Signature): _____			
	Printed Name: <b>SAM ADLINGTON</b>				Printed Name: <b>Jose Vargas</b>	Printed Name: _____			
	Company: <b>SCS</b>				Company: <b>ARI</b>	Company: _____			
	Date & Time: <b>12/16/11 1000</b>				Date & Time: <b>12-16-11 10:40</b>	Date & Time: _____			

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision in any contract, purchase order or co-signed agreement between ARI and the Client.

**Sample Retention Policy:** Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

000000





# Cooler Receipt Form

ARI Client: SCS Engineers

Project Name: OVSL

COC No(s) \_\_\_\_\_ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: \_\_\_\_\_

Assigned ARI Job No UB71

Tracking No. \_\_\_\_\_ (NA)

**Preliminary Examination Phase:**

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES (NO)

Were custody papers included with the cooler? (YES) NO

Were custody papers properly filled out (ink, signed, etc) (YES) NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 2.4

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID# 90941619

Cooler Accepted by: JW Date 12-16-11 Time 10:40

**Complete custody forms and attach all shipping documents**

**Log-In Phase:**

Was a temperature blank included in the cooler? (YES) ~~NO~~

What kind of packing material was used? ... Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: \_\_\_\_\_

Was sufficient ice used (if appropriate)? NA (YES) NO

Were all bottles sealed in individual plastic bags? (YES) (NO)

Did all bottles arrive in good condition (unbroken)? (YES) NO

Were all bottle labels complete and legible? (YES) NO

Did the number of containers listed on COC match with the number of containers received? (YES) NO

Did all bottle labels and tags agree with custody papers? (YES) NO

Were all bottles used correct for the requested analyses? (YES) NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) .. NA (YES) NO

Were all VOC vials free of air bubbles? (NA) YES NO

Was sufficient amount of sample sent in each bottle? (YES) NO

Date VOC Trip Blank was made at ARI: (NA)

Was Sample Split by ARI: (NA) YES Date/Time \_\_\_\_\_ Equipment \_\_\_\_\_ Split by: \_\_\_\_\_

Samples Logged by AV Date: 12/16/11 Time: 11:17

**\*\* Notify Project Manager of discrepancies or concerns \*\***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

**Additional Notes, Discrepancies, & Resolutions:**

By \_\_\_\_\_ Date \_\_\_\_\_

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"



ARI Job No: UB71

PC: Mark  
VTSR: 12/16/11

Inquiry Number: NONE  
Analysis Requested: 12/16/11  
Contact: Sara, Betsy  
Client: Test America  
Logged by: AV  
Sample Set Used: Yes-481  
Validatable Package: No  
Deliverables:

Project #: 040204027.15  
Project: OVSL  
Sample Site:  
SDG No:  
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET DOC FLT FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
11-28958 UB71A	MW-33C						DIS									Y					
11-28959 UB71B	MW-2B1						DIS									Y					
11-28960 UB71C	MW-16						DIS									Y					
11-28961 UB71D	DUP 1						DIS									Y					
11-28962 UB71E	DUP 2						DIS									Y					
11-28963 UB71F	MW-35						DIS									Y					
11-28964 UB71G	MW-34C						DIS									Y					
11-28965 UB71H	MW-34A						DIS									Y					
11-28966 UB71I	MW-36A						DIS									Y					
11-28967 UB71J	MW-15R						DIS									Y					
11-28968 UB71K	MW-23A						DIS									Y					
11-28969 UB71L	MW-4						DIS									Y					
11-28970 UB71M	MW-19C						DIS									Y					
11-28971 UB71N	MW-13A						DIS									Y					

Checked By AV Date 12/16/11



ARI Job No: UB71

Client: Test America

Project #: 040204027.15  
Project: OVSI

LOGNUM	ARI ID	CLIENT ID	CN	WAD	NH3	COD	FOG	MET	PHEN	PHOS	TKN	NO23	TOC	S2	AK102	Fe2+	DMET	DOC	ADJUSTED	LOT	AMOUNT	DATE/BY
			>12	>12	<2	<2	<2	<2	<2	<2	<2	<2	<2	>9	<2	<2	FLT	FLT	TO	NUMBER	ADDED	
11-28972	UB710	MW-13B						DIS									Y					

Checked By AV Date 12/16/11

# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number  
**UB71**

ARI Client Company:  
**SCS ENGINEERS** Phone: **(125)289-5443**

Client Contact:  
**Emily Smart**

Client Project Name  
**OVSL**

Turn-around Requested: **Standard**

Date: **12/16/11**

Page **3** of **3**

No. of Coolers: **3**

Cooler Temps:

Analysis Requested

Notes/Comments

Client Project #  
**04204027.15**

Samplers:  
**S. ADUMGTONS / W. CHANG**

Sample ID

Date

Time

Matrix

No Containers

Received by (Signature)

Printed Name

Company

Date & Time

Reinquired by (Signature)

Printed Name

Company

Date & Time

Received by (Signature)

Printed Name

Company

Date & Time

Sample ID	Date	Time	Matrix	No Containers	Analysis Requested	Notes/Comments
MW-43	12/15/11	0800	WATER	1		
MW-42		0837				
MW-20		0917				
MW-39		1017				
MW-24		1119				
MW-32		1219				
Comments/Special Instructions	Received by (Signature): <i>Sam Adumgtons</i> Printed Name: <b>SAM ADUMGTONS</b> Company: <b>SCS</b> Date & Time: <b>12/16/11 1000</b>  Reinquired by (Signature): <i>Jose Ugas</i> Printed Name: <b>Jose Ugas</b> Company: <b>ART</b> Date & Time: <b>12-16-11 10:40</b>  Received by (Signature): Printed Name: Company: Date & Time:					



Analytical Resources, Incorporated  
Analytical Chemists and Consultants  
4611 South 134th Place, Suite 100  
Tukwila, WA 98168  
206-695-6200 206-695-6201 (fax)

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.



# Cooler Receipt Form

ARI Client SCS Engineers

Project Name OVSL

COC No(s) \_\_\_\_\_ (NA)

Delivered by Fed-Ex UPS Courier Hand Delivered  Other: \_\_\_\_\_

Assigned ARI Job No UB72

Tracking No: \_\_\_\_\_ (NA)

**Preliminary Examination Phase:**

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES  NO

Were custody papers included with the cooler? YES  NO

Were custody papers properly filled out (ink, signed, etc) YES  NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 2.4

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID# 90941619

Cooler Accepted by JW Date 12-16-11 Time 10:40

*Complete custody forms and attach all shipping documents*

**Log-In Phase:**

Was a temperature blank included in the cooler? YES  NO

What kind of packing material was used? Bubble Wrap  Wet Ice  Gel Packs  Baggies  Foam Block  Paper  Other: \_\_\_\_\_

Was sufficient ice used (if appropriate)? NA  YES  NO

Were all bottles sealed in individual plastic bags? YES  NO

Did all bottles arrive in good condition (unbroken)? YES  NO

Were all bottle labels complete and legible? YES  NO

Did the number of containers listed on COC match with the number of containers received? YES  NO

Did all bottle labels and tags agree with custody papers? YES  NO

Were all bottles used correct for the requested analyses? YES  NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) NA  YES  NO

Were all VOC vials free of air bubbles? NA  YES  NO

Was sufficient amount of sample sent in each bottle? YES  NO

Date VOC Trip Blank was made at ARI. NA

Was Sample Split by ARI  YES  Date/Time \_\_\_\_\_ Equipment \_\_\_\_\_ Split by: \_\_\_\_\_

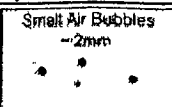
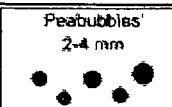
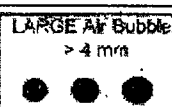
Samples Logged by AV Date: 12/16/11 Time: 12:21

**\*\* Notify Project Manager of discrepancies or concerns \*\***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

**Additional Notes, Discrepancies, & Resolutions:**

By: \_\_\_\_\_ Date: \_\_\_\_\_

			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"



ARI Job No: UB72

PC: Mark  
VTSR: 12/16/11

Inquiry Number: NONE  
Analysis Requested: 12/16/11

Contact: Smart, Emily  
Client: SCS Engineers

Logged by: AV

Sample Set Used: Yes-481  
Validatable Package: No

Deliverables:

Project #: 04204027.15  
Project: OVSL  
Sample Site:  
SDG No:  
Analytical Protocol: In-house

LOGNUM	ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102Fe2+ <2	DMET DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
11-28936	UB72A	MW-43						DIS								Y					
11-28937	UB72B	MW-42						DIS								Y					
11-28938	UB72C	MW-20						DIS								Y					
11-28939	UB72D	MW-39						DIS								Y					
11-28940	UB72E	MW-24						DIS								Y					
11-28941	UB72F	MW-32						DIS								Y					

UB71 : 00009

Checked By AV Date 12/16/11

# Sample ID Cross Reference Report



ARI Job No: UB71  
Client: Test America  
Project Event: 040204027.15  
Project Name: OVSL

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. MW-33C	UB71A	11-28958	Water	12/13/11 11:49	12/16/11 10:40
2. MW-2B1	UB71B	11-28959	Water	12/13/11 12:55	12/16/11 10:40
3. MW-16	UB71C	11-28960	Water	12/13/11 13:39	12/16/11 10:40
4. DUP 1	UB71D	11-28961	Water	12/13/11 12:55	12/16/11 10:40
5. DUP 2	UB71E	11-28962	Water	12/13/11 13:39	12/16/11 10:40
6. MW-35	UB71F	11-28963	Water	12/13/11 14:42	12/16/11 10:40
7. MW-34C	UB71G	11-28964	Water	12/14/11 09:00	12/16/11 10:40
8. MW-34A	UB71H	11-28965	Water	12/14/11 10:00	12/16/11 10:40
9. MW-36A	UB71I	11-28966	Water	12/14/11 10:32	12/16/11 10:40
10. MW-15R	UB71J	11-28967	Water	12/14/11 11:03	12/16/11 10:40
11. MW-23A	UB71K	11-28968	Water	12/14/11 11:47	12/16/11 10:40
12. MW-4	UB71L	11-28969	Water	12/14/11 13:14	12/16/11 10:40
13. MW-19C	UB71M	11-28970	Water	12/14/11 14:56	12/16/11 10:40
14. MW-13A	UB71N	11-28971	Water	12/14/11 14:30	12/16/11 10:40
15. MW-13B	UB71O	11-28972	Water	12/14/11 15:02	12/16/11 10:40

Printed 12/16/11

# Sample ID Cross Reference Report



ARI Job No: UB72  
Client: SCS Engineers  
Project Event: 04204027.15  
Project Name: OVSL

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. MW-43	UB72A	11-28936	Water	12/15/11 08:00	12/16/11 10:40
2. MW-42	UB72B	11-28937	Water	12/15/11 08:37	12/16/11 10:40
3. MW-20	UB72C	11-28938	Water	12/15/11 09:17	12/16/11 10:40
4. MW-39	UB72D	11-28939	Water	12/15/11 10:17	12/16/11 10:40
5. MW-24	UB72E	11-28940	Water	12/15/11 11:19	12/16/11 10:40
6. MW-32	UB72F	11-28941	Water	12/15/11 12:19	12/16/11 10:40

Printed 12/16/11



**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

**Sample ID: METHOD BLANK**

Lab Sample ID: UB71MB

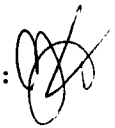
QC Report No: UB71-Test America

LIMS ID: 11-28964

Project: OVSL

Matrix: Water

04204027.15

Data Release Authorized: 

Date Sampled: NA

Reported: 01/03/12


Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/21/11	200.8	12/30/11	7440-38-2	Arsenic	0.04	0.04	U

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**  
**DISSOLVED METALS**  
Page 1 of 1

**Sample ID: MW-33C**  
**SAMPLE**

Lab Sample ID: UB71A  
LIMS ID: 11-28958  
Matrix: Water  
Data Release Authorized:   
Reported: 01/03/12


QC Report No: UB71-Test America  
Project: OVSL  
04204027.15  
Date Sampled: 12/13/11  
Date Received: 12/16/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/21/11	200.8	12/30/11	7440-38-2	Arsenic	0.04	2.60	

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**  
**DISSOLVED METALS**  
Page 1 of 1

**Sample ID: MW-2B1**  
**SAMPLE**

Lab Sample ID: UB71B  
LIMS ID: 11-28959  
Matrix: Water  
Data Release Authorized:   
Reported: 01/03/12


QC Report No: UB71-Test America  
Project: OVSL  
04204027.15  
Date Sampled: 12/13/11  
Date Received: 12/16/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/21/11	200.8	12/30/11	7440-38-2	Arsenic	0.1	0.2	

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**  
**DISSOLVED METALS**  
Page 1 of 1

**Sample ID: MW-16**  
**SAMPLE**

Lab Sample ID: UB71C  
LIMS ID: 11-28960  
Matrix: Water  
Data Release Authorized:   
Reported: 01/03/12

QC Report No: UB71-Test America  
Project: OVSL  
04204027.15  
Date Sampled: 12/13/11  
Date Received: 12/16/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/21/11	200.8	12/30/11	7440-38-2	Arsenic	0.04	0.32	

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**


Page 1 of 1

Sample ID: DUP 1  
SAMPLE

Lab Sample ID: UB71D

LIMS ID: 11-28961

Matrix: Water

Data Release Authorized: 

Reported: 01/03/12

QC Report No: UB71-Test America

Project: OVSL

04204027.15

Date Sampled: 12/13/11

Date Received: 12/16/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/21/11	200.8	12/30/11	7440-38-2	Arsenic	0.1	0.2	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

Sample ID: DUP 2  
SAMPLE

Lab Sample ID: UB71E


QC Report No: UB71-Test America

LIMS ID: 11-28962

Project: OVSL

Matrix: Water

04204027.15

Data Release Authorized: 

Date Sampled: 12/13/11

Reported: 01/03/12

Date Received: 12/16/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/21/11	200.8	12/30/11	7440-38-2	Arsenic	0.04	0.32	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

**Sample ID: MW-35  
SAMPLE**

Lab Sample ID: UB71F


QC Report No: UB71-Test America

LIMS ID: 11-28963

Project: OVSL

Matrix: Water

04204027.15

Data Release Authorized: 

Date Sampled: 12/13/11

Reported: 01/03/12

Date Received: 12/16/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/21/11	200.8	12/30/11	7440-38-2	Arsenic	0.04	0.14	

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

**Sample ID: MW-34C  
SAMPLE**

Lab Sample ID: UB71G


QC Report No: UB71-Test America

LIMS ID: 11-28964

Project: OVSL

Matrix: Water

04204027.15

Data Release Authorized: 

Date Sampled: 12/14/11

Reported: 01/03/12

Date Received: 12/16/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/21/11	200.8	12/30/11	7440-38-2	Arsenic	0.1	1.2	

U-Analyte undetected at given RL

RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**  
**DISSOLVED METALS**  
Page 1 of 1

**Sample ID: MW-34A**  
**SAMPLE**

Lab Sample ID: UB71H  
LIMS ID: 11-28965  
Matrix: Water  
Data Release Authorized:  
Reported: 01/03/12

QC Report No: UB71-Test America  
Project: OVSL  
04204027.15  
Date Sampled: 12/14/11  
Date Received: 12/16/11



Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/21/11	200.8	12/30/11	7440-38-2	Arsenic	0.1	0.5	

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

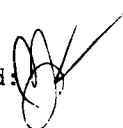
Sample ID: MW-36A

**SAMPLE**

Lab Sample ID: UB71I

LIMS ID: 11-28966

Matrix: Water

Data Release Authorized: 

Reported: 01/03/12

QC Report No: UB71-Test America

Project: OVSL

04204027.15

Date Sampled: 12/14/11

Date Received: 12/16/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/21/11	200.8	12/30/11	7440-38-2	Arsenic	0.1	0.7	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

**Sample ID: MW-15R  
SAMPLE**

Lab Sample ID: UB71J


QC Report No: UB71-Test America

LIMS ID: 11-28967

Project: OVSL

Matrix: Water

04204027.15

Data Release Authorized 

Date Sampled: 12/14/11

Reported: 01/03/12

Date Received: 12/16/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/21/11	200.8	12/30/11	7440-38-2	Arsenic	0.04	0.22	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**  
**DISSOLVED METALS**  
Page 1 of 1

**Sample ID: MW-23A**  
**SAMPLE**

Lab Sample ID: UB71K  
LIMS ID: 11-28968  
Matrix: Water  
Data Release Authorized  
Reported: 01/03/12

QC Report No: UB71-Test America  
Project: OVSL  
04204027.15  
Date Sampled: 12/14/11  
Date Received: 12/16/11



Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/21/11	200.8	12/30/11	7440-38-2	Arsenic	0.04	0.20	

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

Sample ID: MW-4  
SAMPLE

Lab Sample ID: UB71L


QC Report No: UB71-Test America

LIMS ID: 11-28969

Project: OVSL

Matrix: Water

04204027.15

Data Release Authorized: 

Date Sampled: 12/14/11

Reported: 01/03/12

Date Received: 12/16/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/21/11	200.8	12/30/11	7440-38-2	Arsenic	0.04	0.67	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

**Sample ID: MW-19C  
SAMPLE**

Lab Sample ID: UB71M


QC Report No: UB71-Test America

LIMS ID: 11-28970

Project: OVSL

Matrix: Water

04204027.15

Data Release Authorized: 

Date Sampled: 12/14/11

Reported: 01/03/12

Date Received: 12/16/11


Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/21/11	200.8	12/30/11	7440-38-2	Arsenic	0.1	4.0	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**  
**DISSOLVED METALS**  
Page 1 of 1

Sample ID: MW-13A  
SAMPLE

Lab Sample ID: UB71N  
LIMS ID: 11-28971  
Matrix: Water  
Data Release Authorized:   
Reported: 01/03/12

QC Report No: UB71-Test America  
Project: OVSL  
04204027.15  
Date Sampled: 12/14/11  
Date Received: 12/16/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/21/11	200.8	12/30/11	7440-38-2	Arsenic	0.04	0.20	

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET  
DISSOLVED METALS**

**Sample ID: MW-13B  
SAMPLE**

Page 1 of 1

Lab Sample ID: UB710


QC Report No: UB71-Test America

LIMS ID: 11-28972

Project: OVSL

Matrix: Water

04204027.15

Data Release Authorized: 

Date Sampled: 12/14/11

Reported: 01/03/12

Date Received: 12/16/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/21/11	200.8	12/30/11	7440-38-2	Arsenic	0.04	0.34	

U-Analyte undetected at given RL

RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

Sample ID: MW-35

**MATRIX SPIKE**

Lab Sample ID: UB71F

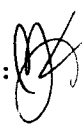
QC Report No: UB71-Test America

LIMS ID: 11-28963

Project: OVSL

Matrix: Water

04204027.15

Data Release Authorized: 

Date Sampled: 12/13/11

Reported: 01/03/12

Date Received: 12/16/11

**MATRIX SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	200.8	0.140	4.77	5.00	92.6%	

Reported in µg/L

N-Control Limit Not Met


H-% Recovery Not Applicable, Sample Concentration Too High

NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

**INORGANICS ANALYSIS DATA SHEET**  
**DISSOLVED METALS**  
Page 1 of 1

Sample ID: MW-35  
DUPLICATE

Lab Sample ID: UB71F  
LIMS ID: 11-28963  
Matrix: Water  
Data Release Authorized:   
Reported: 01/03/12

QC Report No: UB71-Test America  
Project: OVSL  
04204027.15  
Date Sampled: 12/13/11  
Date Received: 12/16/11

**MATRIX DUPLICATE QUALITY CONTROL REPORT**


Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	200.8	0.14	0.14	0.0%	+/- 0.04	L

Reported in µg/L

\*-Control Limit Not Met  
L-RPD Invalid, Limit = Detection Limit

**INORGANICS ANALYSIS DATA SHEET**  
**DISSOLVED METALS**  
Page 1 of 1

**Sample ID: LAB CONTROL**

Lab Sample ID: UB71LCS  
LIMS ID: 11-28964  
Matrix: Water  
Data Release Authorized:   
Reported: 01/03/12

QC Report No: UB71-Test America  
Project: OVSL  
04204027.15  
Date Sampled: NA  
Date Received: NA

**BLANK SPIKE QUALITY CONTROL REPORT**

<b>Analyte</b>	<b>Analysis Method</b>	<b>Spike Found</b>	<b>Spike Added</b>	<b>% Recovery</b>	<b>Q</b>
Arsenic	200.8	4.85	5.00	97.0%	

Reported in µg/L

N-Control limit not met  
Control Limits: 80-120%

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

**Sample ID: METHOD BLANK**

Page 1 of 1

Lab Sample ID: UB72MB

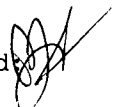
QC Report No: UB72-Test America

LIMS ID: 11-28937

Project: OVSL

Matrix: Water

04204027.15

Data Release Authorized 

Date Sampled: NA

Reported: 01/03/12

Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/20/11	200.8	12/30/11	7440-38-2	Arsenic	0.04	0.04	U

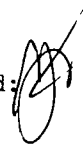
U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET  
DISSOLVED METALS**

Sample ID: MW-43  
SAMPLE

Page 1 of 1

Lab Sample ID: UB72A  
LIMS ID: 11-28936  
Matrix: Water  
Data Release Authorized:   
Reported: 01/03/12

QC Report No: UB72-Test America  
Project: OVSL  
04204027.15  
Date Sampled: 12/15/11  
Date Received: 12/16/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/20/11	200.8	12/30/11	7440-38-2	Arsenic	0.04	0.05	

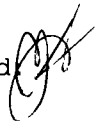
U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**  
**DISSOLVED METALS**  
Page 1 of 1

Sample ID: MW-42  
SAMPLE

Lab Sample ID: UB72B  
LIMS ID: 11-28937  
Matrix: Water  
Data Release Authorized  
Reported: 01/03/12

QC Report No: UB72-Test America  
Project: OVSL  
04204027.15  
Date Sampled: 12/15/11  
Date Received: 12/16/11



Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/20/11	200.8	12/30/11	7440-38-2	Arsenic	0.1	1.6	

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

Sample ID: MW-20  
SAMPLE

Lab Sample ID: UB72C

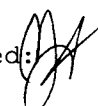
QC Report No: UB72-Test America

LIMS ID: 11-28938

Project: OVSL

Matrix: Water

04204027.15

Data Release Authorized: 

Date Sampled: 12/15/11

Reported: 01/03/12

Date Received: 12/16/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/20/11	200.8	12/30/11	7440-38-2	Arsenic	0.1	0.3	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

**Sample ID: MW-39  
SAMPLE**

Lab Sample ID: UB72D


QC Report No: UB72-Test America

LIMS ID: 11-28939

Project: OVSL

Matrix: Water

04204027.15

Data Release Authorized: 

Date Sampled: 12/15/11

Reported: 01/03/12

Date Received: 12/16/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/20/11	200.8	12/30/11	7440-38-2	Arsenic	0.04	0.65	

U-Analyte undetected at given RL

RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

Sample ID: MW-24  
SAMPLE

Lab Sample ID: UB72E


QC Report No: UB72-Test America

LIMS ID: 11-28940

Project: OVSL

Matrix: Water

04204027.15

Data Release Authorized: 

Date Sampled: 12/15/11

Reported: 01/03/12

Date Received: 12/16/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/20/11	200.8	12/30/11	7440-38-2	Arsenic	0.04	0.42	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

Sample ID: MW-32  
SAMPLE

Lab Sample ID: UB72F


QC Report No: UB72-Test America

LIMS ID: 11-28941

Project: OVSL

Matrix: Water

04204027.15

Data Release Authorized: 

Date Sampled: 12/15/11

Reported: 01/03/12

Date Received: 12/16/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	12/20/11	200.8	12/30/11	7440-38-2	Arsenic	0.1	9.9	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

**Sample ID: MW-43**

**MATRIX SPIKE**

Lab Sample ID: UB72A

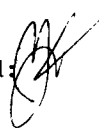
QC Report No: UB72-Test America

LIMS ID: 11-28936

Project: OVSL

Matrix: Water

04204027.15

Data Release Authorized: 

Date Sampled: 12/15/11

Reported: 01/03/12

Date Received: 12/16/11

**MATRIX SPIKE QUALITY CONTROL REPORT**

<b>Analyte</b>	<b>Analysis Method</b>	<b>Sample</b>	<b>Spike</b>	<b>Spike Added</b>	<b>% Recovery</b>	<b>Q</b>
Arsenic	200.8	0.0500	4.91	5.00	97.2%	

Reported in µg/L

N-Control Limit Not Met


H-% Recovery Not Applicable, Sample Concentration Too High

NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

**INORGANICS ANALYSIS DATA SHEET**  
**DISSOLVED METALS**  
 Page 1 of 1

**Sample ID: MW-43**  
**DUPLICATE**

Lab Sample ID: UB72A  
 LIMS ID: 11-28936  
 Matrix: Water  
 Data Release Authorized:   
 Reported: 01/03/12

QC Report No: UB72-Test America  
 Project: OVSL  
 04204027.15  
 Date Sampled: 12/15/11  
 Date Received: 12/16/11

**MATRIX DUPLICATE QUALITY CONTROL REPORT**

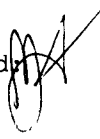
Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	200.8	0.05	0.05	0.0%	+/- 0.04	L

Reported in µg/L

\*-Control Limit Not Met  
 L-RPD Invalid, Limit = Detection Limit

**INORGANICS ANALYSIS DATA SHEET**  
**DISSOLVED METALS**  
Page 1 of 1

**Sample ID: LAB CONTROL**

Lab Sample ID: UB72LCS  
LIMS ID: 11-28937  
Matrix: Water  
Data Release Authorized:   
Reported: 01/03/12

QC Report No: UB72-Test America  
Project: OVSL  
04204027.15  
Date Sampled: NA  
Date Received: NA

**BLANK SPIKE QUALITY CONTROL REPORT**

<b>Analyte</b>	<b>Analysis Method</b>	<b>Spike Found</b>	<b>Spike Added</b>	<b>% Recovery</b>	<b>Q</b>
Arsenic	200.8	4.90	5.00	98.0%	

Reported in µg/L

N-Control limit not met  
Control Limits: 80-120%

APPENDIX E  
HISTORICAL LANDFILL GAS  
MONITORING RESULTS

**Historical Results of Methane (CH4) Measurements**

Location	Mar-07	Sep-07	Jun-07	Dec-07	Mar-08	Jun-08	Sep-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Mar-10	Jun-10	Sep-10	Dec-10	Mar-11	Jun-11	Sep-11	Dec-11
OV-GP-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
OV-GP-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OV-GP-9S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OV-GP-9D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—	—	—	—
OV-GP10S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OV-GP10D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—	—	—	—
OV-GP11S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OV-GP11D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—	—	—	—
OV-GP12S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OV-GP12M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OV-GP12D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—	—	—	—
OV-GP13S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OV-GP13M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OV-GP13D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—	—	—	—
OV-GP14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OV-GP15	6.2	9.3	7.6	5.7	9.4	4.9	5.8	1.4	0.9	0.0	1.0	1.7	0.2	0.0	0.0	0.0	0.0	1.0	0.3	1.5
OV-GP16	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OV-GP = Gas Probe  
 S = Shallow Monitoring Zone  
 M = Middle Monitoring Zone  
 D = Deep Monitoring Zone  
 Detected CH4>0.3% vol.  
 — Screened interval submerged

## Historical Results of Carbon Dioxide (CO2) Measurements

Location	Mar-07	Sep-07	Jun-07	Dec-07	Mar-08	Jun-08	Sep-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Mar-10	Jun-10	Sep-10	Dec-10	Mar-11	Jun-11	Sep-11	Dec-11
OV-GP-07	4.7	11.7	8.1	7.7	4.9	8.5	10.3	9.2	7.7	7.6	11.3	6.9	5.1	8.0	11.0	8.3	1.5	6.6	9.7	1.5
OV-GP-08	0.8	7.1	4.3	1.2	2.6	4.6	6.2	7.0	2.8	4.9	6.8	6.1	2.1	0.2	4.1	2.4	0.5	3.0	4.7	5.5
OV-GP-9S	2.5	2.4	3.2	2.2	2.3	2.9	3.0	0.7	2.1	3.2	2.7	2.3	2.5	3.5	2.1	2.3	2.1	3.0	1.7	3.2
OV-GP-9D	2.0	1.6	1.7	1.8	1.6	1.6	1.9	0.7	1.4	1.9	2.0	1.7	1.7	1.6	1.5	1.7	—	—	—	—
OV-GP10S	0.7	1.0	0.9	0.9	0.6	0.8	1.0	2.9	0.6	0.6	0.9	0.1	0.2	0.9	0.9	3.2	0.7	0.7	0.7	1.3
OV-GP10D	0.7	0.7	0.7	0.8	0.7	0.7	0.8	1.7	0.6	0.6	0.9	0.4	0.7	0.7	1.0	2.8	—	—	—	—
OV-GP11S	1.8	2.7	2.7	2.3	2.0	2.5	2.8	2.0	1.6	2.2	2.6	1.8	1.9	2.5	2.0	2.4	1.4	2.1	1.8	1.3
OV-GP11D	1.5	1.7	1.5	1.9	1.7	1.8	2.1	1.6	1.4	1.6	2.0	0.2	1.7	1.6	0.4	2.1	—	—	—	—
OV-GP12S	2.2	2.7	2.7	5.3	1.0	1.8	3.1	2.3	1.5	2.3	2.4	1.5	1.5	2.3	1.9	2.2	2.4	2.3	0.7	1.4
OV-GP12M	2.1	3.1	2.5	5.3	0.8	2.0	2.6	2.3	1.4	2.3	2.7	1.8	1.3	2.2	1.3	1.8	1.7	0.9	0.7	1.0
OV-GP12D	1.1	2.2	0.6	2.2	1.1	1.0	2.3	1.8	1.3	1.5	2.2	0.2	1.4	0.7	0.7	1.0	—	—	—	—
OV-GP13S	2.7	4.4	3.6	2.9	2.3	3.4	4.2	2.9	2.1	2.9	3.4	1.5	1.2	2.7	1.1	3.9	3	3.4	2.9	2.0
OV-GP13M	7.5	5.9	6.6	5.7	4.7	4.4	4.7	4.2	4.0	3.8	3.8	3.3	3.2	3.0	3.2	3.5	3.1	3.0	1.8	2.0
OV-GP13D	8.2	6.0	6.6	4.2	5.0	4.3	3.9	12.4	3.6	12.4	13.9	3.3	15.6	14.9	20.7	19.5	—	—	—	—
OV-GP14	0.1	11.0	8.1	8.2	6.6	7.5	9.8	9.9	8.0	8.2	11.7	10.0	6.0	7.3	10.2	3.4	0.3	6.4	8.9	5.1
OV-GP15	8.8	18.1	12.5	8.5	8.9	12.4	14.3	2.9	2.4	2.4	5.1	2.8	1.9	0.2	0.8	1.3	0.3	3.9	8.8	5.2
OV-GP16	19.1	1.5	1.8	1.5	1.2	2.3	1.9	1.8	1.1	2.0	1.9	7.1	7.0	9.3	7.4	6.7	3.8	6.2	2.4	4.6

OV-GP = Gas Probe  
 S = Shallow Monitoring Zone  
 M = Middle Monitoring Zone  
 D = Deep Monitoring Zone  
 Detected CO2>0.3% vol.  
 — Screened interval submerged



## Historical Results of Oxygen (O2) Measurements

Location	Mar-07	Sep-07	Jun-07	Dec-07	Mar-08	Jun-08	Sep-08	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09	Mar-10	Jun-10	Sep-10	Dec-10	Mar-11	Jun-11	Sep-11	Dec-11
OV-GP-07	4.6	6.2	4.8	3.9	4.0	6.0	6.8	1.4	2.9	2.4	7.5	2.5	3.0	3.5	6.6	1.8	20.1	3.6	8.9	20.0
OV-GP-08	6.8	5.7	7.2	5.7	13.6	10.8	8.0	1.0	7.5	3.4	6.4	6.0	8.5	20.1	9.7	2.4	20.7	6.5	10.8	5.7
OV-GP-9S	17.7	19.7	18.4	17.7	19.3	18.5	18.9	20.2	18.8	17.0	19.8	16.6	18.4	16.6	18.5	16.3	18.3	17.9	19.9	17.6
OV-GP-9D	18.1	19.3	18.8	18.9	19.5	19.3	19.3	19.6	18.9	18.3	19.8	18.8	19.3	18.0	19.0	17.8	—	—	—	—
OV-GP10S	19.9	20.0	20.1	20.3	20.2	20.1	20.5	17.6	20.4	20.1	21.1	21.3	21.6	19.3	20.5	11.1	20.5	20.2	20.6	19.8
OV-GP10D	18.4	19.5	18.9	19.0	18.7	19.3	19.7	19.1	18.9	18.9	20.2	21.6	19.3	18.3	20.6	10.1	—	—	—	—
OV-GP11S	17.7	19.2	18.1	18.8	18.8	18.9	19.1	18.9	18.8	18.3	20.1	19.3	18.0	17.3	19.1	16.5	16.5	18.7	20.0	18.9
OV-GP11D	16.7	19.6	18.8	18.5	18.2	19.2	19.4	19.1	19.3	19.0	19.6	21.7	18.9	18.1	20.5	16.4	—	—	—	—
OV-GP12S	17.1	16.4	17.7	15.0	20.0	17.5	17.1	16.5	19.0	16.3	15.9	17.9	20.9	16.8	19.0	16.1	16.7	19.4	20.4	19.6
OV-GP12M	17.1	13.9	17.7	15.0	20.0	17.5	17.1	16.5	19.0	16.3	15.9	17.9	20.9	16.8	19.0	16.1	17.4	19.8	19.9	19.3
OV-GP12D	17.0	12.2	18.4	15.3	18.4	18.1	14.4	15.2	16.7	17.0	14.3	20.1	18.0	18.4	19.4	18.8	—	—	—	—
OV-GP13S	12.7	14.5	15.3	14.7	15.4	16.3	15.8	16.4	16.3	15.3	17.3	17.9	17.0	15.8	17.5	14.7	16.6	17.2	18.3	17.7
OV-GP13M	2.5	7.8	6.6	6.0	8.8	11.3	11.7	13.1	13.4	12.6	14.3	15.2	12.7	13.4	15.3	14.5	15	14.9	18.8	18.4
OV-GP13D	2.1	6.5	5.5	10.6	8.5	10.5	13.0	12.4	13.7	12.4	13.9	15.7	15.6	14.9	20.7	19.5	—	—	—	—
OV-GP14	20.9	4.3	3.7	2.2	5.5	4.3	5.0	1.6	2.7	3.0	3.0	1.8	2.8	4.5	8.2	18.6	20.6	4.8	7.6	6.7
OV-GP15	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	6.2	3.3	5.3	10.0	19.6	20.3	19.4	20.4	6.5	4.4	12.4
OV-GP16	18.8	19.7	20.0	19.6	20.3	19.1	19.5	18.8	19.5	18.9	19.3	10.4	10.4	9.2	12.6	11.2	15.3	14.8	18.8	15.2

OV-GP = Gas Probe  
 S = Shallow Monitoring Zone  
 M = Middle Monitoring Zone  
 D = Deep Monitoring Zone  
 Depressed O2 < 20.3% vol.  
 — Screened interval submerged