

# SCS ENGINEERS



## 2013 Annual Monitoring Report Olympic View Sanitary Landfill

Presented To:

**Olympic View Sanitary Landfill, Inc.**  
10015 SW Barney White Road  
Bremerton, Washington 98366  
(925) 456-5369

Presented From:

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



RACHEL ELENA RAMIREZ

March 24, 2014  
File No. 04204027.17

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

Elena Ramirez, LG  
Project Professional  
**SCS ENGINEERS**

Dan A. Venchiarutti, LG, LHG  
Project Director  
**SCS ENGINEERS**

## Table of Contents

1.0	Introduction.....	1
2.0	Site Description.....	3
2.1	Location.....	3
2.2	Background.....	3
2.3	Topography and Climate.....	3
2.4	Local and Regional Hydrogeology.....	4
3.0	2013 Monitoring Activities.....	5
3.1	Groundwater.....	5
3.1.1	Groundwater Monitoring Network.....	5
3.1.2	Monitoring Schedule.....	6
3.1.3	Parameters and Analytical Methods.....	6
3.1.4	Field Monitoring and Sampling Procedures.....	7
3.2	Leachate.....	8
3.2.1	Leachate Monitoring Locations.....	8
3.2.2	Monitoring Schedule.....	8
3.2.3	Parameters and Analytical Methods.....	8
3.2.4	Leachate Monitoring Field Procedures.....	9
3.3	Landfill Gas.....	9
3.3.1	Landfill Gas Monitoring Network.....	9
3.3.2	Monitoring Schedule.....	10
3.3.3	Monitored Parameters.....	10
3.3.4	Landfill Gas Monitoring Field Procedures and Instrumentation.....	10
3.3.5	Field Conditions.....	10
4.0	2013 Monitoring Results.....	11
4.1	Groundwater.....	11
4.1.1	Groundwater Elevation and Flow.....	11
4.1.2	Groundwater Quality.....	11
4.1.3	Spatial Distribution and Temporal Trends.....	12
4.1.4	Groundwater Geochemistry.....	14
4.1.5	Statistical Prediction Limit Evaluation.....	15
4.1.6	Point of Compliance and Cleanup Level Exceedances.....	16
4.2	Leachate Monitoring Results.....	18
4.2.1	Leachate Quality.....	18
4.2.2	Leachate Generation Rates.....	18
4.3	Landfill Gas Monitoring Results.....	19
4.3.1	Perimeter Gas Probe.....	19
4.3.2	Structure Monitoring.....	20
4.3.3	Barometric Pressure Conditions.....	20
5.0	Summary and Conclusions.....	21
5.1	Groundwater.....	21
5.1.1	Groundwater Quality.....	21
5.1.2	Evidence for Natural Attenuation.....	22

5.2	Leachate .....	23
5.3	Landfill Gas .....	23
6.0	References.....	24

### List of Tables

Table 1	Groundwater Well Construction Details
Table 2	Summary of Analytical Parameters
Table 3	Groundwater Elevations
Table 4A	Detections and Field Measurements – Compliance Monitoring Wells
Table 4B	Detections and Field Measurements – Performance Monitoring Wells
Table 4C	Detections and Field Measurements – Downgradient Monitoring Wells
Table 4D	Detections and Field Measurements – Upgradient Monitoring Wells
Table 4E	Detections and Field Measurements – Leachate and Leak Detection Locations
Table 5	2013 Groundwater and Leachate VOC Detections
Table 6A	Summary of 2013 Significant Parameters Trends by Well Type
Table 6B	Summary of 2013 Trends in Groundwater Monitoring Wells (2005 – 2013)
Table 7	Fourth Quarter 2013 Prediction Limit Exceedances
Table 8	2013 Annual Groundwater Cleanup Level Statistical Evaluation Summary
Table 9	Groundwater Quality Criteria and Site-Specific Cleanup Level Exceedances
Table 10	2013 Leak Detection System Volumes
Table 11	Fourth Quarter 2013 Landfill Gas Measurement Results
Table 12	LFG Monitoring Results - 2013

### List of Figures

Figure 1	Site Location Map
Figure 2	Groundwater Monitoring Network and Leachate Monitoring Locations
Figure 3	Subsurface LFG Monitoring Probes and Building Monitoring Locations
Figure 4A	Groundwater Elevation Map – First Quarter March 2013
Figure 4B	Groundwater Elevation Map – Second Quarter June 2013
Figure 4C	Groundwater Elevation Map – Third Quarter September 2013
Figure 4D	Groundwater Elevation Map – Fourth Quarter December 2013
Figure 5	Historical Groundwater Elevations
Figure 6A	Dissolved Arsenic Concentration Map – December 2013
Figure 6B	Dissolved Iron Concentration Map – December 2013
Figure 6C	Dissolved Manganese Concentration Map – December 2013
Figure 6D	Vinyl Chloride Concentration Map – December 2013
Figure 7	Leachate Generation Volumes (2007 – 2013)
Figure 8	Barometric Pressure during LFG Migration Monitoring – December 2013

### Appendices

Appendix A	Fourth Quarter 2013 Field Documentation
Appendix B	Fourth Quarter 2013 Data Validation and Analytical Data Reports
Appendix C	2013 Annual Time Series, Trend Test, and Prediction Limit Evaluation
Appendix D	Fourth Quarter 2013 Groundwater Geochemical Evaluation
Appendix E	Landfill Gas Monitoring Results

## 1.0 INTRODUCTION

This report summarizes the results of the 2013 quarterly post-closure environmental monitoring conducted at the Olympic View Sanitary Landfill (OVSL), located in Bremerton, Washington. Monitoring events for the current reporting period were performed during March, June, September, and December of 2013. Quarterly environmental monitoring at the OVSL includes sampling and analysis of groundwater and leachate pond leak detection liquid, and monitoring landfill gas. Leachate influent monitoring is also performed at the OVSL, but on an annual basis.

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 updated site-specific Sampling and Analysis Plan (SCS Engineers 2013). 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 (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).

SCS Engineers (SCS) and SCS Field Services (Field Services) conducted quarterly environmental monitoring at the OVSL during March through December 2013. The following information describes the quarterly monitoring activities included in this report:

- Quarterly measurement of depth-to-water in groundwater monitoring wells within the monitoring well network
- Quarterly collection and analysis of groundwater samples at select monitoring wells within the monitoring network
- Quarterly collection and analysis of a leachate pond/leak detection system sample
- Collection and analysis of a leachate influent sample (during the fourth quarter monitoring event)
- Quarterly measurement of landfill gas concentrations at perimeter soil gas monitoring probes and building monitoring locations

This report includes:

- A site location description and background section
- A discussion of monitoring activities including a summary of sampling techniques and locations within the groundwater and landfill gas monitoring network
- Construction details for groundwater monitoring wells
- A discussion of groundwater including groundwater elevations, flow direction, and flow velocity for the reporting year
- A summary of the monitoring analytical program and presentation of the analytical results and findings for the reporting year
- A summary of the landfill gas monitoring results for the reporting year

- A geochemical evaluation of water quality samples collected in December 2013
- A statistical trend analysis and concentration time series plots of groundwater monitoring results
- A statistical evaluation and comparison of groundwater results to background prediction limits
- A comparison of groundwater monitoring results to site-specific cleanup levels and other applicable criteria
- Field documentation from the 2013 monitoring events
- The Fourth Quarter 2013 data validation report and associated analytical laboratory reports
- A summary of historical landfill gas monitoring measurements

Previously issued analytical laboratory data reports for the first three quarters of the 2013 will not be reissued with this report and can be found in the respective quarterly monitoring reports. Similarly, landfill gas migration monitoring results for the first three quarters of the 2013 reporting year are reported separately in respective quarterly monitoring reports.

In order to conserve paper resources, the complete 2013 annual report is presented on an enclosed data CD attached to the rear cover of the document. However, for the convenience of the reviewer, hard copies of select material are included in this report.

## 2.0 SITE DESCRIPTION

### 2.1 LOCATION

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, Bremerton, Washington. A site location map is shown on Figure 1. The closed refuse fill area covers approximately 65 acres of the site. A site plan is presented on Figure 2.

### 2.2 BACKGROUND

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 landfill cover.

The final landfill cover consists of (top to bottom):

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

### 2.3 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.

## 2.4 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)
- 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 elevations ranging between approximately 140 and 260 feet above MSL (depths-to-water ranging between near-surface and approximately 80 feet below ground surface). The groundwater flow direction beneath the landfill is generally toward the west.

## 3.0 2013 MONITORING ACTIVITIES

### 3.1 GROUNDWATER

#### 3.1.1 Groundwater Monitoring Network

Quarterly groundwater monitoring is conducted at the OVSL in accordance with the January 2001 Agreed Order, EMP as modified through subsequent technical discussions with Ecology, and the site-specific SAP. The monitoring also meets the post-closure landfill monitoring requirements under WAC 173-351-430.

The groundwater monitoring network at the OVSL includes four categories of monitoring wells that are sampled either quarterly or semi-annually, as well as those that are only used for water level measurements. The four well categories designated at the Site include the following:

- Upgradient (background) monitoring wells are used to assess the quality of groundwater upgradient of the landfill Site.
- Performance monitoring wells are used to assess groundwater quality at the edge of the waste management unit.
- Compliance monitoring wells are used to assess groundwater quality at the MTCA Point-of-Compliance (POC).
- Downgradient monitoring wells are used to assess groundwater quality leaving the Site.

A summary of well and type are listed below. The locations of these groundwater monitoring wells are illustrated on Figure 2.

Monitoring Wells at the OVSL by Type			
Upgradient	Performance	Compliance	Downgradient
MW-13A	MW-2B1	MW-15R	MW-29A (S)
MW-13B	MW-4	MW-34A	MW-32
MW-16	MW-19C	MW-34C	MW-33A (S)
MW-35	MW-20	MW-39	MW-33C
	MW-23A	MW-42	MW-36A
	MW-24	MW-43	

S = semiannual monitoring

A indicates a shallower well completion

B indicates a intermediate well completion

C indicates a deeper well completion

Well completion depths range from approximately 9 to 230 feet below ground surface. Screen lengths vary from 5 to 20 feet, with a 10-foot average well screen length. Completion depth differences are indicated by the following letter indicators: "A" is a shallower monitoring well



completion, “B” indicates a intermediate well completion, and “C” indicates a deeper monitoring well completion. Construction details for the monitoring wells are provided on Table 1.

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. Low-flow sampling with dedicated pumps minimizes pump-introduced artifacts as well as eliminating cross contamination between wells. 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 2006), the *Remedial Investigation Report, OVSL, Kitsap County* (Parametrix 2007) and the *Groundwater Monitoring Well Installation Report, OVSL* (SCS Engineers. 2009).

### 3.1.2 Monitoring Schedule

Groundwater monitoring was conducted on a quarterly basis in 2013. The quarterly events were completed in March, June, September, and December 2013. In accordance with the SAP, monitoring wells MW-29A and MW-33A were sampled on a semiannual basis during June and December 2013.

### 3.1.3 Parameters and Analytical Methods

The analytical program for groundwater quality monitoring in during the 2013 reporting period included the following Appendix I and II parameters:

Analytical Program	Parameter
Field Measurements	temperature, specific conductivity, pH, dissolved oxygen, turbidity, and static water level
Geochemical Indicator and General Parameters	chloride, sulfate, nitrate, calcium, sodium, bicarbonate, alkalinity, magnesium, potassium, iron, and manganese, and total suspended solids (as of Sept. 2013)
Dissolved and Totals Metals	antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc (Totals Metals as of Sept. 2013)
Volatile Organic Compounds	as listed in WAC 173-351 Appendix I
Leachate Indicator Parameters	ammonia, total organic carbon (TOC), and total dissolved solids (TDS)

Laboratory methods used are derived from several industry-standard publications. Methods for Chemical Analysis of Water and Wastes (MCAWW, EPA 1983) describe methods used for nitrate, nitrite, chloride, sulfate, and ammonia analyses. Standard Methods for the Examination of Water and Wastewater (SM, APHA/AWWA 1999) describe the methods used for analysis of

alkalinity (total and bicarbonate, TDS, total suspended solids (TSS), and TOC. Metals and VOC analyses are described in EPA publication number SW-846, Test Methods for Evaluating Solid Wastes, Physical and Chemical Methods (EPA revised 2007). The method for measuring arsenic is described in Method 200.8, Determination of Trace Elements in Waters and Wastes by Inductively Coupled Plasma-Mass Spectrometry (EPA 1994).

All laboratory analyses were completed by TestAmerica labs in Denver, Colorado and Buffalo, New York; and by Analytical Resources Incorporated in Tukwila, Washington. The laboratories are accredited in accordance with WAC 173-50, Accreditation of Environmental Laboratories.

### **3.1.4 Field Monitoring and Sampling Procedures**

Field activities conducted at the Site consist of surveying well condition, obtaining field measurements (depth-to-water, pH, specific conductivity, turbidity, temperature, and dissolved oxygen), collecting groundwater samples for laboratory analysis, and packaging and shipping the samples to the laboratories. These activities are conducted as described in the revised 2013 site-specific SAP.

As part of the routine groundwater monitoring program, static water levels were measured and recorded each quarter in monitoring wells within the groundwater monitoring network prior to initializing sampling procedures. Static water levels are collected from both monitoring wells where water quality samples are collected and additional monitoring wells used only for determining the potentiometric groundwater surface. Depth-to-water measurements (to the nearest 0.01 ft.) were obtained using an electronic water level indicator. Static water level measurements were recorded and documented on Field Information Forms included in Appendix A (for December 2013).

Prior to sample collection, groundwater monitoring wells were purged in order to ensure representative groundwater conditions at each location. Both purging and sampling of the monitoring wells were conducted using low-flow/low-volume well sampling techniques. Once the pumping was initiated, flow rates were confirmed by volumetric discharge measurements (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). Prior to initiating the purge process, multiparameter field meters were calibrated in accordance with manufacturer's guidelines. Field measurements for pH, temperature, specific conductivity, dissolved oxygen, and turbidity were conducted using a closed, in-line flow-through cell and a portable turbidity meter. When water quality parameters stabilized and there had been no change in the pumping water level, sample collection would begin. Field-measured were measured as described in Standard Methods for the Examination of Water and Wastewater. Field data obtained during the well purging procedure was recorded on Field Information Forms included in Appendix A (for December 2013).

Non-disposable sampling equipment that was exposed to well water (e.g., electronic water level tape) was decontaminated between wells as outlined in the SAP. Decontamination of equipment was completed before leaving each well, therefore minimizing potential cross contamination. Disposable sampling equipment and disposable personal protective equipment (PPE) were removed and disposed of after each use and prior to leaving each well.

## 3.2 LEACHATE

Leachate generated from three separate closed municipal waste storage cells 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 (refer to Figure 2). The force main outfall is located on the north end of the leachate lagoon. Accumulated leachate is treated by aeration. When the leachate elevation in the pond approaches the elevation of the former pond outlet, leachate is removed via pumping and hauled to nearby wastewater treatment plants.

### 3.2.1 Leachate Monitoring Locations

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

### 3.2.2 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 fourth quarter of 2013. The OBWL-TD station did not contain adequate sample volume for sample collection, as determined during the fourth quarter 2013 monitoring event. The LP-LCD was sampled quarterly in 2013.

### 3.2.3 Parameters and Analytical Methods

A summary of the analytical parameters tested for the leachate samples collected at the OVSL is presented in the table below.

Annual L-INF Analytical Program	Parameter
Field Measurements	temperature, specific conductivity, pH, dissolved oxygen, and turbidity
Geochemical Indicator Parameters	chloride, sulfate, nitrate/nitrite, calcium, sodium, bicarbonate, alkalinity, magnesium, potassium, iron, and manganese
Dissolved Metals	Antimony, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc
Volatile Organic Compounds	as listed in WAC 173-351 Appendix I
Leachate Indicator Parameters	ammonia, total organic carbon (TOC), and total dissolved solids (TDS)

Quarterly LP-LCD Analytical	Parameter
Field Measurements	temperature, specific conductivity, pH, dissolved oxygen, and turbidity
Geochemical Indicator Parameters	chloride, sulfate, nitrate/nitrite, calcium, sodium, bicarbonate, alkalinity, magnesium, potassium, iron, and manganese
Leachate Indicator Parameters	ammonia, TOC, and TDS

Laboratory methods are the same methods used for groundwater samples. All laboratory analyses were completed by TestAmerica labs in Denver, Colorado and Buffalo, New York.

### 3.2.4 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 sample, L-INF, consisted of an individual grab sample. The L-INF monitoring station was dry in 2013 so the L-INF sample was collected directly from the leachate pond. Field personnel immersed sample bottles to collect 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 (for December 2013).

## 3.3 LANDFILL GAS

Landfill gas monitoring activities at the OVSL consists of obtaining field measurements of primary gas composition (methane, carbon dioxide, and oxygen) at 10 subsurface soil gas detection probes (some with multiple screened intervals) and four locations within two onsite structures on or immediately adjacent to the landfill.

Landfill gas monitoring is conducted to provide an assessment of the subsurface soil gas conditions at the OVSL and monitor 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 2013 SAP.

### 3.3.1 Landfill Gas Monitoring Network

Landfill gas monitoring was conducted at 10 perimeter gas probes (GP-7 through GP-16) and two onsite structures as illustrated on Figure 3. 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 three 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 by groundwater. 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 2006).

### **3.3.2 Monitoring Schedule**

Monitoring at the gas probes and facility structures was conducted during February, May, July, and December 2013. The landfill gas monitoring results reported in Section 4 were collected as part of the December 2013 monitoring effort.

### **3.3.3 Monitored 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 groundwater levels were measured in the gas probes during the monitoring events.

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

Field monitoring was conducted in accordance with 2013 SAP. The landfill gas probes and building locations were monitored 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.

### **3.3.5 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 2013 are included in this report.

## 4.0 2013 MONITORING RESULTS

### 4.1 GROUNDWATER

#### 4.1.1 Groundwater Elevation and Flow

Eleven wells (MW-1, MW-5, MW-11, MW-13A, MW-13B, MW-14, MW-16, MW-19D, MW-26, MW-40A, and MW-41A) could not be accessed, were obstructed, or were dry for at least one quarter of 2013. Recorded depth-to-water level summary field documentation is included in Appendix A.

Depth-to-water measurements collected through 2013 were used to calculate groundwater elevations in feet relative to MSL. The 2013 records have been compiled and are presented on Table 3. Groundwater elevation surface maps (derived from static depth-to-water measurements collected at the OVSL monitoring wells) for each quarter during the reporting period are presented in Figures 4A through 4D. A hydrograph of the groundwater elevations over time is presented on Figure 5. Groundwater elevations ranged from approximately 140 to 260 ft. MSL over the 2013 reporting period. Groundwater elevations remained relatively stable over the entire reporting period. The potentiometric groundwater elevation surface across the OVSL does not show significant seasonal fluctuations. This is consistent with results from previous reporting years.

The groundwater flow direction during the reporting period remained consistent with that previously reported. Locally, the groundwater flow direction is to the west/northwest. The average hydraulic gradient across the site remained fairly consistent from quarter to quarter.

Calculated 2013 Hydraulic Gradient and Flow Velocities – East Side				
	Q1	Q2	Q3	Q4
Well Pair	MW-35/MW-24			
Hydraulic Gradient (ft./ft.)	0.045	0.032	0.034	0.034
Flow Velocity (ft./day)	3.87	2.77	2.92	2.92
Calculated 2013 Hydraulic Gradient and Flow Velocities – West Side				
	Q1	Q2	Q3	Q4
Well Pair	MW-20/MW-38			
Hydraulic Gradient (ft./ft.)	0.021	0.014	0.014	0.013
Flow Velocity (ft./day)	10.94	7.19	7.42	6.91

Eastern Hydraulic Conductivity = 26 ft/day (Parametrix 2007)  
 Western Hydraulic Conductivity = 154 ft/day (Parametrix 2007)  
 Porosity = 30% (Parametrix 2007)

#### 4.1.2 Groundwater Quality

##### 4.1.2.1 Chemical Analysis

Water quality data for the OVSL are summarized in Tables 4A through 4E. These tables present the data results of detected analytes and measured field parameters from all four quarters of

2013. Each table presents the data for a monitoring well category (Compliance, Performance, Downgradient, and Upgradient). A table summarizing the detected analytes and field parameters for the annual L-INF and quarterly LP-LCD leachate and leak detection monitoring stations are available for comparison and is also provided. In addition, a summary table of VOC detections in groundwater and leachate is presented on Table 5.

#### 4.1.2.2 Data QA/QC

All analytical data from TestAmerica and ARI were subjected to a quality assurance/quality control (QA/QC) program and evaluation. The program included field and in-house components. The field portion consisted of the collection and analysis of trip blanks, field replicates, and a matrix spike/matrix spike duplicates. The in-house evaluation provided a detailed review of laboratory data which included sample handling, analysis hold times, and laboratory performance analyses (duplicates, blanks, matrix spikes, matrix spike duplicates and surrogate recoveries). The 2013 data set was determined to be acceptable for the intended purposes.

Appendix B contains the data validation report and the analytical laboratory data reports for the December 2013 monitoring event.

#### 4.1.3 Spatial Distribution and Temporal Trends

##### 4.1.3.1 Parameter Distribution

As previously noted for the site, the influence of past waste disposal activities on groundwater quality at the OVSL is observed in the groundwater VOC detections, general chemistry, inorganics, and field parameter results. The elevated concentrations of parameters adjacent to the landfill are typically characteristic of influence from either landfill leaching, transport from landfill gas, or increased mobilization of naturally occurring constituents as a result of the landfill's presence.

At the OVSL, several key parameters (dissolved arsenic, dissolved iron, dissolved manganese, and vinyl chloride) are routinely monitored for their spatial distribution each quarter by plotting concentrations on the landfill base map. The spatial distributions for these four parameters for the fourth quarter December 2013 monitoring event are presented in Figures 6A through 6D and summarized in the tables below.

Dissolved Arsenic (mg/L) - December 2013 (Figure 6A)				
Concentration	Upgradient	Performance	Compliance	Downgradient
Low (Location)	0.00012 (MW-35)	0.00011 (MW-23A)	<0.00004 (MW-43)	0.00015 (MW-33A)
High (Location)	0.00028 (MW-13B)	0.00261 (MW-19C)	0.00153 (MW-39)	0.01 (MW-32)

Dissolved Iron (mg/L) - December 2013 (Figure 6B)				
Concentration	Upgradient	Performance	Compliance	Downgradient
Low (Location)	All less than <0.06	<0.06 (MW-2B1, MW-20, MW-24)	<0.06 (MW-15R, MW-34A)	<0.06 (MW-36A)
High (Location)		0.82 (MW-23A)	36 (MW-39)	3.9 (MW-29A)

Dissolved Manganese (mg/L) - December 2013 (Figure 6C)				
Concentration	Upgradient	Performance	Compliance	Downgradient
Low (Location)	<0.001 (MW-13A, MW-13B, MW-35)	0.15 (MW-20)	<0.001 (MW-34A)	0.001 (MW-36A)
High (Location)	0.012 (MW-16)	2.2 (MW-23A)	4.6 (MW-42)	2.2 (MW-32)

Vinyl Chloride (µg/L) - December 2013 (Figure 6D)				
Concentration	Upgradient	Performance	Compliance	Downgradient
Low (Location)	All less than <0.02	<0.02 (MW-2B1, MW-24)	<0.02 (MW-15R, MW-39, MW-43)	<0.02 (MW-29A, MW-33A, MW-33C, MW-36A)
High (Location)		0.11 (MW-19C)	0.16 (MW-34C)	0.35 (MW-35)

Groundwater impacts are seen in each category of monitoring wells at the Site. The highest detected concentrations of arsenic and manganese in Upgradient (background) monitoring wells were observed at MW-13B (arsenic, 0.00028 mg/L) and MW-16 (manganese, 0.012 mg/L). The highest concentrations of these parameters observed in Performance monitoring wells were observed at wells MW-19C (arsenic, 0.00261 mg/L; vinyl chloride, 0.11 µg/L) and MW-23A (iron, 0.82 mg/L; manganese, 2.2 mg/L). The highest detected concentrations of these parameters in Compliance monitoring wells were observed in wells MW-34C (vinyl chloride, 0.16 µg/L), MW-39 (arsenic, 0.00153 mg/L; iron, 36 mg/L), and MW-42 (manganese, 4.6 mg/L).

#### 4.1.3.2 Temporal Trends

Time series graphs and a statistical trend analysis were produced for all Upgradient, Performance, Compliance, and Downgradient monitoring wells using the DUMPStat software package. The data used for the statistical analyses includes data from 2005 through the present reporting year, 2013. This evaluation was conducted for parameters listed in Appendices I and II of WAC 173-351-990 -- organized into two groups: "Trend Test A" and "Trend Test B". The "Trend Test A" time series include all organic parameters in Appendices I and II that have been detected above the practical quantification limit (PQL) during at least one sampling event in any of the wells since 2005 (currently 25 VOCs). The "Trend Test B" time series include Appendix I and II inorganic and ground water quality parameters (currently 32 parameters). To facilitate review of the statistically significant trends, time series 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 parameters showing significant increasing or decreasing concentration trends grouped by well type is provided on Table 6A and a more detailed summary of parameter trends in specific wells can be found in Table 6B.

The dominant data trend seen for many parameters throughout the Site is that of decreasing concentrations. This is observed primarily in Performance, Compliance, and Downgradient monitoring wells with significant decreases noted in all well groups for as many as 15 inorganic parameters and two VOCs. However, significant increasing trends for some inorganic parameters are also seen in all well groups, although the number of parameters increasing remains low.

Significant parameters trends for the Compliance monitoring wells are summarized below.

Significant Trends in Compliance Wells			
Increasing		Decreasing	
Parameter	Wells	Parameter	Wells
Chromium, Dissolved	MW-34A	Arsenic, Dissolved	MW-34C
pH	MW-42	Barium, Dissolved	MW-15R, MW-34C
Potassium, Dissolved	MW-42	Calcium, Dissolved	MW-15R, MW-34C
Temperature	MW-34A, MW-34C	Chloride	MW-34A, MW-34C
		Iron, Dissolved	MW-34C
		Magnesium, Dissolved	MW-34A
		Manganese, Dissolved	MW-15R, MW-34C
		Sodium, Dissolved	MW-34A, MW-34C
		Specific Conductivity	MW-15R, MW-34A, MW-34C
		Sulfate	MW-34A
		Total Dissolved Solids	MW-15R, MW-34C

#### 4.1.4 Groundwater Geochemistry

The geochemical character of groundwater, LP-LCD, and L-INF samples was evaluated by plotting and comparing geochemical parameters using a Piper diagram for the December 2013 analytical results. Groundwater samples collected during December 2013 were of similar geochemical water type with clear differences seen between the groundwater, L-INF, and LP-LCD samples. 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 and L-INF samples have higher sodium and potassium levels than groundwater, as well as higher chloride levels. The Piper diagram for December 2013 can be found in Appendix D. Previous Piper diagrams for the first, second, and third quarters can be found in corresponding quarterly monitoring reports.

In addition to the Piper diagram, cation/anion balance calculations of groundwater were also used to assess geochemical character. Ideally, after the major anions and cations present in a sample are determined, the sum of the positive cations (in milliequivalents per liter [meq/L])

should approximately equal the sum of the negative anions (Hem 1986). All natural waters should be electroneutral, however, differences can arise between dissolved cations and anions in groundwater as measured by an analytical laboratory due to a number of factors including: presence of colloidal fractions, systematic error in preparation and analysis of samples, malfunction of/poorly calibrated equipment, major species omitted from analysis, the presence of unusually high concentrations of cations/anions, and not all ions present in water are included in the balance calculation. Due to these potential issues, differences in the ion balance can be difficult to assess for imbalances due to groundwater impacts.

The range of the sum of ions and balance of ions observed at the Site for the December 2013 monitoring event are summarized in the table below. Positive values indicate that the sum of the cations is greater than the sum of the anions

Well Group	Upgradient	Performance	Compliance	Downgradient
Sum of Ions	2.4-3.3	2.2-7.5	3.8-5.2	1.6-6.0
Balance (%)	9.0-10.0	5.7-12.7	-4.7-10.5	-0.9-12.8

As stated in WAC 173-351-430-5(a), a relative percent difference (RPD) in the charge-balance (ion balance) of greater than five to ten percent (depending on the concentrations of ions in solution) could potentially indicate impacted groundwater conditions. Ion balances observed at the Site during the December 2013 event are within or very close to this threshold. It's likely that results greater than the 5 to 10% ion balance threshold are due to possible errors associated with analytical limitations in the measurements (as previously discussed) or potential low level impact from human activities upgradient and at the Site.

#### **4.1.5 Statistical Prediction Limit Evaluation**

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 prediction limit concentrations are used for comparison purposes for compliance and downgradient monitoring wells.

Prediction limits for inorganic parameters were exceeded at least once during the fourth quarter of 2013 in eleven of the groundwater monitoring wells (MW-15R, MW-29A, MW-32, MW-33A, MW-33C, MW-34A, MW-34C, MW-36A, MW-39, MW-42, and MW-43). Well MW-42 reported the largest number of prediction limit exceedances. A summary of the latest prediction limit exceedances for the December 2013 results for Compliance and Downgradient wells is presented on Table 7. Prediction limit calculations are presented in Appendix C.

As noted previously (and as shown on Tables 6A and 6B), the following upgradient monitoring wells exhibited statistically significant increasing or decreasing trends over the period for which background prediction limits are calculated: MW-13A (bicarbonate/total alkalinity and magnesium), MW-13B (bicarbonate/total alkalinity), MW-16 (nitrate), and MW-35 (bicarbonate/total alkalinity and nitrate). 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.

#### 4.1.6 Point of Compliance and Cleanup Level Exceedances

##### 4.1.6.1 Point of Compliance

The solid waste regulations (WAC 173-351-300[6]), specify that 462 groundwater quality compliance must be established at a POC located on the landfill property no more than one hundred fifty meters (four hundred ninety two feet) from the waste management unit boundary. At the OVSL, the POC is established as a line of wells located within 150 meters of the landfill waste management unit boundary. As illustrated on Figure 2, the Compliance monitoring wells are colored red and lie west/northwest of the downslope boundary of the landfill.

##### 4.1.6.2 Cleanup Level Exceedances

###### Site-Specific MTCA Cleanup Levels

Ten organic and inorganic parameters are regulated under the OVSL Cleanup Action Plan (CAP, Ecology 2010) and have site-specific MTCA cleanup levels. Analytical results are used to calculate an upper confidence limit (UCL) of the mean concentration for each parameter for each well for Compliance and Downgradient monitoring wells to assess compliance with their respective cleanup level.

The UCLs are calculated using a three-year moving data window (per MTCASat guidance) for the ten site-specific chemicals of concern (COC). The UCLs are calculated using MTCASat; calculation details are presented in Appendix C. The following in-text table and Table 8 summarize the COCs and their 2013 exceedances.

Chemicals of Concern	Units	Site-specific MTCA Cleanup Level	Exceedances in 2013
1,1-Dichloroethane	µg/L	50	No
1,4-Dichlorobenzene	µg/L	2	No
Ammonia	mg/L	0.19	Yes
Arsenic	mg/L	0.000462	Yes
Cis-1,2-Dichloroethene	µg/L	35	No
Ethyl ether	µg/L	50	No
Iron	mg/L	0.3	Yes
Manganese	mg/L	0.05	Yes
Trichloroethene	µg/L	1	Yes
Vinyl Chloride	µg/L	0.2	Yes

Blue indicates COC in 2013 exceeded site-specific MTCA Cleanup Levels

There are several indications of improving groundwater quality or groundwater continuing to remain stable that were observed in 2013. The 95% UCL for vinyl chloride was below the cleanup level in all Compliance wells and all Downgradient wells except MW-32. The 95% UCL for iron and ammonia moved above the cleanup level in compliance well MW-43 and MW-33C, respectively. This was a change from the previous reporting year, but for both cases are an example of the UCLs hovering very near cleanup levels such that minor variation from year to year can cause exceedances to arise or vanish between reporting periods.

Statistically significant trends are also noted on Table 8 in order to provide additional information regarding 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.

Exceedances of the site-specific MTCA cleanup levels were reported in five of six Compliance well locations (refer to Table 8): MW-34A (arsenic); MW-34C (arsenic, iron, manganese); MW-39 (arsenic, iron, manganese, and ammonia); MW-42 (arsenic, iron, manganese, and ammonia); and MW-43 (iron and manganese). In 2013, as in 2012, a significant decreasing trend was reported for manganese in MW-15R, and was reported for arsenic, iron, and manganese in MW-34C. The 95% UCLs for select VOCs were below the site-specific MTCA cleanup levels in all of the Compliance monitoring wells.

Exceedances of the site-specific MTCA cleanup levels were reported in all five Downgradient well locations (refer to Table 8): MW-29A (arsenic, iron, and manganese); MW-32 (arsenic, iron, manganese, and vinyl chloride); MW-33A (iron, manganese, and ammonia); MW-33C (arsenic, manganese, and ammonia); and MW-36A (arsenic). Significant decreasing trends were identified: well MW-32 (iron), MW-33C (arsenic), and MW-36A (arsenic). Other than vinyl chloride in MW-32, all of the 95% UCLs for the select VOCs were below the site-specific MTCA cleanup levels in all of the Downgradient monitoring wells.

#### **Other Criteria Comparison (Federal MCLs, WAC 173-200, and MTCA)**

In addition to the site-specific MTCA cleanup levels, groundwater at the OVSL is also compared to WAC 173-200 Groundwater Quality Protection Standards and State/Federal Primary and Secondary Maximum Contaminant Levels (MCLs). For comparison purposes, site-specific MTCA cleanup levels are also included.

The WAC 173-200 and MCL exceedances for the 2013 reporting period by parameter and well are summarized on Table 9. Criteria for the following seven analytes were exceeded:

- pH
- Ammonia
- Arsenic, Total and Dissolved
- Iron, Total and Dissolved
- Manganese, Total and Dissolved
- Trichloroethene
- Vinyl chloride

## 4.2 LEACHATE MONITORING RESULTS

### 4.2.1 Leachate Quality

The results of the fourth quarter 2013 leachate influent sample (L-INF) analysis are presented along with the groundwater sampling results on Table 4E. Where the leachate influent and groundwater samples 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:

Parameter Type	Parameter	Result
Field	Specific	520
General	Alkalinity	520 mg/L
	Total Dissolved	2700 mg/L
	Chloride	770 mg/L
	Potassium	100 mg/L
	Sodium	650 mg/L
	Sulfate	290 mg/L
Metals	Barium	0.1 mg/L
	Iron	0.23 mg/L
	Manganese	0.69 mg/L
VOCs	Tetrahydrofuran	12 µg/L

Samples were also obtained from the LP-LCD monitoring station and submitted for selected Appendix II parameter and total metals analysis during all four quarters of 2013 (refer to Table 4E).

### 4.2.2 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 2013 reporting period, approximately 1,102,482 gallons of leachate were reported to have been pumped into the leachate collection pond. Locally, 27.95 inches of precipitation was reported during 2013. As previously noted, this volume is approximately 550,000 gallons less than that generated at the site in 2012 (1,651,593 gallons), during which local precipitation totaled more than 78 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. The amount of leachate produced on a quarterly and annual basis over the last five years is presented on Figure 7.

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 2013 are presented on Table 10. Approximately 2,863 gallons of liquid were removed from the collection system during 2013.

Metered volume readings reported during previous monitoring years from the pump at the LP-LCD station had been considered to be unreliable. The totalizer was suspected of reporting the combined volumes of air and liquid. To address this issue, the LP-LCD system was re-engineered during the Fourth Quarter of 2012. A new LCD vault, volumetric tank, and piping were installed. On November 16, 2012, the final piping was completed and the old meter was taken off-line. On December 10, 2012, following the re-configuration, the system was pumped and the volume was visually measured in the new tank (rather than by meter) prior to return to the leachate pond.

### 4.3 LANDFILL GAS MONITORING RESULTS

The presence of landfill gas is discussed in terms of detected methane and/or carbon dioxide (at concentrations of both gases at levels greater than 0.3 percent by volume) and depressed oxygen (less than 20.3 percent by volume). The detection of these gases, as well as, and elevated gas pressures within the perimeter probes indicate the potential presence of landfill gas. The reported values represent measurements from stabilized conditions (after purging at least one probe volume from each sampling zone). It should also be noted that the monitoring results are discussed in terms of probe locations, not sampling zones (by depth). For example, if methane is detected in the shallow or deep monitoring zone (or both) of one gas probe, the reference is to the location. The screened interval in Middle- and Deep-monitoring zones is sometimes submerged by the shallow groundwater table. When this occurs, gas results are not representative of the screened interval, and as a result are not reported.

Perimeter landfill gas probes and surface structure locations were monitored for the presence of landfill gases. The December 2013 results are summarized in Table 11.

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 2013 are presented on Figure 8.

#### 4.3.1 Perimeter Gas Probe

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 soil 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 0.9 (GP-10D) to 9.5 percent by volume (GP-15). Depressed oxygen levels were reported at all gas probes, ranging from 1.2 (GP-15) to 19.6 percent by volume (GP-9D). Representative relative (static) pressure readings in the perimeter gas probes ranged from -6.77 to 2.73 inches of water column.

As noted in past monitoring years, the observed 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 2013 monitoring year.

Groundwater seepage during the rainy season can submerge the perforated portion of the soil gas probe casing 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 are taken at each gas probe location. The percentage of exposed perforated casing for each gas probe is shown on Table 11. During the December 2013 event, water level measurements were obtained on December 18, 2013 concurrently with soil gas probe measurements.

#### **4.3.2 Structure Monitoring**

In December 2013, monitoring showed no presence of methane in either the South Slope Well House or the Scale House. Carbon dioxide was detected at 0 to 0.1 percent by volume in onsite structures. Oxygen concentrations at both structures were not depressed.

#### **4.3.3 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 effects 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 2013 are presented on Figure 8. On December 18, landfill gas monitoring was conducted during a period of relatively stable (to slightly falling) barometric pressure conditions.

## 5.0 SUMMARY AND CONCLUSIONS

Over the last decade of post-closure care monitoring, landfill gas and leachate generation rates and groundwater quality results at the OVSL have been consistent with an overall improvement of environmental site conditions and the on-going stabilization of the closed landfill.

Groundwater quality data indicate that from 2005 through 2013 that contaminants in groundwater continue to decline with fewer exceedances in site-specific MTCA cleanup levels in groundwater reported at POC monitoring wells and downgradient of the site overtime. The 2013 reporting year saw a further reduction in leachate production, which is consistent with recent trends, and the previous implementation of improved site engineering controls. The facility will continue to explore opportunities to minimize any remaining above ground contribution to leachate volumes to ensure that the trend of diminishing leachate generation continues.

Similarly, landfill gas production at the OVSL continues to decline with flow rates decreasing rapidly to several orders of magnitude below their model production high as the depletion of methane and other landfill gases continues at the site. It is anticipated that on-going monitoring efforts in 2014 will continue to show improving environmental conditions and increased landfill stability.

### 5.1 GROUNDWATER

#### 5.1.1 Groundwater Quality

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 during the 2013 reporting period.

Water quality standards were exceeded for seven analytes: pH, dissolved arsenic, dissolved iron, dissolved manganese, ammonia, trichloroethene, and vinyl chloride. The results from the 2013 monitoring year are generally consistent with those reported for previous years although overall trends show concentrations decreasing.

The only primary federal MCL exceedance at the OVSL for the 2013 reporting period was for arsenic in well MW-32 (0.01 mg/L) and well MW-34C (0.0252 mg/L, in an unfiltered groundwater sample) during December. 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 2013 reported 95% UCL groundwater cleanup goal exceedances at ten of eleven compliance and downgradient wells at the OVSL. Compliance well MW-15R did not report any exceedances. With the exception of vinyl chloride in MW-32, the only parameters to report exceedances of the site specific MTCA cleanup levels were arsenic, iron, manganese, and ammonia. The most parameter exceedances were reported in Compliance wells MW-39 and MW-42 and downgradient well MW-32. However, an analysis of the 95% UCL for the ten COCs relative to their respective cleanup levels indicates improving groundwater quality during 2013. The 95% UCL for ammonia at MW-33C and iron at MW-43 rose above the cleanup level, but for both cases the UCLs hover near the cleanup levels such that



minor and natural variation from year to year could cause exceedances to come and go. Furthermore, Downgradient and Compliance wells exhibited only decreasing trends in 2013.

Prediction limits for inorganic parameters were exceeded in eight groundwater monitoring wells. Significantly increasing concentrations trends were reported for at least one inorganic parameter at thirteen well locations, and significantly decreasing trends also occurred at sixteen well locations. Significantly decreasing concentration trends were reported for trichloroethene (MW-19C) and vinyl chloride in performance wells MW-19C, MW-23A, and MW-24.

The groundwater analytical data, statistical and graphical analyses, and comparison to water quality standards continue to indicate similar, but improving conditions (in 2013) to those previously documented from 2005 through 2012, with on-going evidence that natural attenuation continues to be affecting the groundwater quality at the site.

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

Natural attention includes a variety of physical, chemical and biological processes that act without human intervention to reduce mass, toxicity, mobility, volume, or concentration of contaminants. Examples of these processes can include biodegradation, dispersion, dilution, sorption, volatilization, chemical transformation, and contaminant destruction. At solid waste landfills, natural attenuation processes are largely controlled by and associated with changes in groundwater chemistry. Typically, for landfills, pathways for aerating subsurface soils and groundwater is impeded resulting in increasingly anaerobic and reducing conditions (or in the case of unlined landfills, there is potential for highly reduced liquids to enter the groundwater system). These conditions promote microbial communities that can degrade organic compounds resulting in the dechlorination of solvents and their daughter products.

The on-going improvement observed in water quality throughout 2013 is illustrated by the overall stability and decreasing trends observed in the 95% UCLs calculated and compared to cleanup levels for the site-specific MTCA cleanup levels. These data continue to support the conclusion that natural attention is occurring as expected 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 (e.g., MW-20 and MW-19C with elevated dissolved iron, vinyl chloride and other redox sensitive parameters). The presence of vinyl chloride beneath the west-central portions of the site is consistent with the ongoing reductive dechlorination of parent compounds (PCE, TCE and DCE isomers). However, further downgradient, along the far western margins of the site, groundwater geochemistry becomes increasingly less reductive and more oxidative which may still continue to support the degradation of vinyl chloride. This is demonstrated by the general absence of VOCs, including vinyl chloride, in downgradient wells MW-33A, MW-33C and MW-36A.

The increasing number of decreasing parameter trends provides additional evidence supporting the ongoing and expected natural attention at the OVSL. Given the current data and historical trends, natural attenuation at the OVSL can be anticipated to continue throughout the post-closure period.

## 5.2 LEACHATE

Comparison of the 2013 groundwater and L-INF field and laboratory results confirm that parameters measured and analyzed in the L-INF are elevated relative to groundwater. These parameters include specific conductivity, alkalinity, ammonia, total calcium, total magnesium, total potassium, total sodium, chloride, sulfate, total dissolved solids, total organic carbon, and barium. Tetrahydrofuran was also reported in the L-INF sample, however, it was not observed in any groundwater samples in 2013. Vinyl chloride was not reported in the 2013 L-INF sample, and has not been since 2011.

The LP-LCD monitoring station was sampled in all four quarters of 2013. These samples continue to report elevated specific conductivity, alkalinity, ammonia, calcium, chloride, iron, manganese, sodium, sulfate, TDS and TOC compared to the groundwater results.

A reduction on the order of 550,000 gallons in leachate volume generated was realized in 2013. In addition to reduced rainfall, infrastructure improvements at the site have continued to contribute to a decrease in leachate generation. Liquid volumes recorded at the LP-LCD monitoring station for the leachate pond leakage collection system indicate that approximately 2,863 gallons of liquid were returned to the pond in 2013. The relatively low LP-LCD volumes reported during 2013 continue to suggest that leakage through the leachate pond liner system is minimal and well controlled. Metered volume readings previously reported from the pump at the LP-LCD station had been considered to be unreliable. The re-engineered of the LP-LCD system in late 2012 has improved accuracy of reported liquid volume entering the leak detection system.

## 5.3 LANDFILL GAS

Methane was not detected above state regulatory standards in any of the gas monitoring probes or in any of the landfill structures during 2013. The perimeter soil gas probe monitoring results indicate that the facility is in compliance with respect to subsurface landfill soil 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 or stabilizing to low levels, 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 2013 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 soil gas probe and structural monitoring locations. The gas collection system will continue to be monitored and optimized to enhance its performance.

## 6.0 REFERENCES

- American Public Health Association, American Water Works Association, Water Environment Federation, revised 2014. *Standard Methods for the Examination of Water and Wastewater*.
- 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. 2013. *Olympic View Sanitary Landfill, (OVSL) Sampling and Analysis Plan*. April.

United States Department of Environmental Protection (USEPA) 1983. *Methods Chemical Analysis of Water and Wastes*. Environmental Monitoring and Support Laboratory, Office of Research and Development.

USEPA 1994. *Method 200.8, Determination of Trace Elements in Waters and Wastes by Inductively Coupled Plasma-Mass Spectrometry*, Revision 5.4 EMMC Version. Environmental Monitoring Systems Laboratory, Office of Research and Development.

USEPA revised 2007. *Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods*, Third Ed., Environmental Monitoring Systems Laboratory, Office of Research and Development.

Washington Department of Ecology (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*.

## TABLES



**Table 1. Groundwater Well Construction Details  
2013 Annual Monitoring Report  
Olympic View Sanitary Landfill, Kitsap County, Washington**

Well ID	Northing	Easting	Measuring Point Elevation (ft. MSL)	Well Depth (ft. bgs)	Top of Screen Elevation (ft. MSL)	Bottom of Screen Elevation (ft. MSL)	Screen Length (ft.)
<b>Water Quality Monitoring 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-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-36A	189754.10	1156935.20	192.68	50	147	142	5
MW-39	190362.60	1158325.32	189.92	25	174	164	10
MW-42	188690.50	1156617.90	187.43	33	159	154	5
MW-43	188407.60	1156636.60	186.42	30	161	156	5
<b>Water Level Measurement Only Wells</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-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

**Notes:**

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

**Table 2. Summary of Analytical Parameters  
2013 Annual Monitoring Report  
Olympic View Sanitary Landfill, Kitsap County, Washington**

Well	Volatile Organic Compounds		Geochemical Indicator Parameters	Leachate Indicator Parameters		Field Parameters	Metals* and Nitrate	
	WAC 173-351 Appendix I	Vinyl Chloride (SIM)	Cl, Fe, Mn, SO <sub>4</sub> , Ca, Mg, Na, K, Alkalinity	Ammonia	TOC, TDS	Dissolved Oxygen, ORP, pH, Specific Conductivity, Temperature, Turbidity	As, Sb, Ba, Be, Cd, Cr, Co, Cu, Pb, Ni, Se, Ag, Tl, V, Zn, NO <sub>3</sub>	TSS
Compliance Monitoring Locations								
MW-15R	✓	✓	✓	✓	✓	✓	✓	✓
MW-34A								
MW-34C								
MW-39								
MW-42								
MW-43								
Performance Monitoring Locations								
MW-2B1	✓	✓	✓	✓	✓	✓	✓	✓
MW-4								
MW-19C								
MW-20								
MW-23A								
MW-24								
Downgradient Monitoring Locations								
MW-29A <sup>a</sup>	✓	✓	✓	✓	✓	✓	✓	✓
MW-32								
MW-33A <sup>a</sup>								
MW-33C								
MW-36A								
Upgradient Monitoring Locations								
MW-13A	✓	✓	✓	✓	✓	✓	✓	✓
MW-13B								
MW-16								
MW-35								
Leachate Monitoring Locations								
L-INF	✓	✓	✓	✓	✓	✓	✓	
LP-LCD			✓	✓	✓	✓		
OBWL-TD								

**Notes**  
 ✓ Indicates wells were sampled for selected parameters  
 \* Groundwater samples were analyzed for both total and dissolved metals fractions (commencing 3Q13), except As which commenced monitoring for the 4Q13 event.  
<sup>a</sup> Sampled semi-annually in June and December 2013.  
 OBWL-TD did not contain adequate volume to sample in 2013.



**Table 3. Groundwater Elevations  
2013 Annual Monitoring Report  
Olympic View Sanitary Landfill, Kitsap County, Washington**

Location ID	Measuring Point Elevation (ft. MSL)	Q1 March 2013		Q2 June 2013		Q3 September 2013		Q4 December 2013	
		DTW	WLE	DTW	WLE	DTW	WLE	DTW	WLE
<b>Water Quality Monitoring Wells</b>									
MW-2B1	172.94	6.10	166.84	6.66	166.28	7.73	165.21	7.91	165.03
MW-4	175.78	13.12	162.66	14.75	161.03	16.07	159.71	15.79	159.99
MW-13A	288.74	45.78	242.96	46.00	242.74	DRY	--	47.36	241.38
MW-13B	288.66	59.48	229.18	59.44	229.22	DRY	--	61.45	227.21
MW-15R	180.66	18.25	162.41	18.75	161.91	19.43	161.23	19.32	161.34
MW-16	240.01	54.75	185.26	57.43	182.58	59.41	180.60	61.23	178.78
MW-19C	196.96	33.12	163.84	33.62	163.34	NM	--	35.11	161.85
MW-20	198.41	35.00	163.41	35.69	162.72	36.80	161.61	37.00	161.41
MW-23A	182.28	10.85	171.43	10.44	171.84	13.33	168.95	13.80	168.48
MW-24	208.25	30.07	178.18	31.47	176.78	33.55	174.70	34.20	174.05
MW-29A	160.21	12.85	147.36	13.80	146.41	15.80	144.41	14.40	145.81
MW-32	152.36	1.25	151.11	1.54	150.82	2.14	150.22	1.90	150.46
MW-33A	147.68	4.89	142.79	5.60	142.08	6.44	141.24	5.24	142.44
MW-33C	147.59	1.81	145.78	2.42	145.17	3.20	144.39	2.49	145.10
MW-34A	197.95	38.95	159.00	39.47	158.48	40.51	157.44	40.30	157.65
MW-34C	199.89	40.74	159.15	41.28	158.61	42.30	157.44	42.10	157.79
MW-35	302.69	71.55	231.14	71.78	230.91	72.56	230.13	72.66	230.03
MW-36A	192.68	30.50	162.65	31.03	161.65	31.95	161.20	31.40	161.28
MW-39	189.92	18.35	171.57	20.38	169.54	22.35	167.57	20.11	169.81
MW-42	187.43	27.20	160.56	27.82	159.61	29.50	158.26	28.62	158.81
MW-43	186.42	24.15	162.42	25.00	161.42	26.50	160.07	25.70	160.72
MW-9	160.34	2.58	157.76	2.96	157.38	3.60	156.74	3.45	156.89
<b>Water Level Measurement Only Wells</b>									
MW-1	273.63	66.56	207.07	68.87	204.76	NM	--	NM	--
MW-2A1	174.22	7.11	167.11	7.75	166.47	10.28	163.94	9.10	165.12
MW-5	164.37	1.90	162.47	2.46	161.91	NM	--	3.55	160.82
MW-10	155.12	4.65	150.47	4.30	150.82	5.28	149.84	4.76	150.36
MW-11	155.04	4.19	150.85	4.21	150.83	NM	--	5.36	149.68
MW-12	233.09	44.32	188.77	44.01	189.08	49.20	183.89	50.73	182.36
MW-13	288.94	28.39	260.55	28.33	260.61	29.60	259.34	29.80	259.14
MW-14	228.22	44.85	183.37	NM	--	NM	--	NM	--
MW-17	208.01	30.87	177.14	30.53	177.48	34.65	173.36	35.72	172.29
MW-18	258.34	61.35	196.99	60.97	197.37	65.04	193.30	66.52	191.82
MW-19A	195.74	31.54	164.20	32.40	163.34	33.85	161.89	33.87	161.87
MW-19B	195.82	31.40	164.42	32.45	163.37	35.90	159.92	33.94	161.88
MW-19D	196.83	31.79	165.04	32.54	164.29	NM	--	34.22	162.61
MW-21	156.03	4.85	151.18	5.12	150.91	6.49	149.54	5.90	150.13
MW-23B	182.42	11.17	171.25	12.05	170.37	14.00	168.42	14.13	168.29
MW-23C	182.41	11.20	171.21	12.20	170.21	14.53	167.88	14.41	168.00
MW-26	189.73	9.62	180.11	10.81	178.92	NM	--	13.68	176.05
MW-27	200.65	19.70	180.95	21.15	179.50	23.35	177.30	24.47	176.18
MW-28	181.05	5.10	175.95	5.58	175.47	6.30	174.75	6.85	174.20
MW-29B	161.69	16.77	144.92	17.40	144.29	18.50	143.19	18.05	143.64
MW-29C	156.92	11.40	145.52	11.70	145.22	13.28	143.64	12.73	144.19
MW-30A	166.74	23.58	143.16	24.15	142.59	25.37	141.37	24.90	141.84
MW-30B	166.60	23.45	143.15	24.00	142.60	25.37	141.23	24.72	141.88
MW-31	148.28	2.08	146.20	3.00	145.28	3.80	144.48	2.80	145.48
MW-33B	147.55	1.82	145.73	2.56	144.99	3.19	144.36	2.52	145.03
MW-34B	198.93	38.70	160.23	39.20	159.73	40.61	158.32	40.08	158.85
MW-36	189.39	30.58	158.81	31.08	158.31	31.99	157.40	31.81	157.58
MW-37	145.93	3.65	142.28	4.67	141.26	5.85	140.08	4.19	141.74
MW-38	149.93	3.57	146.36	4.43	145.50	5.40	144.53	4.41	145.52
MW-40A	180.16	14.04	162.59	15.71	164.45	DRY	--	16.85	163.31
MW-40B	180.24	14.21	162.51	15.63	164.61	16.95	159.77	16.77	163.47
MW-40C	181.16	14.80	161.98	15.99	165.17	17.14	159.64	17.35	163.81
MW-41A	199.43	22.70	173.21	24.10	175.33	DRY	--	30.05	169.38
MW-41B	200.64	23.00	173.24	24.50	176.14	26.30	169.94	27.11	173.53
MW-41C	199.67	24.65	171.50	26.06	173.61	27.80	168.35	28.33	171.34

**Notes:**

DTW = Depth to Water (ft)

WLE = Water level elevation

Elevations, ft-msl

NM = Not measured

-- = Groundwater elevation not calculated

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











**Table 4E. Detections and Field Measurements - Leachate and Leak Detection Locations  
2013 Annual Monitoring Report  
Olympic View Sanitary Landfill, Kitsap County, Washington**

Parameters		Leachate and Leak Detection				
		L-INF	LP-LCD			
			12/13/2013	3/11/2013	6/7/2013	9/30/2013
<b>Field Measurements</b>	<b>Units</b>					
Dissolved Oxygen	mg/L	9.98	8.54	6.77	6.1	13.2
ORP	mV	190	247.4	82	-44.1	197.9
pH	SU	6.26	6.97	6.83	7.13	6.53
Specific Conductivity	µmhos/cm	3850	3004	31500	2813	2324
Temperature	deg-C	3.86	9.72	17.47	18.9	8.2
Turbidity	NTU	3.46	40.17	439.6	3.9	9.1
<b>General Chemistry</b>						
Alkalinity, Bicarbonate	mg CaCO <sub>3</sub> /L	520	1000	810	--	940
Alkalinity, Total	mg CaCO <sub>3</sub> /L	520	1000	--	--	940
Ammonia	mg N/L	3	27	12	19	20
Calcium, Dissolved	mg/L	100	--	--	--	--
Calcium, Total	mg/L	--	69	35	32	48
Chloride	mg/L	770	740	540	600	610
Magnesium, Dissolved	mg/L	69	--	--	--	--
Magnesium, Total	mg/L	--	45	21	20	28
Nitrate	mg/L	83	--	--	--	--
Potassium, Dissolved	mg/L	100	--	--	--	--
Potassium, Total	mg/L	--	84	66	67	66
Sodium, Dissolved	mg/L	650	--	--	--	--
Sodium, Total	mg/L	--	870	680	740	770
Sulfate	mg/L	290	160	150	170	200
Total Dissolved Solids	mg/L	2700	2700	2200	2300	2400
Total Organic Carbon	mg/L	85	92	62	85	75
Total Suspended Solids	mg/L	--	--	--	--	--
<b>Metals</b>						
Antimony, Dissolved	mg/L	0.0058	--	--	--	--
Antimony, Total	mg/L	--	--	--	--	--
Arsenic, Dissolved	mg/L	--	--	--	--	--
Arsenic, Total	mg/L	--	--	--	--	--
Barium, Dissolved	mg/L	0.1	--	--	--	--
Barium, Total	mg/L	--	--	--	--	--
Cadmium, Dissolved	mg/L	0.00026	--	--	--	--
Cadmium, Total	mg/L	--	--	--	--	--
Chromium, Dissolved	mg/L	0.0067	--	--	--	--
Chromium, Total	mg/L	--	--	--	--	--
Cobalt, Dissolved	mg/L	0.012	--	--	--	--
Cobalt, Total	mg/L	--	--	--	--	--
Copper, Dissolved	mg/L	0.021	--	--	--	--
Copper, Total	mg/L	--	--	--	--	--
Iron, Dissolved	mg/L	0.23	--	--	--	--
Iron, Total	mg/L	--	0.48	0.5	1.5	1.3
Manganese, Dissolved	mg/L	0.69	--	--	--	--
Manganese, Total	mg/L	--	1	0.69	0.9	1.1
Nickel, Dissolved	mg/L	0.087	--	--	--	--
Selenium, Dissolved	mg/L	--	--	--	--	--
Vanadium, Dissolved	mg/L	0.0095	--	--	--	--
Vanadium, Total	mg/L	--	--	--	--	--
Zinc, Dissolved	mg/L	0.044	--	--	--	--
Zinc, Total	mg/L	--	--	--	--	--
<b>Volatile Organic Compounds</b>						
Acetone	µg/L	--	--	--	--	--
Carbon disulfide	µg/L	--	--	--	--	--
Tetrahydrofuran	µg/L	12	--	--	--	--
Trichloroethene	µg/L	--	--	--	--	--
Vinyl chloride	µg/L	--	--	--	--	--

**Notes:**

CaCO <sub>3</sub> = Calcium carbonate	mV = Millivolts
deg-C = Degrees Celcius	N = Nitrogen
J = Conentration is estimated	NTU = Nephelometric turbidity units
µmhos/cm = Microhms per centimeter	SU = Standard units
µg/L = Micrograms per liter	-- = Parameter not detected above the project-specific reporting limit
mg/L = Miligrams per liter	

**Table 5. 2013 Groundwater and Leachate VOC Detections  
2013 Annual Monitoring Report  
Olympic View Sanitary Landfill, Kitsap County, Washington**

Parameter	Date	Well Type	Sample Location	Result
Acetone*	9/4/13	Performance	MW-19C	3.2
	9/4/13	Downgradient	MW-33C	5.9
	9/4/13	Compliance	MW-34A	5
	9/5/13	Compliance	MW-39	4.3
Carbon disulfide*	9/5/13	Performance	MW-4	1 J
	9/5/13	Downgradient	MW-32	1
	9/4/13	Downgradient	MW-33C	1.3
	9/4/13	Compliance	MW-34A	1 J
	9/3/13	Compliance	MW-34C	0.62 J
	9/5/13	Upgradient	MW-35	1 J
	9/4/13	Downgradient	MW-36A	1 J
	9/5/13	Compliance	MW-39	1 J
	9/3/13	Compliance	MW-42	1 J
	9/9/13	Compliance	MW-43	0.31 J
	Tetrahydrofuran	12/16/13	N/A	L-INF
12/16/13		Downgradient	MW-33C	12 J
Trichloroethene	3/12/13	Performance	MW-19C	1.1
	3/13/13	Downgradient	MW-32	0.46 J
	6/6/13	Performance	MW-19C	1.2
	6/4/13	Downgradient	MW-32	0.61 J
	9/4/13	Performance	MW-19C	1.3
	9/4/13	Performance	MW-20	0.59
	9/5/13	Downgradient	MW-32	0.5
	12/16/13	Upgradient	MW-16	0.68 J
	12/3/13	Compliance	MW-34C	0.46 J
	12/3/13	Compliance	MW-42	1.3
Vinyl chloride	3/13/13	Performance	MW-4	0.028
	3/13/13	Downgradient	MW-32	0.35
	3/11/13	Compliance	MW-34C	0.12
	6/4/13	Performance	MW-2B1	0.035
	6/7/13	Performance	MW-4	0.12
	6/3/13	Compliance	MW-15R	0.029
	6/6/13	Performance	MW-19C	0.047
	6/5/13	Performance	MW-20	0.042
	6/4/13	Downgradient	MW-32	0.57
	6/3/13	Compliance	MW-34C	0.16
	6/4/13	Downgradient	MW-36A	0.063
	6/5/13	Compliance	MW-42	0.077
	9/4/13	Performance	MW-2B1	0.076
	9/5/13	Performance	MW-4	0.14
	9/4/13	Performance	MW-19C	0.093
	9/4/13	Performance	MW-20	0.25
	9/4/13	Performance	MW-23A	0.038
	9/5/13	Downgradient	MW-32	0.49
	9/3/13	Compliance	MW-34C	0.13
	9/3/13	Compliance	MW-42	0.1
	9/9/13	Compliance	MW-43	0.036
	12/3/13	Upgradient	MW-13B	0.023
	12/16/13	Upgradient	MW-16	0.35
	12/4/13	Performance	MW-20	0.02
12/3/13	Compliance	MW-34A	0.16	
12/3/13	Compliance	MW-34C	0.051	
12/16/13	Upgradient	MW-35	0.068	
12/3/13	Compliance	MW-42	0.11	

\* These detections are likely due to laboratory contamination.



**Table 6A. Summary of 2013 Significant Parameter Trends by Well Type**  
**2013 Annual Monitoring Report**  
**Olympic View Sanitary Lanfill, Kitsap County, Washington**

Significant VOC Trends		Significant Inorganic Parameter Trends	
Increasing	Decreasing	Increasing	Decreasing
<b>Upgradient Wells</b>			
None	None	Alkalinity, Bicarbonate Alkalinity, Total Magnesium, Dissolved Nitrate	Arsenic, Dissolved Chromium, Dissolved Sulfate
<b>Performance Wells</b>			
None	Trichloroethene Vinyl Chloride	Barium, Dissolved pH Sulfate Temperature	Alkalinity, Bicarbonate Alkalinity, Total Ammonia Arsenic, Dissolved Barium, Dissolved Calcium, Dissolved Chloride Iron, Dissolved Magnesium, Dissolved Manganese, Dissolved Sodium, Dissolved Specific Conductivity Sulfate Temperature Total Dissolved Solids
<b>Compliance Wells</b>			
None	None	Chromium, Dissolved pH Potassium, Dissolved Temperature	Arsenic, Dissolved Barium, Dissolved Calcium, Dissolved Chloride Iron, Dissolved Magnesium, Dissolved Manganese, Dissolved Sodium, Dissolved Specific Conductivity Sulfate Total Dissolved Solids
<b>Downgradient Wells</b>			
None	None	Nitrate Temperature	Alkalinity, Bicarbonate Alkalinity, Total Ammonia Arsenic, Dissolved Barium, Dissolved Calcium, Dissolved Chloride Iron, Dissolved Magnesium, Dissolved Specific Conductivity Total Dissolved Solids

**Table 6B. Summary of 2013 Trends in Groundwater (2005 - 2013)**  
**2013 Annual Monitoring Report**  
**Olympic View Sanitary Lanfill, Kitsap County, Washington**

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

**Trend Test Period:** January 2005 through September 2013

**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,

\*no longer routinely sampled; \*\*sampled semi-annually

**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 2) performance, 3) downgradient, and 4) upgradient site monitoring wells, at least one of 22 wells comprising the network of 1) compliance, during the trend test period. This includes the following constituents:

	<u>Significant Increasing Trends</u>	<u>Significant Decreasing Trends</u>
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	MW-19C (graph 533)
Vinyl Chloride	None	MW-19C (graph 555) MW-23A (graph 557) MW-24 (graph 558)

**Table 6B. Summary of 2013 Trends in Groundwater (2005 - 2013)  
2013 Annual Monitoring Report  
Olympic View Sanitary Lanfill, Kitsap County, Washington**

<i>Trend Test B = all metals and groundwater quality parameters listed in Appendix I and Appendix II of WAC (173-351-990)</i>		
	<u>Significant Increasing Trends</u>	<u>Significant Decreasing Trends</u>
Antimony, dissolved	None	None
Arsenic, dissolved	None	MW-16 (graph 92) MW-19C (graph 93) MW-24 (graph 96) MW-33C (graph 101) MW-34C (graph 103) MW-36A (graph 105)
Barium, dissolved	MW-20 (graph 116)	MW-15R (graph 113) MW-19C (graph 115) MW-24 (graph 118) MW-29A (graph 119) MW-34C (graph 125) MW-36A (graph 127) MW-4 (graph 129)
Beryllium, dissolved	None	None
Cadmium, dissolved	None	None
Chromium, dissolved	MW-34A (graph 234)	MW-16 (graph 224)
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)	MW-16 (graph 400) MW-35 (graph 412) MW-36A (graph 413)	None
pH	MW-23A (graph 425) MW-42 (graph 438)	None

**Table 6B. Summary of 2013 Trends in Groundwater (2005 - 2013)**  
**2013 Annual Monitoring Report**  
**Olympic View Sanitary Landfill, Kitsap County, Washington**

<i>Trend Test B = all metals and groundwater quality parameters listed in Appendix I and Appendix II of WAC (173-351-990)</i>		
	<u>Significant Increasing Trends</u>	<u>Significant Decreasing Trends</u>
Specific Conductivity	None	MW-15R (graph 531) MW-19C (graph 533) MW-23A (graph 535) MW-24 (graph 536) MW-29A (graph 537) MW-2B1 (graph 538) MW-32 (graph 539) MW-33A (graph 540) MW-33C (graph 541) MW-34A (graph 542) MW-34C (graph 543) MW-36A (graph 545) MW-4 (graph 547)
Temperature	MW-20 (graph 578) MW-2B1 (graph 582) MW-32 (graph 583) MW-34A (graph 586) MW-34C (graph 587)	MW-24 (graph 580)
Calcium, dissolved	None	MW-15R (graph 179) MW-23A (graph 183) MW-24 (graph 184) MW-29A (graph 185) MW-2B1 (graph 186) MW-33A (graph 188) MW-34C (graph 191) MW-36A (graph 193) MW-9 (graph 198)
Bicarbonate Alkalinity (as CaCO <sub>3</sub> )	MW-13A (graph 1) MW-13B (graph 2) MW-35 (graph 16)	MW-23A (graph 7) MW-24 (graph 8) MW-36A (graph 17)
Magnesium, dissolved	MW-13A (graph 331)	MW-15R (graph 333) MW-23A (graph 337) MW-24 (graph 338) MW-33A (graph 342) MW-34A (graph 344) MW-36A (graph 347)

**Table 6B. Summary of 2013 Trends in Groundwater (2005 - 2013)**  
**2013 Annual Monitoring Report**  
**Olympic View Sanitary Lanfill, Kitsap County, Washington**

<i>Trend Test B = all metals and groundwater quality parameters listed in Appendix I and Appendix II of WAC (173-351-990)</i>		
	<u>Significant Increasing Trends</u>	<u>Significant Decreasing Trends</u>
Sulfate	MW-20 (graph 556) MW-24 (graph 558)	MW-13A (graph 551) MW-13B (graph 552) MW-19C (graph 555) MW-23A (graph 557) MW-34A (graph 564) MW-4 (graph 569)
Sodium, dissolved	None	MW-19C (graph 511) MW-23A (graph 513) MW-24 (graph 514) MW-34A (graph 520) MW-34C (graph 521)
Chloride	None	MW-2B1 (graph 208) MW-34A (graph 212) MW-34C (graph 213) MW-36A (graph 215)
Potassium, dissolved	MW-42 (graph 460)	None
Total Alkalinity as CaCO <sub>3</sub>	MW-13A (graph 23) MW-13B (graph 24) MW-35 (graph 38)	MW-23A (graph 29) MW-24 (graph 30) MW-36A (graph 39)
Iron, dissolved	None	MW-19C (graph 291) MW-24 (graph 294) MW-32 (graph 297) MW-34C (graph 301) MW-9 (graph 308)
Manganese, dissolved	None	MW-15R (graph 355) MW-23A (graph 359) MW-24 (graph 360) MW-34C (graph 367)
Ammonia (as N)	None	MW-19C (graph 49) MW-29A (graph 53)
Total Organic Carbon	None	None
Total Dissolved Solids	None	MW-15R (graph 619) MW-23A (graph 623) MW-24 (graph 624) MW-33A (graph 628) MW-34C (graph 631)

Table prepared by Aqua Chem Applications (February 2013)

**Table 7. Fourth Quarter 2013 Prediction Limit Exceedances  
2013 Annual Monitoring Report  
Olympic View Sanitary Landfill, Kitsap County, Washington**

Well Type	Well Location	Date Sampled	Parameter	Units	Result	Prediction Limit
Compliance	MW-15R	12/04/2013	Calcium, Dissolved	mg/L	18	17.1
			Magnesium, Dissolved	mg/L	11	10.74
	MW-34A	12/03/2013	Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )	mg/L	97	96
			Alkalinity, Total (as CaCO <sub>3</sub> )	mg/L	97	96
			Arsenic, Dissolved	µg/L	0.4	0.38
			Calcium, Dissolved	mg/L	18	17.1
			Selenium, Dissolved	mg/L	0.0013	0.0011
			Sodium, Dissolved	mg/L	9.5	6.2
			Specific Conductivity	mS/cm	0.183	0.18
			Temperature	deg C	11.21	11.09
	MW-34C	12/03/2013	Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )	mg/L	130	96
			Alkalinity, Total (as CaCO <sub>3</sub> )	mg/L	130	96
			Arsenic, Dissolved	µg/L	1.13	0.38
			Barium, Dissolved	mg/L	0.0084	0.0052
			Calcium, Dissolved	mg/L	26	17.1
			Chloride	mg/L	4.8	3.91
			Iron, Dissolved	mg/L	0.57	0.097
			Magnesium, Dissolved	mg/L	11	10.74
			Manganese, Dissolved	mg/L	0.58	0.0067
			Selenium, Dissolved	mg/L	0.002	0.0011
			Sodium, Dissolved	mg/L	14	6.2
			Specific Conductivity	mS/cm	0.247	0.18
			Temperature	deg C	11.87	11.09
			Total Dissolved Solids (TDS)	mg/L	190	175
	MW-42	12/03/2013	Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )	mg/L	220	96
			Alkalinity, Total (as CaCO <sub>3</sub> )	mg/L	220	96
			Ammonia (as N)	mg/L	6.0	0.34
Arsenic, Dissolved			µg/L	1.5	0.38	
Barium, Dissolved			mg/L	0.11	0.0052	
Calcium, Dissolved			mg/L	40	17.1	
Chloride			mg/L	18	3.91	
Iron, Dissolved			mg/L	25	0.097	
Magnesium, Dissolved			mg/L	16	10.74	
Manganese, Dissolved			mg/L	4.6	0.0067	
Potassium, Dissolved			mg/L	6.9	1.0	
Selenium, Dissolved			mg/L	0.0022	0.0011	
Sodium, Dissolved			mg/L	20	6.2	
Specific Conductivity			mS/cm	0.454	0.18	
Sulfate			mg/L	11	9.9	
Temperature			deg C	11.7	11.09	
Total Dissolved Solids (TDS)	mg/L	260	175			
Total Organic Carbon (TOC)	mg/L	7.1	6.0			
MW-43	12/02/2013	Iron, Dissolved	mg/L	0.87	0.097	
		Manganese, Dissolved	mg/L	0.24	0.0067	
		pH	SU	5.61	5.87 - 8.27	
		Temperature	deg C	11.8	11.09	
Downgradient	MW-29A	12/03/2013	Arsenic, Dissolved	µg/L	1.42	0.38
			Barium, Dissolved	mg/L	0.011	0.0052
			Iron, Dissolved	mg/L	3.9	0.097
			Manganese, Dissolved	mg/L	1.3	0.0067

**Table 7. Fourth Quarter 2013 Prediction Limit Exceedances  
2013 Annual Monitoring Report  
Olympic View Sanitary Landfill, Kitsap County, Washington**

Well Type	Well Location	Date Sampled	Parameter	Units	Result	Prediction Limit
Downgradient	MW-32	12/16/2013	Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )	mg/L	130	96
			Alkalinity, Total (as CaCO <sub>3</sub> )	mg/L	130	96
			Arsenic, Dissolved	µg/L	10	0.38
			Calcium, Dissolved	mg/L	28	17.1
			Chloride	mg/L	12	3.91
			Iron, Dissolved	mg/L	0.68	0.097
			Magnesium, Dissolved	mg/L	13	10.74
			Manganese, Dissolved	mg/L	2.2	0.0067
			Potassium, Dissolved	mg/L	1.2	1.0
			Sodium, Dissolved	mg/L	16	6.2
			Specific Conductivity	mS/cm	0.287	0.18
			Sulfate	mg/L	18	9.9
			Temperature	deg C	12.01	11.09
	Total Dissolved Solids (TDS)	mg/L	230	175		
	MW-33A	12/05/2013	Iron, Dissolved	mg/L	0.46	0.097
			Manganese, Dissolved	mg/L	0.017	0.0067
	MW-33C	12/23/2013	Arsenic, Dissolved	µg/L	2.11	0.38
			Manganese, Dissolved	mg/L	0.14	0.0067
			Potassium, Dissolved	mg/L	1.2	1.0
	MW-36A	12/04/2013	Arsenic, Dissolved	µg/L	0.57	0.38
Sodium, Dissolved			mg/L	6.9	6.2	
MW-39	12/05/2013	Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )	mg/L	99	96	
		Alkalinity, Total (as CaCO <sub>3</sub> )	mg/L	99	96	
		Ammonia (as N)	mg/L	0.43	0.34	
		Arsenic, Dissolved	µg/L	1.53	0.38	
		Barium, Dissolved	mg/L	0.012	0.0052	
		Chloride	mg/L	4.8	3.91	
		Cobalt, Dissolved	mg/L	0.0078	0.003	
		Iron, Dissolved	mg/L	36	0.097	
		Manganese, Dissolved	mg/L	0.46	0.0067	
		Nitrate (as N)	mg/L	5.5	1.8	
		Sodium, Dissolved	mg/L	8.1	6.2	
Specific Conductivity	mS/cm	0.242	0.18			

Notes:

Contents prepared by GeoChem Applications

deg C = degrees Celcius

CaCO<sub>3</sub> = calcium carbonate

N = nitrogen

µg/L = micrograms per liter

mg/L = milligrams per liter

mS/cm = milliSiemens per centimeter

**Table 8. 2013 Annual Groundwater Cleanup Level Statistical Evaluation Summary**  
**2013 Annual Monitoring Report**  
**Olympic View Sanitary Landfill, Kitsap County, Washington**

**Statistical Methodology:** calculation of 95% UCL of mean per MTCASat

**Data Input (general):** 3-year "moving window", updated annually

**Data Input (specific):** January 1, 2011 through December 31, 2013

**Wells Evaluated:** (1) Compliance -- MW-15R, MW-34A, MW-34C, MW-39, MW-42, MW-43; (2) Downgradient -- MW-9<sup>+</sup>, MW-29A, MW-32, MW-33A, MW-33C, MW-36A

Monitoring Well Type	Monitoring Well	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>
Compliance	MW-15R	1,1-Dichloroethane	12	0%	0.38 (ND)	0.38	ug/L	B	50	ug/L	No	No
		1,4-Dichlorobenzene	12	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
		Ammonia as N	12 <sup>[7]</sup>	50%	0.069	0.069	mg/L	LN	0.19	mg/L	No	No
		Arsenic, dissolved	12	100%	0.26	0.23	ug/L	LN	0.462	ug/L	No	No
		cis-1,2-dichloroethene	12	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No
		Ethyl ether	12	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
		Iron, dissolved	12	0%	0.06 (ND)	0.06	mg/L	B	0.30	mg/L	No	No
		Manganese, dissolved	12	92%	0.0044	0.003	mg/L	Z	0.05	mg/L	No	Yes (↓)
		Trichloroethene	12	0%	0.46 (ND)	0.46	ug/L	B	1.0	ug/L	No	No
	Vinyl Chloride	12	58%	0.046	0.04	ug/L	LN	0.20	ug/L	No	No	
	MW-34A	1,1-Dichloroethane	12	0%	0.38 (ND)	0.38	ug/L	B	50	ug/L	No	No
		1,4-Dichlorobenzene	12	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
		Ammonia as N	12	58%	0.15	0.08	ug/L	LN	0.19	mg/L	No	No
		Arsenic, dissolved	12	100%	0.57	0.50	ug/L	LN	0.462	ug/L	Yes	No
		cis-1,2-dichloroethene	12	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No
		Ethyl ether	12	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
		Iron, dissolved	12	0%	0.06 (ND)	0.06	ug/L	B	0.30	mg/L	No	No
		Manganese, dissolved	12	0%	0.0010	0.0010	ug/L	B	0.05	mg/L	No	No
		Trichloroethene	12	0%	0.46 (ND)	0.46	ug/L	B	1.0	ug/L	No	No
	Vinyl Chloride	12	8.3%	0.023	0.023	ug/L	A	0.20	ug/L	No	No	
	MW-34C	1,1-Dichloroethane	12	0%	0.38 (ND)	0.38	ug/L	B	50	ug/L	No	No
		1,4-Dichlorobenzene	12	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
		Ammonia as N	12	50%	0.18	0.18	ug/L	A	0.19	mg/L	No	No
		Arsenic, dissolved	12	100%	4.2	1.89	ug/L	Z	0.462	ug/L	Yes	Yes (↓)
		cis-1,2-dichloroethene	12	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No
		Ethyl ether	12	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
		Iron, dissolved	12	100%	1.0	0.89	ug/L	LN	0.30	mg/L	Yes	Yes (↓)
Manganese, dissolved		12	100%	0.80	0.71	ug/L	LN	0.05	mg/L	Yes	Yes (↓)	
Trichloroethene		12	0%	0.46 (ND)	0.46	ug/L	B	1.0	ug/L	No	No	
Vinyl Chloride	12	100%	0.16	0.14	ug/L	LN	0.20	ug/L	No	No		



**Table 8. 2013 Annual Groundwater Cleanup Level Statistical Evaluation Summary**  
**2013 Annual Monitoring Report**  
**Olympic View Sanitary Landfill, Kitsap County, Washington**

Monitoring Well Type	Monitoring Well	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-39	1,1-Dichloroethane	12	0%	0.38 (ND)	0.38	ug/L	B	50	ug/L	No	No
		1,4-Dichlorobenzene	12	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
		Ammonia as N	12	100%	0.43	0.35	ug/L	Z	0.19	mg/L	Yes	No
		Arsenic, dissolved	12	100%	2.23	1.71	ug/L	Z	0.462	ug/L	Yes	No
		cis-1,2-dichloroethene	12	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No
		Ethyl ether	12	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
		Iron, dissolved	12	92%	41.0	32.6	ug/L	Z	0.30	mg/L	Yes	No
		Manganese, dissolved	12	100%	0.53	0.44	ug/L	Z	0.05	mg/L	Yes	No
		Trichloroethene	12	0%	0.46 (ND)	0.46	ug/L	B	1.0	ug/L	No	No
	Vinyl Chloride	12	0%	0.02 (ND)	0.02	ug/L	B	0.20	ug/L	No	No	
	MW-42	1,1-Dichloroethane	12	0%	0.38 (ND)	0.38	ug/L	B	50	ug/L	No	No
		1,4-Dichlorobenzene	12	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
		Ammonia as N	12	92%	59.0	16.7	ug/L	Z	0.19	mg/L	Yes	No
		Arsenic, dissolved	12	100%	1.7	1.6	ug/L	Z	0.462	ug/L	Yes	No
		cis-1,2-dichloroethene	12	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No
		Ethyl ether	12	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
		Iron, dissolved	12	100%	28	26.8	ug/L	LN	0.30	mg/L	Yes	No
		Manganese, dissolved	12	100%	5.4	5.1	ug/L	LN	0.05	mg/L	Yes	No
		Trichloroethene	12	17%	0.51	0.51	ug/L	A	1.0	ug/L	No	No
	Vinyl Chloride	12	83%	0.15	0.12	ug/L	LN	0.20	ug/L	No	No	
	MW-43	1,1-Dichloroethane	12	0%	0.38 (ND)	0.38	ug/L	B	50	ug/L	No	No
		1,4-Dichlorobenzene	12	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
		Ammonia as N	12	92%	0.18	0.18	ug/L	LN	0.19	mg/L	No	No
		Arsenic, dissolved	12	33%	0.05	0.05	ug/L	A	0.462	ug/L	No	No
		cis-1,2-dichloroethene	12	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No
		Ethyl ether	12	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
		Iron, dissolved	12	83%	0.87	0.51	ug/L	N	0.30	mg/L	Yes	No
Manganese, dissolved		12	100%	0.37	0.24	ug/L	N	0.05	mg/L	Yes	No	
Trichloroethene		12	0%	0.46 (ND)	0.46	ug/L	B	1.0	ug/L	No	No	
Vinyl Chloride	12	8.3%	0.036	0.036	ug/L	A	0.20	ug/L	No	No		

**Table 8. 2013 Annual Groundwater Cleanup Level Statistical Evaluation Summary**  
**2013 Annual Monitoring Report**  
**Olympic View Sanitary Landfill, Kitsap County, Washington**

Monitoring Well Type	Monitoring Well	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>
Downgradient	MW-29A	1,1-Dichloroethane	6	0%	0.38 (ND)	0.38	ug/L	B	50	ug/L	No	No
		1,4-Dichlorobenzene	6	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
		Ammonia as N	6	100%	0.14	0.13	ug/L	Z	0.19	mg/L	No	No
		Arsenic, dissolved	6	100%	1.99	1.82	ug/L	LN	0.462	ug/L	Yes	No
		cis-1,2-dichloroethene	6	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No
		Ethyl ether	6	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
		Iron, dissolved	6	100%	4.2	4.07	mg/L	LN	0.30	mg/L	Yes	No
		Manganese, dissolved	6	100%	1.4	1.38	mg/L	LN	0.05	mg/L	Yes	No
		Trichloroethene	6	0%	0.46 (ND)	0.46	ug/L	B	1.0	ug/L	No	No
		Vinyl Chloride	6	0%	0.02 (ND)	0.02	ug/L	B	0.20	ug/L	No	No
	MW-32	1,1-Dichloroethane	12	0%	0.38 (ND)	0.38	ug/L	B	50	ug/L	No	No
		1,4-Dichlorobenzene	12	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
		Ammonia as N	12	58%	0.17	0.11	mg/L	LN	0.19	mg/L	No	No
		Arsenic, dissolved	12	100%	11.4	10.0	ug/L	LN	0.462	ug/L	Yes	No
		cis-1,2-dichloroethene	12	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No
		Ethyl ether	12	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
		Iron, dissolved	12	100%	0.77	0.66	mg/L	Z	0.30	mg/L	Yes	Yes (↓)
		Manganese, dissolved	12	100%	2.7	2.24	mg/L	Z	0.05	mg/L	Yes	No
		Trichloroethene	12	58%	0.70	0.57	ug/L	LN	1.0	ug/L	No	No
		Vinyl Chloride	12	100%	0.63	0.47	ug/L	LN	0.20	ug/L	Yes	No
	MW-33A	1,1-Dichloroethane	6	0%	0.38 (ND)	0.38	ug/L	B	50	ug/L	No	No
		1,4-Dichlorobenzene	6	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
		Ammonia as N	6	83%	0.28	0.25	mg/L	N	0.19	mg/L	Yes	No
		Arsenic, dissolved	6	100%	0.37	0.24	ug/L	Z	0.462	ug/L	No	No
		cis-1,2-dichloroethene	6	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No
		Ethyl ether	6	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
		Iron, dissolved	6	83%	2.1	2.1	mg/L	A**	0.30	mg/L	Yes	No
Manganese, dissolved		6	100%	0.081	0.08	mg/L	A**	0.05	mg/L	Yes	No	
Trichloroethene		6	0%	0.46 (ND)	0.46	ug/L	B	1.0	ug/L	No	No	
Vinyl Chloride		6	0%	0.02 (ND)	0.02	ug/L	B	0.20	ug/L	No	No	

**Table 8. 2013 Annual Groundwater Cleanup Level Statistical Evaluation Summary**  
**2013 Annual Monitoring Report**  
**Olympic View Sanitary Landfill, Kitsap County, Washington**

Monitoring Well Type	Monitoring Well	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	1,1-Dichloroethane	12	0%	0.38 (ND)	0.38	ug/L	B	50	ug/L	No	No
		1,4-Dichlorobenzene	12	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
		Ammonia as N	12	50%	0.15	0.20	mg/L	LN	0.19	mg/L	Yes	No
		Arsenic, dissolved	12	100%	2.66	2.50	ug/L	LN	0.462	ug/L	Yes	Yes (↓)
		cis-1,2-dichloroethene	12	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No
		Ethyl ether	12	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
		Iron, dissolved	12	8.3%	0.088	0.088	mg/L	A	0.3	mg/L	No	No
		Manganese, dissolved	12	100%	0.15	0.14	mg/L	Z	0.05	mg/L	Yes	No
		Trichloroethene	12	0%	0.46 (ND)	0.46	ug/L	B	1.0	ug/L	No	No
	Vinyl Chloride	12	0%	0.02 (ND)	0.02	ug/L	B	0.20	ug/L	No	No	
	MW-36A	1,1-Dichloroethane	12	0%	0.38 (ND)	0.38	ug/L	B	50	ug/L	No	No
		1,4-Dichlorobenzene	12	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
		Ammonia as N	12 <sup>[8]</sup>	50%	0.077	0.077	mg/L	A	0.19	mg/L	No	No
		Arsenic, dissolved	12	100%	0.96	0.82	ug/L	LN	0.462	ug/L	Yes	Yes (↓)
		cis-1,2-dichloroethene	12	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No
		Ethyl ether	12	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
		Iron, dissolved	12	0%	0.06 (ND)	0.06	mg/L	B	0.3	mg/L	No	No
		Manganese, dissolved	12	67%	0.0038	0.003	mg/L	LN	0.05	mg/L	No	No
Trichloroethene		12	0%	0.46 (ND)	0.46	ug/L	B	1.0	ug/L	No	No	
Vinyl Chloride	12	8.3%	0.063	0.063	ug/L	A	0.20	ug/L	No	No		

**NOTES:**

+ Well MW-9 is no longer routinely sampled and no longer included on this table

<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 2013; arrows indicated decreasing (↓) trends.

<sup>[7]</sup> For MW-15R, gross outlier of 0.31 mg/L from 6-7-12 sampling event was removed prior to UCL calculation

<sup>[8]</sup> For MW-36A, gross outlier of 0.30 mg/L from 6-7-12 sampling event was removed prior to UCL calculation

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.

**Table 8. 2013 Annual Groundwater Cleanup Level Statistical Evaluation Summary  
2013 Annual Monitoring Report  
Olympic View Sanitary Landfill, Kitsap County, Washington**

<b>Monitoring Well Type</b>	<b>Monitoring Well</b>	<b>Corrective Action Monitoring Parameter</b>	<b>N<sup>[1]</sup></b>	<b>% Detect</b>	<b>Max<sup>[2]</sup></b>	<b>95% UCL of Mean<sup>[3]</sup></b>	<b>Units<sup>[4]</sup></b>	<b>Note</b>	<b>Groundwater Cleanup Level<sup>[5]</sup></b>	<b>Units<sup>[4]</sup></b>	<b>Does 95% UCL Exceed Cleanup Level?</b>	<b>Significant Trend?<sup>[6]</sup></b>
-----------------------------	------------------------	---	------------------------	-----------------	--------------------------	--------------------------------------	----------------------------	-------------	--	----------------------------	---	---

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.

Notes (Continued)

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.

Prepared by: GeoChem Applications





**Table 10. 2013 Leak Detection System Volumes  
2013 Annual Monitoring Report  
Olympic View Sanitary Landfill, Kitsap County, Washington**

<b>Date</b>	<b>Total Volume (Gals)</b>	<b>Comments</b>
1/7/2013	130	Pumped Dry
1/14/2013	90	Pumped Dry
1/21/2013	105	Pumped Dry
1/28/2013	100	Pumped Dry
2/4/2013	68	Pumped Dry
2/11/2013	0	Dry
2/18/2013	60	
2/25/2013	80	
3/4/2013	0	Dry
3/11/2013	75	Quarterly Sample taken and sent to TA
3/18/2013	70	Pumped Dry
3/25/2013	0	Dry/pumped for 45 min
4/1/2013	45	Pumped Dry
4/8/2013	65	Pumped Dry
4/15/2013	70	Pumped Dry
4/22/2013	45	Pumped Dry
4/29/2013	0	Dry
5/6/2013	70	Pumped Dry
5/13/2013	85	Pumped Dry
5/20/2013	90	Pumped Dry
5/28/2013	95	Pumped Dry
6/3/2013	0	Dry
6/7/2013	--	Quarterly Sample taken and sent to TA
6/10/2013	95	Pumped Dry
6/17/2013	75	Pumped Dry
6/24/2013	80	Pumped Dry
7/1/2013	105	Pumped Dry
7/8/2013	0	Dry
7/15/2013	85	Pumped Dry
7/22/2013	70	Pumped Dry
7/29/2013	105	Pumped Dry
8/5/2013	95	Pumped Dry
8/13/2013	65	Pumped Dry
8/19/2013	0	Pumped Dry
8/26/2013	70	Pumped Dry
9/3/2013	85	Pumped Dry
9/9/2013	105	Pumped Dry
9/17/2013	0	Dry
9/23/2013	0	Dry
9/30/2013	110	Pumped dry, sample collected.
10/7/2013	0	
10/14/2013	0	
10/21/2013	0	
10/28/2013	0	No pumping til sample
11/4/2013	0	No pumping til sample
11/11/2013	0	No pumping til sample
11/18/2013	0	No pumping til sample
11/25/2013	0	No pumping til sample
12/2/2013	0	No pumping til sample
12/10/2013	0	Frozen Bellows
12/16/2013	265	Pumped Dry / Sample taken and sent to TestAmerica (4th QTR)
12/23/2013	35	Pumped Dry
12/31/2013	75	Pumped Dry
<b>TOTAL</b>	<b>2,863</b>	<b>Volume for period between 1/1/2013 through 12/31/2013.</b>

**Notes:**

-- = volume not measured on this date

**Table 11. Fourth Quarter 2013 Landfill Gas Measurement Results**  
**2013 Annual Monitoring Report**  
**Olympic View Sanitary Landfill, Kitsap County Washington**

Waste Management Incorporated												
Instrument Readings							Comments					
Location Reference Designation	Date	Time	Relative Pressure (in. H <sub>2</sub> O)	CH <sub>4</sub> (% vol.)	CO <sub>2</sub> (% vol.)	O <sub>2</sub> (% vol.)	CH <sub>4</sub> Spike Note 1 (% vol.)	CO <sub>2</sub> Spike Note 1 (% vol.)	Depth to Water TOP (ft)	Exposed Portion of Perforations Notes 2 & 3 (ft) (%)		Other
<b>Subsurface Landfill Gas Detection Wells (Gas Probes):</b>												
GP-7	12/18/13	8:54	0.11	0.00	9.60	4.90			15.7	5.1	100%	
GP-8	12/18/13	9:05	0.13	0.00	5.40	6.30			17.7	4.9	98%	
GP-9S	12/18/13	9:07	0.14	0.00	2.60	19.40			31.1	19.6	100%	
GP-9D	12/18/13	9:11	0.15	0.00	1.70	19.60				4.8	96%	
GP-10S	12/18/13	9:20	0.15	0.00	1.10	20.10			28.7	15.7	100.0%	
GP-10D	12/18/13	9:27	0.19	0.00	0.90	19.30				4.6	92%	
GP-11S	12/18/13	9:34	0.13	0.00	3.50	17.60			26.1	3.0	61%	
GP-11D	12/18/13	9:44	0.14	0.00	3.60	11.50				0.8	17%	
GP-12S	12/18/13	9:47	0.12	0.00	1.70	18.50			49.1	37.7	100%	
GP-12M	12/18/13	9:52	0.16	0.00	1.90	17.80				17.5	100%	
GP-12D	12/18/13	10:02	0.15	0.00	1.70	16.60				3.7	74%	
GP-13S	12/18/13	10:08	0.15	0.00	3.90	17.60			51.9	39.8	100%	
GP-13M	12/18/13	10:14	0.27	0.00	3.80	17.30				18.4	100%	
GP-13D	12/18/13	10:25	0.17	0.00	3.70	17.30				6.7	67%	
GP-14	12/18/13	10:37	0.05	0.00	8.50	3.90			15.5	5.1	100%	
GP-15	12/18/13	10:43	0.29	3.40	9.50	1.20			14.9	4.5	91%	
GP-16	12/18/13	10:51	0.06	0.00	5.10	16.10			15.0	4.8	95%	
<b>Onsite Building Interiors:</b>												
SH-SS	12/18/13	10:30	NA	0.00	0.10	20.90						
SH-NS	12/18/13	10:31	NA	0.00	0.10	20.80						
SH-in	12/18/13	10:32	NA	0.00	0.10	20.80						
SS-WH	12/18/13	9:16	NA	0.00	0.00	0.00						
<p align="center"><b>Weather Conditions</b></p> <p>Monitoring Date: 12/18/13      Sky Cover: Clear</p> <p>Monitored By: Brad Beach      Wind/Rain/Snow: None</p> <p>Instrument: GEM 2NAV      Temperature (°F): 43</p> <p>Calibration Date: 12/18/13      Preceding 24-hr Barometric Trend: Falling</p>												
<p>Notes:</p> <ol style="list-style-type: none"> <li>1. Measurement for spike concentrations of CH<sub>4</sub> and CO<sub>2</sub> are recorded if observed during sampling.</li> <li>2. Exposed perforations = perforated pipe section not submerged by water.</li> <li>3. Readings not reported: Screened interval completely submerged.</li> <li>4. Depth to water measurement not taken this quarter.</li> <li>5. Pressure is not thought to be indicative of soil gas pressure. An error in measurement is suspected.</li> </ol>												
<p>CH<sub>4</sub> = Methane      SH-SS = Scale House - South Side Exterior</p> <p>CO<sub>2</sub> = Carbon Dioxide      SH-NS = Scale House - North Side Exterior</p> <p>O<sub>2</sub> = Oxygen      SH-Of = Scale House - Office Interior</p> <p>GP = Gas Probe      SS-WH = South Slope Well House</p> <p>S = Shallow Monitoring Zone      NA = not applicable</p> <p>M = Middle Monitoring Zone      Depressed O<sub>2</sub> &lt; 20.3% vol.</p> <p>D = Deep Monitoring Zone      Detected CO<sub>2</sub> &gt; 0.3 % vol.</p> <p>TOP = From Top of Pipe      Detected CH<sub>4</sub> &gt; 0.3 % vol.</p>												



**Table 12. Landfill Gas Monitoring Results - 2013**  
**2013 Annual Monitoring Report**  
**Olympic View Sanitary Landfill, Port Orchard, Washington**

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	2/26/2013	0.00	0.00	4.20	4.00
	5/14/2013	0.06	0.00	6.20	4.50
	7/16/2013	0.00	0.00	9.60	4.40
	12/18/2013	0.11	0.00	9.60	4.90
GP-8	2/26/2013	-0.03	0.00	2.50	7.40
	5/14/2013	0.24	0.00	2.60	8.40
	7/16/2013	0.00	0.00	4.50	5.80
	12/18/2013	0.13	0.00	5.40	6.30
GP-9S	2/26/2013	0.00	0.00	1.70	19.20
	5/14/2013	0.08	0.00	2.30	18.80
	7/16/2013	-0.01	0.00	2.90	18.50
	12/18/2013	0.14	0.00	2.60	19.40
GP-9D	2/26/2013	0.01	0.00	1.50	18.20
	5/14/2013	0.08	0.00	1.70	19.00
	7/16/2013	0.00	0.00	1.50	19.10
	12/18/2013	0.15	0.00	1.70	19.60
GP-10S	2/26/2013	0.00	0.00	0.70	20.40
	5/14/2013	0.20	0.00	0.80	20.10
	7/16/2013	-0.01	0.00	1.10	20.00
	12/18/2013	0.15	0.00	1.10	20.10
GP-10D	2/26/2013	-5.28	0.00	0.70	18.40
	5/14/2013	0.06	0.00	0.70	18.70
	7/16/2013	0.01	0.00	0.70	19.20
	12/18/2013	0.19	0.00	0.90	19.30
GP-11S	2/26/2013	0.97	0.00	1.80	18.90
	5/14/2013	0.06	0.00	2.40	18.20
	7/16/2013	-0.02	0.00	3.90	16.90
	12/18/2013	0.13	0.00	3.50	17.60
GP-11D	2/26/2013	—	—	—	—
	5/14/2013	—	—	—	—
	7/16/2013	—	—	—	—
	12/18/2013	0.14	0.00	3.60	11.50
GP-12S	2/26/2013	-3.17	0.00	1.10	20.50
	5/14/2013	0.68	0.00	1.90	19.60
	7/16/2013	-0.06	0.00	1.80	17.30
	12/18/2013	0.12	0.00	1.70	18.50
GP-12M	2/26/2013	0.43	0.00	0.90	20.20
	5/14/2013	0.07	0.00	1.00	20.00
	7/16/2013	-0.03	0.00	1.70	16.30
	12/18/2013	0.16	0.00	1.90	17.80
GP-12D	2/26/2013	—	—	—	—
	5/14/2013	—	—	—	—
	7/16/2013	—	—	—	—
	12/18/2013	0.15	0.00	1.70	16.60
GP-13S	2/26/2013	-0.04	0.00	2.30	18.60
	5/14/2013	-0.01	0.00	2.30	18.20
	7/16/2013	-0.12	0.00	3.50	17.00
	12/18/2013	0.15	0.00	3.90	17.60

**Table 12. Landfill Gas Monitoring Results - 2013**  
**2013 Annual Monitoring Report**  
**Olympic View Sanitary Landfill, Port Orchard, Washington**

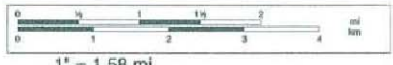
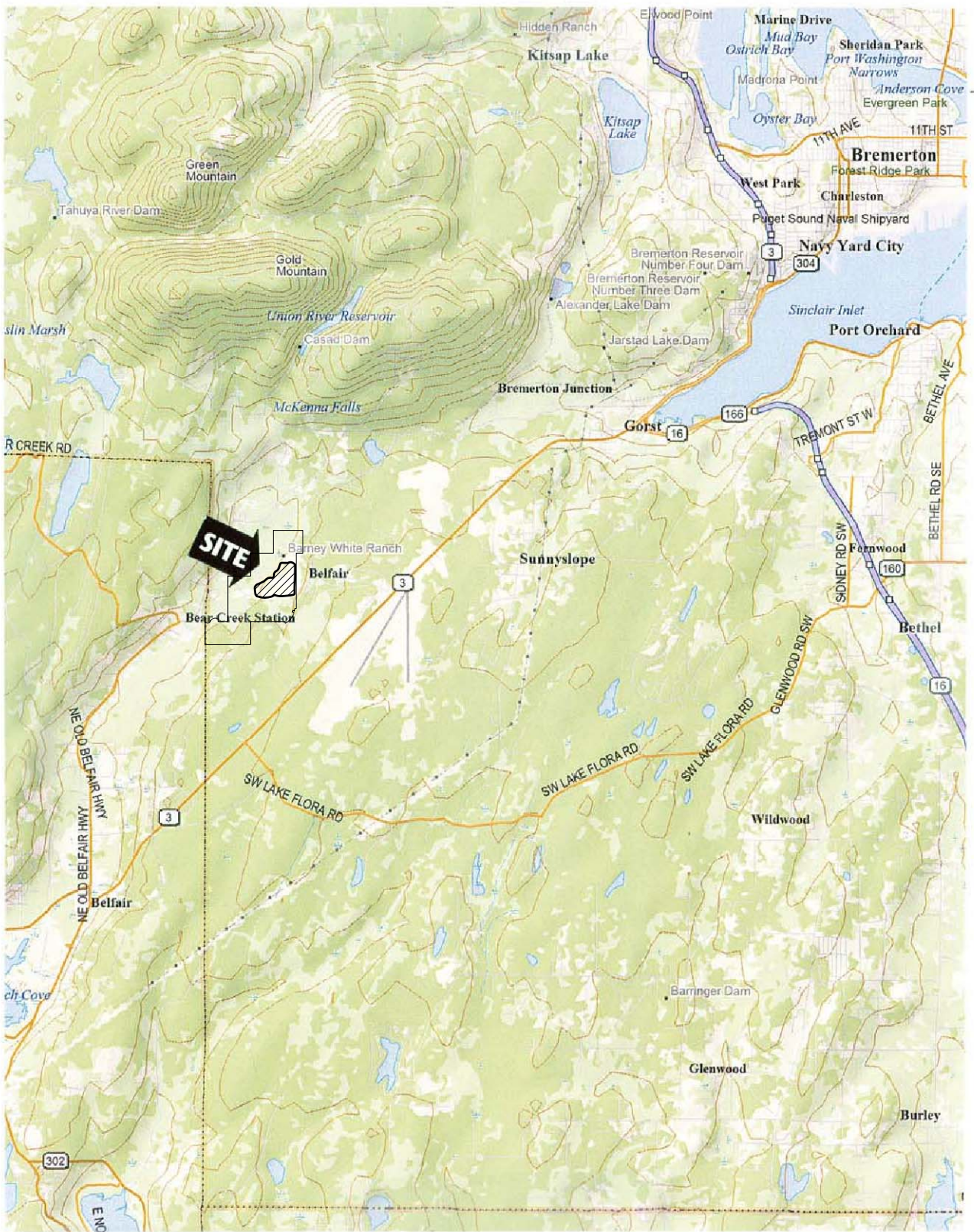
Location	Date	Pressure (in. H <sub>2</sub> O)	CH <sub>4</sub> (% vol.)	CO <sub>2</sub> (% vol.)	O <sub>2</sub> (% vol.)
GP-13M	2/26/2013	0.28	0.00	2.40	17.10
	5/14/2013	-0.08	0.00	2.60	17.90
	7/16/2013	-0.11	0.00	3.10	17.70
	12/18/2013	0.27	0.00	3.80	17.30
GP-13D	2/26/2013	0.59	0.00	0.80	20.20
	5/14/2013	-0.06	0.00	0.10	20.80
	7/16/2013	-0.13	0.10	3.10	18.00
	12/18/2013	0.17	0.00	3.70	17.30
GP-14	2/26/2013	-0.07	0.00	5.10	5.80
	5/14/2013	0.05	0.00	5.30	6.20
	7/16/2013	-0.15	0.00	7.80	0.00
	12/18/2013	0.05	0.00	8.50	3.90
GP-15	2/26/2013	2.73	0.60	6.20	0.30
	5/14/2013	-4.55	0.00	4.00	7.20
	7/16/2013	-0.15	2.70	7.80	0.00
	12/18/2013	0.29	3.40	9.50	1.20
GP-16	2/26/2013	-6.77	0.00	3.90	15.90
	5/14/2013	-2.89	0.00	5.00	15.40
	7/16/2013	-0.18	0.00	7.40	13.60
	12/18/2013	0.06	0.00	5.10	16.10

Notes:

— Readings not reported: screened interval submerged

## FIGURES

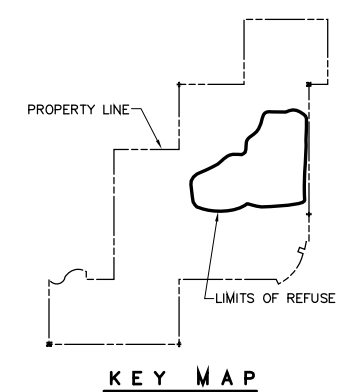
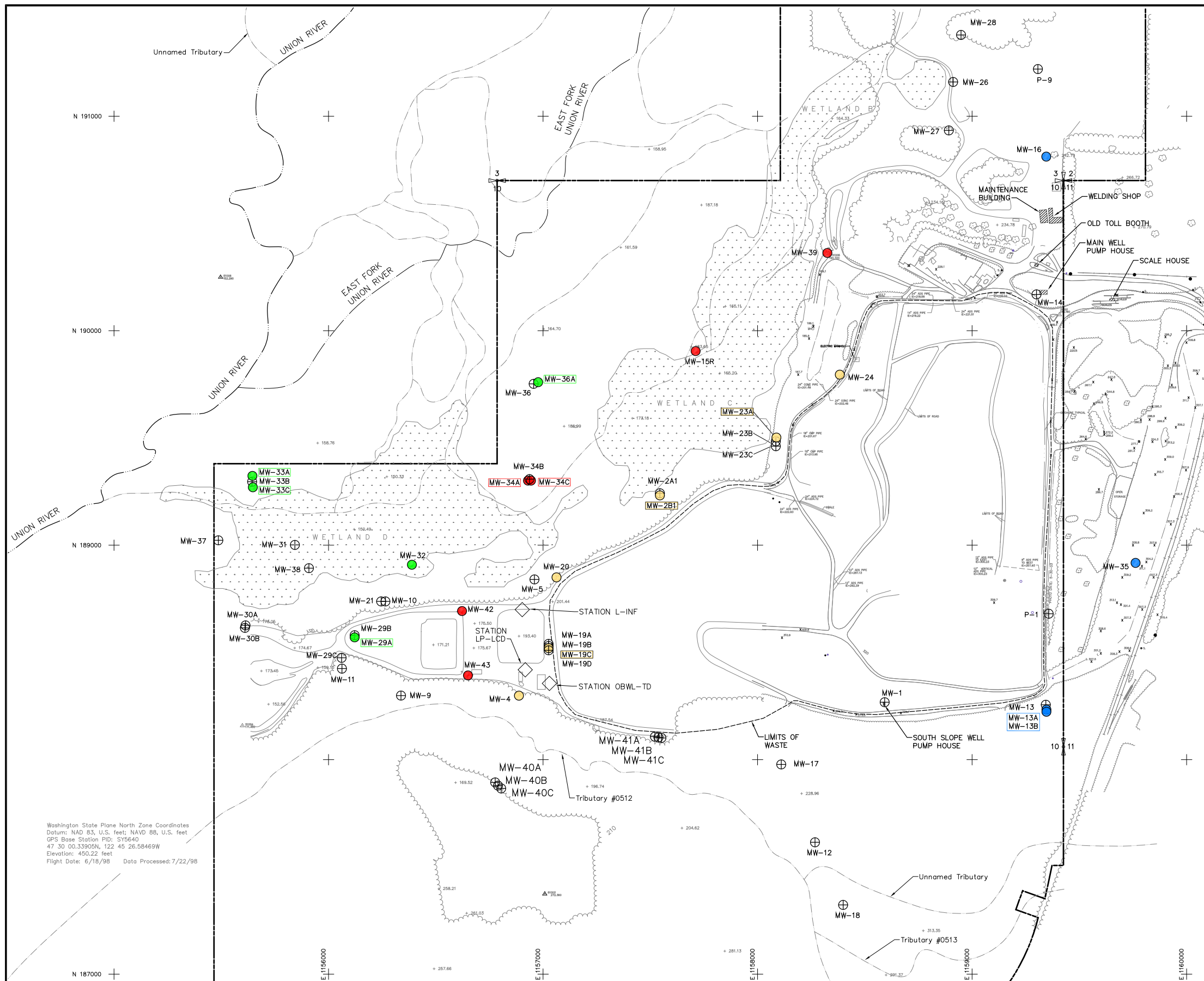




© 2004 DeLorme. Topo USA® 5.0.

<b>SCS ENGINEERS</b> Environmental Consultants and Contractors 2405 140th Avenue NE, Suite 107 Bellevue, Washington 98005 (425) 746-4600 FAX: (425) 746-6747	PROJECT NO. 04204027.17	DES BY L.L.	<b>SITE LOCATION MAP</b>  <b>OLYMPIC VIEW SANITARY LANDFILL</b> <b>KITSAP COUNTY, WASHINGTON</b>	DATE FEBRUARY 2014
	SCALE 1:100,000	CHK BY E.R.		FIGURE
	CAD FILE FIGURE 1	APP BY D.V.		<b>1</b>

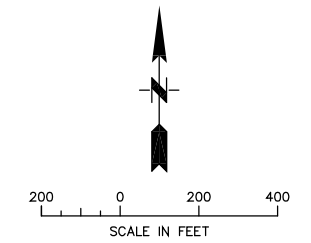




**LEGEND**

	MW-35	UPGRADIENT (BACKGROUND) GROUNDWATER MONITORING WELL
	MW-32	DOWNGRADIENT GROUNDWATER MONITORING WELL
	MW-20	PERFORMANCE GROUNDWATER MONITORING WELL
	MW-43	COMPLIANCE GROUNDWATER MONITORING WELL
	MW-36	GROUNDWATER MONITORING WELL (WATER LEVEL ONLY)
	L-INF	LEACHATE INFLUENT MONITORING STATION
		PROPERTY LINE (ASSUMED)

Washington State Plane North Zone Coordinates  
 Datum: NAD 83, U.S. feet; NAVD 88, U.S. feet  
 GPS Base Station PID: S79640  
 47 30 00.33905N, 122 45 26.58469W  
 Elevation: 450.22 feet  
 Flight Date: 6/18/98 Data Processed: 7/22/98

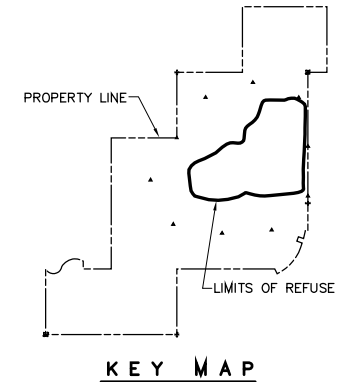
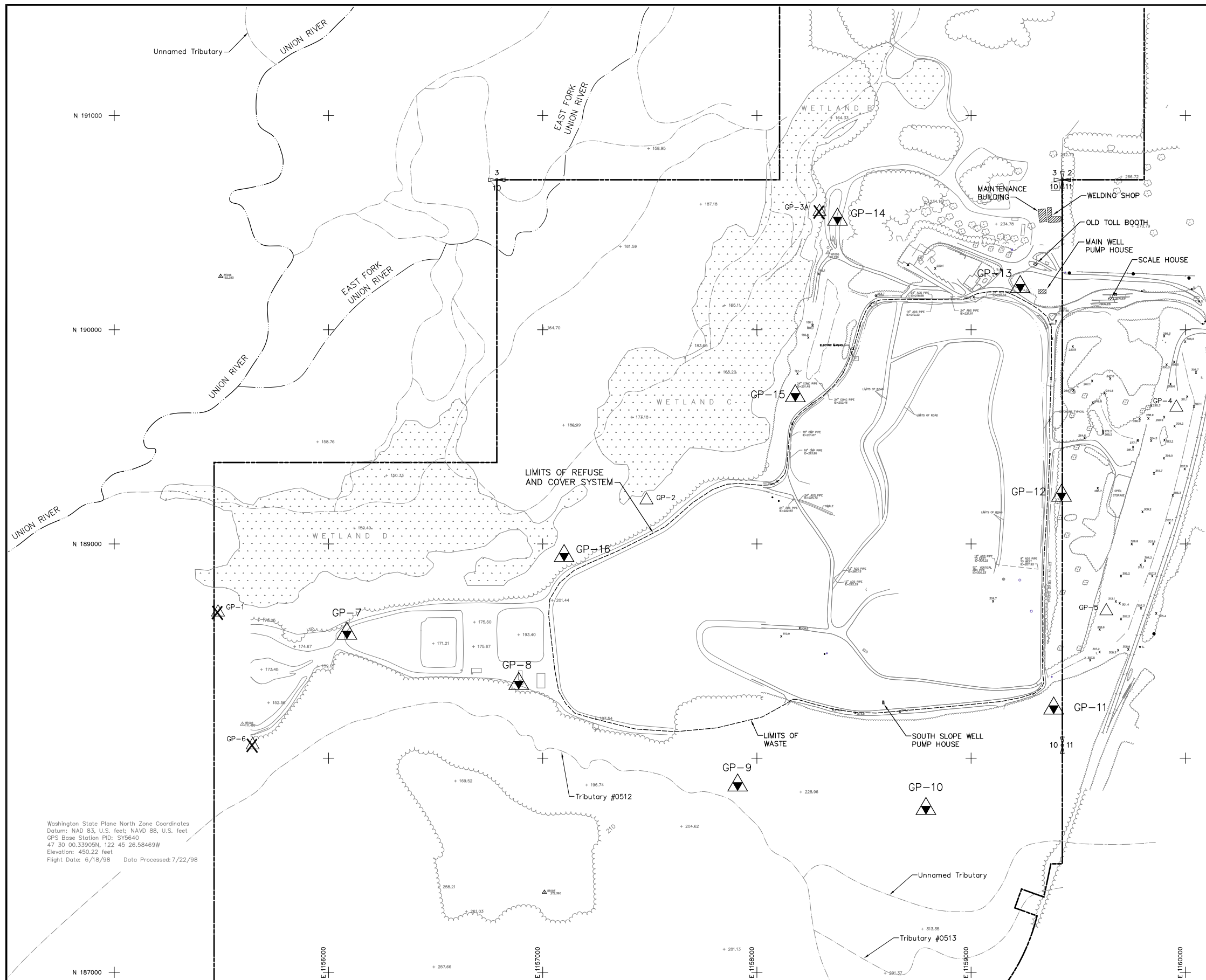


**SCS ENGINEERS**  
 Environmental Consultants and Contractors  
 2405 140th Avenue NE, Suite 107  
 Bellevue, Washington 98005  
 (425) 746-4600 FAX: (425) 746-6747

PROJECT NO.	04204027.17	DES BY	L.L.
SCALE	AS SHOWN	CHK BY	E.R.
CAD FILE	FIGURE 2	APP BY	D.V.

**GROUNDWATER MONITORING WELL NETWORK  
 AND LEACHATE MONITORING LOCATIONS**  
 OLYMPIC VIEW SANITARY LANDFILL  
 KITSAP COUNTY, WASHINGTON

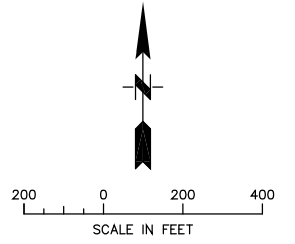
DATE	FEBRUARY 2014
FIGURE	<b>2</b>



**LEGEND**

GP-1 X	ABANDON GAS PROBE
GP-2 Δ	EXISTING GAS PROBE (NOT PART OF MONITORING PROGRAM)
GP-7 ▲	LANDFILL GAS MONITORING PROBE
---	PROPERTY LINE (ASSUMED)
+	SECTION CORNER (ASSUMED - NOT FOUND)
⊕	QUARTER SECTION CORNER (ASSUMED - NOT FOUND)
⊙	SECTION CENTER (ASSUMED - NOT FOUND)

Washington State Plane North Zone Coordinates  
 Datum: NAD 83, U.S. feet; NAVD 88, U.S. feet  
 GPS Base Station PID: SY5640  
 47 30 00.33905N, 122 45 26.58469W  
 Elevation: 450.22 feet  
 Flight Date: 6/18/98 Data Processed: 7/22/98



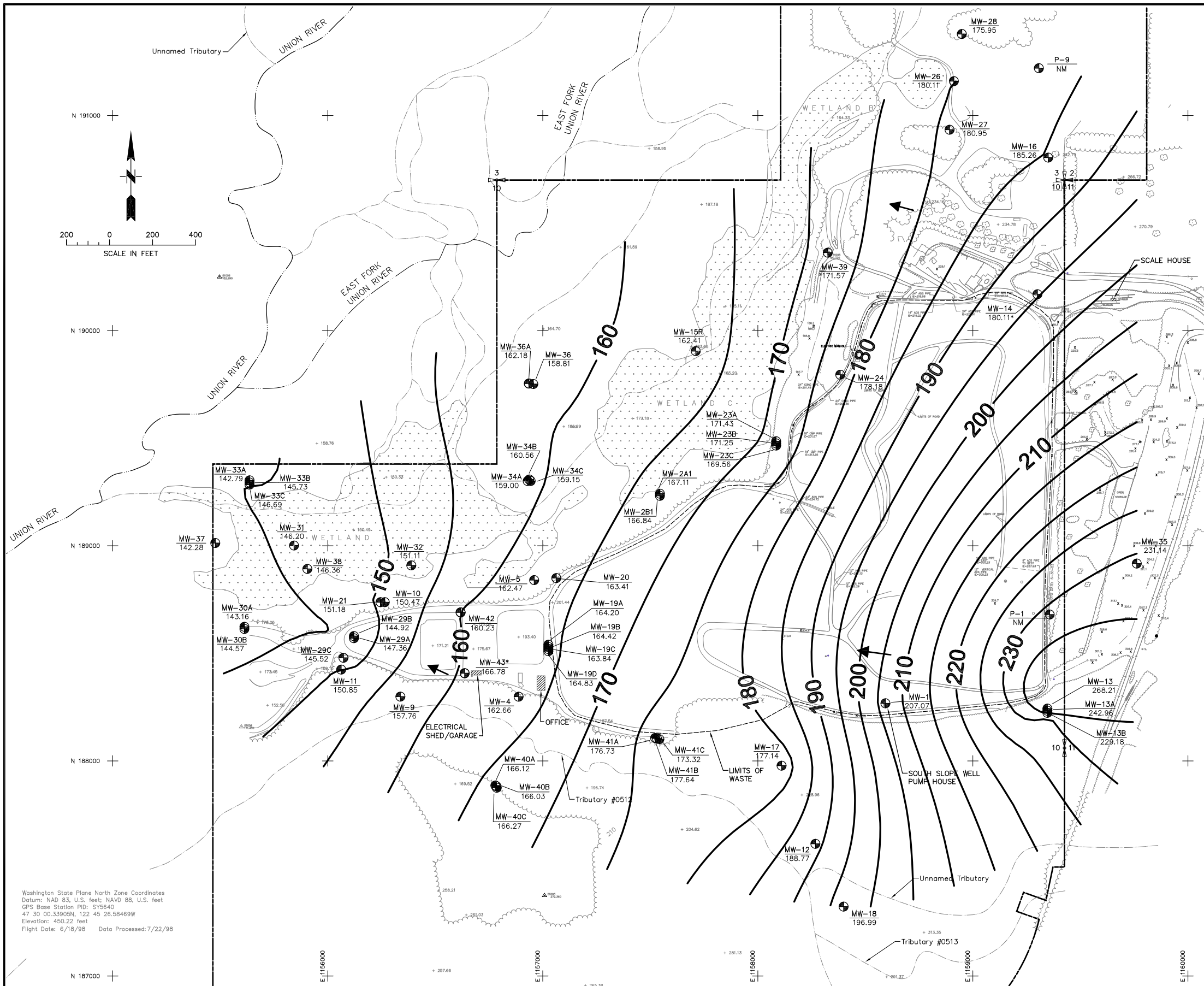
**SCS ENGINEERS**  
 Environmental Consultants and Contractors  
 2405 140th Avenue NE, Suite 107  
 Bellevue, Washington 98005  
 (425) 746-4600 FAX: (425) 746-6747

PROJECT NO.	04204027.17	DES BY	T.M.
SCALE	AS SHOWN	CHK BY	E.R.
CAD FILE	FIGURE 3	APP BY	D.V.

**SUBSURFACE LANDFILL GAS MONITORING PROBES AND BUILDING MONITORING LOCATIONS**  
 OLYMPIC VIEW SANITARY LANDFILL  
 KITSAP COUNTY, WASHINGTON

DATE: FEBRUARY 2014  
 FIGURE: 3

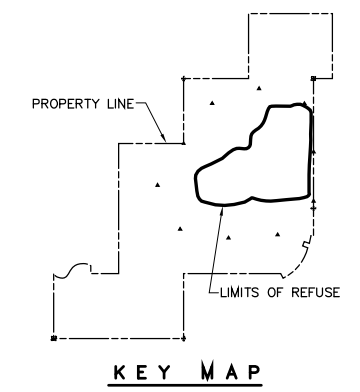




**Note:**

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, and MW-41C have screen elevations outside the 89 to 200 ft-msl range.



LEGEND	
MW-35 231.14	MONITORING WELL WATER LEVEL ELEVATION, FT-MSL, MARCH 2013
—180—	ESTIMATED GROUNDWATER ELEVATION CONTOUR IN FEET-MSL CONTOUR INTERVAL = 5 FT
→	GROUNDWATER FLOW DIRECTION
*	WATER LEVEL ELEVATION NOT NOT USED IN CONTOURING

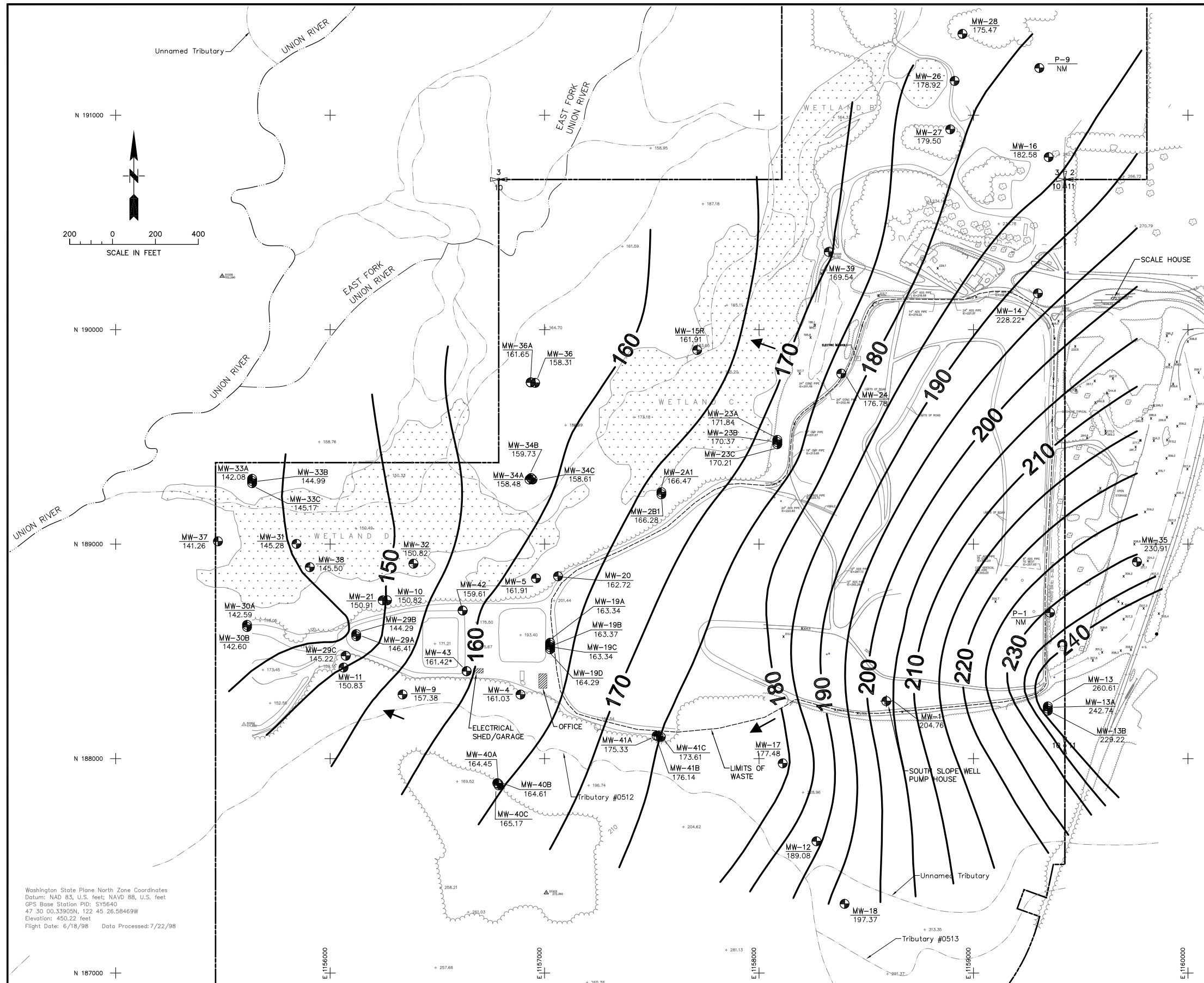
Washington State Plane North Zone Coordinates  
 Datum: NAD 83, U.S. feet; NAVD 88, U.S. feet  
 GPS Base Station PID: SY5640  
 47 30 00.33905N, 122 45 26.58469W  
 Elevation: 450.22 feet  
 Flight Date: 6/18/98 Data Processed: 7/22/98

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

PROJECT NO.	04204027.17	DES BY	M.O.
SCALE	AS SHOWN	CHK BY	E.R.
CAD FILE	FIGURE 4A	APP BY	D.V.

GROUNDWATER ELEVATION MAP  
 FIRST QUARTER MARCH 2013  
 OLYMPIC VIEW SANITARY LANDFILL  
 KITSAP COUNTY, WASHINGTON

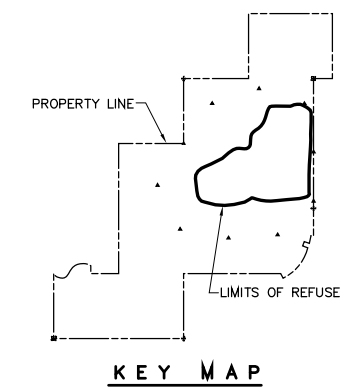
DATE  
 FEBRUARY 2014  
 FIGURE  
**4A**



**Note:**

Water level contours were generated using depth to water and reference 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, and MW-41C have screen elevations outside the 89 to 200 ft-msl range.



LEGEND	
MW-35 230.91	MONITORING WELL WATER LEVEL ELEVATION, FT-MSL, JUNE 2013
—180—	ESTIMATED GROUNDWATER ELEVATION CONTOUR IN FEET-MSL CONTOUR INTERVAL = 5 FT
→	GROUNDWATER FLOW DIRECTION
*	WATER LEVEL ELEVATION NOT NOT USED IN CONTOURING

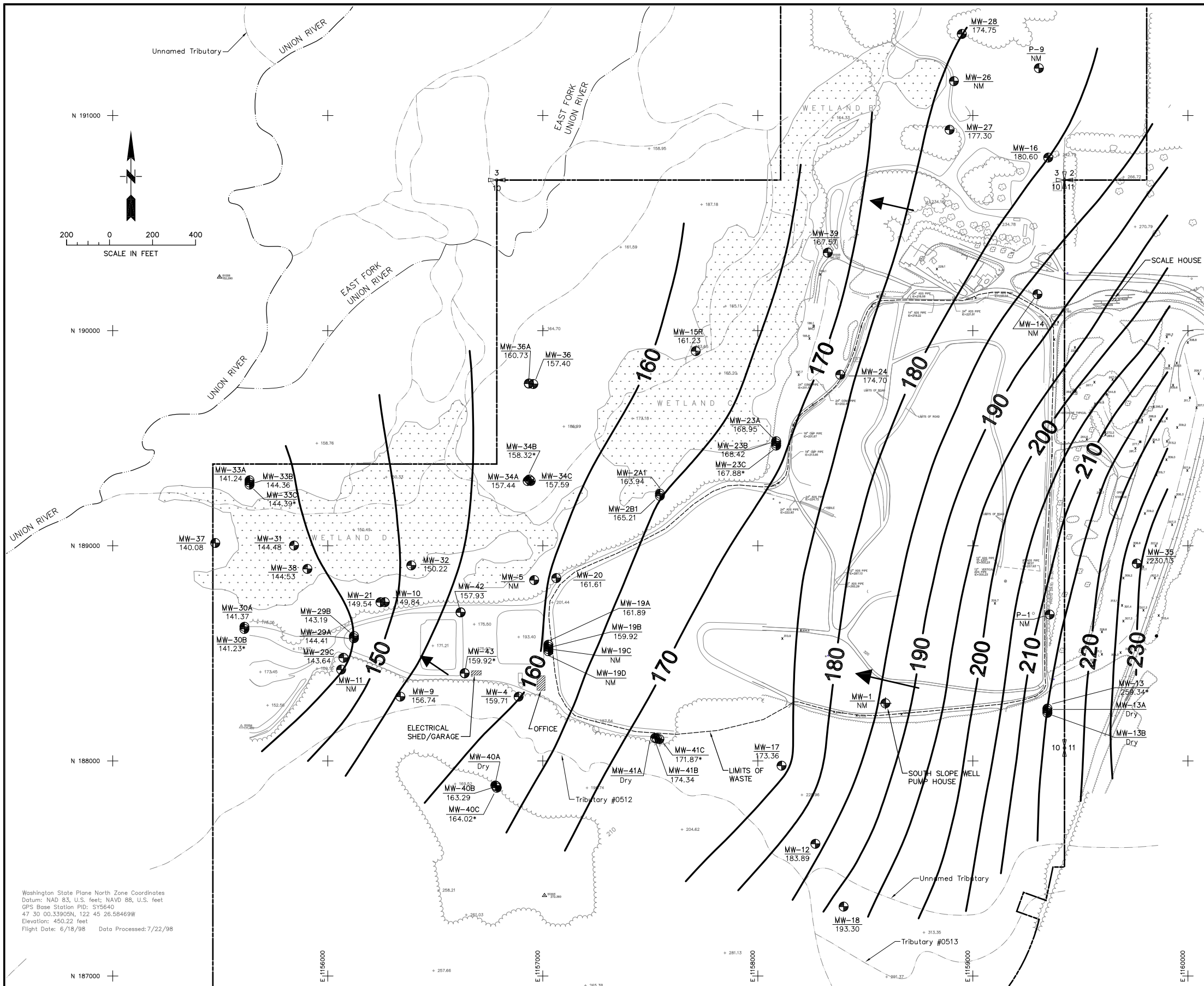
Washington State Plane North Zone Coordinates  
Datum: NAD 83, U.S. feet; NAVD 88, U.S. feet  
GPS Base Station PID: SY5640  
47 30 00.33905N, 122 45 26.58469W  
Elevation: 450.22 feet  
Flight Date: 6/18/98 Data Processed: 7/22/98

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

PROJECT NO.	04204027.17	DES BY	M.O.
SCALE	AS SHOWN	CHK BY	E.R.
CAD FILE	FIGURE 4B	APP BY	D.V.

GROUNDWATER ELEVATION MAP  
SECOND QUARTER JUNE 2013  
OLYMPIC VIEW SANITARY LANDFILL  
KITSAP COUNTY, WASHINGTON

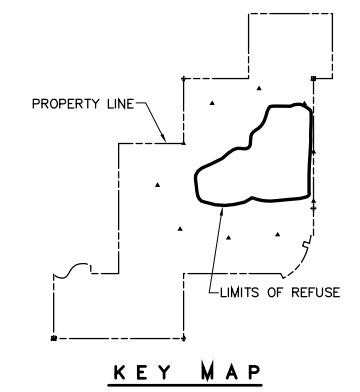
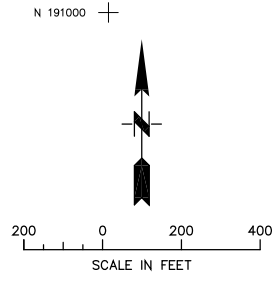
DATE  
FEBRUARY 2014  
FIGURE  
**4B**



**Note:**

Water level contours were generated using depth to water and reference 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, and MW-41C have screen elevations outside the 89 to 200 ft-msl range.



LEGEND	
MW-35 230.13	MONITORING WELL WATER LEVEL ELEVATION, FT-MSL
—180—	ESTIMATED GROUNDWATER ELEVATION CONTOUR IN FEET-MSL CONTOUR INTERVAL = 5 FT
→	GROUNDWATER FLOW DIRECTION
*	WATER LEVEL ELEVATION NOT USED IN CONTOURING

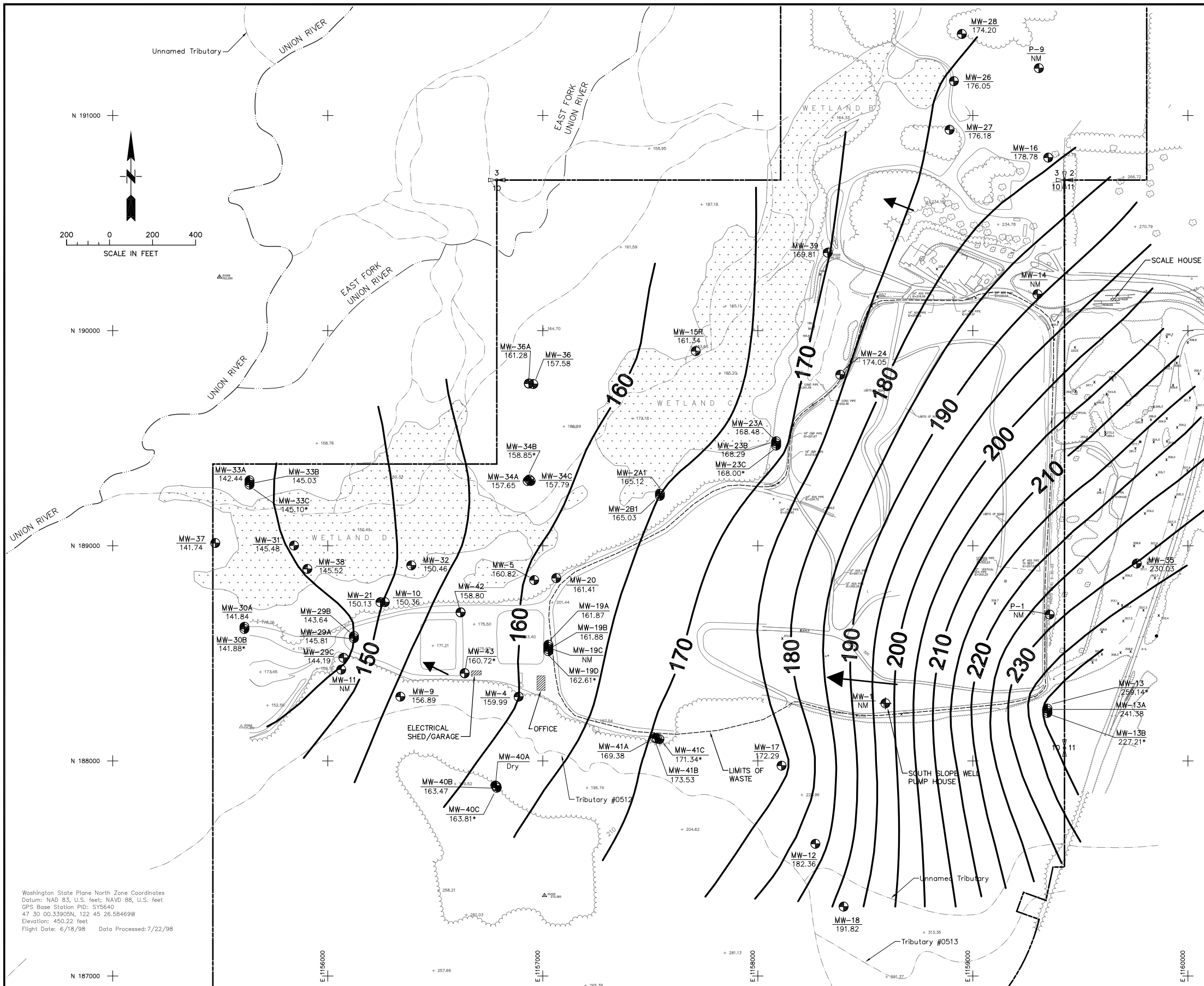
Washington State Plane North Zone Coordinates  
 Datum: NAD 83, U.S. feet; NAVD 88, U.S. feet  
 GPS Base Station PID: SY5640  
 47 30 00.33905N, 122 45 26.58469W  
 Elevation: 450.22 feet  
 Flight Date: 6/18/98 Data Processed: 7/22/98

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

PROJECT NO.	04204027.17	DES BY	M.O.
SCALE	AS SHOWN	CHK BY	E.R.
CAD FILE	FIGURE 4C	APP BY	D.V.

GROUNDWATER ELEVATION MAP  
 THIRD QUARTER SEPTEMBER 2013  
 OLYMPIC VIEW SANITARY LANDFILL  
 KITSAP COUNTY, WASHINGTON

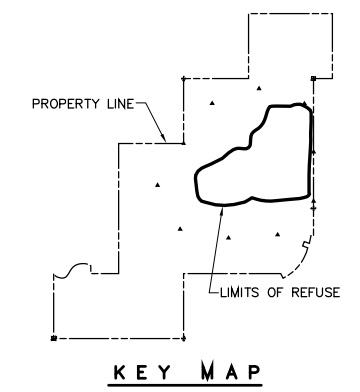
DATE	FEBRUARY 2014
FIGURE	4C



**Note:**

Water level contours were generated using depth to water and reference 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, and MW-41C have screen elevations outside the 89 to 200 ft-msl range.



LEGEND	
MW-35 230.03	MONITORING WELL WATER LEVEL ELEVATION, FT-MSL
—180—	ESTIMATED GROUNDWATER ELEVATION CONTOUR IN FEET-MSL CONTOUR INTERVAL = 5 FT
→	GROUNDWATER FLOW DIRECTION
*	WATER LEVEL ELEVATION NOT NOT USED IN CONTOURING

Washington State Plane North Zone Coordinates  
 Datum: NAD 83, U.S. feet; NAVD 88, U.S. feet  
 GPS Base Station PID: SY5640  
 47 30 00.33905N, 122 45 26.58469W  
 Elevation: 450.22 feet  
 Flight Date: 6/18/98 Data Processed: 7/22/98

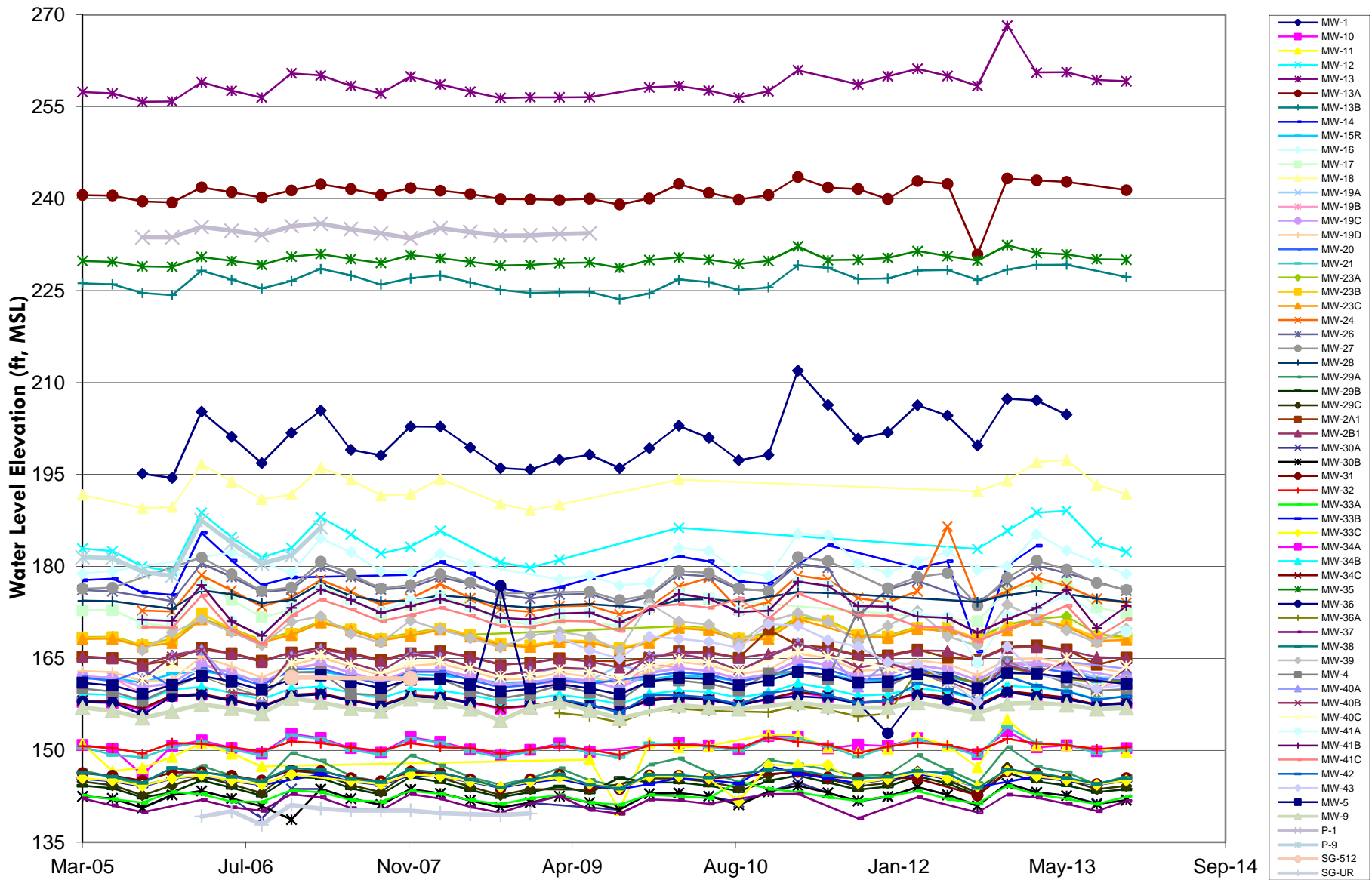
**SCS ENGINEERS**  
 Environmental Consultants and Contractors  
 2405 140th Avenue NE, Suite 107  
 Bellevue, Washington 98005  
 (425) 746-4600 FAX: (425) 746-6747

PROJECT NO.	04204027.17	DES BY	M.O.
SCALE	AS SHOWN	CHK BY	E.R.
CAD FILE	FIGURE 4D	APP BY	D.V.

GROUNDWATER ELEVATION MAP  
 FOURTH QUARTER DECEMBER 2013  
 OLYMPIC VIEW SANITARY LANDFILL  
 KITSAP COUNTY, WASHINGTON

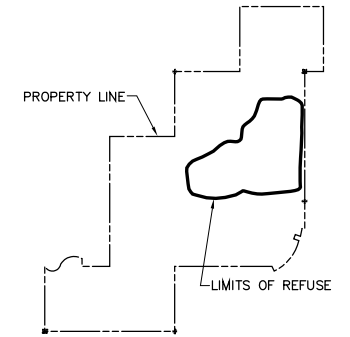
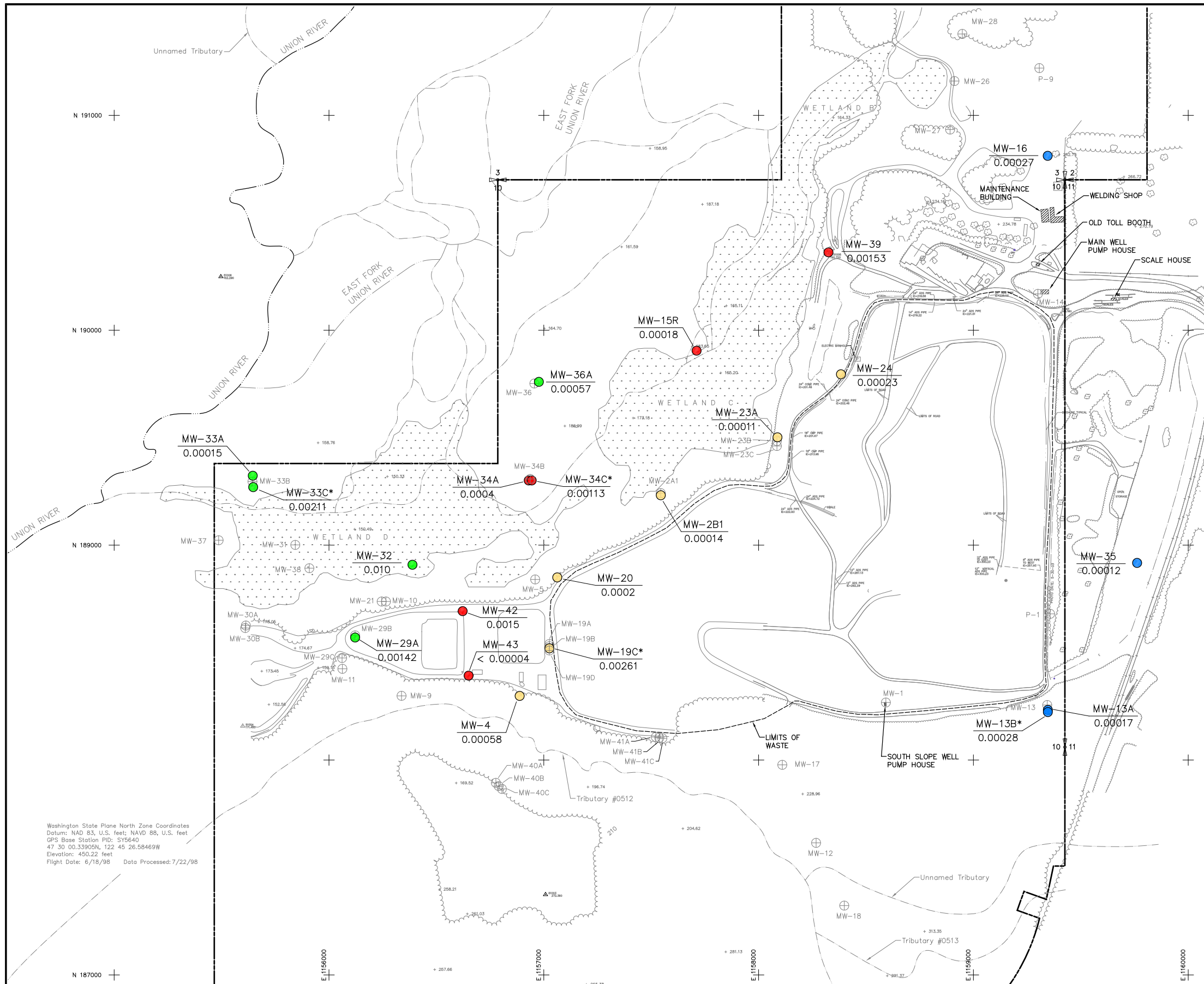
DATE	FEBRUARY 2014
FIGURE	4D

**Figure 5. Historical Groundwater Elevations**  
**2013 Annual Monitoring Report**  
**Olympic View Sanitary Landfill, Kitsap County, Washington**





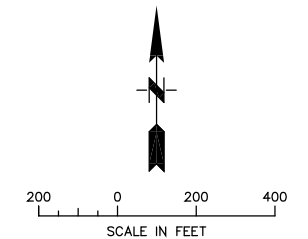
NOTES : Wells MW-29A and MW-33A are only sampled semi-annually and shown as NS when not sampled.



KEY MAP

LEGEND

- MW-35 UPGRADIENT (BACKGROUND) GROUNDWATER MONITORING WELL
- MW-32 DOWNGRADIENT GROUNDWATER MONITORING WELL
- MW-20 PERFORMANCE GROUNDWATER MONITORING WELL
- MW-43 COMPLIANCE GROUNDWATER MONITORING WELL
- ⊕ MW-36 GROUNDWATER MONITORING WELL (WATER LEVEL ONLY)
- MW-32  
0.010 SHALLOW MONITORING WELL  
ARSENIC, DISSOLVED (mg/L)
- \* DEEP MONITORING WELL
- PROPERTY LINE (ASSUMED)



Washington State Plane North Zone Coordinates  
 Datum: NAD 83, U.S. feet; NAVD 88, U.S. feet  
 GPS Base Station PID: SY9640  
 47 30 00.33905N, 122 45 26.58469W  
 Elevation: 450.22 feet  
 Flight Date: 6/18/98 Data Processed: 7/22/98

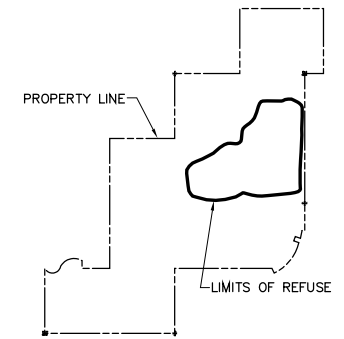
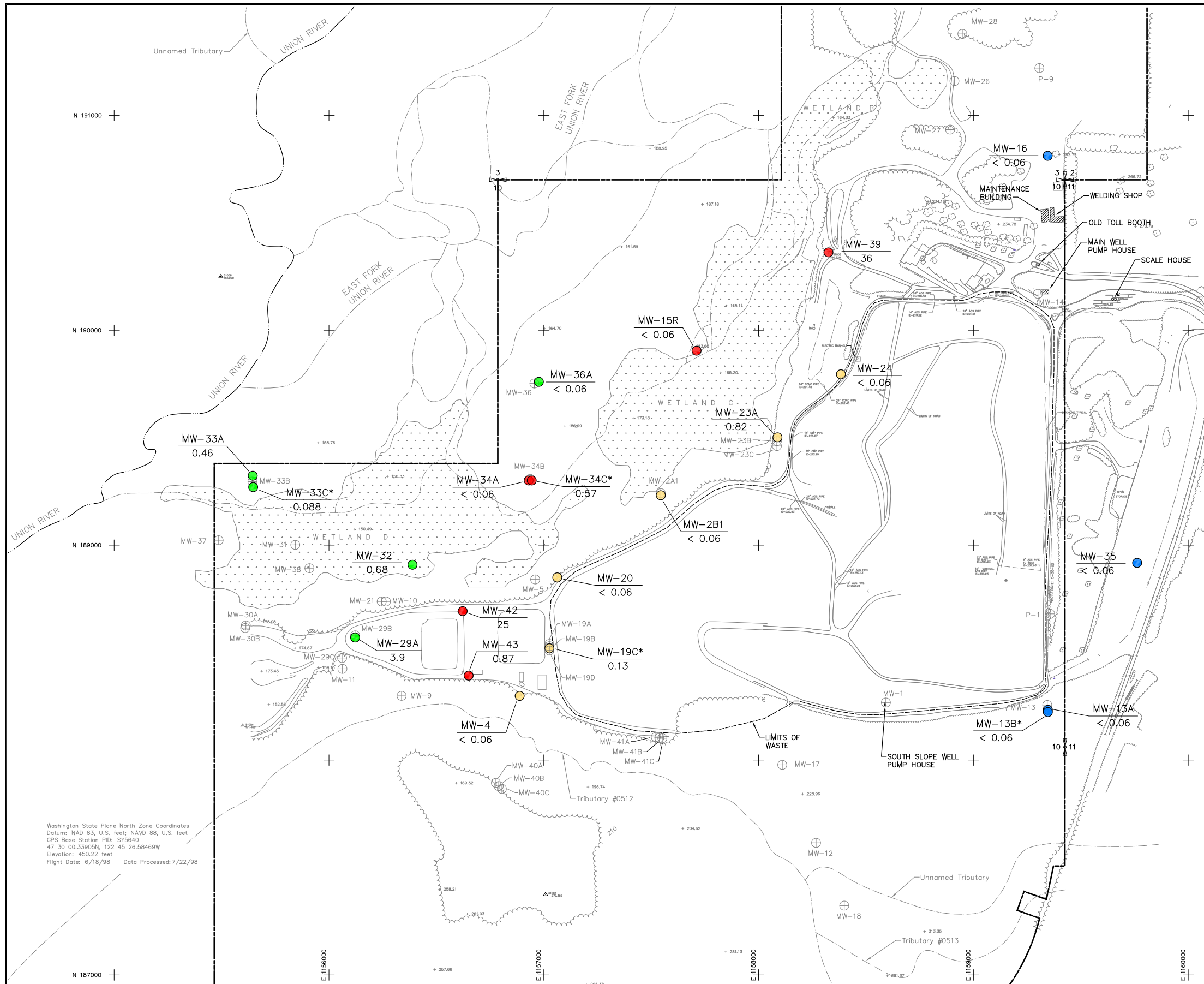
**SCS ENGINEERS**  
 Environmental Consultants and Contractors  
 2405 140th Avenue NE, Suite 107  
 Bellevue, Washington 98005  
 (425) 746-4600 FAX: (425) 746-6747

PROJECT NO.	04204027.17	DES BY	M.O.
SCALE	AS SHOWN	CHK BY	E.R.
CAD FILE	FIGURE 6A	APP BY	D.V.

DISSOLVED ARSENIC CONCENTRATION MAP  
 DECEMBER 2013  
 OLYMPIC VIEW SANITARY LANDFILL  
 KITSAP COUNTY, WASHINGTON

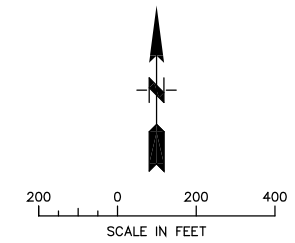
DATE  
 FEBRUARY 2014  
 FIGURE  
**6A**

NOTES : Wells MW-29A and MW-33A are only sampled semi-annually and shown as NS when not sampled.



KEY MAP

LEGEND	
<span style="color: blue;">●</span> MW-35	UPGRADIENT (BACKGROUND) GROUNDWATER MONITORING WELL
<span style="color: green;">●</span> MW-32	DOWNGRADIENT GROUNDWATER MONITORING WELL
<span style="color: yellow;">●</span> MW-20	PERFORMANCE GROUNDWATER MONITORING WELL
<span style="color: red;">●</span> MW-43	COMPLIANCE GROUNDWATER MONITORING WELL
⊕ MW-36	GROUNDWATER MONITORING WELL (WATER LEVEL ONLY)
<u>MW-32</u> 0.68	SHALLOW MONITORING WELL IRON, DISSOLVED (mg/L)
*	DEEP MONITORING WELL
---	PROPERTY LINE (ASSUMED)



Washington State Plane North Zone Coordinates  
 Datum: NAD 83, U.S. feet; NAVD 88, U.S. feet  
 GPS Base Station PID: SY9640  
 47 30 00.33905N, 122 45 26.58469W  
 Elevation: 450.22 feet  
 Flight Date: 6/18/98 Data Processed: 7/22/98

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

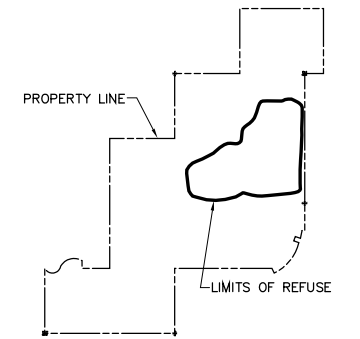
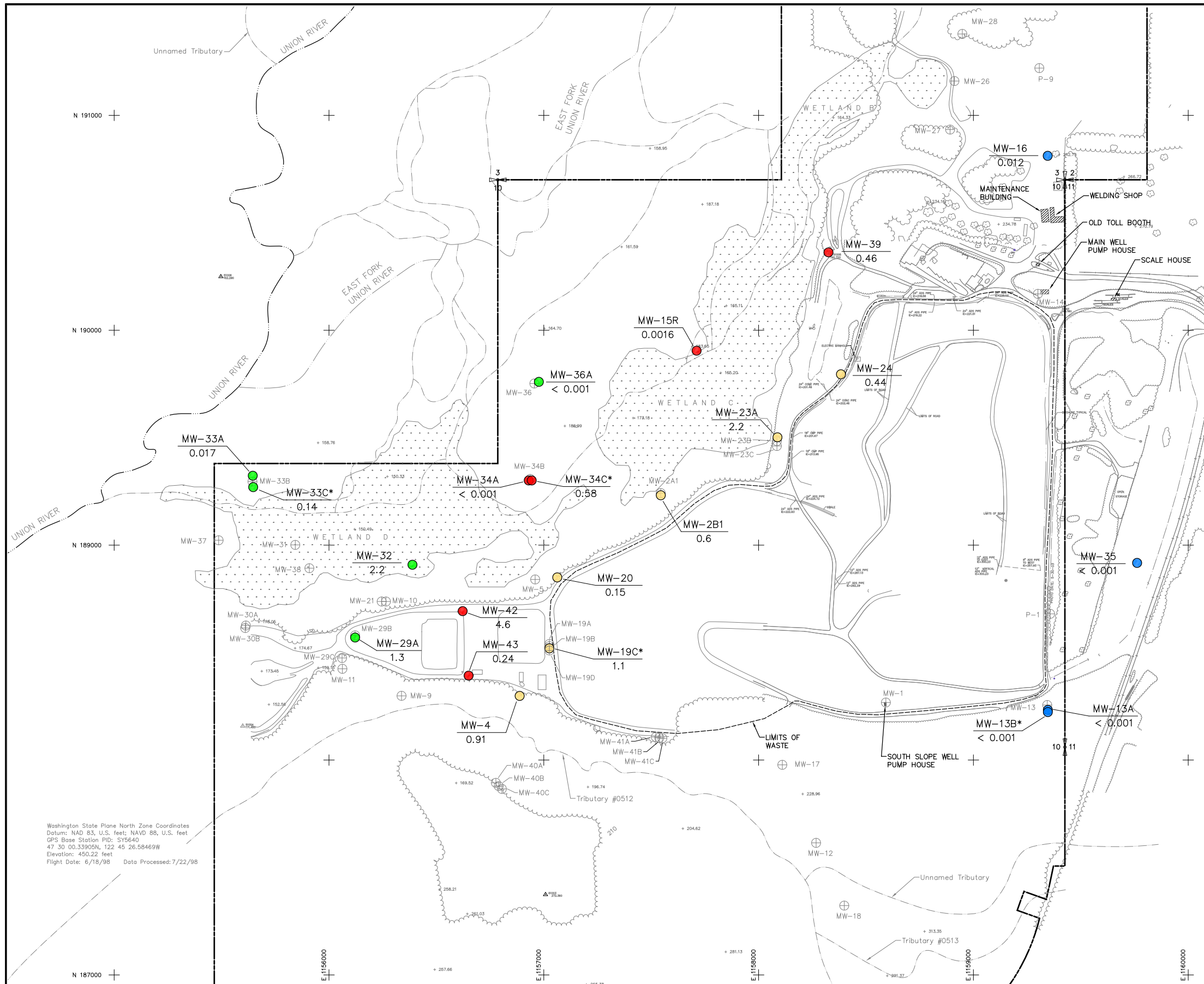
PROJECT NO.	04204027.17	DES BY	M.O.
SCALE	AS SHOWN	CHK BY	E.R.
CAD FILE	FIGURE 6B	APP BY	D.V.

DISSOLVED IRON CONCENTRATION MAP  
 DECEMBER 2013  
 OLYMPIC VIEW SANITARY LANDFILL  
 KITSAP COUNTY, WASHINGTON

DATE	FEBRUARY 2014
FIGURE	6B

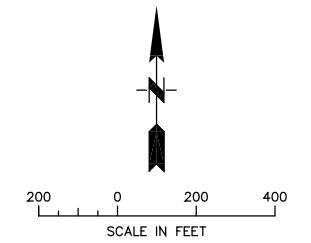


NOTES : Wells MW-29A and MW-33A are only sampled semi-annually and shown as NS when not sampled.



KEY MAP

LEGEND	
<span style="color: blue;">●</span> MW-35	UPGRADIENT (BACKGROUND) GROUNDWATER MONITORING WELL
<span style="color: green;">●</span> MW-32	DOWNGRADIENT GROUNDWATER MONITORING WELL
<span style="color: orange;">●</span> MW-20	PERFORMANCE GROUNDWATER MONITORING WELL
<span style="color: red;">●</span> MW-43	COMPLIANCE GROUNDWATER MONITORING WELL
$\oplus$ MW-36	GROUNDWATER MONITORING WELL (WATER LEVEL ONLY)
<u>MW-32</u> 2.2	SHALLOW MONITORING WELL MANGANESE, DISSOLVED (mg/L)
*	DEEP MONITORING WELL
---	PROPERTY LINE (ASSUMED)



Washington State Plane North Zone Coordinates  
 Datum: NAD 83, U.S. feet; NAVD 88, U.S. feet  
 GPS Base Station PID: SY9640  
 47 30 00.33905N, 122 45 26.58469W  
 Elevation: 450.22 feet  
 Flight Date: 6/18/98 Data Processed: 7/22/98

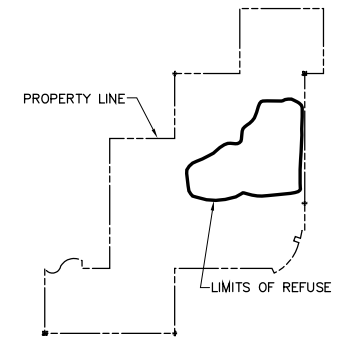
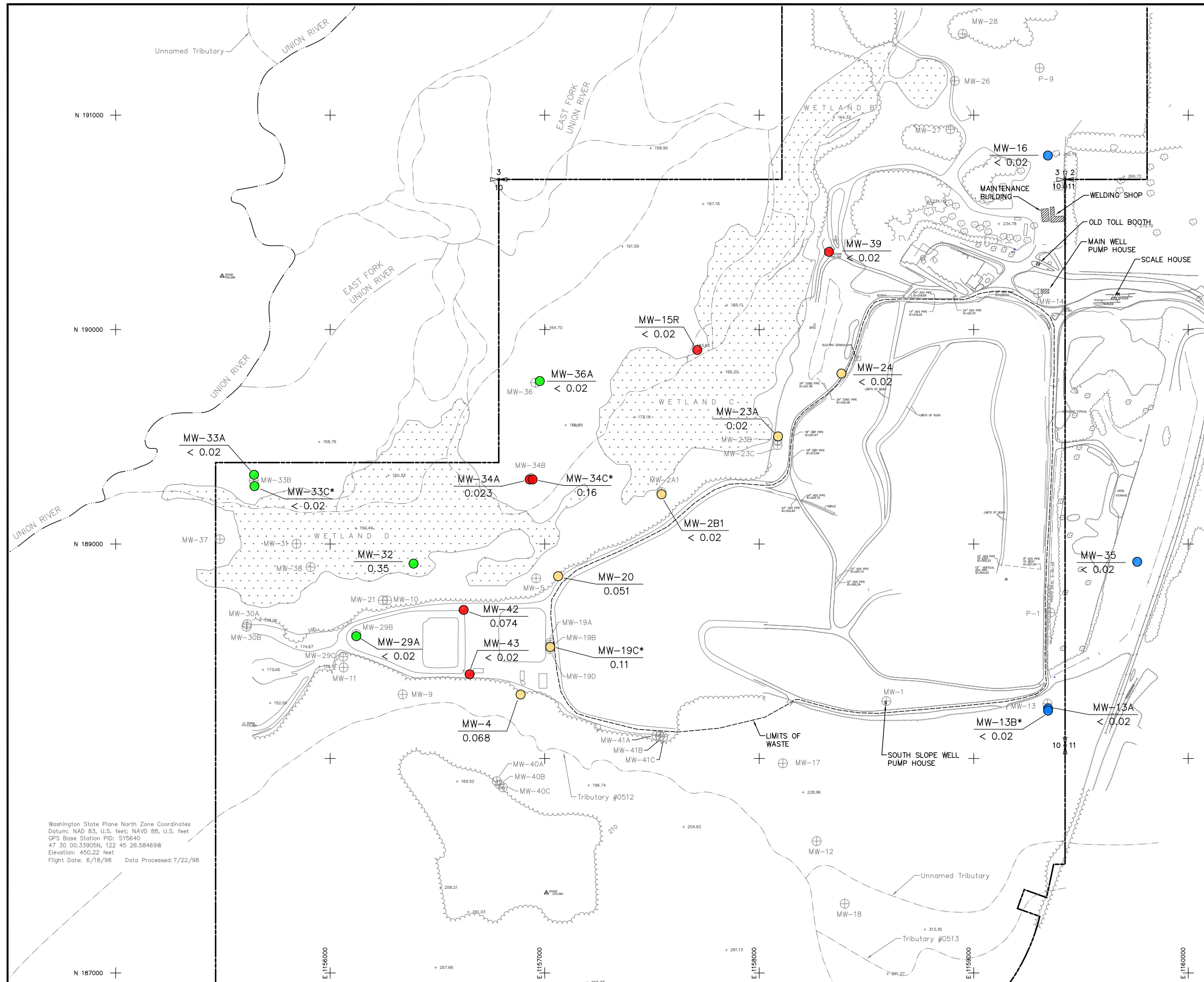
**SCS ENGINEERS**  
 Environmental Consultants and Contractors  
 2405 140th Avenue NE, Suite 107  
 Bellevue, Washington 98005  
 (425) 746-4600 FAX: (425) 746-6747

PROJECT NO.	04204027.17	DES BY	M.O.
SCALE	AS SHOWN	CHK BY	E.R.
CAD FILE	FIGURE 6C	APP BY	D.V.

DISSOLVED MANGANESE CONCENTRATION MAP  
 DECEMBER 2013  
 OLYMPIC VIEW SANITARY LANDFILL  
 KITSAP COUNTY, WASHINGTON

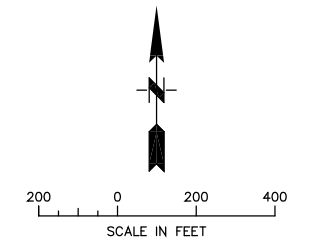
DATE	FEBRUARY 2014
FIGURE	6C

NOTES : Wells MW-29A and MW-33A are only sampled semi-annually and shown as NS when not sampled.



KEY MAP

LEGEND	
	UPGRADIENT (BACKGROUND) GROUNDWATER MONITORING WELL
	DOWNGRADIENT GROUNDWATER MONITORING WELL
	PERFORMANCE GROUNDWATER MONITORING WELL
	COMPLIANCE GROUNDWATER MONITORING WELL
	GROUNDWATER MONITORING WELL (WATER LEVEL ONLY)
	SHALLOW MONITORING WELL 0.35 VINYL CHLORIDE (ug/L)
*	DEEP MONITORING WELL
---	PROPERTY LINE (ASSUMED)



Washington State Plane North Zone Coordinates  
 Datum: NAD 83, U.S. feet; NAVD 88, U.S. feet  
 GPS Base Station PID: SY9640  
 47 30 00.33905N, 122 45 26.58469W  
 Elevation: 450.22 feet  
 Flight Date: 6/18/98 Data Processed: 7/22/98

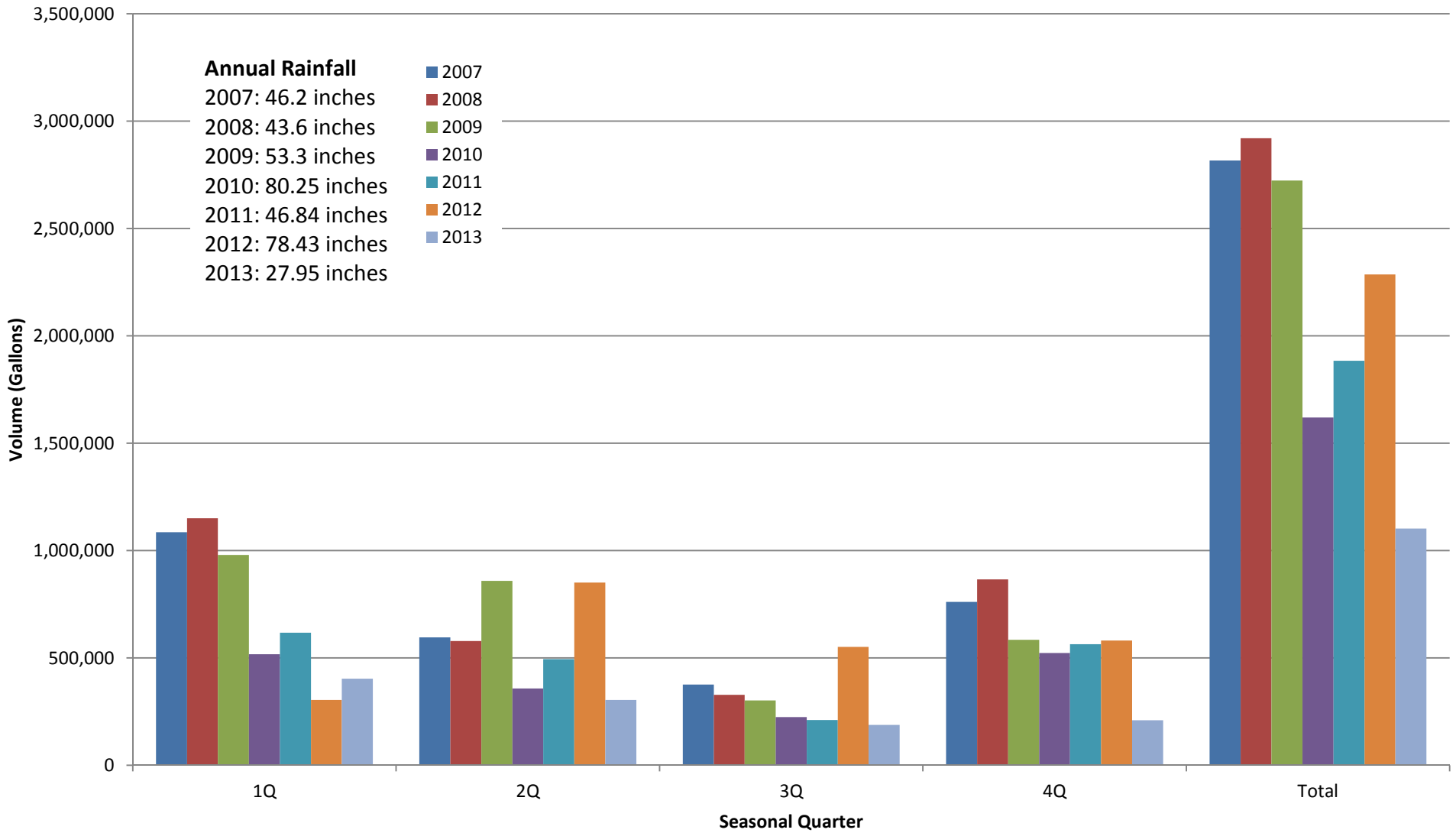
**SCS ENGINEERS**  
 Environmental Consultants and Contractors  
 2405 140th Avenue NE, Suite 107  
 Bellevue, Washington 98005  
 (425) 746-4600 FAX: (425) 746-6747

PROJECT NO.	04204027.17	DES BY	M.O.
SCALE	AS SHOWN	CHK BY	E.R.
CAD FILE	FIGURE 6D	APP BY	D.V.

VINYL CHLORIDE CONCENTRATION MAP  
 DECEMBER 2013  
 OLYMPIC VIEW SANITARY LANDFILL  
 KITSAP COUNTY, WASHINGTON

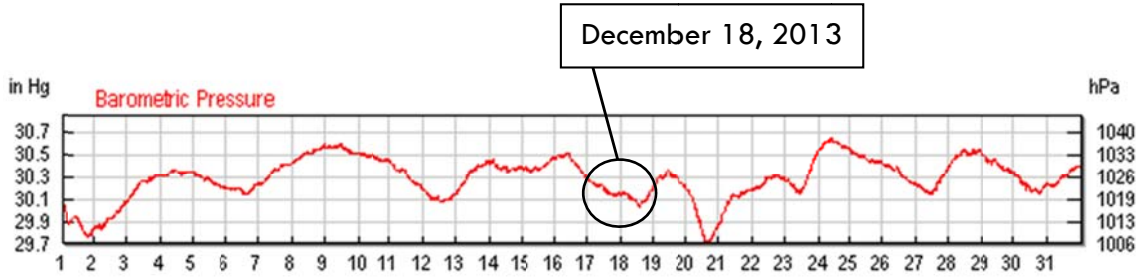
DATE	FEBRUARY 2014
FIGURE	6D

**Figure 7. Leachate Generation (2007-2013)**  
**2013 Annual Monitoring Report**  
**Olympic View Sanitary Landfill, Kitsap County, Washington**

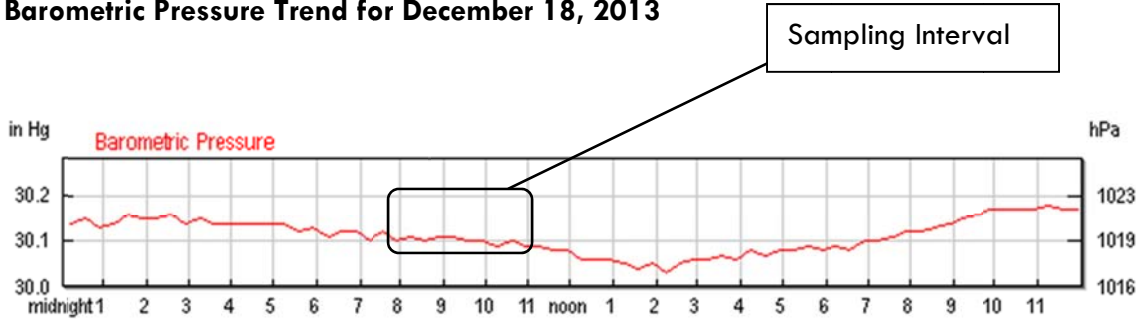


**Figure 8. Barometric Pressure during LFG Migration Monitoring- December 2013**  
**2013 Annual Monitoring Report**  
**Olympic View Sanitary Landfill, Kitsap County, Washington**

**Barometric Pressure Trend for December 2013**



**Barometric Pressure Trend for December 18, 2013**



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

[http://www.wunderground.com/history/airport/KPWT/2013/12/18/DailyHistory.html?req\\_city=NA&req\\_state=NA&req\\_statename=NA](http://www.wunderground.com/history/airport/KPWT/2013/12/18/DailyHistory.html?req_city=NA&req_state=NA&req_statename=NA)  
[http://www.wunderground.com/history/airport/KPWT/2013/12/1/MonthlyHistory.html?req\\_city=NA&req\\_state=NA&req\\_statename=NA](http://www.wunderground.com/history/airport/KPWT/2013/12/1/MonthlyHistory.html?req_city=NA&req_state=NA&req_statename=NA)

## APPENDICES



APPENDIX A

FOURTH QUARTER 2013  
FIELD DOCUMENTATION

(FIELD DOCUMENTATION FROM Q1 THROUGH Q3 ON CD)





## SCS ENGINEERS

March 14, 2013  
File No. 04204027.16

**Subject: Olympic View Sanitary Landfill First Quarter Ground Water Sampling**

---

Olympic View Sanitary Landfill  
Fourth Quarter Groundwater Monitoring  
March 2013  
3/11/13 through 3/13/13  
Personell: Wayne Chang, Matt O'Hare  
Notes/Sampling Decoding:

- Dedicated pumps were used for purging and sampling all wells.
- Duplicate samples were taken at MW-43 (DUP 1) and MW-34C (DUP 2).
- Laboratory MS/MSD samples were taken at MW-13B.
- The LP-LCD sample point was sampled on 3/11/13 by SCS Engineers. Field parameter readings were taken prior to sampling.
- The samples were sent to TestAmerica Denver for analysis same day.

Sample Date	Well Number	Comments
3/11/13	MW-34C	DUP -2 Taken
3/11/13	MW-13A	
3/11/13	MW-34A	
3/12/13	MW-33C	
3/11/13	MW-13B	MS/MSD Taken
3/11/13	MW-42	
3/12/13	MW-39	
3/11/12	MW-43	DUP-1 Taken
3/13/13	MW-35	
3/12/13	MW-24	
3/12/13	MW-23A	
3/12/13	MW-2B1	

3/12/13	MW-15R	
3/12/13	MW-16	
3/12/13	MW-19C	
3/11/13	MW-36A	
3/12/13	MW-20	
3/11/13	LP-LCD	
3/13/13	MW-4	
3/13/13	MW-32	

10 2013 - GWE measurements

**SCS ENGINEERS**

Olympic View Sanitary Landfill

Well	Date	Time	DTW	Measured by (initials)	Comments	Last Quarter DTW
MW-1			66.56			69.04
MW-10	3/13		4.65			NM
MW-11			4.19			4.25
MW-12			44.32			NM
MW-13			28.39			28.94
MW-13A			45.78			46.34
MW-13B			59.48			60.30
MW-14			TBC			47.38
MW-15R			18.25			18.72
MW-16			54.75			57.65
MW-17			30.87			NM
MW-18			61.35			NM
MW-19A			31.54			32.58
MW-19B			31.40			32.62
MW-19C			33.12			33.60
MW-19D			31.79			32.73
MW-20			35.00			35.91
MW-21	3/13		4.85			5.35
MW-23A			10.85			NM
MW-23B			11.17			12.41
MW-23C			11.20			12.92
MW-24			30.07			21.74
MW-26			9.62			NM
MW-27			19.70			21.74
MW-28			5.10			NM
MW-29A			12.85			13.35
MW-29B			16.77			17.12
MW-29C			11.40			11.73
<b>SCS ENGINEERS</b>				OVSL		

						Page 2 of 2
	Date	Time	DTW	Measured by (initials)	Comments	Last Quarter DTW
MW-2A1			7.11			9.12
MW-2B1			6.10			6.72
MW-30A			23.58			24.00
MW-30B			23.45			23.88
MW-31			2.08			NM
MW-32			1.25			1.50
MW-33A			4.89			5.62
MW-33B			1.82			2.13
MW-33C			1.81			2.17
MW-34A			38.95			39.5
MW-34B			38.70			39.41
MW-34C			40.74			41.21
MW-35			71.55			72.07
MW-36			30.58			31.14
MW-36A			30.50			31.00
MW-37			3.65			NM
MW-38			3.57			3.67
MW-39			18.35			21.34
MW-4			131.2			14.95
MW-40A			14.04			15.51
MW-40B			14.21			15.44
MW-40C			14.80			15.84
MW-41A			22.70			24.18
MW-41B			23.00			24.64
MW-41C			24.65			26.16
MW-42			27.20			27.85
MW-43			24.15			25.16
MW-5			1.90			2.57
MW-9			2.58			NM



**GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM**

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	3/12/13					
Time	0800					
Weather (sky or precip, temp)	Rain					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	1000, 10, 0.2	
Pre-Cal Reading	293	3.91	6.98	765.7 mm		
Post Cal Reading	445	4.01	7.00	MS		
Discrepancy						
Calib. Successful?						
Calibration by						
Instrument Type, ID	MP20	MP20	MP20	MP20	MicoTPW	
Calibration Location						

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

YSI

**GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM**

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	3/12/13					
Time	0800					
Weather (sky or precip, temp)	Ran 					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	1000, 10, 0.2	
Pre-Cal Reading	427	3.92	6.90			
Post Cal Reading	443	4.01	7.00	8.5		
Discrepancy						
Calib. Successful?						
Calibration by						
Instrument Type, ID	MP20	MP20	MP20	MP20	MicoTPW	
Calibration Location						

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

MP-20

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	3/11/13					
Time	0830					
Weather (sky or precip, temp)	Cloudy					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	800-20 1000, 10, 0.2	
Pre-Cal Reading	435	4.23	7.05		813, 23.6, 0.59	
Post Cal Reading	445	4.01	7.00			
Discrepancy						
Calib. Successful?						
Calibration by	MO					
Instrument Type, ID	MP20	MP20	MP20	MP20	MicoTPW	
Calibration Location	OVSU					

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

MP20

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	3/11/13					
Time	0830					
Weather (sky or precip, temp)	cloudy					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	1000, 10, 0.02	
Pre-Cal Reading	7763	3.62	7.08	126	967.3, 9.66, 100	
Post Cal Reading	445	4.01	7.00	8.5	1000, 10, 0.02	
Discrepancy						
Calib. Successful?	yes					
Calibration by	[Signature]					
Instrument Type, ID	YSI <del>MP20</del>	MP20	MP20	MP20	MicoTPW	
Calibration Location	[Signature]					

Submit  
 695 9037

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

YSI



# FIELD INFORMATION FORM



Site Name: Olympic View Sanitary Landfill

Site No.:      Sample Point: WV-19C 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): 03/21/13 PURGE TIME (24HR Hr Clock): 08:48 ELAPSED HRS (hrs:min):     

WATER VOL IN CASING (Gallons):      ACTUAL VOL PURGED (Gallons):      WELL VOL 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 Devices:  Y or  N 0.45 µ or      µ (circle or fill in)

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

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

Sampling Device:  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): 33.12 (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/Site. 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)
08:53	350	6.23	122	10.18	4.90	4.12	99	33.12
08:56	1	6.41	121	10.16	3.72	3.66	75	33.12
08:59	1	6.58	122	10.16	3.01	3.05	53	33.12
09:02	1	6.65	122	10.14	2.46	2.69	43	33.12
09:05	1	6.70	122	10.13	2.93	2.41	34	33.12
09:08	1	6.73	122	10.13	2.58	2.09	27	33.12
09:11	1	6.79	123	10.13	1.92	1.74	19	33.12
09:14	1	6.79	123	10.12	1.89	1.60	17	33.12
09:17	1	6.82	122	10.12	1.75	1.55	15	33.12
01:11								Stabilize

*Suggested range for 3 consec. readings or 300 Permit/Site requirements: pH: ±0.2, Conductance: ±10%, Temp: ±0.5°C, Turbidity: ±10% ±5, D.O.: ±0.2*

*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 sheets or forms.*

**FIELD DATA**

SAMPLE DATE (MM DD YY): 03/21/13 pH (std): 6.82 CONDUCTANCE (µmhos/cm @ 25°C): 1122 TEMP. (°C): 10.12 TURBIDITY (ntu): 1.73 DO (mg/L-ppm): 1.55 eH/ORP (mV): 15 Other: Time 3:04:17

*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):

19D - 31.79

19B - 31.40

19A - 30.54

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

Date: 3.12.13 Name: M. H. O'Brien Signature: [Signature] Company: SCS Engineers

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

# FIELD INFORMATION FORM



Site Name: Olympic View Sanitary Landfill

**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:

Sample Point: MW-39  
Sample ID

PURGE INFO	PURGE DATE (MM DD YY) 03/12/13	PURGE TIME (2400 Hr Clock) 12:50	ELAPSED HRS (hrs:min) 00:00	WATER VOL IN CASING (Gallons) 00:00:00	ACTUAL VOL PURGED (Gallons) 00:00:00	WELL VOL PURGED 00:00:00
------------	-----------------------------------	-------------------------------------	--------------------------------	---	---	-----------------------------

*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.*

Purging and Sampling Equipment Dedicated: <input type="checkbox"/> Y or <input type="checkbox"/> N	Filter Device: <input type="checkbox"/> Y or <input type="checkbox"/> N	Filter Type: <input type="checkbox"/> A-In-line Disposable <input type="checkbox"/> C-Vacuum <input type="checkbox"/> B-Pressure <input type="checkbox"/> X-Other
Purging Device: <input type="checkbox"/> A-Submersible Pump <input type="checkbox"/> D-Bailer <input type="checkbox"/> B-Peristaltic Pump <input type="checkbox"/> E-Piston Pump	Sample Tube Type: <input type="checkbox"/>	<input type="checkbox"/> A-Teflon <input type="checkbox"/> C-PVC <input type="checkbox"/> X-Other <input type="checkbox"/> B-Stainless Steel <input type="checkbox"/> D-Polypropylene
Sampling Device: <input type="checkbox"/> C-QED Bladder Pump <input type="checkbox"/> F-Dipper/Bottle		
X-Other: _____		

Well Elevation (at TOC) _____ (ft/m)	Depth to Water (DTW) (from TOC) 11835 _____ (ft)	Groundwater Elevation (site datum, from TOC) _____ (ft/m)
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 provided 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)
		12:55	300	6.41	229	10.10	4.65	0.94	-13
	12:58		6.40	230	10.07	4.70	1.10	-13	19.30
	13:01		6.37	233	10.00	3.92	1.32	-4	19.30
	13:04		6.36	233	10.04	4.05	1.30	-6	19.30
	13:07		6.56	233	10.07	4.36	1.35	-9	19.30
	13:10		6.36	234	10.06	3.27	1.21	-11	19.30

Suggested range for 3 consec. readings or more Permit/State requirements: pH ± 0.2, Conductance ± 10%, Temp ± 0.5°C, Turbidity ± 10% ≤ 5, D.O. ± 0.2

**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.

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (µmhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L - ppm)	eH/ORP (mV)	Other: Time Units
03/12/13	6.36	234	10.06	3.27	1.21	-11	13:10

**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): \_\_\_\_\_

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):  
 3, 12, 13      Matthew      [Signature]      SCS Engineers  
 Date      Name      Signature      Company

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

# FIELD INFORMATION FORM



Site Name: Olympic View Sanitary Landfill  
 Site No.:       
 Sample Point: MM 120  
 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): 3 12 13  
 PURGE TIME (24HR Hr Clock): 09:55  
 ELAPSED HRS (hrs:min):       
 WATER VOL IN CASING (Gallons):       
 ACTUAL VOL PURGED (Gallons):       
 WELL VOL 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:  A-Submersible Pump  D-Bailer  
 B-Peristaltic Pump  E-Piston Pump  
 Sampling Device:  C-QED Bladder Pump  F-Dipper/Buttle  
 X-Other:       
 Filter Device:  Y or  N 0.45 μ or      μ (circle or fill in)  
 Filter Type:  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): 35.00 (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/Site. 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)
09:55	300	6.46	345	14.75	0.3	4.07	132	35.10
09:58	1	6.43	332	14.74	0.41	4.03	132	35.11
10:01	1	6.44	326	14.77	0.41	4.18	133	35.11
10:04	1	6.46	325	14.77	0.51	4.17	133	35.11
10:07	1	6.44	324	14.78	0.61	4.10	133	35.11
10:10	1	6.44	323	14.75	0.41	4.02	133	35.11
:								
:								
:								
:								

*Suggested range for 3 consec. readings or one Permit/State requirements: pH +/- 0.2, Conductance +/- 10%, Temp +/- 0.5°C, Turbidity +/- 10% ≤ 5, D.O. +/- 0.2, eH/ORP 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): 03/12/13  
 pH (std): 6.44  
 CONDUCTANCE (umhos/cm @ 25°C): 323  
 TEMP. (°C): 14.75  
 TURBIDITY (ntu): 0.41  
 DO (mg/L-ppm): 4.02  
 eH/ORP (mV): 133  
 Other: Time 1010

*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):  
3/12/13 Date  
Matt Ottavio Name  
Matt Ottavio Signature  
SCS Engineers Company

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

# FIELD INFORMATION FORM



Site Name: Olympic View Sanitary Landfill

**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-241  
 Sample ID: \_\_\_\_\_

**PURGE INFO**

PURGE DATE (MM DD YY)	PURGE TIME (24HR Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOL PURGED
<u>031213</u>	<u>101416</u>				

*Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" by "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)

Filter Type: \_\_\_\_\_

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

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

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/m)

Depth to Water (DTW) (from TOC) 30.07 (ft)

Groundwater Elevation (site datum, from TOC) \_\_\_\_\_ (ft/m)

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)
10:51	3cc	6.63	107	11.89	1.05	3.79	105	30.07
10:54		6.58	107	11.60	1.08	3.40	97	30.07
10:57		6.53	107	11.89	1.08	3.13	91	30.07
10:59		6.53	107	11.89	1.06	2.42	87	30.07
11:03		6.51	107	11.60	7.8	2.75	82	30.07
11:06		6.51	108	11.89	8.5	2.52	78	30.07
11:09		6.49	108	11.89	8.5	2.37	74	30.07
11:12		6.50	108	11.69	8.9	2.40	72	30.07
11:15		6.48	108	11.63	8.9	2.05	69	30.07
11:18		6.50	108	11.62	8.6	2.03	67	30.07

*Suggested range for 3 consec. readings or more Permit/State requirements: pH ±0.2, Conductance ±10%, Temp ±0.5°C, Turbidity ±10% ≤ 5, D.O. ±0.2*

**FIELD DATA**

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 DATE (MM DD YY)	pH (std)	CONDUCTANCE (µmhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L - ppm)	eH/ORP (mV)	Other: Time Units
<u>031213</u>	<u>6.50</u>	<u>108</u>	<u>11.62</u>	<u>8.6</u>	<u>2.03</u>	<u>67</u>	<u>1118</u>

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):

3.12.13 M. Haffare [Signature] SCS Engineers

Date Name Signature Company

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

# FIELD INFORMATION FORM



Site Name: Olympic View Sanitary Landfill

**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: MM-115R  
 Sample ID: \_\_\_\_\_

**PURGE INFO**

PURGE DATE (MM DD YY): 03/11/2013      PURGE TIME (24HR Hr Clock): 09:00      ELAPSED HRS (hrs:min): \_\_\_\_\_

WATER VOL IN CASING (Gallons): \_\_\_\_\_      ACTUAL VOL PURGED (Gallons): \_\_\_\_\_      WELL VOL PURGED \_\_\_\_\_

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

**PURGE/SAMPLE EQUIPMENT**

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

Purging Device:  C (Submersible Pump)       D (Baller)       E (Piston Pump)       F (Dipper/Bottle)

Sampling Device:  C (QED Bladder Pump)       A (In-line Disposable)       B (Pressure)       X (Other)

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

Filter Type:  A       B (Stainless Steel)       C (PVC)       D (Polypropylene)

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

**WELL DATA**

Well Elevation (at TOC) \_\_\_\_\_ (ft/msl)      Depth to Water (DTW) (from TOC) 18.25 (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)
09:00	1 <sup>st</sup>	6.17	193	9.90	2.26	3.00	400.1	
09:05	2 <sup>nd</sup>	6.41	204	9.92	0.15	1.67	395.9	18.25
09:10	3 <sup>rd</sup>	6.50	205	9.95		1.19	391.8	
09:15	4 <sup>th</sup>	6.54	204	9.97	0.41	0.85	390.4	
09:20		6.55	204	9.98		0.80	391.0	18.25
09:25		6.55	204	9.97		0.75	390.5	

*Suggested range for 3 consec. readings or one Permit/State requirement: pH ± 0.2, Conductance ± 10%, Temp ± 0.5°C, Turbidity ± 10% ≤ 5, D.O. ± 0.2*

**FIELD DATA**

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 DATE (MM DD YY): 03/11/2013      pH (std): 6.55      CONDUCTANCE (µmhos/cm @ 25°C): 204      TEMP. (°C): 9.97      TURBIDITY (ntu): 0.41      DO (mg/L - ppm): 0.75      eH/ORP (mV): 390.5      Other: Time 09:25

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): \_\_\_\_\_

9  
6  
20  
300

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

3.12.13      Wayne Chang      Wayne Chang      SCS Engineers

Date      Name      Signature      Company

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

# FIELD INFORMATION FORM



Site Name: Olympic View Sanitary Landfill

**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.: 1111 Sample Point: MW-23A Sample ID

PURGE INFO	PURGE DATE (MM DD YY) <span style="border: 1px solid black; padding: 2px;">10/31/13</span>	PURGE TIME (24HR Hr Clock) <span style="border: 1px solid black; padding: 2px;">110115</span>	ELAPSED HRS (hrs:min) <span style="border: 1px solid black; padding: 2px;">0000</span>	WATER VOL IN CASING (Gallons) <span style="border: 1px solid black; padding: 2px;">0000</span>	ACTUAL VOL PURGED (Gallons) <span style="border: 1px solid black; padding: 2px;">0000</span>	WELL VOL PURGED <span style="border: 1px solid black; padding: 2px;">0000</span>
------------	---	--	---	---	---	---

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.

Purging and Sampling Equipment ... Dedicated: <input checked="" type="checkbox"/> Y or <input type="checkbox"/> N Purging Device: <span style="border: 1px solid black; padding: 2px;">C</span> Sampling Device: <span style="border: 1px solid black; padding: 2px;">C</span> X-Other: _____	A-Submersible Pump B-Peristaltic Pump C-QED Bladder Pump	D-Bailer E-Piston Pump F-Dipper/Bottle	Filter Device: <input checked="" type="checkbox"/> Y or <input type="checkbox"/> N <span style="border: 1px solid black; padding: 2px;">0.45</span> $\mu$ (circle or fill in) Filter Type: <span style="border: 1px solid black; padding: 2px;">A</span>	A-In-line Disposable B-Pressure A-Teflon B-Stainless Steel	C-Vacuum X-Other C-PVC D-Polypropylene	Sample Tube Type: _____
--	--	--	---	---	---	-------------------------

Well Elevation (at TOC) <span style="border: 1px solid black; padding: 2px;">0000</span> (ft/msl)	Depth to Water (DTW) (from TOC) <span style="border: 1px solid black; padding: 2px;">11085</span> (ft)	Groundwater Elevation (site datum, from TOC) <span style="border: 1px solid black; padding: 2px;">0000</span> (ft/msl)
Total Well Depth (from TOC) <span style="border: 1px solid black; padding: 2px;">0000</span> (ft)	Stick Up (from ground elevation) <span style="border: 1px solid black; padding: 2px;">0000</span> (ft)	Casing ID <span style="border: 1px solid black; padding: 2px;">00</span> (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/Site. 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)
	10:18	1"		6.31	100	13.08	2649	0.15	343.1
10:23	2"		6.34	127	13.12	912	0.29	314.7	1085
10:28	3"		6.33	141	13.08	810	0.20	308.3	
10:33	4"		6.33	145	13.11	682	0.15	302.2	
10:38			6.33	170	13.10	690	0.13	300.9	
10:43			6.32	171	13.13	492	0.11	297.7	

Suggested range for 3 consec. readings or use Permit/State requirements: pH +/- 0.2, Conductance +/- 10%, Temp +/- 0.5°C, Turbidity +/- 10%  $\leq$  5, D.O. +/- 0.2. Stabilize

**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 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
10/31/2013	6.32	171	13.13	492	0.11	297.7	1043

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**

4  
6  
15  
280

MW-27B: 1117  
MW-23C: 1120

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

3.12.13     Wayne Chang     Wayne Chang     SCS Engineers

# FIELD INFORMATION FORM



**Site Name:** Olympic View Sanitary Landfill

**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: 03/12/13  
PURGE TIME: 1135  
ELAPSED HRS: [ ] [ ] [ ] [ ] [ ] [ ]  
WATER VOL IN CASING (Gallons): [ ] [ ] [ ] [ ] [ ] [ ]  
ACTUAL VOL PURGED (Gallons): [ ] [ ] [ ] [ ] [ ] [ ]  
WELL VOL 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:*

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

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

**PURGE/SAMPLE EQUIPMENT**

Purging Device:  C A-Submersible Pump D-Bailer  
B-Peristaltic Pump E-Piston Pump  
Sampling Device:  C C-QED Bladder Pump F-Dipper/Bottle  
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): 610 (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)
11:40	1"	6.19	249	13.50	19.78	2.85	261.2	
11:45	2"	6.31	217.1	13.40	63.9	0.17	216.7	
11:50	3"	6.31	245.0	13.43	487.6	0.14	214.9	
11:55	4"	6.31	29.1	13.42	4.89	0.15	213.1	

Suggested range for 3 consec. readings or one Permit/State requirement:  
 pH: ±0.2  
 Conductance: ±10%  
 Temp: ±0.5°C  
 Turbidity: ±10% ≤ 5  
 D.O.: ±0.2

**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 in Site. If more fields above are needed, use separate sheet or form.

**FIELD DATA**

SAMPLE DATE (MM DD YY): 03/12/13  
 pH (std): 6.31  
 CONDUCTANCE (umhos/cm @ 25°C): 29.1  
 TEMP. (°C): 13.42  
 TURBIDITY (ntu): 4.89  
 DO (mg/L-ppm): 0.15  
 eH/ORP (mV): 213.1  
 Other: Time Units: 11:55

*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: Ram  
 Precipitation:  Y or  N

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

9

6

10

20

DTW - 2A-1 = 7.1

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

Date: 3.12.13  
 Name: Wayne Cheng  
 Signature: [Signature]  
 Company: SCS Engineers

# FIELD INFORMATION FORM



Site Name: Olympic View Sanitary Landfill

**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: WV-133C  
 Sample ID: \_\_\_\_\_

PURGE INFO	<u>031213</u>	<u>1450</u>	<u>    </u> <u>    </u> <u>    </u>	<u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>
	PURGE DATE (MM DD YY)	PURGE TIME (24HR Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOL <sub>s</sub> PURGED

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

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

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

Purging Device: <input type="checkbox"/> A-Submersible Pump <input type="checkbox"/> D-Bailer	Filter Type: <input type="checkbox"/> A-In-line Disposable <input type="checkbox"/> C-Vacuum	
Sampling Device: <input type="checkbox"/> B-Peristaltic Pump <input type="checkbox"/> E-Piston Pump	B-Pressure <input type="checkbox"/> X-Other _____	
X-Other: _____	A-Teflon <input type="checkbox"/> C-PVC <input type="checkbox"/> X-Other: _____	
	B-Stainless Steel <input type="checkbox"/> D-Polypropylene	

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

WELL DATA	Well Elevation (at TOC) _____ (ft/mst)	Depth to Water (DTW) (from TOC) <u>1281</u> (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) (umhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
		<u>14:55</u>	<u>390</u>	<u>7.61</u>	<u>139</u>	<u>8.81</u>	<u>1.55</u>	<u>0.45</u>	<u>-81</u>
	<u>14:58</u>	<u>1</u>	<u>7.60</u>	<u>140</u>	<u>8.82</u>	<u>1.83</u>	<u>0.32</u>	<u>-54</u>	<u>1.85</u>
	<u>15:01</u>	<u>1</u>	<u>7.33</u>	<u>134</u>	<u>8.82</u>	<u>4.51</u>	<u>0.24</u>	<u>-74</u>	<u>1.85</u>
	<u>15:04</u>	<u>1</u>	<u>7.46</u>	<u>137</u>	<u>8.82</u>	<u>4.46</u>	<u>0.21</u>	<u>-84</u>	<u>1.85</u>
	<u>15:00</u>	<u>1</u>	<u>7.51</u>	<u>134</u>	<u>8.83</u>	<u>3.87</u>	<u>0.18</u>	<u>-88</u>	<u>1.85</u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>

Suggested range for 3 consec. readings or one Permit/State requirements: pH +/- 0.2, Conductance +/- 10%, Temp +/- 0.5°C, Turbidity +/- 10% ≤ 5, D.O. +/- 0.2, eH/ORP 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 (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Time Units
	<u>031213</u>	<u>7.51</u>	<u>134</u>	<u>8.83</u>	<u>3.87</u>	<u>0.18</u>	<u>-88</u>	<u>1510</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):

\_\_\_\_\_

28A 4.84  
33B 1.82

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

SCS Engineers

3.12.13 Date      Name      Signature      Company     

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



# FIELD INFORMATION FORM



Site Name: Olympic View Sanitary Landfill  
 Site No.:       
 Sample Point: MM-116  
 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 Form 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): 03/12/13      PURGE TIME (24HR Hr Clock): 11:31:15      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      Filter Device: Y or N      0.45  $\mu$  or       $\mu$  (reticle or fill in)  
 Sampling Device: C      B-Peristaltic Pump      E-Piston Pump      Filter Type: A  
 X-Other:           C-QED Bladder Pump      F-Dipper/Bottle      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): 54.85 (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/Site. 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)	Stabilize
13:15	1"	6.88	1133	8.97	2.64	10.45	362.4		
13:20	2"	6.81	1123	9.04		7.20	370.8	54.85	
13:25	3"	6.35	1118	9.03	2.58	7.17	377.7		
13:30	4"	6.35	1118	9.02		7.15	381.7	54.85	

*Suggested range for 3 consec. readings or use Permit/State requirements: pH: +/- 0.2, Conductance: +/- 10%, Temp: +/- 0.5°C, Turbidity: +/- 10% ≤ 5, D.O.: +/- 0.2*

**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): 03/12/13      pH (std): 6.35      CONDUCTANCE ( $\mu$ mhos/cm @ 25°C): 1118      TEMP. (°C): 9.02      TURBIDITY (ntu): 2.58      DO (mg/L-ppm): 7.15      eH/ORP (mV): 381.7      Other: Time: 1330

*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**  
9  
6  
30  
300

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

# FIELD INFORMATION FORM



Site Name: Olympic View Sanitary Landfill

**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.: 1111 Sample Point: 140-1318  
Sample ID

**PURGE INFO**

<b>PURGE DATE</b> (MM DD YY)	<b>PURGE TIME</b> (2400 Hr Clock)	<b>ELAPSED HRS</b> (hr:min)	<b>WATER VOL IN CASING</b> (Gallons)	<b>ACTUAL VOL PURGED</b> (Gallons)	<b>WELL VOL PURGED</b>
031113	13133				

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)

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

Purging Device:  A-Submersible Pump    D-Bailer  
 B-Peristaltic Pump    E-Piston Pump

Sampling Device:  C-QED Bladder Pump    F-Dipper/Bottle

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

**WELL DATA**

Well Elevation (at TOC)   (ft/m)    Depth to Water (DTW) (from TOC) 59.48 (ft)

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

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)
13:38	0.50	6.87	143	9.10	3.00	7.30	74	59.48
13:41		7.11	143	9.11	0.90	7.21	68	59.48
13:44		7.22	143	9.12	0.83	7.17	66	59.48
13:47		7.27	143	9.14	0.77	7.14	67	59.48
13:50		7.33	143	9.15	0.73	7.10	67	59.48
13:53		7.42	144	9.15	0.70	7.07	68	59.48

Suggested range for 3 consec. readings or more Permit/State requirements:    pH: ±0.2    Conductance: ±10%    Temp: ±0.5°C    Turbidity: ±10% ≤ 5    D.O.: ±0.2    Stabilize

**FIELD DATA**

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 DATE (MM DD YY)	pH (std)	CONDUCTANCE (µmhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Time Units
031113	7.42	144	9.15	0.70	7.07	68	1353

**FIELD COMMENTS**

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):  
 MS/MSD taken

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

SCS Engineers

Date: 3.11.13    Name: Matt O'Hare    Signature: [Signature]    Company: \_\_\_\_\_

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

# FIELD INFORMATION FORM



Site Name: Olympic View Sanitary Landfill

**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: WW-412  
Sample ID

**PURGE INFO**

PURGE DATE (MM DD YY)	PURGE TIME (24HR Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOL PURGED
<u>03/11/13</u>	<u>12:24</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 μ or \_\_\_\_\_ μ (circle or fill in)

Filter Type: \_\_\_\_\_

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

Sampling Device: \_\_\_\_\_

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) 27.20 (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 reviewed 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>12:24</u>								
<u>12:29</u>	<u>400</u>	<u>6.29</u>	<u>472</u>	<u>11.66</u>	<u>14.7</u>	<u>3.75</u>	<u>-1</u>	<u>27.20</u>
<u>12:32</u>		<u>6.34</u>	<u>497</u>	<u>11.65</u>	<u>7.7</u>	<u>1.94</u>	<u>-34</u>	<u>27.25</u>
<u>12:35</u>		<u>6.39</u>	<u>500</u>	<u>11.75</u>	<u>5.49</u>	<u>1.35</u>	<u>-49</u>	<u>27.28</u>
<u>12:38</u>		<u>6.59</u>	<u>498</u>	<u>11.77</u>	<u>4.82</u>	<u>1.26</u>	<u>-51</u>	<u>27.30</u>
<u>12:41</u>		<u>6.41</u>	<u>499</u>	<u>11.76</u>	<u>4.73</u>	<u>1.14</u>	<u>-57</u>	<u>27.32</u>
<u>12:44</u>		<u>6.40</u>	<u>501</u>	<u>11.77</u>	<u>4.12</u>	<u>1.09</u>	<u>-60</u>	<u>27.30</u>

Suggested range for 3 consec. readings or one Permit/State requirement:      ±0.2      ±10%      ±0.5°C      ±10% ≤ 5      ±0.2      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: Time Units
<u>03/11/13</u>	<u>6.40</u>	<u>501</u>	<u>11.77</u>	<u>4.12</u>	<u>1.09</u>	<u>-60</u>	<u>12:44</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/State).

**FIELD COMMENTS**

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):

3, 11, 13      Matt O'Hare      MHO      SCS Engineers

\_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_

Date      Name      Signature      Company

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

# FIELD INFORMATION FORM



Site Name: Olympic View Sanitary Landfill

**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.: 0311113 Sample Point: 10516  
Sample ID: 10516

**PURGE INFO**

PURGE DATE (MM DD YY)	PURGE TIME (24HR Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOL PURGED
0311113	10516				

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

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

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

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

**WELL DATA**

Well Elevation (at TOC)  (ft/msl) Depth to Water (DTW) (from TOC) 124.15 (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)
10:56	1"							24.15
10:59	450	5.90	46	7.94	56.4	4.66	106	
11:05	1	5.80	43	7.93	1.03	4.39	171	24.18
11:08	1	5.82	42	7.94	1.57	4.24	174	
11:11	1	5.82	43	7.93	1.38	4.16	174	24.18
11:14	1	5.82	43	7.94	7.61	4.09	177	
11:17	1	5.80	42	7.94	4.27	4.04	120	24.20
:								
:								
:								

*Suggested range for 3 consec. readings or once Permit/State requirements:*

- pH: +/- 0.2
- Conductance: +/- 10%
- Temp: +/- 0.5°C
- Turbidity: +/- 10% ≤ 5
- D.O.: +/- 0.2

**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: Time Units
031113	5.80	42	7.94	4.27	4.04	120	1117

*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):

Dup taken

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

3, 11, 13 Mike O'Hara [Signature] SCS Engineers

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

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

# FIELD INFORMATION FORM



Site Name: Olympic View Sanitary Landfill

Site No.:      Sample Point: MW-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): 03/11/13 PURGE TIME (24HR Hr Clock): 1456 ELAPSED HRS (hrs:min):     

WATER VOL IN CASING (Gallons):      ACTUAL VOL PURGED (Gallons):      WELL VOL PURGED (ft):     

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

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

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

WELL DATA

Well Elevation (at TOC)      (ft/msl) Depth to Water (DTW) (from TOC) 45.78 (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/Site. 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>1456</u>	<u>1"</u>	<u>7.25</u>	<u>146</u>	<u>9.22</u>	<u>6.34</u>	<u>7.09</u>	<u>92</u>
	<u>15:05</u>	<u>450</u>	<u>7.22</u>	<u>145</u>	<u>9.23</u>	<u>5.91</u>	<u>6.90</u>	<u>93</u>	<u>45.80</u>
	<u>15:07</u>	<u>1</u>	<u>7.21</u>	<u>145</u>	<u>9.21</u>	<u>4.70</u>	<u>6.82</u>	<u>95</u>	<u>45.80</u>
	<u>15:10</u>	<u>1</u>	<u>7.20</u>	<u>145</u>	<u>9.21</u>	<u>4.34</u>	<u>6.75</u>	<u>95</u>	<u>45.80</u>
	<u>15:13</u>	<u>1</u>	<u>7.16</u>	<u>145</u>	<u>9.21</u>	<u>3.82</u>	<u>6.66</u>	<u>96</u>	<u>45.80</u>
	<u>15:16</u>	<u>1</u>	<u>7.18</u>	<u>145</u>	<u>9.22</u>	<u>3.88</u>	<u>6.65</u>	<u>98</u>	<u>45.80</u>

*Suggested range for 3 consec. readings or more Permit/State requirements: pH: ±0.2, Conductance: ±10%, Temp: ±0.5°C, Turbidity: ±10% ≤ 5, D.O.: ±0.2, 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: Time
	<u>03/11/13</u>	<u>7.18</u>	<u>145</u>	<u>9.22</u>	<u>3.88</u>	<u>6.65</u>	<u>98</u>	<u>1516</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**

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

3/11/13 Date      Name      Signature      Company SCS Engineers

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

# FIELD INFORMATION FORM



Site Name: Olympic View Sanitary Landfill  
 Site No.:       
 Sample Point: MW-13AEC  
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): 031113  
 PURGE TIME (2400 Hr Clock): 11125  
 ELAPSED HRS (hrs:min):       
 WATER VOL IN CASING (Gallons):       
 ACTUAL VOL PURGED (Gallons):       
 WELL VOL PURGED:     

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vol 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:  **LY** or  **N**

Purging Device:  **C** (A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump) or  **E** (D-Bulkier, E-Piston Pump, F-Dipper/Bottle)

Sampling Device:  **C** or  **X-Other**:     

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

Filter Type:  **A** (A-In-line Disposable, B-Pressure, C-PVC, D-Polypropylene) or  **X-Other**:     

Sample Tube Type:     

**WELL DATA**

Well Elevation (at TOC)      (ft/msl)  
 Depth to Water (DTW) (from TOC) 40.77 (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)
11:30	1"	6.87	191	11.49	71000	1.15	278.4	
11:40	2"	6.56	193	12.09	75.61	0.25	206.0	40.77
11:45	3"	6.56	194	12.13	62.05	0.19	201.2	
11:50	4"	6.56	195	12.15	71.01	0.17	198.2	40.77
11:55		6.55	194	12.20	138.2	0.15	196.7	
12:00		6.55	194	12.22	117.3	0.15	196.2	40.77
12:05		6.55	195	12.28	273.3	0.15	194.6	
12:15		6.55	194	12.37	704.2	0.11	195.0	40.77
12:25		6.55	194	12.37	71000	0.11	198.2	40.77
12:50		6.57	194	11.76	172.96	0.27	214.7	

Suggested range for 3 consec. readings or more Permit/State requirements: pH ±0.2, Conductance ±10%, Temp. ±0.5°C, Turbidity ±10% ≤ 5, D.O. ±0.2. 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**

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 DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Time
031113	6.53	191.6	11.79	45.33	0.20	211.5	1315

Sample Appearance:      Odor:      Color:      Other:     

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

**Specific Comments (Including purge/well volume calculations if required):** Battery Change for MP-15

9 1300 6.53 194 11.85 41.83 0.16 213.7

6 1310 6.53 195 11.95 41.98 0.15 209.2

50 1315 6.53 196 11.79 45.33 0.20 211.5

360

Dup 2 taken here CO2 tank change

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

3.11.13 Wayne Chang Wayne Chang SCS Engineers

Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: Olympic View Sanitary Landfill  
 Site No.:  
 Sample Point: MW-341A  
 Sample ID:

**This Waste Management Field Information Form is Required**  
 This form is to be completed, in addition to any State Forms. This Field Form is submitted along with the Chain of Custody Forms that accompany the sample container(s) (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 (24HR Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLS PURGED
	03/11/13	11:42:00				

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.

Purging and Sampling Equipment ... Dedicated:  Y or  N  
 Purging Device:  C A-Submersible Pump D-Bailer  
 B-Peristaltic Pump E-Piston Pump  
 C-QED Bladder Pump F-Dipper/Bottle  
 X-Other: \_\_\_\_\_  
 Sampling Device: \_\_\_\_\_  
 X-Other: \_\_\_\_\_  
 Filter Device:  Y or  N 0.45 µ or \_\_\_\_\_ µ (rettle or fill in)  
 Filter Type:  A  
 B-Pressure X-Other: \_\_\_\_\_  
 A-Teflon C-PVC X-Other: \_\_\_\_\_  
 B-Stainless Steel D-Polypropylene  
 Sample Tube Type: \_\_\_\_\_

Well Elevation (at TOC) \_\_\_\_\_ (ft/msl)      Depth to Water (DTW) (from TOC) 38.95 (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)
	11:42:00	1"	5.91	9.7	11.30	1.19	5.35	364.3	
	11:42:25	2"	6.01	10.8	11.45		4.75	374.5	38.95
	11:43:00	3"	6.00	10.7	11.45	1.65	4.80	381.2	
	11:43:25	4"	5.99	10.7	11.46		4.81	387.5	
	:								
	:								
	:								
	:								
	:								
	:								
	:								
	:								

Suggested range for 3 consec. readings or one Permit/State requirements:  
 pH: +/- 0.2      Conductance: +/- 10%      Temp: +/- 0.5 °C      Turbidity: +/- 10% ≤ 5      D.O.: +/- 0.2      eH/ORP: 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: Time
	03/11/13	5.99	10.7	11.46	1.65	4.81	387.5	11:43:25

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):  
 9  
 6  
 28  
 300  
 DTW 38.70  
 MW-34B

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
 Date: 3/11/13 Name: Wayne Chang Signature: Wayne Chang Company: SCS Engineers

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

# FIELD INFORMATION FORM



Site Name: Olympic View Sanitary Landfill

**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.: 031113 Sample Point: WW-36A  
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>031113</u>	<u>1520</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 Device	Filter Device	Filter Type
	<u>C</u> A-Submersible Pump <u>C</u> B-Peristaltic Pump C-QED Bladder Pump X-Other: _____	<u>Y</u> or <u>N</u> <u>A</u> B-Pressure C-Vacuum X-Other: _____	<u>A</u> A-In-line Disposable B-Pressure C-PVC D-Polypropylene X-Other: _____

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

WELL DATA	Well Elevation (at TOC)	Depth to Water (DTW) (from TOC)	Groundwater Elevation (site datum, from TOC)	Total Well Depth (from TOC)	Stick Up (from ground elevation)	Casing ID	Casing Material
	<u>31050</u> (ft)	<u>31050</u> (ft)					

*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>15:20</u>	<u>1"</u>	<u>5.75</u>	<u>95</u>	<u>9.31</u>	<u>4.47</u>	<u>1.70</u>	<u>420.1</u>
	<u>15:25</u>	<u>2"</u>	<u>5.74</u>	<u>100</u>	<u>9.30</u>		<u>2.65</u>	<u>418.5</u>	
	<u>15:30</u>	<u>3"</u>	<u>6.03</u>	<u>101</u>	<u>9.30</u>	<u>7.31</u>	<u>1.95</u>	<u>408.6</u>	<u>31.05</u>
	<u>15:34</u>	<u>4"</u>	<u>6.09</u>	<u>101</u>	<u>9.30</u>	<u>6.62</u>	<u>1.85</u>	<u>406.2</u>	
	<u>15:37</u>		<u>6.12</u>	<u>101</u>	<u>9.31</u>	<u>39.6</u>	<u>1.73</u>	<u>404.5</u>	<u>31.07</u>
	<u>15:40</u>		<u>6.12</u>	<u>100</u>	<u>9.29</u>	<u>4.54</u>	<u>1.73</u>	<u>404.3</u>	

Suggested range for 3 consec. readings or more Permit/State requirements: pH +/- 0.2, Conductance +/- 10%, Temp +/- 0.5 °C, Turbidity +/- 10% ≤ 5, D.O. +/- 0.2. 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.

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>031113</u>	<u>6.12</u>	<u>100</u>	<u>9.29</u>	<u>4.54</u>	<u>1.73</u>	<u>404.3</u>	<u>311.07</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/State).

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

Specific Comments (including purge/well volume calculations if required):  
9  
6  
25  
300  
DTW 3058  
WW-36

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



# FIELD INFORMATION FORM



Site Name: Olympic View Sanitary Landfill

**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-4  
Sample ID

**PURGE INFO**

<u>031313</u>	<u>1100</u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
PURGE DATE (MM DD YY)	PURGE TIME (24HR Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOL PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vol 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:  A-Submersible Pump    D-Bailer  
 B-Peristaltic Pump            E-Piston Pump  
 C-QED Bladder Pump            F-Dipper/Bottle

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

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

Sample Tube Type:

**WELL DATA**

Well Elevation (at TOC)      (ft/mls)    Depth to Water (DTW) (from TOC) 1312 (ft)

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

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>11:00</u>	<u>1"</u>	<u>6.55</u>	<u>60</u>	<u>9.17</u>	<u>1.02</u>	<u>4.87</u>	<u>343.1</u>	<u>    </u>
<u>11:05</u>	<u>2"</u>	<u>6.48</u>	<u>97</u>	<u>9.26</u>	<u>    </u>	<u>0.28</u>	<u>323.4</u>	<u>    </u>
<u>11:10</u>	<u>3"</u>	<u>6.53</u>	<u>100</u>	<u>9.25</u>	<u>2.87</u>	<u>0.16</u>	<u>322.4</u>	<u>1327</u>
<u>11:15</u>	<u>4"</u>	<u>6.55</u>	<u>101</u>	<u>9.27</u>	<u>    </u>	<u>0.12</u>	<u>324.7</u>	<u>    </u>
<u>11:20</u>	<u>    </u>	<u>6.55</u>	<u>101</u>	<u>9.27</u>	<u>1.53</u>	<u>0.11</u>	<u>325.9</u>	<u>1320</u>
<u>11:25</u>	<u>    </u>	<u>6.55</u>	<u>101</u>	<u>9.27</u>	<u>    </u>	<u>0.07</u>	<u>328.3</u>	<u>    </u>
<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>

Suggested range for 3 consec. readings or use Permit/State requirements:    ±0.2    ±10%    ±0.5°C    ±10% ≤ 5    ±0.2    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: Time
<u>031313</u>	<u>6.55</u>	<u>1107</u>	<u>9.27</u>	<u>1.53</u>	<u>0.07</u>	<u>328.3</u>	<u>1125</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/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):

8

7

20

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

3/13/13                    SCS Engineers

Date    Name    Signature    Company

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

# FIELD INFORMATION FORM



Site Name: Olympic View Sanitary Landfill

**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. in the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

Site No.: [ ] [ ] [ ] [ ] [ ] [ ]  
 Sample Point: 140-135  
 Sample ID: [ ] [ ] [ ] [ ] [ ] [ ]

**PURGE INFO**

PURGE DATE (MM DD YY): 03/13/13  
 PURGE TIME (24Hr Hr Clock): 09:44  
 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" or "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 [ ] [ ] 45 µ or [ ] [ ] µ (circle or fill in)  
 Purging Device:  A-Submersible Pump  D-Bailer  
 Filter Type:  A-In-line Disposable  C-Vacuum  
 B-Peristaltic Pump  E-Piston Pump  B-Pressure  X-Other \_\_\_\_\_  
 Sampling Device:  C-QED Bladder Pump  F-Dipper/Bottle  
 A-Teflon  C-PVC  X-Other: \_\_\_\_\_  
 X-Other: \_\_\_\_\_ Sample Tube Type:  B-Stainless Steel  D-Polypropylene

**WELL DATA**

Well Elevation (at TOC) [ ] [ ] [ ] [ ] (ft/msl)      Depth to Water (DTW) (from TOC) 71.65 (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)
09:44	400	6.50	132	10.00	2.29	7.50	156	71.65
09:54		6.74	131	9.82	2.06	7.49	142	71.65
09:59		6.94	131	9.75	2.47	7.29	132	71.65
10:04		7.06	132	9.75	2.05	7.34	131	71.65
:								
:								
:								
:								
:								
:								
:								
:								
:								
:								
:								
:								

Suggested range for 3 consec. readings or more Permit/State requirements:  
 pH: ± 0.2      Conductance: ± 10%      Temp: ± 0.5°C      Turbidity: ± 10% ≤ 5      D.O.: ± 0.2      eH/ORP: 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): 03/13/13  
 pH (std): 7.06  
 CONDUCTANCE (µmhos/cm @ 25°C): 132  
 TEMP. (°C): 9.75  
 TURBIDITY (ntu): 2.05  
 DO (mg/L-ppm): 7.34  
 eH/ORP (mV): 131  
 Other: \_\_\_\_\_ Time: 1004

*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):

SCS Engineers

Date: 3/13/13      Name: Matt Ottare      Signature: [Signature]      Company: \_\_\_\_\_

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

# FIELD INFORMATION FORM



Site Name: Olympic View Sanitary Landfill

**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-32  
Sample ID

**PURGE INFO**  
 PURGE DATE (MM DD YY): 03/13/13 PURGE TIME (2400 Hr Clock): 09:30  
 ELAPSED HRS (hrs:min):          WATER VOL IN CASING (Gallons):          ACTUAL VOL PURGED (Gallons):          WELL VOL 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  
C B-Peristaltic Pump E-Piston Pump  
 Sampling Device: C C-QED Bladder Pump F-Dipper/Bottle  
 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 \_\_\_\_\_  
 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) 125 (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)
09:35	1"	6.53	203	11.57		1.18	247.2	1.30
09:40	2"	6.77	200	11.76		0.64	207.8	1.30
09:45	3"	6.84	200	11.79		0.44	195.7	1.30
09:50	4"	6.86	200	11.83		0.32	187.0	1.30
09:55		6.86	200	11.84		0.23	182.8	1.30
10:00		6.86	200	11.85		0.21	180.8	1.30
:								
:								
:								
:								
:								
:								
:								
:								
:								
:								
:								
:								
:								

*Suggested range for 3 consec. readings or see Permit/State requirements: pH +/- 0.2, Conductance +/- 10%, Temp +/- 0.5°C, Turbidity +/- 10% ≤ 5, D.O. +/- 0.2. 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): 03/13/13 pH (std): 6.86 CONDUCTANCE (µmhos/cm @ 25°C): 200 TEMP. (°C): 11.85 TURBIDITY (ntu):          DO (mg/L-ppm): 0.21 eH/ORP (mV): 180.8 Other: Time 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  
 Specific Comments (including purge/well volume calculations if required): \_\_\_\_\_

**FIELD COMMENTS**  
8  
7  
10  
240

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
 Date: 3/13/13 Name: Matt Koffare Signature: [Signature] Company: SCS Engineers

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

# FIELD INFORMATION FORM



Site Name: Olympic View Sanitary Landfill  
 Site No.: \_\_\_\_\_  
 Sample Point: INF  
 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): 031113  
 PURGE TIME (2400 Hr Clock): \_\_\_\_\_  
 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: E A-Submersible Pump D-Bailer  
 Sampling Device: E B-Peristaltic Pump E Piston Pump  
 X-Other: \_\_\_\_\_  
 Filter Device:  Y or  N | 0.45 μ or \_\_\_\_\_ μ (circle or fill in)  
 Filter Type: \_\_\_\_\_ 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) \_\_\_\_\_ (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 Site/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>10:45</u>	1 <sup>st</sup>	<u>6.97</u>	<u>3004</u>	<u>9.72</u>	<u>40.17</u>	<u>8.54</u>	<u>2474</u>	
	2 <sup>nd</sup>							
	3 <sup>rd</sup>							
	4 <sup>th</sup>							

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 (umhos/cm @25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: <u>TIME</u>
<u>031113</u>	<u>6.97</u>	<u>3004</u>	<u>9.72</u>	<u>40.17</u>	<u>8.54</u>	<u>2474</u>	<u>TIME</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: light brown clear Odor: leachate inf Color: light brown 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): Grab sample from leachate influent pump

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

## SCS ENGINEERS

June 11, 2013  
File No. 04204027.16

**Subject: Second Quarter June 2013 Ground Water Sampling  
Olympic View Sanitary Landfill, Port Orchard, Washington**

---

Sampling Event Dates: 6/3/13 through 6/7/13

Personell: Matt O'Hare

Notes/Sampling Decoding:

- Dedicated pumps were used for purging and sampling all wells.
- Duplicate samples were taken at MW-34C (DUP 1) and MW-32 (DUP 2).
- The LP-LCD sample point was sampled on 6/7/13 by SCS Engineers. Field parameter readings were taken prior to sampling.
- The samples were sent to TestAmerica Denver for analysis same day.

Sample Date	Location ID	Comments
6/3/13	MW-15R	
6/3/13	MW-34A	
6/3/13	MW-34C	DUP -1 Taken
6/4/13	MW-36A	
6/4/13	MW-2B1	
6/4/13	MW-23A	
6/4/13	MW-16	
6/4/13	MW-32	DUP-2 Taken
6/5/13	MW-13B	
6/5/13	MW-13A	
6/5/13	MW-20	
6/5/13	MW-42	
6/5/13	MW-29A	
6/5/13	MW-43	
6/6/13	MW-33A	
6/6/13	MW-33C	
6/6/13	MW-35	
6/6/13	MW-39	
6/6/13	MW-19C	
6/7/13	LP-LCD	
6/7/13	MW-4	
6/7/13	MW-24	



**SCS ENGINEERS**

Olympic View Sanitary Landfill

Well	Date	Time	DTW	Measured by (initials)	Comments	Last Quarter DTW
MW-1			68.87			69.04
MW-10			<del>100</del> 4.30			NM
MW-11			4.21			4.25
MW-12			44.01			NM
MW-13			28.33			28.94
MW-13A			46.00			46.34
MW-13B			59.44			60.30
MW-14			TBC			47.38
MW-15R			18.75			18.72
MW-16			57.43			57.65
MW-17			30.53			NM
MW-18			60.97			NM
MW-19A			32.40			32.58
MW-19B			<del>33</del> 45			32.62
MW-19C			33.62			33.80
MW-19D			32.84			32.73
MW-20			35.69			35.91
MW-21			5.12			5.35
MW-23A			10.44			NM
MW-23B			12.05			12.41
MW-23C			12.20			12.92
MW-24			31.47			21.74
MW-26			10.81			NM
MW-27			21.15			21.74
MW-28			5.58			NM
MW-29A			13.80			13.35
MW-29B			17.40			17.12
MW-29C			11.70			11.73

SCS ENGINEERS						
				OVSL		
	Date	Time	DTW	Measured by (initials)	Comments	Page 2 of 2 Last Quarter DTW
MW-2A1			7.75			9.12
MW-2B1			6.66			6.72
MW-30A			24.15			24.00
MW-30B			24.00			23.88
MW-31			3.00			NM
MW-32			1.54			1.50
MW-33A			5.60			5.62
MW-33B			2.96			2.13
MW-33C			2.42			2.17
MW-34A			39.47			39.5
MW-34B			39.20			39.41
MW-34C			41.28			41.21
MW-35			71.78			72.07
MW-36			31.08			31.14
MW-36A			31.03			31.00
MW-37			4.67			NM
MW-38			4.43			3.67
MW-39			20.38			21.34
MW-4			14.75			14.95
MW-40A			15.71			15.51
MW-40B			15.63			15.44
MW-40C			15.99			15.84
MW-41A			24.10			24.18
MW-41B			24.50			24.64
MW-41C			26.06			26.16
MW-42			27.82			27.85
MW-43			25.00			25.16
MW-5			2.46			2.57
MW-9			2.96			NM



**GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM**

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	6/3/13					
Time	0830					
Weather (sky or precip, temp)	Sun					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	1000, 10, 0.01 800, 100, 20, <0.1	
Pre-Cal Reading	430	3.96	6.83			
Post Cal Reading	445	4.01	7.00	8.5	990, 9.85, 0.03	
Discrepancy						
Calib. Successful?	yes					
Calibration by	[Signature]					
Instrument Type, ID	(MP20) YSI 556			MicoTPW / HACH2000		
Calibration Location	OUSA					

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

## GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	6/4/13					
Time	0800					
Weather (sky or precip, temp)	Sun					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	442	4.06	6.98			
Post Cal Reading	445	4.01	7.00	8.50	983, 10.1, 0.0	
Discrepancy						
Calib. Successful?	yes					
Calibration by	mo					
Instrument Type, ID	MP20 / YSI 556			MicoTPW / HACH2000		
Calibration Location	OVS					

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

**GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM**

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	6/5/13					
Time	0800					
Weather (sky or precip, temp)	Sun					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	441	3.96	7.01			
Post Cal Reading	445	4.01	7.00	8.5	991, 10.9, 0.00	
Discrepancy	<del>Yes</del>					
Calib. Successful?	yes					
Calibration by	mo					
Instrument Type, ID	MP20 / YSI 556			MicoTPW / HACH2000		
Calibration Location	Ovsl					

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

**GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM**

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	6/6/13					
Time	0815					
Weather (sky or precip, temp)	Sun					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	440	3.99	6.95			
Post Cal Reading	445	4.01	7.00	8rs	989, 10.7, 0.0	
Discrepancy	_____					
Calib. Successful?	yes					
Calibration by	MNO					
Instrument Type, ID	MP20 / YSI 556			MicoTPW / HACH2000		
Calibration Location	OUSA					

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

**GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM**

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	6/7/13					
Time	0800					
Weather (sky or precip, temp)	Sun					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	442	4.02	7.01			
Post Cal Reading	445	4.01	7.00	8.5	973, 10, 8, etc	
Discrepancy						
Calib. Successful?	yes					
Calibration by	[Signature]					
Instrument Type, ID	MP20 / YSI 556			MicoTPW / HACH2000		
Calibration Location	[Signature]					

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



# FIELD INFORMATION FORM



Site Name: DUSE  
 Site No.:       
 Sample Point: MU-1SR  
 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: 06/03/13 PURGE TIME: 13:05 ELAPSED HRS:       
 WATER VOL IN CASING:      ACTUAL VOL PURGED:      WELL VOLs PURGED:       
(MM DD YY) (2400 Hr Clock) (hrs:min) (Gallons) (Gallons) (ft)  
 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: A A-Submersible Pump D-Bailer  
 Sampling Device: A B-Peristaltic Pump E-Piston Pump  
 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       
 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): 18.75 (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 Site/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)
13:10	300	6.54	183	10.58	3.49	1.21	-50	18.75
13:13	↓	6.58	180	10.65	3.29	1.45	-65	18.75
13:16	↓	6.64	177	10.60	4.16	1.18	-77	18.75
13:19	↓	6.65	177	10.65	3.52	0.98	-89	18.75
13:22	↓	6.68	177	10.67	3.12	0.72	-92	18.75
13:25	↓	6.69	177	10.63	3.00	0.81	-94	18.75
:								
:								
:								
:								

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): 06/03/13 pH (std): 6.69 CONDUCTANCE ( $\mu$ mhos/cm @ 25°C): 177 TEMP. (°C): 10.63 TURBIDITY (ntu): 300 DO (mg/L-ppm): 0.81 eH/ORP (mV): -94 Other: Time  
 Units: 1325  
 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):  
6.3.13 Matt O'Hare            
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: Case  
 Site No.:       
 Sample Point: 6W-34A  
 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): 060313  
 PURGE TIME (2400 Hr Clock): 11:47  
 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: A A-Submersible Pump D-Bailer  
 Sampling Device: A 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) 39.47 (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 Site/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)
11:52	400	6.27	124	11.84	7.25	5.44	82	39.48
11:55	1	6.21	125	11.90	4.51	5.34	79	39.48
11:58	1	6.17	125	11.93	4.22	5.31	78	39.48
12:01	1	6.15	125	11.98	3.97	5.31	75	39.48
12:04	1	6.15	125	11.92	3.99	5.27	74	39.48
12:07	1	6.12	125	11.96	3.26	5.23	73	39.48
:								
:								
:								
:								

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): 060313  
 pH (std): 6.12  
 CONDUCTANCE (umhos/cm @ 25°C): 125  
 TEMP. (°C): 11.96  
 TURBIDITY (ntu): 3.26  
 DO (mg/L-ppm): 5.23  
 eH/ORP (mV): 73  
 Other: June  
 Units: 1207

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):  
6.3.13 Matt Outner Alta ses  
 Date Name Signature Company

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



# FIELD INFORMATION FORM



Site Name: Case  
 Site No.:       
 Sample Point: NV-34C  
 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: 060313 PURGE TIME: 10:12 ELAPSED HRS:       
 WATER VOL IN CASING:      ACTUAL VOL PURGED:      WELL VOLS PURGED:       
 (MM DD YY) (2400 Hr Clock) (hrs:min) (Gallons) (Gallons)

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: A A-Submersible Pump D-Bailer  
 B-Peristaltic Pump E-Piston Pump  
 Sampling Device: A C-QED Bladder Pump F-Dipper/Bottle  
 X-Other:       
 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/msl) Depth to Water (DTW) (from TOC): 4128 (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 Site/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)
10:17	400	6.18	241	18.42	32.08	2.01	-17	4128
10:20	↓	6.32	235	12.51	26.43	1.39	-39	4129
10:23	↓	6.44	233	12.41	22.53	1.11	-52	4129
10:26	↓	6.50	234	12.42	20.96	0.95	-59	4129
10:29	↓	6.55	234	12.44	15.26	0.79	-66	4129
10:32	↓	6.58	234	12.45	12.23	0.69	-68	4129
10:35	↓	6.60	234	12.45	12.46	0.61	-71	4129
:								
:								
:								

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): 060313 pH (std): 6.60 CONDUCTANCE ( $\mu$ mhos/cm @ 25°C): 234 TEMP. (°C): 12.45 TURBIDITY (ntu): 12.46 DO (mg/L-ppm): 0.61 eH/ORP (mV): -71 Other: Time  
 Units: 1035  
 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):  
Dup 1 taken

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
6.3.13                 
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: DVSL  
 Site No.:       
 Sample Point: AW-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: 06/04/13 PURGE TIME: 08:45 ELAPSED HRS: 00:05  
 WATER VOL IN CASING:      ACTUAL VOL PURGED:      WELL VOLS PURGED:       
 (MM DD YY) (2400 Hr Clock) (hrs:min) (Gallons) (Gallons) (ft/msl)

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: A A-Submersible Pump D-Bailer  
 B-Peristaltic Pump E-Piston Pump  
 Sampling Device: A C-QED Bladder Pump F-Dipper/Bottle  
 X-Other:       
 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): 31.00 (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 Site/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)
08:50	300	5.90	126	9.44	7.48	6.20	48	31.00
08:53	1	6.08	123	9.40	6.50	5.77	33	31.00
08:56	1	6.13	123	9.58	5.74	5.29	28	31.00
08:59	1	6.13	123	9.40	5.63	5.25	27	31.00
09:02	1	6.20	122	9.37	5.29	5.29	26	31.00
09:05	1	6.16	121	9.37	4.97	5.25	26	31.00
:								
:								
:								
:								

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): 06/04/13 pH (std): 6.16 CONDUCTANCE (umhos/cm @ 25°C): 121 TEMP. (°C): 9.37 TURBIDITY (ntu): 4.97 DO (mg/L-ppm): 5.25 eH/ORP (mV): 26 Other: Final  
 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 WMI protocols (if more than one sampler, all should sign):  
6.4.13 Matt O'Hara [Signature] [Signature]  
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: DUKE  
Site No.:    Sample Point: WW-2B11  
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: 060413 PURGE TIME: 0938 ELAPSED HRS:    WATER VOL IN CASING:    ACTUAL VOL PURGED:    WELL VOLS PURGED:     
(MM DD YY) (2400 Hr Clock) (hrs:min) (Gallons) (Gallons)  
*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: (C) or (N) Filter Device: (C) or (N) 0.45 μ or    μ (circle or fill in)  
Purging Device: (A) A-Submersible Pump D-Bailer Filter Type: (A) A-In-line Disposable C-Vacuum  
                  (A) B-Peristaltic Pump E-Piston Pump B-Pressure X-Other:     
Sampling Device: (A) C-QED Bladder Pump F-Dipper/Bottle A-Teflon C-PVC X-Other:     
X-Other:    Sample Tube Type:    B-Stainless Steel D-Polypropylene

**WELL DATA**  
Well Elevation (at TOC):    (ft/msl) Depth to Water (DTW) (from TOC): 666 (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 Site/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)
09:43	300	6.33	231	13.74	547.3	0.63	-14	6.69
09:48		6.38	230	13.66	108.6	0.68	-36	6.71
09:53		6.39	230	13.68	33.12	0.39	-48	6.74
09:58		6.40	229	13.71	17.10	0.20	-62	6.79
10:03		6.40	229	13.81	12.04	0.17	-65	6.81
10:08		6.40	230	13.85	11.34	0.13	-73	6.90
:								
:								
:								
:								
:								

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)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: <u>  </u>
060413	6.40	230	13.85	11.34	0.13	-73	Units: <u>1008</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):**  
High Turbidity during purge  
    
    
    
  

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
6.4.13 Matt O'Hare        
Date Name Signature Company

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

# FIELD INFORMATION FORM



Site Name: QVSL  
 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: 06/04/13 PURGE TIME: 10:48 ELAPSED HRS:       
 WATER VOL IN CASING:      ACTUAL VOL PURGED:      WELL VOLs PURGED:       
(MM DD YY) (2400 Hr Clock) (hrs:min) (Gallons) (Gallons) (ft)  
 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: (D) or N  
 Purging Device: A A-Submersible Pump D-Bailer  
 Sampling Device: A B-Peristaltic Pump E-Piston Pump  
 C-QED Bladder Pump F-Dipper/Bottle  
 Filter Device: (D) or N 0.45  $\mu$  or       $\mu$  (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): 117.6 (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 Site/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)
10:50	350	6.27	136	13.81	37.4	0.20	40	11.89
10:55		6.38	137	14.00	20.77	0.16	7	11.80
11:00		6.41	137	13.94	21.37	0.13	-17	11.80
11:05		6.41	137	13.96	21.15	0.12	-25	11.80

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): 06/04/13 pH (std): 6.41 CONDUCTANCE (umhos/cm @ 25°C): 137 TEMP. (°C): 13.96 TURBIDITY (ntu): 21.15 DO (mg/L-ppm): 0.12 eH/ORP (mV): -25 Other: Final  
 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):  
6.4.13 Matt O'Hare            
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: OVSL  
 Site No.:       
 Sample Point: MW-116  
 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): 060413  
 PURGE TIME (2400 Hr Clock): 1202  
 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:  or  N  
 Purging Device:  A-Submersible Pump  D-Bailer  
 Sampling Device:  B-Peristaltic Pump  E-Piston Pump  
 Filter Device:  Y or  N 0.45 μ or      μ (circle or fill in)  
 Filter Type:  A In-line Disposable  C-Vacuum  
 X-Other:      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) 567.5 (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 Site/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)
12:07	300	6.44	106	9.72	7.94	5.98	43	56.75
12:10	1	6.46	105	9.61	6.33	5.71	37	56.75
12:13	1	6.47	103	9.54	5.92	5.66	40	56.75
12:16	1	6.47	103	9.46	5.33	5.54	42	56.75
12:19	1	6.46	103	9.47	4.87	5.54	42	56.75
12:22	1	6.45	103	9.47	3.98	5.53	43	56.75
:								
:								
:								
:								

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): 060413 pH (std): 6.45 CONDUCTANCE (umhos/cm @ 25°C): 103 TEMP. (°C): 9.47 TURBIDITY (ntu): 3.93 DO (mg/L-ppm): 5.53 eH/ORP (mV): 43 Other: 1222 Units:       
 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):  
6.4.13 Matt Outine MSFW SES  
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name:         
 Site No.:         
 Sample Point: AW-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: 06/04/13 PURGE TIME: 13:44 ELAPSED HRS:         
 WATER VOL IN CASING:        ACTUAL VOL PURGED:        WELL VOLS PURGED:         
 (MM DD YY) (2400 Hr Clock) (hrs:min) (Gallons) (Gallons)

*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:  A A-Submersible Pump D-Bailer  
 Sampling Device:  A 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): 190 (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 Site/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)
13:49	250	6.57	218	12.76	4.83	3.64	-54	1.92
13:52		6.76	220	12.57	3.91	1.98	-75	1.85
13:55		6.80	219	12.57	3.72	2.00	-85	1.97
13:58		6.84	219	12.51	3.86	1.82	-97	2.03
14:01		6.87	220	12.56	2.99	1.85	-103	2.05
14:04		6.86	220	12.59	3.40	1.90	-105	2.09
:								
:								
:								
:								

*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): 06/04/13 pH (std): 6.86 CONDUCTANCE (umhos/cm @ 25°C): 220 TEMP. (°C): 12.59 TURBIDITY (ntu): 3.40 DO (mg/L-ppm): 1.90 eH/ORP (mV): -105 Other: 1404  
 Units: \_\_\_\_\_

**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 - 2 taken

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
6.4.13 Matt O'Hare WMA SES  
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: 025C  
 Site No.:       
 Sample Point: MW-13R  
 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: 060513 PURGE TIME: 14:35 ELAPSED HRS:       
 WATER VOL IN CASING:      ACTUAL VOL PURGED:      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:  A-Submersible Pump  D-Bailer  
 Sampling Device:  A-B-Peristaltic Pump  E-Piston Pump  
 X-Other:       
 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       
 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): 59.49 (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 Site/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)
14:40	300	7.32	144	17.26	6.11	7.02	24	53.49
14:43	1	7.20	144	17.79	5.32	6.54	27	53.49
14:46	1	7.16	144	17.46	4.17	6.35	15	53.49
14:49	1	7.24	145	17.37	4.27	6.35	7	53.49
14:52	1	7.25	145	17.40	3.96	6.35	6	53.49
14:53	1	7.27	144	17.41	3.32	6.36	6	53.49
:								
:								
:								
:								

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: 060513 pH (std): 7.27 CONDUCTANCE ( $\mu$ mhos/cm @ 25°C): 144 TEMP. (°C): 17.41 TURBIDITY (ntu): 3.32 DO (mg/L-ppm): 6.36 eH/ORP (mV): 6 Other: Flu  
 Units: 1453

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):  
6.5.13 Matt O'Hara WM SCS  
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: CVSE  
 Site No.:       
 Sample Point: MW-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: 060513 PURGE TIME: 13:58 ELAPSED HRS:       
 WATER VOL IN CASING:      ACTUAL VOL PURGED:      WELL VOLS PURGED:       
(MM DD YY) (2400 Hr Clock) (hrs:min) (Gallons) (Gallons) (ft)  
 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:  or  N | 0.45 μ or      μ (circle or fill in)  
 Purging Device:  A | A-Submersible Pump | D-Bailer | Filter Type:  A | A-In-line Disposable | C-Vacuum  
 Sampling Device:  A | 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): 46.00 (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 Site/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)
14:03	3.00	7.29	146	12.55	7.27	6.68	8	46.00
14:06	1	7.30	146	12.7	5.11	6.43	3	46.00
14:09	1	7.32	147	12.07	4.73	6.38	3	46.00
14:12	1	7.33	147	11.85	4.63	6.38	4	46.00
14:15	1	7.33	147	11.93	4.81	6.28	4	46.00
14:18	1	7.33	147	11.96	4.00	6.19	4	46.00
:								
:								
:								
:								

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): 060513 pH (std): 7.33 CONDUCTANCE (umhos/cm @ 25°C): 147 TEMP. (°C): 11.96 TURBIDITY (ntu): 4.00 DO (mg/L-ppm): 6.19 eH/ORP (mV): 4 Other: The  
 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):  
0.5.13 Matthew            
 Date Name Signature Company



# FIELD INFORMATION FORM



Site Name: 098  
 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): 060513  
 PURGE TIME (2400 Hr Clock): 1245  
 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:  or  N  
 Purging Device: A A-Submersible Pump D-Bailer  
 Sampling Device: A B-Peristaltic Pump E-Piston Pump  
 C-QED Bladder Pump F-Dipper/Bottle  
 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) 3569 (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 Site/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)
12:50	400 1 <sup>st</sup>	6.66	315	15.66	7.71	3.98	39	35.69
12:53	1 2 <sup>nd</sup>	6.65	315	15.64	6.10	3.66	36	35.69
12:56	1 3 <sup>rd</sup>	6.63	315	15.70	5.90	3.41	36	35.69
12:59	1 4 <sup>th</sup>	6.61	314	15.76	4.25	3.21	35	35.69
1:30Z	1	6.61	303	15.82	4.69	3.09	33	35.69
1:30S	1	6.60	313	15.77	4.87	3.11	33	35.69

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): 060513  
 pH (std): 6.60  
 CONDUCTANCE (umhos/cm @ 25°C): 313  
 TEMP. (°C): 15.77  
 TURBIDITY (ntu): 4.87  
 DO (mg/L-ppm): 3.11  
 eH/ORP (mV): 33  
 Other: 1305  
**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):  
6.5.13 Matt@Hve      ses  
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: 06S  
 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: 06/05/13 PURGE TIME: 11:21 ELAPSED HRS:       
 WATER VOL IN CASING:      ACTUAL VOL PURGED:      WELL VOLS PURGED:       
(MM DD YY) (2400 Hr Clock) (hrs:min) (Gallons) (Gallons) (ft/msl)  
 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: A A-Submersible Pump D-Bailer  
 B-Peristaltic Pump E-Piston Pump  
 Sampling Device: A C-QED Bladder Pump F-Dipper/Bottle  
 X-Other:      Sample Tube Type:       
 Filter Type: A 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): 27.82 (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 Site/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)
11:26	1 <sup>st</sup>	6.36	490	12.42	44.84	0.79	-24	27.82
11:29	2 <sup>nd</sup>	6.42	493	12.36	23.79	0.50	-26	27.82
11:32	3 <sup>rd</sup>	6.45	499	12.39	21.45	0.43	-37	27.82
11:35	4 <sup>th</sup>	6.46	502	12.22	9.75	0.40	-40	27.82
11:38		6.47	499	12.19	9.19	0.40	-40	27.82
11:41		6.47	501	12.22	9.38	0.39	-29	27.82
:								
:								
:								
:								

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): 06/05/13 pH (std): 6.47 CONDUCTANCE ( $\mu$ mhos/cm @ 25°C): 501 TEMP. (°C): 12.22 TURBIDITY (ntu): 9.38 DO (mg/L-ppm): 0.39 eH/ORP (mV): -29 Other: 1141  
 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):  
6.5.13 Matt O'Hare MAA SES  
 Date Name Signature Company  
 DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client. PINK - Field Copy

# FIELD INFORMATION FORM



Site Name: OUSe  
 Site No.:       
 Sample Point: MU-22A  
 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): 060513  
 PURGE TIME (2400 Hr Clock): 10:21  
 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:  or  N  
 Filter Device:  or  N 0.45 μ or      μ (circle or fill in)  
 Purging Device:  A A-Submersible Pump D-Bailer  
 B-Peristaltic Pump E-Piston Pump  
 Sampling Device:  C-QED Bladder Pump F-Dipper/Bottle  
 X-Other:       
 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) 1380 (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 Site/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)
10:26	250 1 <sup>st</sup>	6.00	74	9.39	37.78	2.80	45	1382
10:29	↓ 2 <sup>nd</sup>	6.04	77	9.32	18.19	2.29	33	1382
10:32	↓ 3 <sup>rd</sup>	6.08	79	9.26	12.18	1.74	25	1382
10:35	↓ 4 <sup>th</sup>	6.11	80	9.21	9.08	1.57	21	1382
10:38	↓	6.12	80	9.18	8.54	1.36	16	1382
10:41	↓	6.12	81	9.19	8.23	1.20	12	1382
10:44	↓	6.12	81	9.20	8.61	1.13	10	1382
:								
:								
:								

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): 060513  
 pH (std): 6.12  
 CONDUCTANCE (umhos/cm @ 25°C): 81  
 TEMP. (°C): 9.20  
 TURBIDITY (ntu): 8.61  
 DO (mg/L-ppm): 1.13  
 eH/ORP (mV): 10  
 Other: 1044  
 Units:     

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):  
6.5.13 Math O'Hare            
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: 06S13  
 Site No.:       
 Sample Point: W-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: 060513 PURGE TIME: 0900 ELAPSED HRS:       
 WATER VOL IN CASING:      ACTUAL VOL PURGED:      WELL VOLS PURGED:       
(MM DD YY) (2400 Hr Clock) (hrs:min) (Gallons) (Gallons) (ft/msl)  
 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:  A-Submersible Pump  D-Bailer  
 Filter Type:  A-In-line Disposable  C-Vacuum  
 B-Peristaltic Pump  E-Piston Pump  B-Pressure  X-Other  
 Sampling Device:  C-QED Bladder Pump  F-Dipper/Bottle  
 A-Teflon  C-PVC  X-Other  
 X-Other:      Sample Tube Type:       
 B-Stainless Steel  D-Polypropylene

**WELL DATA**  
 Well Elevation (at TOC):      (ft/msl) Depth to Water (DTW) (from TOC): 2500 (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 Site/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)
09:20	300	5.22	44	9.60	213.7	0.97	162	2503
09:25	↓	5.45	43	9.45	77.99	0.78	145	2502
09:30	↓	5.54	42	9.39	67.97	0.78	130	2509
09:35	↓	5.62	42	9.50	21.41	0.77	107	2511
09:40		5.62	42	9.50	18.47	0.77	98	2515
09:43		5.65	42	9.41	13.23	0.78	96	2518
09:48		5.67	42	9.37	13.98	0.77	96	
:								
:								
:								

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): 060513 pH (std): 5.67 CONDUCTANCE (umhos/cm @ 25°C): 42 TEMP. (°C): 9.37 TURBIDITY (ntu): 13.98 DO (mg/L-ppm): 0.77 eH/ORP (mV): 96 Other: Flu  
 Units: 0948  
**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):**  
Extended purge due to high turbidity

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign)  
0.5.13 M. H. O'Hara Alper SES  
 Date:      Name:      Signature:      Company:

# FIELD INFORMATION FORM



Site Name: ORSC  
 Site No.:       
 Sample Point: 4W-33A  
 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): 06/06/13  
 PURGE TIME (2400 Hr Clock): 10:40  
 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: A (A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle)  
 Sampling Device: A  
 Filter Device: Y or N (0.45 μ or      μ (circle or fill in))  
 Filter Type: A (A-In-line Disposable, B-Pressure, C-Vacuum, X-Other)  
 Sample Tube Type:      (A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other)

**WELL DATA**  
 Well Elevation (at TOC):      (ft/msl)  
 Depth to Water (DTW) (from TOC): 560 (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 Site/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)
10:45	300	6.08	119	9.12	74.78	0.78	62	560
10:50	1	6.36	119	9.15	26.26	0.47	36	560
10:55		6.50	119	9.20	8.05	0.45	32	560
<del>11:00</del>	<del>1058</del>	<del>6.59</del>	<del>119</del>	<del>9.16</del>	<del>5.31</del>	<del>0.45</del>	<del>32</del>	<del>560</del>
<del>11:05</del>	<del>1101V</del>	<del>6.61</del>	<del>119</del>	<del>9.20</del>	<del>4.02</del>	<del>0.46</del>	<del>32</del>	<del>560</del>

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): 06/06/13  
 pH (std): 6.61  
 CONDUCTANCE (umhos/cm @ 25°C): 119  
 TEMP. (°C): 9.20  
 TURBIDITY (ntu): 4.02  
 DO (mg/L-ppm): 0.46  
 eH/ORP (mV): 32  
 Other: 1101 Units

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):  
6.6.13 Mark O'Hare W. Fee SES  
 Date Name Signature Company

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

# FIELD INFORMATION FORM



Site Name: Case  
 Site No.:       
 Sample Point: MW-330  
 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: 06/06/13 (MM DD YY)  
 PURGE TIME: 11:15 (2400 Hr Clock)  
 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:  A A-Submersible Pump D-Bailer  
 Sampling Device:  A 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): 242 (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 Site/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)
11:20	1 <sup>st</sup>	6.31	136	9.63	13.91	1.55	53	2.45
11:23	2 <sup>nd</sup>	6.62	135	9.63	10.10	0.50	-41	2.45
11:26	3 <sup>rd</sup>	6.71	135	9.66	6.61	0.41	-53	2.45
11:29	4 <sup>th</sup>	6.86	134	9.59	5.44	0.30	-86	2.45
11:32		7.01	135	9.58	4.70	0.24	-106	2.45
11:35		7.02	134	9.56	4.80	0.21	-119	2.45

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): 06/06/13 pH (std): 7.02 CONDUCTANCE (µmhos/cm @ 25°C): 134 TEMP. (°C): 9.56 TURBIDITY (ntu): 4.80 DO (mg/L-ppm): 0.21 eH/ORP (mV): -119 Other: Final  
 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):  
6.6.13 Matt O'Hare MTHA SES  
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: OVSC  
 Site No.:       
 Sample Point: 4V-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**  
 PURGE DATE (MM DD YY): 06/06/13  
 PURGE TIME (2400 Hr Clock): 17:49  
 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:  A    A-Submersible Pump    D-Bailer  
 Filter Type:  A    A-In-line Disposable    C-Vacuum  
 B-Peristaltic Pump    E-Piston Pump    B-Pressure    X-Other  
 Sampling Device:  A    C-QED Bladder Pump    F-Dipper/Bottle  
 A-Teflon    C-PVC    X-Other:  
 X-Other:         Sample Tube Type:         B-Stainless Steel    D-Polypropylene

**WELL DATA**  
 Well Elevation (at TOC)      (ft/msl)    Depth to Water (DTW) (from TOC) 71.78 (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 Site/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)
12:54	350	7.30	133	10.94	4.96	6.84	-1	71.78
12:57	↓	7.31	133	10.79	4.53	6.73	2	71.78
13:00	↓	7.33	133	10.82	3.86	6.66	3	71.78
13:03	↓	7.38	133	10.84	4.02	6.60	7	71.78
13:06	↓	7.39	133	10.78	3.92	6.59	7	71.78
13:09	↓	7.37	133	10.83	4.54	6.59	7	71.78
:								
:								
:								
:								

*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): 06/06/13    pH (std): 7.37    CONDUCTANCE (umhos/cm @ 25°C): 133    TEMP. (°C): 10.83    TURBIDITY (ntu): 4.54    DO (mg/L-ppm): 6.59    eH/ORP (mV): 7    Other: Thd  
 Units: 1309

**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):  
6.6.13    Matt O'Hara                  
 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: 060613 PURGE TIME: 13:57 ELAPSED HRS:       
 WATER VOL IN CASING:      ACTUAL VOL PURGED:      WELL VOLS PURGED:       
(MM DD YY) (2400 Hr Clock) (hrs:min) (Gallons) (Gallons)  
 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:  or  N  
 Filter Device:  Y or  N 0.45 µ or      µ (circle or fill in)  
 Purging Device:  A A-Submersible Pump D-Bailer  
 Filter Type:  A A-In-line Disposable C-Vacuum  
 Sampling Device:  A B-Peristaltic Pump E-Piston Pump  
 B-Pressure X-Other       
 C-QED Bladder Pump F-Dipper/Bottle  
 A-Teflon C-PVC X-Other:       
 X-Other:      Sample Tube Type:      B-Stainless Steel D-Polypropylene

**WELL DATA**  
 Well Elevation (at TOC)      (ft/msl) Depth to Water (DTW) (from TOC) 2038 (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 Site/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)
14:02	400	6.38	215	11.53	17.86	1.52	-40	20.40
14:05		6.31	211	11.42	18.65	0.99	-45	20.40
14:08		6.30	212	11.39	16.67	0.75	-49	20.40
14:11		6.31	215	11.46	17.33	0.58	-55	20.40
14:14		6.31	215	11.51	16.98	0.59	-55	20.40
14:17		6.31	215	11.54	16.47	0.56	-58	20.40
:								
:								
:								
:								

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

**FIELD DATA**  
 SAMPLE DATE (MM DD YY): 060613 pH (std): 6.31 CONDUCTANCE (µmhos/cm @ 25°C): 215 TEMP. (°C): 11.54 TURBIDITY (ntu): 16.47 DO (mg/L-ppm): 0.56 eH/ORP (mV): -58 Other: 1417 Units  
 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):  
6.6.13 Matt O'Hara M. J. Miller SES  
 Date Name Signature Company



# FIELD INFORMATION FORM



Site Name: 9W5C  
 Site No.:       
 Sample Point: mw-19C  
 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): 060613 PURGE TIME (2400 Hr Clock): 1451 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: A A-Submersible Pump D-Bailer  
 Sampling Device: A 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:       
 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) 3362 (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 Site/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)
14:56	300	6.45	131	11.20	7.69	0.85	36	33.63
14:59	1	6.67	132	11.10	5.00	0.46	10	33.65
15:02	1	6.70	132	11.11	4.96	0.28	-1	33.65
15:05	1	6.77	132	11.18	4.98	0.22	-10	33.68
15:08	1	6.81	132	11.17	3.77	0.20	-18	33.68
15:11	1	6.80	132	11.17	4.78	0.20	-19	33.68

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): 060613 pH (std): 6.80 CONDUCTANCE ( $\mu$ mhos/cm @ 25°C): 132 TEMP. (°C): 11.17 TURBIDITY (ntu): 4.78 DO (mg/L-ppm): 0.20 eH/ORP (mV): -19 Other: 1511  
 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):  
6.6.13 Matthew WKA SES  
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: 0VSL  
 Site No.:       
 Sample Point: LP-LCD  
 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: 06/07/13 PURGE TIME: 08:45 ELAPSED HRS:       
 WATER VOL IN CASING:      ACTUAL VOL PURGED:      WELL VOLS PURGED:       
 (MM DD YY) (2400 Hr Clock) (hrs:min) (Gallons) (Gallons)

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:      A-Submersible Pump D-Bailer  
 B-Peristaltic Pump E-Piston Pump  
 Sampling Device:      C-QED Bladder Pump F-Dipper/Bottle  
 X-Other: probe  
 Filter Device:  Y or  N | 0.45 μ | or      μ (circle or fill in)  
 Filter Type:      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):      (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 Site/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)
<u>08:45</u>	<u>1<sup>st</sup></u>	<u>6.83</u>	<u>31500</u>	<u>17.47</u>	<u>4396</u>	<u>6.77</u>	<u>82</u>	<u>    </u>
	<u>2<sup>nd</sup></u>							
	<u>3<sup>rd</sup></u>							
	<u>4<sup>th</sup></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): 06/07/13 pH (std): 6.83 CONDUCTANCE (umhos/cm @ 25°C): 31500 TEMP. (°C): 17.47 TURBIDITY (ntu): 4396 DO (mg/L-ppm): 6.77 eH/ORP (mV): 82 Other:       
 Units:      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):  
6.7.13 Matt O'Hare M. Hill SES  
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: OVSL  
 Site No.:       
 Sample Point: NW-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: 06/07/13 PURGE TIME: 09:05 ELAPSED HRS:       
 WATER VOL IN CASING:      ACTUAL VOL PURGED:      WELL VOLS PURGED:       
(MM DD YY) (2400 Hr Clock) (hrs:min) (Gallons) (Gallons)  
 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:  A A-Submersible Pump D-Bailer  
 Sampling Device:  A 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): 147.5 (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 Site/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)
09:10	350 1 <sup>st</sup>	7.26 1 <sup>st</sup>	120	9.88	5.66	1.49	30	146.75
09:03	1 2 <sup>nd</sup>	7.20 2 <sup>nd</sup>	119	9.73	4.83	0.73	15	146.75
09:16	1 3 <sup>rd</sup>	7.12 3 <sup>rd</sup>	119	9.60	4.63	0.35	0	147.75
09:19	1 4 <sup>th</sup>	7.05 4 <sup>th</sup>	119	9.59	4.72	0.25	-7	147.75
09:22	1	7.03	119	9.55	3.68	0.24	-9	147.75
09:25	1	7.02	119	9.54	4.18	0.24	-12	147.75
:								
:								
:								
:								

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: 06/07/13 pH: 7.02 CONDUCTANCE: 119 TEMP.: 9.54 TURBIDITY: 4.18 DO: 0.24 eH/ORP: -12 Other: Final  
(MM DD YY) (std) (umhos/cm @ 25°C) (°C) (ntu) (mg/L-ppm) (mV) Units  
 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):  
6.7.13 Matt O'Hare M. O'Hare SES  
 Date Name Signature Company  
 DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client. PINK - Field Copy

# FIELD INFORMATION FORM



Site Name: OVSC  
 Site No.:       
 Sample Point: MM-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: 060713 PURGE TIME: 0953 ELAPSED HRS:       
 WATER VOL IN CASING:      ACTUAL VOL PURGED:      WELL VOLS PURGED:       
(MM DD YY) (2400 Hr Clock) (hrs:min) (Gallons) (Gallons) (ft/msl)  
 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: A A-Submersible Pump D-Bailer  
 Sampling Device: A 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/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 Site/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>09:58</u>	<u>1st</u>	<u>6.55</u>	<u>116</u>	<u>12.21</u>	<u>1539</u>	<u>0.39</u>	<u>13</u>
	<u>10:03</u>	<u>350</u>	<u>6.55</u>	<u>116</u>	<u>12.21</u>	<u>2064</u>	<u>0.39</u>	<u>13</u>	<u>31.51</u>
	<u>10:06</u>	<u>J</u>	<u>6.53</u>	<u>117</u>	<u>12.28</u>	<u>1393</u>	<u>0.38</u>	<u>8</u>	<u>31.50</u>
	<u>10:09</u>	<u>J</u>	<u>6.53</u>	<u>116</u>	<u>12.29</u>	<u>8062</u>	<u>0.38</u>	<u>6</u>	<u>31.50</u>
	<u>10:12</u>	<u>J</u>	<u>6.52</u>	<u>116</u>	<u>12.29</u>	<u>503</u>	<u>0.37</u>	<u>6</u>	<u>31.50</u>
	<u>10:15</u>	<u>J</u>	<u>6.52</u>	<u>117</u>	<u>12.29</u>	<u>471</u>	<u>0.37</u>	<u>4</u>	<u>31.50</u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </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): 060713 pH (std): 6.52 CONDUCTANCE (umhos/cm @ 25°C): 117 TEMP. (°C): 12.29 TURBIDITY (ntu): 471 DO (mg/L-ppm): 0.37 eH/ORP (mV): 14 Other: 4th  
 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):  
Extended Purge due to high turbidity

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
6.7.13 Matt O'Hare WPM ses  
 Date Name Signature Company

## SCS ENGINEERS

November 5, 2013  
File No. 04204027.17

**Subject: Third Quarter September 2013 Ground Water Sampling  
Olympic View Sanitary Landfill, Port Orchard, Washington**

---

Sampling Event Dates: 9/3/13 through 9/5/13  
Personell: Matt O'Hare and Andrew McDonald  
Notes/Sampling Decoding:

- Dedicated pumps were used for purging and sampling all wells.
- MW-13A and -13B were dry.
- MW-29A was sampled erroneously. The lab was notified and the sample was not analyzed.
- Duplicate samples were taken at MW-34C (DUP 1) and MW-32 (DUP 2).
- Additional wells were monitored for water level elevations. A water level elevation form is included with the field sheets.
- The samples were sent to TestAmerica Denver for analysis at the close of each sampling day.

Sample Date	Location ID	Comments
9/3/13	MW-43	DUP -1 Taken
9/3/13	MW-42	
9/3/13	MW-34C	DUP -2 Taken
9/3/13	MW-15R	
9/4/13	MW-33C	
9/4/13	MW-19C	
9/4/13	MW-20	MS/MSD taken
9/4/13	MW-34A	
9/4/13	MW-36A	
9/4/13	MW-2B1	
9/4/13	MW-23A	
9/4/13	MW-24	
9/5/13	MW-32	
9/5/13	MW-4	
9/5/13	MW-16	
9/5/13	MW-39	
9/5/13	MW-35	
9/5/13	MW-29A	



3Q13

**SCS ENGINEERS**

Olympic View Sanitary Landfill

Page 1 of 2

Well	Date	Time	DTW	Measured by (initials)	Comments	Last Quarter DTW
MW-1	-	-	-	-	Lost	69.04
MW-10			5:28	MD		NM
MW-11			Lost	MD/AM		4.25
MW-12			49.20			NM
MW-13			29.6			28.94
MW-13A			Dry			46.34
MW-13B			Dry			60.30
MW-14			NM		Lost	47.38
MW-15R			19.43			18.72
MW-16			59.41			57.65
MW-17			31.65			NM
MW-18			65.04			NM
MW-19A			33.85			32.58
MW-19B			35.9			32.62
MW-19C			-		Blockage, NM	33.80
MW-19D			NM			32.73
MW-20			36.80			35.91
MW-21			6.49			5.35
MW-23A			13.33			NM
MW-23B			14.00			12.41
MW-23C			14.53			12.92
MW-24			33.55			21.74
MW-26			-		Biohazard - Ants Not measured	NM
MW-27			23.35			21.74
MW-28			6.30			NM
MW-29A			15.8			13.35
MW-29B			18.50			17.12
MW-29C			13.28			11.73

SCS ENGINEERS						
			OVSL			Page 2 of 2
	Date	Time	DTW	Measured by (initials)	Comments	Last Quarter DTW
MW-2A1			10.28	MO/AM		9.12
MW-2B1			7.73			6.72
MW-30A			25.37			24.00
MW-30B			25.37			23.88
MW-31			3.80			NM
MW-32			2.14			1.50
MW-33A			6.44			5.62
MW-33B			3.19			2.13
MW-33C			3.20			2.17
MW-34A			40.51			39.5
MW-34B			40.61			39.41
MW-34C			42.30			41.21
MW-35			72.56			72.07
MW-36			31.99			31.14
MW-36A			31.95			31.00
MW-37			5.85			NM
MW-38			5.40			3.67
MW-39			22.35			21.34
MW-4			16.07			14.95
MW-40A			Dry			15.51
MW-40B			16.95			15.44
MW-40C			17.14			15.84
MW-41A			Dry			24.18
MW-41B			26.30			24.64
MW-41C			27.80			26.16
MW-42			29.50			27.85
MW-43			26.50	↓		25.16
MW-5	-	-	-	-	Lost	2.57
MW-9			3.60	MO/AM		NM



**GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM**

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	9/5/13					
Time	0845					
Weather (sky or precip, temp)	Rain					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	1000, 10, 0.2 <del>800, 100, 20, &lt;0.1</del>	
Pre-Cal Reading	441	4.07	6.99			
Post Cal Reading	445	4.01	7.00	8.46	990, 10.3, 00	
Discrepancy						
Calib. Successful?	yes					
Calibration by	mo					
Instrument Type, ID	MP20 / YSI 556			MicoTPW / HACH2000		
Calibration Location	OVSU					

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

## GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	9/5/13					
Time	0845					
Weather (sky or precip, temp)	Rain					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	<del>1000, 10, 0.2</del> 800, 100, 20, <0.1	
Pre-Cal Reading	449	4.10	7.10			
Post Cal Reading	445	4.01	7.00	8.49	<del>798</del> , 104, 20.1, 0.0	
Discrepancy						
Calib. Successful?	yes					
Calibration by	MO					
Instrument Type, ID	MP20 / YSI 556			MicoTPW / HACH2000		
Calibration Location	OUSL					

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

## GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	9/3/13					
Time	1000					
Weather (sky or precip, temp)	Rain					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	462	4.04	6.96			
Post Cal Reading	445	4.01	7.00	8.48 <del>7.48</del>	984, 9.8, 0.10	
Discrepancy						
Calib. Successful?	yes					
Calibration by	mo					
Instrument Type, ID	MP20 / YSI 556			MicoTPW / HACH2000		
Calibration Location	OVS L					

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

**GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM**

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	9/3/13					
Time	1000					
Weather (sky or precip, temp)	Rain					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	<del>1000, 10, 0.2</del> 800, 100, 20, <0.1	
Pre-Cal Reading	440	3.82	7.09			
Post Cal Reading	445	4.01	7.00	<del>7.00</del> 8.48	801, 99, 20.3 0.00	
Discrepancy						
Calib. Successful?	yes					
Calibration by	mo					
Instrument Type, ID	MP20 / <u>YSI 556</u>			<u>MicoTPW</u> / HACH2000		
Calibration Location	OVSU					

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

**GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM**

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	9/4/13					
Time	0830					
Weather (sky or precip, temp)	Rain					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	444	4.03	6.97			
Post Cal Reading	445	4.01	7.00	8.5	989, 10.1, 0.0	
Discrepancy						
Calib. Successful?	yes					
Calibration by	[Signature]					
Instrument Type, ID	MP20 / YSI 556			MicoTPW / HACH2000		
Calibration Location	DVSL					

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

**GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM**

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	9/4/13					
Time	0830					
Weather (sky or precip, temp)	Rain					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	<del>1000, 10, 0.2</del> 800, 100, 20, <0.1	
Pre-Cal Reading	450	4.02	7.01			
Post Cal Reading	445	4.01	7.00	8.46	<del>800, 100, 20, 0.2</del> 0.0	
Discrepancy						
Calib. Successful?	yes					
Calibration by	MO					
Instrument Type, ID	MP20 / YSI 556			MicoTPW / HACH2000		
Calibration Location	OVS					

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

# FIELD INFORMATION FORM



Site Name: OVSL  
 Site No.:      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: 090313 (MM DD YY)  
 PURGE TIME: 12:08 (2400 Hr Clock)  
 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: A A-Submersible Pump D-Bailer  
 Sampling Device: A B-Peristaltic Pump E-Piston Pump  
 X-Other: \_\_\_\_\_ C-QED Bladder Pump F-Dipper/Bottle  
 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) Blocked (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 Site/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)
<u>12:08</u>		<u>6.22</u>	<u>39</u>	<u>10.4</u>		<u>4.1</u>	<u>130</u>	
<u>12:13</u>	<u>530 ml</u>	<u>5.92</u>	<u>39</u>	<u>10.4</u>	<u>212</u>	<u>3.3</u>	<u>132</u>	
<u>12:16</u>	" "	<u>5.86</u>	<u>38</u>	<u>10.3</u>	<u>4.1</u>	<u>1.0</u>	<u>126</u>	
<u>12:19</u>		<u>5.84</u>	<u>39</u>	<u>10.4</u>	<u>3.1</u>	<u>0.9</u>	<u>125</u>	
<u>12:22</u>		<u>5.76</u>	<u>39</u>	<u>10.3</u>	<u>4.9</u>	<u>0.9</u>	<u>122</u>	
<u>12:25</u>		<u>5.70</u>	<u>39</u>	<u>10.4</u>	<u>2.9</u>	<u>0.9</u>	<u>121</u>	
<u>12:28</u>		<u>5.68</u>	<u>39</u>	<u>10.4</u>	<u>3.5</u>	<u>0.8</u>	<u>118</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): 090313  
 pH (std): 5.68  
 CONDUCTANCE ( $\mu$ mhos/cm @ 25°C): 39  
 TEMP. (°C): 10.4  
 TURBIDITY (ntu): 3.5  
 DO (mg/L-ppm): 0.8  
 eH/ORP (mV): 118  
 Other: Time  
 Units: 12:28

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**  
Dup taken as Dup - 1  
Stabilization Parameters - pH  $\pm$  0.2, Conductance  $\pm$  10%, Temp  $\pm$  0.5°C  
Turbidity  $\pm$  10% or < 5, DO  $\pm$  0.2, DTW - Stabilized

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
9, 3, 13 Mark Hattum AM SCS  
9, 3, 13 Andrew McDonald Andrew McDonald SCS  
Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: OVSL  
 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): 090313  
 PURGE TIME (2400 Hr Clock): 15:00  
 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: A A-Submersible Pump D-Bailer  
 Sampling Device: A 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) 29.50 (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 Site/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>15:05</u>	<u>750 ml/min</u>	<u>6.05</u>	<u>1</u>	<u>12.6</u>	<u>8.7</u>	<u>7.7</u>	<u>-5</u>	<u>29.5</u>
<del>15:08</del>	<del>    </del>	<del>    </del>	<del>    </del>	<del>    </del>	<del>    </del>	<del>    </del>	<del>    </del>	<del>    </del>
<u>15:11</u>	<u>    </u>	<u>6.32</u>	<u>2</u>	<u>12.1</u>	<u>7.2</u>	<u>6.4</u>	<u>-27</u>	<u>    </u>
<u>15:14</u>	<u>    </u>	<u>6.34</u>	<u>1</u>	<u>12.2</u>	<u>4.1</u>	<u>5.9</u>	<u>+30</u>	<u>    </u>
<u>15:17</u>	<u>    </u>	<u>6.35</u>	<u>2</u>	<u>12.1</u>	<u>2.6</u>	<u>5.9</u>	<u>+31</u>	<u>    </u>
<u>15:20</u>	<u>    </u>	<u>6.37</u>	<u>1</u>	<u>11.9</u>	<u>2.9</u>	<u>5.4</u>	<u>-32</u>	<u>    </u>
<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </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): 090313  
 pH (std): 6.37  
 CONDUCTANCE (umhos/cm @ 25°C): 1  
 TEMP. (°C): 11.9  
 TURBIDITY (ntu): 2.9  
 DO (mg/L-ppm): 5.4  
 eH/ORP (mV): -32  
 Other: Final Units: Final  
1520

**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):**  
See MW-43

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
9.3.13 Matthew O'Hare      SCS  
9.3.13 Andrew McDonald Andrew McDonald 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-34C  
 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): 090313  
 PURGE TIME (2400 Hr Clock): 1300  
 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: A A-Submersible Pump D-Bailer  
 Sampling Device: A 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) 4230 (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 Site/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>13:40</u>		<u>7.36</u>	<u>129</u>	<u>13.45</u>	<u>71000</u>	<u>0.7</u>	<u>-125</u>
	<u>13:50</u>		<u>7.36</u>	<u>129</u>	<u>13.50</u>	<u>632</u>	<u>0.6</u>	<u>-124</u>	<u>4230</u>
	<u>14:00</u>		<u>7.37</u>	<u>129</u>	<u>13.47</u>	<u>250</u>	<u>0.5</u>	<u>-102.9</u>	<u>4230</u>
	<u>14:10</u>		<u>7.37</u>	<u>129</u>	<u>13.45</u>	<u>135</u>	<u>0.5</u>	<u>-104.5</u>	<u>4250</u>
	<u>14:20</u>		<u>7.40</u>	<u>129</u>	<u>13.47</u>	<u>828</u>	<u>0.4</u>	<u>-108.8</u>	<u>4230</u>
	<u>14:30</u>		<u>7.40</u>	<u>129</u>	<u>13.48</u>	<u>640</u>	<u>0.4</u>	<u>-109.2</u>	<u>4230</u>
	<u>14:33</u>		<u>7.40</u>	<u>128</u>	<u>13.50</u>	<u>502</u>	<u>0.4</u>	<u>-110.1</u>	<u>4230</u>
	<u>14:36</u>		<u>7.40</u>	<u>128</u>	<u>13.50</u>	<u>499</u>	<u>0.4</u>	<u>-110.4</u>	<u>4230</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 W.M. 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): 090313  
 pH (std): 7.40  
 CONDUCTANCE (umhos/cm @ 25°C): 128  
 TEMP. (°C): 13.50  
 TURBIDITY (ntu): 499  
 DO (mg/L-ppm): 0.4  
 eH/ORP (mV): -110.4  
 Other: Units True 1436

**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):  
High turb. ref. base  
Duplicate taken as Dup-2  
See MW-43

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
9.3.13 Mark H. Hare      SCS  
9.3.13 Andrew McDonald Andrew McDonald SCS  
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: 090313  
 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) 090313, PURGE TIME (2400 Hr Clock) 12:18, ELAPSED HRS (hrs:min)     , WATER VOL IN CASING (Gallons) Yes, ACTUAL VOL PURGED (Gallons)     , WELL VOL 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:  A (A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle, X-Other). Sampling Device:  A. X-Other:     . Filter Type:  A (A-In-line Disposable, B-Pressure, C-Vacuum, X-Other). Sample Tube Type:  A (A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other).

WELL DATA: Well Elevation (at TOC) (ft/msl)     , Depth to Water (DTW) (from TOC) 1943 (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 Site/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)
12:23	400	6.63	93	10.85	3.86	1.2	-120.7	19.50
12:26		6.70	93	10.81	2.17	0.9	-119.2	19.56
12:29		6.51	92	10.93	2.87	0.8	-186.2	19.56
12:32		6.51	91	10.91	2.44	0.9	-188.2	19.56
12:35		6.50	91	10.93	1.56	0.9	-185.5	19.56
12:38		6.49	91	10.81	2.06	0.8	-181.1	19.56

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.

FIELD DATA: SAMPLE DATE (MM DD YY) 090313, pH (std) 6.49, CONDUCTANCE (umhos/cm @ 25°C) 91, TEMP. (°C) 10.81, TURBIDITY (ntu) 2.06, DO (mg/L - ppm) 0.8, eH/ORP (mV) -181.1, Other: Fmax Units: 1238.

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

Specific Comments (including purge/well volume calculations if required): See MW-43

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
9, 3, 13 Matt O'Hara MAH SCS  
9, 3, 13 Andrew McDonald Andrew McDonald SCS

# 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**  
 PURGE DATE (MM DD YY): 09/04/13  
 PURGE TIME (2400 Hr Clock): 15:08  
 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.*

**PURGESAMPLE EQUIPMENT**  
 Purging and Sampling Equipment... Dedicated:  Y or  N  
 Purging Device: A A-Submersible Pump D-Bailer  
 Sampling Device: A 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       
 A-Teflon C-PVC X-Other:       
 B-Stainless Steel D-Polypropylene

Sample Tube Type:     

**WELL DATA**  
 Well Elevation (at TOC):      (ftmsl)  
 Depth to Water (DTW) (from TOC): 32 (ft)  
 Groundwater Elevation (site datum, from TOC):      (ftmsl)  
 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 Site/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>15:08</u>	<u>400ml/min</u>	<u>6.84</u>	<u>129</u>	<u>10.7</u>	<u>13</u>	<u>1.4</u>	<u>21</u>
	<u>15:11</u>	<u>"</u>	<u>6.93</u>	<u>129</u>	<u>10.2</u>	<u>    </u>	<u>1.1</u>	<u>+13</u>	<u>32</u>
	<u>15:14</u>	<u>"</u>	<u>7.03</u>	<u>129</u>	<u>10.2</u>	<u>69</u>	<u>1.0</u>	<u>-37</u>	<u>"</u>
	<u>15:17</u>	<u>"</u>	<u>7.22</u>	<u>128</u>	<u>10.1</u>	<u>30</u>	<u>0.8</u>	<u>+55</u>	<u>"</u>
	<u>15:20</u>	<u>"</u>	<u>7.32</u>	<u>128</u>	<u>10.0</u>	<u>17</u>	<u>0.7</u>	<u>-70</u>	<u>"</u>
	<u>15:23</u>	<u>"</u>	<u>7.43</u>	<u>128</u>	<u>10.0</u>	<u>14</u>	<u>0.6</u>	<u>-80</u>	<u>"</u>
	<u>15:26</u>	<u>"</u>	<u>7.51</u>	<u>128</u>	<u>10.0</u>	<u>16</u>	<u>0.5</u>	<u>-86</u>	<u>"</u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </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

**FIELD DATA**  
 SAMPLE DATE (MM DD YY): 09/04/13  
 pH (std): 7.51  
 CONDUCTANCE ( $\mu$ mhos/cm @ 25°C): 128  
 TEMP. (°C): 10.0  
 TURBIDITY (ntu): 16  
 DO (mg/L-ppm): 0.5  
 eH/ORP (mV): -86  
 Other: X Units: Time  
15:26

*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):  
See MW-43

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
9.4.13 Matthew O'Hara MAH SES  
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: OVSL  
 Site No.:       
 Sample Point: MW-19C  
 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: 090413 (MM DD YY)  
 PURGE TIME: 11:25 (2400 Hr Clock)  
 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:  A (A-Submersible Pump) |  B (B-Peristaltic Pump) |  C (C-QED Bladder Pump) |  D (D-Bailer) |  E (E-Piston Pump) |  F (F-Dipper/Bottle)  
 Sampling Device:  A |  B (B-Pressure) |  C (C-PVC) |  D (D-Polypropylene) |  X (X-Other:     )  
 X-Other:      | Sample Tube Type:     

**WELL DATA**  
 Well Elevation (at TOC):      (ft/msl) | Depth to Water (DTW) (from TOC): Blocked (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 Site/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>11:30</u>	<u>400 ml/min</u>	<u>6.44</u>	<u>127</u>	<u>11.7</u>	<u>    </u>	<u>1.1</u>	<u>9.6</u>
	<u>11:33</u>		<u>6.43</u>	<u>128</u>	<u>11.1</u>	<u>1.4</u>	<u>0.3</u>	<u>35</u>	
	<u>11:36</u>		<u>6.50</u>	<u>129</u>	<u>11.1</u>	<u>0.8</u>	<u>0.2</u>	<u>23</u>	
	<u>11:39</u>		<u>6.56</u>	<u>128</u>	<u>11.1</u>	<u>1.0</u>	<u>0.2</u>	<u>1.7</u>	
	<u>11:42</u>		<u>6.64</u>	<u>128</u>	<u>11.2</u>	<u>1.4</u>	<u>0.2</u>	<u>6</u>	
	<u>11:45</u>		<u>6.67</u>	<u>128</u>	<u>11.2</u>	<u>1.7</u>	<u>0.2</u>	<u>4</u>	
	<u>    </u>		<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>    </u>		<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>    </u>		<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>    </u>		<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </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): 090413 | pH (std): 6.67 | CONDUCTANCE (umhos/cm @ 25°C): 128 | TEMP. (°C): 11.2 | TURBIDITY (ntu): 1.7 | DO (mg/L-ppm): 0.2 | eH/ORP (mV): 4 | Other: X Units: line

**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):  
See MW-43

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
9, 4, 13 | Math O'Hare |      | SCS  
9, 4, 13 | Andrew McDonald | Andrew McDonald | 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-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: 09/04/13
PURGE TIME: 09:25
ELAPSED HRS:
WATER VOL IN CASING:
ACTUAL VOL PURGED:
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
Filter Type: A
Sample Tube Type:

WELL DATA
Well Elevation (at TOC):
Depth to Water (DTW) (from TOC): 36.80 / 38.0
Groundwater Elevation (site datum, from TOC):
Total Well Depth (from TOC):
Stick Up (from ground elevation):
Casing ID:
Casing Material:

Table with 9 columns: Sample Time, Rate/Unit, pH, Conductance, Temp., Turbidity, D.O., eH/ORP, DTW. Rows show stabilization data from 09:30 to 09:45.

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.

FIELD DATA
SAMPLE DATE: 09/04/13
pH: 6.31
CONDUCTANCE: 263
TEMP.: 15.5
TURBIDITY: 0.3
DO: 0.2
eH/ORP: 129
Other: X
Units: Time 0945

Sample Appearance:
Weather Conditions:
Direction/Speed:
Outlook: Rain
Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):
MS/MSD taken
See MW-43

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):
9.4.13 Matt O'Hare
9.4.13 Andrew McDonald
Signature: Andrew McDonald
Company: SCS

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

# FIELD INFORMATION FORM



Site Name: OKSL  
 Site No.:       
 Sample Point: MW-34A  
 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): 09/04/13  
 PURGE TIME (2400 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: A A-Submersible Pump D-Bailer  
 Sampling Device: A 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:       
 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) 40.51 (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 Site/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>09:05</u>	<u>100</u>	<u>6.81</u>	<u>190</u>	<u>12.20</u>	<u>7.82</u>	<u>5.1</u>	<u>-96.2</u>
	<u>09:08</u>	<u>↓</u>	<u>6.72</u>	<u>135</u>	<u>12.13</u>	<u>4.17</u>	<u>5.4</u>	<u>-75.0</u>	<u>40.51</u>
	<u>09:11</u>	<u>↓</u>	<u>6.70</u>	<u>129</u>	<u>12.10</u>	<u>2.76</u>	<u>6.5</u>	<u>-63.0</u>	<u>40.51</u>
	<u>09:14</u>	<u>↓</u>	<u>6.69</u>	<u>130</u>	<u>12.11</u>	<u>0.99</u>	<u>6.8</u>	<u>-57.9</u>	<u>40.51</u>
	<u>09:17</u>	<u>↓</u>	<u>6.69</u>	<u>130</u>	<u>12.10</u>	<u>0.84</u>	<u>6.8</u>	<u>-55.4</u>	<u>40.51</u>
	<u>09:20</u>	<u>↓</u>	<u>6.69</u>	<u>130</u>	<u>12.09</u>	<u>0.84</u>	<u>6.8</u>	<u>-55.2</u>	<u>40.51</u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>

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): 09/04/13  
 pH (std): 6.69  
 CONDUCTANCE (umhos/cm @ 25°C): 130  
 TEMP. (°C): 12.09  
 TURBIDITY (ntu): 0.84  
 DO (mg/L-ppm): 6.8  
 eH/ORP (mV): -55.2  
 Other: 7.46  
 Units: 0920

*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): See MW-43

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
9.4.13 Matt O'Hare  
9.4.13 Andrew McDonald Andrew McDonald  
 Date Name Signature Company SCS  
SCS

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

# FIELD INFORMATION FORM



Site Name: QVSL

**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-36A  
 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>090413</u>	<u>09:52</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: <input checked="" type="checkbox"/> Y or <input type="checkbox"/> N	Filter Type: <u>A</u>	A-In-line Disposable	C-Vacuum
Purging Device: <u>A</u>	B-Submersible Pump	D-Bailer	B-Pressure
Sampling Device: <u>A</u>	B-Peristaltic Pump	E-Piston Pump	X-Other: _____
X-Other: _____	C-QED Bladder Pump	F-Dipper/Bottle	A-Teflon
			C-PVC
			X-Other: _____
			D-Polypropylene
			B-Stainless Steel
			Sample Tube Type: _____

**WELL DATA**

Well Elevation (at TOC) _____ (ft/msl)	Depth to Water (DTW) (from TOC) <u>3195</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 Site/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>09:57</u>	<u>350</u>	<u>6.63</u>	<u>110</u>	<u>964</u>	<u>300</u>	<u>30</u>	<u>-91.4</u>	<u>33.47</u>
<u>10:00</u>	<u> </u>	<u>6.63</u>	<u>110</u>	<u>964</u>	<u>503</u>	<u>28</u>	<u>-98.2</u>	<u>33.47</u>
<u>10:03</u>	<u>↓</u>	<u>6.63</u>	<u>109</u>	<u>962</u>	<u>371</u>	<u>26</u>	<u>-103.1</u>	<u>33.47</u>
<u>10:06</u>	<u>√</u>	<u>6.63</u>	<u>109</u>	<u>961</u>	<u>308</u>	<u>28</u>	<u>-103.1</u>	<u>33.47</u>
<u>10:09</u>		<u>6.62</u>	<u>108</u>	<u>960</u>	<u>151</u>	<u>28</u>	<u>-103.5</u>	<u>33.47</u>
<u>10:12</u>		<u>6.61</u>	<u>108</u>	<u>960</u>	<u>102</u>	<u>29</u>	<u>-100.7</u>	<u>33.47</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 (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units <u>True</u>
<u>090413</u>	<u>6.61</u>	<u>108</u>	<u>960</u>	<u>102</u>	<u>20.9</u>	<u>-100.7</u>	<u>1012</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**

See MW-43

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

<u>9.4.13</u>	<u>Matthew O'Hare</u>	<u>WHL</u>	<u>SCS</u>
<u>9.4.13</u>	<u>Andrew McDonald</u>	<u>Andrew McDonald</u>	<u>SCS</u>
Date	Name	Signature	Company

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

# FIELD INFORMATION FORM



Site Name: OUSL  
 Site No.:       
 Sample Point: MW-281  
 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): 090413  
 PURGE TIME (2400 Hr Clock): 1127  
 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: A A-Submersible Pump D-Bailer  
 Sampling Device: A B-Peristaltic Pump E-Piston Pump  
 X-Other:      C-QED Bladder Pump F-Dipper/Bottle  
 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) 773 (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 Site/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>11:32</u>	<u>200</u>	<u>7.88</u>	<u>231</u>	<u>14.52</u>	<u>1.38</u>	<u>1.2</u>	<u>-2305</u>
	<u>11:35</u>	<u>    </u>	<u>7.77</u>	<u>231</u>	<u>14.59</u>	<u>3.41</u>	<u>0.7</u>	<u>-2198</u>	<u>7.85</u>
	<u>11:38</u>	<u>    </u>	<u>7.82</u>	<u>226</u>	<u>14.62</u>	<u>2.29</u>	<u>0.5</u>	<u>-2163</u>	<u>7.80</u>
	<u>11:47</u>	<u>    </u>	<u>7.68</u>	<u>227</u>	<u>14.74</u>	<u>2.10</u>	<u>0.4</u>	<u>-2104</u>	<u>7.80</u>
	<u>11:44</u>	<u>    </u>	<u>7.68</u>	<u>228</u>	<u>14.83</u>	<u>2.18</u>	<u>0.3</u>	<u>-2010</u>	<u>7.80</u>
	<u>11:47</u>	<u>    </u>	<u>7.69</u>	<u>228</u>	<u>14.80</u>	<u>2.14</u>	<u>0.3</u>	<u>-2000</u>	<u>7.80</u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>

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): 090413 | pH (std): 7.69 | CONDUCTANCE (umhos/cm @ 25°C): 228 | TEMP. (°C): 14.80 | TURBIDITY (ntu): 2.14 | DO (mg/L-ppm): 0.3 | eH/ORP (mV): -2000 | Other: Flow Units: 1147

**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):  
See MW - 43

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
9.4.13 Matt O'Hare      SCS  
9.4.13 Andrew McDonald Andrew McDonald SCS

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



# FIELD INFORMATION FORM



Site Name: 093  
 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): 090413  
 PURGE TIME (2400 Hr Clock): 1232  
 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: A A-Submersible Pump D-Bailer  
 Sampling Device: A B-Peristaltic Pump E-Piston Pump  
 X-Other:      C-QED Bladder Pump F-Dipper/Bottle  
 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): 1333 (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 Site/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)
12:37	300	6.37	151	16.78	2.46	6.3	-135.5	13.33
12:40	1	6.38	153	17.52	1.86	5.4	-133.1	13.33
12:43	1	6.38	156	18.18	0.44	5.0	-125.0	13.33
12:46	1	6.38	158	18.19	1.07	4.3	-129.5	13.33
12:49	1	6.38	163	13.98	1.46	0.7	-124.3	13.33
12:52	1	6.40	164	13.92	0.00	0.4	-126.5	13.33
12:55	1	6.40	163	13.89	0.82	0.4	-125.7	13.33
12:58	1	6.40	162	13.89	0.00	0.4	-124.0	13.33

*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): 090413  
 pH (std): 6.40  
 CONDUCTANCE (µmhos/cm @ 25°C): 162  
 TEMP. (°C): 13.89  
 TURBIDITY (ntu): 0.00  
 DO (mg/L-ppm): 0.4  
 eH/ORP (mV): -124.0  
 Other: Temp Units:       
 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**  
See MW-43

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
9.4.13 Matt O'Hare MAD SCS  
9.4.13 Andrew McDonald Andrew McDonald 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-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): 090413  
 PURGE TIME (2400 Hr Clock): 12:35  
 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: A A-Submersible Pump D-Bailer  
 Sampling Device: A B-Peristaltic Pump E-Piston Pump  
 X-Other:      C-QED Bladder Pump F-Dipper/Bottle  
 Filter Device: A  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): 3355 (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 Site/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)
12:40	1 <sup>st</sup>	6.28	106	13.6		05	62	
12:43	300ml/min 2 <sup>nd</sup>	6.29	109	13.4		04	65	
12:46	" " 3 <sup>rd</sup>	6.29	108	13.3		04	65	3337
12:49	" " 4 <sup>th</sup>	6.28	108	13.2	8.6	0.4	66	" "
12:52	" "	6.27	108	13.2	68	0.4	68	" "
12:55	" "	6.27	108	13.2	64	0.4	69	" "
12:58	" "	6.27	109	13.3		0.4	69	" "

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): 090413      pH (std): 6.27      CONDUCTANCE (µmhos/cm @ 25°C): 109      TEMP. (°C): 13.3      TURBIDITY (ntu): 64      DO (mg/L-ppm): 04      eH/ORP (mV): 69      Other: X  
 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/Site).

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

**FIELD COMMENTS**  
 Specific Comments (including purge/well volume calculations if required):  
See MW-43

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
9.4.13      Matt O'Hare                SCS  
9.4.13      Andrew McDonald      Andrew McDonald      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-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): 09/05/13  
 PURGE TIME (2400 Hr Clock): 09:29  
 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: A A-Submersible Pump D-Bailer  
 Sampling Device: A 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/msl) Depth to Water (DTW) (from TOC): 214 (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 Site/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>09:34</u>	<u>400</u>	<u>6.29</u>	<u>278</u>	<u>12.76</u>	<u>1.44</u>	<u>10.8</u>	<u>133.4</u>
	<u>09:37</u>	<u>    </u>	<u>6.33</u>	<u>278</u>	<u>12.75</u>	<u>1.00</u>	<u>10.7</u>	<u>160.4</u>	<u>215</u>
	<u>09:40</u>	<u>    </u>	<u>6.44</u>	<u>278</u>	<u>12.75</u>	<u>1.00</u>	<u>10.6</u>	<u>159.4</u>	<u>215</u>
	<u>09:43</u>	<u>    </u>	<u>6.50</u>	<u>278</u>	<u>12.75</u>	<u>1.25</u>	<u>10.5</u>	<u>153.2</u>	<u>215</u>
	<u>09:46</u>	<u>    </u>	<u>6.51</u>	<u>278</u>	<u>12.74</u>	<u>1.29</u>	<u>10.4</u>	<u>149.1</u>	<u>215</u>
	<u>09:49</u>	<u>    </u>	<u>6.51</u>	<u>278</u>	<u>12.75</u>	<u>1.08</u>	<u>10.4</u>	<u>147.2</u>	<u>215</u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </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

**FIELD DATA**  
 SAMPLE DATE (MM DD YY): 09/05/13  
 pH (std): 6.51  
 CONDUCTANCE ( $\mu$ mhos/cm @ 25°C): 278  
 TEMP. (°C): 12.75  
 TURBIDITY (ntu): 0.88  
 DO (mg/L-ppm): 0.4  
 eH/ORP (mV): 47.2  
 Other: Final  
 Units: 0949

**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):  
See MW-43

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
9.5.13 Matthew O'Hara      SCS  
9.5.13 Andrew McDonald Andrew McDonald SCS  
 Date Name Signature Company

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

# FIELD INFORMATION FORM



Site Name: 005C  
 Site No.:      Sample Point: MW-41  
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: 09/05/13 PURGE TIME: 11:26 ELAPSED HRS:       
 WATER VOL IN CASING:      ACTUAL VOL PURGED:      WELL VOLS PURGED:       
(MM DD YY) (2400 Hr Clock) (hrs:min) (Gallons) (Gallons)

*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: A A-Submersible Pump D-Bailer  
 Sampling Device: A 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/msl) Depth to Water (DTW) (from TOC): 116.07 (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 Site/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>	<u>350</u> 1 <sup>st</sup>	<u>7.08</u> 1 <sup>st</sup>	<u>1115</u> 1 <sup>st</sup>	<u>9.64</u>	<u>9.12</u>	<u>10.4</u>	<u>-136.8</u>
	<u>11:34</u>	<u>Y</u> 2 <sup>nd</sup>	<u>7.42</u> 2 <sup>nd</sup>	<u>1114</u> 2 <sup>nd</sup>	<u>9.61</u>	<u>5.81</u>	<u>10.3</u>	<u>-159.3</u>	<u>116.07</u>
	<u>11:37</u>	<u>    </u> 3 <sup>rd</sup>	<u>7.35</u> 3 <sup>rd</sup>	<u>1114</u> 3 <sup>rd</sup>	<u>9.59</u>	<u>3.66</u>	<u>16.3</u>	<u>-159.8</u>	<u>116.07</u>
	<u>11:40</u>	<u>    </u> 4 <sup>th</sup>	<u>7.25</u> 4 <sup>th</sup>	<u>1114</u>	<u>9.59</u>	<u>3.84</u>	<u>10.3</u>	<u>-158.7</u>	<u>116.07</u>
	<u>11:43</u>	<u>    </u>	<u>7.24</u>	<u>1114</u>	<u>9.61</u>	<u>2.65</u>	<u>10.3</u>	<u>-160.5</u>	<u>116.07</u>
	<u>11:46</u>	<u>    </u>	<u>7.21</u>	<u>1114</u>	<u>9.60</u>	<u>1.89</u>	<u>10.3</u>	<u>-158.5</u>	<u>116.07</u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </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 ( $\mu$ mhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: <u>None</u> Units
	<u>09/05/13</u>	<u>7.21</u>	<u>1114</u>	<u>9.60</u>	<u>1.88</u>	<u>10.3</u>	<u>-159.5</u>	<u>1146</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).

**FIELD COMMENTS**  
 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): \_\_\_\_\_  
See MW-43

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
9.5.13 Matt O'Hare      SCS  
9.5.13 Andrew McDonald Andrew McDonald SCS  
Date Name Signature Company

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

# FIELD INFORMATION FORM



Site Name: 0VSC  
 Site No.:       
 Sample Point: MW-16  
 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): 09/05/13  
 PURGE TIME (2400 Hr Clock): 11:02:28  
 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: A A-Submersible Pump D-Bailer  
 B-Peristaltic Pump E-Piston Pump  
 Sampling Device:      C-QED Bladder Pump F-Dipper/Bottle  
 X-Other:       
 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/msl) Depth to Water (DTW) (from TOC): 59.41 (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 Site/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>11:03:33</u>	<u>350</u>	<u>6.61</u>	<u>110.9</u>	<u>9.42</u>	<u>15.42</u>	<u>1.04</u>	<u>-737.2</u>
	<u>11:03:36</u>	<u>    </u>	<u>6.62</u>	<u>110.9</u>	<u>9.40</u>	<u>2.85</u>	<u>1.02</u>	<u>-735.3</u>	<u>59.41</u>
	<u>11:03:39</u>	<u>    </u>	<u>6.63</u>	<u>111.0</u>	<u>9.39</u>	<u>3.46</u>	<u>1.98</u>	<u>-45.1</u>	<u>59.41</u>
	<u>11:04:2</u>	<u>    </u>	<u>6.62</u>	<u>110.9</u>	<u>9.40</u>	<u>2.45</u>	<u>1.99</u>	<u>-45.5</u>	<u>59.41</u>
	<u>11:04:5</u>	<u>    </u>	<u>6.62</u>	<u>111.0</u>	<u>9.36</u>	<u>3.02</u>	<u>1.99</u>	<u>-48.5</u>	<u>59.41</u>
	<u>11:04:8</u>	<u>    </u>	<u>6.62</u>	<u>111.0</u>	<u>9.36</u>	<u>2.47</u>	<u>1.00</u>	<u>-48.2</u>	<u>59.41</u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </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): 09/05/13  
 pH (std): 6.62  
 CONDUCTANCE ( $\mu$ mhos/cm @ 25°C): 110  
 TEMP. (°C): 9.36  
 TURBIDITY (ntu): 2.47  
 DO (mg/L-ppm): 1.00  
 eH/ORP (mV): -482  
 Other: True Units:       
 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).

**FIELD COMMENTS**  
 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):       
See MW-43

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
9.5.13 Matt O'Hare      SCS  
9.5.13 Andrew McDonald Andrew McDonald 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-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): 090513  
 PURGE TIME (2400 Hr Clock):       
 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: A A-Submersible Pump D-Bailer  
 Sampling Device: A 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)      (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 Site/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)
	1 <sup>st</sup>		1 <sup>st</sup>					
	2 <sup>nd</sup>		2 <sup>nd</sup>					
	3 <sup>rd</sup>		3 <sup>rd</sup>					
	4 <sup>th</sup>		4 <sup>th</sup>					

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):       
 pH (std):       
 CONDUCTANCE (umhos/cm @ 25°C):       
 TEMP. (°C):       
 TURBIDITY (ntu):       
 DO (mg/L-ppm):       
 eH/ORP (mV):       
 Other:      Units:     

**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).

**FIELD COMMENTS**  
 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):       
70.45 top of pump  
Dry well

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
9, 5, 13      Math O'Hare      MAH      SCS  
9, 5, 13      Andrew McDonald      Andrew McDonald      SCS  
 Date      Name      Signature      Company

# FIELD INFORMATION FORM



Site Name: OVSL  
 Site No.:       
 Sample Point: MW-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): 090513  
 PURGE TIME (2400 Hr Clock): 1228  
 ELAPSED HRS (hrs:min): 1218<sup>AM</sup>  
 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: A A-Submersible Pump D-Bailer  
 Sampling Device: A B-Peristaltic Pump E-Piston Pump  
 X-Other:      C-QED Bladder Pump F-Dipper/Bottle  
 Filter Type:      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) 46.05 (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 Site/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)
			1 <sup>st</sup>		1 <sup>st</sup>				
		2 <sup>nd</sup>		2 <sup>nd</sup>					
		3 <sup>rd</sup>		3 <sup>rd</sup>					
		4 <sup>th</sup>		4 <sup>th</sup>					

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 (umhos/cm @ 25°C):      TEMP. (°C):      TURBIDITY (ntu):      DO (mg/L-ppm):      eH/ORP (mV):      Other:       
 Units:       
*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):  
Top of Pump: 60.04 ft  
Dry well

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
9.5.13 Mark O'Hare      SCS  
9.5.13 Andrew McDonald Andrew McDonald 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-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): 09/05/13  
 PURGE TIME (2400 Hr Clock): 110:00  
 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  
 Filter Device:  Y or  N    0.45  $\mu$  or       $\mu$  (circle or fill in)  
 Purging Device: A A-Submersible Pump    D-Bailer  
 Sampling Device: A B-Peristaltic Pump    E-Piston Pump  
 X-Other:      C-QED Bladder Pump    F-Dipper/Bottle  
 Filter Type: 4 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): 2235 (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 Site/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)
0:05	500ml/min	57.6	201	11.0		0.2	-51	
10:08		58.7	202	11.1		0.2	-62	
10:15		59.2	201	11.2	1.85	0.2	-67	
10:23		60.2		11.0	2.03	0.3	-65	
10:38		60.2	205	13.7		0.6	-45	
10:44	500ml/min	60.6	207	11.5	5.3	0.4	-40	236
10:49		60.5	211	11.5	6.6	0.6	-36	
10:52		60.3	209	11.4	8.7	0.8	-30	237
10:55		60.6	209	11.4	8.9	0.8	-26	
10:58		60.7	209	11.4	10.0	0.9	-22	239

*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): 09/05/13    pH (std): 60.2    CONDUCTANCE ( $\mu$ mhos/cm @ 25°C): 209    TEMP. (°C): 11.4    TURBIDITY (ntu): 100    DO (mg/L-ppm): 0.9    eH/ORP (mV): -22    Other: X  
 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/Site).

**FIELD COMMENTS**  
 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): From 1000 until 1038 Well had a failure to recharge. Pressure was dropped to 10psi. 1038 flow too low 400ml/min of flow cell  
See MW-43

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
9, 5, 13    Matthew O'Hare    WMA    SCS  
9, 5, 13    Andrew McDonald    Andrew McDonald    SCS  
 Date    Name    Signature    Company

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



# FIELD INFORMATION FORM



Site Name: OU5C  
 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**  
 PURGE DATE (MM DD YY): 090513  
 PURGE TIME (2400 Hr Clock): 1242  
 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: A A-Submersible Pump D-Bailer  
 Sampling Device: A 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/msl) Depth to Water (DTW) (from TOC) 7256 (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 Site/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>12:47</u>	<u>400</u>	<u>7.25</u>	<u>132</u>	<u>10.18</u>	<u>0.46</u>	<u>130</u>	<u>-69.3</u>
	<u>12:50</u>	<u>1</u>	<u>7.03</u>	<u>132</u>	<u>10.08</u>	<u>1.25</u>	<u>134</u>	<u>-64.5</u>	<u>7255</u>
	<u>12:53</u>	<u>1</u>	<u>7.04</u>	<u>132</u>	<u>10.07</u>	<u>1.60</u>	<u>136</u>	<u>-66.6</u>	<u>7256</u>
	<u>12:56</u>	<u>4</u>	<u>7.02</u>	<u>132</u>	<u>10.05</u>	<u>2.03</u>	<u>135</u>	<u>-64.8</u>	<u>7256</u>
	<u>12:59</u>	<u>1</u>	<u>7.08</u>	<u>132</u>	<u>10.09</u>	<u>2.46</u>	<u>135</u>	<u>-67.3</u>	<u>7256</u>
	<u>13:02</u>	<u>1</u>	<u>7.10</u>	<u>132</u>	<u>10.09</u>	<u>1.95</u>	<u>136</u>	<u>-64.1</u>	<u>7256</u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </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): 090513 pH (std): 7.10 CONDUCTANCE ( $\mu$ mhos/cm @ 25°C): 132 TEMP. (°C): 10.09 TURBIDITY (ntu): 1.95 DO (mg/L-ppm): 13.6 eH/ORP (mV): -64.1 Other: 1302  
**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):  
See MW - 43

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
9/5/13 Matthew O'Hare      SCS  
9/5/13 Andrew McDonald Andrew McDonald 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-29A  
Sample ID

PURGE INFO	<u>090313</u>	<u>13:50</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: <input checked="" type="checkbox"/> Y or <input type="checkbox"/> N		Filter Device: <input type="checkbox"/> Y or <input type="checkbox"/> N		0.45 μ or _____ μ (circle or fill in)	
	Purging Device: <u>A</u>	A-Submersible Pump	D-Bailer	Filter Type: _____	A-In-line Disposable	C-Vacuum
	Sampling Device: <u>A</u>	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
				B-Stainless Steel	D-Polypropylene	

WELL DATA	Well Elevation (at TOC) _____ (ft/msl)	Depth to Water (DTW) (from TOC) <u>15.8</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 Site/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>13:50</u>	<u>1000</u>	<u>5.93</u>	<u>64</u>	<u>10.9</u>		<u>2.9</u>	<u>3.8</u>
	<u>13:55</u>	" "	<u>5.98</u>	<u>51</u>	<u>10.5</u>	<u>5.8</u>	<u>0.5</u>	<u>7</u>	<u>16.3</u>
	<u>13:58</u>		<u>6.02</u>		<u>10.5</u>	<u>2.3</u>	<u>0.4</u>	<u>0</u>	<u>16.2</u>
	<u>14:01</u>		<u>6.04</u>	<u>73</u>	<u>10.4</u>	<u>1.3</u>	<u>0.3</u>	<u>+1</u>	<u>16.2</u>
	<u>14:04</u>		<u>6.01</u>	<u>73</u>	<u>10.4</u>	<u>0.8</u>	<u>0.2</u>	<u>+3</u>	" "
	<u>14:10</u>		<u>6.04</u>	<u>73</u>	<u>10.4</u>		<u>0.2</u>	<u>-4</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 (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: <u>X</u> Units: <u>TEMP</u>
	<u>090313</u>	<u>6.04</u>	<u>73</u>	<u>10.4</u>	<u>0.8</u>	<u>0.2</u>	<u>-4</u>	<u>1410</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**

---



---



---



---

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

## SCS ENGINEERS

December 24, 2013  
File No. 04204027.17

**Subject: Fourth Quarter December 2013 Monitoring Event  
Olympic View Sanitary Landfill, Kitsap County, Washington**

---

Sampling Event Dates: 12/2/13 through 12/16/13  
Personell: Matt O'Hare and Andrew McDonald

### Notes/Sampling Decoding:

- Dedicated pumps were used for purging and sampling all wells.
- MW-4, MW-16, MW-32, MW-33C, and MW-35 had frozen discharge lines. These wells were sampled when the weather conditions improved (December 16, 2013).
- Duplicate samples were collected at wells MW-23A (DUP 1) and MW-29A (DUP 2).
- In addition to sampled wells, other wells were monitored for water level elevations. A complete summary of water level elevation data are included with the field documentation.
- The samples were sent to TestAmerica Denver for analysis at the close of each sampling day and to Analytical Resources, Inc at the end of each sampling week of the monitoring event.
- Several predatory animals were present on site during the sampling event. Appropriate precautions were taken.
- The L-INF sample location was dry; sample collected directly from pond.
- The Barney White Toe Drain was also dry; therefore, no sample was collected as in previous years.
- Beginning on Wednesday, December 4, 2013 temperatures onsite remained below freezing. Several wells (as noted above) could not be sampled due to frozen discharge lines. Staff remobilized on Monday, December 16, 2013 and sampled the remaining wells.

Sample Date	Location ID	Comments
12/2/13	MW-43	MS/MSD Taken
12/3/13	MW-34C	
12/3/13	MW-13A	
12/3/13	MW-13B	
12/3/13	MW-34A	
12/3/13	MW-19C	

Sample Date	Location ID	Comments
12/3/13	MW-29A	DUP-1 Taken
12/3/13	MW-42	
12/4/13	MW-24	
12/4/13	MW-15R	
12/4/13	MW-20	
12/4/13	MW-36A	
12/4/13	MW-23A	DUP-2 Taken
12/5/13	MW-33A	
12/5/13	MW-2B1	
12/5/13	MW-39	
12/16/13	MW-33C	
12/16/13	MW-16	
12/16/13	MW-35	
12/16/13	MW-32	
12/16/13	MW-4	
12/16/13	L-INF	

109167  
Old Belfair  
Highway

SCS ENGINEERS						
				OVSL		Page 2 of 2
	Date	Time	DTW	Measured by (initials)	Comments	Last Quarter DTW
MW-2A1	12/2/13	1139	9.10	MO		9.12
MW-2B1	12/2/13	1137	7.91	MO		6.72
MW-30A	12/2/13	1086	24.90	MO	Lock 5	24.00
MW-30B	12/2/13	1087	24.72	MO	Lock 5	23.88
MW-31	12/2/13	1162	2.80	MO	Water in stickup/Broken hinge on monument lid	NM
<del>MW-32</del>	<del>12/2/13</del>	<del>1053</del>	<del>5.50</del>	<del>MO</del>	<del>Hinge on monument broken</del>	1.50
MW-33A	12/2/13	1442	52.4	MO		5.62
MW-33B	12/2/13	1444	2.52	MO		2.13
MW-33C	12/2/13	1445	2.49	MO	<del>lock frozen (1) operable</del>	2.17
MW-34A	12/2/13	1118	40.30	MO		39.5
MW-34B	12/2/13	1120	40.08	MO		39.41
MW-34C	12/2/13	1116	42.10	MO		41.21
MW-35	12/2/13	1315	72.66	MO		72.07
MW-36	12/2/13	1127	31.81	MO	No lock	31.14
MW-36A	12/2/13	1125	31.40	MO		31.00
MW-37	12/2/13	1031	4.19	MO	Broken lock	NM
MW-38	12/2/13	1058	4.41	MO	No lock	3.67
MW-39	12/2/13	1246	20.11	NO		21.34
MW-4	12/2/13	1523	15.79	MO	Lock rusted, needs replacing	14.95
MW-40A	12/2/13	1015	16.85	MO		15.51
MW-40B	12/2/13	1018	16.77	MO	No tubing for sampling	15.44
MW-40C	12/2/13	1016	17.35	MO	lock broken	15.84
MW-41A	12/2/13	1517	30.05	MO		24.18
MW-41B	12/2/13	1516	27.11	MO		24.64
MW-41C	12/2/13	1515	28.33	MO		26.16
MW-42	12/2/13	1042	28.63	MO	No lock.	27.85
MW-43	12/2/13	0938	25.70	MO	Needs new lock.	25.16
MW-49	12/2/13	0952	3.45	MO	No cap./lock freezing issue	2.57
MW-45	12/2/13	1112	3.55	MO	inside wooden stakes, water in monument; No lock	NM

3.55

etching pencil to mark locks.  
Air hose 2-3 more/more visible storage

**SCS ENGINEERS**

Olympic View Sanitary Landfill

Page 1 of 2

Well	Date	Time	DTW	Measured by (initials)	Comments	Last Quarter DTW
MW-1						69.04
MW-10	12/2/13	1054	4.76	MO	No lock	NM
MW-11	12/2/13	1001	5.36	MO	frozen lock, no cap.	4.25
MW-12	12/2/13	1343	50.73	MO		NM
MW-13	12/2/13	1323	29.80	MO		28.94
MW-13A	12/2/13	1325	47.36	MO		46.34
MW-13B	12/2/13	1327	61.45	MO		60.30
MW-14					NM	47.38
MW-15R	12/2/13	1133	19.32	MO	No lock	18.72
MW-16	12/2/13	1252	61.23	MO	No locks. - Weard locker	57.65
MW-17	12/2/13	1509	35.72	MO	Water in casing	NM
MW-18	12/2/13	1336	66.52	MO		NM
MW-19A	12/2/13	1215	33.87	MO		32.58
MW-19B	12/2/13	1212	33.94	MO	lock will not clasp. -	32.62
MW-19C	12/2/13	1210	35.11	MO		33.80
MW-19D	12/2/13	1208	34.22	MO		32.73
MW-20	12/2/13	1223	37.00	MO		35.91
MW-21	12/2/13	1053	5.90	MO		5.35
MW-23A	12/2/13	1233	13.80	MO		NM
MW-23B	12/2/13	1231	14.13	MO	water in monument	12.41
MW-23C	12/2/13	1230	14.41	MO	monument lid/lock mechanism does not line up	12.92
MW-24	12/2/13	1240	34.20	MO	Needs new tubing/too short	21.74
MW-26	12/2/13	1300	13.68	MO	Broken lock	NM
MW-27	12/2/13	1256	24.47	MO		21.74
MW-28	12/2/13	1302	6.85	MO		NM
MW-29A	12/2/13	1037	14.40	MO		13.35
MW-29B	12/2/13	1039	18.05	MO	is this used for contouring? Well const	17.12
MW-29C	12/2/13	0958	12.73	MO	Lock # fading	11.73

## GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	12/2/13					
Time	0928					
Weather (sky or precip, temp)	Clear					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	469	3.96	7.03	9.21 750.9 mm Hg		
Post Cal Reading	445	4.01	7.00			
Discrepancy	No					
Calib. Successful?	Yes					
Calibration by	AM/MO					
Instrument Type, ID	MP20 / YSI 556			MicoTPW / HACH2000		
Calibration Location	OVSL					

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

## GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	12/2/13					
Time	0928					
Weather (sky or precip, temp)	Clear					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	454	4.35	6.93	7.78 760mmHg	806, 113, 22.7, 0.72	
Post Cal Reading	445	4.01	7.00			
Discrepancy	No					
Calib. Successful?	Yes					
Calibration by	MO/AM					
Instrument Type, ID	MP20 / YSI 556			MicoTPW / HACH2000		
Calibration Location	OVSL					

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



GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	<del>12/2/13</del> 12/3/13					
Time	0810					
Weather (sky or precip, temp)	Foggy					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	460	3.99	6.90	8.50	995, 10.3,	
Post Cal Reading	445	4.01	7.00	760.19	0.00	
Discrepancy	_____					
Calib. Successful?	yes _____					
Calibration by	MO					
Instrument Type, ID	MP20 / YSI 556			MicoTPW HACH2000		
Calibration Location	DUSL					

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

## GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	1/15 <sup>MO</sup> 12/3/13					
Time	0810					
Weather (sky or precip, temp)	Foggy					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	<del>1000, 10, 0.2</del> 800, 100, 20, <0.1	
Pre-Cal Reading	503	3.70	6.90	8.43		
Post Cal Reading	445	4.01	7.00	↓	724, 105, 20.3, 0.63	
Discrepancy	_____					
Calib. Successful?	Yes _____					
Calibration by	MO					
Instrument Type, ID	(MP20) / YSI 556			MicoTPW / (HACH2000)		
Calibration Location	OVS L					

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

**GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM**

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	12/04/13					
Time	0830					
Weather (sky or precip, temp)	Clear					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	384	4.16	7.03	8.09 760 mm-Hg	972.0 10.73 0.36	
Post Cal Reading	445	4.01	7.00			
Discrepancy	No					
Calib. Successful?	Yes					
Calibration by	MO/AM					
Instrument Type, ID	MP20 / YSI 556			MicoTPW / HACH2000		
Calibration Location	OVSL					

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

## GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	12/04/13					
Time	0830					
Weather (sky or precip, temp)	Clear					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	1000, 10, 0.2 <del>800, 100, 20, &lt;0.1</del>	
Pre-Cal Reading	522	4.06	7.03		792 22.5 105 0.74	
Post Cal Reading	445	4.01	7.00			
Discrepancy	No					
Calib. Successful?	Yes					
Calibration by	MO/AM					
Instrument Type, ID	MP20 / YSI 556			MicoTPW / HACH2000		
Calibration Location	OVSL					

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

## GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	12/5/13					
Time	0810					
Weather (sky or precip, temp)	Clear					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	356	4.00	6.96	761.5 10.00 / 100%	765.3 10.00 00.02	
Post Cal Reading	445	4.01	7.00			
Discrepancy	No					
Calib. Successful?	Yes					
Calibration by	MO/AM					
Instrument Type, ID	MP20 / YSI 556			MicoTPW / HACH2000		
Calibration Location	OVS L					

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



**GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM**

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	12/16/13					
Time	0730					
Weather (sky or precip, temp)	Fog					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	463	<del>449</del> <sup>448</sup>	6.87	8.44		
Post Cal Reading	448	<del>445</del> <sup>445</sup>	7.00	761.4	117, 112, 23.2 0.76	
Discrepancy	<hr/>					
Calib. Successful?	yes					
Calibration by	MO					
Instrument Type, ID	MP20 / YSI 556			MicoTPW / HACH2000		
Calibration Location	AUSL					

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

## GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	12/16/13					
Time	0730					
Weather (sky or precip, temp)	Fog					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	445	4.01	7.00	100% or ~8.5	(1000, 10, 0.2) 800, 100, 20, <0.1	
Pre-Cal Reading	490	4.00	7.58			
Post Cal Reading	445	4.01	7.00	767.4	8100, 11.06, 0.60	
Discrepancy	_____					
Calib. Successful?	yes _____					
Calibration by	MO					
Instrument Type, ID	MP20 / YSI 556			MicoTPW / HACH2000		
Calibration Location	OUSL					

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





# 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: M/W-33C  
 Sample ID

**PURGE INFO**

<u>121613</u>	<u>1211</u>	<u>00:05</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 μ or \_\_\_\_\_ μ (circle or fill in)

Purging Device:  A    A-Submersible Pump    D-Bailer    A-In-line Disposable    C-Vacuum  
 B    B-Peristaltic Pump    E-Piston Pump    B-Pressure    X-Other \_\_\_\_\_

Sampling Device:  A    C-QED Bladder Pump    F-Dipper/Bottle    A-Teflon    C-PVC    X-Other: \_\_\_\_\_  
 X-Other: \_\_\_\_\_    Sample Tube Type: \_\_\_\_\_    B-Stainless Steel    D-Polypropylene

**WELL DATA**

Well Elevation (at TOC) \_\_\_\_\_ (ft/msl)    Depth to Water (DTW) (from TOC) 270 (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 Site/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>12:16</u>	<u>300</u>	<u>7.78</u>	<u>144</u>	<u>8.63</u>	<u>5.41</u>	<u>3.80</u>	<u>93</u>	<u>270</u>
<u>12:19</u>	<u>1</u>	<u>7.69</u>	<u>145</u>	<u>8.67</u>	<u>5.41</u>	<u>1.68</u>	<u>46</u>	<u>270</u>
<u>12:22</u>	<u>1</u>	<u>7.67</u>	<u>144</u>	<u>8.69</u>	<u>1.34</u>	<u>0.77</u>	<u>9</u>	<u>270</u>
<u>12:25</u>	<u>1</u>	<u>7.73</u>	<u>144</u>	<u>8.71</u>	<u>1.20</u>	<u>0.51</u>	<u>-1.8</u>	<u>270</u>
<u>12:28</u>	<u>1</u>	<u>7.83</u>	<u>144</u>	<u>8.72</u>	<u>9.50</u>	<u>0.35</u>	<u>-4.2</u>	<u>270</u>
<u>12:31</u>	<u>1</u>	<u>7.90</u>	<u>145</u>	<u>8.72</u>	<u>7.77</u>	<u>0.32</u>	<u>-5.3</u>	<u>270</u>
<u>12:34</u>	<u>1</u>	<u>7.96</u>	<u>145</u>	<u>8.73</u>	<u>5.49</u>	<u>0.29</u>	<u>-6.1</u>	<u>270</u>
<u>12:37</u>	<u>1</u>	<u>7.99</u>	<u>144</u>	<u>8.74</u>	<u>3.99</u>	<u>0.29</u>	<u>-6.3</u>	<u>270</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 W.M. 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 (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: <u>True</u>
<u>121613</u>	<u>7.99</u>	<u>144</u>	<u>8.74</u>	<u>3.29</u>	<u>0.29</u>	<u>-6.3</u>	<u>1237</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: \_\_\_\_\_    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): Turbidity meter - Micro TAU - Failure

**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):

12.16.13    Matt O'Hare    [Signature]    SCS

Date    Name    Signature    Company



# FIELD INFORMATION FORM



Site Name: OVSL  
 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**  
 PURGE DATE: 12/16/13 PURGE TIME: 09:12 ELAPSED HRS: 00:05  
(MM DD YY) (2400 Hr Clock) (hrs:min)  
 WATER VOL IN CASING:      ACTUAL VOL PURGED:      WELL VOLS PURGED:       
(Gallons) (Gallons)  
 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: A A-Submersible Pump D-Bailer  
 Sampling Device: A B-Peristaltic Pump E-Piston Pump  
 C-QED Bladder Pump F-Dipper/Bottle  
 X-Other: \_\_\_\_\_  
 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 \_\_\_\_\_  
 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): 72.70 (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 Site/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)
09:17	320	6.13	121	10.06	2.41	7.95	1625	72.70
09:20	↓	6.76	121	09.91	2.45	7.96	1542	72.70
09:23	↓	6.93	119	9.88	3.18	7.95	1491	72.70
09:26	↓	7.06	119	9.84	3.5	7.94	1423	72.70
09:29		7.12	121	9.84	3.19	7.93	1378	72.70
09:32		7.15	121	9.84	3.85	7.94	1358	72.70

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: 12/16/13 pH: 7.15 CONDUCTANCE: 121 TEMP.: 9.84 TURBIDITY: 3.85 DO: 7.94 eH/ORP: 1358 Other: Time  
(MM DD YY) (std) (umhos/cm @ 25°C) (°C) (ntu) (mg/L-ppm) (mV) Units  
 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: Overcast 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):  
12.16.13 Date      Matt O'Hara Name      [Signature] Signature      SES Company

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

# FIELD INFORMATION FORM



Site Name: OSL  
 Site No.:       
 Sample Point: 121613  
 Sample ID: 10:28

**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: 12/16/13 PURGE TIME: 10:28 ELAPSED HRS: 0905  
 WATER VOL IN CASING:      ACTUAL VOL PURGED:      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: A A-Submersible Pump D-Bailer  
 Sampling Device: A 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/msl) Depth to Water (DTW) (from TOC): 6143 (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 Site/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)
10:33	300	6.30	101	8.97	4.45	6.01	129.3	61.43
10:36	↓	6.31	099	8.77	3.99	6.27	134.8	61.43
10:39	↓	6.31	99	8.98	3.77	6.42	137.8	61.43
10:42	↓	6.31	96	9.00	2.95	6.40	140.9	61.43
10:45	↓	6.32	95	9.02	3.44	6.40	141.9	61.43
10:48	↓	6.32	96	9.04	3.50	6.40	142.3	61.43
:								
:								
:								
:								

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>True</u>
12/16/13	6.32	96	9.04	3.50	6.40	142.3	Units: <u>1098</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:      Other:       
 Weather Conditions (required daily, or as conditions change):      Direction/Speed:      Outlook: overcast 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):  
12/16/13 Date      Matt O'Neil Name      [Signature] Signature      SES Company

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

**FIELD INFORMATION FORM**



Site Name: OUSC

**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:  
\_\_\_\_\_

Sample Point: L-11NF  
Sample ID

PURGE INFO  
PURGE DATE (MM DD YY) 12 | 16 | 13  
PURGE TIME (2400 Hr Clock) \_\_\_\_\_  
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:  or  N | 0.45 μ or \_\_\_\_\_ μ (circle or fill in)  
Purging Device:  A-Submersible Pump D-Bailer  
 B-Peristaltic Pump E-Piston Pump  
Sampling Device:  C-QED Bladder Pump F-Dipper/Bottle  
Filter Type: A  
A-In-line Disposable C-Vacuum  
B-Pressure X-Other \_\_\_\_\_  
X-Other: Grab  
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) \_\_\_\_\_ (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 Site/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>08:20</u>	1 <sup>st</sup>	<u>6.26</u>	<u>385</u>	<u>386</u>	<u>3.46</u>	<u>998</u>	<u>190</u>	
:	2 <sup>nd</sup>							
:	3 <sup>rd</sup>							
:	4 <sup>th</sup>							
:								
:								
:								
:								
:								
:								
:								

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 | 16 | 13    pH (std) 6.26    CONDUCTANCE (μS :m @ 25°C) 3850    TEMP. (°C) 386    TURBIDITY (ntu) 3.46    DO (mg/L-ppm) 998    eH/ORP (mV) 190    Other: \_\_\_\_\_  
*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<sup>A</sup> murky    Odor: —    Color: clear yellow    Other: \_\_\_\_\_  
Weather Conditions (required daily, or as conditions change):    Direction/Speed: \_\_\_\_\_    Outlook: overcast    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, 16, 13    Andrew McDonald    Andrew McDonald    SCS  
Date                                      Name                                      Signature                                      Company

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

# FIELD INFORMATION FORM



Site Name: LOVSL

**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-4  
 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 VOL PURGED
	<u>12/16/13</u>	<u>09:12</u>	<u>00:05</u>	<u>        </u>	<u>        </u>	<u>        </u>
<i>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.</i>						

Purging and Sampling Equipment  Dedicated:  Y or  N

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

Purging Device:  A - Submersible Pump |  D - Bailor

Filter Type:  A |  B - Pressure |  C - Vacuum

Sampling Device:  A - Peristaltic Pump |  E - Piston Pump |  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) (ft)	Groundwater Elevation (site datum, from TOC) (ft/msl)	Casing ID (in)	Casing Material
	<u>        </u>	<u>1622</u>	<u>        </u>	<u>        </u>	<u>        </u>
<i>Note: Total Well Depth, Stick Up, Casing Id, etc, are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.</i>					

	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)
STABILIZATION DATA (Optional)	<u>09:17</u>	<u>14/6</u> 3CPM	<u>7.18</u>	<u>124</u>	<u>9.40</u>	<u>        </u>	<u>0.51</u>	<u>120</u>	<u>        </u>
	<u>09:20</u>	<u>        </u>	<u>7.09</u>	<u>124</u>	<u>9.41</u>	<u>        </u>	<u>0.42</u>	<u>120</u>	<u>        </u>
	<u>09:23</u>	<u>400</u> 4CPM	<u>7.03</u>	<u>124</u>	<u>9.40</u>	<u>        </u>	<u>0.32</u>	<u>119</u>	<u>1631</u>
	<u>09:26</u>	<u>        </u>	<u>6.97</u>	<u>124</u>	<u>9.41</u>	<u>2.75</u>	<u>0.25</u>	<u>117</u>	<u>1635</u>
	<u>09:29</u>	<u>        </u>	<u>6.93</u>	<u>124</u>	<u>9.40</u>	<u>2.65</u>	<u>0.25</u>	<u>116</u>	<u>        </u>
	<u>09:32</u>	<u>        </u>	<u>6.87</u>	<u>127</u>	<u>9.41</u>	<u>1.88</u>	<u>0.21</u>	<u>115</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.*

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE μS/cm @ 25°C	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units
<u>12/16/13</u>	<u>6.87</u>	<u>127</u>	<u>9.41</u>	<u>1.88</u>	<u>0.21</u>	<u>115</u>	<u>        </u>
<i>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).</i>							

Sample Appearance: clear      Odor:               Color:               Other:         

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

12/16/13      Andrew McDonald      Andrew McDonald      SCS

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

# FIELD INFORMATION FORM



Site Name: OVSL  
Site No.: 1121613 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): 12/16/13 PURGE TIME (2400 Hr Clock): 10:32 ELAPSED HRS (hrs:min): 60:06  
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: A A-Submersible Pump D-Bailer  
Sampling Device: A B-Peristaltic Pump E-Piston Pump  
Filter Type: A 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): 275 (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 Site/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)
<u>10:38</u>	<u>390</u>	<u>6.81</u>	<u>288</u>	<u>11.84</u>	<u>1.44</u>	<u>0.53</u>	<u>9</u>	<u>275</u>
<u>10:41</u>	" "	<u>6.85</u>	<u>288</u>	<u>11.92</u>	<u>1.21</u>	<u>0.40</u>	<u>3</u>	" "
<u>10:44</u>	" "	<u>6.86</u>	<u>287</u>	<u>11.95</u>	<u>1.16</u>	<u>0.30</u>	<u>-1</u>	" "
<u>10:47</u>	" "	<u>6.87</u>	<u>291</u>	<u>11.97</u>		<u>0.26</u>	<u>-4</u>	" "
<u>10:50</u>		<u>6.89</u>	<u>290</u>	<u>11.98</u>	<u>1.97</u>	<u>0.87</u>	<u>8</u>	
<u>10:53</u>		<u>6.89</u>	<u>290</u>	<u>12.01</u>	<u>3.30</u>	<u>0.86</u>	<u>9</u>	
<u>10:56</u>		<u>6.91</u>	<u>287</u>	<u>12.01</u>	<u>3.09</u>	<u>0.87</u>	<u>8</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.

**FIELD DATA**  
SAMPLE DATE (MM DD YY): 12/16/13 pH (std): 6.91 CONDUCTANCE (μS/cm @ 25°C): 287 TEMP. (°C): 12.01 TURBIDITY (ntu): 3.09 DO (mg/L - ppm): 0.87 eH/ORP (mV): 8 Other: \_\_\_\_\_  
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: clear Other: \_\_\_\_\_  
Weather Conditions (required daily, or as conditions change): \_\_\_\_\_ Direction/Speed: \_\_\_\_\_ Outlook: overcast Precipitation: Y or N

**Specific Comments (including purge/well volume calculations if required):**  
Air in pump/well sample hose starting at 1048  
pump is making noise before/as pressure is applied to the well  
water bubbles stopped when pressure lifted off of discharge tube

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

# FIELD INFORMATION FORM



Site Name: OVSL  
 Site No.:       
 Sample Point: MW29A  
 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: 120313 (MM DD YY)  
 PURGE TIME: 10:30 (2400 Hr Clock)  
 ELAPSED HRS: 00:05 (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: A A-Submersible Pump D-Bailer  
 Sampling Device: A 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/msl)  
 Depth to Water (DTW) (from TOC): 114.35 (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 Site/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>110:30</u>	1 <sup>st</sup>		<u>Purge Began</u>				
	<u>110:35</u>	2 <sup>nd</sup>	<u>6.16</u>	<u>0.081</u> $\frac{\mu S}{cm}$	<u>10.7</u>		<u>1.9</u>	<u>33</u>	<u>114.8</u>
	<u>110:40</u>	3 <sup>rd</sup>	<u>6.18</u>	<u>0.081</u>	<u>10.7</u>		<u>1.7</u>		
	<u>110:43</u>	4 <sup>th</sup>	<u>6.22</u>	<u>0.080</u>	<u>10.5</u>	<u>2.3</u>	<u>1.4</u>	<u>2.8</u>	<u>114.7</u>
	<u>110:46</u>	" "	<u>6.03</u>	<u>0.081</u>	<u>10.4</u>	<u>3.1</u>	<u>1.1</u>	<u>2.6</u>	" "
	<u>110:49</u>	" "	<u>6.24</u>	<u>0.081</u>	<u>10.5</u>	<u>3.3</u>	<u>1.0</u>	<u>2.5</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): 120313  
 pH (std): 6.24  
 CONDUCTANCE ( $\mu$ mhos/cm @ 25°C): 81  
 TEMP. (°C): 10.5  
 TURBIDITY (ntu): 3.3  
 DO (mg/L-ppm): 1.0  
 eH/ORP (mV): 2.5  
 Other: \_\_\_\_\_ Units: \_\_\_\_\_

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

Specific Comments (including purge/well volume calculations if required):  
DUP-1 taken The well

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
12/03/13 Andrew McDonald Andrew McDonald SCS  
 Date Name Signature Company



# FIELD INFORMATION FORM



Site Name: OVSL  
 Site No.:                          
 Sample Point: M/W - 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: 120313 (MM DD YY)  
 PURGE TIME: 1220 (2400 Hr Clock)  
 ELAPSED HRS: 0005 (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: A  
 A-Submersible Pump D-Bailer  
 B-Peristaltic Pump E-Piston Pump  
 Sampling Device: A  
 C-QED Bladder Pump F-Dipper/Bottle  
 X-Other: \_\_\_\_\_  
 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): 286 (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 Site/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)
12:20	1"		Purge Began					
12:25	<u>450 <sup>ml</sup> / min</u> 2"	6.40	0.454	11.6	6.4	1.1	-25	286
12:28	3"	6.47	0.453	11.7	4.2	1.0	-32	" "
12:31	4"	6.48	0.454	11.7	3.6	0.8	-36	
12:34		6.50	0.454	11.7	2.4	0.7	-34	

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: 120313 (MM DD YY)  
 pH (std): 6.50  
 CONDUCTANCE (umhos/cm @ 25°C): 454  
 TEMP. (°C): 11.7  
 TURBIDITY (ntu): 2.4  
 DO (mg/L-ppm): 0.7  
 eH/ORP (mV): -34  
 Other:    Units

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

**FIELD COMMENTS**  
 Specific Comments (including purge/well volume calculations if required):  
Air in hose from well

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
12,03,13 Andrew McDonald Andrew McDonald SCS  
 Date Name Signature Company

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

FIELD INFORMATION FORM



Site Name: OVSL
Sample Point: MW-19C
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: 12/03/13
PURGE TIME: 13:44
ELAPSED HRS: 0008
WATER VOL IN CASING:
ACTUAL VOL PURGED:
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]
Purging Device: [A]
Sampling Device: [A]

WELL DATA
Well Elevation (at TOC):
Depth to Water (DTW) (from TOC): 353
Groundwater Elevation (site datum, from TOC):
Total Well Depth (from TOC):
Stick Up (from ground elevation):
Casing ID:
Casing Material:

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

Table with 9 columns: Sample Time, Rate/Unit, pH, Conductance, Temp, Turbidity, D.O., eH/ORP, DTW. Includes handwritten data for 4 samples and a 'Start Purge' entry.

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: 12/03/13
pH: 6.84
CONDUCTANCE: 136
TEMP: 10.2
TURBIDITY: 0.8
DO: 1.5
eH/ORP: 26

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

Specific Comments (including purge/well volume calculations if required):
Elevated Well head, Air in sampling hose

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):
Date: 12/03/13
Name: Andrew McDonald
Signature: Andrew McDonald
Company: SES

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

# FIELD INFORMATION FORM



Site Name: 0052  
 Site No.: 120313 Sample Point: MW-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): 12/03/13 PURGE TIME (2400 Hr Clock): 14:27 ELAPSED HRS (hrs:min): 00:05  
 WATER VOL IN CASING (Gallons): \_\_\_\_\_ ACTUAL VOL PURGED (Gallons): \_\_\_\_\_ WELL VOLs PURGED (ft/msl): \_\_\_\_\_

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:  A (Submersible Pump) or  D (Bailer)  
 Sampling Device:  C (QED Bladder Pump) or  F (Dipper/Bottle)  
 Filter Device:  Y or  N (0.45 μ or \_\_\_\_\_ μ)  
 Filter Type:  A (In-line Disposable) or  B (Pressure) or  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) (ft): 47.40 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 Site/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)
14:32	300	7.00	156	8.99	4.11	8.17	143.7	47.40
14:35	↓	7.17	156	8.94	3.96	8.20	140.1	47.40
14:38	↓	7.19	156	8.92	3.65	8.10	140.0	47.40
14:41	↓	7.18	155	8.99	3.33	8.02	140.5	47.40
14:44	↓	7.18	156	8.93	3.55	8.01	140.7	47.40
14:47	↓	7.16	156	8.83	3.43	8.00	145.8	47.40
:								
:								
:								
:								

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): 12/03/13 pH (std): 7.16 CONDUCTANCE (umhos/cm @ 25°C): 156 TEMP. (°C): 8.93 TURBIDITY (ntu): 3.43 DO (mg/L-ppm): 8.00 eH/ORP (mV): 145.8 Other: \_\_\_\_\_  
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: clear Other: \_\_\_\_\_  
 Weather Conditions (required daily, or as conditions change): \_\_\_\_\_ Direction/Speed: \_\_\_\_\_ Outlook: clear 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):  
12/03/13 Andrew McDonald Andrew McDonald SCS  
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: OVSC  
 Site No.:       
 Sample Point: AV-34A  
 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
12   03   13	12   11	00   05			

*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:  A    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:  A  
 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) 4027 (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 Site/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)
11:16	400	6.09	183	11.68	2.88	0.80	159.1	4029
11:21	↓	6.11	185	11.22	2.47	0.92	164.7	4031
11:24	↓	6.11	185	11.22	2.91	0.94	167.0	4031
11:27	↓	6.11	185	11.24	2.77	0.95	167.6	4031
11:30		6.17	184	11.26	2.96	0.97	169.1	4031
11:33		6.10	183	11.21	3.03	1.00	170.6	4031
:								
:								
:								
:								

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)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: <u>Time</u>
120313	6.10	183	11.21	3.03	1.00	170.6	Units: <u>1133</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:         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):

12/3/13    Matt O'Hare    WMA    SES

Date    Name    Signature    Company

# FIELD INFORMATION FORM



Site Name: \_\_\_\_\_  
 Site No.: \_\_\_\_\_  
 Sample Point: W413B  
 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
120313	1309	0005			

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

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

Sampling Device:  A  
 B | 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) (ft)	Groundwater Elevation (site datum, from TOC) (ft/msl)
	6148	

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 Site/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)
1314	300 1 <sup>st</sup>	5.82 1 <sup>st</sup>	155	9.63	3.17	7.79	192.8	6148
1317	↓ 2 <sup>nd</sup>	6.25 2 <sup>nd</sup>	153	9.60	3.20	6.91	171.2	6148
1320	↓ 3 <sup>rd</sup>	6.63 3 <sup>rd</sup>	153	9.47	3.06	7.77	147.6	6148
1323	↓ 4 <sup>th</sup>	6.97 4 <sup>th</sup>	153	9.54	2.90	8.14	152.9	6148
1326	↓	7.19	154	9.57	2.44	8.28	134.1	6148
1329	↓	7.28	154	9.55	2.77	8.30	126.4	6148
1332		7.34	154	9.44	2.91	8.41	118.9	6148

Suggested range for 3 consec. readings or note Permit/State requirements:

pH	Conductance	Temp.	Turbidity	D.O.	eH/ORP	DTW
+/- 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)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units
120313	7.34	154	9.44	2.91	8.41	118.9	

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: clear Other: \_\_\_\_\_

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

12.3.13 Matt O'Hara Matt O'Hara SCS  
 \_\_\_\_\_  
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: OVSL  
 Site No.:       
 Sample Point: MW-34C  
 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: 020313 (MM DD YY)  
 PURGE TIME: 09:32 (2400 Hr Clock)  
 ELAPSED HRS: 00:10 (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: A A-Submersible Pump D-Bailer  
 Sampling Device: A 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): 42.11 (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 Site/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)
08:42	320	6.39	249	11.58	343.2	1.22	31.1	42.11
09:47	↓	6.50	248	11.67	372.7	0.82	18.0	42.10
09:52	↓	6.52	248	11.76	418.9	0.70	17.3	42.10
09:57	↓	6.60	249	11.77	438.3	0.48	13.9	42.10
10:02	320	6.59	249	11.81	306.8	0.37	14.9	42.10
10:08	↓	6.59	248	11.90	227.8	0.40	14.0	42.10
10:12	↓	6.60	249	11.84	172.1	0.37	11.9	42.10
10:17	320	6.61	249	11.85	164.3	0.35	11.6	42.10
10:22	↓	6.62	249	11.88	116.1	0.34	8.0	42.10
10:27	↓	6.63	247	11.84	171.0	0.36	7.5	42.10

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): 020313  
 pH (std): 6.64  
 CONDUCTANCE (umhos/cm @ 25°C): 247  
 TEMP. (°C): 11.87  
 TURBIDITY (ntu): 256.4  
 DO (mg/L-ppm): 0.37  
 eH/ORP (mV): 14.3  
 Other:       
 Units: 1037

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: murky Odor:      Color: Brown Other:       
 Weather Conditions (required daily, or as conditions change):      Direction/Speed: West/South Outlook: Sunny Precipitation: Y or  N

**FIELD COMMENTS**  
 Specific Comments (including purge/well volume calculations if required):  
High Turbidity at Purge - Extended Purge  

10:32	320	6.63	247	11.89	272.5	0.41	10.1	42.10
10:37	↓	6.64	247	11.87	256.4	0.37	14.3	42.10

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
02/03/13 Matt O'Hara      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-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: 120213 PURGE TIME:      ELAPSED HRS:      WATER VOL IN CASING:      ACTUAL VOL PURGED:      WELL VOLS PURGED:       
 (MM DD YY) (2400 Hr Clock) (hrs:min) (Gallons) (Gallons)

*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:  or  Filter Device:  or  0.45 μ or \_\_\_\_\_ μ (circle or fill in)  
 Purging Device:  A-Submersible Pump  D-Bailer  Filter Type:  A  B-Pressure  X-Other \_\_\_\_\_  
 Sampling Device:  B-Peristaltic Pump  E-Piston Pump  A-In-line Disposable  C-Vacuum  
 C-QED Bladder Pump  F-Dipper/Bottle  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): 25.80 (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 Site/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)
12:12	1"		Start Purge					25.8
12:25	400 ml/min	5.56	57	1116		1.8	109	" "
12:40	" "	5.60	54	1117	5.3	1.8	104	" "
12:43		5.60		1118	4.5	1.8	105	
12:46		5.61	54	1117	3.8	1.8	106	
12:49		5.61	55	1118	2.5	1.8	107	
:								
:								
:								
:								

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.*

**FIELD DATA**

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: _____ Units _____
120213	5.61	55	1118	2.5	1.8	107	

*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: clear Other: \_\_\_\_\_  
 Weather Conditions (required daily, or as conditions change): \_\_\_\_\_ Direction/Speed: None Outlook: Clear 40°F Precipitation: Y or  N

**FIELD COMMENTS**  
 Specific Comments (including purge/well volume calculations if required):  
MS/MSD, Water from well came out initially an ~~orange~~ AM orange color. Extended purge resulted in clear water.

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
12.02.13 Andrew McDonald Andrew McDonald 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-241  
 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: 120413 (MM DD YY)  
 PURGE TIME: 11:30 (2400 Hr Clock)  
 ELAPSED HRS: 0005 (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: A A-Submersible Pump D-Bailer  
 Sampling Device: A 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): 3425 (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 Site/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>11:35</u>	<u>360ml/min</u>	<u>6.60</u>	<u>138</u>	<u>11.2</u>	<u>    </u>	<u>15</u>	<u>140</u>
	<u>11:38</u>	<u>    </u>	<u>6.56</u>	<u>140</u>	<u>11.2</u>	<u>10.4</u>	<u>1.4</u>	<u>141</u>	<u>343</u>
	<u>11:41</u>	<u>    </u>	<u>6.51</u>	<u>139</u>	<u>11.2</u>	<u>8.5</u>	<u>1.2</u>	<u>142</u>	<u>" "</u>
	<u>11:44</u>	<u>    </u>	<u>6.42</u>	<u>139</u>	<u>11.2</u>	<u>8.8</u>	<u>0.8</u>	<u>143</u>	<u>    </u>
	<u>11:47</u>	<u>    </u>	<u>6.39</u>	<u>140</u>	<u>11.1</u>	<u>7.9</u>	<u>0.6</u>	<u>144</u>	<u>    </u>
	<u>11:50</u>	<u>    </u>	<u>6.38</u>	<u>140</u>	<u>11.1</u>	<u>6.7</u>	<u>0.6</u>	<u>144</u>	<u>    </u>
	<u>11:53</u>	<u>    </u>	<u>6.36</u>	<u>139</u>	<u>11.2</u>	<u>6.8</u>	<u>0.5</u>	<u>143</u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </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.*

**FIELD DATA**  
 SAMPLE DATE (MM DD YY): 120413 pH (std): 636 CONDUCTANCE (umhos/cm @ 25°C): 139 TEMP. (°C): 11.2 TURBIDITY (ntu): 68 DO (mg/L-ppm): 05 eH/ORP (mV): 143 Other:       
 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: clear Other:       
 Weather Conditions (required daily, or as conditions change):      Direction/Speed:      Outlook: sunny Precipitation: Y or  N

Specific Comments (including purge/well volume calculations if required):  
needs to be repaired - longer stick up

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

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



# FIELD INFORMATION FORM



Site Name: ASL  
 Site No.:                                
 Sample Point: NW-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|04|13  
 PURGE TIME (2400 Hr Clock): 14:10  
 ELAPSED HRS (hrs:min): 00:05  
 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:  A (Submersible Pump)  D (Bailer)  
 Sampling Device:  B (Peristaltic Pump)  E (Piston Pump)  
 X-Other:       
 Filter Device:  Y or  N    0.45 μ or      μ (circle or fill in)  
 Filter Type:  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): 19|26 (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 Site/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) (μS/cm @ 25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
14:15	EDDHL min	6.49	149 μS/cm	9.8	1.4	1.5	98.2	19.3
14:18		6.59	151	10.0	1.1	0.6	96.6	" "
14:21		6.62	151	10.0	1.3	0.5	96.7	" "
14:24		6.63	148	10.0	1.1	0.5	97.3	
14:27		6.63	148	10.0		0.5	98.0	
14:30		6.63	147	10.0	0.9	0.5	99.0	

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|04|13  
 pH (std): 6.63  
 CONDUCTANCE (μS/cm @ 25°C): 147  
 TEMP. (°C): 10.0  
 TURBIDITY (ntu): 0.9  
 DO (mg/L-ppm): 0.5  
 eH/ORP (mV): 99.0  
 Other:      Units:     

*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: clear    Other:       
 Weather Conditions (required daily, or as conditions change):         Direction/Speed:         Outlook: Sunny    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):  
12.04.13    Andrew McDonald    Andrew McDonald    SCS  
 Date    Name    Signature    Company

# FIELD INFORMATION FORM



Site Name: 0VSL  
 Site No.:      Sample Point: rw-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: 12/04/13 (MM DD YY)  
 PURGE TIME: 10:15 (2400 Hr Clock)  
 ELAPSED HRS: 00:05 (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: A A-Submersible Pump D-Bailer  
 B-Peristaltic Pump E-Piston Pump  
 Sampling Device: A C-QED Bladder Pump F-Dipper/Bottle  
 X-Other:       
 Filter Device:  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): 37.07 (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 Site/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>10:15</u>	<u>375 gph</u>		<u>Start Purge</u>				
	<u>10:20</u>		<u>6.35</u>	<u>421</u>	<u>13.9</u>	<u>2.1</u>	<u>13.3</u>	<u>167</u>	
	<u>10:23</u>		<u>6.39</u>	<u>424</u>	<u>13.8</u>	<u>1.2</u>	<u>27</u>	<u>165</u>	
	<u>10:26</u>		<u>6.42</u>	<u>426</u>	<u>13.9</u>	<u>0.4</u>	<u>20</u>	<u>161</u>	<u>37.3</u>
	<u>10:29</u>		<u>6.45</u>	<u>426</u>	<u>13.8</u>	<u>0.6</u>	<u>12</u>	<u>156</u>	
	<u>10:32</u>		<u>6.46</u>	<u>418</u>	<u>14.0</u>	<u>0.3</u>	<u>09</u>	<u>151</u>	
	<u>10:35</u>		<u>6.47</u>	<u>414</u>	<u>13.9</u>	<u>0.3</u>	<u>08</u>	<u>149</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.

**FIELD DATA**  
 SAMPLE DATE (MM DD YY): 12/04/13  
 pH (std): 6.47  
 CONDUCTANCE (μS cm @ 25°C): 414  
 TEMP. (°C): 13.9  
 TURBIDITY (ntu): 0.3  
 DO (mg/L-ppm): 0.8  
 eH/ORP (mV): 149  
 Other:      Units:     

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

Specific Comments (including purge/well volume calculations if required):  
Draw back through sample tubes

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
12/04/13 Andrew McDonald Andrew McDonald SCS  
 Date Name Signature Company

# FIELD INFORMATION FORM



Site Name: OVSL  
 Site No.:       
 Sample Point: MV-234  
 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: 120413 (MM DD YY)  
 PURGE TIME: 1300 (2400 Hr Clock)  
 ELAPSED HRS: 00:05 (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:  A-Submersible Pump  D-Bailer  
 Sampling Device:  B-Peristaltic Pump  E-Piston Pump  
 X-Other:       
 Filter Device:  Y or  N 0.45  $\mu$  or       $\mu$  (circle or fill in)  
 Filter Type:  A  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): 1391 (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 Site/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)
13:05	400ml/min	6.28	158	12.7	10.7	0.6	478	13.9
13:08		6.29	157	12.8	10.1	0.4	448	" "
13:11		6.28	157	12.8	5.2	0.4	437	
13:14		6.28	156	12.7	4.3	0.3	447	
13:17		6.28	156	12.7	2.8	0.4	454	
13:20		6.28	155	12.7	3.8	0.4	455	

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.

**FIELD DATA**  
 SAMPLE DATE (MM DD YY): 120413  
 pH (std): 6.28  
 CONDUCTANCE ( $\mu$ S/cm @ 25°C): 155  
 TEMP. (°C): 12.7  
 TURBIDITY (ntu): 3.8  
 DO (mg/L-ppm): 0.4  
 eH/ORP (mV): 455  
 Other:       
 Units:     

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

Specific Comments (including purge/well volume calculations if required):  
Dup - 2 taken

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):  
12.04.13 Andrew McDonald Andrew McDonald 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-33A  
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: 12/05/13 (MM DD YY)  
 PURGE TIME: 14:21 (2400 Hr Clock)  
 ELAPSED HRS: 00:05 (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: A A-Submersible Pump D-Bailer  
 Sampling Device: A 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): 6.15 (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 Site/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>14:26</u>	<u>320</u>	<u>6.57</u>	<u>111</u>	<u>9.17</u>	<u>83.38</u>	<u>0.70</u>	<u>-1.1</u>
	<u>14:29</u>		<u>6.60</u>	<u>113</u>	<u>9.11</u>	<u>65.87</u>	<u>1.55</u>	<u>-4.6</u>	<u>6.15</u>
	<u>14:32</u>		<u>6.67</u>	<u>117</u>	<u>9.05</u>	<u>32.35</u>	<u>0.47</u>	<u>-9.7</u>	<u>6.15</u>
	<u>14:35</u>		<u>6.75</u>	<u>121</u>	<u>9.10</u>	<u>27.89</u>	<u>0.44</u>	<u>-13.3</u>	<u>6.15</u>
	<u>14:38</u>		<u>6.83</u>	<u>123</u>	<u>9.04</u>	<u>14.85</u>	<u>0.46</u>	<u>-15.2</u>	<u>6.15</u>
	<u>14:41</u>		<u>6.90</u>	<u>125</u>	<u>9.00</u>	<u>10.53</u>	<u>0.48</u>	<u>-14.6</u>	<u>6.15</u>
	<u>14:44</u>		<u>6.92</u>	<u>125</u>	<u>8.96</u>	<u>8.96</u>	<u>0.48</u>	<u>-14.0</u>	<u>6.15</u>
	<u>14:47</u>		<u>6.95</u>	<u>126</u>	<u>8.94</u>	<u>8.65</u>	<u>0.49</u>	<u>-13.8</u>	<u>6.15</u>
	<u>14:50</u>		<u>6.96</u>	<u>126</u>	<u>8.92</u>	<u>8.58</u>	<u>0.50</u>	<u>-13.0</u>	<u>6.15</u>
			+/- 0.2	+/- 3%	-	-	+/- 10%	+/- 25 mV	Stabilize

Suggested range for 3 consec. readings or note Permit/State requirements: 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): 12/05/13  
 pH (std): 6.96  
 CONDUCTANCE (umhos/cm @ 25°C): 126  
 TEMP. (°C): 8.92  
 TURBIDITY (ntu): 8.58  
 DO (mg/L-ppm): 0.50  
 eH/ORP (mV): -13.0  
 Other: 1450  
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:      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):  
12/5/13 Date  
Matthew Han Name  
     Signature  
SES Company

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

# FIELD INFORMATION FORM



Site Name: OU3L  
 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: 12/05/13 (MM DD YY)  
 PURGE TIME: 09:44 (2400 Hr Clock)  
 ELAPSED HRS: 00:05 (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:  A A-Submersible Pump D-Bailer  
 Sampling Device:  A 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  
 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): 797 (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 Site/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)
09:49	320	6.20	114	12.47	51.22	1.12	135.2	8.04
09:52	↓	6.20	113	12.42	14.36	0.91	130.7	8.04
09:55	↓	6.19	110	12.44	8.93	0.93	128.6	8.04
09:58	↓	6.20	110	12.52	5.81	0.94	127.9	8.04
10:01	↓	6.20	110	12.48	4.59	0.95	127.5	8.04
10:04	↓	6.20	110	12.58	3.16	0.94	126.9	8.04

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: 12/05/13 (MM DD YY)  
 pH (std): 6.20  
 CONDUCTANCE (μmhos/cm @ 25°C): 110  
 TEMP. (°C): 12.58  
 TURBIDITY (ntu): 3.16  
 DO (mg/L-ppm): 0.94  
 eH/ORP (mV): 126.9  
 Other: 1004 Units

*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: Clear Precipitation:  Y or  N

**FIELD COMMENTS**

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):

Date: 12/5/13 Name: Matt O'Hara Signature: [Signature] Company: SES

# 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: 120513 (MM DD YY)  
 PURGE TIME: 1037 (2400 Hr Clock)  
 ELAPSED HRS: 00:05 (hrs:min)  
 WATER VOL IN CASING: \_\_\_\_\_ (Gallons)  
 ACTUAL VOL PURGED: \_\_\_\_\_ (Gallons)  
 WELL VOLs PURGED: \_\_\_\_\_ (ft/msl)

*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: A A-Submersible Pump D-Bailer  
 Sampling Device: A 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): 20.29 (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 Site/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>10:42</u>	<u>400 ml/min</u>	<u>6.31</u>	<u>247</u>	<u>10.45</u>	<u>113.95</u>	<u>1.93</u>	<u>-79.3</u>
	<u>10:45</u>	<u>300</u>	<u>6.32</u>	<u>242</u>	<u>10.64</u>	<u>11.02</u>	<u>0.70</u>	<u>-81.0</u>	
	<u>10:48</u>		<u>6.32</u>	<u>242</u>	<u>10.68</u>		<u>0.58</u>	<u>-81.1</u>	<u>21.04</u>
	<u>10:51</u>	<u>290</u>	<u>6.32</u>	<u>240</u>	<u>10.68</u>	<u>9.40</u>	<u>0.46</u>	<u>-78.9</u>	<u>21.11</u>
	<u>10:54</u>		<u>6.31</u>	<u>240</u>	<u>10.92</u>	<u>6.84</u>	<u>0.39</u>	<u>-72.0</u>	<u>21.12</u>
	<u>10:57</u>		<u>6.31</u>	<u>241</u>	<u>10.71</u>	<u>5.48</u>	<u>0.35</u>	<u>-72.4</u>	
	<u>11:00</u>		<u>6.31</u>	<u>242</u>	<u>10.73</u>	<u>4.75</u>	<u>0.32</u>	<u>-78.5</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): 120513  
 pH (std): 6.31  
 CONDUCTANCE (μmhos/cm @ 25°C): 242  
 TEMP. (°C): 10.73  
 TURBIDITY (ntu): 4.75  
 DO (mg/L - ppm): 0.32  
 eH/ORP (mV): -78.5  
 Other: \_\_\_\_\_ Units: \_\_\_\_\_  
 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: clear Other: \_\_\_\_\_  
 Weather Conditions (required daily, or as conditions change): \_\_\_\_\_ Direction/Speed: \_\_\_\_\_ Outlook: sunny 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):  
12.05.13 Andrew McDonald Andrew McDonald SCS  
 Date Name Signature Company

APPENDIX B

FOURTH QUARTER 2013 DATA VALIDATION  
AND  
ANALYTICAL DATA REPORTS

(ANALYTICAL DATA REPORTS AVAILABLE ON CD)

## DATA VALIDATION REPORT

### Introduction

**Project:** Olympic View Sanitary Landfill      Project No.: 04204027.17  
**Event Period:** Fourth Quarter 2013, December 2013  
**Participating Laboratories:** TestAmerica Denver, TestAmerica Buffalo, Analytical Resources Inc.  
**Analyses:**

#### TA Denver:

##### **Total and Dissolved Metals**

Method 6020 (Sb, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, Tl, V, Zn)

Method 6010B Ca, Co, Fe, Mg, Mn, K, Na)

##### **General Chemistry**

Nitrate/Nitrite – EPA 353.2 and MCAWW 353.2

Alkalinity (Total and Bicarbonate) – SM SM 2320B

Chloride and Sulfate – MCAWW 300.0

Ammonia – MCAWW 350.1

TDS – SM SM 2540C

TSS – SM SM 2540D

TOC – SM SM 5310B

#### ARI Tukwila

**Total and Dissolved Arsenic** – E200.8

#### TA Buffalo

**Volatile Organic Compounds** - 8260B, 8260B SIM, 8260C, and 8260C SIM

A summary of sample identifications and requested analyses are provided in the following table.

Sample Location	TA Sample Identification	ARI Sample Identification
MW-2B1	280-50090-1	13-26928-XQ72P, 13-26946-XQ72AH
MW-4	280-50359-2	13-27568-XR80A, 13-27573-XR80F
MW-13A	280-49930-5	13-26918-XQ72F, 13-26936-XQ72X
MW-13B	280-49930-6	13-26919-XQ72G, 13-26937-XQ72Y
MW-15R	280-49982-4	13-26925-XQ72M, 13-26943-XQ72AE
MW-16	280-50359-3	13-27571-XR80D, 13-27576-XR80I
MW-19C	280-49930-4	13-26917-XQ72E, 13-26935-XQ72W
MW-20	280-49982-1	13-26922-XQ72J, 13-26940-XQ72AB
MW-23A	280-49982-2	13-26923-XQ72K, 13-26941-XQ72AC



Sample Location	TA Sample Identification	ARI Sample Identification
Dup-2 (MW-23A)	280-49982-6	13-26927-XQ72O, 13-26945-XQ72AG
MW-24	280-49982-5	13-26926-XQ72N, 13-26944-XQ72AF
MW-29A	280-49930-1	13-26914-XQ72B, 13-26932-XQ72T
Dup-1 (MW-29A)	280-49930-2	13-26933-XQ72U, 13-26915-XQ72C
MW-32	280-50359-4	13-27570-XR80C, 13-27575-XR80H
MW-33A	280-50090-4	13-26930-XQ72R, 13-26948-XQ72AJ
MW-33C	280-50359-5	13-27572-XR80E, 13-27577-XR80J
MW-34A	280-49930-7	13-26920-XQ72H, 13-26938-XQ72Z
MW-34C	280-49930-8	13-26921-XQ72I, 13-26939-XQ72AA
MW-35	280-50359-1	13-27569-XR80B, 13-27574-XR80G
MW-36A	280-49982-3	13-26924-XQ72L, 13-26942-XQ72AD
MW-39	280-50090-2	13-26929-XQ72Q, 13-26947-XQ72AI
MW-42	280-49930-3	13-26916-XQ72D, 13-26934-XQ72V
MW-43	280-49836-1	13-26913-XQ72A, 13-26931-XQ72S
L-INF	280-50392-1	NA

### 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 event-specific 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.

### Holding Time

All analyses were performed within the recommended maximum holding time with the following exception:

Due to a FedEx delivery issues, samples from lab group number 280-50090-1 were delayed and the 48 hour hold time for nitrite was not met. This impacted the nitrate concentration calculations. These samples are flagged with an "H" flag to indicate that they could potentially be impacted by the delay in analysis outside of the standard hold time.

## Method Blanks

Analysis of a method blank makes it possible to determine the existence and magnitude of contamination resulting from laboratory activities on the measured sample concentration.

The following analytes were detected in the laboratory method blank (MB):

Analyte	CAS No.	Result	Unit	Flags	Lab Delivery Group
Lead, Total	7439-92-1	0.00106	mg/L		280-49930-1
Carbon Disulfide	75-15-0	0.54	µg/L	J	280-49930-1
TDS	NA	9	mg/L		

J = concentration is estimated

## 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 the following exceptions:

Lab Delivery Group	Analyte	Issue	Action
280-49930-1	ethyl acetate	Analytes were co-eluted and exceeded control values.	None. Analytes were not detected in samples.
	2-butanone		

## Matrix Spike and Duplicate Analyses

Data for matrix spike and matrix spike duplicate (MS/MSD) analysis were collected to evaluate potential matrix contribution to measured sample concentrations. The MS/MSDs on samples and batch blanks were in control for all methods in all lots with the following exceptions:

Lab Delivery Group	Analyte	MS/MSD Source	Interference Effect
280-49930-1	Lead, Dissolved	Other	Not determined
	Thallium, Dissolved	Other	Not determined
	Manganese, Dissolved	Other	Not determined
	Manganese, Total	MW-29A	Not determined

Lab Delivery Group	Analyte	MS/MSD Source	Interference Effect
280-49982-1	TCE	Other	Not determined
	Ammonia	Other	Not determined
	Manganese, Total	MW-20	Not determined
280-50090-1	1,1-DCE	Other	Not determined
	Manganese, Total	Other	Not determined
	Lead, Dissolved	MW-39	Possible positive interference
280-50359-1	Antimony, Total	Other	Not determined
	Barium, Total	Other	Not determined
	Ammonia	MW-33C	Possible positive interference
280-50392-1	TCE	Other	Not determined
	Ammonia	MW-33C	Possible positive interference

### Trip Blanks

The compounds 2-butanone and ethyl acetate were noted to be co-eluted in laboratory method blanks, but were not detected in trip blanks. No other analytes were observed.

### Field Duplicates

Summary of the results from the field duplicate samples and their associated primary samples:

Analyte	Units	MW-23A	MW-23A (Dup2)	RPD (%)	MW-29A (Dup1)	MW-29A	RPD (%)
Alkalinity, Bicarbonate	mg/L	100	100	0	45	46	2
Alkalinity, Total	mg/L	100	100	0	45	46	2
Ammonia (as N)	mg/L	0.047	0.05	6	0.077	0.076	1
Antimony, Total	mg/L	0.0024	0.001 U	58	--	--	NA
Barium, Dissolved	mg/L	0.012	0.012	0	0.011	0.011	0
Barium, Total	mg/L	0.012	0.012	0	0.011	0.01	9
Calcium, Dissolved	mg/L	20	21	5	6.7	6.6	1
Chloride	mg/L	2.1	2.1	0	1.6	1.7	6
Iron, Dissolved	mg/L	0.82	0.83	1	3.9	3.9	0
Iron, Total	mg/L	0.98	1	2	3.9	3.8	3
Magnesium, Dissolved	mg/L	9.4	9.6	2	3.8	3.7	3
Manganese, Dissolved	mg/L	2.2	2.1	5	1.3	1.3	0
Manganese, Total	mg/L	2.2	2.1	5	1.3	1.2	8

Analyte	Units	MW-23A	MW-23A (Dup2)	RPD (%)	MW-29A (Dup1)	MW-29A	RPD (%)
Potassium, Dissolved	mg/L	1	1.1	10	--	--	NA
Selenium, Dissolved	mg/L	--	--	NA	0.0013	0.001 U	23
Sodium, Dissolved	mg/L	6.4	6.5	2	3.4	3.4	0
Sulfate	mg/L	4	4	0	--	--	NA
Total Dissolved Solids (TDS)	mg/L	110	160	45	59 B	64 B	8
Total Organic Carbon	mg/L	--	--	NA	1.5	1.5	0
Vinyl chloride	ug/L	0.02	0.017 J	15	--	--	NA

The target for RPDs for all analytes is within  $\leq 20\%$  RPD greater than five percent of the method reporting limit. The results indicate that measured concentrations for duplicates analysis meet these criteria with the exception of total dissolved solids at MW-23A with an RPD of 45%.

### 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 (MTCA Method A).

### 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.

## ANALYTICAL REPORT

Job Number: 280-49836-1

Job Description: WA02|Olympic View Sanitary LF

For:  
Waste Management  
Olympic View Transfer Station  
9300 Southwest Barney White Road  
Bremerton, WA 98312  
Attention: Mr. Charles Luckie



Approved for release.  
Betsy A Sara  
Project Manager II  
12/23/2013 12:49 PM

---

Betsy A Sara, Project Manager II  
4955 Yarrow Street, Arvada, CO, 80002  
(303)736-0189  
betsy.sara@testamericainc.com  
12/23/2013

cc: Mr. Sam Adlington  
Mr. Matt O'Hare  
Mr. Phil Perley  
Ms. Elena Ramirez  
Mr. Dan Venchiarutti

The test results in this report relate only to the samples in this report and meet all requirements of NELAP, 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.

**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 . . . . .	17
QC Results . . . . .	18
Qc Association Summary . . . . .	19
Surrogate Recovery Report . . . . .	24
Qc Reports . . . . .	26
Laboratory Chronicle . . . . .	62
Client Chain of Custody . . . . .	67
Sample Receipt Checklist . . . . .	68

## CASE NARRATIVE

Client: Waste Management

Project: WA02|Olympic View Sanitary LF

Report Number: 280-49836-1

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 12/03/2013; the sample arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 1.1 C.

A Trip Blank was listed on the chain of custody but was not received. The client was notified on 12/4/2013.

### Holding Times

All holding times were within established control limits.

### Method Blanks

All 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 percent recoveries and/or the relative percent difference of the MS/MSD performed on sample MW-43 was outside control limits for Dissolved Manganese Method 6020 because the sample concentration was greater than four times the spike amount.

All other MS and MSD samples were within established control limits.

### General Comments

The analyses for Volatile Organics by Method 8260C and Volatile Organics by Method 8260C 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: 280-49836-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-49836-1</b>	<b>MW-43</b>					
Sulfate		1.6		1.0	mg/L	300.0
Ammonia (as N)		0.12		0.030	mg/L	350.1
Nitrate as N		0.95		0.050	mg/L	353.2
Alkalinity, Total (As CaCO <sub>3</sub> )		23		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO <sub>3</sub> )		23		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		34		5.0	mg/L	SM 2540C
Total Organic Carbon - Average		1.2		1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		4.5		0.040	mg/L	6010B
Iron, Dissolved		0.87		0.060	mg/L	6010B
Magnesium, Dissolved		1.9		0.050	mg/L	6010B
Sodium, Dissolved		3.1		1.0	mg/L	6010B
Barium, Dissolved		0.0052		0.0010	mg/L	6020
Manganese, Dissolved		0.24		0.0010	mg/L	6020
<b><i>Total Recoverable</i></b>						
Iron, Total		0.94		0.060	mg/L	6010B
Barium, Total		0.0057		0.0010	mg/L	6020
Manganese, Total		0.27		0.0010	mg/L	6020



## METHOD SUMMARY

Client: Waste Management

Job Number: 280-49836-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		SW846 3005A
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Metals (ICP/MS)	TAL DEN	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		SW846 3005A
Metals (ICP/MS)	TAL DEN	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		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	
Alkalinity	TAL DEN	SM SM 2320B	
Solids, Total Dissolved (TDS)	TAL DEN	SM SM 2540C	
Solids, Total Suspended (TSS)	TAL DEN	SM SM 2540D	
Organic Carbon, Total (TOC)	TAL DEN	SM SM 5310B	
Volatile Organic Compounds by GC/MS	TAL BUF	SW846 8260C	
Purge and Trap	TAL BUF		SW846 5030C
Volatile Organic Compounds (GC/MS)	TAL BUF	SW846 8260C SIM	
Purge and Trap	TAL BUF		SW846 5030C

**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: 280-49836-1

<b>Method</b>	<b>Analyst</b>	<b>Analyst ID</b>
SW846 8260C	Dias, Nicole M	NMD1
SW846 8260C SIM	Cwiklinski, Charles D	CDC
SW846 6010B	Scott, Samantha J	SJS
SW846 6020	Trudell, Lynn-Anne M	LMT
MCAWW 300.0	Allen, Andrew J	AJA
MCAWW 350.1	Elkin, David M	DME
EPA 353.2	Sullivan, Roxanne K	RKS
SM SM 2320B	Hoefler, Alexandra F	AFH
SM SM 2540C	Janssen, Elizabeth L	ELJ
SM SM 2540D	Neeley, Beth A	BAN
SM SM 5310B	Graham, Shane M	SMG

## SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-49836-1

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
280-49836-1	MW-43	Water	12/02/2013 1249	12/03/2013 0945
280-49836-1MS	MW-43	Water	12/02/2013 1249	12/03/2013 0945
280-49836-1MSD	MW-43	Water	12/02/2013 1249	12/03/2013 0945

# SAMPLE RESULTS

Client: Waste Management

Job Number: 280-49836-1

Client Sample ID: MW-43

Lab Sample ID: 280-49836-1

Date Sampled: 12/02/2013 1249

Client Matrix: Water

Date Received: 12/03/2013 0945

## 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-156300	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33090.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/07/2013 1709			Final Weight/Volume:	5 mL
Prep Date:	12/07/2013 1709				

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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-49836-1

Client Sample ID: MW-43

Lab Sample ID: 280-49836-1

Date Sampled: 12/02/2013 1249

Client Matrix: Water

Date Received: 12/03/2013 0945

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-156300	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33090.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/07/2013 1709			Final Weight/Volume:	5 mL
Prep Date:	12/07/2013 1709				

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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-49836-1

**Client Sample ID: MW-43**

Lab Sample ID: 280-49836-1

Date Sampled: 12/02/2013 1249

Client Matrix: Water

Date Received: 12/03/2013 0945

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-156300	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33090.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/07/2013 1709			Final Weight/Volume:	5 mL
Prep Date:	12/07/2013 1709				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		66 - 137
4-Bromofluorobenzene (Surr)	98		73 - 120
Toluene-d8 (Surr)	102		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-49836-1

**Client Sample ID: MW-43**

Lab Sample ID: 280-49836-1

Date Sampled: 12/02/2013 1249

Client Matrix: Water

Date Received: 12/03/2013 0945

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-156300	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33090.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/07/2013 1709			Final Weight/Volume:	5 mL
Prep Date:	12/07/2013 1709				

**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: 280-49836-1

**Client Sample ID: MW-43**

Lab Sample ID: 280-49836-1

Date Sampled: 12/02/2013 1249

Client Matrix: Water

Date Received: 12/03/2013 0945

---

**8260C SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260C SIM	Analysis Batch:	480-157025	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J6790.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 1903			Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 1903				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.0040	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	139		50 - 150
TBA-d9 (Surr)	131		50 - 150

Client: Waste Management

Job Number: 280-49836-1

Client Sample ID: MW-43

Lab Sample ID: 280-49836-1

Date Sampled: 12/02/2013 1249

Client Matrix: Water

Date Received: 12/03/2013 0945

**6010B Metals (ICP)-Total Recoverable**

Analysis Method:	6010B	Analysis Batch:	280-205172	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-203672	Lab File ID:	26a01121213.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/12/2013 1620			Final Weight/Volume:	50 mL
Prep Date:	12/04/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	0.94		0.060	0.060

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-204335	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-203773	Lab File ID:	26A07120613.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/07/2013 0506			Final Weight/Volume:	50 mL
Prep Date:	12/04/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	4.5		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	0.87		0.060	0.060
Magnesium, Dissolved	1.9		0.050	0.050
Potassium, Dissolved	ND		1.0	1.0

Analysis Method:	6010B	Analysis Batch:	280-204774	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-203773	Lab File ID:	26a03121013.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/10/2013 1554			Final Weight/Volume:	50 mL
Prep Date:	12/04/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Sodium, Dissolved	3.1		1.0	1.0

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-203914	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-203671	Lab File ID:	144SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/04/2013 2104			Final Weight/Volume:	50 mL
Prep Date:	12/04/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	0.0057		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020

**Analytical Data**

Client: Waste Management

Job Number: 280-49836-1

**Client Sample ID: MW-43**

Lab Sample ID: 280-49836-1

Date Sampled: 12/02/2013 1249

Client Matrix: Water

Date Received: 12/03/2013 0945

**6020 Metals (ICP/MS)-Total Recoverable**

Analyte	Result (mg/L)	Qualifier	RL	RL
Lead, Total	ND		0.0010	0.0010
Manganese, Total	0.27		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Selenium, Total	ND		0.0010	0.0010
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	ND		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method: 6020	Analysis Batch: 280-204363	Instrument ID: MT_077
Prep Method: 3005A	Prep Batch: 280-203834	Lab File ID: 144SMPL.d
Dilution: 1.0		Initial Weight/Volume: 50 mL
Analysis Date: 12/05/2013 2047		Final Weight/Volume: 50 mL
Prep Date: 12/05/2013 0730		

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.0052		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	0.24		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	ND		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

Client: Waste Management

Job Number: 280-49836-1

General Chemistry

Client Sample ID: MW-43

Lab Sample ID: 280-49836-1

Date Sampled: 12/02/2013 1249

Client Matrix: Water

Date Received: 12/03/2013 0945

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	ND		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205400	Analysis Date: 12/14/2013 1149					
Sulfate	1.6		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205400	Analysis Date: 12/14/2013 1149					
Ammonia (as N)	0.12		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-205244	Analysis Date: 12/13/2013 1108					
Nitrate as N	0.95		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-205552	Analysis Date: 12/03/2013 1954					
Alkalinity, Total (As CaCO3)	23		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-203939	Analysis Date: 12/04/2013 2050					
Alkalinity, Bicarbonate (As CaCO3)	23		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-203939	Analysis Date: 12/04/2013 2050					
Total Dissolved Solids (TDS)	34		mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-204018	Analysis Date: 12/05/2013 1250					
Total Suspended Solids	ND		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-203909	Analysis Date: 12/05/2013 0755					
Total Organic Carbon - Average	1.2		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-204724	Analysis Date: 12/10/2013 2322					

## DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-49836-1

Lab Section	Qualifier	Description
GC/MS VOA	F	MS/MSD Recovery and/or RPD exceeds the control limits
Metals	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

# QUALITY CONTROL RESULTS

## Quality Control Results

Client: Waste Management

Job Number: 280-49836-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Analysis Batch:480-156300</b>					
LCS 480-156300/5	Lab Control Sample	T	Water	8260C	
MB 480-156300/7	Method Blank	T	Water	8260C	
280-49836-1	MW-43	T	Water	8260C	
280-49836-1MS	Matrix Spike	T	Water	8260C	
280-49836-1MSD	Matrix Spike Duplicate	T	Water	8260C	
<b>Analysis Batch:480-157025</b>					
LCS 480-157025/5	Lab Control Sample	T	Water	8260C SIM	
LCSD 480-157025/6	Lab Control Sample Duplicate	T	Water	8260C SIM	
MB 480-157025/7	Method Blank	T	Water	8260C SIM	
280-49836-1	MW-43	T	Water	8260C SIM	
280-49836-1MS	Matrix Spike	T	Water	8260C SIM	
280-49836-1MSD	Matrix Spike Duplicate	T	Water	8260C SIM	

#### Report Basis

T = Total

## Quality Control Results

Client: Waste Management

Job Number: 280-49836-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
<b>Metals</b>					
<b>Prep Batch: 280-203671</b>					
LCS 280-203671/2-A	Lab Control Sample	R	Water	3005A	
MB 280-203671/1-A	Method Blank	R	Water	3005A	
280-49836-1	MW-43	R	Water	3005A	
280-49836-1MS	Matrix Spike	R	Water	3005A	
280-49836-1MSD	Matrix Spike Duplicate	R	Water	3005A	
<b>Prep Batch: 280-203672</b>					
LCS 280-203672/2-A	Lab Control Sample	R	Water	3005A	
MB 280-203672/1-A	Method Blank	R	Water	3005A	
280-49836-1	MW-43	R	Water	3005A	
280-49836-1MS	Matrix Spike	R	Water	3005A	
280-49836-1MSD	Matrix Spike Duplicate	R	Water	3005A	
<b>Prep Batch: 280-203773</b>					
LCS 280-203773/2-A	Lab Control Sample	R	Water	3005A	
MB 280-203773/1-A	Method Blank	R	Water	3005A	
280-49836-1	MW-43	D	Water	3005A	
280-49836-1MS	Matrix Spike	D	Water	3005A	
280-49836-1MSD	Matrix Spike Duplicate	D	Water	3005A	
<b>Prep Batch: 280-203834</b>					
LCS 280-203834/2-A	Lab Control Sample	R	Water	3005A	
MB 280-203834/1-A	Method Blank	R	Water	3005A	
280-49836-1	MW-43	D	Water	3005A	
280-49836-1MS	Matrix Spike	D	Water	3005A	
280-49836-1MSD	Matrix Spike Duplicate	D	Water	3005A	
<b>Analysis Batch:280-203914</b>					
LCS 280-203671/2-A	Lab Control Sample	R	Water	6020	280-203671
MB 280-203671/1-A	Method Blank	R	Water	6020	280-203671
280-49836-1	MW-43	R	Water	6020	280-203671
280-49836-1MS	Matrix Spike	R	Water	6020	280-203671
280-49836-1MSD	Matrix Spike Duplicate	R	Water	6020	280-203671
<b>Analysis Batch:280-204335</b>					
LCS 280-203672/2-A	Lab Control Sample	R	Water	6010B	280-203672
MB 280-203672/1-A	Method Blank	R	Water	6010B	280-203672
LCS 280-203773/2-A	Lab Control Sample	R	Water	6010B	280-203773
MB 280-203773/1-A	Method Blank	R	Water	6010B	280-203773
280-49836-1	MW-43	R	Water	6010B	280-203672
280-49836-1MS	Matrix Spike	R	Water	6010B	280-203672
280-49836-1	MW-43	D	Water	6010B	280-203773
280-49836-1MS	Matrix Spike	D	Water	6010B	280-203773
280-49836-1MSD	Matrix Spike Duplicate	D	Water	6010B	280-203773

TestAmerica Denver



## Quality Control Results

Client: Waste Management

Job Number: 280-49836-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Analysis Batch:280-204363</b>					
LCS 280-203834/2-A	Lab Control Sample	R	Water	6020	280-203834
MB 280-203834/1-A	Method Blank	R	Water	6020	280-203834
280-49836-1	MW-43	D	Water	6020	280-203834
280-49836-1MS	Matrix Spike	D	Water	6020	280-203834
280-49836-1MSD	Matrix Spike Duplicate	D	Water	6020	280-203834
<b>Analysis Batch:280-204774</b>					
LCS 280-203773/2-A	Lab Control Sample	R	Water	6010B	280-203773
MB 280-203773/1-A	Method Blank	R	Water	6010B	280-203773
280-49836-1	MW-43	D	Water	6010B	280-203773
280-49836-1MS	Matrix Spike	D	Water	6010B	280-203773
280-49836-1MSD	Matrix Spike Duplicate	D	Water	6010B	280-203773
<b>Analysis Batch:280-205172</b>					
LCS 280-203672/2-A	Lab Control Sample	R	Water	6010B	280-203672
MB 280-203672/1-A	Method Blank	R	Water	6010B	280-203672
280-49836-1	MW-43	R	Water	6010B	280-203672
280-49836-1MS	Matrix Spike	R	Water	6010B	280-203672
280-49836-1MSD	Matrix Spike Duplicate	R	Water	6010B	280-203672

**Report Basis**

D = Dissolved

R = Total Recoverable

## Quality Control Results

Client: Waste Management

Job Number: 280-49836-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
<b>General Chemistry</b>					
<b>Analysis Batch:280-203909</b>					
LCS 280-203909/2	Lab Control Sample	T	Water	SM 2540D	
LCSD 280-203909/3	Lab Control Sample Duplicate	T	Water	SM 2540D	
MB 280-203909/1	Method Blank	T	Water	SM 2540D	
280-49836-1	MW-43	T	Water	SM 2540D	
280-49940-A-1 DU	Duplicate	T	Water	SM 2540D	
<b>Analysis Batch:280-203939</b>					
LCS 280-203939/4	Lab Control Sample	T	Water	SM 2320B	
LCSD 280-203939/5	Lab Control Sample Duplicate	T	Water	SM 2320B	
MB 280-203939/6	Method Blank	T	Water	SM 2320B	
280-49831-F-2 DU	Duplicate	T	Water	SM 2320B	
280-49836-1	MW-43	T	Water	SM 2320B	
<b>Analysis Batch:280-204018</b>					
LCS 280-204018/2	Lab Control Sample	T	Water	SM 2540C	
LCSD 280-204018/3	Lab Control Sample Duplicate	T	Water	SM 2540C	
MB 280-204018/1	Method Blank	T	Water	SM 2540C	
280-49836-1	MW-43	T	Water	SM 2540C	
280-49838-A-7 DU	Duplicate	T	Water	SM 2540C	
<b>Analysis Batch:280-204724</b>					
LCS 280-204724/35	Lab Control Sample	T	Water	SM 5310B	
LCSD 280-204724/36	Lab Control Sample Duplicate	T	Water	SM 5310B	
MB 280-204724/37	Method Blank	T	Water	SM 5310B	
280-49836-1	MW-43	T	Water	SM 5310B	
280-49836-1MS	Matrix Spike	T	Water	SM 5310B	
280-49836-1MSD	Matrix Spike Duplicate	T	Water	SM 5310B	
<b>Analysis Batch:280-205244</b>					
LCS 280-205244/19	Lab Control Sample	T	Water	350.1	
LCSD 280-205244/20	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-205244/21	Method Blank	T	Water	350.1	
280-49836-1	MW-43	T	Water	350.1	
280-49836-1MS	Matrix Spike	T	Water	350.1	
280-49836-1MSD	Matrix Spike Duplicate	T	Water	350.1	
<b>Analysis Batch:280-205400</b>					
LCS 280-205400/4	Lab Control Sample	T	Water	300.0	
LCSD 280-205400/5	Lab Control Sample Duplicate	T	Water	300.0	
MB 280-205400/6	Method Blank	T	Water	300.0	
280-49836-1	MW-43	T	Water	300.0	
280-49836-1DU	Duplicate	T	Water	300.0	
280-49836-1MS	Matrix Spike	T	Water	300.0	
280-49836-1MSD	Matrix Spike Duplicate	T	Water	300.0	

TestAmerica Denver

# Quality Control Results

Client: Waste Management

Job Number: 280-49836-1

## QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-205552</b>					
MB 280-205552/1	Method Blank	T	Water	353.2	
280-49836-1	MW-43	T	Water	353.2	

### Report Basis

T = Total

Client: Waste Management

Job Number: 280-49836-1

**Surrogate Recovery Report**

**8260C Volatile Organic Compounds by GC/MS**

**Client Matrix: Water**

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec
280-49836-1	MW-43	98	98	102
MB 480-156300/7		99	100	103
LCS 480-156300/5		101	106	102
280-49836-1 MS	MW-43 MS	102	106	102
280-49836-1 MSD	MW-43 MSD	102	104	100

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	66-137
BFB = 4-Bromofluorobenzene (Surr)	73-120
TOL = Toluene-d8 (Surr)	71-126

Client: Waste Management

Job Number: 280-49836-1

**Surrogate Recovery Report**

**8260C SIM Volatile Organic Compounds (GC/MS)**

**Client Matrix: Water**

Lab Sample ID	Client Sample ID	DBFM %Rec	TBA %Rec
280-49836-1	MW-43	139	131
MB 480-157025/7		122	128
LCS 480-157025/5		120	125
LCSD 480-157025/6		120	124
280-49836-1 MS	MW-43 MS	136	141
280-49836-1 MSD	MW-43 MSD	133	127

Surrogate	Acceptance Limits
DBFM = Dibromofluoromethane (Surr)	50-150
TBA = TBA-d9 (Surr)	50-150

## Quality Control Results

Client: Waste Management

Job Number: 280-49836-1

**Method Blank - Batch: 480-156300**

**Method: 8260C  
Preparation: 5030C**

Lab Sample ID: MB 480-156300/7  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/07/2013 1238  
 Prep Date: 12/07/2013 1238  
 Leach Date: N/A

Analysis Batch: 480-156300  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973S  
 Lab File ID: S33078.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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-49836-1

**Method Blank - Batch: 480-156300**

**Method: 8260C  
Preparation: 5030C**

Lab Sample ID: MB 480-156300/7  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/07/2013 1238  
 Prep Date: 12/07/2013 1238  
 Leach Date: N/A

Analysis Batch: 480-156300  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973S  
 Lab File ID: S33078.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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-49836-1

**Method Blank - Batch: 480-156300**

**Method: 8260C  
Preparation: 5030C**

Lab Sample ID:	MB 480-156300/7	Analysis Batch:	480-156300	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S33078.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/07/2013 1238	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/07/2013 1238				
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)	99	66 - 137
4-Bromofluorobenzene (Surr)	100	73 - 120
Toluene-d8 (Surr)	103	71 - 126

**Method Blank TICs- Batch: 480-156300**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qual
67-72-1	Hexachloroethane TIC	0.00	ND	



## Quality Control Results

Client: Waste Management

Job Number: 280-49836-1

**Lab Control Sample - Batch: 480-156300**

**Method: 8260C**

**Preparation: 5030C**

Lab Sample ID: LCS 480-156300/5	Analysis Batch: 480-156300	Instrument ID: HP5973S
Client Matrix: Water	Prep Batch: N/A	Lab File ID: S33076.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/07/2013 1155	Units: ug/L	Final Weight/Volume: 5 mL
Prep Date: 12/07/2013 1155		
Leach Date: N/A		

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethane	25.0	24.2	97	71 - 129	
1,1-Dichloroethene	25.0	23.8	95	58 - 121	
1,2,4-Trimethylbenzene	25.0	24.3	97	76 - 121	
1,2-Dichlorobenzene	25.0	24.4	98	80 - 124	
1,2-Dichloroethane	25.0	22.3	89	75 - 127	
Benzene	25.0	24.5	98	71 - 124	
Chlorobenzene	25.0	24.0	96	72 - 120	
cis-1,2-Dichloroethene	25.0	24.5	98	74 - 124	
Ethylbenzene	25.0	24.5	98	77 - 123	
Methyl tert-butyl ether	25.0	23.2	93	64 - 127	
m-Xylene & p-Xylene	50.0	48.8	98	76 - 122	
o-Xylene	25.0	24.5	98	76 - 122	
Tetrachloroethene	25.0	25.0	100	74 - 122	
Toluene	25.0	24.5	98	80 - 122	
trans-1,2-Dichloroethene	25.0	23.9	95	73 - 127	
Trichloroethene	25.0	24.6	99	74 - 123	
Surrogate		% Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		101		66 - 137	
4-Bromofluorobenzene (Surr)		106		73 - 120	
Toluene-d8 (Surr)		102		71 - 126	

## Quality Control Results

Client: Waste Management

Job Number: 280-49836-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-156300**

**Method: 8260C  
Preparation: 5030C**

MS Lab Sample ID: 280-49836-1	Analysis Batch: 480-156300	Instrument ID: HP5973S
Client Matrix: Water	Prep Batch: N/A	Lab File ID: S33091.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/07/2013 1730		Final Weight/Volume: 5 mL
Prep Date: 12/07/2013 1730		
Leach Date: N/A		

MSD Lab Sample ID: 280-49836-1	Analysis Batch: 480-156300	Instrument ID: HP5973S
Client Matrix: Water	Prep Batch: N/A	Lab File ID: S33092.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/07/2013 1752		Final Weight/Volume: 5 mL
Prep Date: 12/07/2013 1752		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
1,1-Dichloroethane	111	115	71 - 129	4	20		
1,1-Dichloroethene	114	116	58 - 121	2	16		
1,2,4-Trimethylbenzene	101	107	76 - 121	5	20		
1,2-Dichlorobenzene	109	114	80 - 124	5	20		
1,2-Dichloroethane	99	106	75 - 127	7	20		
Benzene	110	115	71 - 124	5	13		
Chlorobenzene	108	111	72 - 120	3	25		
cis-1,2-Dichloroethene	111	115	74 - 124	4	15		
Ethylbenzene	109	113	77 - 123	4	15		
Methyl tert-butyl ether	71	101	64 - 127	36	37		
m-Xylene & p-Xylene	106	110	76 - 122	4	16		
o-Xylene	105	110	76 - 122	5	16		
Tetrachloroethene	113	117	74 - 122	4	20		
Toluene	107	111	80 - 122	4	15		
trans-1,2-Dichloroethene	112	113	73 - 127	0	20		
Trichloroethene	110	117	74 - 123	6	16		
Surrogate		MS % Rec	MSD % Rec			Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		102	102			66 - 137	
4-Bromofluorobenzene (Surr)		106	104			73 - 120	
Toluene-d8 (Surr)		102	100			71 - 126	

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-156300**

**Method: 8260C  
Preparation: 5030C**

MS Lab Sample ID: 280-49836-1                      Units: ug/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/07/2013 1730  
 Prep Date: 12/07/2013 1730  
 Leach Date: N/A

MSD Lab Sample ID: 280-49836-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/07/2013 1752  
 Prep Date: 12/07/2013 1752  
 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	27.7	28.8
1,1-Dichloroethene	ND	25.0	25.0	28.5	29.0
1,2,4-Trimethylbenzene	ND	25.0	25.0	25.4	26.6
1,2-Dichlorobenzene	ND	25.0	25.0	27.2	28.5
1,2-Dichloroethane	ND	25.0	25.0	24.9	26.6
Benzene	ND	25.0	25.0	27.5	28.9
Chlorobenzene	ND	25.0	25.0	26.9	27.8
cis-1,2-Dichloroethene	ND	25.0	25.0	27.7	28.7
Ethylbenzene	ND	25.0	25.0	27.2	28.3
Methyl tert-butyl ether	ND	25.0	25.0	17.6	25.3
m-Xylene & p-Xylene	ND	50.0	50.0	53.1	55.2
o-Xylene	ND	25.0	25.0	26.3	27.6
Tetrachloroethene	ND	25.0	25.0	28.3	29.3
Toluene	ND	25.0	25.0	26.8	27.8
trans-1,2-Dichloroethene	ND	25.0	25.0	28.1	28.2
Trichloroethene	ND	25.0	25.0	27.5	29.2

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Method Blank - Batch: 480-157025**

**Method: 8260C SIM  
Preparation: 5030C**

Lab Sample ID:	MB 480-157025/7	Analysis Batch:	480-157025	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J6780.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 1501	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 1501				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Vinyl chloride	ND		0.0040	0.020
Surrogate	% Rec		Acceptance Limits	
Dibromofluoromethane (Surr)	122		50 - 150	
TBA-d9 (Surr)	128		50 - 150	

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 480-157025**

**Method: 8260C SIM  
Preparation: 5030C**

LCS Lab Sample ID:	LCS 480-157025/5	Analysis Batch:	480-157025	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J6778.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 1412	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 1412				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 480-157025/6	Analysis Batch:	480-157025	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J6779.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 1436	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 1436				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Vinyl chloride	107	102	50 - 150	5	20		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
Dibromofluoromethane (Surr)	120		120		50 - 150		
TBA-d9 (Surr)	125		124		50 - 150		

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 480-157025**

**Method: 8260C SIM  
Preparation: 5030C**

LCS Lab Sample ID: LCS 480-157025/5      Units: ug/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1412  
 Prep Date: 12/11/2013 1412  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 480-157025/6  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1436  
 Prep Date: 12/11/2013 1436  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Vinyl chloride	0.200	0.200	0.214	0.204

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-157025**

**Method: 8260C SIM  
Preparation: 5030C**

MS Lab Sample ID: 280-49836-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1927  
 Prep Date: 12/11/2013 1927  
 Leach Date: N/A

Analysis Batch: 480-157025  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: HP5973J  
 Lab File ID: J6791.D  
 Initial Weight/Volume: 25 mL  
 Final Weight/Volume: 25 mL

MSD Lab Sample ID: 280-49836-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1951  
 Prep Date: 12/11/2013 1951  
 Leach Date: N/A

Analysis Batch: 480-157025  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: HP5973J  
 Lab File ID: J6792.D  
 Initial Weight/Volume: 25 mL  
 Final Weight/Volume: 25 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Vinyl chloride	118	119	50 - 150	1	20		
Surrogate		MS % Rec	MSD % Rec			Acceptance Limits	
Dibromofluoromethane (Surr)		136	133			50 - 150	
TBA-d9 (Surr)		141	127			50 - 150	

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-157025**

**Method: 8260C SIM  
Preparation: 5030C**

MS Lab Sample ID: 280-49836-1                      Units: ug/L  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/11/2013 1927  
Prep Date: 12/11/2013 1927  
Leach Date: N/A

MSD Lab Sample ID: 280-49836-1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/11/2013 1951  
Prep Date: 12/11/2013 1951  
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	0.237	0.239

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Method Blank - Batch: 280-203672**

Lab Sample ID: MB 280-203672/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/07/2013 0333  
 Prep Date: 12/04/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-204335  
 Prep Batch: 280-203672  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26A07120613.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Cobalt, Total	ND		0.0030	0.0030

**Method Blank - Batch: 280-203672**

Lab Sample ID: MB 280-203672/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/12/2013 1541  
 Prep Date: 12/04/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-205172  
 Prep Batch: 280-203672  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26a01121213.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Iron, Total	ND		0.060	0.060

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Lab Control Sample - Batch: 280-203672**

Lab Sample ID: LCS 280-203672/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/07/2013 0335  
 Prep Date: 12/04/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-204335  
 Prep Batch: 280-203672  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26A07120613.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cobalt, Total	0.500	0.473	95	89 - 111	

**Lab Control Sample - Batch: 280-203672**

Lab Sample ID: LCS 280-203672/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/12/2013 1543  
 Prep Date: 12/04/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-205172  
 Prep Batch: 280-203672  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26a01121213.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Iron, Total	1.00	0.919	92	89 - 115	

**Matrix Spike/  
 Matrix Spike Duplicate Recovery Report - Batch: 280-203672**

MS Lab Sample ID: 280-49836-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/12/2013 1625  
 Prep Date: 12/04/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-205172  
 Prep Batch: 280-203672  
 Leach Batch: N/A

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26a01121213.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-49836-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/12/2013 1627  
 Prep Date: 12/04/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-205172  
 Prep Batch: 280-203672  
 Leach Batch: N/A

Instrument ID: MT\_026  
 Lab File ID: 26a01121213.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Cobalt, Total	99	98	82 - 119	0	20		
Iron, Total	97	98	52 - 155	1	20		



**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-203672**

**Method: 6010B  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-49836-1                      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/12/2013 1625  
 Prep Date: 12/04/2013 1200  
 Leach Date: N/A

MSD Lab Sample ID: 280-49836-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/12/2013 1627  
 Prep Date: 12/04/2013 1200  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Cobalt, Total	ND	0.500	0.500	0.495	0.492
Iron, Total	0.94	1.00	1.00	1.91	1.92

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Method Blank - Batch: 280-203773**

Lab Sample ID: MB 280-203773/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/07/2013 0501  
 Prep Date: 12/04/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-204335  
 Prep Batch: 280-203773  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26A07120613.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Calcium, Dissolved	ND		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	ND		0.060	0.060
Magnesium, Dissolved	ND		0.050	0.050
Potassium, Dissolved	ND		1.0	1.0

**Method Blank - Batch: 280-203773**

Lab Sample ID: MB 280-203773/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/10/2013 1549  
 Prep Date: 12/04/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-204774  
 Prep Batch: 280-203773  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26a03121013.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Sodium, Dissolved	ND		1.0	1.0

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Lab Control Sample - Batch: 280-203773**

**Method: 6010B  
Preparation: 3005A  
Total Recoverable**

Lab Sample ID: LCS 280-203773/2-A  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/07/2013 0504  
Prep Date: 12/04/2013 1200  
Leach Date: N/A

Analysis Batch: 280-204335  
Prep Batch: 280-203773  
Leach Batch: N/A  
Units: mg/L

Instrument ID: MT\_026  
Lab File ID: 26A07120613.asc  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Calcium, Dissolved	50.0	47.7	95	90 - 111	
Cobalt, Dissolved	0.500	0.473	95	89 - 111	
Iron, Dissolved	1.00	0.949	95	89 - 115	
Magnesium, Dissolved	50.0	48.3	97	90 - 113	
Potassium, Dissolved	50.0	51.0	102	89 - 114	

**Lab Control Sample - Batch: 280-203773**

**Method: 6010B  
Preparation: 3005A  
Total Recoverable**

Lab Sample ID: LCS 280-203773/2-A  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/10/2013 1551  
Prep Date: 12/04/2013 1200  
Leach Date: N/A

Analysis Batch: 280-204774  
Prep Batch: 280-203773  
Leach Batch: N/A  
Units: mg/L

Instrument ID: MT\_026  
Lab File ID: 26a03121013.asc  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sodium, Dissolved	50.0	48.0	96	90 - 115	

## Quality Control Results

Client: Waste Management

Job Number: 280-49836-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-203773**

**Method: 6010B  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-49836-1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/07/2013 0511  
Prep Date: 12/04/2013 1200  
Leach Date: N/A

Analysis Batch: 280-204335  
Prep Batch: 280-203773  
Leach Batch: N/A

Instrument ID: MT\_026  
Lab File ID: 26A07120613.asc  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-49836-1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/07/2013 0513  
Prep Date: 12/04/2013 1200  
Leach Date: N/A

Analysis Batch: 280-204335  
Prep Batch: 280-203773  
Leach Batch: N/A

Instrument ID: MT\_026  
Lab File ID: 26A07120613.asc  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Calcium, Dissolved	101	95	48 - 153	5	20		
Cobalt, Dissolved	99	95	82 - 119	4	20		
Iron, Dissolved	100	93	52 - 155	4	20		
Magnesium, Dissolved	100	97	62 - 146	4	20		
Potassium, Dissolved	109	103	76 - 132	5	20		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-203773**

**Method: 6010B  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-49836-1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/10/2013 1559  
Prep Date: 12/04/2013 1200  
Leach Date: N/A

Analysis Batch: 280-204774  
Prep Batch: 280-203773  
Leach Batch: N/A

Instrument ID: MT\_026  
Lab File ID: 26a03121013.asc  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-49836-1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/10/2013 1601  
Prep Date: 12/04/2013 1200  
Leach Date: N/A

Analysis Batch: 280-204774  
Prep Batch: 280-203773  
Leach Batch: N/A

Instrument ID: MT\_026  
Lab File ID: 26a03121013.asc  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Sodium, Dissolved	101	98	70 - 203	2	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-203773**

**Method: 6010B  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-49836-1 Units: mg/L  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/07/2013 0511  
Prep Date: 12/04/2013 1200  
Leach Date: N/A

MSD Lab Sample ID: 280-49836-1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/07/2013 0513  
Prep Date: 12/04/2013 1200  
Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Calcium, Dissolved	4.5	50.0	50.0	54.8	52.2
Cobalt, Dissolved	ND	0.500	0.500	0.494	0.473
Iron, Dissolved	0.87	1.00	1.00	1.87	1.80
Magnesium, Dissolved	1.9	50.0	50.0	52.0	50.2
Potassium, Dissolved	ND	50.0	50.0	54.4	51.7

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-203773**

**Method: 6010B  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-49836-1 Units: mg/L  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/10/2013 1559  
Prep Date: 12/04/2013 1200  
Leach Date: N/A

MSD Lab Sample ID: 280-49836-1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/10/2013 1601  
Prep Date: 12/04/2013 1200  
Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Sodium, Dissolved	3.1	50.0	50.0	53.4	52.3

## Quality Control Results

Client: Waste Management

Job Number: 280-49836-1

**Method Blank - Batch: 280-203671**

Lab Sample ID: MB 280-203671/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/04/2013 2009  
 Prep Date: 12/04/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-203914  
 Prep Batch: 280-203671  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_077  
 Lab File ID: 130\_BLK.d  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	ND		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Manganese, Total	ND		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Selenium, Total	ND		0.0010	0.0010
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	ND		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

**Lab Control Sample - Batch: 280-203671**

Lab Sample ID: LCS 280-203671/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/04/2013 2013  
 Prep Date: 12/04/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-203914  
 Prep Batch: 280-203671  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_077  
 Lab File ID: 131\_LCS.d  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony, Total	0.0400	0.0371	93	85 - 115	
Barium, Total	0.0400	0.0414	104	85 - 118	
Beryllium, Total	0.0400	0.0409	102	80 - 125	
Cadmium, Total	0.0400	0.0398	99	85 - 115	
Chromium, Total	0.0400	0.0404	101	84 - 121	
Copper, Total	0.0400	0.0404	101	85 - 119	
Lead, Total	0.0400	0.0411	103	85 - 118	
Manganese, Total	0.0400	0.0400	100	85 - 117	
Nickel, Total	0.0400	0.0402	100	85 - 119	
Selenium, Total	0.0400	0.0405	101	77 - 122	
Silver, Total	0.0400	0.0409	102	85 - 115	
Thallium, Total	0.0400	0.0413	103	85 - 118	
Vanadium, Total	0.0400	0.0394	99	85 - 120	
Zinc, Total	0.0400	0.0419	105	83 - 122	

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-203671**

**Method: 6020  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-49836-1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/04/2013 2112  
Prep Date: 12/04/2013 1200  
Leach Date: N/A

Analysis Batch: 280-203914  
Prep Batch: 280-203671  
Leach Batch: N/A

Instrument ID: MT\_077  
Lab File ID: 146SMPL.d  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-49836-1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/04/2013 2116  
Prep Date: 12/04/2013 1200  
Leach Date: N/A

Analysis Batch: 280-203914  
Prep Batch: 280-203671  
Leach Batch: N/A

Instrument ID: MT\_077  
Lab File ID: 147SMPL.d  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Antimony, Total	93	95	85 - 115	3	20		
Barium, Total	101	100	85 - 118	0	20		
Beryllium, Total	100	97	80 - 125	3	20		
Cadmium, Total	100	95	85 - 115	5	20		
Chromium, Total	98	99	84 - 121	1	20		
Copper, Total	101	98	85 - 119	4	20		
Lead, Total	100	100	85 - 118	0	20		
Manganese, Total	91	89	85 - 117	0	20	4	4
Nickel, Total	99	99	85 - 119	0	20		
Selenium, Total	96	96	77 - 122	0	20		
Silver, Total	100	97	85 - 115	4	20		
Thallium, Total	99	99	85 - 118	0	20		
Vanadium, Total	99	99	85 - 120	1	20		
Zinc, Total	99	97	83 - 122	2	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-203671**

**Method: 6020  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-49836-1                      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/04/2013 2112  
 Prep Date: 12/04/2013 1200  
 Leach Date: N/A

MSD Lab Sample ID: 280-49836-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/04/2013 2116  
 Prep Date: 12/04/2013 1200  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Antimony, Total	ND	0.0400	0.0400	0.0371	0.0381
Barium, Total	0.0057	0.0400	0.0400	0.0460	0.0459
Beryllium, Total	ND	0.0400	0.0400	0.0398	0.0387
Cadmium, Total	ND	0.0400	0.0400	0.0399	0.0380
Chromium, Total	ND	0.0400	0.0400	0.0391	0.0395
Copper, Total	ND	0.0400	0.0400	0.0404	0.0390
Lead, Total	ND	0.0400	0.0400	0.0400	0.0400
Manganese, Total	0.27	0.0400	0.0400	0.306	0.305
Nickel, Total	ND	0.0400	0.0400	0.0394	0.0394
Selenium, Total	ND	0.0400	0.0400	0.0386	0.0384
Silver, Total	ND	0.0400	0.0400	0.0401	0.0386
Thallium, Total	ND	0.0400	0.0400	0.0398	0.0397
Vanadium, Total	ND	0.0400	0.0400	0.0394	0.0397
Zinc, Total	ND	0.0400	0.0400	0.0394	0.0387



## Quality Control Results

Client: Waste Management

Job Number: 280-49836-1

**Method Blank - Batch: 280-203834**

Lab Sample ID: MB 280-203834/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/05/2013 2040  
 Prep Date: 12/05/2013 0730  
 Leach Date: N/A

Analysis Batch: 280-204363  
 Prep Batch: 280-203834  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_077  
 Lab File ID: 142\_BLK.d  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	ND		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	ND		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	ND		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

**Lab Control Sample - Batch: 280-203834**

Lab Sample ID: LCS 280-203834/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/05/2013 2043  
 Prep Date: 12/05/2013 0730  
 Leach Date: N/A

Analysis Batch: 280-204363  
 Prep Batch: 280-203834  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_077  
 Lab File ID: 143\_LCS.d  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony, Dissolved	0.0400	0.0360	90	85 - 115	
Barium, Dissolved	0.0400	0.0404	101	85 - 118	
Beryllium, Dissolved	0.0400	0.0386	96	80 - 125	
Cadmium, Dissolved	0.0400	0.0365	91	85 - 115	
Chromium, Dissolved	0.0400	0.0366	92	84 - 121	
Copper, Dissolved	0.0400	0.0357	89	85 - 119	
Lead, Dissolved	0.0400	0.0384	96	85 - 118	
Manganese, Dissolved	0.0400	0.0386	97	85 - 117	
Nickel, Dissolved	0.0400	0.0360	90	85 - 119	
Selenium, Dissolved	0.0400	0.0354	89	77 - 122	
Silver, Dissolved	0.0400	0.0354	89	85 - 115	
Thallium, Dissolved	0.0400	0.0366	91	85 - 118	
Vanadium, Dissolved	0.0400	0.0373	93	85 - 120	
Zinc, Dissolved	0.0400	0.0384	96	83 - 122	

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-203834**

**Method: 6020  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-49836-1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/05/2013 2054  
Prep Date: 12/05/2013 0730  
Leach Date: N/A

Analysis Batch: 280-204363  
Prep Batch: 280-203834  
Leach Batch: N/A

Instrument ID: MT\_077  
Lab File ID: 146SMPL.d  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-49836-1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/05/2013 2058  
Prep Date: 12/05/2013 0730  
Leach Date: N/A

Analysis Batch: 280-204363  
Prep Batch: 280-203834  
Leach Batch: N/A

Instrument ID: MT\_077  
Lab File ID: 147SMPL.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	89	92	85 - 115	3	20		
Barium, Dissolved	96	99	85 - 118	2	20		
Beryllium, Dissolved	103	96	80 - 125	7	20		
Cadmium, Dissolved	90	91	85 - 115	1	20		
Chromium, Dissolved	93	91	84 - 121	2	20		
Copper, Dissolved	91	90	85 - 119	1	20		
Lead, Dissolved	97	96	85 - 118	0	20		
Manganese, Dissolved	132	139	85 - 117	1	20	4	4
Nickel, Dissolved	90	90	85 - 119	0	20		
Selenium, Dissolved	87	88	77 - 122	1	20		
Silver, Dissolved	88	88	85 - 115	0	20		
Thallium, Dissolved	93	93	85 - 118	0	20		
Vanadium, Dissolved	95	94	85 - 120	1	20		
Zinc, Dissolved	99	94	83 - 122	5	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-203834**

**Method: 6020  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-49836-1                      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/05/2013 2054  
 Prep Date: 12/05/2013 0730  
 Leach Date: N/A

MSD Lab Sample ID: 280-49836-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/05/2013 2058  
 Prep Date: 12/05/2013 0730  
 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	0.0357	0.0369
Barium, Dissolved	0.0052	0.0400	0.0400	0.0435	0.0446
Beryllium, Dissolved	ND	0.0400	0.0400	0.0414	0.0385
Cadmium, Dissolved	ND	0.0400	0.0400	0.0359	0.0363
Chromium, Dissolved	ND	0.0400	0.0400	0.0370	0.0363
Copper, Dissolved	ND	0.0400	0.0400	0.0363	0.0361
Lead, Dissolved	ND	0.0400	0.0400	0.0387	0.0385
Manganese, Dissolved	0.24	0.0400	0.0400	0.295      4	0.298      4
Nickel, Dissolved	ND	0.0400	0.0400	0.0360	0.0359
Selenium, Dissolved	ND	0.0400	0.0400	0.0348	0.0351
Silver, Dissolved	ND	0.0400	0.0400	0.0352	0.0352
Thallium, Dissolved	ND	0.0400	0.0400	0.0371	0.0371
Vanadium, Dissolved	ND	0.0400	0.0400	0.0380	0.0375
Zinc, Dissolved	ND	0.0400	0.0400	0.0394	0.0376

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Method Blank - Batch: 280-205400**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	MB 280-205400/6	Analysis Batch:	280-205400	Instrument ID:	WC_IC7
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	115.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/14/2013 1133	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Chloride	ND		1.0	1.0
Sulfate	ND		1.0	1.0

**Method Reporting Limit Check - Batch: 280-205400**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	MRL 280-205400/3	Analysis Batch:	280-205400	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:	
Analysis Date:	12/14/2013 1045	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	1.00	ND	100	50 - 150	
Sulfate	1.00	ND	76	50 - 150	

**Lab Control Sample/**

**Method: 300.0**  
**Preparation: N/A**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-205400**

LCS Lab Sample ID:	LCS 280-205400/4	Analysis Batch:	280-205400	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:	
Analysis Date:	12/14/2013 1101	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-205400/5	Analysis Batch:	280-205400	Instrument ID:	WC_IC7
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	114.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/14/2013 1117	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Chloride	98	98	90 - 110	0	10		
Sulfate	98	97	90 - 110	1	10		

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-205400**

**Method: 300.0  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-205400/4      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/14/2013 1101  
 Prep Date: N/A  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 280-205400/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/14/2013 1117  
 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	24.6	24.5
Sulfate	25.0	25.0	24.5	24.2

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205400**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 280-49836-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/14/2013 1220  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-205400  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: WC\_IC7  
 Lab File ID: 118.TXT  
 Initial Weight/Volume:  
 Final Weight/Volume: 5 mL

MSD Lab Sample ID: 280-49836-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/14/2013 1236  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-205400  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: WC\_IC7  
 Lab File ID: 119.TXT  
 Initial Weight/Volume:  
 Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chloride	109	107	80 - 120	2	20		
Sulfate	106	104	80 - 120	2	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205400**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 280-49836-1                      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/14/2013 1220  
 Prep Date: N/A  
 Leach Date: N/A

MSD Lab Sample ID: 280-49836-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/14/2013 1236  
 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	ND	25.0	25.0	27.2	26.7
Sulfate	1.6	25.0	25.0	28.2	27.6

**Duplicate - Batch: 280-205400**

**Method: 300.0  
Preparation: N/A**

Lab Sample ID: 280-49836-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/14/2013 1204  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-205400  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_IC7  
 Lab File ID: 117.TXT  
 Initial Weight/Volume:  
 Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Chloride	ND	ND	NC	15	
Sulfate	1.6	1.66	1	15	

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Method Blank - Batch: 280-205244**

Lab Sample ID: MB 280-205244/21  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/13/2013 1056  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-205244  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

**Method: 350.1  
 Preparation: N/A**

Instrument ID: WC\_Alph 3  
 Lab File ID: Z:\WETCHEM\ALP3\350.1  
 Initial Weight/Volume: 10 mL  
 Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL	RL
Ammonia (as N)	ND		0.030	0.030

**Lab Control Sample/  
 Lab Control Sample Duplicate Recovery Report - Batch: 280-205244**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-205244/19  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/13/2013 1051  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-205244  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 3  
 Lab File ID: Z:\WETCHEM\ALP3\350.1  
 Initial Weight/Volume: 100 mL  
 Final Weight/Volume: 100 mL

LCSD Lab Sample ID: LCSD 280-205244/20  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/13/2013 1054  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-205244  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 3  
 Lab File ID: Z:\WETCHEM\ALP3\350.1  
 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)	102	104	90 - 110	2	10		

**Laboratory Control/  
 Laboratory Duplicate Data Report - Batch: 280-205244**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-205244/19  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/13/2013 1051  
 Prep Date: N/A  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-205244/20  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/13/2013 1054  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia (as N)	2.50	2.50	2.55	2.60

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205244**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-49836-1	Analysis Batch: 280-205244	Instrument ID: WC_Alph 3
Client Matrix: Water	Prep Batch: N/A	Lab File ID: Z:\WETCHEM\ALP3\350.1
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 20 mL
Analysis Date: 12/13/2013 1110		Final Weight/Volume: 20 mL
Prep Date: N/A		
Leach Date: N/A		

MSD Lab Sample ID: 280-49836-1	Analysis Batch: 280-205244	Instrument ID: WC_Alph 3
Client Matrix: Water	Prep Batch: N/A	Lab File ID: Z:\WETCHEM\ALP3\350.1
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 20 mL
Analysis Date: 12/13/2013 1112		Final Weight/Volume: 20 mL
Prep Date: N/A		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Ammonia (as N)	103	104	90 - 110	0	10		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205244**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-49836-1	Units: mg/L	MSD Lab Sample ID: 280-49836-1
Client Matrix: Water		Client Matrix: Water
Dilution: 1.0		Dilution: 1.0
Analysis Date: 12/13/2013 1110		Analysis Date: 12/13/2013 1112
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)	0.12	1.00	1.00	1.15	1.15



**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Method Blank - Batch: 280-205552**

**Method: 353.2  
Preparation: N/A**

Lab Sample ID: MB 280-205552/1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/03/2013 1954  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-205552  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: No Equipment Assigned  
Lab File ID: N/A  
Initial Weight/Volume:  
Final Weight/Volume:

Analyte	Result	Qual	RL	RL
Nitrate as N	ND		0.050	0.050

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Method Blank - Batch: 280-203939**

Lab Sample ID: MB 280-203939/6  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/04/2013 1908  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-203939  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

**Method: SM 2320B  
 Preparation: N/A**

Instrument ID: WC-AT3  
 Lab File ID: 120413a.TXT  
 Initial Weight/Volume:  
 Final Weight/Volume:

Analyte	Result	Qual	RL	RL
Alkalinity, Total (As CaCO3)	ND		5.0	5.0
Alkalinity, Bicarbonate (As CaCO3)	ND		5.0	5.0

**Lab Control Sample/  
 Lab Control Sample Duplicate Recovery Report - Batch: 280-203939**

**Method: SM 2320B  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-203939/4  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/04/2013 1859  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-203939  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC-AT3  
 Lab File ID: 120413a.TXT  
 Initial Weight/Volume:  
 Final Weight/Volume:

LCSD Lab Sample ID: LCSD 280-203939/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/04/2013 1904  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-203939  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC-AT3  
 Lab File ID: 120413a.TXT  
 Initial Weight/Volume:  
 Final Weight/Volume:

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Alkalinity, Total (As CaCO3)	98	97	90 - 110	0	10		

**Laboratory Control/  
 Laboratory Duplicate Data Report - Batch: 280-203939**

**Method: SM 2320B  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-203939/4  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/04/2013 1859  
 Prep Date: N/A  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-203939/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/04/2013 1904  
 Prep 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	195	195

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Duplicate - Batch: 280-203939**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID: 280-49831-F-2 DU  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/04/2013 2027  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-203939  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: WC-AT3  
Lab File ID: 120413a.TXT  
Initial Weight/Volume:  
Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Alkalinity, Total (As CaCO3)	390	402	3	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Method Blank - Batch: 280-204018**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	MB 280-204018/1	Analysis Batch:	280-204018	Instrument ID:	No Equipment Assigned
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:	12/05/2013 1250	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Dissolved Solids (TDS)	ND		5.0	5.0

**Lab Control Sample/**

**Method: SM 2540C**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-204018**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-204018/2	Analysis Batch:	280-204018	Instrument ID:	No Equipment Assigned
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:	12/05/2013 1250	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-204018/3	Analysis Batch:	280-204018	Instrument ID:	No Equipment Assigned
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:	12/05/2013 1250	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)	98	97	86 - 110	1	20		

**Laboratory Control/**

**Method: SM 2540C**

**Laboratory Duplicate Data Report - Batch: 280-204018**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-204018/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-204018/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/05/2013 1250			Analysis Date:	12/05/2013 1250
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	489	486

## Quality Control Results

Client: Waste Management

Job Number: 280-49836-1

**Duplicate - Batch: 280-204018**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	280-49838-A-7 DU	Analysis Batch:	280-204018	Instrument ID:	No Equipment Assigned
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:	12/05/2013 1250	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)	260	263	1	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Method Blank - Batch: 280-203909**

**Method: SM 2540D**

**Preparation: N/A**

Lab Sample ID:	MB 280-203909/1	Analysis Batch:	280-203909	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/05/2013 0755	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Suspended Solids	ND		4.0	4.0

**Lab Control Sample/**

**Method: SM 2540D**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-203909**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-203909/2	Analysis Batch:	280-203909	Instrument ID:	No Equipment Assigned
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:	12/05/2013 0755	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-203909/3	Analysis Batch:	280-203909	Instrument ID:	No Equipment Assigned
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:	12/05/2013 0755	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Suspended Solids	91	97	86 - 114	6	20		

**Laboratory Control/**

**Method: SM 2540D**

**Laboratory Duplicate Data Report - Batch: 280-203909**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-203909/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-203909/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/05/2013 0755			Analysis Date:	12/05/2013 0755
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 Suspended Solids	100	100	91.0	97.0

## Quality Control Results

Client: Waste Management

Job Number: 280-49836-1

**Duplicate - Batch: 280-203909**

**Method: SM 2540D**

**Preparation: N/A**

Lab Sample ID:	280-49940-A-1 DU	Analysis Batch:	280-203909	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/05/2013 0755	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Suspended Solids	19	18.0	4	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Method Blank - Batch: 280-204724**

**Method: SM 5310B**

**Preparation: N/A**

Lab Sample ID:	MB 280-204724/37	Analysis Batch:	280-204724	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121013.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/10/2013 2251	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Organic Carbon - Average	ND		1.0	1.0

**Lab Control Sample/**

**Method: SM 5310B**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-204724**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-204724/35	Analysis Batch:	280-204724	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121013.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/10/2013 2213	Units:	mg/L	Final Weight/Volume:	200 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-204724/36	Analysis Batch:	280-204724	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121013.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/10/2013 2231	Units:	mg/L	Final Weight/Volume:	200 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: 280-204724**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-204724/35	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-204724/36
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/10/2013 2213			Analysis Date:	12/10/2013 2231
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	24.5



**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-204724**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID: 280-49836-1	Analysis Batch: 280-204724	Instrument ID: WC_SHI2
Client Matrix: Water	Prep Batch: N/A	Lab File ID: 121013.txt
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume:
Analysis Date: 12/11/2013 0014		Final Weight/Volume: 50 mL
Prep Date: N/A		
Leach Date: N/A		

MSD Lab Sample ID: 280-49836-1	Analysis Batch: 280-204724	Instrument ID: WC_SHI2
Client Matrix: Water	Prep Batch: N/A	Lab File ID: 121013.txt
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume:
Analysis Date: 12/11/2013 0032		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	97	99	88 - 112	1	15		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-204724**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID: 280-49836-1	Units: mg/L
Client Matrix: Water	
Dilution: 1.0	
Analysis Date: 12/11/2013 0014	
Prep Date: N/A	
Leach Date: N/A	

MSD Lab Sample ID: 280-49836-1
Client Matrix: Water
Dilution: 1.0
Analysis Date: 12/11/2013 0032
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	1.2	25.0	25.0	25.5	25.8

## Quality Control Results

Client: Waste Management

Job Number: 280-49836-1

### Laboratory Chronicle

Lab ID: 280-49836-1

Client ID: MW-43

Sample Date/Time: 12/02/2013 12:49

Received Date/Time: 12/03/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-49836-P-1		480-156300		12/07/2013 17:09	1	TAL BUF	NMD1
A:8260C	280-49836-P-1		480-156300		12/07/2013 17:09	1	TAL BUF	NMD1
P:5030C	280-49836-T-1		480-157025		12/11/2013 19:03	1	TAL BUF	CDC
A:8260C SIM	280-49836-T-1		480-157025		12/11/2013 19:03	1	TAL BUF	CDC
P:3005A	280-49836-G-1-G		280-204335	280-203773	12/04/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49836-G-1-G		280-204335	280-203773	12/07/2013 05:06	1	TAL DEN	SJS
P:3005A	280-49836-G-1-G		280-204774	280-203773	12/04/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49836-G-1-G		280-204774	280-203773	12/10/2013 15:54	1	TAL DEN	SJS
P:3005A	280-49836-G-1-D		280-205172	280-203672	12/04/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49836-G-1-D		280-205172	280-203672	12/12/2013 16:20	1	TAL DEN	SJS
P:3005A	280-49836-G-1-A		280-203914	280-203671	12/04/2013 12:00	1	TAL DEN	LLB
A:6020	280-49836-G-1-A		280-203914	280-203671	12/04/2013 21:04	1	TAL DEN	LMT
P:3005A	280-49836-G-1-J		280-204363	280-203834	12/05/2013 07:30	1	TAL DEN	WAW
A:6020	280-49836-G-1-J		280-204363	280-203834	12/05/2013 20:47	1	TAL DEN	LMT
A:300.0	280-49836-A-1		280-205400		12/14/2013 11:49	1	TAL DEN	AJA
A:350.1	280-49836-N-1		280-205244		12/13/2013 11:08	1	TAL DEN	DME
A:353.2	280-49836-A-1		280-205552		12/03/2013 19:54	1	TAL DEN	RKS
A:SM 2320B	280-49836-D-1		280-203939		12/04/2013 20:50	1	TAL DEN	AFH
A:SM 2540C	280-49836-A-1		280-204018		12/05/2013 12:50	1	TAL DEN	ELJ
A:SM 2540D	280-49836-D-1		280-203909		12/05/2013 07:55	1	TAL DEN	BAN
A:SM 5310B	280-49836-N-1		280-204724		12/10/2013 23:22	1	TAL DEN	SMG

Lab ID: 280-49836-1

Client ID: MW-43

Sample Date/Time: 12/02/2013 12:49

Received Date/Time: 12/03/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-49836-A-1 MS		480-156300		12/07/2013 17:30	1	TAL BUF	NMD1
A:8260C	280-49836-A-1 MS		480-156300		12/07/2013 17:30	1	TAL BUF	NMD1
P:5030C	280-49836-B-1 MS		480-157025		12/11/2013 19:27	1	TAL BUF	CDC
A:8260C SIM	280-49836-B-1 MS		480-157025		12/11/2013 19:27	1	TAL BUF	CDC
P:3005A	280-49836-G-1-H MS		280-204335	280-203773	12/04/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49836-G-1-H MS		280-204335	280-203773	12/07/2013 05:11	1	TAL DEN	SJS
P:3005A	280-49836-G-1-H MS		280-204774	280-203773	12/04/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49836-G-1-H MS		280-204774	280-203773	12/10/2013 15:59	1	TAL DEN	SJS
P:3005A	280-49836-G-1-E MS		280-205172	280-203672	12/04/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49836-G-1-E MS		280-205172	280-203672	12/12/2013 16:25	1	TAL DEN	SJS
P:3005A	280-49836-G-1-B MS		280-203914	280-203671	12/04/2013 12:00	1	TAL DEN	LLB
A:6020	280-49836-G-1-B MS		280-203914	280-203671	12/04/2013 21:12	1	TAL DEN	LMT
P:3005A	280-49836-G-1-K MS		280-204363	280-203834	12/05/2013 07:30	1	TAL DEN	WAW
A:6020	280-49836-G-1-K MS		280-204363	280-203834	12/05/2013 20:54	1	TAL DEN	LMT
A:300.0	280-49836-A-1 MS		280-205400		12/14/2013 12:20	1	TAL DEN	AJA
A:350.1	280-49836-N-1 MS		280-205244		12/13/2013 11:10	1	TAL DEN	DME
A:SM 5310B	280-49836-N-1 MS		280-204724		12/11/2013 00:14	1	TAL DEN	SMG

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**Laboratory Chronicle**

Lab ID: 280-49836-1

Client ID: MW-43

Sample Date/Time: 12/02/2013 12:49

Received Date/Time: 12/03/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-49836-A-1 MSD		480-156300		12/07/2013 17:52	1	TAL BUF	NMD1
A:8260C	280-49836-A-1 MSD		480-156300		12/07/2013 17:52	1	TAL BUF	NMD1
P:5030C	280-49836-B-1 MSD		480-157025		12/11/2013 19:51	1	TAL BUF	CDC
A:8260C SIM	280-49836-B-1 MSD		480-157025		12/11/2013 19:51	1	TAL BUF	CDC
P:3005A	280-49836-G-1-I MSD		280-204335	280-203773	12/04/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49836-G-1-I MSD		280-204335	280-203773	12/07/2013 05:13	1	TAL DEN	SJS
P:3005A	280-49836-G-1-I MSD		280-204774	280-203773	12/04/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49836-G-1-I MSD		280-204774	280-203773	12/10/2013 16:01	1	TAL DEN	SJS
P:3005A	280-49836-G-1-F MSD		280-205172	280-203672	12/04/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49836-G-1-F MSD		280-205172	280-203672	12/12/2013 16:27	1	TAL DEN	SJS
P:3005A	280-49836-G-1-C MSD		280-203914	280-203671	12/04/2013 12:00	1	TAL DEN	LLB
A:6020	280-49836-G-1-C MSD		280-203914	280-203671	12/04/2013 21:16	1	TAL DEN	LMT
P:3005A	280-49836-G-1-L MSD		280-204363	280-203834	12/05/2013 07:30	1	TAL DEN	WAW
A:6020	280-49836-G-1-L MSD		280-204363	280-203834	12/05/2013 20:58	1	TAL DEN	LMT
A:300.0	280-49836-A-1 MSD		280-205400		12/14/2013 12:36	1	TAL DEN	AJA
A:350.1	280-49836-N-1 MSD		280-205244		12/13/2013 11:12	1	TAL DEN	DME
A:SM 5310B	280-49836-N-1 MSD		280-204724		12/11/2013 00:32	1	TAL DEN	SMG

Lab ID: 280-49836-1 DU

Client ID: MW-43

Sample Date/Time: 12/02/2013 12:49

Received Date/Time: 12/03/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-49836-A-1 DU		280-205400		12/14/2013 12:04	1	TAL DEN	AJA

## Quality Control Results

Client: Waste Management

Job Number: 280-49836-1

### 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:5030C	MB 480-156300/7		480-156300		12/07/2013 12:38	1	TAL BUF	NMD1
A:8260C	MB 480-156300/7		480-156300		12/07/2013 12:38	1	TAL BUF	NMD1
P:5030C	MB 480-157025/7		480-157025		12/11/2013 15:01	1	TAL BUF	CDC
A:8260C SIM	MB 480-157025/7		480-157025		12/11/2013 15:01	1	TAL BUF	CDC
P:3005A	MB 280-203672/1-A		280-204335	280-203672	12/04/2013 12:00	1	TAL DEN	LLB
A:6010B	MB 280-203672/1-A		280-204335	280-203672	12/07/2013 03:33	1	TAL DEN	SJS
P:3005A	MB 280-203773/1-A		280-204335	280-203773	12/04/2013 12:00	1	TAL DEN	LLB
A:6010B	MB 280-203773/1-A		280-204335	280-203773	12/07/2013 05:01	1	TAL DEN	SJS
P:3005A	MB 280-203773/1-A		280-204774	280-203773	12/04/2013 12:00	1	TAL DEN	LLB
A:6010B	MB 280-203773/1-A		280-204774	280-203773	12/10/2013 15:49	1	TAL DEN	SJS
P:3005A	MB 280-203672/1-A		280-205172	280-203672	12/04/2013 12:00	1	TAL DEN	LLB
A:6010B	MB 280-203672/1-A		280-205172	280-203672	12/12/2013 15:41	1	TAL DEN	SJS
P:3005A	MB 280-203671/1-A		280-203914	280-203671	12/04/2013 12:00	1	TAL DEN	LLB
A:6020	MB 280-203671/1-A		280-203914	280-203671	12/04/2013 20:09	1	TAL DEN	LMT
P:3005A	MB 280-203834/1-A		280-204363	280-203834	12/05/2013 07:30	1	TAL DEN	WAW
A:6020	MB 280-203834/1-A		280-204363	280-203834	12/05/2013 20:40	1	TAL DEN	LMT
A:300.0	MB 280-205400/6		280-205400		12/14/2013 11:33	1	TAL DEN	AJA
A:350.1	MB 280-205244/21		280-205244		12/13/2013 10:56	1	TAL DEN	DME
A:353.2	MB 280-205552/1		280-205552		12/03/2013 19:54	1	TAL DEN	RKS
A:SM 2320B	MB 280-203939/6		280-203939		12/04/2013 19:08	1	TAL DEN	AFH
A:SM 2540C	MB 280-204018/1		280-204018		12/05/2013 12:50	1	TAL DEN	ELJ
A:SM 2540D	MB 280-203909/1		280-203909		12/05/2013 07:55	1	TAL DEN	BAN
A:SM 5310B	MB 280-204724/37		280-204724		12/10/2013 22:51	1	TAL DEN	SMG

**Quality Control Results**

Client: Waste Management

Job Number: 280-49836-1

**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:5030C	LCS 480-156300/5		480-156300		12/07/2013 11:55	1	TAL BUF	NMD1
A:8260C	LCS 480-156300/5		480-156300		12/07/2013 11:55	1	TAL BUF	NMD1
P:5030C	LCS 480-157025/5		480-157025		12/11/2013 14:12	1	TAL BUF	CDC
A:8260C SIM	LCS 480-157025/5		480-157025		12/11/2013 14:12	1	TAL BUF	CDC
P:3005A	LCS 280-203672/2-A		280-204335	280-203672	12/04/2013 12:00	1	TAL DEN	LLB
A:6010B	LCS 280-203672/2-A		280-204335	280-203672	12/07/2013 03:35	1	TAL DEN	SJS
P:3005A	LCS 280-203773/2-A		280-204335	280-203773	12/04/2013 12:00	1	TAL DEN	LLB
A:6010B	LCS 280-203773/2-A		280-204335	280-203773	12/07/2013 05:04	1	TAL DEN	SJS
P:3005A	LCS 280-203773/2-A		280-204774	280-203773	12/04/2013 12:00	1	TAL DEN	LLB
A:6010B	LCS 280-203773/2-A		280-204774	280-203773	12/10/2013 15:51	1	TAL DEN	SJS
P:3005A	LCS 280-203672/2-A		280-205172	280-203672	12/04/2013 12:00	1	TAL DEN	LLB
A:6010B	LCS 280-203672/2-A		280-205172	280-203672	12/12/2013 15:43	1	TAL DEN	SJS
P:3005A	LCS 280-203671/2-A		280-203914	280-203671	12/04/2013 12:00	1	TAL DEN	LLB
A:6020	LCS 280-203671/2-A		280-203914	280-203671	12/04/2013 20:13	1	TAL DEN	LMT
P:3005A	LCS 280-203834/2-A		280-204363	280-203834	12/05/2013 07:30	1	TAL DEN	WAW
A:6020	LCS 280-203834/2-A		280-204363	280-203834	12/05/2013 20:43	1	TAL DEN	LMT
A:300.0	LCS 280-205400/4		280-205400		12/14/2013 11:01	1	TAL DEN	AJA
A:350.1	LCS 280-205244/19		280-205244		12/13/2013 10:51	1	TAL DEN	DME
A:SM 2320B	LCS 280-203939/4		280-203939		12/04/2013 18:59	1	TAL DEN	AFH
A:SM 2540C	LCS 280-204018/2		280-204018		12/05/2013 12:50	1	TAL DEN	ELJ
A:SM 2540D	LCS 280-203909/2		280-203909		12/05/2013 07:55	1	TAL DEN	BAN
A:SM 5310B	LCS 280-204724/35		280-204724		12/10/2013 22:13	1	TAL DEN	SMG

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
P:5030C	LCSD 480-157025/6		480-157025		12/11/2013 14:36	1	TAL BUF	CDC
A:8260C SIM	LCSD 480-157025/6		480-157025		12/11/2013 14:36	1	TAL BUF	CDC
A:300.0	LCSD 280-205400/5		280-205400		12/14/2013 11:17	1	TAL DEN	AJA
A:350.1	LCSD 280-205244/20		280-205244		12/13/2013 10:54	1	TAL DEN	DME
A:SM 2320B	LCSD 280-203939/5		280-203939		12/04/2013 19:04	1	TAL DEN	AFH
A:SM 2540C	LCSD 280-204018/3		280-204018		12/05/2013 12:50	1	TAL DEN	ELJ
A:SM 2540D	LCSD 280-203909/3		280-203909		12/05/2013 07:55	1	TAL DEN	BAN
A:SM 5310B	LCSD 280-204724/36		280-204724		12/10/2013 22:31	1	TAL DEN	SMG

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 280-205400/3		280-205400		12/14/2013 10:45	1	TAL DEN	AJA

## Quality Control Results

Client: Waste Management

Job Number: 280-49836-1

### Laboratory Chronicle

Lab ID: DU

Client ID: N/A

Sample Date/Time: 12/02/2013 10:45

Received Date/Time: 12/03/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2320B	280-49831-F-2 DU		280-203939		12/04/2013 20:27	1	TAL DEN	AFH
A:SM 2540C	280-49838-A-7 DU		280-204018		12/05/2013 12:50	1	TAL DEN	ELJ
A:SM 2540D	280-49940-A-1 DU		280-203909		12/05/2013 07:55	1	TAL DEN	BAN

#### Lab References:

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver



TAL-4124-280 (0508)

Client

SCS Engineers

Address

2405 140th Ave NE Ste. 107

City

Bellevue

Project Name and Location (State)

OVSL WA

Contract/Purchase Order/Quote No.

04204027.17

Sample I.D. No. and Description  
(Containers for each sample may be combined on one line)

MW-43

MS

MSD

Trip Blank

Date

12/2/13

12/2/13

12/2/13

12/2/13

Time

1249

1249

1249

Project Manager

Elena Ramirez

Telephone Number (Area Code)/Fax Number

425-289-5451

Site Contact

M. O'Hara

Carrier/Waybill Number

B. Sara

Date

12/2/13

Lab Number

192264

Analysis (Attach list if more space is needed)

No<sub>2</sub>/Cl/SO<sub>2</sub>/TDS/PAHs

Dissolved Metals

TOC/NH<sub>3</sub>

8260B-Si(MC)

8260B-Br/Total

Total Metals

TSS

Containers & Preservatives

Unpres.

H2SO4

HNO3

HCl

NaOH

ZnAc

NaOH

Matrix

Air

Aqueous

Sed.

Soil

Possible Hazard Identification

Non-Hazard

Flammable

Skin Irritant

Poison B

Unknown

Return To Client

Archive For

Months

Disposal By Lab

Archive For

Months

(A fee may be assessed if samples are retained longer than 1 month)

Sample Disposal

Return To Client

Disposal By Lab

QC Requirements (Specify)

Standard

Other

1. Relinquished By

M. O'Hara

2. Relinquished By

3. Relinquished By

Date

12/2/13

Time

1600

Date

12-3-13

Time

945

Comments

Custody Seal # 102281

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-49836-1

**Login Number: 49836**  
**List Number: 1**  
**Creator: Knauf, James R**

**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?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	False	NO TB RECEIVED
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	N/A	
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.	N/A	



## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-49836-1

**Login Number: 49836**  
**List Number: 1**  
**Creator: Goliszek, Gregory T**

**List Source: TestAmerica Buffalo**  
**List Creation: 12/05/13 09:11 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	4.9 #2
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: 280-49930-1

Job Description: WA02|Olympic View Sanitary LF

For:  
Waste Management  
Olympic View Transfer Station  
9300 Southwest Barney White Road  
Bremerton, WA 98312  
Attention: Mr. Charles Luckie



Approved for release.  
Betsy A Sara  
Project Manager II  
12/30/2013 10:26 AM

---

Betsy A Sara, Project Manager II  
4955 Yarrow Street, Arvada, CO, 80002  
(303)736-0189  
betsy.sara@testamericainc.com  
12/30/2013

cc: Mr. Sam Adlington  
Mr. Matt O'Hare  
Mr. Phil Perley  
Ms. Elena Ramirez  
Mr. Dan Venchiarutti

The test results in this report relate only to the samples in this report and meet all requirements of NELAP, 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.

**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 . . . . .	10
Method / Analyst Summary . . . . .	11
Sample Summary . . . . .	12
Sample Results . . . . .	13
Sample Datasheets . . . . .	14
Data Qualifiers . . . . .	83
QC Results . . . . .	84
Qc Association Summary . . . . .	85
Surrogate Recovery Report . . . . .	92
Qc Reports . . . . .	94
Laboratory Chronicle . . . . .	135
Client Chain of Custody . . . . .	147
Sample Receipt Checklist . . . . .	148

## CASE NARRATIVE

Client: Waste Management

Project: WA02|Olympic View Sanitary LF

Report Number: 280-49930-1

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 12/04/2013; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 0.5° C, 3.4° C and 5.4° C.

### Holding Times

All holding times were within established control limits.

### Method Blanks

Carbon Disulfide Method 8260B was detected in the Method Blank below the project established reporting limit. 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.

Total Lead Method 6020 was detected in the Method Blank above the project established reporting limit, however, the requested reporting limit for Total Lead is below TestAmerica Denver's standard reporting limit and, therefore, no corrective action has been taken for this anomaly. It must be noted that results reported below TestAmerica Denver's standard reporting limits may result in false positive/false negative results, less accurate quantitation and potential misidentification at the lower concentrations.

All other Method Blank recoveries were within established control limits.

### Laboratory Control Samples (LCS)

Due to the coelution of Ethyl Acetate with 2-Butanone in the full spike solution, these analytes exceeded control limits in the Method 8260C laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) associated with batches 156625 and 156962.

All other 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 Dissolved Lead and Dissolved Thallium 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.

The percent recoveries and/or the relative percent difference of the MS/MSD performed on a sample from another client were outside control limits for Dissolved Manganese Method 6020 because the sample concentration was greater than four times the spike amount.

The percent recoveries and/or the relative percent difference of the MS/MSD performed on sample MW-29A was outside control limits for Total Manganese Method 6020 because the sample concentration was greater than four times the spike amount.

All other MS and MSD samples were within established control limits.

### General Comments

The analyses for Volatile Organics by Method 8260C and Volatile Organics by Method 8260C 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: 280-49930-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-49930-1</b>	<b>MW-29A</b>					
Chloride		1.7		1.0	mg/L	300.0
Ammonia (as N)		0.076		0.030	mg/L	350.1
Alkalinity, Total (As CaCO3)		46		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		46		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		64	B	5.0	mg/L	SM 2540C
Total Organic Carbon - Average		1.5		1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		6.6		0.040	mg/L	6010B
Iron, Dissolved		3.9		0.060	mg/L	6010B
Magnesium, Dissolved		3.7		0.050	mg/L	6010B
Sodium, Dissolved		3.4		1.0	mg/L	6010B
Barium, Dissolved		0.011		0.0010	mg/L	6020
Manganese, Dissolved		1.3		0.0010	mg/L	6020
<b><i>Total Recoverable</i></b>						
Iron, Total		3.8		0.060	mg/L	6010B
Barium, Total		0.010		0.0010	mg/L	6020
Manganese, Total		1.2		0.0010	mg/L	6020
<b>280-49930-2FD</b>	<b>DUP1</b>					
Chloride		1.6		1.0	mg/L	300.0
Ammonia (as N)		0.077		0.030	mg/L	350.1
Alkalinity, Total (As CaCO3)		45		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		45		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		59	B	5.0	mg/L	SM 2540C
Total Organic Carbon - Average		1.5		1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		6.7		0.040	mg/L	6010B
Iron, Dissolved		3.9		0.060	mg/L	6010B
Magnesium, Dissolved		3.8		0.050	mg/L	6010B
Sodium, Dissolved		3.4		1.0	mg/L	6010B
Barium, Dissolved		0.011		0.0010	mg/L	6020
Manganese, Dissolved		1.3		0.0010	mg/L	6020
Selenium, Dissolved		0.0013		0.0010	mg/L	6020
<b><i>Total Recoverable</i></b>						
Iron, Total		3.9		0.060	mg/L	6010B
Barium, Total		0.011		0.0010	mg/L	6020
Manganese, Total		1.3		0.0010	mg/L	6020

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-49930-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-49930-3</b>	<b>MW-42</b>					
Trichloroethene		0.48	J	1.0	ug/L	8260B
Vinyl chloride		0.074		0.020	ug/L	8260B SIM
Chloride		18		1.0	mg/L	300.0
Sulfate		11		1.0	mg/L	300.0
Ammonia (as N)		6.0		0.060	mg/L	350.1
Alkalinity, Total (As CaCO3)		220		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		220		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		260	B	5.0	mg/L	SM 2540C
Total Suspended Solids		30		4.0	mg/L	SM 2540D
Total Organic Carbon - Average		7.1		1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		40		0.040	mg/L	6010B
Iron, Dissolved		25		0.060	mg/L	6010B
Magnesium, Dissolved		16		0.050	mg/L	6010B
Potassium, Dissolved		6.9		1.0	mg/L	6010B
Sodium, Dissolved		20		1.0	mg/L	6010B
Barium, Dissolved		0.11		0.0010	mg/L	6020
Manganese, Dissolved		4.6		0.0010	mg/L	6020
Selenium, Dissolved		0.0022		0.0010	mg/L	6020
<b><i>Total Recoverable</i></b>						
Iron, Total		24		0.060	mg/L	6010B
Barium, Total		0.11		0.0010	mg/L	6020
Manganese, Total		4.4		0.0010	mg/L	6020

**EXECUTIVE SUMMARY - Detections**

Client: Waste Management

Job Number: 280-49930-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-49930-4</b>	<b>MW-19C</b>					
Trichloroethene		1.3		1.0	ug/L	8260B
Vinyl chloride		0.11		0.020	ug/L	8260B SIM
Chloride		3.3		1.0	mg/L	300.0
Sulfate		4.6		1.0	mg/L	300.0
Ammonia (as N)		0.57		0.030	mg/L	350.1
Alkalinity, Total (As CaCO3)		74		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		74		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		100	B	5.0	mg/L	SM 2540C
<i><b>Dissolved</b></i>						
Calcium, Dissolved		14		0.040	mg/L	6010B
Iron, Dissolved		0.13		0.060	mg/L	6010B
Magnesium, Dissolved		7.3		0.050	mg/L	6010B
Potassium, Dissolved		1.4		1.0	mg/L	6010B
Sodium, Dissolved		6.0		1.0	mg/L	6010B
Barium, Dissolved		0.0037		0.0010	mg/L	6020
Manganese, Dissolved		1.1		0.0010	mg/L	6020
Selenium, Dissolved		0.0029		0.0010	mg/L	6020
<i><b>Total Recoverable</b></i>						
Iron, Total		0.14		0.060	mg/L	6010B
Barium, Total		0.0038		0.0010	mg/L	6020
Manganese, Total		1.1		0.0010	mg/L	6020
<b>280-49930-5</b>	<b>MW-13A</b>					
Chloride		1.7		1.0	mg/L	300.0
Sulfate		1.6		1.0	mg/L	300.0
Nitrate as N		0.47		0.050	mg/L	353.2
Alkalinity, Total (As CaCO3)		86		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		86		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		98	B	5.0	mg/L	SM 2540C
<i><b>Dissolved</b></i>						
Calcium, Dissolved		16		0.040	mg/L	6010B
Magnesium, Dissolved		9.4		0.050	mg/L	6010B
Sodium, Dissolved		5.5		1.0	mg/L	6010B
Barium, Dissolved		0.0028		0.0010	mg/L	6020
Copper, Dissolved		0.0020		0.0020	mg/L	6020
Selenium, Dissolved		0.0030		0.0010	mg/L	6020
Vanadium, Dissolved		0.0041		0.0020	mg/L	6020
<i><b>Total Recoverable</b></i>						
Barium, Total		0.0030		0.0010	mg/L	6020
Vanadium, Total		0.0042		0.0020	mg/L	6020



## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-49930-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-49930-6</b>	<b>MW-13B</b>					
Chloride		1.9		1.0	mg/L	300.0
Sulfate		3.1		1.0	mg/L	300.0
Nitrate as N		0.51		0.050	mg/L	353.2
Alkalinity, Total (As CaCO3)		84		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		84		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		99	B	5.0	mg/L	SM 2540C
<i>Dissolved</i>						
Calcium, Dissolved		17		0.040	mg/L	6010B
Magnesium, Dissolved		8.9		0.050	mg/L	6010B
Sodium, Dissolved		5.4		1.0	mg/L	6010B
Barium, Dissolved		0.0035		0.0010	mg/L	6020
Chromium, Dissolved		0.0031		0.0030	mg/L	6020
Copper, Dissolved		0.0044		0.0020	mg/L	6020
Selenium, Dissolved		0.0033		0.0010	mg/L	6020
Vanadium, Dissolved		0.0057		0.0020	mg/L	6020
<i>Total Recoverable</i>						
Barium, Total		0.0035		0.0010	mg/L	6020
Chromium, Total		0.0030		0.0030	mg/L	6020
Vanadium, Total		0.0058		0.0020	mg/L	6020
<b>280-49930-7</b>	<b>MW-34A</b>					
Vinyl chloride		0.023		0.020	ug/L	8260B SIM
Chloride		3.7		1.0	mg/L	300.0
Sulfate		1.7		1.0	mg/L	300.0
Nitrate as N		0.79		0.050	mg/L	353.2
Alkalinity, Total (As CaCO3)		97		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		97		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		140	B	5.0	mg/L	SM 2540C
<i>Dissolved</i>						
Calcium, Dissolved		18		0.040	mg/L	6010B
Magnesium, Dissolved		9.1		0.050	mg/L	6010B
Sodium, Dissolved		9.5		1.0	mg/L	6010B
Barium, Dissolved		0.0051		0.0010	mg/L	6020
Chromium, Dissolved		0.0038		0.0030	mg/L	6020
Copper, Dissolved		0.0026		0.0020	mg/L	6020
Selenium, Dissolved		0.0013		0.0010	mg/L	6020
Vanadium, Dissolved		0.0046		0.0020	mg/L	6020
<i>Total Recoverable</i>						
Barium, Total		0.0050		0.0010	mg/L	6020
Chromium, Total		0.0036		0.0030	mg/L	6020
Vanadium, Total		0.0043		0.0020	mg/L	6020

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-49930-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-49930-8</b>	<b>MW-34C</b>					
Vinyl chloride		0.16		0.020	ug/L	8260B SIM
Chloride		4.8		1.0	mg/L	300.0
Sulfate		5.7		1.0	mg/L	300.0
Alkalinity, Total (As CaCO3)		130		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		130		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		190	B	5.0	mg/L	SM 2540C
Total Suspended Solids		110		4.0	mg/L	SM 2540D
Total Organic Carbon - Average		2.1		1.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		26		0.040	mg/L	6010B
Iron, Dissolved		0.57		0.060	mg/L	6010B
Magnesium, Dissolved		11		0.050	mg/L	6010B
Potassium, Dissolved		1.0		1.0	mg/L	6010B
Sodium, Dissolved		14		1.0	mg/L	6010B
Barium, Dissolved		0.0084		0.0010	mg/L	6020
Copper, Dissolved		0.0047		0.0020	mg/L	6020
Manganese, Dissolved		0.58		0.0010	mg/L	6020
Selenium, Dissolved		0.0020		0.0010	mg/L	6020
<b><i>Total Recoverable</i></b>						
Cobalt, Total		0.0030		0.0030	mg/L	6010B
Iron, Total		37		0.060	mg/L	6010B
Barium, Total		0.11		0.0010	mg/L	6020
Copper, Total		0.0080		0.0020	mg/L	6020
Manganese, Total		2.5		0.0010	mg/L	6020
Vanadium, Total		0.0048		0.0020	mg/L	6020

## METHOD SUMMARY

Client: Waste Management

Job Number: 280-49930-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		SW846 3005A
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Metals (ICP/MS)	TAL DEN	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		SW846 3005A
Metals (ICP/MS)	TAL DEN	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		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	
Alkalinity	TAL DEN	SM SM 2320B	
Solids, Total Dissolved (TDS)	TAL DEN	SM SM 2540C	
Solids, Total Suspended (TSS)	TAL DEN	SM SM 2540D	
Organic Carbon, Total (TOC)	TAL DEN	SM SM 5310B	
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: 280-49930-1

<b>Method</b>	<b>Analyst</b>	<b>Analyst ID</b>
SW846 8260B	Hill, Leah C	LCH
SW846 8260B	Larson, Renee A	RAL
SW846 8260B SIM	Cwiklinski, Charles D	CDC
SW846 6010B	Scott, Samantha J	SJS
SW846 6020	Lill, Thomas E	TEL
MCAWW 300.0	Phan, Thu L	TLP
MCAWW 350.1	Elkin, David M	DME
EPA 353.2	Elkin, David M	DME
SM SM 2320B	Hoefler, Alexandra F	AFH
SM SM 2540C	Janssen, Elizabeth L	ELJ
SM SM 2540D	Neeley, Beth A	BAN
SM SM 5310B	Graham, Shane M	SMG
SM SM 5310B	Jewell, Connie C	CCJ

## SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-49930-1

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
280-49930-1	MW-29A	Water	12/03/2013 1049	12/04/2013 1015
280-49930-2FD	DUP1	Water	12/03/2013 1049	12/04/2013 1015
280-49930-3	MW-42	Water	12/03/2013 1234	12/04/2013 1015
280-49930-4	MW-19C	Water	12/03/2013 1402	12/04/2013 1015
280-49930-5	MW-13A	Water	12/03/2013 1427	12/04/2013 1015
280-49930-6	MW-13B	Water	12/03/2013 1332	12/04/2013 1015
280-49930-7	MW-34A	Water	12/03/2013 1133	12/04/2013 1015
280-49930-8	MW-34C	Water	12/03/2013 1037	12/04/2013 1015
280-49930-9TB	TRIP BLANK	Water	12/03/2013 0000	12/04/2013 1015

# **SAMPLE RESULTS**

## Analytical Data

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-29A**

Lab Sample ID: 280-49930-1

Date Sampled: 12/03/2013 1049

Client Matrix: Water

Date Received: 12/04/2013 1015

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B	Analysis Batch: 480-156625	Instrument ID: HP5973C	
Prep Method: 5030B	Prep Batch: N/A	Lab File ID: C35020.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/10/2013 0532		Final Weight/Volume: 5 mL	
Prep Date: 12/10/2013 0532			

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: 280-49930-1

**Client Sample ID: MW-29A**

Lab Sample ID: 280-49930-1

Date Sampled: 12/03/2013 1049

Client Matrix: Water

Date Received: 12/04/2013 1015

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B	Analysis Batch: 480-156625	Instrument ID: HP5973C	
Prep Method: 5030B	Prep Batch: N/A	Lab File ID: C35020.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/10/2013 0532		Final Weight/Volume: 5 mL	
Prep Date: 12/10/2013 0532			

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: 280-49930-1

**Client Sample ID: MW-29A**

Lab Sample ID: 280-49930-1

Date Sampled: 12/03/2013 1049

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35020.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0532			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0532				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95		66 - 137
4-Bromofluorobenzene (Surr)	100		73 - 120
Toluene-d8 (Surr)	96		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-29A**

Lab Sample ID: 280-49930-1

Date Sampled: 12/03/2013 1049

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35020.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0532			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0532				

**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: 280-49930-1

**Client Sample ID:** DUP1

Lab Sample ID: 280-49930-2FD

Date Sampled: 12/03/2013 1049

Client Matrix: Water

Date Received: 12/04/2013 1015

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35021.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0557			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0557				

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: 280-49930-1

**Client Sample ID:** DUP1

Lab Sample ID: 280-49930-2FD

Date Sampled: 12/03/2013 1049

Client Matrix: Water

Date Received: 12/04/2013 1015

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35021.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0557			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0557				

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: 280-49930-1

**Client Sample ID: DUP1**

Lab Sample ID: 280-49930-2FD

Date Sampled: 12/03/2013 1049

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35021.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0557			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0557				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95		66 - 137
4-Bromofluorobenzene (Surr)	97		73 - 120
Toluene-d8 (Surr)	96		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: DUP1**

Lab Sample ID: 280-49930-2FD

Date Sampled: 12/03/2013 1049

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method: 8260B

Analysis Batch: 480-156625

Instrument ID: HP5973C

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: C35021.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Analysis Date: 12/10/2013 0557

Final Weight/Volume: 5 mL

Prep Date: 12/10/2013 0557

**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: 280-49930-1

**Client Sample ID:** MW-42

Lab Sample ID: 280-49930-3

Date Sampled: 12/03/2013 1234

Client Matrix: Water

Date Received: 12/04/2013 1015

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35022.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0622			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0622				

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: 280-49930-1

**Client Sample ID: MW-42**

Lab Sample ID: 280-49930-3

Date Sampled: 12/03/2013 1234

Client Matrix: Water

Date Received: 12/04/2013 1015

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35022.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0622			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0622				

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	0.48	J	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: 280-49930-1

**Client Sample ID: MW-42**

Lab Sample ID: 280-49930-3

Date Sampled: 12/03/2013 1234

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35022.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0622			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0622				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97		66 - 137
4-Bromofluorobenzene (Surr)	95		73 - 120
Toluene-d8 (Surr)	93		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-42**

Lab Sample ID: 280-49930-3

Date Sampled: 12/03/2013 1234

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35022.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0622			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0622				

**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: 280-49930-1

Client Sample ID: MW-19C

Lab Sample ID: 280-49930-4

Date Sampled: 12/03/2013 1402

Client Matrix: Water

Date Received: 12/04/2013 1015

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35023.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0648			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0648				

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: 280-49930-1

**Client Sample ID: MW-19C**

Lab Sample ID: 280-49930-4

Date Sampled: 12/03/2013 1402

Client Matrix: Water

Date Received: 12/04/2013 1015

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B	Analysis Batch: 480-156625	Instrument ID: HP5973C	
Prep Method: 5030B	Prep Batch: N/A	Lab File ID: C35023.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/10/2013 0648		Final Weight/Volume: 5 mL	
Prep Date: 12/10/2013 0648			

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	1.3		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: 280-49930-1

**Client Sample ID: MW-19C**

Lab Sample ID: 280-49930-4

Date Sampled: 12/03/2013 1402

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35023.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0648			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0648				

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97		66 - 137
4-Bromofluorobenzene (Surr)	98		73 - 120
Toluene-d8 (Surr)	95		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-19C**

Lab Sample ID: 280-49930-4

Date Sampled: 12/03/2013 1402

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35023.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0648			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0648				

**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: 280-49930-1

**Client Sample ID:** MW-13A

Lab Sample ID: 280-49930-5

Date Sampled: 12/03/2013 1427

Client Matrix: Water

Date Received: 12/04/2013 1015

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35024.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0713			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0713				

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: 280-49930-1

**Client Sample ID:** MW-13A

Lab Sample ID: 280-49930-5

Date Sampled: 12/03/2013 1427

Client Matrix: Water

Date Received: 12/04/2013 1015

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35024.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0713			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0713				

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: 280-49930-1

**Client Sample ID: MW-13A**

Lab Sample ID: 280-49930-5

Date Sampled: 12/03/2013 1427

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35024.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0713			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0713				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96		66 - 137
4-Bromofluorobenzene (Surr)	98		73 - 120
Toluene-d8 (Surr)	94		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-13A**

Lab Sample ID: 280-49930-5

Date Sampled: 12/03/2013 1427

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35024.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0713			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0713				

**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: 280-49930-1

**Client Sample ID: MW-13B**

Lab Sample ID: 280-49930-6

Date Sampled: 12/03/2013 1332

Client Matrix: Water

Date Received: 12/04/2013 1015

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B	Analysis Batch: 480-156625	Instrument ID: HP5973C	
Prep Method: 5030B	Prep Batch: N/A	Lab File ID: C35025.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/10/2013 0739		Final Weight/Volume: 5 mL	
Prep Date: 12/10/2013 0739			

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: 280-49930-1

**Client Sample ID: MW-13B**

Lab Sample ID: 280-49930-6

Date Sampled: 12/03/2013 1332

Client Matrix: Water

Date Received: 12/04/2013 1015

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35025.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0739			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0739				

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: 280-49930-1

**Client Sample ID: MW-13B**

Lab Sample ID: 280-49930-6

Date Sampled: 12/03/2013 1332

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35025.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0739			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0739				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100		66 - 137
4-Bromofluorobenzene (Surr)	99		73 - 120
Toluene-d8 (Surr)	97		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-13B**

Lab Sample ID: 280-49930-6

Date Sampled: 12/03/2013 1332

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35025.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0739			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0739				

**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: 280-49930-1

**Client Sample ID:** MW-34A

Lab Sample ID: 280-49930-7

Date Sampled: 12/03/2013 1133

Client Matrix: Water

Date Received: 12/04/2013 1015

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35026.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0804			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0804				

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: 280-49930-1

**Client Sample ID:** MW-34A

Lab Sample ID: 280-49930-7

Date Sampled: 12/03/2013 1133

Client Matrix: Water

Date Received: 12/04/2013 1015

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35026.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0804			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0804				

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: 280-49930-1

**Client Sample ID: MW-34A**

Lab Sample ID: 280-49930-7

Date Sampled: 12/03/2013 1133

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35026.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0804			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0804				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96		66 - 137
4-Bromofluorobenzene (Surr)	98		73 - 120
Toluene-d8 (Surr)	95		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-34A**

Lab Sample ID: 280-49930-7

Date Sampled: 12/03/2013 1133

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35026.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0804			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0804				

**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: 280-49930-1

**Client Sample ID: MW-34C**

Lab Sample ID: 280-49930-8

Date Sampled: 12/03/2013 1037

Client Matrix: Water

Date Received: 12/04/2013 1015

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B	Analysis Batch: 480-156625	Instrument ID: HP5973C	
Prep Method: 5030B	Prep Batch: N/A	Lab File ID: C35027.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/10/2013 0830		Final Weight/Volume: 5 mL	
Prep Date: 12/10/2013 0830			

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: 280-49930-1

Client Sample ID: MW-34C

Lab Sample ID: 280-49930-8

Date Sampled: 12/03/2013 1037

Client Matrix: Water

Date Received: 12/04/2013 1015

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35027.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0830			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0830				

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: 280-49930-1

**Client Sample ID: MW-34C**

Lab Sample ID: 280-49930-8

Date Sampled: 12/03/2013 1037

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35027.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0830			Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0830				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94		66 - 137
4-Bromofluorobenzene (Surr)	95		73 - 120
Toluene-d8 (Surr)	91		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-34C**

Lab Sample ID: 280-49930-8

Date Sampled: 12/03/2013 1037

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method: 8260B

Analysis Batch: 480-156625

Instrument ID: HP5973C

Prep Method: 5030B

Prep Batch: N/A

Lab File ID: C35027.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Analysis Date: 12/10/2013 0830

Final Weight/Volume: 5 mL

Prep Date: 12/10/2013 0830

**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: 280-49930-1

**Client Sample ID:** TRIP BLANK

Lab Sample ID: 280-49930-9TB

Date Sampled: 12/03/2013 0000

Client Matrix: Water

Date Received: 12/04/2013 1015

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-156962	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35094.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1519			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1519				

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: 280-49930-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 280-49930-9TB

Date Sampled: 12/03/2013 0000

Client Matrix: Water

Date Received: 12/04/2013 1015

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B	Analysis Batch: 480-156962	Instrument ID: HP5973C	
Prep Method: 5030B	Prep Batch: N/A	Lab File ID: C35094.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/11/2013 1519		Final Weight/Volume: 5 mL	
Prep Date: 12/11/2013 1519			

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: 280-49930-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 280-49930-9TB

Date Sampled: 12/03/2013 0000

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-156962	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35094.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1519			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1519				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97		66 - 137
4-Bromofluorobenzene (Surr)	94		73 - 120
Toluene-d8 (Surr)	92		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 280-49930-9TB

Date Sampled: 12/03/2013 0000

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	480-156962	Instrument ID:	HP5973C
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	C35094.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1519			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1519				

**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: 280-49930-1

**Client Sample ID: MW-29A**

Lab Sample ID: 280-49930-1

Date Sampled: 12/03/2013 1049

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-157026	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J6781.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 1525			Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 1525				

---

Analyte	Result (ug/L)	Qualifier	RL	RL
Vinyl chloride	ND		0.020	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
TBA-d9 (Surr)	125		50 - 150
Dibromofluoromethane (Surr)	124		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: DUP1**

Lab Sample ID: 280-49930-2FD

Date Sampled: 12/03/2013 1049

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-157026	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J6782.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 1549			Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 1549				

---

Analyte	Result (ug/L)	Qualifier	RL	RL
Vinyl chloride	ND		0.020	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
TBA-d9 (Surr)	120		50 - 150
Dibromofluoromethane (Surr)	126		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-42**

Lab Sample ID: 280-49930-3

Date Sampled: 12/03/2013 1234

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-157026	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J6783.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 1614			Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 1614				

---

Analyte	Result (ug/L)	Qualifier	RL	RL
Vinyl chloride	0.074		0.020	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
TBA-d9 (Surr)	125		50 - 150
Dibromofluoromethane (Surr)	124		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-19C**

Lab Sample ID: 280-49930-4

Date Sampled: 12/03/2013 1402

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-157026	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J6784.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 1638			Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 1638				

---

Analyte	Result (ug/L)	Qualifier	RL	RL
Vinyl chloride	0.11		0.020	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
TBA-d9 (Surr)	117		50 - 150
Dibromofluoromethane (Surr)	127		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-13A**

Lab Sample ID: 280-49930-5

Date Sampled: 12/03/2013 1427

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-157026	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J6785.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 1702			Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 1702				

---

Analyte	Result (ug/L)	Qualifier	RL	RL
Vinyl chloride	ND		0.020	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
TBA-d9 (Surr)	122		50 - 150
Dibromofluoromethane (Surr)	132		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-13B**

Lab Sample ID: 280-49930-6

Date Sampled: 12/03/2013 1332

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-157026	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J6786.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 1726			Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 1726				

---

Analyte	Result (ug/L)	Qualifier	RL	RL
Vinyl chloride	ND		0.020	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
TBA-d9 (Surr)	133		50 - 150
Dibromofluoromethane (Surr)	133		50 - 150



**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-34A**

Lab Sample ID: 280-49930-7

Date Sampled: 12/03/2013 1133

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-157026	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J6787.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 1750			Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 1750				

---

Analyte	Result (ug/L)	Qualifier	RL	RL
Vinyl chloride	0.023		0.020	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
TBA-d9 (Surr)	126		50 - 150
Dibromofluoromethane (Surr)	132		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-34C**

Lab Sample ID: 280-49930-8

Date Sampled: 12/03/2013 1037

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-157026	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J6788.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 1814			Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 1814				

---

Analyte	Result (ug/L)	Qualifier	RL	RL
Vinyl chloride	0.16		0.020	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
TBA-d9 (Surr)	131		50 - 150
Dibromofluoromethane (Surr)	134		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 280-49930-9TB

Date Sampled: 12/03/2013 0000

Client Matrix: Water

Date Received: 12/04/2013 1015

---

**8260B SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B SIM	Analysis Batch:	480-157026	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J6789.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 1839			Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 1839				

---

Analyte	Result (ug/L)	Qualifier	RL	RL
Vinyl chloride	ND		0.020	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
TBA-d9 (Surr)	125		50 - 150
Dibromofluoromethane (Surr)	138		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-29A**

Lab Sample ID: 280-49930-1

Date Sampled: 12/03/2013 1049

Client Matrix: Water

Date Received: 12/04/2013 1015

**6010B Metals (ICP)-Total Recoverable**

Analysis Method:	6010B	Analysis Batch:	280-204395	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-203908	Lab File ID:	26A04120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 2054			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	3.8		0.060	0.060

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-204391	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-203879	Lab File ID:	26A01120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 1308			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	6.6		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	3.9		0.060	0.060
Magnesium, Dissolved	3.7		0.050	0.050
Potassium, Dissolved	ND		1.0	1.0
Sodium, Dissolved	3.4		1.0	1.0

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-204373	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203949	Lab File ID:	231AREF.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/07/2013 0447			Final Weight/Volume:	50 mL
Prep Date:	12/06/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	0.010		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	ND		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-29A**

Lab Sample ID: 280-49930-1

Date Sampled: 12/03/2013 1049

Client Matrix: Water

Date Received: 12/04/2013 1015

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-204577	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203949	Lab File ID:	077AREF.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/09/2013 2058			Final Weight/Volume:	50 mL
Prep Date:	12/06/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Manganese, Total	1.2		0.0010	0.0010
Selenium, Total	ND		0.0010	0.0010

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-204115	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203912	Lab File ID:	118SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/06/2013 0209			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.011		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	1.3		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	ND		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: DUP1**

Lab Sample ID: 280-49930-2FD

Date Sampled: 12/03/2013 1049

Client Matrix: Water

Date Received: 12/04/2013 1015

**6010B Metals (ICP)-Total Recoverable**

Analysis Method:	6010B	Analysis Batch:	280-204395	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-203908	Lab File ID:	26A04120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 2056			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	3.9		0.060	0.060

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-204391	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-203879	Lab File ID:	26A01120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 1317			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	6.7		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	3.9		0.060	0.060
Magnesium, Dissolved	3.8		0.050	0.050
Potassium, Dissolved	ND		1.0	1.0
Sodium, Dissolved	3.4		1.0	1.0

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-204373	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203949	Lab File ID:	238SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/07/2013 0509			Final Weight/Volume:	50 mL
Prep Date:	12/06/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	0.011		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	ND		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

Client: Waste Management

Job Number: 280-49930-1

Client Sample ID: DUP1

Lab Sample ID: 280-49930-2FD  
 Client Matrix: Water

Date Sampled: 12/03/2013 1049  
 Date Received: 12/04/2013 1015

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-204577	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203949	Lab File ID:	084SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/09/2013 2119			Final Weight/Volume:	50 mL
Prep Date:	12/06/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Manganese, Total	1.3		0.0010	0.0010
Selenium, Total	ND		0.0010	0.0010

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-204115	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203912	Lab File ID:	119SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/06/2013 0213			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.011		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	1.3		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	0.0013		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-42**

Lab Sample ID: 280-49930-3

Date Sampled: 12/03/2013 1234

Client Matrix: Water

Date Received: 12/04/2013 1015

**6010B Metals (ICP)-Total Recoverable**

Analysis Method:	6010B	Analysis Batch:	280-204395	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-203908	Lab File ID:	26A04120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 2059			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	24		0.060	0.060

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-204391	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-203879	Lab File ID:	26A01120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 1319			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	40		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	25		0.060	0.060
Magnesium, Dissolved	16		0.050	0.050
Potassium, Dissolved	6.9		1.0	1.0
Sodium, Dissolved	20		1.0	1.0

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-204373	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203949	Lab File ID:	239SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/07/2013 0512			Final Weight/Volume:	50 mL
Prep Date:	12/06/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	0.11		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	ND		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050



**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-42**

Lab Sample ID: 280-49930-3

Date Sampled: 12/03/2013 1234

Client Matrix: Water

Date Received: 12/04/2013 1015

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-204577	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203949	Lab File ID:	085SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/09/2013 2122			Final Weight/Volume:	50 mL
Prep Date:	12/06/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Manganese, Total	4.4		0.0010	0.0010
Selenium, Total	ND		0.0010	0.0010

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-204115	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203912	Lab File ID:	120SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/06/2013 0216			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.11		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	4.6		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	0.0022		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-19C**

Lab Sample ID: 280-49930-4

Date Sampled: 12/03/2013 1402

Client Matrix: Water

Date Received: 12/04/2013 1015

**6010B Metals (ICP)-Total Recoverable**

Analysis Method:	6010B	Analysis Batch:	280-204395	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-203908	Lab File ID:	26A04120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 2111			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	0.14		0.060	0.060

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-204391	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-203879	Lab File ID:	26A01120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 1322			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	14		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	0.13		0.060	0.060
Magnesium, Dissolved	7.3		0.050	0.050
Potassium, Dissolved	1.4		1.0	1.0
Sodium, Dissolved	6.0		1.0	1.0

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-204373	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203949	Lab File ID:	240SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/07/2013 0515			Final Weight/Volume:	50 mL
Prep Date:	12/06/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	0.0038		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	ND		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-19C**

Lab Sample ID: 280-49930-4

Date Sampled: 12/03/2013 1402

Client Matrix: Water

Date Received: 12/04/2013 1015

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-204577	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203949	Lab File ID:	086SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/09/2013 2125			Final Weight/Volume:	50 mL
Prep Date:	12/06/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Manganese, Total	1.1		0.0010	0.0010
Selenium, Total	ND		0.0010	0.0010

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-204115	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203912	Lab File ID:	121SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/06/2013 0219			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.0037		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	1.1		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	0.0029		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-13A**

Lab Sample ID: 280-49930-5

Date Sampled: 12/03/2013 1427

Client Matrix: Water

Date Received: 12/04/2013 1015

**6010B Metals (ICP)-Total Recoverable**

Analysis Method:	6010B	Analysis Batch:	280-204395	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-203908	Lab File ID:	26A04120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 2113			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	ND		0.060	0.060

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-204391	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-203879	Lab File ID:	26A01120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 1324			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	16		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	ND		0.060	0.060
Magnesium, Dissolved	9.4		0.050	0.050
Potassium, Dissolved	ND		1.0	1.0
Sodium, Dissolved	5.5		1.0	1.0

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-204373	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203949	Lab File ID:	241SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/07/2013 0518			Final Weight/Volume:	50 mL
Prep Date:	12/06/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	0.0030		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	0.0042		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID:** MW-13A

Lab Sample ID: 280-49930-5

Date Sampled: 12/03/2013 1427

Client Matrix: Water

Date Received: 12/04/2013 1015

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-204577	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203949	Lab File ID:	087SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/09/2013 2129			Final Weight/Volume:	50 mL
Prep Date:	12/06/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Manganese, Total	ND		0.0010	0.0010
Selenium, Total	ND		0.0010	0.0010

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-204115	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203912	Lab File ID:	122SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/06/2013 0222			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.0028		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	0.0020		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	ND		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	0.0030		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	0.0041		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-13B**

Lab Sample ID: 280-49930-6

Date Sampled: 12/03/2013 1332

Client Matrix: Water

Date Received: 12/04/2013 1015

**6010B Metals (ICP)-Total Recoverable**

Analysis Method:	6010B	Analysis Batch:	280-204395	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-203908	Lab File ID:	26A04120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 2116			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	ND		0.060	0.060

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-204391	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-203879	Lab File ID:	26A01120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 1336			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	17		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	ND		0.060	0.060
Magnesium, Dissolved	8.9		0.050	0.050
Potassium, Dissolved	ND		1.0	1.0
Sodium, Dissolved	5.4		1.0	1.0

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-204373	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203949	Lab File ID:	242SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/07/2013 0521			Final Weight/Volume:	50 mL
Prep Date:	12/06/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	0.0035		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	0.0030		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	0.0058		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-13B**

Lab Sample ID: 280-49930-6

Date Sampled: 12/03/2013 1332

Client Matrix: Water

Date Received: 12/04/2013 1015

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-204577	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203949	Lab File ID:	088SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/09/2013 2132			Final Weight/Volume:	50 mL
Prep Date:	12/06/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Manganese, Total	ND		0.0010	0.0010
Selenium, Total	ND		0.0010	0.0010

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-204115	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203912	Lab File ID:	123SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/06/2013 0225			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.0035		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	0.0031		0.0030	0.0030
Copper, Dissolved	0.0044		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	ND		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	0.0033		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	0.0057		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

## Analytical Data

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID:** MW-34A

Lab Sample ID: 280-49930-7

Date Sampled: 12/03/2013 1133

Client Matrix: Water

Date Received: 12/04/2013 1015

### 6010B Metals (ICP)-Total Recoverable

Analysis Method:	6010B	Analysis Batch:	280-204395	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-203908	Lab File ID:	26A04120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 2118			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	ND		0.060	0.060

### 6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	280-204391	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-203879	Lab File ID:	26A01120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 1339			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	18		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	ND		0.060	0.060
Magnesium, Dissolved	9.1		0.050	0.050
Potassium, Dissolved	ND		1.0	1.0
Sodium, Dissolved	9.5		1.0	1.0

### 6020 Metals (ICP/MS)-Total Recoverable

Analysis Method:	6020	Analysis Batch:	280-204373	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203949	Lab File ID:	243SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/07/2013 0524			Final Weight/Volume:	50 mL
Prep Date:	12/06/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	0.0050		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	0.0036		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	0.0043		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050



Analytical Data

Client: Waste Management

Job Number: 280-49930-1

Client Sample ID: MW-34A

Lab Sample ID: 280-49930-7

Date Sampled: 12/03/2013 1133

Client Matrix: Water

Date Received: 12/04/2013 1015

6020 Metals (ICP/MS)-Total Recoverable

Analysis Method: 6020                      Analysis Batch: 280-204577                      Instrument ID: MT\_024  
Prep Method: 3005A                      Prep Batch: 280-203949                      Lab File ID: 089SMPL.D  
Dilution: 1.0                      Initial Weight/Volume: 50 mL  
Analysis Date: 12/09/2013 2135                      Final Weight/Volume: 50 mL  
Prep Date: 12/06/2013 0730

Analyte	Result (mg/L)	Qualifier	RL	RL
Manganese, Total	ND		0.0010	0.0010
Selenium, Total	ND		0.0010	0.0010

6020 Metals (ICP/MS)-Dissolved

Analysis Method: 6020                      Analysis Batch: 280-204115                      Instrument ID: MT\_024  
Prep Method: 3005A                      Prep Batch: 280-203912                      Lab File ID: 124SMPL.D  
Dilution: 1.0                      Initial Weight/Volume: 50 mL  
Analysis Date: 12/06/2013 0228                      Final Weight/Volume: 50 mL  
Prep Date: 12/05/2013 1200

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.0051		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	0.0038		0.0030	0.0030
Copper, Dissolved	0.0026		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	ND		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	0.0013		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	0.0046		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-34C**

Lab Sample ID: 280-49930-8

Date Sampled: 12/03/2013 1037

Client Matrix: Water

Date Received: 12/04/2013 1015

**6010B Metals (ICP)-Total Recoverable**

Analysis Method:	6010B	Analysis Batch:	280-204395	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-203908	Lab File ID:	26A04120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 2121			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	0.0030		0.0030	0.0030
Iron, Total	37		0.060	0.060

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-204391	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-203879	Lab File ID:	26A01120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 1341			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	26		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	0.57		0.060	0.060
Magnesium, Dissolved	11		0.050	0.050
Potassium, Dissolved	1.0		1.0	1.0
Sodium, Dissolved	14		1.0	1.0

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-204373	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203949	Lab File ID:	244SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/07/2013 0527			Final Weight/Volume:	50 mL
Prep Date:	12/06/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	0.11		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	0.0080		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	0.0048		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-49930-1

**Client Sample ID: MW-34C**

Lab Sample ID: 280-49930-8  
 Client Matrix: Water

Date Sampled: 12/03/2013 1037  
 Date Received: 12/04/2013 1015

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-204577	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203949	Lab File ID:	090SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/09/2013 2138			Final Weight/Volume:	50 mL
Prep Date:	12/06/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Manganese, Total	2.5		0.0010	0.0010
Selenium, Total	ND		0.0010	0.0010

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-204115	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-203912	Lab File ID:	125SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/06/2013 0231			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.0084		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	0.0047		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	0.58		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	0.0020		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

Client: Waste Management

Job Number: 280-49930-1

General Chemistry

Client Sample ID: MW-29A

Lab Sample ID: 280-49930-1

Date Sampled: 12/03/2013 1049

Client Matrix: Water

Date Received: 12/04/2013 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	1.7		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205526	Analysis Date: 12/16/2013 2003					
Sulfate	ND		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205526	Analysis Date: 12/16/2013 2003					
Ammonia (as N)	0.076		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-205244	Analysis Date: 12/13/2013 1349					
Nitrate as N	ND		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206107	Analysis Date: 12/20/2013 1009					
Alkalinity, Total (As CaCO3)	46		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204131	Analysis Date: 12/05/2013 2137					
Alkalinity, Bicarbonate (As CaCO3)	46		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204131	Analysis Date: 12/05/2013 2137					
Total Dissolved Solids (TDS)	64	B	mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-204203	Analysis Date: 12/06/2013 1306					
Total Suspended Solids	ND		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-204110	Analysis Date: 12/06/2013 0803					
Total Organic Carbon - Average	1.5		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-204724	Analysis Date: 12/11/2013 0213					

Client: Waste Management

Job Number: 280-49930-1

General Chemistry

Client Sample ID: DUP1

Lab Sample ID: 280-49930-2FD

Date Sampled: 12/03/2013 1049

Client Matrix: Water

Date Received: 12/04/2013 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	1.6		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205526	Analysis Date: 12/16/2013 2112					
Sulfate	ND		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205526	Analysis Date: 12/16/2013 2112					
Ammonia (as N)	0.077		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-205244	Analysis Date: 12/13/2013 1328					
Nitrate as N	ND		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206107	Analysis Date: 12/20/2013 1009					
Alkalinity, Total (As CaCO3)	45		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204131	Analysis Date: 12/05/2013 2144					
Alkalinity, Bicarbonate (As CaCO3)	45		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204131	Analysis Date: 12/05/2013 2144					
Total Dissolved Solids (TDS)	59	B	mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-204203	Analysis Date: 12/06/2013 1306					
Total Suspended Solids	ND		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-204110	Analysis Date: 12/06/2013 0803					
Total Organic Carbon - Average	1.5		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-204724	Analysis Date: 12/11/2013 0229					

Client: Waste Management

Job Number: 280-49930-1

General Chemistry

Client Sample ID: MW-42

Lab Sample ID: 280-49930-3

Date Sampled: 12/03/2013 1234

Client Matrix: Water

Date Received: 12/04/2013 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	18		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205526	Analysis Date: 12/16/2013 2204					
Sulfate	11		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205526	Analysis Date: 12/16/2013 2204					
Ammonia (as N)	6.0		mg/L	0.060	0.060	2.0	350.1
	Analysis Batch: 280-205244	Analysis Date: 12/13/2013 1410					
Nitrate as N	ND		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206107	Analysis Date: 12/20/2013 1009					
Alkalinity, Total (As CaCO3)	220		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204131	Analysis Date: 12/05/2013 2209					
Alkalinity, Bicarbonate (As CaCO3)	220		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204131	Analysis Date: 12/05/2013 2209					
Total Dissolved Solids (TDS)	260	B	mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-204203	Analysis Date: 12/06/2013 1306					
Total Suspended Solids	30		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-204110	Analysis Date: 12/06/2013 0803					
Total Organic Carbon - Average	7.1		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-204724	Analysis Date: 12/11/2013 0245					

Client: Waste Management

Job Number: 280-49930-1

General Chemistry

Client Sample ID: MW-19C

Lab Sample ID: 280-49930-4

Date Sampled: 12/03/2013 1402

Client Matrix: Water

Date Received: 12/04/2013 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	3.3		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205526	Analysis Date: 12/16/2013 2221					
Sulfate	4.6		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205526	Analysis Date: 12/16/2013 2221					
Ammonia (as N)	0.57		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-205244	Analysis Date: 12/13/2013 1337					
Nitrate as N	ND		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206107	Analysis Date: 12/20/2013 1009					
Alkalinity, Total (As CaCO3)	74		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204131	Analysis Date: 12/05/2013 2215					
Alkalinity, Bicarbonate (As CaCO3)	74		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204131	Analysis Date: 12/05/2013 2215					
Total Dissolved Solids (TDS)	100	B	mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-204203	Analysis Date: 12/06/2013 1306					
Total Suspended Solids	ND		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-204110	Analysis Date: 12/06/2013 0803					
Total Organic Carbon - Average	ND		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-204724	Analysis Date: 12/11/2013 0334					

Client: Waste Management

Job Number: 280-49930-1

General Chemistry

Client Sample ID: MW-13A

Lab Sample ID: 280-49930-5

Date Sampled: 12/03/2013 1427

Client Matrix: Water

Date Received: 12/04/2013 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	1.7		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205526	Analysis Date: 12/16/2013 2239					
Sulfate	1.6		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205526	Analysis Date: 12/16/2013 2239					
Ammonia (as N)	ND		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-205244	Analysis Date: 12/13/2013 1340					
Nitrate as N	0.47		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206107	Analysis Date: 12/20/2013 1009					
Alkalinity, Total (As CaCO3)	86		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204131	Analysis Date: 12/05/2013 2223					
Alkalinity, Bicarbonate (As CaCO3)	86		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204131	Analysis Date: 12/05/2013 2223					
Total Dissolved Solids (TDS)	98	B	mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-204203	Analysis Date: 12/06/2013 1306					
Total Suspended Solids	ND		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-204358	Analysis Date: 12/09/2013 0742					
Total Organic Carbon - Average	ND		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-206902	Analysis Date: 12/29/2013 0519					



Client: Waste Management

Job Number: 280-49930-1

General Chemistry

Client Sample ID: MW-13B

Lab Sample ID: 280-49930-6

Date Sampled: 12/03/2013 1332

Client Matrix: Water

Date Received: 12/04/2013 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	1.9		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205526			Analysis Date: 12/16/2013 2256			
Sulfate	3.1		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205526			Analysis Date: 12/16/2013 2256			
Ammonia (as N)	ND		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-205244			Analysis Date: 12/13/2013 1342			
Nitrate as N	0.51		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206107			Analysis Date: 12/20/2013 1009			
Alkalinity, Total (As CaCO3)	84		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204131			Analysis Date: 12/05/2013 2230			
Alkalinity, Bicarbonate (As CaCO3)	84		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204131			Analysis Date: 12/05/2013 2230			
Total Dissolved Solids (TDS)	99	B	mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-204203			Analysis Date: 12/06/2013 1306			
Total Suspended Solids	ND		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-204358			Analysis Date: 12/09/2013 0742			
Total Organic Carbon - Average	ND		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-206902			Analysis Date: 12/29/2013 0533			

Client: Waste Management

Job Number: 280-49930-1

General Chemistry

Client Sample ID: MW-34A

Lab Sample ID: 280-49930-7

Date Sampled: 12/03/2013 1133

Client Matrix: Water

Date Received: 12/04/2013 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	3.7		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205526	Analysis Date: 12/16/2013 2313					
Sulfate	1.7		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205526	Analysis Date: 12/16/2013 2313					
Ammonia (as N)	ND		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-205244	Analysis Date: 12/13/2013 1344					
Nitrate as N	0.79		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206107	Analysis Date: 12/20/2013 1009					
Alkalinity, Total (As CaCO3)	97		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204131	Analysis Date: 12/05/2013 2238					
Alkalinity, Bicarbonate (As CaCO3)	97		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204131	Analysis Date: 12/05/2013 2238					
Total Dissolved Solids (TDS)	140	B	mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-204203	Analysis Date: 12/06/2013 1306					
Total Suspended Solids	ND		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-204358	Analysis Date: 12/09/2013 0742					
Total Organic Carbon - Average	ND		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-206902	Analysis Date: 12/29/2013 0547					

Client: Waste Management

Job Number: 280-49930-1

General Chemistry

Client Sample ID: MW-34C

Lab Sample ID: 280-49930-8

Date Sampled: 12/03/2013 1037

Client Matrix: Water

Date Received: 12/04/2013 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	4.8		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205526	Analysis Date: 12/16/2013 2331					
Sulfate	5.7		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205526	Analysis Date: 12/16/2013 2331					
Ammonia (as N)	ND		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-205244	Analysis Date: 12/13/2013 1347					
Nitrate as N	ND		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206107	Analysis Date: 12/20/2013 1009					
Alkalinity, Total (As CaCO3)	130		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204131	Analysis Date: 12/05/2013 2244					
Alkalinity, Bicarbonate (As CaCO3)	130		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204131	Analysis Date: 12/05/2013 2244					
Total Dissolved Solids (TDS)	190	B	mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-204203	Analysis Date: 12/06/2013 1306					
Total Suspended Solids	110		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-204358	Analysis Date: 12/09/2013 0742					
Total Organic Carbon - Average	2.1		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-206902	Analysis Date: 12/29/2013 0603					

## DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-49930-1

Lab Section	Qualifier	Description
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	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F	MS/MSD Recovery and/or RPD exceeds the control limits
General Chemistry	B	Compound was found in the blank and sample.

# QUALITY CONTROL RESULTS

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Analysis Batch:480-156625</b>					
LCS 480-156625/4	Lab Control Sample	T	Water	8260B	
LCSD 480-156625/5	Lab Control Sample Duplicate	T	Water	8260B	
MB 480-156625/7	Method Blank	T	Water	8260B	
280-49930-1	MW-29A	T	Water	8260B	
280-49930-2FD	DUP1	T	Water	8260B	
280-49930-3	MW-42	T	Water	8260B	
280-49930-4	MW-19C	T	Water	8260B	
280-49930-5	MW-13A	T	Water	8260B	
280-49930-6	MW-13B	T	Water	8260B	
280-49930-7	MW-34A	T	Water	8260B	
280-49930-8	MW-34C	T	Water	8260B	
<b>Analysis Batch:480-156962</b>					
LCS 480-156962/4	Lab Control Sample	T	Water	8260B	
LCSD 480-156962/5	Lab Control Sample Duplicate	T	Water	8260B	
MB 480-156962/7	Method Blank	T	Water	8260B	
280-49930-9TB	TRIP BLANK	T	Water	8260B	
<b>Analysis Batch:480-157026</b>					
LCS 480-157026/5	Lab Control Sample	T	Water	8260B SIM	
LCSD 480-157026/6	Lab Control Sample Duplicate	T	Water	8260B SIM	
MB 480-157026/7	Method Blank	T	Water	8260B SIM	
280-49930-1	MW-29A	T	Water	8260B SIM	
280-49930-2FD	DUP1	T	Water	8260B SIM	
280-49930-3	MW-42	T	Water	8260B SIM	
280-49930-4	MW-19C	T	Water	8260B SIM	
280-49930-5	MW-13A	T	Water	8260B SIM	
280-49930-6	MW-13B	T	Water	8260B SIM	
280-49930-7	MW-34A	T	Water	8260B SIM	
280-49930-8	MW-34C	T	Water	8260B SIM	
280-49930-9TB	TRIP BLANK	T	Water	8260B SIM	

**Report Basis**

T = Total

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
<b>Metals</b>					
<b>Prep Batch: 280-203879</b>					
LCS 280-203879/2-A	Lab Control Sample	R	Water	3005A	
MB 280-203879/1-A	Method Blank	R	Water	3005A	
280-49930-1	MW-29A	D	Water	3005A	
280-49930-1MS	Matrix Spike	D	Water	3005A	
280-49930-1MSD	Matrix Spike Duplicate	D	Water	3005A	
280-49930-2FD	DUP1	D	Water	3005A	
280-49930-3	MW-42	D	Water	3005A	
280-49930-4	MW-19C	D	Water	3005A	
280-49930-5	MW-13A	D	Water	3005A	
280-49930-6	MW-13B	D	Water	3005A	
280-49930-7	MW-34A	D	Water	3005A	
280-49930-8	MW-34C	D	Water	3005A	
<b>Prep Batch: 280-203908</b>					
LCS 280-203908/2-A	Lab Control Sample	R	Water	3005A	
MB 280-203908/1-A	Method Blank	R	Water	3005A	
280-49927-A-1-B MS	Matrix Spike	R	Water	3005A	
280-49927-A-1-C MSD	Matrix Spike Duplicate	R	Water	3005A	
280-49930-1	MW-29A	R	Water	3005A	
280-49930-2FD	DUP1	R	Water	3005A	
280-49930-3	MW-42	R	Water	3005A	
280-49930-4	MW-19C	R	Water	3005A	
280-49930-5	MW-13A	R	Water	3005A	
280-49930-6	MW-13B	R	Water	3005A	
280-49930-7	MW-34A	R	Water	3005A	
280-49930-8	MW-34C	R	Water	3005A	
<b>Prep Batch: 280-203912</b>					
LCS 280-203912/2-A	Lab Control Sample	R	Water	3005A	
MB 280-203912/1-A	Method Blank	R	Water	3005A	
280-49928-A-3-E MS ^5	Matrix Spike	D	Water	3005A	
280-49928-A-3-F MSD ^5	Matrix Spike Duplicate	D	Water	3005A	
280-49930-1	MW-29A	D	Water	3005A	
280-49930-2FD	DUP1	D	Water	3005A	
280-49930-3	MW-42	D	Water	3005A	
280-49930-4	MW-19C	D	Water	3005A	
280-49930-5	MW-13A	D	Water	3005A	
280-49930-6	MW-13B	D	Water	3005A	
280-49930-7	MW-34A	D	Water	3005A	
280-49930-8	MW-34C	D	Water	3005A	

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Prep Batch: 280-203949</b>					
LCS 280-203949/2-A	Lab Control Sample	R	Water	3005A	
MB 280-203949/1-A	Method Blank	R	Water	3005A	
280-49930-1	MW-29A	R	Water	3005A	
280-49930-1MS	Matrix Spike	R	Water	3005A	
280-49930-1MSD	Matrix Spike Duplicate	R	Water	3005A	
280-49930-2FD	DUP1	R	Water	3005A	
280-49930-3	MW-42	R	Water	3005A	
280-49930-4	MW-19C	R	Water	3005A	
280-49930-5	MW-13A	R	Water	3005A	
280-49930-6	MW-13B	R	Water	3005A	
280-49930-7	MW-34A	R	Water	3005A	
280-49930-8	MW-34C	R	Water	3005A	
<b>Analysis Batch:280-204115</b>					
LCS 280-203912/2-A	Lab Control Sample	R	Water	6020	280-203912
MB 280-203912/1-A	Method Blank	R	Water	6020	280-203912
280-49930-1	MW-29A	D	Water	6020	280-203912
280-49930-2FD	DUP1	D	Water	6020	280-203912
280-49930-3	MW-42	D	Water	6020	280-203912
280-49930-4	MW-19C	D	Water	6020	280-203912
280-49930-5	MW-13A	D	Water	6020	280-203912
280-49930-6	MW-13B	D	Water	6020	280-203912
280-49930-7	MW-34A	D	Water	6020	280-203912
280-49930-8	MW-34C	D	Water	6020	280-203912
<b>Analysis Batch:280-204373</b>					
LCS 280-203949/2-A	Lab Control Sample	R	Water	6020	280-203949
MB 280-203949/1-A	Method Blank	R	Water	6020	280-203949
280-49928-A-3-E MS ^5	Matrix Spike	D	Water	6020	280-203912
280-49928-A-3-F MSD ^5	Matrix Spike Duplicate	D	Water	6020	280-203912
280-49930-1	MW-29A	R	Water	6020	280-203949
280-49930-1MS	Matrix Spike	R	Water	6020	280-203949
280-49930-1MSD	Matrix Spike Duplicate	R	Water	6020	280-203949
280-49930-2FD	DUP1	R	Water	6020	280-203949
280-49930-3	MW-42	R	Water	6020	280-203949
280-49930-4	MW-19C	R	Water	6020	280-203949
280-49930-5	MW-13A	R	Water	6020	280-203949
280-49930-6	MW-13B	R	Water	6020	280-203949
280-49930-7	MW-34A	R	Water	6020	280-203949
280-49930-8	MW-34C	R	Water	6020	280-203949



## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
<b>Metals</b>					
<b>Analysis Batch:280-204391</b>					
LCS 280-203879/2-A	Lab Control Sample	R	Water	6010B	280-203879
MB 280-203879/1-A	Method Blank	R	Water	6010B	280-203879
280-49930-1	MW-29A	D	Water	6010B	280-203879
280-49930-1MS	Matrix Spike	D	Water	6010B	280-203879
280-49930-1MSD	Matrix Spike Duplicate	D	Water	6010B	280-203879
280-49930-2FD	DUP1	D	Water	6010B	280-203879
280-49930-3	MW-42	D	Water	6010B	280-203879
280-49930-4	MW-19C	D	Water	6010B	280-203879
280-49930-5	MW-13A	D	Water	6010B	280-203879
280-49930-6	MW-13B	D	Water	6010B	280-203879
280-49930-7	MW-34A	D	Water	6010B	280-203879
280-49930-8	MW-34C	D	Water	6010B	280-203879
<b>Analysis Batch:280-204395</b>					
LCS 280-203908/2-A	Lab Control Sample	R	Water	6010B	280-203908
MB 280-203908/1-A	Method Blank	R	Water	6010B	280-203908
280-49927-A-1-B MS	Matrix Spike	R	Water	6010B	280-203908
280-49927-A-1-C MSD	Matrix Spike Duplicate	R	Water	6010B	280-203908
280-49930-1	MW-29A	R	Water	6010B	280-203908
280-49930-2FD	DUP1	R	Water	6010B	280-203908
280-49930-3	MW-42	R	Water	6010B	280-203908
280-49930-4	MW-19C	R	Water	6010B	280-203908
280-49930-5	MW-13A	R	Water	6010B	280-203908
280-49930-6	MW-13B	R	Water	6010B	280-203908
280-49930-7	MW-34A	R	Water	6010B	280-203908
280-49930-8	MW-34C	R	Water	6010B	280-203908
<b>Analysis Batch:280-204577</b>					
LCS 280-203949/2-A	Lab Control Sample	R	Water	6020	280-203949
MB 280-203949/1-A	Method Blank	R	Water	6020	280-203949
280-49930-1	MW-29A	R	Water	6020	280-203949
280-49930-1MS	Matrix Spike	R	Water	6020	280-203949
280-49930-1MSD	Matrix Spike Duplicate	R	Water	6020	280-203949
280-49930-2FD	DUP1	R	Water	6020	280-203949
280-49930-3	MW-42	R	Water	6020	280-203949
280-49930-4	MW-19C	R	Water	6020	280-203949
280-49930-5	MW-13A	R	Water	6020	280-203949
280-49930-6	MW-13B	R	Water	6020	280-203949
280-49930-7	MW-34A	R	Water	6020	280-203949
280-49930-8	MW-34C	R	Water	6020	280-203949

**Report Basis**

D = Dissolved

R = Total Recoverable

TestAmerica Denver

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-204110</b>					
LCS 280-204110/2	Lab Control Sample	T	Water	SM 2540D	
LCSD 280-204110/3	Lab Control Sample Duplicate	T	Water	SM 2540D	
MB 280-204110/1	Method Blank	T	Water	SM 2540D	
280-49930-1	MW-29A	T	Water	SM 2540D	
280-49930-2FD	DUP1	T	Water	SM 2540D	
280-49930-3	MW-42	T	Water	SM 2540D	
280-49930-4	MW-19C	T	Water	SM 2540D	
<b>Analysis Batch:280-204131</b>					
LCS 280-204131/4	Lab Control Sample	T	Water	SM 2320B	
LCSD 280-204131/5	Lab Control Sample Duplicate	T	Water	SM 2320B	
MB 280-204131/6	Method Blank	T	Water	SM 2320B	
280-49926-A-7 DU	Duplicate	T	Water	SM 2320B	
280-49930-1	MW-29A	T	Water	SM 2320B	
280-49930-2FD	DUP1	T	Water	SM 2320B	
280-49930-3	MW-42	T	Water	SM 2320B	
280-49930-4	MW-19C	T	Water	SM 2320B	
280-49930-5	MW-13A	T	Water	SM 2320B	
280-49930-6	MW-13B	T	Water	SM 2320B	
280-49930-7	MW-34A	T	Water	SM 2320B	
280-49930-8	MW-34C	T	Water	SM 2320B	
<b>Analysis Batch:280-204203</b>					
LCS 280-204203/2	Lab Control Sample	T	Water	SM 2540C	
LCSD 280-204203/3	Lab Control Sample Duplicate	T	Water	SM 2540C	
MB 280-204203/1	Method Blank	T	Water	SM 2540C	
280-49930-1	MW-29A	T	Water	SM 2540C	
280-49930-1DU	Duplicate	T	Water	SM 2540C	
280-49930-2FD	DUP1	T	Water	SM 2540C	
280-49930-3	MW-42	T	Water	SM 2540C	
280-49930-4	MW-19C	T	Water	SM 2540C	
280-49930-5	MW-13A	T	Water	SM 2540C	
280-49930-6	MW-13B	T	Water	SM 2540C	
280-49930-7	MW-34A	T	Water	SM 2540C	
280-49930-8	MW-34C	T	Water	SM 2540C	
<b>Analysis Batch:280-204358</b>					
LCS 280-204358/2	Lab Control Sample	T	Water	SM 2540D	
LCSD 280-204358/3	Lab Control Sample Duplicate	T	Water	SM 2540D	
MB 280-204358/1	Method Blank	T	Water	SM 2540D	
280-49930-5	MW-13A	T	Water	SM 2540D	
280-49930-6	MW-13B	T	Water	SM 2540D	
280-49930-6DU	Duplicate	T	Water	SM 2540D	
280-49930-7	MW-34A	T	Water	SM 2540D	
280-49930-8	MW-34C	T	Water	SM 2540D	

TestAmerica Denver

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-204724</b>					
LCS 280-204724/35	Lab Control Sample	T	Water	SM 5310B	
LCSD 280-204724/36	Lab Control Sample Duplicate	T	Water	SM 5310B	
MB 280-204724/37	Method Blank	T	Water	SM 5310B	
280-49836-N-1 MS	Matrix Spike	T	Water	SM 5310B	
280-49836-N-1 MSD	Matrix Spike Duplicate	T	Water	SM 5310B	
280-49930-1	MW-29A	T	Water	SM 5310B	
280-49930-2FD	DUP1	T	Water	SM 5310B	
280-49930-3	MW-42	T	Water	SM 5310B	
280-49930-4	MW-19C	T	Water	SM 5310B	
<b>Analysis Batch:280-205244</b>					
LCS 280-205244/58	Lab Control Sample	T	Water	350.1	
LCSD 280-205244/59	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-205244/60	Method Blank	T	Water	350.1	
280-49930-1	MW-29A	T	Water	350.1	
280-49930-2FD	DUP1	T	Water	350.1	
280-49930-2MS	Matrix Spike	T	Water	350.1	
280-49930-2MSD	Matrix Spike Duplicate	T	Water	350.1	
280-49930-3	MW-42	T	Water	350.1	
280-49930-4	MW-19C	T	Water	350.1	
280-49930-5	MW-13A	T	Water	350.1	
280-49930-6	MW-13B	T	Water	350.1	
280-49930-7	MW-34A	T	Water	350.1	
280-49930-8	MW-34C	T	Water	350.1	
<b>Analysis Batch:280-205526</b>					
LCS 280-205526/4	Lab Control Sample	T	Water	300.0	
LCSD 280-205526/5	Lab Control Sample Duplicate	T	Water	300.0	
MB 280-205526/6	Method Blank	T	Water	300.0	
280-49930-1	MW-29A	T	Water	300.0	
280-49930-1DU	Duplicate	T	Water	300.0	
280-49930-1MS	Matrix Spike	T	Water	300.0	
280-49930-1MSD	Matrix Spike Duplicate	T	Water	300.0	
280-49930-2FD	DUP1	T	Water	300.0	
280-49930-3	MW-42	T	Water	300.0	
280-49930-4	MW-19C	T	Water	300.0	
280-49930-5	MW-13A	T	Water	300.0	
280-49930-6	MW-13B	T	Water	300.0	
280-49930-7	MW-34A	T	Water	300.0	
280-49930-8	MW-34C	T	Water	300.0	

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-206107</b>					
MB 280-206107/1	Method Blank	T	Water	353.2	
280-49930-1	MW-29A	T	Water	353.2	
280-49930-2FD	DUP1	T	Water	353.2	
280-49930-3	MW-42	T	Water	353.2	
280-49930-4	MW-19C	T	Water	353.2	
280-49930-5	MW-13A	T	Water	353.2	
280-49930-6	MW-13B	T	Water	353.2	
280-49930-7	MW-34A	T	Water	353.2	
280-49930-8	MW-34C	T	Water	353.2	
<b>Analysis Batch:280-206902</b>					
LCS 280-206902/33	Lab Control Sample	T	Water	SM 5310B	
LCSD 280-206902/34	Lab Control Sample Duplicate	T	Water	SM 5310B	
MB 280-206902/35	Method Blank	T	Water	SM 5310B	
280-49930-5	MW-13A	T	Water	SM 5310B	
280-49930-6	MW-13B	T	Water	SM 5310B	
280-49930-7	MW-34A	T	Water	SM 5310B	
280-49930-8	MW-34C	T	Water	SM 5310B	
280-50411-C-7 MS	Matrix Spike	T	Water	SM 5310B	
280-50411-C-7 MSD	Matrix Spike Duplicate	T	Water	SM 5310B	

**Report Basis**

T = Total

Client: Waste Management

Job Number: 280-49930-1

**Surrogate Recovery Report**

**8260B Volatile Organic Compounds (GC/MS)**

**Client Matrix: Water**

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec
280-49930-1	MW-29A	95	100	96
280-49930-2	DUP1	95	97	96
280-49930-3	MW-42	97	95	93
280-49930-4	MW-19C	97	98	95
280-49930-5	MW-13A	96	98	94
280-49930-6	MW-13B	100	99	97
280-49930-7	MW-34A	96	98	95
280-49930-8	MW-34C	94	95	91
280-49930-9	TRIP BLANK	97	94	92
MB 480-156625/7		97	100	97
MB 480-156962/7		93	93	93
LCS 480-156625/4		102	98	96
LCS 480-156962/4		99	97	96
LCSD 480-156625/5		101	98	97
LCSD 480-156962/5		102	93	93

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	66-137
BFB = 4-Bromofluorobenzene (Surr)	73-120
TOL = Toluene-d8 (Surr)	71-126

Client: Waste Management

Job Number: 280-49930-1

**Surrogate Recovery Report**

**8260B SIM Volatile Organic Compounds (GC/MS)**

**Client Matrix: Water**

Lab Sample ID	Client Sample ID	TBA %Rec	DBFM %Rec
280-49930-1	MW-29A	125	124
280-49930-2	DUP1	120	126
280-49930-3	MW-42	125	124
280-49930-4	MW-19C	117	127
280-49930-5	MW-13A	122	132
280-49930-6	MW-13B	133	133
280-49930-7	MW-34A	126	132
280-49930-8	MW-34C	131	134
280-49930-9	TRIP BLANK	125	138
MB 480-157026/7		128	122
LCS 480-157026/5		125	120
LCSD 480-157026/6		124	120

Surrogate	Acceptance Limits
TBA = TBA-d9 (Surr)	50-150
DBFM = Dibromofluoromethane (Surr)	50-150

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

**Method Blank - Batch: 480-156625**

**Method: 8260B**

**Preparation: 5030B**

Lab Sample ID: MB 480-156625/7  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/10/2013 0039  
 Prep Date: 12/10/2013 0039  
 Leach Date: N/A

Analysis Batch: 480-156625  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973C  
 Lab File ID: C35009.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: 280-49930-1

**Method Blank - Batch: 480-156625**

**Method: 8260B  
Preparation: 5030B**

Lab Sample ID: MB 480-156625/7  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/10/2013 0039  
 Prep Date: 12/10/2013 0039  
 Leach Date: N/A

Analysis Batch: 480-156625  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973C  
 Lab File ID: C35009.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: 280-49930-1

**Method Blank - Batch: 480-156625**

**Method: 8260B  
Preparation: 5030B**

Lab Sample ID:	MB 480-156625/7	Analysis Batch:	480-156625	Instrument ID:	HP5973C
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C35009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/10/2013 0039	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/10/2013 0039				
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)	97	66 - 137
4-Bromofluorobenzene (Surr)	100	73 - 120
Toluene-d8 (Surr)	97	71 - 126

**Method Blank TICs- Batch: 480-156625**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qual
67-72-1	Hexachloroethane TIC	0.00	ND	

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 480-156625**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 480-156625/4	Analysis Batch: 480-156625	Instrument ID: HP5973C
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C35006.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/09/2013 2323	Units: ug/L	Final Weight/Volume: 5 mL
Prep Date: 12/09/2013 2323		
Leach Date: N/A		

LCSD Lab Sample ID: LCSD 480-156625/5	Analysis Batch: 480-156625	Instrument ID: HP5973C
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C35007.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/09/2013 2349	Units: ug/L	Final Weight/Volume: 5 mL
Prep Date: 12/09/2013 2349		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1-Dichloroethane	103	99	71 - 129	4	20		
1,1-Dichloroethene	104	98	58 - 121	6	16		
1,2,4-Trimethylbenzene	101	99	76 - 121	2	20		
1,2-Dichlorobenzene	97	96	80 - 124	1	20		
1,2-Dichloroethane	101	100	75 - 127	0	20		
Benzene	101	98	71 - 124	3	13		
Chlorobenzene	98	96	72 - 120	2	25		
cis-1,2-Dichloroethene	101	96	74 - 124	5	15		
Ethylbenzene	99	97	77 - 123	2	15		
Methyl tert-butyl ether	104	101	64 - 127	3	37		
m-Xylene & p-Xylene	102	100	76 - 122	3	16		
o-Xylene	101	99	76 - 122	2	16		
Tetrachloroethene	108	103	74 - 122	4	20		
Toluene	101	99	80 - 122	2	15		
trans-1,2-Dichloroethene	101	96	73 - 127	5	20		
Trichloroethene	106	102	74 - 123	3	16		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102	101	66 - 137
4-Bromofluorobenzene (Surr)	98	98	73 - 120
Toluene-d8 (Surr)	96	97	71 - 126

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 480-156625**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 480-156625/4                      Units: ug/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/09/2013 2323  
 Prep Date: 12/09/2013 2323  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 480-156625/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/09/2013 2349  
 Prep Date: 12/09/2013 2349  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
1,1-Dichloroethane	25.0	25.0	25.7	24.7
1,1-Dichloroethene	25.0	25.0	26.0	24.4
1,2,4-Trimethylbenzene	25.0	25.0	25.3	24.8
1,2-Dichlorobenzene	25.0	25.0	24.2	24.0
1,2-Dichloroethane	25.0	25.0	25.2	25.1
Benzene	25.0	25.0	25.2	24.4
Chlorobenzene	25.0	25.0	24.5	24.1
cis-1,2-Dichloroethene	25.0	25.0	25.2	24.0
Ethylbenzene	25.0	25.0	24.9	24.3
Methyl tert-butyl ether	25.0	25.0	26.0	25.1
m-Xylene & p-Xylene	50.0	50.0	51.1	49.8
o-Xylene	25.0	25.0	25.3	24.8
Tetrachloroethene	25.0	25.0	26.9	25.8
Toluene	25.0	25.0	25.3	24.7
trans-1,2-Dichloroethene	25.0	25.0	25.2	24.0
Trichloroethene	25.0	25.0	26.4	25.6

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

**Method Blank - Batch: 480-156962**

**Method: 8260B  
Preparation: 5030B**

Lab Sample ID: MB 480-156962/7  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1258  
 Prep Date: 12/11/2013 1258  
 Leach Date: N/A

Analysis Batch: 480-156962  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973C  
 Lab File ID: C35089.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	0.540	J	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: 280-49930-1

**Method Blank - Batch: 480-156962**

**Method: 8260B  
Preparation: 5030B**

Lab Sample ID: MB 480-156962/7  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1258  
 Prep Date: 12/11/2013 1258  
 Leach Date: N/A

Analysis Batch: 480-156962  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973C  
 Lab File ID: C35089.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: 280-49930-1

**Method Blank - Batch: 480-156962**

**Method: 8260B  
Preparation: 5030B**

Lab Sample ID: MB 480-156962/7  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1258  
 Prep Date: 12/11/2013 1258  
 Leach Date: N/A

Analysis Batch: 480-156962  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973C  
 Lab File ID: C35089.D  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

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)	93	73 - 120
Toluene-d8 (Surr)	93	71 - 126

**Method Blank TICs- Batch: 480-156962**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qual
67-72-1	Hexachloroethane TIC	0.00	ND	

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 480-156962**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 480-156962/4	Analysis Batch: 480-156962	Instrument ID: HP5973C
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C35086.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/11/2013 1054	Units: ug/L	Final Weight/Volume: 5 mL
Prep Date: 12/11/2013 1054		
Leach Date: N/A		

LCSD Lab Sample ID: LCSD 480-156962/5	Analysis Batch: 480-156962	Instrument ID: HP5973C
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C35087.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/11/2013 1120	Units: ug/L	Final Weight/Volume: 5 mL
Prep Date: 12/11/2013 1120		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1-Dichloroethane	104	102	71 - 129	1	20		
1,1-Dichloroethene	104	102	58 - 121	2	16		
1,2,4-Trimethylbenzene	100	99	76 - 121	2	20		
1,2-Dichlorobenzene	96	95	80 - 124	1	20		
1,2-Dichloroethane	102	101	75 - 127	0	20		
Benzene	102	101	71 - 124	2	13		
Chlorobenzene	99	96	72 - 120	2	25		
cis-1,2-Dichloroethene	100	99	74 - 124	1	15		
Ethylbenzene	101	97	77 - 123	4	15		
Methyl tert-butyl ether	105	108	64 - 127	3	37		
m-Xylene & p-Xylene	104	101	76 - 122	3	16		
o-Xylene	102	98	76 - 122	4	16		
Tetrachloroethene	108	103	74 - 122	4	20		
Toluene	103	99	80 - 122	4	15		
trans-1,2-Dichloroethene	103	99	73 - 127	4	20		
Trichloroethene	106	104	74 - 123	2	16		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99	102	66 - 137
4-Bromofluorobenzene (Surr)	97	93	73 - 120
Toluene-d8 (Surr)	96	93	71 - 126

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 480-156962**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 480-156962/4      Units: ug/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1054  
 Prep Date: 12/11/2013 1054  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 480-156962/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1120  
 Prep Date: 12/11/2013 1120  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
1,1-Dichloroethane	25.0	25.0	25.9	25.5
1,1-Dichloroethene	25.0	25.0	26.0	25.6
1,2,4-Trimethylbenzene	25.0	25.0	25.1	24.7
1,2-Dichlorobenzene	25.0	25.0	24.1	23.8
1,2-Dichloroethane	25.0	25.0	25.5	25.4
Benzene	25.0	25.0	25.5	25.1
Chlorobenzene	25.0	25.0	24.6	24.1
cis-1,2-Dichloroethene	25.0	25.0	24.9	24.7
Ethylbenzene	25.0	25.0	25.4	24.3
Methyl tert-butyl ether	25.0	25.0	26.4	27.1
m-Xylene & p-Xylene	50.0	50.0	52.1	50.7
o-Xylene	25.0	25.0	25.6	24.5
Tetrachloroethene	25.0	25.0	27.0	25.9
Toluene	25.0	25.0	25.6	24.7
trans-1,2-Dichloroethene	25.0	25.0	25.8	24.8
Trichloroethene	25.0	25.0	26.4	25.9



**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Method Blank - Batch: 480-157026**

**Method: 8260B SIM  
Preparation: 5030B**

Lab Sample ID:	MB 480-157026/7	Analysis Batch:	480-157026	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J6780.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 1501	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 1501				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Vinyl chloride	ND		0.020	0.020

Surrogate	% Rec	Acceptance Limits
TBA-d9 (Surr)	128	50 - 150
Dibromofluoromethane (Surr)	122	50 - 150

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 480-157026**

**Method: 8260B SIM  
Preparation: 5030B**

LCS Lab Sample ID:	LCS 480-157026/5	Analysis Batch:	480-157026	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J6778.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 1412	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 1412				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 480-157026/6	Analysis Batch:	480-157026	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J6779.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 1436	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 1436				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Vinyl chloride	107	102	50 - 150	5	20		
Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits				
TBA-d9 (Surr)	125	124	50 - 150				
Dibromofluoromethane (Surr)	120	120	50 - 150				

**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 480-157026**

**Method: 8260B SIM  
Preparation: 5030B**

LCS Lab Sample ID: LCS 480-157026/5      Units: ug/L  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/11/2013 1412  
Prep Date: 12/11/2013 1412  
Leach Date: N/A

LCSD Lab Sample ID: LCSD 480-157026/6  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/11/2013 1436  
Prep Date: 12/11/2013 1436  
Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Vinyl chloride	0.200	0.200	0.214	0.204

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

**Method Blank - Batch: 280-203879**

Lab Sample ID: MB 280-203879/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/08/2013 1303  
 Prep Date: 12/05/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-204391  
 Prep Batch: 280-203879  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26A01120813.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Calcium, Dissolved	ND		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	ND		0.060	0.060
Magnesium, Dissolved	ND		0.050	0.050
Potassium, Dissolved	ND		1.0	1.0
Sodium, Dissolved	ND		1.0	1.0

**Lab Control Sample - Batch: 280-203879**

Lab Sample ID: LCS 280-203879/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/08/2013 1305  
 Prep Date: 12/05/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-204391  
 Prep Batch: 280-203879  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26A01120813.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Calcium, Dissolved	50.0	51.2	102	90 - 111	
Cobalt, Dissolved	0.500	0.500	100	89 - 111	
Iron, Dissolved	1.00	1.03	103	89 - 115	
Magnesium, Dissolved	50.0	50.8	102	90 - 113	
Potassium, Dissolved	50.0	52.0	104	89 - 114	
Sodium, Dissolved	50.0	52.8	106	90 - 115	

**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-203879**

**Method: 6010B  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-49930-1	Analysis Batch: 280-204391	Instrument ID: MT_026
Client Matrix: Water	Prep Batch: 280-203879	Lab File ID: 26A01120813.asc
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 50 mL
Analysis Date: 12/08/2013 1312		Final Weight/Volume: 50 mL
Prep Date: 12/05/2013 1200		
Leach Date: N/A		

MSD Lab Sample ID: 280-49930-1	Analysis Batch: 280-204391	Instrument ID: MT_026
Client Matrix: Water	Prep Batch: 280-203879	Lab File ID: 26A01120813.asc
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 50 mL
Analysis Date: 12/08/2013 1315		Final Weight/Volume: 50 mL
Prep Date: 12/05/2013 1200		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Calcium, Dissolved	103	101	48 - 153	2	20		
Cobalt, Dissolved	100	97	82 - 119	3	20		
Iron, Dissolved	107	107	52 - 155	0	20		
Magnesium, Dissolved	103	99	62 - 146	4	20		
Potassium, Dissolved	105	102	76 - 132	3	20		
Sodium, Dissolved	105	103	70 - 203	2	20		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-203879**

**Method: 6010B  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-49930-1	Units: mg/L	MSD Lab Sample ID: 280-49930-1
Client Matrix: Water		Client Matrix: Water
Dilution: 1.0		Dilution: 1.0
Analysis Date: 12/08/2013 1312		Analysis Date: 12/08/2013 1315
Prep Date: 12/05/2013 1200		Prep Date: 12/05/2013 1200
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	6.6	50.0	50.0	58.3	57.1
Cobalt, Dissolved	ND	0.500	0.500	0.500	0.487
Iron, Dissolved	3.9	1.00	1.00	4.97	4.98
Magnesium, Dissolved	3.7	50.0	50.0	55.0	53.0
Potassium, Dissolved	ND	50.0	50.0	52.4	51.1
Sodium, Dissolved	3.4	50.0	50.0	55.9	55.1

**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Method Blank - Batch: 280-203908**

Lab Sample ID: MB 280-203908/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/08/2013 2002  
 Prep Date: 12/05/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-204395  
 Prep Batch: 280-203908  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26A04120813.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	ND		0.060	0.060

**Lab Control Sample - Batch: 280-203908**

Lab Sample ID: LCS 280-203908/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/08/2013 2004  
 Prep Date: 12/05/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-204395  
 Prep Batch: 280-203908  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26A04120813.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cobalt, Total	0.500	0.524	105	89 - 111	
Iron, Total	1.00	1.00	100	89 - 115	

**Matrix Spike/  
 Matrix Spike Duplicate Recovery Report - Batch: 280-203908**

MS Lab Sample ID: 280-49927-A-1-B MS  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/08/2013 2011  
 Prep Date: 12/05/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-204395  
 Prep Batch: 280-203908  
 Leach Batch: N/A

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26A04120813.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-49927-A-1-C MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/08/2013 2014  
 Prep Date: 12/05/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-204395  
 Prep Batch: 280-203908  
 Leach Batch: N/A

Instrument ID: MT\_026  
 Lab File ID: 26A04120813.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Cobalt, Total	102	102	82 - 119	1	20		
Iron, Total	113	104	52 - 155	3	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-203908**

**Method: 6010B  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-49927-A-1-B MS      Units: mg/L  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/08/2013 2011  
Prep Date: 12/05/2013 1200  
Leach Date: N/A

MSD Lab Sample ID: 280-49927-A-1-C MSD  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/08/2013 2014  
Prep Date: 12/05/2013 1200  
Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Cobalt, Total	ND	0.500	0.500	0.512	0.509
Iron, Total	2.3	1.00	1.00	3.44	3.35

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

**Method Blank - Batch: 280-203912**

Lab Sample ID: MB 280-203912/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/06/2013 0135  
 Prep Date: 12/05/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-204115  
 Prep Batch: 280-203912  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_024  
 Lab File ID: 107\_BLK.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	ND		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	ND		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	ND		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

**Lab Control Sample - Batch: 280-203912**

Lab Sample ID: LCS 280-203912/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/06/2013 0138  
 Prep Date: 12/05/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-204115  
 Prep Batch: 280-203912  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_024  
 Lab File ID: 108\_LCS.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony, Dissolved	0.0400	0.0384	96	85 - 115	
Barium, Dissolved	0.0400	0.0393	98	85 - 118	
Beryllium, Dissolved	0.0400	0.0399	100	80 - 125	
Cadmium, Dissolved	0.0400	0.0404	101	85 - 115	
Chromium, Dissolved	0.0400	0.0400	100	84 - 121	
Copper, Dissolved	0.0400	0.0420	105	85 - 119	
Lead, Dissolved	0.0400	0.0414	104	85 - 118	
Manganese, Dissolved	0.0400	0.0402	100	85 - 117	
Nickel, Dissolved	0.0400	0.0412	103	85 - 119	
Selenium, Dissolved	0.0400	0.0412	103	77 - 122	
Silver, Dissolved	0.0400	0.0414	103	85 - 115	
Thallium, Dissolved	0.0400	0.0410	103	85 - 118	
Vanadium, Dissolved	0.0400	0.0396	99	85 - 120	
Zinc, Dissolved	0.0400	0.0411	103	83 - 122	

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-203912**

**Method: 6020  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-49928-A-3-E MS ^5	Analysis Batch: 280-204373	Instrument ID: MT_024
Client Matrix: Water	Prep Batch: 280-203912	Lab File ID: 050_MS.D
Dilution: 5.0	Leach Batch: N/A	Initial Weight/Volume: 50 mL
Analysis Date: 12/06/2013 1929		Final Weight/Volume: 50 mL
Prep Date: 12/05/2013 1200		
Leach Date: N/A		

MSD Lab Sample ID: 280-49928-A-3-F MSD ^5	Analysis Batch: 280-204373	Instrument ID: MT_024
Client Matrix: Water	Prep Batch: 280-203912	Lab File ID: 051_MS.D
Dilution: 5.0	Leach Batch: N/A	Initial Weight/Volume: 50 mL
Analysis Date: 12/06/2013 1932		Final Weight/Volume: 50 mL
Prep Date: 12/05/2013 1200		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Antimony, Dissolved	110	106	85 - 115	3	20		
Barium, Dissolved	102	92	85 - 118	2	20	4	4
Beryllium, Dissolved	101	96	80 - 125	5	20		
Cadmium, Dissolved	92	93	85 - 115	1	20		
Chromium, Dissolved	110	109	84 - 121	1	20		
Copper, Dissolved	99	98	85 - 119	1	20		
Lead, Dissolved	75	73	85 - 118	3	20	F	F
Manganese, Dissolved	130	113	85 - 117	1	20	4	4
Nickel, Dissolved	101	102	85 - 119	0	20		
Selenium, Dissolved	119	117	77 - 122	2	20		
Silver, Dissolved	89	88	85 - 115	1	20		
Thallium, Dissolved	77	76	85 - 118	2	20	F	F
Vanadium, Dissolved	117	113	85 - 120	3	20		
Zinc, Dissolved	96	95	83 - 122	1	20		



**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-203912**

**Method: 6020  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-49928-A-3-E MS ^5 Units: mg/L  
 Client Matrix: Water  
 Dilution: 5.0  
 Analysis Date: 12/06/2013 1929  
 Prep Date: 12/05/2013 1200  
 Leach Date: N/A

MSD Lab Sample ID: 280-49928-A-3-F MSD ^5  
 Client Matrix: Water  
 Dilution: 5.0  
 Analysis Date: 12/06/2013 1932  
 Prep Date: 12/05/2013 1200  
 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	0.0438	0.0425
Barium, Dissolved	0.17	0.0400	0.0400	0.207 4	0.203 4
Beryllium, Dissolved	ND	0.0400	0.0400	0.0405	0.0385
Cadmium, Dissolved	ND	0.0400	0.0400	0.0366	0.0371
Chromium, Dissolved	ND	0.0400	0.0400	0.0438	0.0435
Copper, Dissolved	ND	0.0400	0.0400	0.0396	0.0393
Lead, Dissolved	ND	0.0400	0.0400	0.0301 F	0.0291 F
Manganese, Dissolved	1.2	0.0400	0.0400	1.22 4	1.21 4
Nickel, Dissolved	ND	0.0400	0.0400	0.0405	0.0406
Selenium, Dissolved	ND	0.0400	0.0400	0.0475	0.0468
Silver, Dissolved	ND	0.0400	0.0400	0.0356	0.0352
Thallium, Dissolved	ND	0.0400	0.0400	0.0309 F	0.0304 F
Vanadium, Dissolved	ND	0.0400	0.0400	0.0468	0.0454
Zinc, Dissolved	ND	0.0400	0.0400	0.0385	0.0381

**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Method Blank - Batch: 280-203949**

Lab Sample ID: MB 280-203949/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/07/2013 0441  
 Prep Date: 12/06/2013 0730  
 Leach Date: N/A

Analysis Batch: 280-204373  
 Prep Batch: 280-203949  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_024  
 Lab File ID: 229\_BLK.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	ND		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	0.00106		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	ND		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

**Method Blank - Batch: 280-203949**

Lab Sample ID: MB 280-203949/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/09/2013 2052  
 Prep Date: 12/06/2013 0730  
 Leach Date: N/A

Analysis Batch: 280-204577  
 Prep Batch: 280-203949  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_024  
 Lab File ID: 075\_BLK.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Manganese, Total	ND		0.0010	0.0010
Selenium, Total	ND		0.0010	0.0010

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

**Lab Control Sample - Batch: 280-203949**

**Method: 6020**  
**Preparation: 3005A**  
**Total Recoverable**

Lab Sample ID: LCS 280-203949/2-A	Analysis Batch: 280-204373	Instrument ID: MT_024
Client Matrix: Water	Prep Batch: 280-203949	Lab File ID: 230_LCS.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 50 mL
Analysis Date: 12/07/2013 0444	Units: mg/L	Final Weight/Volume: 50 mL
Prep Date: 12/06/2013 0730		
Leach Date: N/A		

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony, Total	0.0400	0.0387	97	85 - 115	
Barium, Total	0.0400	0.0406	101	85 - 118	
Beryllium, Total	0.0400	0.0404	101	80 - 125	
Cadmium, Total	0.0400	0.0396	99	85 - 115	
Chromium, Total	0.0400	0.0395	99	84 - 121	
Copper, Total	0.0400	0.0420	105	85 - 119	
Lead, Total	0.0400	0.0409	102	85 - 118	
Nickel, Total	0.0400	0.0407	102	85 - 119	
Silver, Total	0.0400	0.0407	102	85 - 115	
Thallium, Total	0.0400	0.0404	101	85 - 118	
Vanadium, Total	0.0400	0.0397	99	85 - 120	
Zinc, Total	0.0400	0.0408	102	83 - 122	

**Lab Control Sample - Batch: 280-203949**

**Method: 6020**  
**Preparation: 3005A**  
**Total Recoverable**

Lab Sample ID: LCS 280-203949/2-A	Analysis Batch: 280-204577	Instrument ID: MT_024
Client Matrix: Water	Prep Batch: 280-203949	Lab File ID: 076_LCS.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 50 mL
Analysis Date: 12/09/2013 2055	Units: mg/L	Final Weight/Volume: 50 mL
Prep Date: 12/06/2013 0730		
Leach Date: N/A		

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Manganese, Total	0.0400	0.0392	98	85 - 117	
Selenium, Total	0.0400	0.0426	107	77 - 122	

**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-203949**

**Method: 6020  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-49930-1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/07/2013 0456  
Prep Date: 12/06/2013 0730  
Leach Date: N/A

Analysis Batch: 280-204373  
Prep Batch: 280-203949  
Leach Batch: N/A

Instrument ID: MT\_024  
Lab File ID: 234\_MS.D  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-49930-1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/07/2013 0500  
Prep Date: 12/06/2013 0730  
Leach Date: N/A

Analysis Batch: 280-204373  
Prep Batch: 280-203949  
Leach Batch: N/A

Instrument ID: MT\_024  
Lab File ID: 235\_MSD.D  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Antimony, Total	103	99	85 - 115	4	20		
Barium, Total	104	101	85 - 118	2	20		
Beryllium, Total	104	103	80 - 125	1	20		
Cadmium, Total	100	99	85 - 115	1	20		
Chromium, Total	101	100	84 - 121	1	20		
Copper, Total	106	104	85 - 119	1	20		
Lead, Total	103	103	85 - 118	0	20		
Nickel, Total	107	106	85 - 119	1	20		
Silver, Total	102	100	85 - 115	2	20		
Thallium, Total	103	101	85 - 118	1	20		
Vanadium, Total	104	102	85 - 120	2	20		
Zinc, Total	106	104	83 - 122	2	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-203949**

**Method: 6020  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-49930-1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/09/2013 2107  
Prep Date: 12/06/2013 0730  
Leach Date: N/A

Analysis Batch: 280-204577  
Prep Batch: 280-203949  
Leach Batch: N/A

Instrument ID: MT\_024  
Lab File ID: 080\_MS.D  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-49930-1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/09/2013 2110  
Prep Date: 12/06/2013 0730  
Leach Date: N/A

Analysis Batch: 280-204577  
Prep Batch: 280-203949  
Leach Batch: N/A

Instrument ID: MT\_024  
Lab File ID: 081\_MS.D  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Manganese, Total	198	165	85 - 117	1	20	4	4
Selenium, Total	108	107	77 - 122	1	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-203949**

**Method: 6020  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-49930-1 Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/07/2013 0456  
 Prep Date: 12/06/2013 0730  
 Leach Date: N/A

MSD Lab Sample ID: 280-49930-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/07/2013 0500  
 Prep Date: 12/06/2013 0730  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Antimony, Total	ND	0.0400	0.0400	0.0411	0.0395
Barium, Total	0.010	0.0400	0.0400	0.0519	0.0510
Beryllium, Total	ND	0.0400	0.0400	0.0416	0.0412
Cadmium, Total	ND	0.0400	0.0400	0.0401	0.0397
Chromium, Total	ND	0.0400	0.0400	0.0404	0.0401
Copper, Total	ND	0.0400	0.0400	0.0422	0.0418
Lead, Total	ND	0.0400	0.0400	0.0412	0.0411
Nickel, Total	ND	0.0400	0.0400	0.0428	0.0424
Silver, Total	ND	0.0400	0.0400	0.0408	0.0401
Thallium, Total	ND	0.0400	0.0400	0.0411	0.0405
Vanadium, Total	ND	0.0400	0.0400	0.0414	0.0408
Zinc, Total	ND	0.0400	0.0400	0.0425	0.0418

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-203949**

**Method: 6020  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-49930-1 Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/09/2013 2107  
 Prep Date: 12/06/2013 0730  
 Leach Date: N/A

MSD Lab Sample ID: 280-49930-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/09/2013 2110  
 Prep Date: 12/06/2013 0730  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Manganese, Total	1.2	0.0400	0.0400	1.31 4	1.30 4
Selenium, Total	ND	0.0400	0.0400	0.0432	0.0428

**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Method Blank - Batch: 280-205526**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	MB 280-205526/6	Analysis Batch:	280-205526	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:	
Analysis Date:	12/16/2013 1316	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Chloride	ND		1.0	1.0
Sulfate	ND		1.0	1.0

**Method Reporting Limit Check - Batch: 280-205526**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	MRL 280-205526/3	Analysis Batch:	280-205526	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:	
Analysis Date:	12/16/2013 1153	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	1.00	ND	92	50 - 150	
Sulfate	1.00	ND	68	50 - 150	

**Lab Control Sample/**

**Method: 300.0**  
**Preparation: N/A**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-205526**

LCS Lab Sample ID:	LCS 280-205526/4	Analysis Batch:	280-205526	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:	
Analysis Date:	12/16/2013 1210	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-205526/5	Analysis Batch:	280-205526	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:	
Analysis Date:	12/16/2013 1259	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Chloride	97	97	90 - 110	0	10		
Sulfate	97	97	90 - 110	0	10		

**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-205526**

**Method: 300.0  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-205526/4      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2013 1210  
 Prep Date: N/A  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 280-205526/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2013 1259  
 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	24.2	24.2
Sulfate	25.0	25.0	24.2	24.2

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205526**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 280-49930-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2013 2037  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-205526  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: WC\_IC6  
 Lab File ID: 135.TXT  
 Initial Weight/Volume:  
 Final Weight/Volume: 5 mL

MSD Lab Sample ID: 280-49930-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2013 2055  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-205526  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: WC\_IC6  
 Lab File ID: 136.TXT  
 Initial Weight/Volume:  
 Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chloride	102	102	80 - 120	0	20		
Sulfate	105	105	80 - 120	0	20		



**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205526**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 280-49930-1                      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2013 2037  
 Prep Date: N/A  
 Leach Date: N/A

MSD Lab Sample ID: 280-49930-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2013 2055  
 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	1.7	25.0	25.0	27.3	27.4
Sulfate	ND	25.0	25.0	26.3	26.2

**Duplicate - Batch: 280-205526**

**Method: 300.0  
Preparation: N/A**

Lab Sample ID: 280-49930-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/16/2013 2020  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-205526  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_IC6  
 Lab File ID: 134.TXT  
 Initial Weight/Volume:  
 Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Chloride	1.7	1.67	4	15	
Sulfate	ND	ND	NC	15	

**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Method Blank - Batch: 280-205244**

Lab Sample ID: MB 280-205244/60  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/13/2013 1227  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-205244  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

**Method: 350.1  
 Preparation: N/A**

Instrument ID: WC\_Alph 3  
 Lab File ID: Z:\WETCHEM\ALP3\350.1  
 Initial Weight/Volume: 10 mL  
 Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL	RL
Ammonia (as N)	ND		0.030	0.030

**Lab Control Sample/  
 Lab Control Sample Duplicate Recovery Report - Batch: 280-205244**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-205244/58  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/13/2013 1223  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-205244  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 3  
 Lab File ID: Z:\WETCHEM\ALP3\350.1  
 Initial Weight/Volume: 100 mL  
 Final Weight/Volume: 100 mL

LCSD Lab Sample ID: LCSD 280-205244/59  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/13/2013 1225  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-205244  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 3  
 Lab File ID: Z:\WETCHEM\ALP3\350.1  
 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: 280-205244**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-205244/58  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/13/2013 1223  
 Prep Date: N/A  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-205244/59  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/13/2013 1225  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia (as N)	2.50	2.50	2.60	2.61

**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205244**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-49930-2	Analysis Batch: 280-205244	Instrument ID: WC_Alph 3
Client Matrix: Water	Prep Batch: N/A	Lab File ID: Z:\WETCHEM\ALP3\350.1
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 20 mL
Analysis Date: 12/13/2013 1330		Final Weight/Volume: 20 mL
Prep Date: N/A		
Leach Date: N/A		

MSD Lab Sample ID: 280-49930-2	Analysis Batch: 280-205244	Instrument ID: WC_Alph 3
Client Matrix: Water	Prep Batch: N/A	Lab File ID: Z:\WETCHEM\ALP3\350.1
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 20 mL
Analysis Date: 12/13/2013 1333		Final Weight/Volume: 20 mL
Prep Date: N/A		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Ammonia (as N)	109	109	90 - 110	0	10		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205244**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-49930-2	Units: mg/L	MSD Lab Sample ID: 280-49930-2
Client Matrix: Water		Client Matrix: Water
Dilution: 1.0		Dilution: 1.0
Analysis Date: 12/13/2013 1330		Analysis Date: 12/13/2013 1333
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)	0.077	1.00	1.00	1.17	1.17

# Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

## Method Blank - Batch: 280-206107

**Method: 353.2**  
**Preparation: N/A**

Lab Sample ID: MB 280-206107/1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/20/2013 1009  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-206107  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: No Equipment Assigned  
Lab File ID: N/A  
Initial Weight/Volume:  
Final Weight/Volume:

Analyte	Result	Qual	RL	RL
Nitrate as N	ND		0.050	0.050

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

**Method Blank - Batch: 280-204131**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID: MB 280-204131/6  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/05/2013 2023  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-204131  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_AT2  
 Lab File ID: 120513a.txt  
 Initial Weight/Volume:  
 Final Weight/Volume:

Analyte	Result	Qual	RL	RL
Alkalinity, Total (As CaCO3)	ND		5.0	5.0
Alkalinity, Bicarbonate (As CaCO3)	ND		5.0	5.0

**Lab Control Sample/**

**Method: SM 2320B**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-204131**

**Preparation: N/A**

LCS Lab Sample ID: LCS 280-204131/4  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/05/2013 2005  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-204131  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_AT2  
 Lab File ID: 120513a.txt  
 Initial Weight/Volume:  
 Final Weight/Volume:

LCSD Lab Sample ID: LCSD 280-204131/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/05/2013 2015  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-204131  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_AT2  
 Lab File ID: 120513a.txt  
 Initial Weight/Volume:  
 Final Weight/Volume:

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Alkalinity, Total (As CaCO3)	100	100	90 - 110	0	10		

**Laboratory Control/**

**Method: SM 2320B**

**Laboratory Duplicate Data Report - Batch: 280-204131**

**Preparation: N/A**

LCS Lab Sample ID: LCS 280-204131/4  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/05/2013 2005  
 Prep Date: N/A  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-204131/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/05/2013 2015  
 Prep 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	199	200

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

**Duplicate - Batch: 280-204131**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID: 280-49926-A-7 DU  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/05/2013 2041  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-204131  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: WC\_AT2  
Lab File ID: 120513a.txt  
Initial Weight/Volume:  
Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Alkalinity, Total (As CaCO3)	390	393	0.8	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Method Blank - Batch: 280-204203**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	MB 280-204203/1	Analysis Batch:	280-204203	Instrument ID:	No Equipment Assigned
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:	12/06/2013 1306	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Dissolved Solids (TDS)	ND		5.0	5.0

**Lab Control Sample/**

**Method: SM 2540C**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-204203**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-204203/2	Analysis Batch:	280-204203	Instrument ID:	No Equipment Assigned
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:	12/06/2013 1306	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-204203/3	Analysis Batch:	280-204203	Instrument ID:	No Equipment Assigned
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:	12/06/2013 1306	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)	99	99	86 - 110	0	20		

**Laboratory Control/**

**Method: SM 2540C**

**Laboratory Duplicate Data Report - Batch: 280-204203**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-204203/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-204203/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/06/2013 1306			Analysis Date:	12/06/2013 1306
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	495	494

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

**Duplicate - Batch: 280-204203**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	280-49930-1	Analysis Batch:	280-204203	Instrument ID:	No Equipment Assigned
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:	12/06/2013 1306	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)	64	65.0	2	10	



**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Method Blank - Batch: 280-204110**

**Method: SM 2540D**

**Preparation: N/A**

Lab Sample ID:	MB 280-204110/1	Analysis Batch:	280-204110	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/06/2013 0803	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Suspended Solids	ND		4.0	4.0

**Lab Control Sample/**

**Method: SM 2540D**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-204110**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-204110/2	Analysis Batch:	280-204110	Instrument ID:	No Equipment Assigned
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:	12/06/2013 0803	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-204110/3	Analysis Batch:	280-204110	Instrument ID:	No Equipment Assigned
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:	12/06/2013 0803	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Suspended Solids	86	90	86 - 114	5	20		

**Laboratory Control/**

**Method: SM 2540D**

**Laboratory Duplicate Data Report - Batch: 280-204110**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-204110/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-204110/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/06/2013 0803			Analysis Date:	12/06/2013 0803
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 Suspended Solids	100	100	86.0	90.0

**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Method Blank - Batch: 280-204358**

**Method: SM 2540D**

**Preparation: N/A**

Lab Sample ID:	MB 280-204358/1	Analysis Batch:	280-204358	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/09/2013 0742	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Suspended Solids	ND		4.0	4.0

**Lab Control Sample/**

**Method: SM 2540D**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-204358**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-204358/2	Analysis Batch:	280-204358	Instrument ID:	No Equipment Assigned
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:	12/09/2013 0742	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-204358/3	Analysis Batch:	280-204358	Instrument ID:	No Equipment Assigned
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:	12/09/2013 0742	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Suspended Solids	92	99	86 - 114	7	20		

**Laboratory Control/**

**Method: SM 2540D**

**Laboratory Duplicate Data Report - Batch: 280-204358**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-204358/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-204358/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/09/2013 0742			Analysis Date:	12/09/2013 0742
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 Suspended Solids	100	100	92.0	99.0

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

**Duplicate - Batch: 280-204358**

**Method: SM 2540D**

**Preparation: N/A**

Lab Sample ID:	280-49930-6	Analysis Batch:	280-204358	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/09/2013 0742	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Suspended Solids	ND	ND	NC	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Method Blank - Batch: 280-204724**

**Method: SM 5310B**

**Preparation: N/A**

Lab Sample ID:	MB 280-204724/37	Analysis Batch:	280-204724	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121013.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/10/2013 2251	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Organic Carbon - Average	ND		1.0	1.0

**Lab Control Sample/**

**Method: SM 5310B**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-204724**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-204724/35	Analysis Batch:	280-204724	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121013.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/10/2013 2213	Units:	mg/L	Final Weight/Volume:	200 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-204724/36	Analysis Batch:	280-204724	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121013.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/10/2013 2231	Units:	mg/L	Final Weight/Volume:	200 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: 280-204724**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-204724/35	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-204724/36
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/10/2013 2213			Analysis Date:	12/10/2013 2231
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	24.5

**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-204724**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID: 280-49836-N-1 MS	Analysis Batch: 280-204724	Instrument ID: WC_SHI2
Client Matrix: Water	Prep Batch: N/A	Lab File ID: 121013.txt
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume:
Analysis Date: 12/11/2013 0014		Final Weight/Volume: 50 mL
Prep Date: N/A		
Leach Date: N/A		

MSD Lab Sample ID: 280-49836-N-1 MSD	Analysis Batch: 280-204724	Instrument ID: WC_SHI2
Client Matrix: Water	Prep Batch: N/A	Lab File ID: 121013.txt
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume:
Analysis Date: 12/11/2013 0032		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	97	99	88 - 112	1	15		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-204724**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID: 280-49836-N-1 MS	Units: mg/L
Client Matrix: Water	
Dilution: 1.0	
Analysis Date: 12/11/2013 0014	
Prep Date: N/A	
Leach Date: N/A	

MSD Lab Sample ID: 280-49836-N-1 MSD
Client Matrix: Water
Dilution: 1.0
Analysis Date: 12/11/2013 0032
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	1.2	25.0	25.0	25.5	25.8

**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Method Blank - Batch: 280-206902**

**Method: SM 5310B**

**Preparation: N/A**

Lab Sample ID:	MB 280-206902/35	Analysis Batch:	280-206902	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122813.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/29/2013 0200	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Organic Carbon - Average	ND		1.0	1.0

**Lab Control Sample/**

**Method: SM 5310B**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-206902**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-206902/33	Analysis Batch:	280-206902	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122813.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/29/2013 0123	Units:	mg/L	Final Weight/Volume:	200 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-206902/34	Analysis Batch:	280-206902	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122813.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/29/2013 0141	Units:	mg/L	Final Weight/Volume:	200 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	100	100	88 - 112	0	15		

**Laboratory Control/**

**Method: SM 5310B**

**Laboratory Duplicate Data Report - Batch: 280-206902**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-206902/33	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-206902/34
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/29/2013 0123			Analysis Date:	12/29/2013 0141
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	25.0	24.9

**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206902**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID: 280-50411-C-7 MS	Analysis Batch: 280-206902	Instrument ID: WC_SHI2
Client Matrix: Water	Prep Batch: N/A	Lab File ID: 122813.txt
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume:
Analysis Date: 12/29/2013 0249		Final Weight/Volume: 50 mL
Prep Date: N/A		
Leach Date: N/A		

MSD Lab Sample ID: 280-50411-C-7 MSD	Analysis Batch: 280-206902	Instrument ID: WC_SHI2
Client Matrix: Water	Prep Batch: N/A	Lab File ID: 122813.txt
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume:
Analysis Date: 12/29/2013 0307		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	104	105	88 - 112	1	15		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206902**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID: 280-50411-C-7 MS	Units: mg/L
Client Matrix: Water	
Dilution: 1.0	
Analysis Date: 12/29/2013 0249	
Prep Date: N/A	
Leach Date: N/A	

MSD Lab Sample ID: 280-50411-C-7 MSD
Client Matrix: Water
Dilution: 1.0
Analysis Date: 12/29/2013 0307
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	ND	25.0	25.0	25.9	26.2

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

### Laboratory Chronicle

Lab ID: 280-49930-1

Client ID: MW-29A

Sample Date/Time: 12/03/2013 10:49

Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-49930-F-1		480-156625		12/10/2013 05:32	1	TAL BUF	LCH
A:8260B	280-49930-F-1		480-156625		12/10/2013 05:32	1	TAL BUF	LCH
P:5030B	280-49930-K-1		480-157026		12/11/2013 15:25	1	TAL BUF	CDC
A:8260B SIM	280-49930-K-1		480-157026		12/11/2013 15:25	1	TAL BUF	CDC
P:3005A	280-49930-D-1-A		280-204391	280-203879	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49930-D-1-A		280-204391	280-203879	12/08/2013 13:08	1	TAL DEN	SJS
P:3005A	280-49930-D-1-D		280-204395	280-203908	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49930-D-1-D		280-204395	280-203908	12/08/2013 20:54	1	TAL DEN	SJS
P:3005A	280-49930-D-1-E		280-204115	280-203912	12/05/2013 12:00	1	TAL DEN	LLB
A:6020	280-49930-D-1-E		280-204115	280-203912	12/06/2013 02:09	1	TAL DEN	TEL
P:3005A	280-49930-D-1-F		280-204373	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	280-49930-D-1-F		280-204373	280-203949	12/07/2013 04:47	1	TAL DEN	TEL
P:3005A	280-49930-D-1-F		280-204577	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	280-49930-D-1-F		280-204577	280-203949	12/09/2013 20:58	1	TAL DEN	TEL
A:300.0	280-49930-B-1		280-205526		12/16/2013 20:03	1	TAL DEN	TLP
A:350.1	280-49930-C-1		280-205244		12/13/2013 13:49	1	TAL DEN	DME
A:353.2	280-49930-A-1		280-206107		12/20/2013 10:09	1	TAL DEN	DME
A:SM 2320B	280-49930-B-1		280-204131		12/05/2013 21:37	1	TAL DEN	AFH
A:SM 2540C	280-49930-A-1		280-204203		12/06/2013 13:06	1	TAL DEN	ELJ
A:SM 2540D	280-49930-B-1		280-204110		12/06/2013 08:03	1	TAL DEN	BAN
A:SM 5310B	280-49930-C-1		280-204724		12/11/2013 02:13	1	TAL DEN	SMG

Lab ID: 280-49930-1 MS

Client ID: MW-29A

Sample Date/Time: 12/03/2013 10:49

Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-49930-D-1-B MS		280-204391	280-203879	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49930-D-1-B MS		280-204391	280-203879	12/08/2013 13:12	1	TAL DEN	SJS
P:3005A	280-49930-D-1-G MS		280-204373	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	280-49930-D-1-G MS		280-204373	280-203949	12/07/2013 04:56	1	TAL DEN	TEL
P:3005A	280-49930-D-1-G MS		280-204577	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	280-49930-D-1-G MS		280-204577	280-203949	12/09/2013 21:07	1	TAL DEN	TEL
A:300.0	280-49930-B-1 MS		280-205526		12/16/2013 20:37	1	TAL DEN	TLP



**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Laboratory Chronicle**

Lab ID: 280-49930-1 MSD

Client ID: MW-29A

Sample Date/Time: 12/03/2013 10:49

Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-49930-D-1-C MSD		280-204391	280-203879	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49930-D-1-C MSD		280-204391	280-203879	12/08/2013 13:15	1	TAL DEN	SJS
P:3005A	280-49930-D-1-H MSD		280-204373	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	280-49930-D-1-H MSD		280-204373	280-203949	12/07/2013 05:00	1	TAL DEN	TEL
P:3005A	280-49930-D-1-H MSD		280-204577	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	280-49930-D-1-H MSD		280-204577	280-203949	12/09/2013 21:10	1	TAL DEN	TEL
A:300.0	280-49930-B-1 MSD		280-205526		12/16/2013 20:55	1	TAL DEN	TLP

Lab ID: 280-49930-1 DU

Client ID: MW-29A

Sample Date/Time: 12/03/2013 10:49

Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-49930-B-1 DU		280-205526		12/16/2013 20:20	1	TAL DEN	TLP
A:SM 2540C	280-49930-A-1 DU		280-204203		12/06/2013 13:06	1	TAL DEN	ELJ

**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**Laboratory Chronicle**

Lab ID: 280-49930-2

Client ID: DUP1

Sample Date/Time: 12/03/2013 10:49

Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-49930-F-2		480-156625		12/10/2013 05:57	1	TAL BUF	LCH
A:8260B	280-49930-F-2		480-156625		12/10/2013 05:57	1	TAL BUF	LCH
P:5030B	280-49930-K-2		480-157026		12/11/2013 15:49	1	TAL BUF	CDC
A:8260B SIM	280-49930-K-2		480-157026		12/11/2013 15:49	1	TAL BUF	CDC
P:3005A	280-49930-D-2-A		280-204391	280-203879	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49930-D-2-A		280-204391	280-203879	12/08/2013 13:17	1	TAL DEN	SJS
P:3005A	280-49930-D-2-B		280-204395	280-203908	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49930-D-2-B		280-204395	280-203908	12/08/2013 20:56	1	TAL DEN	SJS
P:3005A	280-49930-D-2-C		280-204115	280-203912	12/05/2013 12:00	1	TAL DEN	LLB
A:6020	280-49930-D-2-C		280-204115	280-203912	12/06/2013 02:13	1	TAL DEN	TEL
P:3005A	280-49930-D-2-D		280-204373	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	280-49930-D-2-D		280-204373	280-203949	12/07/2013 05:09	1	TAL DEN	TEL
P:3005A	280-49930-D-2-D		280-204577	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	280-49930-D-2-D		280-204577	280-203949	12/09/2013 21:19	1	TAL DEN	TEL
A:300.0	280-49930-A-2		280-205526		12/16/2013 21:12	1	TAL DEN	TLP
A:350.1	280-49930-C-2		280-205244		12/13/2013 13:28	1	TAL DEN	DME
A:353.2	280-49930-A-2		280-206107		12/20/2013 10:09	1	TAL DEN	DME
A:SM 2320B	280-49930-B-2		280-204131		12/05/2013 21:44	1	TAL DEN	AFH
A:SM 2540C	280-49930-B-2		280-204203		12/06/2013 13:06	1	TAL DEN	ELJ
A:SM 2540D	280-49930-A-2		280-204110		12/06/2013 08:03	1	TAL DEN	BAN
A:SM 5310B	280-49930-C-2		280-204724		12/11/2013 02:29	1	TAL DEN	SMG

Lab ID: 280-49930-2 MS

Client ID: DUP1

Sample Date/Time: 12/03/2013 10:49

Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:350.1	280-49930-C-2 MS		280-205244		12/13/2013 13:30	1	TAL DEN	DME

Lab ID: 280-49930-2 MSD

Client ID: DUP1

Sample Date/Time: 12/03/2013 10:49

Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:350.1	280-49930-C-2 MSD		280-205244		12/13/2013 13:33	1	TAL DEN	DME

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

### Laboratory Chronicle

Lab ID: 280-49930-3

Client ID: MW-42

Sample Date/Time: 12/03/2013 12:34

Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-49930-F-3		480-156625		12/10/2013 06:22	1	TAL BUF	LCH
A:8260B	280-49930-F-3		480-156625		12/10/2013 06:22	1	TAL BUF	LCH
P:5030B	280-49930-H-3		480-157026		12/11/2013 16:14	1	TAL BUF	CDC
A:8260B SIM	280-49930-H-3		480-157026		12/11/2013 16:14	1	TAL BUF	CDC
P:3005A	280-49930-D-3-A		280-204391	280-203879	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49930-D-3-A		280-204391	280-203879	12/08/2013 13:19	1	TAL DEN	SJS
P:3005A	280-49930-D-3-B		280-204395	280-203908	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49930-D-3-B		280-204395	280-203908	12/08/2013 20:59	1	TAL DEN	SJS
P:3005A	280-49930-D-3-C		280-204115	280-203912	12/05/2013 12:00	1	TAL DEN	LLB
A:6020	280-49930-D-3-C		280-204115	280-203912	12/06/2013 02:16	1	TAL DEN	TEL
P:3005A	280-49930-D-3-D		280-204373	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	280-49930-D-3-D		280-204373	280-203949	12/07/2013 05:12	1	TAL DEN	TEL
P:3005A	280-49930-D-3-D		280-204577	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	280-49930-D-3-D		280-204577	280-203949	12/09/2013 21:22	1	TAL DEN	TEL
A:300.0	280-49930-B-3		280-205526		12/16/2013 22:04	1	TAL DEN	TLP
A:350.1	280-49930-C-3		280-205244		12/13/2013 14:10	2	TAL DEN	DME
A:353.2	280-49930-A-3		280-206107		12/20/2013 10:09	1	TAL DEN	DME
A:SM 2320B	280-49930-B-3		280-204131		12/05/2013 22:09	1	TAL DEN	AFH
A:SM 2540C	280-49930-A-3		280-204203		12/06/2013 13:06	1	TAL DEN	ELJ
A:SM 2540D	280-49930-B-3		280-204110		12/06/2013 08:03	1	TAL DEN	BAN
A:SM 5310B	280-49930-C-3		280-204724		12/11/2013 02:45	1	TAL DEN	SMG

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

### Laboratory Chronicle

Lab ID: 280-49930-4

Client ID: MW-19C

Sample Date/Time: 12/03/2013 14:02

Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-49930-F-4		480-156625		12/10/2013 06:48	1	TAL BUF	LCH
A:8260B	280-49930-F-4		480-156625		12/10/2013 06:48	1	TAL BUF	LCH
P:5030B	280-49930-K-4		480-157026		12/11/2013 16:38	1	TAL BUF	CDC
A:8260B SIM	280-49930-K-4		480-157026		12/11/2013 16:38	1	TAL BUF	CDC
P:3005A	280-49930-D-4-A		280-204391	280-203879	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49930-D-4-A		280-204391	280-203879	12/08/2013 13:22	1	TAL DEN	SJS
P:3005A	280-49930-D-4-B		280-204395	280-203908	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49930-D-4-B		280-204395	280-203908	12/08/2013 21:11	1	TAL DEN	SJS
P:3005A	280-49930-D-4-C		280-204115	280-203912	12/05/2013 12:00	1	TAL DEN	LLB
A:6020	280-49930-D-4-C		280-204115	280-203912	12/06/2013 02:19	1	TAL DEN	TEL
P:3005A	280-49930-D-4-D		280-204373	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	280-49930-D-4-D		280-204373	280-203949	12/07/2013 05:15	1	TAL DEN	TEL
P:3005A	280-49930-D-4-D		280-204577	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	280-49930-D-4-D		280-204577	280-203949	12/09/2013 21:25	1	TAL DEN	TEL
A:300.0	280-49930-A-4		280-205526		12/16/2013 22:21	1	TAL DEN	TLP
A:350.1	280-49930-C-4		280-205244		12/13/2013 13:37	1	TAL DEN	DME
A:353.2	280-49930-A-4		280-206107		12/20/2013 10:09	1	TAL DEN	DME
A:SM 2320B	280-49930-B-4		280-204131		12/05/2013 22:15	1	TAL DEN	AFH
A:SM 2540C	280-49930-B-4		280-204203		12/06/2013 13:06	1	TAL DEN	ELJ
A:SM 2540D	280-49930-A-4		280-204110		12/06/2013 08:03	1	TAL DEN	BAN
A:SM 5310B	280-49930-C-4		280-204724		12/11/2013 03:34	1	TAL DEN	SMG

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

### Laboratory Chronicle

Lab ID: 280-49930-5

Client ID: MW-13A

Sample Date/Time: 12/03/2013 14:27

Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-49930-F-5		480-156625		12/10/2013 07:13	1	TAL BUF	LCH
A:8260B	280-49930-F-5		480-156625		12/10/2013 07:13	1	TAL BUF	LCH
P:5030B	280-49930-K-5		480-157026		12/11/2013 17:02	1	TAL BUF	CDC
A:8260B SIM	280-49930-K-5		480-157026		12/11/2013 17:02	1	TAL BUF	CDC
P:3005A	280-49930-D-5-A		280-204391	280-203879	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49930-D-5-A		280-204391	280-203879	12/08/2013 13:24	1	TAL DEN	SJS
P:3005A	280-49930-D-5-B		280-204395	280-203908	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49930-D-5-B		280-204395	280-203908	12/08/2013 21:13	1	TAL DEN	SJS
P:3005A	280-49930-D-5-C		280-204115	280-203912	12/05/2013 12:00	1	TAL DEN	LLB
A:6020	280-49930-D-5-C		280-204115	280-203912	12/06/2013 02:22	1	TAL DEN	TEL
P:3005A	280-49930-D-5-D		280-204373	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	280-49930-D-5-D		280-204373	280-203949	12/07/2013 05:18	1	TAL DEN	TEL
P:3005A	280-49930-D-5-D		280-204577	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	280-49930-D-5-D		280-204577	280-203949	12/09/2013 21:29	1	TAL DEN	TEL
A:300.0	280-49930-A-5		280-205526		12/16/2013 22:39	1	TAL DEN	TLP
A:350.1	280-49930-C-5		280-205244		12/13/2013 13:40	1	TAL DEN	DME
A:353.2	280-49930-A-5		280-206107		12/20/2013 10:09	1	TAL DEN	DME
A:SM 2320B	280-49930-B-5		280-204131		12/05/2013 22:23	1	TAL DEN	AFH
A:SM 2540C	280-49930-B-5		280-204203		12/06/2013 13:06	1	TAL DEN	ELJ
A:SM 2540D	280-49930-B-5		280-204358		12/09/2013 07:42	1	TAL DEN	BAN
A:SM 5310B	280-49930-C-5		280-206902		12/29/2013 05:19	1	TAL DEN	CCJ

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

### Laboratory Chronicle

Lab ID: 280-49930-6

Client ID: MW-13B

Sample Date/Time: 12/03/2013 13:32

Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-49930-F-6		480-156625		12/10/2013 07:39	1	TAL BUF	LCH
A:8260B	280-49930-F-6		480-156625		12/10/2013 07:39	1	TAL BUF	LCH
P:5030B	280-49930-K-6		480-157026		12/11/2013 17:26	1	TAL BUF	CDC
A:8260B SIM	280-49930-K-6		480-157026		12/11/2013 17:26	1	TAL BUF	CDC
P:3005A	280-49930-D-6-A		280-204391	280-203879	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49930-D-6-A		280-204391	280-203879	12/08/2013 13:36	1	TAL DEN	SJS
P:3005A	280-49930-D-6-B		280-204395	280-203908	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49930-D-6-B		280-204395	280-203908	12/08/2013 21:16	1	TAL DEN	SJS
P:3005A	280-49930-D-6-C		280-204115	280-203912	12/05/2013 12:00	1	TAL DEN	LLB
A:6020	280-49930-D-6-C		280-204115	280-203912	12/06/2013 02:25	1	TAL DEN	TEL
P:3005A	280-49930-D-6-D		280-204373	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	280-49930-D-6-D		280-204373	280-203949	12/07/2013 05:21	1	TAL DEN	TEL
P:3005A	280-49930-D-6-D		280-204577	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	280-49930-D-6-D		280-204577	280-203949	12/09/2013 21:32	1	TAL DEN	TEL
A:300.0	280-49930-A-6		280-205526		12/16/2013 22:56	1	TAL DEN	TLP
A:350.1	280-49930-C-6		280-205244		12/13/2013 13:42	1	TAL DEN	DME
A:353.2	280-49930-A-6		280-206107		12/20/2013 10:09	1	TAL DEN	DME
A:SM 2320B	280-49930-B-6		280-204131		12/05/2013 22:30	1	TAL DEN	AFH
A:SM 2540C	280-49930-B-6		280-204203		12/06/2013 13:06	1	TAL DEN	ELJ
A:SM 2540D	280-49930-B-6		280-204358		12/09/2013 07:42	1	TAL DEN	BAN
A:SM 5310B	280-49930-C-6		280-206902		12/29/2013 05:33	1	TAL DEN	CCJ

Lab ID: 280-49930-6 DU

Client ID: MW-13B

Sample Date/Time: 12/03/2013 13:32

Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2540D	280-49930-B-6 DU		280-204358		12/09/2013 07:42	1	TAL DEN	BAN

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

### Laboratory Chronicle

Lab ID: 280-49930-7

Client ID: MW-34A

Sample Date/Time: 12/03/2013 11:33

Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-49930-F-7		480-156625		12/10/2013 08:04	1	TAL BUF	LCH
A:8260B	280-49930-F-7		480-156625		12/10/2013 08:04	1	TAL BUF	LCH
P:5030B	280-49930-K-7		480-157026		12/11/2013 17:50	1	TAL BUF	CDC
A:8260B SIM	280-49930-K-7		480-157026		12/11/2013 17:50	1	TAL BUF	CDC
P:3005A	280-49930-D-7-A		280-204391	280-203879	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49930-D-7-A		280-204391	280-203879	12/08/2013 13:39	1	TAL DEN	SJS
P:3005A	280-49930-D-7-B		280-204395	280-203908	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49930-D-7-B		280-204395	280-203908	12/08/2013 21:18	1	TAL DEN	SJS
P:3005A	280-49930-D-7-C		280-204115	280-203912	12/05/2013 12:00	1	TAL DEN	LLB
A:6020	280-49930-D-7-C		280-204115	280-203912	12/06/2013 02:28	1	TAL DEN	TEL
P:3005A	280-49930-D-7-D		280-204373	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	280-49930-D-7-D		280-204373	280-203949	12/07/2013 05:24	1	TAL DEN	TEL
P:3005A	280-49930-D-7-D		280-204577	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	280-49930-D-7-D		280-204577	280-203949	12/09/2013 21:35	1	TAL DEN	TEL
A:300.0	280-49930-B-7		280-205526		12/16/2013 23:13	1	TAL DEN	TLP
A:350.1	280-49930-C-7		280-205244		12/13/2013 13:44	1	TAL DEN	DME
A:353.2	280-49930-A-7		280-206107		12/20/2013 10:09	1	TAL DEN	DME
A:SM 2320B	280-49930-B-7		280-204131		12/05/2013 22:38	1	TAL DEN	AFH
A:SM 2540C	280-49930-A-7		280-204203		12/06/2013 13:06	1	TAL DEN	ELJ
A:SM 2540D	280-49930-A-7		280-204358		12/09/2013 07:42	1	TAL DEN	BAN
A:SM 5310B	280-49930-C-7		280-206902		12/29/2013 05:47	1	TAL DEN	CCJ

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

### Laboratory Chronicle

Lab ID: 280-49930-8

Client ID: MW-34C

Sample Date/Time: 12/03/2013 10:37

Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-49930-F-8		480-156625		12/10/2013 08:30	1	TAL BUF	LCH
A:8260B	280-49930-F-8		480-156625		12/10/2013 08:30	1	TAL BUF	LCH
P:5030B	280-49930-K-8		480-157026		12/11/2013 18:14	1	TAL BUF	CDC
A:8260B SIM	280-49930-K-8		480-157026		12/11/2013 18:14	1	TAL BUF	CDC
P:3005A	280-49930-D-8-A		280-204391	280-203879	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49930-D-8-A		280-204391	280-203879	12/08/2013 13:41	1	TAL DEN	SJS
P:3005A	280-49930-D-8-B		280-204395	280-203908	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49930-D-8-B		280-204395	280-203908	12/08/2013 21:21	1	TAL DEN	SJS
P:3005A	280-49930-D-8-C		280-204115	280-203912	12/05/2013 12:00	1	TAL DEN	LLB
A:6020	280-49930-D-8-C		280-204115	280-203912	12/06/2013 02:31	1	TAL DEN	TEL
P:3005A	280-49930-D-8-D		280-204373	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	280-49930-D-8-D		280-204373	280-203949	12/07/2013 05:27	1	TAL DEN	TEL
P:3005A	280-49930-D-8-D		280-204577	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	280-49930-D-8-D		280-204577	280-203949	12/09/2013 21:38	1	TAL DEN	TEL
A:300.0	280-49930-B-8		280-205526		12/16/2013 23:31	1	TAL DEN	TLP
A:350.1	280-49930-C-8		280-205244		12/13/2013 13:47	1	TAL DEN	DME
A:353.2	280-49930-A-8		280-206107		12/20/2013 10:09	1	TAL DEN	DME
A:SM 2320B	280-49930-B-8		280-204131		12/05/2013 22:44	1	TAL DEN	AFH
A:SM 2540C	280-49930-A-8		280-204203		12/06/2013 13:06	1	TAL DEN	ELJ
A:SM 2540D	280-49930-A-8		280-204358		12/09/2013 07:42	1	TAL DEN	BAN
A:SM 5310B	280-49930-C-8		280-206902		12/29/2013 06:03	1	TAL DEN	CCJ

Lab ID: 280-49930-9

Client ID: TRIP BLANK

Sample Date/Time: 12/03/2013 00:00

Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-49930-A-9		480-156962		12/11/2013 15:19	1	TAL BUF	RAL
A:8260B	280-49930-A-9		480-156962		12/11/2013 15:19	1	TAL BUF	RAL
P:5030B	280-49930-D-9		480-157026		12/11/2013 18:39	1	TAL BUF	CDC
A:8260B SIM	280-49930-D-9		480-157026		12/11/2013 18:39	1	TAL BUF	CDC



## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

### 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 480-156625/7		480-156625		12/10/2013 00:39	1	TAL BUF	LCH
A:8260B	MB 480-156625/7		480-156625		12/10/2013 00:39	1	TAL BUF	LCH
P:5030B	MB 480-156962/7		480-156962		12/11/2013 12:58	1	TAL BUF	RAL
A:8260B	MB 480-156962/7		480-156962		12/11/2013 12:58	1	TAL BUF	RAL
P:5030B	MB 480-157026/7		480-157026		12/11/2013 15:01	1	TAL BUF	CDC
A:8260B SIM	MB 480-157026/7		480-157026		12/11/2013 15:01	1	TAL BUF	CDC
P:3005A	MB 280-203879/1-A		280-204391	280-203879	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	MB 280-203879/1-A		280-204391	280-203879	12/08/2013 13:03	1	TAL DEN	SJS
P:3005A	MB 280-203908/1-A		280-204395	280-203908	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	MB 280-203908/1-A		280-204395	280-203908	12/08/2013 20:02	1	TAL DEN	SJS
P:3005A	MB 280-203912/1-A		280-204115	280-203912	12/05/2013 12:00	1	TAL DEN	LLB
A:6020	MB 280-203912/1-A		280-204115	280-203912	12/06/2013 01:35	1	TAL DEN	TEL
P:3005A	MB 280-203949/1-A		280-204373	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	MB 280-203949/1-A		280-204373	280-203949	12/07/2013 04:41	1	TAL DEN	TEL
P:3005A	MB 280-203949/1-A		280-204577	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	MB 280-203949/1-A		280-204577	280-203949	12/09/2013 20:52	1	TAL DEN	TEL
A:300.0	MB 280-205526/6		280-205526		12/16/2013 13:16	1	TAL DEN	TLP
A:350.1	MB 280-205244/60		280-205244		12/13/2013 12:27	1	TAL DEN	DME
A:353.2	MB 280-206107/1		280-206107		12/20/2013 10:09	1	TAL DEN	DME
A:SM 2320B	MB 280-204131/6		280-204131		12/05/2013 20:23	1	TAL DEN	AFH
A:SM 2540C	MB 280-204203/1		280-204203		12/06/2013 13:06	1	TAL DEN	ELJ
A:SM 2540D	MB 280-204110/1		280-204110		12/06/2013 08:03	1	TAL DEN	BAN
A:SM 2540D	MB 280-204358/1		280-204358		12/09/2013 07:42	1	TAL DEN	BAN
A:SM 5310B	MB 280-204724/37		280-204724		12/10/2013 22:51	1	TAL DEN	SMG
A:SM 5310B	MB 280-206902/35		280-206902		12/29/2013 02:00	1	TAL DEN	CCJ

**Quality Control Results**

Client: Waste Management

Job Number: 280-49930-1

**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 480-156625/4		480-156625		12/09/2013 23:23	1	TAL BUF	LCH
A:8260B	LCS 480-156625/4		480-156625		12/09/2013 23:23	1	TAL BUF	LCH
P:5030B	LCS 480-156962/4		480-156962		12/11/2013 10:54	1	TAL BUF	RAL
A:8260B	LCS 480-156962/4		480-156962		12/11/2013 10:54	1	TAL BUF	RAL
P:5030B	LCS 480-157026/5		480-157026		12/11/2013 14:12	1	TAL BUF	CDC
A:8260B SIM	LCS 480-157026/5		480-157026		12/11/2013 14:12	1	TAL BUF	CDC
P:3005A	LCS 280-203879/2-A		280-204391	280-203879	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	LCS 280-203879/2-A		280-204391	280-203879	12/08/2013 13:05	1	TAL DEN	SJS
P:3005A	LCS 280-203908/2-A		280-204395	280-203908	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	LCS 280-203908/2-A		280-204395	280-203908	12/08/2013 20:04	1	TAL DEN	SJS
P:3005A	LCS 280-203912/2-A		280-204115	280-203912	12/05/2013 12:00	1	TAL DEN	LLB
A:6020	LCS 280-203912/2-A		280-204115	280-203912	12/06/2013 01:38	1	TAL DEN	TEL
P:3005A	LCS 280-203949/2-A		280-204373	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	LCS 280-203949/2-A		280-204373	280-203949	12/07/2013 04:44	1	TAL DEN	TEL
P:3005A	LCS 280-203949/2-A		280-204577	280-203949	12/06/2013 07:30	1	TAL DEN	WAW
A:6020	LCS 280-203949/2-A		280-204577	280-203949	12/09/2013 20:55	1	TAL DEN	TEL
A:300.0	LCS 280-205526/4		280-205526		12/16/2013 12:10	1	TAL DEN	TLP
A:350.1	LCS 280-205244/58		280-205244		12/13/2013 12:23	1	TAL DEN	DME
A:SM 2320B	LCS 280-204131/4		280-204131		12/05/2013 20:05	1	TAL DEN	AFH
A:SM 2540C	LCS 280-204203/2		280-204203		12/06/2013 13:06	1	TAL DEN	ELJ
A:SM 2540D	LCS 280-204110/2		280-204110		12/06/2013 08:03	1	TAL DEN	BAN
A:SM 2540D	LCS 280-204358/2		280-204358		12/09/2013 07:42	1	TAL DEN	BAN
A:SM 5310B	LCS 280-204724/35		280-204724		12/10/2013 22:13	1	TAL DEN	SMG
A:SM 5310B	LCS 280-206902/33		280-206902		12/29/2013 01:23	1	TAL DEN	CCJ

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
P:5030B	LCSD 480-156625/5		480-156625		12/09/2013 23:49	1	TAL BUF	LCH
A:8260B	LCSD 480-156625/5		480-156625		12/09/2013 23:49	1	TAL BUF	LCH
P:5030B	LCSD 480-156962/5		480-156962		12/11/2013 11:20	1	TAL BUF	RAL
A:8260B	LCSD 480-156962/5		480-156962		12/11/2013 11:20	1	TAL BUF	RAL
P:5030B	LCSD 480-157026/6		480-157026		12/11/2013 14:36	1	TAL BUF	CDC
A:8260B SIM	LCSD 480-157026/6		480-157026		12/11/2013 14:36	1	TAL BUF	CDC
A:300.0	LCSD 280-205526/5		280-205526		12/16/2013 12:59	1	TAL DEN	TLP
A:350.1	LCSD 280-205244/59		280-205244		12/13/2013 12:25	1	TAL DEN	DME
A:SM 2320B	LCSD 280-204131/5		280-204131		12/05/2013 20:15	1	TAL DEN	AFH
A:SM 2540C	LCSD 280-204203/3		280-204203		12/06/2013 13:06	1	TAL DEN	ELJ
A:SM 2540D	LCSD 280-204110/3		280-204110		12/06/2013 08:03	1	TAL DEN	BAN
A:SM 2540D	LCSD 280-204358/3		280-204358		12/09/2013 07:42	1	TAL DEN	BAN
A:SM 5310B	LCSD 280-204724/36		280-204724		12/10/2013 22:31	1	TAL DEN	SMG
A:SM 5310B	LCSD 280-206902/34		280-206902		12/29/2013 01:41	1	TAL DEN	CCJ

## Quality Control Results

Client: Waste Management

Job Number: 280-49930-1

### 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 280-205526/3		280-205526		12/16/2013 11:53	1	TAL DEN	TLP

Lab ID: MS

Client ID: N/A

Sample Date/Time: 12/03/2013 10:56

Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-49927-A-1-B MS		280-204395	280-203908	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49927-A-1-B MS		280-204395	280-203908	12/08/2013 20:11	1	TAL DEN	SJS
P:3005A	280-49928-A-3-E MS		280-204373	280-203912	12/05/2013 12:00	5	TAL DEN	LLB
A:6020	280-49928-A-3-E MS ^5		280-204373	280-203912	12/06/2013 19:29	5	TAL DEN	TEL
A:SM 5310B	280-49836-N-1 MS		280-204724		12/11/2013 00:14	1	TAL DEN	SMG
A:SM 5310B	280-50411-C-7 MS		280-206902		12/29/2013 02:49	1	TAL DEN	CCJ

Lab ID: MSD

Client ID: N/A

Sample Date/Time: 12/03/2013 10:56

Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-49927-A-1-C MSD		280-204395	280-203908	12/05/2013 12:00	1	TAL DEN	LLB
A:6010B	280-49927-A-1-C MSD		280-204395	280-203908	12/08/2013 20:14	1	TAL DEN	SJS
P:3005A	280-49928-A-3-F MSD ^5		280-204373	280-203912	12/05/2013 12:00	5	TAL DEN	LLB
A:6020	280-49928-A-3-F MSD ^5		280-204373	280-203912	12/06/2013 19:32	5	TAL DEN	TEL
A:SM 5310B	280-49836-N-1 MSD		280-204724		12/11/2013 00:32	1	TAL DEN	SMG
A:SM 5310B	280-50411-C-7 MSD		280-206902		12/29/2013 03:07	1	TAL DEN	CCJ

Lab ID: DU

Client ID: N/A

Sample Date/Time: 12/03/2013 11:56

Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2320B	280-49926-A-7 DU		280-204131		12/05/2013 20:41	1	TAL DEN	AFH

**Lab References:**

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver



Tel: 4956  
 Anye  
 Phot

# Chain of Custody Record

280-49930 Chain of Custody

Client Contact: **Elena Ramirez**  
 Company: **SCS Engineers**  
 Address: **3000 Southwest Barney White Road 2405 140th Ave NE #107**  
 City: **Bellevue**  
 State: **WA** Zip: **98005**  
 Phone: **425-289-5454**  
 Email: **Elmarce@scsengineers.com**  
 Project Name: **WA02(Olympic View Sanitary LF)**  
 Event Desc: **Quarterly GW App/II - Mar Jun Sep Dec**  
 Site: **Washington**

Sampler: **M. O'Hara** Lab PM: **Sara, Betsy A**  
 Phone: **425-289-5452** E-Mail: **betsy.sara@testamericainc.com**  
 Carrier Tracking No(s):  
 Job #: **01209027.17**

Due Date Requested: **Standard**  
 TAT Requested (days): **Standard**  
 PO #:   
 WO #:   
 Project #: **28002692**  
 SSOW#:   
 Matrix: **(W=water, S=solid, O=organic, A=air)**

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TDS/AIks/Cl/SO4/NO3(cad)	Dissolved Metals	Ammonia/TC	826B - long list (TA Buffalo)	826B SIM (TA Buffalo)	Total Metals	TSS	Dissolved Arsenic (direct sub to ARI)	Total Arsenic (direct sub to ARI)	Total Number of Containers	Special Instructions/Note:
MW-29A	12/3/13	1049	C	W	X	X	X	X	X	X	X	X	X			11	Short Hold: NO3(cad) Arsenic - Direct sub to ARI
DUP-1		1049															
MW-42		1734															
MW-19C		1402															
MU-13A		1427															
MU-13B		1332															
MU-34A		1133															
MU-34C		1027															
Top Blank																	

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Special Instructions/QC Requirements:

Received by: **Mark O'Hara** Date/Time: **12/13/13 1630** Company: **SCS**  
 Received by: **Manami Otonari** Date/Time: **12/13/13 1015** Company: **TRAD**  
 Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Cooler Temperature(s) °C and Other Remarks: **3.4, 5.1, 0.5, 1.2, 1.4, 5.0**

## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-49930-1

Login Number: 49930

List Source: TestAmerica Denver

List Number: 1

Creator: O'Tormey, Stephanie R

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	N/A	
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.	N/A	

## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-49930-1

**Login Number: 49930**  
**List Number: 1**  
**Creator: Robison, Zachary J**

**List Source: TestAmerica Buffalo**  
**List Creation: 12/09/13 02:57 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	3.4 C
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: 280-49982-1

Job Description: WA02|Olympic View Sanitary LF

For:  
Waste Management  
Olympic View Transfer Station  
9300 Southwest Barney White Road  
Bremerton, WA 98312  
Attention: Mr. Charles Luckie



Approved for release.  
Betsy A Sara  
Project Manager II  
12/23/2013 2:01 PM

---

Betsy A Sara, Project Manager II  
4955 Yarrow Street, Arvada, CO, 80002  
(303)736-0189  
betsy.sara@testamericainc.com  
12/23/2013

cc: Mr. Sam Adlington  
Mr. Matt O'Hare  
Mr. Phil Perley  
Ms. Elena Ramirez  
Mr. Dan Venchiarutti

The test results in this report relate only to the samples in this report and meet all requirements of NELAP, 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.

**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 . . . . .	8
Method / Analyst Summary . . . . .	9
Sample Summary . . . . .	10
Sample Results . . . . .	11
Sample Datasheets . . . . .	12
Data Qualifiers . . . . .	65
QC Results . . . . .	66
Qc Association Summary . . . . .	67
Surrogate Recovery Report . . . . .	74
Qc Reports . . . . .	76
Laboratory Chronicle . . . . .	113
Client Chain of Custody . . . . .	123
Sample Receipt Checklist . . . . .	124



## CASE NARRATIVE

Client: Waste Management

Project: WA02|Olympic View Sanitary LF

Report Number: 280-49982-1

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 12/05/2013; the samples arrived properly preserved and on ice. The temperatures of the coolers at receipt were 1.9° C and 2.3° C.

One of six hydrochloric preserved VOA vials for sample MW-15R was broken in transit. Sufficient volume remained to proceed the analysis. The client was notified on 12/6/2013.

### Holding Times

All holding times were within established control limits.

### Method Blanks

All 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 Spikes and Matrix Spike Duplicates performed on samples from other clients exhibited recoveries outside control limits for Trichloroethene Method 8260C and Ammonia Method 350.1. Because the corresponding Laboratory Control Samples and the Method Blank samples were within control limits, these anomalies may be due to matrix interference and no corrective action was taken.

The percent recoveries and/or the relative percent difference of the MS/MSD performed on sample MW-20 were outside control limits for Total Manganese Method 6020 because the sample concentration was greater than four times the spike amount.

All other MS and MSD samples were within established control limits.

### Organics

The Method 8260C\_SIM surrogate recovery of TBA-d9 was above control limits for sample MW-24. Because the data are considered to be biased high and the Method 8260C\_SIM target analyte in the sample was non-detect above the reporting limit, corrective action was deemed unnecessary.

The Method 8260C\_SIM surrogate recovery of Dibromofluoromethane was above control limits for sample TRIP BLANK. Because the data are considered to be biased high and the Method 8260C\_SIM target analyte in the sample was non-detect, corrective action was deemed unnecessary.

### Metals

The bracketing Continuing Calibration Verification Samples (CCV) surrounding the Method Blank were above control limits for Dissolved Sodium during Method 6010B analysis. Because the data are considered to be biased high and Dissolved Sodium was not detected in the Method Blank sample above the reporting limit, corrective action was deemed unnecessary.

The Method 6020 continuing calibration verification (CCV) for Dissolved Cadmium recovered above the upper control limit. The samples

associated with this CCV were less than the reporting limit for Dissolved Cadmium; therefore, the data have been reported.

**General Comments**

The analyses for Volatile Organics by Method 8260C and Volatile Organics by Method 8260C 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: 280-49982-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-49982-1</b>	<b>MW-20</b>					
Trichloroethene		0.46	J	1.0	ug/L	8260C
Vinyl chloride		0.051		0.020	ug/L	8260C SIM
Chloride		21		1.0	mg/L	300.0
Sulfate		19		1.0	mg/L	300.0
Nitrate as N		4.4		0.050	mg/L	353.2
Alkalinity, Total (As CaCO3)		140		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		140		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		240		5.0	mg/L	SM 2540C
<b><i>Dissolved</i></b>						
Calcium, Dissolved		36		0.040	mg/L	6010B
Magnesium, Dissolved		21		0.050	mg/L	6010B
Potassium, Dissolved		3.9		1.0	mg/L	6010B
Sodium, Dissolved		14		1.0	mg/L	6010B
Barium, Dissolved		0.011		0.0010	mg/L	6020
Manganese, Dissolved		0.15		0.0010	mg/L	6020
Nickel, Dissolved		0.0088		0.0040	mg/L	6020
<b><i>Total Recoverable</i></b>						
Barium, Total		0.012		0.0010	mg/L	6020
Manganese, Total		0.20		0.0010	mg/L	6020
<b>280-49982-2</b>	<b>MW-23A</b>					
Vinyl chloride		0.020		0.020	ug/L	8260C SIM
Chloride		2.1		1.0	mg/L	300.0
Sulfate		4.0		1.0	mg/L	300.0
Ammonia (as N)		0.047		0.030	mg/L	350.1
Alkalinity, Total (As CaCO3)		100		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		100		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		110		5.0	mg/L	SM 2540C
<b><i>Dissolved</i></b>						
Calcium, Dissolved		20		0.040	mg/L	6010B
Iron, Dissolved		0.82		0.060	mg/L	6010B
Magnesium, Dissolved		9.4		0.050	mg/L	6010B
Potassium, Dissolved		1.0		1.0	mg/L	6010B
Sodium, Dissolved		6.4		1.0	mg/L	6010B
Barium, Dissolved		0.012		0.0010	mg/L	6020
Manganese, Dissolved		2.2		0.0010	mg/L	6020
<b><i>Total Recoverable</i></b>						
Iron, Total		0.98		0.060	mg/L	6010B
Antimony, Total		0.0024		0.0010	mg/L	6020
Barium, Total		0.012		0.0010	mg/L	6020
Manganese, Total		2.2		0.0010	mg/L	6020

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-49982-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-49982-3</b>	<b>MW-36A</b>					
Chloride		1.3		1.0	mg/L	300.0
Sulfate		2.2		1.0	mg/L	300.0
Nitrate as N		1.0		0.050	mg/L	353.2
Alkalinity, Total (As CaCO <sub>3</sub> )		63		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO <sub>3</sub> )		63		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		100		5.0	mg/L	SM 2540C
<i><b>Dissolved</b></i>						
Calcium, Dissolved		11		0.040	mg/L	6010B
Magnesium, Dissolved		6.9		0.050	mg/L	6010B
Sodium, Dissolved		6.9		1.0	mg/L	6010B
Barium, Dissolved		0.0020		0.0010	mg/L	6020
Chromium, Dissolved		0.0089		0.0030	mg/L	6020
Vanadium, Dissolved		0.0031		0.0020	mg/L	6020
<i><b>Total Recoverable</b></i>						
Iron, Total		0.18		0.060	mg/L	6010B
Barium, Total		0.0022		0.0010	mg/L	6020
Chromium, Total		0.0091		0.0030	mg/L	6020
Manganese, Total		0.0060		0.0010	mg/L	6020
Vanadium, Total		0.0032		0.0020	mg/L	6020
<b>280-49982-4</b>	<b>MW-15R</b>					
Vinyl chloride		0.012	J	0.020	ug/L	8260C SIM
Chloride		2.6		1.0	mg/L	300.0
Sulfate		4.8		1.0	mg/L	300.0
Nitrate as N		0.16		0.050	mg/L	353.2
Alkalinity, Total (As CaCO <sub>3</sub> )		94		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO <sub>3</sub> )		94		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		110		5.0	mg/L	SM 2540C
<i><b>Dissolved</b></i>						
Calcium, Dissolved		18		0.040	mg/L	6010B
Magnesium, Dissolved		11		0.050	mg/L	6010B
Sodium, Dissolved		6.2		1.0	mg/L	6010B
Barium, Dissolved		0.0047		0.0010	mg/L	6020
Manganese, Dissolved		0.0016		0.0010	mg/L	6020
Vanadium, Dissolved		0.0034		0.0020	mg/L	6020
<i><b>Total Recoverable</b></i>						
Barium, Total		0.0048		0.0010	mg/L	6020
Manganese, Total		0.0031		0.0010	mg/L	6020
Vanadium, Total		0.0033		0.0020	mg/L	6020

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-49982-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-49982-5</b>	<b>MW-24</b>					
Vinyl chloride		0.0044	J	0.020	ug/L	8260C SIM
Chloride		3.0		1.0	mg/L	300.0
Sulfate		4.2		1.0	mg/L	300.0
Nitrate as N		0.27		0.050	mg/L	353.2
Alkalinity, Total (As CaCO3)		66		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		66		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		96		5.0	mg/L	SM 2540C
Total Suspended Solids		4.8		4.0	mg/L	SM 2540D
<i><b>Dissolved</b></i>						
Calcium, Dissolved		13		0.040	mg/L	6010B
Magnesium, Dissolved		7.6		0.050	mg/L	6010B
Sodium, Dissolved		5.3		1.0	mg/L	6010B
Barium, Dissolved		0.0013		0.0010	mg/L	6020
Manganese, Dissolved		0.44		0.0010	mg/L	6020
<i><b>Total Recoverable</b></i>						
Cobalt, Total		0.0034		0.0030	mg/L	6010B
Iron, Total		0.66		0.060	mg/L	6010B
Barium, Total		0.0067		0.0010	mg/L	6020
Manganese, Total		1.7		0.0010	mg/L	6020
Vanadium, Total		0.0029		0.0020	mg/L	6020
<b>280-49982-6FD</b>	<b>DUP2</b>					
Vinyl chloride		0.017	J	0.020	ug/L	8260C SIM
Chloride		2.1		1.0	mg/L	300.0
Sulfate		4.0		1.0	mg/L	300.0
Ammonia (as N)		0.050		0.030	mg/L	350.1
Alkalinity, Total (As CaCO3)		100		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		100		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		160		5.0	mg/L	SM 2540C
<i><b>Dissolved</b></i>						
Calcium, Dissolved		21		0.040	mg/L	6010B
Iron, Dissolved		0.83		0.060	mg/L	6010B
Magnesium, Dissolved		9.6		0.050	mg/L	6010B
Potassium, Dissolved		1.1		1.0	mg/L	6010B
Sodium, Dissolved		6.5		1.0	mg/L	6010B
Barium, Dissolved		0.012		0.0010	mg/L	6020
Manganese, Dissolved		2.1		0.0010	mg/L	6020
<i><b>Total Recoverable</b></i>						
Iron, Total		1.0		0.060	mg/L	6010B
Barium, Total		0.012		0.0010	mg/L	6020
Manganese, Total		2.1		0.0010	mg/L	6020

## METHOD SUMMARY

Client: Waste Management

Job Number: 280-49982-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		SW846 3005A
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Metals (ICP/MS)	TAL DEN	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		SW846 3005A
Metals (ICP/MS)	TAL DEN	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		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	
Alkalinity	TAL DEN	SM SM 2320B	
Solids, Total Dissolved (TDS)	TAL DEN	SM SM 2540C	
Solids, Total Suspended (TSS)	TAL DEN	SM SM 2540D	
Organic Carbon, Total (TOC)	TAL DEN	SM SM 5310B	
Volatile Organic Compounds by GC/MS	TAL BUF	SW846 8260C	
Purge and Trap	TAL BUF		SW846 5030C
Volatile Organic Compounds (GC/MS)	TAL BUF	SW846 8260C SIM	
Purge and Trap	TAL BUF		SW846 5030C

**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: 280-49982-1

<b>Method</b>	<b>Analyst</b>	<b>Analyst ID</b>
SW846 8260C	Dias, Nicole M	NMD1
SW846 8260C SIM	Cwiklinski, Charles D	CDC
SW846 6010B	Scott, Samantha J	SJS
SW846 6020	Trudell, Lynn-Anne M	LMT
MCAWW 300.0	Allen, Andrew J	AJA
MCAWW 350.1	Newcome, Robin S	RSN
EPA 353.2	Elkin, David M	DME
EPA 353.2	Sullivan, Roxanne K	RKS
SM SM 2320B	Hoefler, Alexandra F	AFH
SM SM 2540C	Janssen, Elizabeth L	ELJ
SM SM 2540D	Neeley, Beth A	BAN
SM SM 5310B	Graham, Shane M	SMG
SM SM 5310B	Jewell, Connie C	CCJ

## SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-49982-1

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
280-49982-1	MW-20	Water	12/04/2013 1035	12/05/2013 1030
280-49982-2	MW-23A	Water	12/04/2013 1320	12/05/2013 1030
280-49982-3	MW-36A	Water	12/04/2013 1520	12/05/2013 1030
280-49982-4	MW-15R	Water	12/04/2013 1430	12/05/2013 1030
280-49982-5	MW-24	Water	12/04/2013 1153	12/05/2013 1030
280-49982-6FD	DUP2	Water	12/04/2013 1320	12/05/2013 1030
280-49982-7TB	TRIP BLANK	Water	12/04/2013 0000	12/05/2013 1030



# SAMPLE RESULTS

Client: Waste Management

Job Number: 280-49982-1

Client Sample ID: MW-20

Lab Sample ID: 280-49982-1

Date Sampled: 12/04/2013 1035

Client Matrix: Water

Date Received: 12/05/2013 1030

## 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33182.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1252			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1252				

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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-49982-1

**Client Sample ID: MW-20**

Lab Sample ID: 280-49982-1

Date Sampled: 12/04/2013 1035

Client Matrix: Water

Date Received: 12/05/2013 1030

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33182.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1252			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1252				

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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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	0.46	J	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: 280-49982-1

**Client Sample ID: MW-20**

Lab Sample ID: 280-49982-1

Date Sampled: 12/04/2013 1035

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33182.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1252			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1252				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100		66 - 137
4-Bromofluorobenzene (Surr)	99		73 - 120
Toluene-d8 (Surr)	101		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: MW-20**

Lab Sample ID: 280-49982-1

Date Sampled: 12/04/2013 1035

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33182.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1252			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1252				

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

Client: Waste Management

Job Number: 280-49982-1

Client Sample ID: MW-23A

Lab Sample ID: 280-49982-2

Date Sampled: 12/04/2013 1320

Client Matrix: Water

Date Received: 12/05/2013 1030

## 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33183.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1314			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1314				

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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-49982-1

**Client Sample ID:** MW-23A

Lab Sample ID: 280-49982-2

Date Sampled: 12/04/2013 1320

Client Matrix: Water

Date Received: 12/05/2013 1030

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33183.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1314			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1314				

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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-49982-1

**Client Sample ID: MW-23A**

Lab Sample ID: 280-49982-2

Date Sampled: 12/04/2013 1320

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33183.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1314			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1314				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99		66 - 137
4-Bromofluorobenzene (Surr)	98		73 - 120
Toluene-d8 (Surr)	102		71 - 126



**Analytical Data**

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: MW-23A**

Lab Sample ID: 280-49982-2

Date Sampled: 12/04/2013 1320

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33183.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1314			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1314				

**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: 280-49982-1

**Client Sample ID:** MW-36A

Lab Sample ID: 280-49982-3

Date Sampled: 12/04/2013 1520

Client Matrix: Water

Date Received: 12/05/2013 1030

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33184.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1336			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1336				

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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-49982-1

**Client Sample ID:** MW-36A

Lab Sample ID: 280-49982-3

Date Sampled: 12/04/2013 1520

Client Matrix: Water

Date Received: 12/05/2013 1030

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33184.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1336			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1336				

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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-49982-1

**Client Sample ID: MW-36A**

Lab Sample ID: 280-49982-3

Date Sampled: 12/04/2013 1520

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33184.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1336			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1336				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100		66 - 137
4-Bromofluorobenzene (Surr)	99		73 - 120
Toluene-d8 (Surr)	101		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: MW-36A**

Lab Sample ID: 280-49982-3

Date Sampled: 12/04/2013 1520

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33184.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1336			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1336				

**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: 280-49982-1

Client Sample ID: MW-15R

Lab Sample ID: 280-49982-4

Date Sampled: 12/04/2013 1430

Client Matrix: Water

Date Received: 12/05/2013 1030

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33185.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1358			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1358				

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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-49982-1

**Client Sample ID:** MW-15R

Lab Sample ID: 280-49982-4

Date Sampled: 12/04/2013 1430

Client Matrix: Water

Date Received: 12/05/2013 1030

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33185.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1358			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1358				

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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-49982-1

**Client Sample ID: MW-15R**

Lab Sample ID: 280-49982-4

Date Sampled: 12/04/2013 1430

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33185.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1358			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1358				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99		66 - 137
4-Bromofluorobenzene (Surr)	98		73 - 120
Toluene-d8 (Surr)	102		71 - 126



**Analytical Data**

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: MW-15R**

Lab Sample ID: 280-49982-4

Date Sampled: 12/04/2013 1430

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33185.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1358			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1358				

**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: 280-49982-1

**Client Sample ID: MW-24**

Lab Sample ID: 280-49982-5

Date Sampled: 12/04/2013 1153

Client Matrix: Water

Date Received: 12/05/2013 1030

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method: 8260C	Analysis Batch: 480-156944	Instrument ID: HP5973S	
Prep Method: 5030C	Prep Batch: N/A	Lab File ID: S33186.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/11/2013 1420		Final Weight/Volume: 5 mL	
Prep Date: 12/11/2013 1420			

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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-49982-1

**Client Sample ID:** MW-24

Lab Sample ID: 280-49982-5

Date Sampled: 12/04/2013 1153

Client Matrix: Water

Date Received: 12/05/2013 1030

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33186.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1420			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1420				

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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-49982-1

**Client Sample ID: MW-24**

Lab Sample ID: 280-49982-5

Date Sampled: 12/04/2013 1153

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33186.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1420			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1420				

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100		66 - 137
4-Bromofluorobenzene (Surr)	100		73 - 120
Toluene-d8 (Surr)	103		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: MW-24**

Lab Sample ID: 280-49982-5

Date Sampled: 12/04/2013 1153

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33186.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1420			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1420				

**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: 280-49982-1

**Client Sample ID: DUP2**

Lab Sample ID: 280-49982-6FD

Date Sampled: 12/04/2013 1320

Client Matrix: Water

Date Received: 12/05/2013 1030

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method: 8260C	Analysis Batch: 480-156944	Instrument ID: HP5973S	
Prep Method: 5030C	Prep Batch: N/A	Lab File ID: S33187.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/11/2013 1442		Final Weight/Volume: 5 mL	
Prep Date: 12/11/2013 1442			

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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-49982-1

**Client Sample ID:** DUP2

Lab Sample ID: 280-49982-6FD

Date Sampled: 12/04/2013 1320

Client Matrix: Water

Date Received: 12/05/2013 1030

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33187.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1442			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1442				

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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-49982-1

**Client Sample ID: DUP2**

Lab Sample ID: 280-49982-6FD

Date Sampled: 12/04/2013 1320

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33187.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1442			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1442				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102		66 - 137
4-Bromofluorobenzene (Surr)	99		73 - 120
Toluene-d8 (Surr)	102		71 - 126



**Analytical Data**

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: DUP2**

Lab Sample ID: 280-49982-6FD

Date Sampled: 12/04/2013 1320

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33187.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1442			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1442				

**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: 280-49982-1

**Client Sample ID:** TRIP BLANK

Lab Sample ID: 280-49982-7TB

Date Sampled: 12/04/2013 0000

Client Matrix: Water

Date Received: 12/05/2013 1030

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33188.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1503			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1503				

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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-49982-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 280-49982-7TB

Date Sampled: 12/04/2013 0000

Client Matrix: Water

Date Received: 12/05/2013 1030

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33188.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1503			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1503				

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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-49982-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 280-49982-7TB

Date Sampled: 12/04/2013 0000

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33188.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1503			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1503				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102		66 - 137
4-Bromofluorobenzene (Surr)	99		73 - 120
Toluene-d8 (Surr)	103		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 280-49982-7TB

Date Sampled: 12/04/2013 0000

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-156944	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S33188.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/11/2013 1503			Final Weight/Volume:	5 mL
Prep Date:	12/11/2013 1503				

**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: 280-49982-1

**Client Sample ID: MW-20**

Lab Sample ID: 280-49982-1

Date Sampled: 12/04/2013 1035

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**8260C SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260C SIM	Analysis Batch:	480-157025	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J6793.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 2015			Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 2015				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.051		0.0040	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	131		50 - 150
TBA-d9 (Surr)	131		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: MW-23A**

Lab Sample ID: 280-49982-2

Date Sampled: 12/04/2013 1320

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**8260C SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260C SIM	Analysis Batch:	480-157025	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J6794.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 2039			Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 2039				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.020		0.0040	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	138		50 - 150
TBA-d9 (Surr)	138		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: MW-36A**

Lab Sample ID: 280-49982-3

Date Sampled: 12/04/2013 1520

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**8260C SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260C SIM	Analysis Batch:	480-157025	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J6795.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 2104			Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 2104				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.0040	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	141		50 - 150
TBA-d9 (Surr)	133		50 - 150



**Analytical Data**

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: MW-15R**

Lab Sample ID: 280-49982-4

Date Sampled: 12/04/2013 1430

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**8260C SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260C SIM	Analysis Batch:	480-157025	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J6796.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 2128			Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 2128				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.012	J	0.0040	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	142		50 - 150
TBA-d9 (Surr)	137		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: MW-24**

Lab Sample ID: 280-49982-5

Date Sampled: 12/04/2013 1153

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**8260C SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260C SIM	Analysis Batch:	480-157025	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J6797.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 2152			Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 2152				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.0044	J	0.0040	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	143		50 - 150
TBA-d9 (Surr)	156	X	50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: DUP2**

Lab Sample ID: 280-49982-6FD

Date Sampled: 12/04/2013 1320

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**8260C SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260C SIM	Analysis Batch:	480-157025	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J6798.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 2216			Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 2216				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.017	J	0.0040	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	149		50 - 150
TBA-d9 (Surr)	141		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 280-49982-7TB

Date Sampled: 12/04/2013 0000

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**8260C SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260C SIM	Analysis Batch:	480-157025	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J6799.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 2241			Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 2241				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.0040	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	151	X	50 - 150
TBA-d9 (Surr)	138		50 - 150

Client: Waste Management

Job Number: 280-49982-1

Client Sample ID: MW-20

Lab Sample ID: 280-49982-1

Date Sampled: 12/04/2013 1035

Client Matrix: Water

Date Received: 12/05/2013 1030

**6010B Metals (ICP)-Total Recoverable**

Analysis Method:	6010B	Analysis Batch:	280-204595	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-204075	Lab File ID:	26a07120913.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/10/2013 0329			Final Weight/Volume:	50 mL
Prep Date:	12/09/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	ND		0.060	0.060

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-204391	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-204080	Lab File ID:	26A01120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 1528			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1830				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	36		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	ND		0.060	0.060
Magnesium, Dissolved	21		0.050	0.050
Potassium, Dissolved	3.9		1.0	1.0
Sodium, Dissolved	14		1.0	1.0

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-204553	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-204077	Lab File ID:	165SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/09/2013 2023			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1815				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	0.012		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Manganese, Total	0.20		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Selenium, Total	ND		0.0010	0.0010
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	ND		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: MW-20**

Lab Sample ID: 280-49982-1

Date Sampled: 12/04/2013 1035

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-204803	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-204159	Lab File ID:	037SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/10/2013 1607			Final Weight/Volume:	50 mL
Prep Date:	12/09/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.011		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	0.15		0.0010	0.0010
Nickel, Dissolved	0.0088		0.0040	0.0040
Selenium, Dissolved	ND		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: MW-23A**

Lab Sample ID: 280-49982-2  
 Client Matrix: Water

Date Sampled: 12/04/2013 1320  
 Date Received: 12/05/2013 1030

**6010B Metals (ICP)-Total Recoverable**

Analysis Method:	6010B	Analysis Batch:	280-204595	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-204075	Lab File ID:	26a07120913.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/10/2013 0331			Final Weight/Volume:	50 mL
Prep Date:	12/09/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	0.98		0.060	0.060

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-204391	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-204080	Lab File ID:	26A01120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 1540			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1830				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	20		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	0.82		0.060	0.060
Magnesium, Dissolved	9.4		0.050	0.050
Potassium, Dissolved	1.0		1.0	1.0
Sodium, Dissolved	6.4		1.0	1.0

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-204553	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-204077	Lab File ID:	170SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/09/2013 2041			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1815				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	0.0024		0.0010	0.0010
Barium, Total	0.012		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Manganese, Total	2.2		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Selenium, Total	ND		0.0010	0.0010
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	ND		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: MW-23A**

Lab Sample ID: 280-49982-2

Date Sampled: 12/04/2013 1320

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-204803	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-204159	Lab File ID:	038SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/10/2013 1610			Final Weight/Volume:	50 mL
Prep Date:	12/09/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.012		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	2.2		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	ND		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050



## Analytical Data

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: MW-36A**

Lab Sample ID: 280-49982-3

Date Sampled: 12/04/2013 1520

Client Matrix: Water

Date Received: 12/05/2013 1030

### 6010B Metals (ICP)-Total Recoverable

Analysis Method:	6010B	Analysis Batch:	280-204595	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-204075	Lab File ID:	26a07120913.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/10/2013 0333			Final Weight/Volume:	50 mL
Prep Date:	12/09/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	0.18		0.060	0.060

### 6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	280-204391	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-204080	Lab File ID:	26A01120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 1542			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1830				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	11		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	ND		0.060	0.060
Magnesium, Dissolved	6.9		0.050	0.050
Potassium, Dissolved	ND		1.0	1.0
Sodium, Dissolved	6.9		1.0	1.0

### 6020 Metals (ICP/MS)-Total Recoverable

Analysis Method:	6020	Analysis Batch:	280-204553	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-204077	Lab File ID:	173SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/09/2013 2051			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1815				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	0.0022		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	0.0091		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Manganese, Total	0.0060		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Selenium, Total	ND		0.0010	0.0010
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	0.0032		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

Analytical Data

Client: Waste Management

Job Number: 280-49982-1

Client Sample ID: MW-36A

Lab Sample ID: 280-49982-3

Date Sampled: 12/04/2013 1520

Client Matrix: Water

Date Received: 12/05/2013 1030

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-204803	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-204159	Lab File ID:	039SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/10/2013 1614			Final Weight/Volume:	50 mL
Prep Date:	12/09/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.0020		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	0.0089		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	ND		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	ND		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	0.0031		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

## Analytical Data

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: MW-15R**

Lab Sample ID: 280-49982-4

Date Sampled: 12/04/2013 1430

Client Matrix: Water

Date Received: 12/05/2013 1030

### 6010B Metals (ICP)-Total Recoverable

Analysis Method:	6010B	Analysis Batch:	280-204595	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-204075	Lab File ID:	26a07120913.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/10/2013 0336			Final Weight/Volume:	50 mL
Prep Date:	12/09/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	ND		0.060	0.060

### 6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	280-204391	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-204080	Lab File ID:	26A01120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 1545			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1830				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	18		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	ND		0.060	0.060
Magnesium, Dissolved	11		0.050	0.050
Potassium, Dissolved	ND		1.0	1.0
Sodium, Dissolved	6.2		1.0	1.0

### 6020 Metals (ICP/MS)-Total Recoverable

Analysis Method:	6020	Analysis Batch:	280-204553	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-204077	Lab File ID:	174SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/09/2013 2055			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1815				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	0.0048		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Manganese, Total	0.0031		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Selenium, Total	ND		0.0010	0.0010
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	0.0033		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: MW-15R**

Lab Sample ID: 280-49982-4

Date Sampled: 12/04/2013 1430

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-204803	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-204159	Lab File ID:	040SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/10/2013 1618			Final Weight/Volume:	50 mL
Prep Date:	12/09/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.0047		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	0.0016		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	ND		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	0.0034		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: MW-24**

Lab Sample ID: 280-49982-5  
Client Matrix: Water

Date Sampled: 12/04/2013 1153  
Date Received: 12/05/2013 1030

**6010B Metals (ICP)-Total Recoverable**

Analysis Method:	6010B	Analysis Batch:	280-204595	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-204075	Lab File ID:	26a07120913.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/10/2013 0338			Final Weight/Volume:	50 mL
Prep Date:	12/09/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	0.0034		0.0030	0.0030
Iron, Total	0.66		0.060	0.060

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-204391	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-204080	Lab File ID:	26A01120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 1547			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1830				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	13		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	ND		0.060	0.060
Magnesium, Dissolved	7.6		0.050	0.050
Potassium, Dissolved	ND		1.0	1.0
Sodium, Dissolved	5.3		1.0	1.0

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-204553	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-204077	Lab File ID:	175SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/09/2013 2059			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1815				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	0.0067		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Manganese, Total	1.7		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Selenium, Total	ND		0.0010	0.0010
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	0.0029		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: MW-24**

Lab Sample ID: 280-49982-5

Date Sampled: 12/04/2013 1153

Client Matrix: Water

Date Received: 12/05/2013 1030

---

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-204803	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-204159	Lab File ID:	041SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/10/2013 1621			Final Weight/Volume:	50 mL
Prep Date:	12/09/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.0013		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	0.44		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	ND		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: DUP2**

Lab Sample ID: 280-49982-6FD  
 Client Matrix: Water

Date Sampled: 12/04/2013 1320  
 Date Received: 12/05/2013 1030

**6010B Metals (ICP)-Total Recoverable**

Analysis Method:	6010B	Analysis Batch:	280-204595	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-204075	Lab File ID:	26a07120913.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/10/2013 0341			Final Weight/Volume:	50 mL
Prep Date:	12/09/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	1.0		0.060	0.060

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-204391	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-204080	Lab File ID:	26A01120813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 1549			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1830				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	21		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	0.83		0.060	0.060
Magnesium, Dissolved	9.6		0.050	0.050
Potassium, Dissolved	1.1		1.0	1.0
Sodium, Dissolved	6.5		1.0	1.0

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-204553	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-204077	Lab File ID:	176SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/09/2013 2102			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1815				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	0.012		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Manganese, Total	2.1		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Selenium, Total	ND		0.0010	0.0010
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	ND		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-49982-1

**Client Sample ID: DUP2**

Lab Sample ID: 280-49982-6FD  
Client Matrix: Water

Date Sampled: 12/04/2013 1320  
Date Received: 12/05/2013 1030

---

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-204803	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-204159	Lab File ID:	042SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/10/2013 1625			Final Weight/Volume:	50 mL
Prep Date:	12/09/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.012		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	2.1		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	ND		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050



Client: Waste Management

Job Number: 280-49982-1

General Chemistry

Client Sample ID: MW-20

Lab Sample ID: 280-49982-1

Date Sampled: 12/04/2013 1035

Client Matrix: Water

Date Received: 12/05/2013 1030

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	21		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205826		Analysis Date: 12/17/2013 2244				
Sulfate	19		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205826		Analysis Date: 12/17/2013 2244				
Ammonia (as N)	ND		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-205837		Analysis Date: 12/18/2013 1528				
Nitrate as N	4.4		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206107		Analysis Date: 12/20/2013 1009				
Alkalinity, Total (As CaCO3)	140		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204292		Analysis Date: 12/06/2013 1825				
Alkalinity, Bicarbonate (As CaCO3)	140		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204292		Analysis Date: 12/06/2013 1825				
Total Dissolved Solids (TDS)	240		mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-204597		Analysis Date: 12/10/2013 0936				
Total Suspended Solids	ND		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-204551		Analysis Date: 12/10/2013 0750				
Total Organic Carbon - Average	ND		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-205760		Analysis Date: 12/18/2013 0600				

Client: Waste Management

Job Number: 280-49982-1

General Chemistry

Client Sample ID: MW-23A

Lab Sample ID: 280-49982-2

Date Sampled: 12/04/2013 1320

Client Matrix: Water

Date Received: 12/05/2013 1030

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	2.1		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205826			Analysis Date: 12/17/2013 2301			
Sulfate	4.0		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205826			Analysis Date: 12/17/2013 2301			
Ammonia (as N)	0.047		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-205837			Analysis Date: 12/18/2013 1531			
Nitrate as N	ND		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206107			Analysis Date: 12/20/2013 1009			
Alkalinity, Total (As CaCO3)	100		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204292			Analysis Date: 12/06/2013 1841			
Alkalinity, Bicarbonate (As CaCO3)	100		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204292			Analysis Date: 12/06/2013 1841			
Total Dissolved Solids (TDS)	110		mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-204597			Analysis Date: 12/10/2013 0936			
Total Suspended Solids	ND		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-204551			Analysis Date: 12/10/2013 0750			
Total Organic Carbon - Average	ND		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-205760			Analysis Date: 12/18/2013 0830			

Client: Waste Management

Job Number: 280-49982-1

General Chemistry

Client Sample ID: MW-36A

Lab Sample ID: 280-49982-3

Date Sampled: 12/04/2013 1520

Client Matrix: Water

Date Received: 12/05/2013 1030

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	1.3		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205826			Analysis Date: 12/17/2013 2318			
Sulfate	2.2		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205826			Analysis Date: 12/17/2013 2318			
Ammonia (as N)	ND		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-205837			Analysis Date: 12/18/2013 1533			
Nitrate as N	1.0		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206107			Analysis Date: 12/20/2013 1013			
Alkalinity, Total (As CaCO3)	63		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204292			Analysis Date: 12/06/2013 1848			
Alkalinity, Bicarbonate (As CaCO3)	63		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204292			Analysis Date: 12/06/2013 1848			
Total Dissolved Solids (TDS)	100		mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-204597			Analysis Date: 12/10/2013 0936			
Total Suspended Solids	ND		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-204551			Analysis Date: 12/10/2013 0750			
Total Organic Carbon - Average	ND		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-205760			Analysis Date: 12/18/2013 0845			

Client: Waste Management

Job Number: 280-49982-1

General Chemistry

Client Sample ID: MW-15R

Lab Sample ID: 280-49982-4

Date Sampled: 12/04/2013 1430

Client Matrix: Water

Date Received: 12/05/2013 1030

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	2.6		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205826		Analysis Date: 12/18/2013 0102				
Sulfate	4.8		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205826		Analysis Date: 12/18/2013 0102				
Ammonia (as N)	ND		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-205837		Analysis Date: 12/18/2013 1535				
Nitrate as N	0.16		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206107		Analysis Date: 12/20/2013 1013				
Alkalinity, Total (As CaCO3)	94		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204292		Analysis Date: 12/06/2013 1856				
Alkalinity, Bicarbonate (As CaCO3)	94		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204292		Analysis Date: 12/06/2013 1856				
Total Dissolved Solids (TDS)	110		mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-204627		Analysis Date: 12/10/2013 1116				
Total Suspended Solids	ND		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-204551		Analysis Date: 12/10/2013 0750				
Total Organic Carbon - Average	ND		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-205760		Analysis Date: 12/18/2013 0904				

Client: Waste Management

Job Number: 280-49982-1

General Chemistry

Client Sample ID: MW-24

Lab Sample ID: 280-49982-5

Date Sampled: 12/04/2013 1153

Client Matrix: Water

Date Received: 12/05/2013 1030

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	3.0		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205826		Analysis Date: 12/18/2013 0119				
Sulfate	4.2		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205826		Analysis Date: 12/18/2013 0119				
Ammonia (as N)	ND		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-205837		Analysis Date: 12/18/2013 1538				
Nitrate as N	0.27		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206322		Analysis Date: 12/05/2013 1249				
Alkalinity, Total (As CaCO3)	66		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204292		Analysis Date: 12/06/2013 1903				
Alkalinity, Bicarbonate (As CaCO3)	66		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204292		Analysis Date: 12/06/2013 1903				
Total Dissolved Solids (TDS)	96		mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-204627		Analysis Date: 12/10/2013 1116				
Total Suspended Solids	4.8		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-204551		Analysis Date: 12/10/2013 0750				
Total Organic Carbon - Average	ND		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-205494		Analysis Date: 12/13/2013 0112				

Client: Waste Management

Job Number: 280-49982-1

General Chemistry

Client Sample ID: DUP2

Lab Sample ID: 280-49982-6FD

Date Sampled: 12/04/2013 1320

Client Matrix: Water

Date Received: 12/05/2013 1030

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	2.1		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205826		Analysis Date: 12/18/2013 0137				
Sulfate	4.0		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-205826		Analysis Date: 12/18/2013 0137				
Ammonia (as N)	0.050		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-205837		Analysis Date: 12/18/2013 1540				
Nitrate as N	ND		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206107		Analysis Date: 12/20/2013 1013				
Alkalinity, Total (As CaCO3)	100		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204292		Analysis Date: 12/06/2013 1910				
Alkalinity, Bicarbonate (As CaCO3)	100		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204292		Analysis Date: 12/06/2013 1910				
Total Dissolved Solids (TDS)	160		mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-204627		Analysis Date: 12/10/2013 1116				
Total Suspended Solids	ND		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-204551		Analysis Date: 12/10/2013 0750				
Total Organic Carbon - Average	ND		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-205494		Analysis Date: 12/13/2013 0127				

## DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-49982-1

Lab Section	Qualifier	Description
GC/MS VOA	F	MS/MSD Recovery and/or RPD 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.
	X	Surrogate is outside control limits
Metals	^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
General Chemistry	F	MS/MSD Recovery and/or RPD exceeds the control limits

# QUALITY CONTROL RESULTS



## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Analysis Batch:480-156944</b>					
LCS 480-156944/5	Lab Control Sample	T	Water	8260C	
MB 480-156944/7	Method Blank	T	Water	8260C	
280-49982-1	MW-20	T	Water	8260C	
280-49982-2	MW-23A	T	Water	8260C	
280-49982-3	MW-36A	T	Water	8260C	
280-49982-4	MW-15R	T	Water	8260C	
280-49982-5	MW-24	T	Water	8260C	
280-49982-6FD	DUP2	T	Water	8260C	
280-49982-7TB	TRIP BLANK	T	Water	8260C	
480-51376-E-15 MS	Matrix Spike	T	Water	8260C	
480-51376-E-15 MSD	Matrix Spike Duplicate	T	Water	8260C	
<b>Analysis Batch:480-157025</b>					
LCS 480-157025/5	Lab Control Sample	T	Water	8260C SIM	
LCSD 480-157025/6	Lab Control Sample Duplicate	T	Water	8260C SIM	
MB 480-157025/7	Method Blank	T	Water	8260C SIM	
280-49836-B-1 MS	Matrix Spike	T	Water	8260C SIM	
280-49836-B-1 MSD	Matrix Spike Duplicate	T	Water	8260C SIM	
280-49982-1	MW-20	T	Water	8260C SIM	
280-49982-2	MW-23A	T	Water	8260C SIM	
280-49982-3	MW-36A	T	Water	8260C SIM	
280-49982-4	MW-15R	T	Water	8260C SIM	
280-49982-5	MW-24	T	Water	8260C SIM	
280-49982-6FD	DUP2	T	Water	8260C SIM	
280-49982-7TB	TRIP BLANK	T	Water	8260C SIM	

**Report Basis**

T = Total

## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
<b>Metals</b>					
<b>Prep Batch: 280-204075</b>					
LCS 280-204075/2-A	Lab Control Sample	R	Water	3005A	
MB 280-204075/1-A	Method Blank	R	Water	3005A	
280-49980-C-1-B MS	Matrix Spike	R	Water	3005A	
280-49980-C-1-C MSD	Matrix Spike Duplicate	R	Water	3005A	
280-49982-1	MW-20	R	Water	3005A	
280-49982-2	MW-23A	R	Water	3005A	
280-49982-3	MW-36A	R	Water	3005A	
280-49982-4	MW-15R	R	Water	3005A	
280-49982-5	MW-24	R	Water	3005A	
280-49982-6FD	DUP2	R	Water	3005A	
<b>Prep Batch: 280-204077</b>					
LCS 280-204077/2-A	Lab Control Sample	R	Water	3005A	
MB 280-204077/1-A	Method Blank	R	Water	3005A	
280-49982-1	MW-20	R	Water	3005A	
280-49982-1MS	Matrix Spike	R	Water	3005A	
280-49982-1MSD	Matrix Spike Duplicate	R	Water	3005A	
280-49982-2	MW-23A	R	Water	3005A	
280-49982-3	MW-36A	R	Water	3005A	
280-49982-4	MW-15R	R	Water	3005A	
280-49982-5	MW-24	R	Water	3005A	
280-49982-6FD	DUP2	R	Water	3005A	
<b>Prep Batch: 280-204080</b>					
LCS 280-204080/2-A	Lab Control Sample	R	Water	3005A	
MB 280-204080/1-A	Method Blank	R	Water	3005A	
280-49971-C-1-B MS	Matrix Spike	D	Water	3005A	
280-49971-C-1-C MSD	Matrix Spike Duplicate	D	Water	3005A	
280-49982-1	MW-20	D	Water	3005A	
280-49982-2	MW-23A	D	Water	3005A	
280-49982-3	MW-36A	D	Water	3005A	
280-49982-4	MW-15R	D	Water	3005A	
280-49982-5	MW-24	D	Water	3005A	
280-49982-6FD	DUP2	D	Water	3005A	

## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
<b>Metals</b>					
<b>Prep Batch: 280-204159</b>					
LCS 280-204159/2-A	Lab Control Sample	R	Water	3005A	
MB 280-204159/1-A	Method Blank	R	Water	3005A	
280-49969-L-1-E MS	Matrix Spike	D	Water	3005A	
280-49969-L-1-F MSD	Matrix Spike Duplicate	D	Water	3005A	
280-49982-1	MW-20	D	Water	3005A	
280-49982-2	MW-23A	D	Water	3005A	
280-49982-3	MW-36A	D	Water	3005A	
280-49982-4	MW-15R	D	Water	3005A	
280-49982-5	MW-24	D	Water	3005A	
280-49982-6FD	DUP2	D	Water	3005A	
<b>Analysis Batch:280-204391</b>					
LCS 280-204080/2-A	Lab Control Sample	R	Water	6010B	280-204080
MB 280-204080/1-A	Method Blank	R	Water	6010B	280-204080
280-49971-C-1-B MS	Matrix Spike	D	Water	6010B	280-204080
280-49971-C-1-C MSD	Matrix Spike Duplicate	D	Water	6010B	280-204080
280-49982-1	MW-20	D	Water	6010B	280-204080
280-49982-2	MW-23A	D	Water	6010B	280-204080
280-49982-3	MW-36A	D	Water	6010B	280-204080
280-49982-4	MW-15R	D	Water	6010B	280-204080
280-49982-5	MW-24	D	Water	6010B	280-204080
280-49982-6FD	DUP2	D	Water	6010B	280-204080
<b>Analysis Batch:280-204553</b>					
LCS 280-204077/2-A	Lab Control Sample	R	Water	6020	280-204077
MB 280-204077/1-A	Method Blank	R	Water	6020	280-204077
LCS 280-204159/2-A	Lab Control Sample	R	Water	6020	280-204159
MB 280-204159/1-A	Method Blank	R	Water	6020	280-204159
280-49969-L-1-E MS	Matrix Spike	D	Water	6020	280-204159
280-49969-L-1-F MSD	Matrix Spike Duplicate	D	Water	6020	280-204159
280-49982-1	MW-20	R	Water	6020	280-204077
280-49982-1MS	Matrix Spike	R	Water	6020	280-204077
280-49982-1MSD	Matrix Spike Duplicate	R	Water	6020	280-204077
280-49982-2	MW-23A	R	Water	6020	280-204077
280-49982-3	MW-36A	R	Water	6020	280-204077
280-49982-4	MW-15R	R	Water	6020	280-204077
280-49982-5	MW-24	R	Water	6020	280-204077
280-49982-6FD	DUP2	R	Water	6020	280-204077

## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Analysis Batch:280-204595</b>					
LCS 280-204075/2-A	Lab Control Sample	R	Water	6010B	280-204075
MB 280-204075/1-A	Method Blank	R	Water	6010B	280-204075
280-49980-C-1-B MS	Matrix Spike	R	Water	6010B	280-204075
280-49980-C-1-C MSD	Matrix Spike Duplicate	R	Water	6010B	280-204075
280-49982-1	MW-20	R	Water	6010B	280-204075
280-49982-2	MW-23A	R	Water	6010B	280-204075
280-49982-3	MW-36A	R	Water	6010B	280-204075
280-49982-4	MW-15R	R	Water	6010B	280-204075
280-49982-5	MW-24	R	Water	6010B	280-204075
280-49982-6FD	DUP2	R	Water	6010B	280-204075
<b>Analysis Batch:280-204803</b>					
280-49982-1	MW-20	D	Water	6020	280-204159
280-49982-2	MW-23A	D	Water	6020	280-204159
280-49982-3	MW-36A	D	Water	6020	280-204159
280-49982-4	MW-15R	D	Water	6020	280-204159
280-49982-5	MW-24	D	Water	6020	280-204159
280-49982-6FD	DUP2	D	Water	6020	280-204159

**Report Basis**

D = Dissolved

R = Total Recoverable

## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-204292</b>					
LCS 280-204292/4	Lab Control Sample	T	Water	SM 2320B	
LCSD 280-204292/5	Lab Control Sample Duplicate	T	Water	SM 2320B	
MB 280-204292/6	Method Blank	T	Water	SM 2320B	
280-49982-1	MW-20	T	Water	SM 2320B	
280-49982-1DU	Duplicate	T	Water	SM 2320B	
280-49982-2	MW-23A	T	Water	SM 2320B	
280-49982-3	MW-36A	T	Water	SM 2320B	
280-49982-4	MW-15R	T	Water	SM 2320B	
280-49982-5	MW-24	T	Water	SM 2320B	
280-49982-6FD	DUP2	T	Water	SM 2320B	
<b>Analysis Batch:280-204551</b>					
LCS 280-204551/2	Lab Control Sample	T	Water	SM 2540D	
LCSD 280-204551/3	Lab Control Sample Duplicate	T	Water	SM 2540D	
MB 280-204551/1	Method Blank	T	Water	SM 2540D	
280-49982-1	MW-20	T	Water	SM 2540D	
280-49982-1DU	Duplicate	T	Water	SM 2540D	
280-49982-2	MW-23A	T	Water	SM 2540D	
280-49982-3	MW-36A	T	Water	SM 2540D	
280-49982-4	MW-15R	T	Water	SM 2540D	
280-49982-5	MW-24	T	Water	SM 2540D	
280-49982-6FD	DUP2	T	Water	SM 2540D	
<b>Analysis Batch:280-204597</b>					
LCS 280-204597/2	Lab Control Sample	T	Water	SM 2540C	
LCSD 280-204597/3	Lab Control Sample Duplicate	T	Water	SM 2540C	
MB 280-204597/1	Method Blank	T	Water	SM 2540C	
280-49937-A-1 DU	Duplicate	T	Water	SM 2540C	
280-49982-1	MW-20	T	Water	SM 2540C	
280-49982-2	MW-23A	T	Water	SM 2540C	
280-49982-3	MW-36A	T	Water	SM 2540C	
<b>Analysis Batch:280-204627</b>					
LCS 280-204627/2	Lab Control Sample	T	Water	SM 2540C	
LCSD 280-204627/3	Lab Control Sample Duplicate	T	Water	SM 2540C	
MB 280-204627/1	Method Blank	T	Water	SM 2540C	
280-49982-4	MW-15R	T	Water	SM 2540C	
280-49982-5	MW-24	T	Water	SM 2540C	
280-49982-6FD	DUP2	T	Water	SM 2540C	
280-50048-A-1 DU	Duplicate	T	Water	SM 2540C	

## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
<b>General Chemistry</b>					
<b>Analysis Batch:280-205494</b>					
LCS 280-205494/3	Lab Control Sample	T	Water	SM 5310B	
LCSD 280-205494/4	Lab Control Sample Duplicate	T	Water	SM 5310B	
MB 280-205494/5	Method Blank	T	Water	SM 5310B	
280-49982-5	MW-24	T	Water	SM 5310B	
280-49982-6FD	DUP2	T	Water	SM 5310B	
280-50070-E-4 MS	Matrix Spike	T	Water	SM 5310B	
280-50070-E-4 MSD	Matrix Spike Duplicate	T	Water	SM 5310B	
<b>Analysis Batch:280-205760</b>					
LCS 280-205760/35	Lab Control Sample	T	Water	SM 5310B	
LCSD 280-205760/36	Lab Control Sample Duplicate	T	Water	SM 5310B	
MB 280-205760/37	Method Blank	T	Water	SM 5310B	
280-49982-1	MW-20	T	Water	SM 5310B	
280-49982-1MS	Matrix Spike	T	Water	SM 5310B	
280-49982-1MSD	Matrix Spike Duplicate	T	Water	SM 5310B	
280-49982-2	MW-23A	T	Water	SM 5310B	
280-49982-3	MW-36A	T	Water	SM 5310B	
280-49982-4	MW-15R	T	Water	SM 5310B	
<b>Analysis Batch:280-205826</b>					
LCS 280-205826/4	Lab Control Sample	T	Water	300.0	
LCSD 280-205826/5	Lab Control Sample Duplicate	T	Water	300.0	
MB 280-205826/6	Method Blank	T	Water	300.0	
280-49982-1	MW-20	T	Water	300.0	
280-49982-2	MW-23A	T	Water	300.0	
280-49982-3	MW-36A	T	Water	300.0	
280-49982-3DU	Duplicate	T	Water	300.0	
280-49982-3MS	Matrix Spike	T	Water	300.0	
280-49982-3MSD	Matrix Spike Duplicate	T	Water	300.0	
280-49982-4	MW-15R	T	Water	300.0	
280-49982-5	MW-24	T	Water	300.0	
280-49982-6FD	DUP2	T	Water	300.0	
<b>Analysis Batch:280-205837</b>					
LCS 280-205837/58	Lab Control Sample	T	Water	350.1	
LCSD 280-205837/59	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-205837/60	Method Blank	T	Water	350.1	
280-49982-1	MW-20	T	Water	350.1	
280-49982-2	MW-23A	T	Water	350.1	
280-49982-3	MW-36A	T	Water	350.1	
280-49982-4	MW-15R	T	Water	350.1	
280-49982-5	MW-24	T	Water	350.1	
280-49982-6FD	DUP2	T	Water	350.1	
280-50070-F-10 MS	Matrix Spike	T	Water	350.1	
280-50070-F-10 MSD	Matrix Spike Duplicate	T	Water	350.1	

TestAmerica Denver

## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-206107</b>					
MB 280-206107/1	Method Blank	T	Water	353.2	
280-49982-1	MW-20	T	Water	353.2	
280-49982-2	MW-23A	T	Water	353.2	
280-49982-3	MW-36A	T	Water	353.2	
280-49982-4	MW-15R	T	Water	353.2	
280-49982-6FD	DUP2	T	Water	353.2	
<b>Analysis Batch:280-206322</b>					
MB 280-206322/2	Method Blank	T	Water	353.2	
280-49982-5	MW-24	T	Water	353.2	

#### Report Basis

T = Total

Client: Waste Management

Job Number: 280-49982-1

**Surrogate Recovery Report**

**8260C Volatile Organic Compounds by GC/MS**

**Client Matrix: Water**

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec
280-49982-1	MW-20	100	99	101
280-49982-2	MW-23A	99	98	102
280-49982-3	MW-36A	100	99	101
280-49982-4	MW-15R	99	98	102
280-49982-5	MW-24	100	100	103
280-49982-6	DUP2	102	99	102
280-49982-7	TRIP BLANK	102	99	103
MB 480-156944/7		101	101	104
LCS 480-156944/5		102	103	100
480-51376-E-15 MS		101	102	99
480-51376-E-15 MSD		103	101	100

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	66-137
BFB = 4-Bromofluorobenzene (Surr)	73-120
TOL = Toluene-d8 (Surr)	71-126



Client: Waste Management

Job Number: 280-49982-1

**Surrogate Recovery Report**

**8260C SIM Volatile Organic Compounds (GC/MS)**

**Client Matrix: Water**

Lab Sample ID	Client Sample ID	DBFM %Rec	TBA %Rec
280-49982-1	MW-20	131	131
280-49982-2	MW-23A	138	138
280-49982-3	MW-36A	141	133
280-49982-4	MW-15R	142	137
280-49982-5	MW-24	143	156X
280-49982-6	DUP2	149	141
280-49982-7	TRIP BLANK	151X	138
MB 480-157025/7		122	128
LCS 480-157025/5		120	125
LCSD 480-157025/6		120	124
280-49836-B-1 MS		136	141
280-49836-B-1 MSD		133	127

Surrogate	Acceptance Limits
DBFM = Dibromofluoromethane (Surr)	50-150
TBA = TBA-d9 (Surr)	50-150

## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

**Method Blank - Batch: 480-156944**

**Method: 8260C  
Preparation: 5030C**

Lab Sample ID: MB 480-156944/7  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1115  
 Prep Date: 12/11/2013 1115  
 Leach Date: N/A

Analysis Batch: 480-156944  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973S  
 Lab File ID: S33178.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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-49982-1

**Method Blank - Batch: 480-156944**

**Method: 8260C  
Preparation: 5030C**

Lab Sample ID: MB 480-156944/7  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1115  
 Prep Date: 12/11/2013 1115  
 Leach Date: N/A

Analysis Batch: 480-156944  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973S  
 Lab File ID: S33178.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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-49982-1

**Method Blank - Batch: 480-156944**

**Method: 8260C  
Preparation: 5030C**

Lab Sample ID: MB 480-156944/7  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1115  
 Prep Date: 12/11/2013 1115  
 Leach Date: N/A

Analysis Batch: 480-156944  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973S  
 Lab File ID: S33178.D  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

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)	101	66 - 137
4-Bromofluorobenzene (Surr)	101	73 - 120
Toluene-d8 (Surr)	104	71 - 126

**Method Blank TICs- Batch: 480-156944**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qual
67-72-1	Hexachloroethane TIC	0.00	ND	

## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

**Lab Control Sample - Batch: 480-156944**

**Method: 8260C**

**Preparation: 5030C**

Lab Sample ID: LCS 480-156944/5	Analysis Batch: 480-156944	Instrument ID: HP5973S
Client Matrix: Water	Prep Batch: N/A	Lab File ID: S33176.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/11/2013 1032	Units: ug/L	Final Weight/Volume: 5 mL
Prep Date: 12/11/2013 1032		
Leach Date: N/A		

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethane	25.0	24.0	96	71 - 129	
1,1-Dichloroethene	25.0	22.7	91	58 - 121	
1,2,4-Trimethylbenzene	25.0	24.2	97	76 - 121	
1,2-Dichlorobenzene	25.0	24.1	96	80 - 124	
1,2-Dichloroethane	25.0	22.9	92	75 - 127	
Benzene	25.0	24.0	96	71 - 124	
Chlorobenzene	25.0	23.5	94	72 - 120	
cis-1,2-Dichloroethene	25.0	23.9	95	74 - 124	
Ethylbenzene	25.0	23.7	95	77 - 123	
Methyl tert-butyl ether	25.0	23.4	94	64 - 127	
m-Xylene & p-Xylene	50.0	47.5	95	76 - 122	
o-Xylene	25.0	23.7	95	76 - 122	
Tetrachloroethene	25.0	23.7	95	74 - 122	
Toluene	25.0	23.4	94	80 - 122	
trans-1,2-Dichloroethene	25.0	23.8	95	73 - 127	
Trichloroethene	25.0	24.1	96	74 - 123	
Surrogate		% Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		102		66 - 137	
4-Bromofluorobenzene (Surr)		103		73 - 120	
Toluene-d8 (Surr)		100		71 - 126	

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-156944**

**Method: 8260C  
Preparation: 5030C**

MS Lab Sample ID: 480-51376-E-15 MS	Analysis Batch: 480-156944	Instrument ID: HP5973S
Client Matrix: Water	Prep Batch: N/A	Lab File ID: S33200.D
Dilution: 200	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/11/2013 1922		Final Weight/Volume: 5 mL
Prep Date: 12/11/2013 1922		
Leach Date: N/A		

MSD Lab Sample ID: 480-51376-E-15 MSD	Analysis Batch: 480-156944	Instrument ID: HP5973S
Client Matrix: Water	Prep Batch: N/A	Lab File ID: S33201.D
Dilution: 200	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/11/2013 1944		Final Weight/Volume: 5 mL
Prep Date: 12/11/2013 1944		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
1,1-Dichloroethane	91	93	71 - 129	2	20		
1,1-Dichloroethene	88	91	58 - 121	4	16		
1,2-Dichlorobenzene	96	96	80 - 124	1	20		
1,2-Dichloroethane	88	90	75 - 127	2	20		
Benzene	93	96	71 - 124	3	13		
Chlorobenzene	91	92	72 - 120	2	25		
cis-1,2-Dichloroethene	92	95	74 - 124	3	15		
Ethylbenzene	91	93	77 - 123	2	15		
Methyl tert-butyl ether	91	91	64 - 127	0	37		
m-Xylene & p-Xylene	91	92	76 - 122	1	16		
o-Xylene	91	93	76 - 122	2	16		
Tetrachloroethene	92	95	74 - 122	3	20		
Toluene	90	92	80 - 122	3	15		
trans-1,2-Dichloroethene	88	93	73 - 127	5	20		
Trichloroethene	61	75	74 - 123	4	16	F	
Surrogate		MS % Rec	MSD % Rec			Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		101	103			66 - 137	
4-Bromofluorobenzene (Surr)		102	101			73 - 120	
Toluene-d8 (Surr)		99	100			71 - 126	

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-156944**

**Method: 8260C  
Preparation: 5030C**

MS Lab Sample ID: 480-51376-E-15 MS      Units: ug/L  
 Client Matrix: Water  
 Dilution: 200  
 Analysis Date: 12/11/2013 1922  
 Prep Date: 12/11/2013 1922  
 Leach Date: N/A

MSD Lab Sample ID: 480-51376-E-15 MSD  
 Client Matrix: Water  
 Dilution: 200  
 Analysis Date: 12/11/2013 1944  
 Prep Date: 12/11/2013 1944  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
1,1-Dichloroethane	360	5000	5000	4900	5010
1,1-Dichloroethene	ND	5000	5000	4380	4530
1,2-Dichlorobenzene	ND	5000	5000	4820	4780
1,2-Dichloroethane	ND	5000	5000	4410	4510
Benzene	ND	5000	5000	4630	4780
Chlorobenzene	ND	5000	5000	4530	4620
cis-1,2-Dichloroethene	740	5000	5000	5330	5500
Ethylbenzene	ND	5000	5000	4560	4630
Methyl tert-butyl ether	ND	5000	5000	4560	4560
m-Xylene & p-Xylene	ND	10000	10000	9080	9200
o-Xylene	ND	5000	5000	4550	4650
Tetrachloroethene	ND	5000	5000	4600	4730
Toluene	ND	5000	5000	4490	4620
trans-1,2-Dichloroethene	ND	5000	5000	4420	4660
Trichloroethene	12000	5000	5000	15400	F 16100

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Method Blank - Batch: 480-157025**

**Method: 8260C SIM  
Preparation: 5030C**

Lab Sample ID:	MB 480-157025/7	Analysis Batch:	480-157025	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J6780.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 1501	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 1501				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Vinyl chloride	ND		0.0040	0.020
Surrogate	% Rec		Acceptance Limits	
Dibromofluoromethane (Surr)	122		50 - 150	
TBA-d9 (Surr)	128		50 - 150	

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 480-157025**

**Method: 8260C SIM  
Preparation: 5030C**

LCS Lab Sample ID:	LCS 480-157025/5	Analysis Batch:	480-157025	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J6778.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 1412	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 1412				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 480-157025/6	Analysis Batch:	480-157025	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J6779.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/11/2013 1436	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/11/2013 1436				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Vinyl chloride	107	102	50 - 150	5	20		
Surrogate	LCS % Rec		LCSD % Rec	Acceptance Limits			
Dibromofluoromethane (Surr)	120		120			50 - 150	
TBA-d9 (Surr)	125		124			50 - 150	



**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 480-157025**

**Method: 8260C SIM  
Preparation: 5030C**

LCS Lab Sample ID: LCS 480-157025/5      Units: ug/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1412  
 Prep Date: 12/11/2013 1412  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 480-157025/6  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1436  
 Prep Date: 12/11/2013 1436  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Vinyl chloride	0.200	0.200	0.214	0.204

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-157025**

**Method: 8260C SIM  
Preparation: 5030C**

MS Lab Sample ID: 280-49836-B-1 MS  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1927  
 Prep Date: 12/11/2013 1927  
 Leach Date: N/A

Analysis Batch: 480-157025  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: HP5973J  
 Lab File ID: J6791.D  
 Initial Weight/Volume: 25 mL  
 Final Weight/Volume: 25 mL

MSD Lab Sample ID: 280-49836-B-1 MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1951  
 Prep Date: 12/11/2013 1951  
 Leach Date: N/A

Analysis Batch: 480-157025  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: HP5973J  
 Lab File ID: J6792.D  
 Initial Weight/Volume: 25 mL  
 Final Weight/Volume: 25 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Vinyl chloride	118	119	50 - 150	1	20		
Surrogate		MS % Rec	MSD % Rec			Acceptance Limits	
Dibromofluoromethane (Surr)		136	133			50 - 150	
TBA-d9 (Surr)		141	127			50 - 150	

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-157025**

**Method: 8260C SIM  
Preparation: 5030C**

MS Lab Sample ID: 280-49836-B-1 MS      Units: ug/L  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/11/2013 1927  
Prep Date: 12/11/2013 1927  
Leach Date: N/A

MSD Lab Sample ID: 280-49836-B-1 MSD  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/11/2013 1951  
Prep Date: 12/11/2013 1951  
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	0.237	0.239

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Method Blank - Batch: 280-204075**

Lab Sample ID: MB 280-204075/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/10/2013 0255  
 Prep Date: 12/09/2013 0730  
 Leach Date: N/A

Analysis Batch: 280-204595  
 Prep Batch: 280-204075  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26a07120913.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	ND		0.060	0.060

**Lab Control Sample - Batch: 280-204075**

Lab Sample ID: LCS 280-204075/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/10/2013 0258  
 Prep Date: 12/09/2013 0730  
 Leach Date: N/A

Analysis Batch: 280-204595  
 Prep Batch: 280-204075  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26a07120913.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cobalt, Total	0.500	0.515	103	89 - 111	
Iron, Total	1.00	1.01	101	89 - 115	

**Matrix Spike/  
 Matrix Spike Duplicate Recovery Report - Batch: 280-204075**

MS Lab Sample ID: 280-49980-C-1-B MS  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/10/2013 0305  
 Prep Date: 12/09/2013 0730  
 Leach Date: N/A

Analysis Batch: 280-204595  
 Prep Batch: 280-204075  
 Leach Batch: N/A

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26a07120913.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-49980-C-1-C MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/10/2013 0307  
 Prep Date: 12/09/2013 0730  
 Leach Date: N/A

Analysis Batch: 280-204595  
 Prep Batch: 280-204075  
 Leach Batch: N/A

Instrument ID: MT\_026  
 Lab File ID: 26a07120913.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Cobalt, Total	102	101	82 - 119	1	20		
Iron, Total	100	99	52 - 155	1	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-204075**

**Method: 6010B  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-49980-C-1-B MS      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/10/2013 0305  
 Prep Date: 12/09/2013 0730  
 Leach Date: N/A

MSD Lab Sample ID: 280-49980-C-1-C MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/10/2013 0307  
 Prep Date: 12/09/2013 0730  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Cobalt, Total	ND	0.500	0.500	0.512	0.507
Iron, Total	0.061	1.00	1.00	1.06	1.05

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Method Blank - Batch: 280-204080**

Lab Sample ID: MB 280-204080/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/08/2013 1434  
 Prep Date: 12/05/2013 1830  
 Leach Date: N/A

Analysis Batch: 280-204391  
 Prep Batch: 280-204080  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26A01120813.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Calcium, Dissolved	ND		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	ND		0.060	0.060
Magnesium, Dissolved	ND		0.050	0.050
Potassium, Dissolved	ND		1.0	1.0
Sodium, Dissolved	ND	^	1.0	1.0

**Lab Control Sample - Batch: 280-204080**

Lab Sample ID: LCS 280-204080/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/08/2013 1436  
 Prep Date: 12/05/2013 1830  
 Leach Date: N/A

Analysis Batch: 280-204391  
 Prep Batch: 280-204080  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26A01120813.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Calcium, Dissolved	50.0	50.6	101	90 - 111	
Cobalt, Dissolved	0.500	0.499	100	89 - 111	
Iron, Dissolved	1.00	1.02	102	89 - 115	
Magnesium, Dissolved	50.0	50.6	101	90 - 113	
Potassium, Dissolved	50.0	51.7	103	89 - 114	
Sodium, Dissolved	50.0	52.4	105	90 - 115	

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-204080**

**Method: 6010B  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID:	280-49971-C-1-B MS	Analysis Batch:	280-204391	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-204080	Lab File ID:	26A01120813.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 1443			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1830				
Leach Date:	N/A				

MSD Lab Sample ID:	280-49971-C-1-C MSD	Analysis Batch:	280-204391	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-204080	Lab File ID:	26A01120813.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/08/2013 1446			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1830				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Calcium, Dissolved	101	100	48 - 153	1	20		
Cobalt, Dissolved	100	100	82 - 119	0	20		
Iron, Dissolved	104	103	52 - 155	2	20		
Magnesium, Dissolved	101	100	62 - 146	0	20		
Potassium, Dissolved	106	105	76 - 132	1	20		
Sodium, Dissolved	101	100	70 - 203	0	20		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-204080**

**Method: 6010B  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID:	280-49971-C-1-B MS	Units:	mg/L	MSD Lab Sample ID:	280-49971-C-1-C MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/08/2013 1443			Analysis Date:	12/08/2013 1446
Prep Date:	12/05/2013 1830			Prep Date:	12/05/2013 1830
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	40	50.0	50.0	90.5	90.0
Cobalt, Dissolved	ND	0.500	0.500	0.498	0.499
Iron, Dissolved	ND	1.00	1.00	1.04	1.03
Magnesium, Dissolved	38	50.0	50.0	88.6	88.3
Potassium, Dissolved	3.1	50.0	50.0	55.9	55.4
Sodium, Dissolved	130	50.0	50.0	183	182

## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

**Method Blank - Batch: 280-204077**

Lab Sample ID: MB 280-204077/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/09/2013 1951  
 Prep Date: 12/05/2013 1815  
 Leach Date: N/A

Analysis Batch: 280-204553  
 Prep Batch: 280-204077  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_077  
 Lab File ID: 156\_BLK.d  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	ND		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Manganese, Total	ND		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Selenium, Total	ND		0.0010	0.0010
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	ND		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

**Lab Control Sample - Batch: 280-204077**

Lab Sample ID: LCS 280-204077/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/09/2013 1955  
 Prep Date: 12/05/2013 1815  
 Leach Date: N/A

Analysis Batch: 280-204553  
 Prep Batch: 280-204077  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_077  
 Lab File ID: 157\_LCS.d  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony, Total	0.0400	0.0370	93	85 - 115	
Barium, Total	0.0400	0.0397	99	85 - 118	
Beryllium, Total	0.0400	0.0416	104	80 - 125	
Cadmium, Total	0.0400	0.0415	104	85 - 115	
Chromium, Total	0.0400	0.0408	102	84 - 121	
Copper, Total	0.0400	0.0404	101	85 - 119	
Lead, Total	0.0400	0.0413	103	85 - 118	
Manganese, Total	0.0400	0.0406	102	85 - 117	
Nickel, Total	0.0400	0.0417	104	85 - 119	
Selenium, Total	0.0400	0.0409	102	77 - 122	
Silver, Total	0.0400	0.0409	102	85 - 115	
Thallium, Total	0.0400	0.0414	103	85 - 118	
Vanadium, Total	0.0400	0.0407	102	85 - 120	
Zinc, Total	0.0400	0.0395	99	83 - 122	

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-204077**

**Method: 6020  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-49982-1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/09/2013 2030  
Prep Date: 12/05/2013 1815  
Leach Date: N/A

Analysis Batch: 280-204553  
Prep Batch: 280-204077  
Leach Batch: N/A

Instrument ID: MT\_077  
Lab File ID: 167SMPL.d  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-49982-1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/09/2013 2034  
Prep Date: 12/05/2013 1815  
Leach Date: N/A

Analysis Batch: 280-204553  
Prep Batch: 280-204077  
Leach Batch: N/A

Instrument ID: MT\_077  
Lab File ID: 168SMPL.d  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Antimony, Total	93	94	85 - 115	1	20		
Barium, Total	102	100	85 - 118	1	20		
Beryllium, Total	104	109	80 - 125	5	20		
Cadmium, Total	102	99	85 - 115	3	20		
Chromium, Total	102	100	84 - 121	2	20		
Copper, Total	101	101	85 - 119	0	20		
Lead, Total	103	102	85 - 118	1	20		
Manganese, Total	120	90	85 - 117	5	20	4	4
Nickel, Total	105	105	85 - 119	0	20		
Selenium, Total	102	100	77 - 122	1	20		
Silver, Total	102	100	85 - 115	1	20		
Thallium, Total	103	102	85 - 118	1	20		
Vanadium, Total	107	107	85 - 120	0	20		
Zinc, Total	102	102	83 - 122	0	20		



**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-204077**

**Method: 6020  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-49982-1 Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/09/2013 2030  
 Prep Date: 12/05/2013 1815  
 Leach Date: N/A

MSD Lab Sample ID: 280-49982-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/09/2013 2034  
 Prep Date: 12/05/2013 1815  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Antimony, Total	ND	0.0400	0.0400	0.0372	0.0377
Barium, Total	0.012	0.0400	0.0400	0.0529	0.0522
Beryllium, Total	ND	0.0400	0.0400	0.0417	0.0436
Cadmium, Total	ND	0.0400	0.0400	0.0409	0.0396
Chromium, Total	ND	0.0400	0.0400	0.0406	0.0399
Copper, Total	ND	0.0400	0.0400	0.0403	0.0403
Lead, Total	ND	0.0400	0.0400	0.0412	0.0407
Manganese, Total	0.20	0.0400	0.0400	0.243 4	0.231 4
Nickel, Total	ND	0.0400	0.0400	0.0421	0.0420
Selenium, Total	ND	0.0400	0.0400	0.0406	0.0402
Silver, Total	ND	0.0400	0.0400	0.0407	0.0401
Thallium, Total	ND	0.0400	0.0400	0.0412	0.0409
Vanadium, Total	ND	0.0400	0.0400	0.0427	0.0427
Zinc, Total	ND	0.0400	0.0400	0.0408	0.0410

## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

**Method Blank - Batch: 280-204159**

Lab Sample ID: MB 280-204159/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/10/2013 0227  
 Prep Date: 12/09/2013 0730  
 Leach Date: N/A

Analysis Batch: 280-204553  
 Prep Batch: 280-204159  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_077  
 Lab File ID: 267\_BLK.d  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	ND		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND	^	0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	ND		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	ND		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

**Lab Control Sample - Batch: 280-204159**

Lab Sample ID: LCS 280-204159/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/10/2013 0230  
 Prep Date: 12/09/2013 0730  
 Leach Date: N/A

Analysis Batch: 280-204553  
 Prep Batch: 280-204159  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_077  
 Lab File ID: 268\_LCS.d  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony, Dissolved	0.0400	0.0377	94	85 - 115	
Barium, Dissolved	0.0400	0.0412	103	85 - 118	
Beryllium, Dissolved	0.0400	0.0436	109	80 - 125	
Cadmium, Dissolved	0.0400	0.0431	108	85 - 115	^
Chromium, Dissolved	0.0400	0.0421	105	84 - 121	
Copper, Dissolved	0.0400	0.0424	106	85 - 119	
Lead, Dissolved	0.0400	0.0438	110	85 - 118	
Manganese, Dissolved	0.0400	0.0434	108	85 - 117	
Nickel, Dissolved	0.0400	0.0422	105	85 - 119	
Selenium, Dissolved	0.0400	0.0411	103	77 - 122	
Silver, Dissolved	0.0400	0.0420	105	85 - 115	
Thallium, Dissolved	0.0400	0.0423	106	85 - 118	
Vanadium, Dissolved	0.0400	0.0410	102	85 - 120	
Zinc, Dissolved	0.0400	0.0420	105	83 - 122	

## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-204159**

**Method: 6020  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-49969-L-1-E MS  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/10/2013 0241  
Prep Date: 12/09/2013 0730  
Leach Date: N/A

Analysis Batch: 280-204553  
Prep Batch: 280-204159  
Leach Batch: N/A

Instrument ID: MT\_077  
Lab File ID: 271SMPL.d  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-49969-L-1-F MSD  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/10/2013 0244  
Prep Date: 12/09/2013 0730  
Leach Date: N/A

Analysis Batch: 280-204553  
Prep Batch: 280-204159  
Leach Batch: N/A

Instrument ID: MT\_077  
Lab File ID: 272SMPL.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	106	106	85 - 115	0	20		
Barium, Dissolved	106	106	85 - 118	0	20		
Beryllium, Dissolved	106	113	80 - 125	6	20		
Cadmium, Dissolved	106	106	85 - 115	0	20	^	^
Chromium, Dissolved	106	107	84 - 121	2	20		
Copper, Dissolved	104	104	85 - 119	1	20		
Lead, Dissolved	105	105	85 - 118	1	20		
Manganese, Dissolved	106	105	85 - 117	1	20		
Nickel, Dissolved	107	105	85 - 119	2	20		
Selenium, Dissolved	102	101	77 - 122	1	20		
Silver, Dissolved	102	101	85 - 115	1	20		
Thallium, Dissolved	103	103	85 - 118	0	20		
Vanadium, Dissolved	109	114	85 - 120	5	20		
Zinc, Dissolved	108	105	83 - 122	3	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-204159**

**Method: 6020  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-49969-L-1-E MS      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/10/2013 0241  
 Prep Date: 12/09/2013 0730  
 Leach Date: N/A

MSD Lab Sample ID: 280-49969-L-1-F MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/10/2013 0244  
 Prep Date: 12/09/2013 0730  
 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	0.0422	0.0423
Barium, Dissolved	0.0081	0.0400	0.0400	0.0504	0.0503
Beryllium, Dissolved	ND	0.0400	0.0400	0.0425	0.0452
Cadmium, Dissolved	ND	0.0400	0.0400	0.0425 ^	0.0425 ^
Chromium, Dissolved	ND	0.0400	0.0400	0.0422	0.0429
Copper, Dissolved	ND	0.0400	0.0400	0.0417	0.0414
Lead, Dissolved	ND	0.0400	0.0400	0.0421	0.0418
Manganese, Dissolved	0.057	0.0400	0.0400	0.0998	0.0992
Nickel, Dissolved	ND	0.0400	0.0400	0.0427	0.0418
Selenium, Dissolved	ND	0.0400	0.0400	0.0408	0.0406
Silver, Dissolved	ND	0.0400	0.0400	0.0409	0.0403
Thallium, Dissolved	ND	0.0400	0.0400	0.0414	0.0412
Vanadium, Dissolved	ND	0.0400	0.0400	0.0434	0.0458
Zinc, Dissolved	ND	0.0400	0.0400	0.0431	0.0419

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Method Blank - Batch: 280-205826**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	MB 280-205826/6	Analysis Batch:	280-205826	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:	
Analysis Date:	12/17/2013 1120	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Chloride	ND		1.0	1.0
Sulfate	ND		1.0	1.0

**Method Reporting Limit Check - Batch: 280-205826**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	MRL 280-205826/3	Analysis Batch:	280-205826	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:	
Analysis Date:	12/17/2013 1014	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	1.00	ND	90	50 - 150	
Sulfate	1.00	ND	66	50 - 150	

**Lab Control Sample/**

**Method: 300.0**  
**Preparation: N/A**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-205826**

LCS Lab Sample ID:	LCS 280-205826/4	Analysis Batch:	280-205826	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:	
Analysis Date:	12/17/2013 1031	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-205826/5	Analysis Batch:	280-205826	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:	
Analysis Date:	12/17/2013 1049	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Chloride	98	98	90 - 110	0	10		
Sulfate	98	98	90 - 110	0	10		

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-205826**

**Method: 300.0  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-205826/4 Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/17/2013 1031  
 Prep Date: N/A  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 280-205826/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/17/2013 1049  
 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	24.6	24.5
Sulfate	25.0	25.0	24.4	24.4

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205826**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 280-49982-3  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/17/2013 2353  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-205826  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: WC\_IC6  
 Lab File ID: 137.TXT  
 Initial Weight/Volume:  
 Final Weight/Volume: 5 mL

MSD Lab Sample ID: 280-49982-3  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/18/2013 0045  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-205826  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: WC\_IC6  
 Lab File ID: 140.TXT  
 Initial Weight/Volume:  
 Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chloride	103	98	80 - 120	5	20		
Sulfate	101	97	80 - 120	4	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205826**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 280-49982-3                      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/17/2013 2353  
 Prep Date: N/A  
 Leach Date: N/A

MSD Lab Sample ID: 280-49982-3  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/18/2013 0045  
 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	1.3	25.0	25.0	27.0	25.7
Sulfate	2.2	25.0	25.0	27.4	26.4

**Duplicate - Batch: 280-205826**

**Method: 300.0  
Preparation: N/A**

Lab Sample ID: 280-49982-3  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/17/2013 2336  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-205826  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_IC6  
 Lab File ID: 136.TXT  
 Initial Weight/Volume:  
 Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Chloride	1.3	1.33	0	15	
Sulfate	2.2	2.27	2	15	

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Method Blank - Batch: 280-205837**

Lab Sample ID: MB 280-205837/60  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/18/2013 1423  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-205837  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

**Method: 350.1  
 Preparation: N/A**

Instrument ID: WC\_Alph 3  
 Lab File ID: E:\FLOW\_4\121813.RST  
 Initial Weight/Volume: 10 mL  
 Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL	RL
Ammonia (as N)	ND		0.030	0.030

**Lab Control Sample/  
 Lab Control Sample Duplicate Recovery Report - Batch: 280-205837**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-205837/58  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/18/2013 1418  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-205837  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 3  
 Lab File ID: E:\FLOW\_4\121813.RST  
 Initial Weight/Volume: 100 mL  
 Final Weight/Volume: 100 mL

LCSD Lab Sample ID: LCSD 280-205837/59  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/18/2013 1421  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-205837  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 3  
 Lab File ID: E:\FLOW\_4\121813.RST  
 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)	103	103	90 - 110	0	10		

**Laboratory Control/  
 Laboratory Duplicate Data Report - Batch: 280-205837**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-205837/58  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/18/2013 1418  
 Prep Date: N/A  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-205837/59  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/18/2013 1421  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia (as N)	2.50	2.50	2.57	2.57



**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205837**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID:	280-50070-F-10 MS	Analysis Batch:	280-205837	Instrument ID:	WC_Alph 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\121813.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	12/18/2013 1524			Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50070-F-10 MSD	Analysis Batch:	280-205837	Instrument ID:	WC_Alph 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\121813.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	12/18/2013 1526			Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Ammonia (as N)	112	113	90 - 110	0	10	F	F

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205837**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID:	280-50070-F-10 MS	Units:	mg/L	MSD Lab Sample ID:	280-50070-F-10 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/18/2013 1524			Analysis Date:	12/18/2013 1526
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)	0.35	1.00	1.00	1.48 F	1.48 F

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Method Blank - Batch: 280-206107**

**Method: 353.2  
Preparation: N/A**

Lab Sample ID: MB 280-206107/1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/20/2013 1009  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-206107  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: No Equipment Assigned  
Lab File ID: N/A  
Initial Weight/Volume:  
Final Weight/Volume:

Analyte	Result	Qual	RL	RL
Nitrate as N	ND		0.050	0.050

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Method Blank - Batch: 280-206322**

**Method: 353.2  
Preparation: N/A**

Lab Sample ID: MB 280-206322/2  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/05/2013 1249  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-206322  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: No Equipment Assigned  
Lab File ID: N/A  
Initial Weight/Volume:  
Final Weight/Volume:

Analyte	Result	Qual	RL	RL
Nitrate as N	ND		0.050	0.050

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Method Blank - Batch: 280-204292**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID: MB 280-204292/6  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/06/2013 1818  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-204292  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_AT2  
 Lab File ID: 120613a.txt  
 Initial Weight/Volume:  
 Final Weight/Volume:

Analyte	Result	Qual	RL	RL
Alkalinity, Total (As CaCO3)	ND		5.0	5.0
Alkalinity, Bicarbonate (As CaCO3)	ND		5.0	5.0

**Lab Control Sample - Batch: 280-204292**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID: LCS 280-204292/4  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/06/2013 1800  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-204292  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_AT2  
 Lab File ID: 120613a.txt  
 Initial Weight/Volume:  
 Final Weight/Volume:

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Alkalinity, Total (As CaCO3)	200	208	104	90 - 110	

**Duplicate - Batch: 280-204292**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID: 280-49982-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/06/2013 1833  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-204292  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_AT2  
 Lab File ID: 120613a.txt  
 Initial Weight/Volume:  
 Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Alkalinity, Total (As CaCO3)	140	146	0.5	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Method Blank - Batch: 280-204597**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	MB 280-204597/1	Analysis Batch:	280-204597	Instrument ID:	No Equipment Assigned
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:	12/10/2013 0936	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Dissolved Solids (TDS)	ND		5.0	5.0

**Lab Control Sample/**

**Method: SM 2540C**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-204597**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-204597/2	Analysis Batch:	280-204597	Instrument ID:	No Equipment Assigned
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:	12/10/2013 0936	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-204597/3	Analysis Batch:	280-204597	Instrument ID:	No Equipment Assigned
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:	12/10/2013 0936	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)	100	100	86 - 110	0	20		

**Laboratory Control/**

**Method: SM 2540C**

**Laboratory Duplicate Data Report - Batch: 280-204597**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-204597/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-204597/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/10/2013 0936			Analysis Date:	12/10/2013 0936
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	499	498

## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

**Duplicate - Batch: 280-204597**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	280-49937-A-1 DU	Analysis Batch:	280-204597	Instrument ID:	No Equipment Assigned
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:	12/10/2013 0936	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)	500	497	0.2	10	

## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

**Method Blank - Batch: 280-204627**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	MB 280-204627/1	Analysis Batch:	280-204627	Instrument ID:	No Equipment Assigned
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:	12/10/2013 1116	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Dissolved Solids (TDS)	ND		5.0	5.0

**Lab Control Sample/**

**Method: SM 2540C**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-204627**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-204627/2	Analysis Batch:	280-204627	Instrument ID:	No Equipment Assigned
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:	12/10/2013 1116	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-204627/3	Analysis Batch:	280-204627	Instrument ID:	No Equipment Assigned
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:	12/10/2013 1116	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	<u>% Rec.</u>		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Dissolved Solids (TDS)	99	99	86 - 110	0	20		

**Laboratory Control/**

**Method: SM 2540C**

**Laboratory Duplicate Data Report - Batch: 280-204627**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-204627/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-204627/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/10/2013 1116			Analysis Date:	12/10/2013 1116
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	496	494

## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

**Duplicate - Batch: 280-204627**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	280-50048-A-1 DU	Analysis Batch:	280-204627	Instrument ID:	No Equipment Assigned
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:	12/10/2013 1116	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)	350	346	0.6	10	



**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Method Blank - Batch: 280-204551**

**Method: SM 2540D**

**Preparation: N/A**

Lab Sample ID:	MB 280-204551/1	Analysis Batch:	280-204551	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/10/2013 0750	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Suspended Solids	ND		4.0	4.0

**Lab Control Sample/**

**Method: SM 2540D**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-204551**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-204551/2	Analysis Batch:	280-204551	Instrument ID:	No Equipment Assigned
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:	12/10/2013 0750	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-204551/3	Analysis Batch:	280-204551	Instrument ID:	No Equipment Assigned
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:	12/10/2013 0750	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Suspended Solids	96	109	86 - 114	13	20		

**Laboratory Control/**

**Method: SM 2540D**

**Laboratory Duplicate Data Report - Batch: 280-204551**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-204551/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-204551/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/10/2013 0750			Analysis Date:	12/10/2013 0750
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 Suspended Solids	100	100	96.0	109

# Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

**Duplicate - Batch: 280-204551**

**Method: SM 2540D**

**Preparation: N/A**

Lab Sample ID:	280-49982-1	Analysis Batch:	280-204551	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/10/2013 0750	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Suspended Solids	ND	ND	NC	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Method Blank - Batch: 280-205494**

**Method: SM 5310B**

**Preparation: N/A**

Lab Sample ID:	MB 280-205494/5	Analysis Batch:	280-205494	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121213.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/12/2013 1732	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Organic Carbon - Average	ND		1.0	1.0

**Lab Control Sample/**

**Method: SM 5310B**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-205494**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-205494/3	Analysis Batch:	280-205494	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121213.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/12/2013 1655	Units:	mg/L	Final Weight/Volume:	200 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-205494/4	Analysis Batch:	280-205494	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121213.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/12/2013 1713	Units:	mg/L	Final Weight/Volume:	200 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	99	100	88 - 112	0	15		

**Laboratory Control/**

**Method: SM 5310B**

**Laboratory Duplicate Data Report - Batch: 280-205494**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-205494/3	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-205494/4
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/12/2013 1655			Analysis Date:	12/12/2013 1713
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	24.8	24.9

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205494**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID:	280-50070-E-4 MS	Analysis Batch:	280-205494	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121213.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/12/2013 2225			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50070-E-4 MSD	Analysis Batch:	280-205494	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121213.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/12/2013 2242			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: 280-205494**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID:	280-50070-E-4 MS	Units:	mg/L	MSD Lab Sample ID:	280-50070-E-4 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/12/2013 2225			Analysis Date:	12/12/2013 2242
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	ND	25.0	25.0	24.6	24.6

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Method Blank - Batch: 280-205760**

**Method: SM 5310B**

**Preparation: N/A**

Lab Sample ID:	MB 280-205760/37	Analysis Batch:	280-205760	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121713.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/18/2013 0234	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Organic Carbon - Average	ND		1.0	1.0

**Lab Control Sample/**

**Method: SM 5310B**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-205760**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-205760/35	Analysis Batch:	280-205760	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121713.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/18/2013 0154	Units:	mg/L	Final Weight/Volume:	200 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-205760/36	Analysis Batch:	280-205760	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121713.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/18/2013 0212	Units:	mg/L	Final Weight/Volume:	200 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	102	102	88 - 112	0	15		

**Laboratory Control/**

**Method: SM 5310B**

**Laboratory Duplicate Data Report - Batch: 280-205760**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-205760/35	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-205760/36
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/18/2013 0154			Analysis Date:	12/18/2013 0212
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	25.6	25.6

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205760**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID: 280-49982-1	Analysis Batch: 280-205760	Instrument ID: WC_SHI2
Client Matrix: Water	Prep Batch: N/A	Lab File ID: 121713.txt
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume:
Analysis Date: 12/18/2013 0616		Final Weight/Volume: 50 mL
Prep Date: N/A		
Leach Date: N/A		

MSD Lab Sample ID: 280-49982-1	Analysis Batch: 280-205760	Instrument ID: WC_SHI2
Client Matrix: Water	Prep Batch: N/A	Lab File ID: 121713.txt
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume:
Analysis Date: 12/18/2013 0634		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	105	105	88 - 112	0	15		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205760**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID: 280-49982-1	Units: mg/L	MSD Lab Sample ID: 280-49982-1
Client Matrix: Water		Client Matrix: Water
Dilution: 1.0		Dilution: 1.0
Analysis Date: 12/18/2013 0616		Analysis Date: 12/18/2013 0634
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	ND	25.0	25.0	26.4	26.3

## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

### Laboratory Chronicle

Lab ID: 280-49982-1

Client ID: MW-20

Sample Date/Time: 12/04/2013 10:35

Received Date/Time: 12/05/2013 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-49982-F-1		480-156944		12/11/2013 12:52	1	TAL BUF	NMD1
A:8260C	280-49982-F-1		480-156944		12/11/2013 12:52	1	TAL BUF	NMD1
P:5030C	280-49982-K-1		480-157025		12/11/2013 20:15	1	TAL BUF	CDC
A:8260C SIM	280-49982-K-1		480-157025		12/11/2013 20:15	1	TAL BUF	CDC
P:3005A	280-49982-D-1-E		280-204391	280-204080	12/05/2013 18:30	1	TAL DEN	LLB
A:6010B	280-49982-D-1-E		280-204391	280-204080	12/08/2013 15:28	1	TAL DEN	SJS
P:3005A	280-49982-D-1-A		280-204595	280-204075	12/09/2013 07:30	1	TAL DEN	WAW
A:6010B	280-49982-D-1-A		280-204595	280-204075	12/10/2013 03:29	1	TAL DEN	SJS
P:3005A	280-49982-D-1-B		280-204553	280-204077	12/05/2013 18:15	1	TAL DEN	LLB
A:6020	280-49982-D-1-B		280-204553	280-204077	12/09/2013 20:23	1	TAL DEN	LMT
P:3005A	280-49982-D-1-F		280-204803	280-204159	12/09/2013 07:30	1	TAL DEN	WAW
A:6020	280-49982-D-1-F		280-204803	280-204159	12/10/2013 16:07	1	TAL DEN	LMT
A:300.0	280-49982-B-1		280-205826		12/17/2013 22:44	1	TAL DEN	AJA
A:350.1	280-49982-C-1		280-205837		12/18/2013 15:28	1	TAL DEN	RSN
A:353.2	280-49982-A-1		280-206107		12/20/2013 10:09	1	TAL DEN	DME
A:SM 2320B	280-49982-B-1		280-204292		12/06/2013 18:25	1	TAL DEN	AFH
A:SM 2540C	280-49982-B-1		280-204597		12/10/2013 09:36	1	TAL DEN	ELJ
A:SM 2540D	280-49982-B-1		280-204551		12/10/2013 07:50	1	TAL DEN	BAN
A:SM 5310B	280-49982-C-1		280-205760		12/18/2013 06:00	1	TAL DEN	CCJ

Lab ID: 280-49982-1 MS

Client ID: MW-20

Sample Date/Time: 12/04/2013 10:35

Received Date/Time: 12/05/2013 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-49982-D-1-C MS		280-204553	280-204077	12/05/2013 18:15	1	TAL DEN	LLB
A:6020	280-49982-D-1-C MS		280-204553	280-204077	12/09/2013 20:30	1	TAL DEN	LMT
A:SM 5310B	280-49982-C-1 MS		280-205760		12/18/2013 06:16	1	TAL DEN	CCJ

Lab ID: 280-49982-1 MSD

Client ID: MW-20

Sample Date/Time: 12/04/2013 10:35

Received Date/Time: 12/05/2013 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-49982-D-1-D MSD		280-204553	280-204077	12/05/2013 18:15	1	TAL DEN	LLB
A:6020	280-49982-D-1-D MSD		280-204553	280-204077	12/09/2013 20:34	1	TAL DEN	LMT
A:SM 5310B	280-49982-C-1 MSD		280-205760		12/18/2013 06:34	1	TAL DEN	CCJ

## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

### Laboratory Chronicle

Lab ID: 280-49982-1 DU

Client ID: MW-20

Sample Date/Time: 12/04/2013 10:35

Received Date/Time: 12/05/2013 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2320B	280-49982-B-1 DU		280-204292		12/06/2013 18:33	1	TAL DEN	AFH
A:SM 2540D	280-49982-B-1 DU		280-204551		12/10/2013 07:50	1	TAL DEN	BAN

Lab ID: 280-49982-2

Client ID: MW-23A

Sample Date/Time: 12/04/2013 13:20

Received Date/Time: 12/05/2013 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-49982-F-2		480-156944		12/11/2013 13:14	1	TAL BUF	NMD1
A:8260C	280-49982-F-2		480-156944		12/11/2013 13:14	1	TAL BUF	NMD1
P:5030C	280-49982-K-2		480-157025		12/11/2013 20:39	1	TAL BUF	CDC
A:8260C SIM	280-49982-K-2		480-157025		12/11/2013 20:39	1	TAL BUF	CDC
P:3005A	280-49982-D-2-C		280-204391	280-204080	12/05/2013 18:30	1	TAL DEN	LLB
A:6010B	280-49982-D-2-C		280-204391	280-204080	12/08/2013 15:40	1	TAL DEN	SJS
P:3005A	280-49982-D-2-A		280-204595	280-204075	12/09/2013 07:30	1	TAL DEN	WAW
A:6010B	280-49982-D-2-A		280-204595	280-204075	12/10/2013 03:31	1	TAL DEN	SJS
P:3005A	280-49982-D-2-B		280-204553	280-204077	12/05/2013 18:15	1	TAL DEN	LLB
A:6020	280-49982-D-2-B		280-204553	280-204077	12/09/2013 20:41	1	TAL DEN	LMT
P:3005A	280-49982-D-2-D		280-204803	280-204159	12/09/2013 07:30	1	TAL DEN	WAW
A:6020	280-49982-D-2-D		280-204803	280-204159	12/10/2013 16:10	1	TAL DEN	LMT
A:300.0	280-49982-B-2		280-205826		12/17/2013 23:01	1	TAL DEN	AJA
A:350.1	280-49982-C-2		280-205837		12/18/2013 15:31	1	TAL DEN	RSN
A:353.2	280-49982-A-2		280-206107		12/20/2013 10:09	1	TAL DEN	DME
A:SM 2320B	280-49982-B-2		280-204292		12/06/2013 18:41	1	TAL DEN	AFH
A:SM 2540C	280-49982-B-2		280-204597		12/10/2013 09:36	1	TAL DEN	ELJ
A:SM 2540D	280-49982-B-2		280-204551		12/10/2013 07:50	1	TAL DEN	BAN
A:SM 5310B	280-49982-C-2		280-205760		12/18/2013 08:30	1	TAL DEN	CCJ



**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Laboratory Chronicle**

Lab ID: 280-49982-3

Client ID: MW-36A

Sample Date/Time: 12/04/2013 15:20

Received Date/Time: 12/05/2013 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-49982-F-3		480-156944		12/11/2013 13:36	1	TAL BUF	NMD1
A:8260C	280-49982-F-3		480-156944		12/11/2013 13:36	1	TAL BUF	NMD1
P:5030C	280-49982-K-3		480-157025		12/11/2013 21:04	1	TAL BUF	CDC
A:8260C SIM	280-49982-K-3		480-157025		12/11/2013 21:04	1	TAL BUF	CDC
P:3005A	280-49982-D-3-C		280-204391	280-204080	12/05/2013 18:30	1	TAL DEN	LLB
A:6010B	280-49982-D-3-C		280-204391	280-204080	12/08/2013 15:42	1	TAL DEN	SJS
P:3005A	280-49982-D-3-A		280-204595	280-204075	12/09/2013 07:30	1	TAL DEN	WAW
A:6010B	280-49982-D-3-A		280-204595	280-204075	12/10/2013 03:33	1	TAL DEN	SJS
P:3005A	280-49982-D-3-B		280-204553	280-204077	12/05/2013 18:15	1	TAL DEN	LLB
A:6020	280-49982-D-3-B		280-204553	280-204077	12/09/2013 20:51	1	TAL DEN	LMT
P:3005A	280-49982-D-3-D		280-204803	280-204159	12/09/2013 07:30	1	TAL DEN	WAW
A:6020	280-49982-D-3-D		280-204803	280-204159	12/10/2013 16:14	1	TAL DEN	LMT
A:300.0	280-49982-B-3		280-205826		12/17/2013 23:18	1	TAL DEN	AJA
A:350.1	280-49982-C-3		280-205837		12/18/2013 15:33	1	TAL DEN	RSN
A:353.2	280-49982-A-3		280-206107		12/20/2013 10:13	1	TAL DEN	DME
A:SM 2320B	280-49982-B-3		280-204292		12/06/2013 18:48	1	TAL DEN	AFH
A:SM 2540C	280-49982-B-3		280-204597		12/10/2013 09:36	1	TAL DEN	ELJ
A:SM 2540D	280-49982-B-3		280-204551		12/10/2013 07:50	1	TAL DEN	BAN
A:SM 5310B	280-49982-C-3		280-205760		12/18/2013 08:45	1	TAL DEN	CCJ

Lab ID: 280-49982-3 MS

Client ID: MW-36A

Sample Date/Time: 12/04/2013 15:20

Received Date/Time: 12/05/2013 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-49982-B-3 MS		280-205826		12/17/2013 23:53	1	TAL DEN	AJA

Lab ID: 280-49982-3 MSD

Client ID: MW-36A

Sample Date/Time: 12/04/2013 15:20

Received Date/Time: 12/05/2013 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-49982-B-3 MSD		280-205826		12/18/2013 00:45	1	TAL DEN	AJA

Lab ID: 280-49982-3 DU

Client ID: MW-36A

Sample Date/Time: 12/04/2013 15:20

Received Date/Time: 12/05/2013 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-49982-B-3 DU		280-205826		12/17/2013 23:36	1	TAL DEN	AJA

## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

### Laboratory Chronicle

Lab ID: 280-49982-4

Client ID: MW-15R

Sample Date/Time: 12/04/2013 14:30

Received Date/Time: 12/05/2013 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-49982-F-4		480-156944		12/11/2013 13:58	1	TAL BUF	NMD1
A:8260C	280-49982-F-4		480-156944		12/11/2013 13:58	1	TAL BUF	NMD1
P:5030C	280-49982-J-4		480-157025		12/11/2013 21:28	1	TAL BUF	CDC
A:8260C SIM	280-49982-J-4		480-157025		12/11/2013 21:28	1	TAL BUF	CDC
P:3005A	280-49982-D-4-C		280-204391	280-204080	12/05/2013 18:30	1	TAL DEN	LLB
A:6010B	280-49982-D-4-C		280-204391	280-204080	12/08/2013 15:45	1	TAL DEN	SJS
P:3005A	280-49982-D-4-A		280-204595	280-204075	12/09/2013 07:30	1	TAL DEN	WAW
A:6010B	280-49982-D-4-A		280-204595	280-204075	12/10/2013 03:36	1	TAL DEN	SJS
P:3005A	280-49982-D-4-B		280-204553	280-204077	12/05/2013 18:15	1	TAL DEN	LLB
A:6020	280-49982-D-4-B		280-204553	280-204077	12/09/2013 20:55	1	TAL DEN	LMT
P:3005A	280-49982-D-4-D		280-204803	280-204159	12/09/2013 07:30	1	TAL DEN	WAW
A:6020	280-49982-D-4-D		280-204803	280-204159	12/10/2013 16:18	1	TAL DEN	LMT
A:300.0	280-49982-B-4		280-205826		12/18/2013 01:02	1	TAL DEN	AJA
A:350.1	280-49982-C-4		280-205837		12/18/2013 15:35	1	TAL DEN	RSN
A:353.2	280-49982-A-4		280-206107		12/20/2013 10:13	1	TAL DEN	DME
A:SM 2320B	280-49982-B-4		280-204292		12/06/2013 18:56	1	TAL DEN	AFH
A:SM 2540C	280-49982-B-4		280-204627		12/10/2013 11:16	1	TAL DEN	ELJ
A:SM 2540D	280-49982-B-4		280-204551		12/10/2013 07:50	1	TAL DEN	BAN
A:SM 5310B	280-49982-C-4		280-205760		12/18/2013 09:04	1	TAL DEN	CCJ

## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

### Laboratory Chronicle

Lab ID: 280-49982-5

Client ID: MW-24

Sample Date/Time: 12/04/2013 11:53

Received Date/Time: 12/05/2013 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-49982-F-5		480-156944		12/11/2013 14:20	1	TAL BUF	NMD1
A:8260C	280-49982-F-5		480-156944		12/11/2013 14:20	1	TAL BUF	NMD1
P:5030C	280-49982-K-5		480-157025		12/11/2013 21:52	1	TAL BUF	CDC
A:8260C SIM	280-49982-K-5		480-157025		12/11/2013 21:52	1	TAL BUF	CDC
P:3005A	280-49982-D-5-C		280-204391	280-204080	12/05/2013 18:30	1	TAL DEN	LLB
A:6010B	280-49982-D-5-C		280-204391	280-204080	12/08/2013 15:47	1	TAL DEN	SJS
P:3005A	280-49982-D-5-A		280-204595	280-204075	12/09/2013 07:30	1	TAL DEN	WAW
A:6010B	280-49982-D-5-A		280-204595	280-204075	12/10/2013 03:38	1	TAL DEN	SJS
P:3005A	280-49982-D-5-B		280-204553	280-204077	12/05/2013 18:15	1	TAL DEN	LLB
A:6020	280-49982-D-5-B		280-204553	280-204077	12/09/2013 20:59	1	TAL DEN	LMT
P:3005A	280-49982-D-5-D		280-204803	280-204159	12/09/2013 07:30	1	TAL DEN	WAW
A:6020	280-49982-D-5-D		280-204803	280-204159	12/10/2013 16:21	1	TAL DEN	LMT
A:300.0	280-49982-B-5		280-205826		12/18/2013 01:19	1	TAL DEN	AJA
A:350.1	280-49982-C-5		280-205837		12/18/2013 15:38	1	TAL DEN	RSN
A:353.2	280-49982-A-5		280-206322		12/05/2013 12:49	1	TAL DEN	RKS
A:SM 2320B	280-49982-B-5		280-204292		12/06/2013 19:03	1	TAL DEN	AFH
A:SM 2540C	280-49982-B-5		280-204627		12/10/2013 11:16	1	TAL DEN	ELJ
A:SM 2540D	280-49982-B-5		280-204551		12/10/2013 07:50	1	TAL DEN	BAN
A:SM 5310B	280-49982-C-5		280-205494		12/13/2013 01:12	1	TAL DEN	SMG

## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

### Laboratory Chronicle

Lab ID: 280-49982-6

Client ID: DUP2

Sample Date/Time: 12/04/2013 13:20

Received Date/Time: 12/05/2013 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-49982-F-6		480-156944		12/11/2013 14:42	1	TAL BUF	NMD1
A:8260C	280-49982-F-6		480-156944		12/11/2013 14:42	1	TAL BUF	NMD1
P:5030C	280-49982-K-6		480-157025		12/11/2013 22:16	1	TAL BUF	CDC
A:8260C SIM	280-49982-K-6		480-157025		12/11/2013 22:16	1	TAL BUF	CDC
P:3005A	280-49982-D-6-C		280-204391	280-204080	12/05/2013 18:30	1	TAL DEN	LLB
A:6010B	280-49982-D-6-C		280-204391	280-204080	12/08/2013 15:49	1	TAL DEN	SJS
P:3005A	280-49982-D-6-A		280-204595	280-204075	12/09/2013 07:30	1	TAL DEN	WAW
A:6010B	280-49982-D-6-A		280-204595	280-204075	12/10/2013 03:41	1	TAL DEN	SJS
P:3005A	280-49982-D-6-B		280-204553	280-204077	12/05/2013 18:15	1	TAL DEN	LLB
A:6020	280-49982-D-6-B		280-204553	280-204077	12/09/2013 21:02	1	TAL DEN	LMT
P:3005A	280-49982-D-6-D		280-204803	280-204159	12/09/2013 07:30	1	TAL DEN	WAW
A:6020	280-49982-D-6-D		280-204803	280-204159	12/10/2013 16:25	1	TAL DEN	LMT
A:300.0	280-49982-B-6		280-205826		12/18/2013 01:37	1	TAL DEN	AJA
A:350.1	280-49982-C-6		280-205837		12/18/2013 15:40	1	TAL DEN	RSN
A:353.2	280-49982-A-6		280-206107		12/20/2013 10:13	1	TAL DEN	DME
A:SM 2320B	280-49982-B-6		280-204292		12/06/2013 19:10	1	TAL DEN	AFH
A:SM 2540C	280-49982-B-6		280-204627		12/10/2013 11:16	1	TAL DEN	ELJ
A:SM 2540D	280-49982-B-6		280-204551		12/10/2013 07:50	1	TAL DEN	BAN
A:SM 5310B	280-49982-C-6		280-205494		12/13/2013 01:27	1	TAL DEN	SMG

Lab ID: 280-49982-7

Client ID: TRIP BLANK

Sample Date/Time: 12/04/2013 00:00

Received Date/Time: 12/05/2013 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-49982-A-7		480-156944		12/11/2013 15:03	1	TAL BUF	NMD1
A:8260C	280-49982-A-7		480-156944		12/11/2013 15:03	1	TAL BUF	NMD1
P:5030C	280-49982-D-7		480-157025		12/11/2013 22:41	1	TAL BUF	CDC
A:8260C SIM	280-49982-D-7		480-157025		12/11/2013 22:41	1	TAL BUF	CDC

## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

### 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:5030C	MB 480-156944/7		480-156944		12/11/2013 11:15	1	TAL BUF	NMD1
A:8260C	MB 480-156944/7		480-156944		12/11/2013 11:15	1	TAL BUF	NMD1
P:5030C	MB 480-157025/7		480-157025		12/11/2013 15:01	1	TAL BUF	CDC
A:8260C SIM	MB 480-157025/7		480-157025		12/11/2013 15:01	1	TAL BUF	CDC
P:3005A	MB 280-204080/1-A		280-204391	280-204080	12/05/2013 18:30	1	TAL DEN	LLB
A:6010B	MB 280-204080/1-A		280-204391	280-204080	12/08/2013 14:34	1	TAL DEN	SJS
P:3005A	MB 280-204075/1-A		280-204595	280-204075	12/09/2013 07:30	1	TAL DEN	WAW
A:6010B	MB 280-204075/1-A		280-204595	280-204075	12/10/2013 02:55	1	TAL DEN	SJS
P:3005A	MB 280-204077/1-A		280-204553	280-204077	12/05/2013 18:15	1	TAL DEN	LLB
A:6020	MB 280-204077/1-A		280-204553	280-204077	12/09/2013 19:51	1	TAL DEN	LMT
P:3005A	MB 280-204159/1-A		280-204553	280-204159	12/09/2013 07:30	1	TAL DEN	WAW
A:6020	MB 280-204159/1-A		280-204553	280-204159	12/10/2013 02:27	1	TAL DEN	LMT
A:300.0	MB 280-205826/6		280-205826		12/17/2013 11:20	1	TAL DEN	AJA
A:350.1	MB 280-205837/60		280-205837		12/18/2013 14:23	1	TAL DEN	RSN
A:353.2	MB 280-206322/2		280-206322		12/05/2013 12:49	1	TAL DEN	RKS
A:353.2	MB 280-206107/1		280-206107		12/20/2013 10:09	1	TAL DEN	DME
A:SM 2320B	MB 280-204292/6		280-204292		12/06/2013 18:18	1	TAL DEN	AFH
A:SM 2540C	MB 280-204597/1		280-204597		12/10/2013 09:36	1	TAL DEN	ELJ
A:SM 2540C	MB 280-204627/1		280-204627		12/10/2013 11:16	1	TAL DEN	ELJ
A:SM 2540D	MB 280-204551/1		280-204551		12/10/2013 07:50	1	TAL DEN	BAN
A:SM 5310B	MB 280-205494/5		280-205494		12/12/2013 17:32	1	TAL DEN	SMG
A:SM 5310B	MB 280-205760/37		280-205760		12/18/2013 02:34	1	TAL DEN	CCJ

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**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:5030C	LCS 480-156944/5		480-156944		12/11/2013 10:32	1	TAL BUF	NMD1
A:8260C	LCS 480-156944/5		480-156944		12/11/2013 10:32	1	TAL BUF	NMD1
P:5030C	LCS 480-157025/5		480-157025		12/11/2013 14:12	1	TAL BUF	CDC
A:8260C SIM	LCS 480-157025/5		480-157025		12/11/2013 14:12	1	TAL BUF	CDC
P:3005A	LCS 280-204080/2-A		280-204391	280-204080	12/05/2013 18:30	1	TAL DEN	LLB
A:6010B	LCS 280-204080/2-A		280-204391	280-204080	12/08/2013 14:36	1	TAL DEN	SJS
P:3005A	LCS 280-204075/2-A		280-204595	280-204075	12/09/2013 07:30	1	TAL DEN	WAW
A:6010B	LCS 280-204075/2-A		280-204595	280-204075	12/10/2013 02:58	1	TAL DEN	SJS
P:3005A	LCS 280-204077/2-A		280-204553	280-204077	12/05/2013 18:15	1	TAL DEN	LLB
A:6020	LCS 280-204077/2-A		280-204553	280-204077	12/09/2013 19:55	1	TAL DEN	LMT
P:3005A	LCS 280-204159/2-A		280-204553	280-204159	12/09/2013 07:30	1	TAL DEN	WAW
A:6020	LCS 280-204159/2-A		280-204553	280-204159	12/10/2013 02:30	1	TAL DEN	LMT
A:300.0	LCS 280-205826/4		280-205826		12/17/2013 10:31	1	TAL DEN	AJA
A:350.1	LCS 280-205837/58		280-205837		12/18/2013 14:18	1	TAL DEN	RSN
A:SM 2320B	LCS 280-204292/4		280-204292		12/06/2013 18:00	1	TAL DEN	AFH
A:SM 2540C	LCS 280-204597/2		280-204597		12/10/2013 09:36	1	TAL DEN	ELJ
A:SM 2540C	LCS 280-204627/2		280-204627		12/10/2013 11:16	1	TAL DEN	ELJ
A:SM 2540D	LCS 280-204551/2		280-204551		12/10/2013 07:50	1	TAL DEN	BAN
A:SM 5310B	LCS 280-205494/3		280-205494		12/12/2013 16:55	1	TAL DEN	SMG
A:SM 5310B	LCS 280-205760/35		280-205760		12/18/2013 01:54	1	TAL DEN	CCJ

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
P:5030C	LCSD 480-157025/6		480-157025		12/11/2013 14:36	1	TAL BUF	CDC
A:8260C SIM	LCSD 480-157025/6		480-157025		12/11/2013 14:36	1	TAL BUF	CDC
A:300.0	LCSD 280-205826/5		280-205826		12/17/2013 10:49	1	TAL DEN	AJA
A:350.1	LCSD 280-205837/59		280-205837		12/18/2013 14:21	1	TAL DEN	RSN
A:SM 2320B	LCSD 280-204292/5		280-204292		12/06/2013 18:10	1	TAL DEN	AFH
A:SM 2540C	LCSD 280-204597/3		280-204597		12/10/2013 09:36	1	TAL DEN	ELJ
A:SM 2540C	LCSD 280-204627/3		280-204627		12/10/2013 11:16	1	TAL DEN	ELJ
A:SM 2540D	LCSD 280-204551/3		280-204551		12/10/2013 07:50	1	TAL DEN	BAN
A:SM 5310B	LCSD 280-205494/4		280-205494		12/12/2013 17:13	1	TAL DEN	SMG
A:SM 5310B	LCSD 280-205760/36		280-205760		12/18/2013 02:12	1	TAL DEN	CCJ

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 280-205826/3		280-205826		12/17/2013 10:14	1	TAL DEN	AJA

**Quality Control Results**

Client: Waste Management

Job Number: 280-49982-1

**Laboratory Chronicle**

Lab ID: MS

Client ID: N/A

Sample Date/Time: 12/04/2013 15:35

Received Date/Time: 12/05/2013 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	480-51376-E-15 MS		480-156944		12/11/2013 19:22	200	TAL BUF	NMD1
A:8260C	480-51376-E-15 MS		480-156944		12/11/2013 19:22	200	TAL BUF	NMD1
P:5030C	280-49836-B-1 MS		480-157025		12/11/2013 19:27	1	TAL BUF	CDC
A:8260C SIM	280-49836-B-1 MS		480-157025		12/11/2013 19:27	1	TAL BUF	CDC
P:3005A	280-49971-C-1-B MS		280-204391	280-204080	12/05/2013 18:30	1	TAL DEN	LLB
A:6010B	280-49971-C-1-B MS		280-204391	280-204080	12/08/2013 14:43	1	TAL DEN	SJS
P:3005A	280-49980-C-1-B MS		280-204595	280-204075	12/09/2013 07:30	1	TAL DEN	WAW
A:6010B	280-49980-C-1-B MS		280-204595	280-204075	12/10/2013 03:05	1	TAL DEN	SJS
P:3005A	280-49969-L-1-E MS		280-204553	280-204159	12/09/2013 07:30	1	TAL DEN	WAW
A:6020	280-49969-L-1-E MS		280-204553	280-204159	12/10/2013 02:41	1	TAL DEN	LMT
A:350.1	280-50070-F-10 MS		280-205837		12/18/2013 15:24	1	TAL DEN	RSN
A:SM 5310B	280-50070-E-4 MS		280-205494		12/12/2013 22:25	1	TAL DEN	SMG

Lab ID: MSD

Client ID: N/A

Sample Date/Time: 12/04/2013 15:35

Received Date/Time: 12/05/2013 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	480-51376-E-15 MSD		480-156944		12/11/2013 19:44	200	TAL BUF	NMD1
A:8260C	480-51376-E-15 MSD		480-156944		12/11/2013 19:44	200	TAL BUF	NMD1
P:5030C	280-49836-B-1 MSD		480-157025		12/11/2013 19:51	1	TAL BUF	CDC
A:8260C SIM	280-49836-B-1 MSD		480-157025		12/11/2013 19:51	1	TAL BUF	CDC
P:3005A	280-49971-C-1-C MSD		280-204391	280-204080	12/05/2013 18:30	1	TAL DEN	LLB
A:6010B	280-49971-C-1-C MSD		280-204391	280-204080	12/08/2013 14:46	1	TAL DEN	SJS
P:3005A	280-49980-C-1-C MSD		280-204595	280-204075	12/09/2013 07:30	1	TAL DEN	WAW
A:6010B	280-49980-C-1-C MSD		280-204595	280-204075	12/10/2013 03:07	1	TAL DEN	SJS
P:3005A	280-49969-L-1-F MSD		280-204553	280-204159	12/09/2013 07:30	1	TAL DEN	WAW
A:6020	280-49969-L-1-F MSD		280-204553	280-204159	12/10/2013 02:44	1	TAL DEN	LMT
A:350.1	280-50070-F-10 MSD		280-205837		12/18/2013 15:26	1	TAL DEN	RSN
A:SM 5310B	280-50070-E-4 MSD		280-205494		12/12/2013 22:42	1	TAL DEN	SMG

## Quality Control Results

Client: Waste Management

Job Number: 280-49982-1

### Laboratory Chronicle

Lab ID: DU

Client ID: N/A

Sample Date/Time: 12/04/2013 09:51

Received Date/Time: 12/04/2013 10:43

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2540C	280-49937-A-1 DU		280-204597		12/10/2013 09:36	1	TAL DEN	ELJ
A:SM 2540C	280-50048-A-1 DU		280-204627		12/10/2013 11:16	1	TAL DEN	ELJ

#### Lab References:

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver





Tel: 4956  
ANVA  
Phor

# Chain of Custody Record



THE LEADER IN ENVIRONMENTAL TESTING

280-49982 Chain of Custody

Client Contact: **Elena Ramirez**  
 Mfr: **Charles Leekie**  
 City: **Bremerton**  
 Address: **Olympic View Transfer Station SCS Engineers**  
 3300 Southwest Barney Wittmer Road  
 State: **WA** Zip: **98005**  
 Phone: **425-289-5454**  
 Email: **E.Ramirez@scsengineers.com**  
 Project Name: **WA02/Olympic View Sanitary LE**  
 Event Desc: **Quarterly GW Appl/II - Mar Jun Sep Dec**  
 Site: **Washington**

Sampler: **M. O'Hara & Andy McDonald** Lab PM: **Saira, Betsy A**  
 Phone: **425-289-5452** E-Mail: **betsy.sara@testamericainc.com**

Carrier Tracking No(s):  
 COC No: **280-17318-3224.1**  
 Page: **1 of 1**  
 Job #: **04204027.17**

Due Date Requested: **Standard**  
 TAT Requested (days): **Standard**  
 FO #: **425-289-5454**  
 WO #: **425-289-5454**  
 Project #: **28002692**  
 SSOW#: **425-289-5454**

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Seawater, Other)	Preservation Code	Analysis Requested										Special Instructions/Note:								
						TPS/AI/CS/IS/NO3	Disolved Metals	Ammonia/TOC	826B - long list (TA Buffalo)	826B SIM (TA Buffalo)	Total Metals	Dissolved Arsenic (direct sub to ARI)	Total Arsenic (direct sub to ARI)	Total Number of Containers	Field Filtered Sample (Yes or No)		TPS/AI/CS/IS/NO3	Disolved Metals	Ammonia/TOC	826B - long list (TA Buffalo)	826B SIM (TA Buffalo)	Total Metals	TSS	
MV-20	12/4/13	1035	C	Water	W	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-23A		1320		Water	W	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-36A		1520		Water	W	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-15R		1430		Water	W	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-24		1153		Water	W	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DUP-2		1320		Water	W	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Tap Blank				Water	W	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

Preservation Codes:  
 A - HCL  
 B - NaOH  
 C - Zn Acetate  
 D - Nitric Acid  
 E - NaHSO4  
 F - MeOH  
 G - Amchlor  
 H - Ascorbic Acid  
 I - Ice  
 J - DI Water  
 K - EDTA  
 L - EDA  
 Other:

Special Instructions/Note:  
 Short Hold: NO3(cad)  
 Arsenic - Direct sub to ARI

Possible Hazard Identification  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: **M. O'Hara** Date: **12/4/13** Company: **SCS**  
 Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Company: \_\_\_\_\_

Custody Seals Intact: **102384** Custody Seal No.: **102385**  
 Yes  No

Received by: **Neeraj** Date/Time: **12/13/13 10:00** Company: **TA**  
 Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Cooler Temperature(s) °C and Other Remarks:  
**1.9/2.3 KL RI 12/5**

## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-49982-1

**Login Number: 49982**

**List Source: TestAmerica Denver**

**List Number: 1**

**Creator: O'Tormey, Stephanie R**

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.	False	Refer to job narrative for details
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	
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.	N/A	

## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-49982-1

**Login Number: 49982**  
**List Number: 1**  
**Creator: Goliszek, Gregory T**

**List Source: TestAmerica Buffalo**  
**List Creation: 12/10/13 07:17 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	3.8 #2
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: 280-50090-1

Job Description: WA02|Olympic View Sanitary LF

For:  
Waste Management  
Olympic View Transfer Station  
9300 Southwest Barney White Road  
Bremerton, WA 98312  
Attention: Mr. Charles Luckie



Approved for release.  
Betsy A Sara  
Project Manager II  
12/30/2013 2:31 PM

---

Betsy A Sara, Project Manager II  
4955 Yarrow Street, Arvada, CO, 80002  
(303)736-0189  
betsy.sara@testamericainc.com  
12/30/2013

cc: Mr. Sam Adlington  
Mr. Matt O'Hare  
Mr. Phil Perley  
Ms. Elena Ramirez  
Mr. Dan Venchiarutti

The test results in this report relate only to the samples in this report and meet all requirements of NELAP, 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.

**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 . . . . .	7
Method / Analyst Summary . . . . .	8
Sample Summary . . . . .	9
Sample Results . . . . .	10
Sample Datasheets . . . . .	11
Data Qualifiers . . . . .	40
QC Results . . . . .	41
Qc Association Summary . . . . .	42
Surrogate Recovery Report . . . . .	47
Qc Reports . . . . .	49
Laboratory Chronicle . . . . .	83
Client Chain of Custody . . . . .	90
Sample Receipt Checklist . . . . .	91

## CASE NARRATIVE

Client: Waste Management

Project: WA02|Olympic View Sanitary LF

Report Number: 280-50090-1

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 12/09/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 1.3 C.

### Holding Times

The Nitrate result was derived from a calculation and the analysis date/time reflects when the calculation was performed. Nitrate+Nitrite and Nitrite results were required for the calculation. Nitrate+Nitrite analysis has a 28-day holding time. Nitrite analysis has a 48-hour holding time, and due to a FedEx delay, the associated Nitrite analysis was performed outside of the 48-hour holding time.

All other holding times were within established control limits.

### Method Blanks

All 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 a recovery outside control limits for 1,1-Dichloroethene Method 8260C. 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.

Sample MW-39 was selected to fulfill the laboratory batch quality control requirements for Method 6020. Analysis of the laboratory generated MS/MSD for this sample exhibited recoveries of Dissolved Lead above the upper control limit indicating the possible presence of a matrix interference.

The percent recoveries and/or the relative percent difference of the MS/MSD performed on a sample from another client were outside control limits for Total Manganese Method 6020 because the sample concentration was greater than four times the spike amount.

All other MS and MSD samples were within established control limits.

### Organics

The Method 8260C\_SIM surrogate recovery of Dibromofluoromethane was above control limits for sample MW-33A. Because the data are considered to be biased high and the Method 8260C\_SIM target analyte in the sample was non-detect, corrective action was deemed unnecessary.

### General Comments

The analyses for Volatile Organics by Method 8260C and Volatile Organics by Method 8260C 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: 280-50090-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-50090-1</b>	<b>MW-2B1</b>					
Chloride		1.7		1.0	mg/L	300.0
Sulfate		4.4		1.0	mg/L	300.0
Ammonia (as N)		0.048		0.030	mg/L	350.1
Alkalinity, Total (As CaCO3)		54		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		54		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		78		5.0	mg/L	SM 2540C
<i>Dissolved</i>						
Calcium, Dissolved		11		0.040	mg/L	6010B
Magnesium, Dissolved		4.4		0.050	mg/L	6010B
Potassium, Dissolved		1.1		1.0	mg/L	6010B
Sodium, Dissolved		4.8		1.0	mg/L	6010B
Barium, Dissolved		0.0048		0.0010	mg/L	6020
Manganese, Dissolved		0.60		0.0010	mg/L	6020
<i>Total Recoverable</i>						
Iron, Total		0.34		0.060	mg/L	6010B
Barium, Total		0.0055		0.0010	mg/L	6020
Manganese, Total		0.65		0.0010	mg/L	6020
<b>280-50090-2</b>	<b>MW-39</b>					
Vinyl chloride		0.0091	J	0.020	ug/L	8260C SIM
Chloride		4.8		1.0	mg/L	300.0
Ammonia (as N)		0.43		0.030	mg/L	350.1
Nitrate as N		5.5		0.050	mg/L	353.2
Alkalinity, Total (As CaCO3)		99		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		99		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		98		5.0	mg/L	SM 2540C
Total Suspended Solids		36		4.0	mg/L	SM 2540D
Total Organic Carbon - Average		3.0		1.0	mg/L	SM 5310B
<i>Dissolved</i>						
Calcium, Dissolved		12		0.040	mg/L	6010B
Cobalt, Dissolved		0.0078		0.0030	mg/L	6010B
Iron, Dissolved		36		0.060	mg/L	6010B
Magnesium, Dissolved		7.8		0.050	mg/L	6010B
Sodium, Dissolved		8.1		1.0	mg/L	6010B
Barium, Dissolved		0.012		0.0010	mg/L	6020
Manganese, Dissolved		0.46		0.0010	mg/L	6020
<i>Total Recoverable</i>						
Cobalt, Total		0.0070		0.0030	mg/L	6010B
Iron, Total		37		0.060	mg/L	6010B
Barium, Total		0.018		0.0010	mg/L	6020
Manganese, Total		0.47		0.0010	mg/L	6020



## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-50090-1

Lab Sample ID	Client Sample ID			Reporting		
Analyte		Result	Qualifier	Limit	Units	Method
<b>280-50090-4</b>	<b>MW-33A</b>					
Chloride		2.5		1.0	mg/L	300.0
Sulfate		3.0		1.0	mg/L	300.0
Ammonia (as N)		0.059		0.030	mg/L	350.1
Nitrate as N		0.17		0.050	mg/L	353.2
Alkalinity, Total (As CaCO3)		60		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		60		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		76		5.0	mg/L	SM 2540C
Total Suspended Solids		8.4		4.0	mg/L	SM 2540D
<b><i>Dissolved</i></b>						
Calcium, Dissolved		13		0.040	mg/L	6010B
Iron, Dissolved		0.46		0.060	mg/L	6010B
Magnesium, Dissolved		6.4		0.050	mg/L	6010B
Sodium, Dissolved		3.6		1.0	mg/L	6010B
Barium, Dissolved		0.0012		0.0010	mg/L	6020
Manganese, Dissolved		0.017		0.0010	mg/L	6020
<b><i>Total Recoverable</i></b>						
Iron, Total		1.8		0.060	mg/L	6010B
Barium, Total		0.0021		0.0010	mg/L	6020
Copper, Total		0.0020		0.0020	mg/L	6020
Manganese, Total		0.027		0.0010	mg/L	6020
Vanadium, Total		0.0025		0.0020	mg/L	6020

## METHOD SUMMARY

Client: Waste Management

Job Number: 280-50090-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		SW846 3005A
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Metals (ICP/MS)	TAL DEN	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		SW846 3005A
Metals (ICP/MS)	TAL DEN	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		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	
Alkalinity	TAL DEN	SM SM 2320B	
Solids, Total Dissolved (TDS)	TAL DEN	SM SM 2540C	
Solids, Total Suspended (TSS)	TAL DEN	SM SM 2540D	
Organic Carbon, Total (TOC)	TAL DEN	SM SM 5310B	
Volatile Organic Compounds by GC/MS	TAL BUF	SW846 8260C	
Purge and Trap	TAL BUF		SW846 5030C
Volatile Organic Compounds (GC/MS)	TAL BUF	SW846 8260C SIM	
Purge and Trap	TAL BUF		SW846 5030C

**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: 280-50090-1

<b>Method</b>	<b>Analyst</b>	<b>Analyst ID</b>
SW846 8260C	Hill, Leah C	LCH
SW846 8260C SIM	Brandt, Todd R	TRB
SW846 6010B	Harre, John K	JKH
SW846 6010B	Scott, Samantha J	SJS
SW846 6020	Lill, Thomas E	TEL
MCAWW 300.0	Phan, Thu L	TLP
MCAWW 350.1	Newcome, Robin S	RSN
MCAWW 350.1	Sullivan, Roxanne K	RKS
EPA 353.2	Sullivan, Roxanne K	RKS
SM SM 2320B	Hoefler, Alexandra F	AFH
SM SM 2540C	Janssen, Elizabeth L	ELJ
SM SM 2540D	Neeley, Beth A	BAN
SM SM 5310B	Jewell, Connie C	CCJ

## SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-50090-1

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
280-50090-1	MW-2B1	Water	12/05/2013 1004	12/09/2013 0910
280-50090-2	MW-39	Water	12/05/2013 1100	12/09/2013 0910
280-50090-3TB	TRIP BLANK	Water	12/05/2013 1004	12/09/2013 0910
280-50090-4	MW-33A	Water	12/05/2013 1450	12/09/2013 0910

# SAMPLE RESULTS

Analytical Data

Client: Waste Management

Job Number: 280-50090-1

Client Sample ID: MW-2B1

Lab Sample ID: 280-50090-1

Date Sampled: 12/05/2013 1004

Client Matrix: Water

Date Received: 12/09/2013 0910

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-157104	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35117.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/12/2013 0114			Final Weight/Volume:	5 mL
Prep Date:	12/12/2013 0114				

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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-50090-1

**Client Sample ID: MW-2B1**

Lab Sample ID: 280-50090-1

Date Sampled: 12/05/2013 1004

Client Matrix: Water

Date Received: 12/09/2013 0910

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method: 8260C	Analysis Batch: 480-157104	Instrument ID: HP5973C	
Prep Method: 5030C	Prep Batch: N/A	Lab File ID: C35117.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/12/2013 0114		Final Weight/Volume: 5 mL	
Prep Date: 12/12/2013 0114			

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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-50090-1

**Client Sample ID: MW-2B1**

Lab Sample ID: 280-50090-1

Date Sampled: 12/05/2013 1004

Client Matrix: Water

Date Received: 12/09/2013 0910

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-157104	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35117.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/12/2013 0114			Final Weight/Volume:	5 mL
Prep Date:	12/12/2013 0114				

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		66 - 137
4-Bromofluorobenzene (Surr)	96		73 - 120
Toluene-d8 (Surr)	94		71 - 126



**Analytical Data**

Client: Waste Management

Job Number: 280-50090-1

**Client Sample ID: MW-2B1**

Lab Sample ID: 280-50090-1

Date Sampled: 12/05/2013 1004

Client Matrix: Water

Date Received: 12/09/2013 0910

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-157104	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35117.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/12/2013 0114			Final Weight/Volume:	5 mL
Prep Date:	12/12/2013 0114				

**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: 280-50090-1

**Client Sample ID: MW-39**

Lab Sample ID: 280-50090-2

Date Sampled: 12/05/2013 1100

Client Matrix: Water

Date Received: 12/09/2013 0910

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method: 8260C	Analysis Batch: 480-157104	Instrument ID: HP5973C	
Prep Method: 5030C	Prep Batch: N/A	Lab File ID: C35118.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/12/2013 0139		Final Weight/Volume: 5 mL	
Prep Date: 12/12/2013 0139			

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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-50090-1

Client Sample ID: MW-39

Lab Sample ID: 280-50090-2

Date Sampled: 12/05/2013 1100

Client Matrix: Water

Date Received: 12/09/2013 0910

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-157104	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35118.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/12/2013 0139			Final Weight/Volume:	5 mL
Prep Date:	12/12/2013 0139				

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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-50090-1

**Client Sample ID: MW-39**

Lab Sample ID: 280-50090-2

Date Sampled: 12/05/2013 1100

Client Matrix: Water

Date Received: 12/09/2013 0910

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-157104	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35118.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/12/2013 0139			Final Weight/Volume:	5 mL
Prep Date:	12/12/2013 0139				

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97		66 - 137
4-Bromofluorobenzene (Surr)	89		73 - 120
Toluene-d8 (Surr)	89		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-50090-1

**Client Sample ID: MW-39**

Lab Sample ID: 280-50090-2

Date Sampled: 12/05/2013 1100

Client Matrix: Water

Date Received: 12/09/2013 0910

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-157104	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35118.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/12/2013 0139			Final Weight/Volume:	5 mL
Prep Date:	12/12/2013 0139				

**Targeted Tentatively Identified Compounds**

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

Client: Waste Management

Job Number: 280-50090-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 280-50090-3TB

Date Sampled: 12/05/2013 1004

Client Matrix: Water

Date Received: 12/09/2013 0910

## 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-157104	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35119.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/12/2013 0205			Final Weight/Volume:	5 mL
Prep Date:	12/12/2013 0205				

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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-50090-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 280-50090-3TB

Date Sampled: 12/05/2013 1004

Client Matrix: Water

Date Received: 12/09/2013 0910

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method: 8260C	Analysis Batch: 480-157104	Instrument ID: HP5973C	
Prep Method: 5030C	Prep Batch: N/A	Lab File ID: C35119.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/12/2013 0205		Final Weight/Volume: 5 mL	
Prep Date: 12/12/2013 0205			

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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-50090-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 280-50090-3TB

Date Sampled: 12/05/2013 1004

Client Matrix: Water

Date Received: 12/09/2013 0910

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-157104	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35119.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/12/2013 0205			Final Weight/Volume:	5 mL
Prep Date:	12/12/2013 0205				

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		66 - 137
4-Bromofluorobenzene (Surr)	92		73 - 120
Toluene-d8 (Surr)	93		71 - 126



**Analytical Data**

Client: Waste Management

Job Number: 280-50090-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 280-50090-3TB

Date Sampled: 12/05/2013 1004

Client Matrix: Water

Date Received: 12/09/2013 0910

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-157104	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35119.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/12/2013 0205			Final Weight/Volume:	5 mL
Prep Date:	12/12/2013 0205				

**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: 280-50090-1

**Client Sample ID:** MW-33A

Lab Sample ID: 280-50090-4

Date Sampled: 12/05/2013 1450

Client Matrix: Water

Date Received: 12/09/2013 0910

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-157104	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35120.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/12/2013 0230			Final Weight/Volume:	5 mL
Prep Date:	12/12/2013 0230				

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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-50090-1

**Client Sample ID:** MW-33A

Lab Sample ID: 280-50090-4

Date Sampled: 12/05/2013 1450

Client Matrix: Water

Date Received: 12/09/2013 0910

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-157104	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35120.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/12/2013 0230			Final Weight/Volume:	5 mL
Prep Date:	12/12/2013 0230				

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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-50090-1

**Client Sample ID: MW-33A**

Lab Sample ID: 280-50090-4

Date Sampled: 12/05/2013 1450

Client Matrix: Water

Date Received: 12/09/2013 0910

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-157104	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35120.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/12/2013 0230			Final Weight/Volume:	5 mL
Prep Date:	12/12/2013 0230				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96		66 - 137
4-Bromofluorobenzene (Surr)	91		73 - 120
Toluene-d8 (Surr)	90		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-50090-1

**Client Sample ID: MW-33A**

Lab Sample ID: 280-50090-4

Date Sampled: 12/05/2013 1450

Client Matrix: Water

Date Received: 12/09/2013 0910

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-157104	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35120.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/12/2013 0230			Final Weight/Volume:	5 mL
Prep Date:	12/12/2013 0230				

**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: 280-50090-1

**Client Sample ID: MW-2B1**

Lab Sample ID: 280-50090-1

Date Sampled: 12/05/2013 1004

Client Matrix: Water

Date Received: 12/09/2013 0910

---

**8260C SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260C SIM	Analysis Batch:	480-157208	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J6811.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/12/2013 1322			Final Weight/Volume:	25 mL
Prep Date:	12/12/2013 1322				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.0040	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	142		50 - 150
TBA-d9 (Surr)	147		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-50090-1

**Client Sample ID: MW-39**

Lab Sample ID: 280-50090-2

Date Sampled: 12/05/2013 1100

Client Matrix: Water

Date Received: 12/09/2013 0910

---

**8260C SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260C SIM	Analysis Batch:	480-157208	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J6812.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/12/2013 1347			Final Weight/Volume:	25 mL
Prep Date:	12/12/2013 1347				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.0091	J	0.0040	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	146		50 - 150
TBA-d9 (Surr)	133		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-50090-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 280-50090-3TB

Date Sampled: 12/05/2013 1004

Client Matrix: Water

Date Received: 12/09/2013 0910

---

**8260C SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260C SIM	Analysis Batch:	480-157208	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J6813.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/12/2013 1411			Final Weight/Volume:	25 mL
Prep Date:	12/12/2013 1411				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.0040	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	150		50 - 150
TBA-d9 (Surr)	131		50 - 150



**Analytical Data**

Client: Waste Management

Job Number: 280-50090-1

**Client Sample ID: MW-33A**

Lab Sample ID: 280-50090-4

Date Sampled: 12/05/2013 1450

Client Matrix: Water

Date Received: 12/09/2013 0910

---

**8260C SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260C SIM	Analysis Batch:	480-157208	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J6814.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/12/2013 1435			Final Weight/Volume:	25 mL
Prep Date:	12/12/2013 1435				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.0040	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	154	X	50 - 150
TBA-d9 (Surr)	148		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-50090-1

**Client Sample ID: MW-2B1**

Lab Sample ID: 280-50090-1  
 Client Matrix: Water

Date Sampled: 12/05/2013 1004  
 Date Received: 12/09/2013 0910

**6010B Metals (ICP)-Total Recoverable**

Analysis Method:	6010B	Analysis Batch:	280-205009	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-204518	Lab File ID:	26a02121113.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/11/2013 2025			Final Weight/Volume:	50 mL
Prep Date:	12/11/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	0.34		0.060	0.060

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-204779	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-204520	Lab File ID:	26a06121013.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/10/2013 2208			Final Weight/Volume:	50 mL
Prep Date:	12/10/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	11		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	ND		0.060	0.060
Magnesium, Dissolved	4.4		0.050	0.050
Potassium, Dissolved	1.1		1.0	1.0
Sodium, Dissolved	4.8		1.0	1.0

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-204735	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-204519	Lab File ID:	204SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/11/2013 0318			Final Weight/Volume:	50 mL
Prep Date:	12/10/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	0.0055		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Manganese, Total	0.65		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Selenium, Total	ND		0.0010	0.0010
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	ND		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-50090-1

**Client Sample ID: MW-2B1**

Lab Sample ID: 280-50090-1

Date Sampled: 12/05/2013 1004

Client Matrix: Water

Date Received: 12/09/2013 0910

---

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-204735	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-204525	Lab File ID:	211SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/11/2013 0340			Final Weight/Volume:	50 mL
Prep Date:	12/10/2013 1200				

---

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.0048		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	0.60		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	ND		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-50090-1

**Client Sample ID: MW-39**

Lab Sample ID: 280-50090-2

Date Sampled: 12/05/2013 1100

Client Matrix: Water

Date Received: 12/09/2013 0910

**6010B Metals (ICP)-Total Recoverable**

Analysis Method:	6010B	Analysis Batch:	280-205009	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-204518	Lab File ID:	26a02121113.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/11/2013 2028			Final Weight/Volume:	50 mL
Prep Date:	12/11/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	0.0070		0.0030	0.0030
Iron, Total	37		0.060	0.060

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-204779	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-204520	Lab File ID:	26a06121013.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/10/2013 2210			Final Weight/Volume:	50 mL
Prep Date:	12/10/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	12		0.040	0.040
Cobalt, Dissolved	0.0078		0.0030	0.0030
Iron, Dissolved	36		0.060	0.060
Magnesium, Dissolved	7.8		0.050	0.050
Potassium, Dissolved	ND		1.0	1.0
Sodium, Dissolved	8.1		1.0	1.0

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-204735	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-204519	Lab File ID:	205SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/11/2013 0321			Final Weight/Volume:	50 mL
Prep Date:	12/10/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	0.018		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Manganese, Total	0.47		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Selenium, Total	ND		0.0010	0.0010
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	ND		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-50090-1

**Client Sample ID: MW-39**

Lab Sample ID: 280-50090-2

Date Sampled: 12/05/2013 1100

Client Matrix: Water

Date Received: 12/09/2013 0910

---

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-204735	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-204525	Lab File ID:	212AREF.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/11/2013 0343			Final Weight/Volume:	50 mL
Prep Date:	12/10/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.012		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	0.46		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	ND		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-50090-1

**Client Sample ID: MW-33A**

Lab Sample ID: 280-50090-4

Date Sampled: 12/05/2013 1450

Client Matrix: Water

Date Received: 12/09/2013 0910

**6010B Metals (ICP)-Total Recoverable**

Analysis Method:	6010B	Analysis Batch:	280-205009	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-204518	Lab File ID:	26a02121113.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/11/2013 2030			Final Weight/Volume:	50 mL
Prep Date:	12/11/2013 0730				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	1.8		0.060	0.060

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-204779	Instrument ID:	MT_026
Prep Method:	3005A	Prep Batch:	280-204520	Lab File ID:	26a06121013.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/10/2013 2213			Final Weight/Volume:	50 mL
Prep Date:	12/10/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	13		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	0.46		0.060	0.060
Magnesium, Dissolved	6.4		0.050	0.050
Potassium, Dissolved	ND		1.0	1.0
Sodium, Dissolved	3.6		1.0	1.0

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-204735	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-204519	Lab File ID:	206SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/11/2013 0324			Final Weight/Volume:	50 mL
Prep Date:	12/10/2013 1200				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	0.0021		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	0.0020		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Manganese, Total	0.027		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Selenium, Total	ND		0.0010	0.0010
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	0.0025		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-50090-1

**Client Sample ID: MW-33A**

Lab Sample ID: 280-50090-4

Date Sampled: 12/05/2013 1450

Client Matrix: Water

Date Received: 12/09/2013 0910

---

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-204735	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-204525	Lab File ID:	219SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/11/2013 0404			Final Weight/Volume:	50 mL
Prep Date:	12/10/2013 1200				

---

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.0012		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	0.017		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	ND		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

Client: Waste Management

Job Number: 280-50090-1

General Chemistry

Client Sample ID: MW-2B1

Lab Sample ID: 280-50090-1

Date Sampled: 12/05/2013 1004

Client Matrix: Water

Date Received: 12/09/2013 0910

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	1.7		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-206593	Analysis Date: 12/20/2013 2321					
Sulfate	4.4		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-206593	Analysis Date: 12/20/2013 2321					
Ammonia (as N)	0.048		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-206591	Analysis Date: 12/24/2013 1113					
Nitrate as N	ND		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206377	Analysis Date: 12/10/2013 2059					
Alkalinity, Total (As CaCO3)	54		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204966	Analysis Date: 12/11/2013 2056					
Alkalinity, Bicarbonate (As CaCO3)	54		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204966	Analysis Date: 12/11/2013 2056					
Total Dissolved Solids (TDS)	78		mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-205045	Analysis Date: 12/12/2013 1548					
Total Suspended Solids	ND		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-204720	Analysis Date: 12/11/2013 0742					
Total Organic Carbon - Average	ND		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-205760	Analysis Date: 12/17/2013 1948					



Client: Waste Management

Job Number: 280-50090-1

General Chemistry

Client Sample ID: MW-39

Lab Sample ID: 280-50090-2

Date Sampled: 12/05/2013 1100

Client Matrix: Water

Date Received: 12/09/2013 0910

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	4.8		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-206593			Analysis Date: 12/20/2013 2338			
Sulfate	ND		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-206593			Analysis Date: 12/20/2013 2338			
Ammonia (as N)	0.43		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-206359			Analysis Date: 12/20/2013 1411			
Nitrate as N	5.5		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206377			Analysis Date: 12/10/2013 2059			
Alkalinity, Total (As CaCO3)	99		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204966			Analysis Date: 12/11/2013 2102			
Alkalinity, Bicarbonate (As CaCO3)	99		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204966			Analysis Date: 12/11/2013 2102			
Total Dissolved Solids (TDS)	98		mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-205045			Analysis Date: 12/12/2013 1548			
Total Suspended Solids	36		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-204720			Analysis Date: 12/11/2013 0742			
Total Organic Carbon - Average	3.0		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-205760			Analysis Date: 12/17/2013 2003			

Client: Waste Management

Job Number: 280-50090-1

General Chemistry

Client Sample ID: MW-33A

Lab Sample ID: 280-50090-4

Date Sampled: 12/05/2013 1450

Client Matrix: Water

Date Received: 12/09/2013 0910

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	2.5		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-206593	Analysis Date: 12/20/2013 2356					
Sulfate	3.0		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-206593	Analysis Date: 12/20/2013 2356					
Ammonia (as N)	0.059		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-206359	Analysis Date: 12/20/2013 1413					
Nitrate as N	0.17		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206377	Analysis Date: 12/10/2013 2059					
Alkalinity, Total (As CaCO3)	60		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204966	Analysis Date: 12/11/2013 2110					
Alkalinity, Bicarbonate (As CaCO3)	60		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-204966	Analysis Date: 12/11/2013 2110					
Total Dissolved Solids (TDS)	76		mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-205045	Analysis Date: 12/12/2013 1548					
Total Suspended Solids	8.4		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-204720	Analysis Date: 12/11/2013 0742					
Total Organic Carbon - Average	ND		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-205760	Analysis Date: 12/17/2013 2053					

## DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-50090-1

Lab Section	Qualifier	Description
GC/MS VOA	F	MS/MSD Recovery and/or RPD 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.
	X	Surrogate is outside control limits
Metals	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F	MS/MSD Recovery and/or RPD exceeds the control limits

# QUALITY CONTROL RESULTS

## Quality Control Results

Client: Waste Management

Job Number: 280-50090-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Analysis Batch:480-157104</b>					
LCS 480-157104/4	Lab Control Sample	T	Water	8260C	
MB 480-157104/6	Method Blank	T	Water	8260C	
280-50090-1	MW-2B1	T	Water	8260C	
280-50090-2	MW-39	T	Water	8260C	
280-50090-3TB	TRIP BLANK	T	Water	8260C	
280-50090-4	MW-33A	T	Water	8260C	
480-51473-D-2 MS	Matrix Spike	T	Water	8260C	
480-51473-D-2 MSD	Matrix Spike Duplicate	T	Water	8260C	
<b>Analysis Batch:480-157208</b>					
LCS 480-157208/5	Lab Control Sample	T	Water	8260C SIM	
LCSD 480-157208/12	Lab Control Sample Duplicate	T	Water	8260C SIM	
MB 480-157208/7	Method Blank	T	Water	8260C SIM	
280-50090-1	MW-2B1	T	Water	8260C SIM	
280-50090-2	MW-39	T	Water	8260C SIM	
280-50090-3TB	TRIP BLANK	T	Water	8260C SIM	
280-50090-4	MW-33A	T	Water	8260C SIM	

#### Report Basis

T = Total

## Quality Control Results

Client: Waste Management

Job Number: 280-50090-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
<b>Metals</b>					
<b>Prep Batch: 280-204518</b>					
LCS 280-204518/2-A	Lab Control Sample	R	Water	3005A	
MB 280-204518/1-A	Method Blank	R	Water	3005A	
280-50025-C-11-C MS	Matrix Spike	R	Water	3005A	
280-50025-C-11-D MSD	Matrix Spike Duplicate	R	Water	3005A	
280-50090-1	MW-2B1	R	Water	3005A	
280-50090-2	MW-39	R	Water	3005A	
280-50090-4	MW-33A	R	Water	3005A	
<b>Prep Batch: 280-204519</b>					
LCS 280-204519/2-A	Lab Control Sample	R	Water	3005A	
MB 280-204519/1-A	Method Blank	R	Water	3005A	
280-50021-M-1-C MS	Matrix Spike	R	Water	3005A	
280-50021-M-1-D MSD	Matrix Spike Duplicate	R	Water	3005A	
280-50090-1	MW-2B1	R	Water	3005A	
280-50090-2	MW-39	R	Water	3005A	
280-50090-4	MW-33A	R	Water	3005A	
<b>Prep Batch: 280-204520</b>					
LCS 280-204520/2-A	Lab Control Sample	R	Water	3005A	
MB 280-204520/1-A	Method Blank	R	Water	3005A	
280-50062-A-5-G MS	Matrix Spike	D	Water	3005A	
280-50062-A-5-H MSD	Matrix Spike Duplicate	D	Water	3005A	
280-50090-1	MW-2B1	D	Water	3005A	
280-50090-2	MW-39	D	Water	3005A	
280-50090-4	MW-33A	D	Water	3005A	
<b>Prep Batch: 280-204525</b>					
LCS 280-204525/2-A	Lab Control Sample	R	Water	3005A	
MB 280-204525/1-A	Method Blank	R	Water	3005A	
280-50090-1	MW-2B1	D	Water	3005A	
280-50090-2	MW-39	D	Water	3005A	
280-50090-2MS	Matrix Spike	D	Water	3005A	
280-50090-2MSD	Matrix Spike Duplicate	D	Water	3005A	
280-50090-4	MW-33A	D	Water	3005A	

## Quality Control Results

Client: Waste Management

Job Number: 280-50090-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Analysis Batch:280-204735</b>					
LCS 280-204519/2-A	Lab Control Sample	R	Water	6020	280-204519
MB 280-204519/1-A	Method Blank	R	Water	6020	280-204519
LCS 280-204525/2-A	Lab Control Sample	R	Water	6020	280-204525
MB 280-204525/1-A	Method Blank	R	Water	6020	280-204525
280-50021-M-1-C MS	Matrix Spike	R	Water	6020	280-204519
280-50021-M-1-D MSD	Matrix Spike Duplicate	R	Water	6020	280-204519
280-50090-1	MW-2B1	R	Water	6020	280-204519
280-50090-1	MW-2B1	D	Water	6020	280-204525
280-50090-2	MW-39	R	Water	6020	280-204519
280-50090-2	MW-39	D	Water	6020	280-204525
280-50090-2MS	Matrix Spike	D	Water	6020	280-204525
280-50090-2MSD	Matrix Spike Duplicate	D	Water	6020	280-204525
280-50090-4	MW-33A	R	Water	6020	280-204519
280-50090-4	MW-33A	D	Water	6020	280-204525
<b>Analysis Batch:280-204779</b>					
LCS 280-204520/2-A	Lab Control Sample	R	Water	6010B	280-204520
MB 280-204520/1-A	Method Blank	R	Water	6010B	280-204520
280-50062-A-5-G MS	Matrix Spike	D	Water	6010B	280-204520
280-50062-A-5-H MSD	Matrix Spike Duplicate	D	Water	6010B	280-204520
280-50090-1	MW-2B1	D	Water	6010B	280-204520
280-50090-2	MW-39	D	Water	6010B	280-204520
280-50090-4	MW-33A	D	Water	6010B	280-204520
<b>Analysis Batch:280-205009</b>					
LCS 280-204518/2-A	Lab Control Sample	R	Water	6010B	280-204518
MB 280-204518/1-A	Method Blank	R	Water	6010B	280-204518
280-50025-C-11-C MS	Matrix Spike	R	Water	6010B	280-204518
280-50025-C-11-D MSD	Matrix Spike Duplicate	R	Water	6010B	280-204518
280-50090-1	MW-2B1	R	Water	6010B	280-204518
280-50090-2	MW-39	R	Water	6010B	280-204518
280-50090-4	MW-33A	R	Water	6010B	280-204518

**Report Basis**

D = Dissolved

R = Total Recoverable

## Quality Control Results

Client: Waste Management

Job Number: 280-50090-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-204720</b>					
LCS 280-204720/2	Lab Control Sample	T	Water	SM 2540D	
LCSD 280-204720/3	Lab Control Sample Duplicate	T	Water	SM 2540D	
MB 280-204720/1	Method Blank	T	Water	SM 2540D	
280-50038-B-1 DU	Duplicate	T	Water	SM 2540D	
280-50090-1	MW-2B1	T	Water	SM 2540D	
280-50090-2	MW-39	T	Water	SM 2540D	
280-50090-4	MW-33A	T	Water	SM 2540D	
<b>Analysis Batch:280-204966</b>					
LCS 280-204966/4	Lab Control Sample	T	Water	SM 2320B	
LCSD 280-204966/5	Lab Control Sample Duplicate	T	Water	SM 2320B	
MB 280-204966/6	Method Blank	T	Water	SM 2320B	
200-19926-N-5 DU	Duplicate	T	Water	SM 2320B	
280-50090-1	MW-2B1	T	Water	SM 2320B	
280-50090-2	MW-39	T	Water	SM 2320B	
280-50090-4	MW-33A	T	Water	SM 2320B	
<b>Analysis Batch:280-205045</b>					
LCS 280-205045/2	Lab Control Sample	T	Water	SM 2540C	
LCSD 280-205045/3	Lab Control Sample Duplicate	T	Water	SM 2540C	
MB 280-205045/1	Method Blank	T	Water	SM 2540C	
280-50090-1	MW-2B1	T	Water	SM 2540C	
280-50090-2	MW-39	T	Water	SM 2540C	
280-50090-4	MW-33A	T	Water	SM 2540C	
280-50150-A-1 DU	Duplicate	T	Water	SM 2540C	
<b>Analysis Batch:280-205760</b>					
LCS 280-205760/3	Lab Control Sample	T	Water	SM 5310B	
LCSD 280-205760/4	Lab Control Sample Duplicate	T	Water	SM 5310B	
MB 280-205760/5	Method Blank	T	Water	SM 5310B	
280-50029-D-1 MS	Matrix Spike	T	Water	SM 5310B	
280-50029-D-1 MSD	Matrix Spike Duplicate	T	Water	SM 5310B	
280-50090-1	MW-2B1	T	Water	SM 5310B	
280-50090-2	MW-39	T	Water	SM 5310B	
280-50090-4	MW-33A	T	Water	SM 5310B	
<b>Analysis Batch:280-206359</b>					
LCS 280-206359/19	Lab Control Sample	T	Water	350.1	
LCSD 280-206359/20	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-206359/21	Method Blank	T	Water	350.1	
280-49908-A-1 MS	Matrix Spike	T	Water	350.1	
280-49908-A-1 MSD	Matrix Spike Duplicate	T	Water	350.1	
280-50090-2	MW-39	T	Water	350.1	
280-50090-4	MW-33A	T	Water	350.1	

TestAmerica Denver



## Quality Control Results

Client: Waste Management

Job Number: 280-50090-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-206377</b>					
MB 280-206377/1	Method Blank	T	Water	353.2	
280-50090-1	MW-2B1	T	Water	353.2	
280-50090-2	MW-39	T	Water	353.2	
280-50090-4	MW-33A	T	Water	353.2	
<b>Analysis Batch:280-206591</b>					
LCS 280-206591/19	Lab Control Sample	T	Water	350.1	
LCSD 280-206591/20	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-206591/21	Method Blank	T	Water	350.1	
280-50090-1	MW-2B1	T	Water	350.1	
280-50151-B-4 MS	Matrix Spike	T	Water	350.1	
280-50151-B-4 MSD	Matrix Spike Duplicate	T	Water	350.1	
<b>Analysis Batch:280-206593</b>					
LCS 280-206593/4	Lab Control Sample	T	Water	300.0	
LCSD 280-206593/5	Lab Control Sample Duplicate	T	Water	300.0	
MB 280-206593/6	Method Blank	T	Water	300.0	
280-50090-1	MW-2B1	T	Water	300.0	
280-50090-2	MW-39	T	Water	300.0	
280-50090-4	MW-33A	T	Water	300.0	
280-50530-C-4 DU	Duplicate	T	Water	300.0	
280-50530-C-4 MS	Matrix Spike	T	Water	300.0	
280-50530-C-4 MSD	Matrix Spike Duplicate	T	Water	300.0	

**Report Basis**

T = Total

Client: Waste Management

Job Number: 280-50090-1

**Surrogate Recovery Report**

**8260C Volatile Organic Compounds by GC/MS**

**Client Matrix: Water**

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec
280-50090-1	MW-2B1	98	96	94
280-50090-2	MW-39	97	89	89
280-50090-3	TRIP BLANK	98	92	93
280-50090-4	MW-33A	96	91	90
MB 480-157104/6		99	92	92
LCS 480-157104/4		97	94	92
480-51473-D-2 MS		96	90	91
480-51473-D-2 MSD		97	89	91

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	66-137
BFB = 4-Bromofluorobenzene (Surr)	73-120
TOL = Toluene-d8 (Surr)	71-126

Client: Waste Management

Job Number: 280-50090-1

**Surrogate Recovery Report**

**8260C SIM Volatile Organic Compounds (GC/MS)**

**Client Matrix: Water**

Lab Sample ID	Client Sample ID	DBFM %Rec	TBA %Rec
280-50090-1	MW-2B1	142	147
280-50090-2	MW-39	146	133
280-50090-3	TRIP BLANK	150	131
280-50090-4	MW-33A	154X	148
MB 480-157208/7		147	134
LCS 480-157208/5		132	113
LCSD 480-157208/12		144	127

Surrogate	Acceptance Limits
DBFM = Dibromofluoromethane (Surr)	50-150
TBA = TBA-d9 (Surr)	50-150

## Quality Control Results

Client: Waste Management

Job Number: 280-50090-1

**Method Blank - Batch: 480-157104**

**Method: 8260C  
Preparation: 5030C**

Lab Sample ID: MB 480-157104/6  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/12/2013 0013  
 Prep Date: 12/12/2013 0013  
 Leach Date: N/A

Analysis Batch: 480-157104  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973C  
 Lab File ID: C35115.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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-50090-1

**Method Blank - Batch: 480-157104**

**Method: 8260C  
Preparation: 5030C**

Lab Sample ID: MB 480-157104/6  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/12/2013 0013  
 Prep Date: 12/12/2013 0013  
 Leach Date: N/A

Analysis Batch: 480-157104  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973C  
 Lab File ID: C35115.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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-50090-1

**Method Blank - Batch: 480-157104**

**Method: 8260C  
Preparation: 5030C**

Lab Sample ID: MB 480-157104/6  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/12/2013 0013  
 Prep Date: 12/12/2013 0013  
 Leach Date: N/A

Analysis Batch: 480-157104  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973C  
 Lab File ID: C35115.D  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

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)	99	66 - 137
4-Bromofluorobenzene (Surr)	92	73 - 120
Toluene-d8 (Surr)	92	71 - 126

**Method Blank TICs- Batch: 480-157104**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qual
67-72-1	Hexachloroethane TIC	0.00	ND	

## Quality Control Results

Client: Waste Management

Job Number: 280-50090-1

**Lab Control Sample - Batch: 480-157104**

**Method: 8260C**

**Preparation: 5030C**

Lab Sample ID: LCS 480-157104/4	Analysis Batch: 480-157104	Instrument ID: HP5973C
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C35113.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/11/2013 2322	Units: ug/L	Final Weight/Volume: 5 mL
Prep Date: 12/11/2013 2322		
Leach Date: N/A		

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethane	25.0	24.7	99	71 - 129	
1,1-Dichloroethene	25.0	24.5	98	58 - 121	
1,2,4-Trimethylbenzene	25.0	24.2	97	76 - 121	
1,2-Dichlorobenzene	25.0	23.2	93	80 - 124	
1,2-Dichloroethane	25.0	24.9	100	75 - 127	
Benzene	25.0	24.2	97	71 - 124	
Chlorobenzene	25.0	23.4	93	72 - 120	
cis-1,2-Dichloroethene	25.0	24.3	97	74 - 124	
Ethylbenzene	25.0	23.3	93	77 - 123	
Methyl tert-butyl ether	25.0	24.6	98	64 - 127	
m-Xylene & p-Xylene	50.0	47.7	95	76 - 122	
o-Xylene	25.0	23.6	94	76 - 122	
Tetrachloroethene	25.0	23.5	94	74 - 122	
Toluene	25.0	23.8	95	80 - 122	
trans-1,2-Dichloroethene	25.0	24.3	97	73 - 127	
Trichloroethene	25.0	24.6	98	74 - 123	
Surrogate		% Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		97		66 - 137	
4-Bromofluorobenzene (Surr)		94		73 - 120	
Toluene-d8 (Surr)		92		71 - 126	

## Quality Control Results

Client: Waste Management

Job Number: 280-50090-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-157104**

**Method: 8260C  
Preparation: 5030C**

MS Lab Sample ID: 480-51473-D-2 MS	Analysis Batch: 480-157104	Instrument ID: HP5973C
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C35134.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/12/2013 0824		Final Weight/Volume: 5 mL
Prep Date: 12/12/2013 0824		
Leach Date: N/A		

MSD Lab Sample ID: 480-51473-D-2 MSD	Analysis Batch: 480-157104	Instrument ID: HP5973C
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C35135.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/12/2013 0850		Final Weight/Volume: 5 mL
Prep Date: 12/12/2013 0850		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
1,1-Dichloroethane	110	119	71 - 129	8	20		
1,1-Dichloroethene	113	122	58 - 121	8	16		F
1,2-Dichlorobenzene	97	105	80 - 124	8	20		
1,2-Dichloroethane	108	116	75 - 127	8	20		
Benzene	107	117	71 - 124	9	13		
Chlorobenzene	99	106	72 - 120	6	25		
cis-1,2-Dichloroethene	107	114	74 - 124	7	15		
Ethylbenzene	99	107	77 - 123	7	15		
Methyl tert-butyl ether	105	105	64 - 127	0	37		
m-Xylene & p-Xylene	103	110	76 - 122	7	16		
o-Xylene	99	106	76 - 122	6	16		
Tetrachloroethene	103	109	74 - 122	5	20		
Toluene	102	109	80 - 122	6	15		
trans-1,2-Dichloroethene	108	118	73 - 127	9	20		
Trichloroethene	107	116	74 - 123	8	16		
Surrogate		MS % Rec	MSD % Rec		Acceptance Limits		
1,2-Dichloroethane-d4 (Surr)		96	97		66 - 137		
4-Bromofluorobenzene (Surr)		90	89		73 - 120		
Toluene-d8 (Surr)		91	91		71 - 126		



**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-157104**

**Method: 8260C  
Preparation: 5030C**

MS Lab Sample ID: 480-51473-D-2 MS      Units: ug/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/12/2013 0824  
 Prep Date: 12/12/2013 0824  
 Leach Date: N/A

MSD Lab Sample ID: 480-51473-D-2 MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/12/2013 0850  
 Prep Date: 12/12/2013 0850  
 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	27.4	29.7
1,1-Dichloroethene	ND	25.0	25.0	28.2	30.5
1,2-Dichlorobenzene	ND	25.0	25.0	24.3	26.3
1,2-Dichloroethane	ND	25.0	25.0	26.9	29.0
Benzene	ND	25.0	25.0	26.8	29.2
Chlorobenzene	ND	25.0	25.0	24.9	26.5
cis-1,2-Dichloroethene	ND	25.0	25.0	26.6	28.6
Ethylbenzene	ND	25.0	25.0	24.9	26.7
Methyl tert-butyl ether	ND	25.0	25.0	26.3	26.2
m-Xylene & p-Xylene	ND	50.0	50.0	51.4	54.9
o-Xylene	ND	25.0	25.0	24.9	26.4
Tetrachloroethene	ND	25.0	25.0	25.8	27.2
Toluene	ND	25.0	25.0	25.6	27.1
trans-1,2-Dichloroethene	ND	25.0	25.0	26.9	29.4
Trichloroethene	ND	25.0	25.0	26.9	29.0

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Method Blank - Batch: 480-157208**

**Method: 8260C SIM  
Preparation: 5030C**

Lab Sample ID:	MB 480-157208/7	Analysis Batch:	480-157208	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J6809.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/12/2013 1230	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/12/2013 1230				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Vinyl chloride	ND		0.0040	0.020
Surrogate	% Rec		Acceptance Limits	
Dibromofluoromethane (Surr)	147		50 - 150	
TBA-d9 (Surr)	134		50 - 150	

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 480-157208**

**Method: 8260C SIM  
Preparation: 5030C**

LCS Lab Sample ID:	LCS 480-157208/5	Analysis Batch:	480-157208	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J6807.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/12/2013 1138	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/12/2013 1138				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 480-157208/12	Analysis Batch:	480-157208	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J6810.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/12/2013 1255	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/12/2013 1255				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Vinyl chloride	128	130	50 - 150	1	20		
Surrogate	LCS % Rec		LCSD % Rec	Acceptance Limits			
Dibromofluoromethane (Surr)	132		144			50 - 150	
TBA-d9 (Surr)	113		127			50 - 150	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 480-157208**

**Method: 8260C SIM  
Preparation: 5030C**

LCS Lab Sample ID: LCS 480-157208/5      Units: ug/L  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/12/2013 1138  
Prep Date: 12/12/2013 1138  
Leach Date: N/A

LCSD Lab Sample ID: LCSD 480-157208/12  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/12/2013 1255  
Prep Date: 12/12/2013 1255  
Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Vinyl chloride	0.200	0.200	0.257	0.259

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Method Blank - Batch: 280-204518**

Lab Sample ID: MB 280-204518/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1938  
 Prep Date: 12/11/2013 0730  
 Leach Date: N/A

Analysis Batch: 280-205009  
 Prep Batch: 280-204518  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26a02121113.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	ND		0.060	0.060

**Lab Control Sample - Batch: 280-204518**

Lab Sample ID: LCS 280-204518/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1941  
 Prep Date: 12/11/2013 0730  
 Leach Date: N/A

Analysis Batch: 280-205009  
 Prep Batch: 280-204518  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26a02121113.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cobalt, Total	0.500	0.500	100	89 - 111	
Iron, Total	1.00	1.03	103	89 - 115	

**Matrix Spike/  
 Matrix Spike Duplicate Recovery Report - Batch: 280-204518**

MS Lab Sample ID: 280-50025-C-11-C MS  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 2021  
 Prep Date: 12/11/2013 0730  
 Leach Date: N/A

Analysis Batch: 280-205009  
 Prep Batch: 280-204518  
 Leach Batch: N/A

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26a02121113.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-50025-C-11-D MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 2023  
 Prep Date: 12/11/2013 0730  
 Leach Date: N/A

Analysis Batch: 280-205009  
 Prep Batch: 280-204518  
 Leach Batch: N/A

Instrument ID: MT\_026  
 Lab File ID: 26a02121113.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Cobalt, Total	98	98	82 - 119	0	20		
Iron, Total	84	100	52 - 155	2	20	4	4

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-204518**

**Method: 6010B  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-50025-C-11-C MS      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 2021  
 Prep Date: 12/11/2013 0730  
 Leach Date: N/A

MSD Lab Sample ID: 280-50025-C-11-D MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 2023  
 Prep Date: 12/11/2013 0730  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Cobalt, Total	0.0054	0.500	0.500	0.494	0.493
Iron, Total	8.6	1.00	1.00	9.42      4	9.58      4

## Quality Control Results

Client: Waste Management

Job Number: 280-50090-1

**Method Blank - Batch: 280-204520**

Lab Sample ID: MB 280-204520/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/10/2013 2201  
 Prep Date: 12/10/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-204779  
 Prep Batch: 280-204520  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26a06121013.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Calcium, Dissolved	ND		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	ND		0.060	0.060
Magnesium, Dissolved	ND		0.050	0.050
Potassium, Dissolved	ND		1.0	1.0
Sodium, Dissolved	ND		1.0	1.0

**Lab Control Sample - Batch: 280-204520**

Lab Sample ID: LCS 280-204520/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/10/2013 2203  
 Prep Date: 12/10/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-204779  
 Prep Batch: 280-204520  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_026  
 Lab File ID: 26a06121013.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Calcium, Dissolved	50.0	49.2	98	90 - 111	
Cobalt, Dissolved	0.500	0.522	104	89 - 111	
Iron, Dissolved	1.00	0.958	96	89 - 115	
Magnesium, Dissolved	50.0	50.8	102	90 - 113	
Potassium, Dissolved	50.0	50.7	101	89 - 114	
Sodium, Dissolved	50.0	50.3	101	90 - 115	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-204520**

**Method: 6010B  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID:	280-50062-A-5-G MS	Analysis Batch:	280-204779	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-204520	Lab File ID:	26a06121013.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/10/2013 2311			Final Weight/Volume:	50 mL
Prep Date:	12/10/2013 1200				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50062-A-5-H MSD	Analysis Batch:	280-204779	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-204520	Lab File ID:	26a06121013.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/10/2013 2314			Final Weight/Volume:	50 mL
Prep Date:	12/10/2013 1200				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Calcium, Dissolved	94	91	48 - 153	0	20	4	4
Cobalt, Dissolved	102	102	82 - 119	0	20		
Iron, Dissolved	92	92	52 - 155	0	20	4	4
Magnesium, Dissolved	97	99	62 - 146	1	20		
Potassium, Dissolved	103	103	76 - 132	1	20		
Sodium, Dissolved	101	101	70 - 203	0	20		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-204520**

**Method: 6010B  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID:	280-50062-A-5-G MS	Units:	mg/L	MSD Lab Sample ID:	280-50062-A-5-H MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/10/2013 2311			Analysis Date:	12/10/2013 2314
Prep Date:	12/10/2013 1200			Prep Date:	12/10/2013 1200
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS		MSD	
				Result/Qual	MS	Result/Qual	MSD
Calcium, Dissolved	280	50.0	50.0	331	4	330	4
Cobalt, Dissolved	ND	0.500	0.500	0.508		0.508	
Iron, Dissolved	5.9	1.00	1.00	6.85	4	6.85	4
Magnesium, Dissolved	73	50.0	50.0	121		122	
Potassium, Dissolved	5.7	50.0	50.0	57.5		57.1	
Sodium, Dissolved	51	50.0	50.0	102		102	

## Quality Control Results

Client: Waste Management

Job Number: 280-50090-1

**Method Blank - Batch: 280-204519**

Lab Sample ID: MB 280-204519/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 0241  
 Prep Date: 12/10/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-204735  
 Prep Batch: 280-204519  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_024  
 Lab File ID: 192\_BLK.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	ND		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Manganese, Total	ND		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Selenium, Total	ND		0.0010	0.0010
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	ND		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

**Lab Control Sample - Batch: 280-204519**

Lab Sample ID: LCS 280-204519/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 0244  
 Prep Date: 12/10/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-204735  
 Prep Batch: 280-204519  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_024  
 Lab File ID: 193\_LCS.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony, Total	0.0400	0.0385	96	85 - 115	
Barium, Total	0.0400	0.0390	97	85 - 118	
Beryllium, Total	0.0400	0.0395	99	80 - 125	
Cadmium, Total	0.0400	0.0405	101	85 - 115	
Chromium, Total	0.0400	0.0392	98	84 - 121	
Copper, Total	0.0400	0.0410	103	85 - 119	
Lead, Total	0.0400	0.0406	102	85 - 118	
Manganese, Total	0.0400	0.0389	97	85 - 117	
Nickel, Total	0.0400	0.0404	101	85 - 119	
Selenium, Total	0.0400	0.0406	101	77 - 122	
Silver, Total	0.0400	0.0410	103	85 - 115	
Thallium, Total	0.0400	0.0401	100	85 - 118	
Vanadium, Total	0.0400	0.0387	97	85 - 120	
Zinc, Total	0.0400	0.0404	101	83 - 122	



Quality Control Results

Client: Waste Management

Job Number: 280-50090-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-204519**

**Method: 6020  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-50021-M-1-C MS  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/11/2013 0256  
Prep Date: 12/10/2013 1200  
Leach Date: N/A

Analysis Batch: 280-204735  
Prep Batch: 280-204519  
Leach Batch: N/A

Instrument ID: MT\_024  
Lab File ID: 197\_MS.D  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-50021-M-1-D MSD  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/11/2013 0300  
Prep Date: 12/10/2013 1200  
Leach Date: N/A

Analysis Batch: 280-204735  
Prep Batch: 280-204519  
Leach Batch: N/A

Instrument ID: MT\_024  
Lab File ID: 198\_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, Total	96	101	85 - 115	5	20		
Barium, Total	114	111	85 - 118	1	20		
Beryllium, Total	99	101	80 - 125	1	20		
Cadmium, Total	95	94	85 - 115	0	20		
Chromium, Total	104	104	84 - 121	0	20		
Copper, Total	96	95	85 - 119	1	20		
Lead, Total	91	91	85 - 118	0	20		
Manganese, Total	115	120	85 - 117	1	20	4	4
Nickel, Total	97	96	85 - 119	0	20		
Selenium, Total	99	100	77 - 122	2	20		
Silver, Total	92	91	85 - 115	1	20		
Thallium, Total	92	92	85 - 118	0	20		
Vanadium, Total	107	107	85 - 120	0	20		
Zinc, Total	98	98	83 - 122	1	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-204519**

**Method: 6020  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-50021-M-1-C MS      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 0256  
 Prep Date: 12/10/2013 1200  
 Leach Date: N/A

MSD Lab Sample ID: 280-50021-M-1-D MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 0300  
 Prep Date: 12/10/2013 1200  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Antimony, Total	ND	0.0400	0.0400	0.0384	0.0403
Barium, Total	0.16	0.0400	0.0400	0.204	0.203
Beryllium, Total	ND	0.0400	0.0400	0.0397	0.0403
Cadmium, Total	ND	0.0400	0.0400	0.0379	0.0377
Chromium, Total	0.0037	0.0400	0.0400	0.0454	0.0453
Copper, Total	ND	0.0400	0.0400	0.0386	0.0381
Lead, Total	ND	0.0400	0.0400	0.0365	0.0366
Manganese, Total	0.29	0.0400	0.0400	0.337      4	0.339      4
Nickel, Total	0.065	0.0400	0.0400	0.104	0.103
Selenium, Total	ND	0.0400	0.0400	0.0395	0.0401
Silver, Total	ND	0.0400	0.0400	0.0367	0.0364
Thallium, Total	ND	0.0400	0.0400	0.0369	0.0369
Vanadium, Total	0.0025	0.0400	0.0400	0.0454	0.0454
Zinc, Total	ND	0.0400	0.0400	0.0393	0.0391

## Quality Control Results

Client: Waste Management

Job Number: 280-50090-1

**Method Blank - Batch: 280-204525**

Lab Sample ID: MB 280-204525/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 0334  
 Prep Date: 12/10/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-204735  
 Prep Batch: 280-204525  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_024  
 Lab File ID: 209\_BLK.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	ND		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	ND		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	ND		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

**Lab Control Sample - Batch: 280-204525**

Lab Sample ID: LCS 280-204525/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 0337  
 Prep Date: 12/10/2013 1200  
 Leach Date: N/A

Analysis Batch: 280-204735  
 Prep Batch: 280-204525  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_024  
 Lab File ID: 210\_LCS.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony, Dissolved	0.0400	0.0384	96	85 - 115	
Barium, Dissolved	0.0400	0.0399	100	85 - 118	
Beryllium, Dissolved	0.0400	0.0411	103	80 - 125	
Cadmium, Dissolved	0.0400	0.0399	100	85 - 115	
Chromium, Dissolved	0.0400	0.0385	96	84 - 121	
Copper, Dissolved	0.0400	0.0404	101	85 - 119	
Lead, Dissolved	0.0400	0.0404	101	85 - 118	
Manganese, Dissolved	0.0400	0.0391	98	85 - 117	
Nickel, Dissolved	0.0400	0.0398	100	85 - 119	
Selenium, Dissolved	0.0400	0.0424	106	77 - 122	
Silver, Dissolved	0.0400	0.0405	101	85 - 115	
Thallium, Dissolved	0.0400	0.0401	100	85 - 118	
Vanadium, Dissolved	0.0400	0.0385	96	85 - 120	
Zinc, Dissolved	0.0400	0.0398	100	83 - 122	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-204525**

**Method: 6020  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-50090-2  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/11/2013 0352  
Prep Date: 12/10/2013 1200  
Leach Date: N/A

Analysis Batch: 280-204735  
Prep Batch: 280-204525  
Leach Batch: N/A

Instrument ID: MT\_024  
Lab File ID: 215\_MS.D  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-50090-2  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/11/2013 0355  
Prep Date: 12/10/2013 1200  
Leach Date: N/A

Analysis Batch: 280-204735  
Prep Batch: 280-204525  
Leach Batch: N/A

Instrument ID: MT\_024  
Lab File ID: 216\_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	101	100	85 - 115	1	20		
Barium, Dissolved	99	99	85 - 118	0	20		
Beryllium, Dissolved	102	101	80 - 125	1	20		
Cadmium, Dissolved	98	99	85 - 115	1	20		
Chromium, Dissolved	97	96	84 - 121	1	20		
Copper, Dissolved	97	97	85 - 119	0	20		
Lead, Dissolved	133	98	85 - 118	30	20	F	F
Manganese, Dissolved	109	104	85 - 117	0	20	4	4
Nickel, Dissolved	104	104	85 - 119	0	20		
Selenium, Dissolved	105	104	77 - 122	1	20		
Silver, Dissolved	97	98	85 - 115	0	20		
Thallium, Dissolved	98	99	85 - 118	1	20		
Vanadium, Dissolved	99	99	85 - 120	0	20		
Zinc, Dissolved	102	99	83 - 122	3	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-204525**

**Method: 6020  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-50090-2                      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 0352  
 Prep Date: 12/10/2013 1200  
 Leach Date: N/A

MSD Lab Sample ID: 280-50090-2  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 0355  
 Prep Date: 12/10/2013 1200  
 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	0.0405	0.0401	
Barium, Dissolved	0.012	0.0400	0.0400	0.0519	0.0519	
Beryllium, Dissolved	ND	0.0400	0.0400	0.0409	0.0405	
Cadmium, Dissolved	ND	0.0400	0.0400	0.0393	0.0395	
Chromium, Dissolved	ND	0.0400	0.0400	0.0389	0.0385	
Copper, Dissolved	ND	0.0400	0.0400	0.0389	0.0387	
Lead, Dissolved	ND	0.0400	0.0400	0.0531	F 0.0394	F
Manganese, Dissolved	0.46	0.0400	0.0400	0.504	4 0.502	4
Nickel, Dissolved	ND	0.0400	0.0400	0.0417	0.0416	
Selenium, Dissolved	ND	0.0400	0.0400	0.0420	0.0414	
Silver, Dissolved	ND	0.0400	0.0400	0.0389	0.0391	
Thallium, Dissolved	ND	0.0400	0.0400	0.0393	0.0395	
Vanadium, Dissolved	ND	0.0400	0.0400	0.0395	0.0395	
Zinc, Dissolved	ND	0.0400	0.0400	0.0408	0.0395	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Method Blank - Batch: 280-206593**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	MB 280-206593/6	Analysis Batch:	280-206593	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:	
Analysis Date:	12/20/2013 1437	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Chloride	ND		1.0	1.0
Sulfate	ND		1.0	1.0

**Method Reporting Limit Check - Batch: 280-206593**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	MRL 280-206593/3	Analysis Batch:	280-206593	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:	
Analysis Date:	12/20/2013 1345	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	1.00	ND	89	50 - 150	
Sulfate	1.00	ND	54	50 - 150	

**Lab Control Sample/**

**Method: 300.0**  
**Preparation: N/A**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-206593**

LCS Lab Sample ID:	LCS 280-206593/4	Analysis Batch:	280-206593	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:	
Analysis Date:	12/20/2013 1403	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-206593/5	Analysis Batch:	280-206593	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:	
Analysis Date:	12/20/2013 1420	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Chloride	97	97	90 - 110	1	10		
Sulfate	95	95	90 - 110	0	10		

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-206593**

**Method: 300.0  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-206593/4      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2013 1403  
 Prep Date: N/A  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 280-206593/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2013 1420  
 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	24.2	24.4
Sulfate	25.0	25.0	23.7	23.8

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206593**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 280-50530-C-4 MS      Analysis Batch: 280-206593  
 Client Matrix: Water      Prep Batch: N/A  
 Dilution: 10      Leach Batch: N/A  
 Analysis Date: 12/21/2013 0231  
 Prep Date: N/A  
 Leach Date: N/A

Instrument ID: WC\_IC6  
 Lab File ID: 154.TXT  
 Initial Weight/Volume:  
 Final Weight/Volume: 5 mL

MSD Lab Sample ID: 280-50530-C-4 MSD      Analysis Batch: 280-206593  
 Client Matrix: Water      Prep Batch: N/A  
 Dilution: 10      Leach Batch: N/A  
 Analysis Date: 12/21/2013 0249  
 Prep Date: N/A  
 Leach Date: N/A

Instrument ID: WC\_IC6  
 Lab File ID: 155.TXT  
 Initial Weight/Volume:  
 Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chloride	95	97	80 - 120	1	20		
Sulfate	90	92	80 - 120	1	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206593**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 280-50530-C-4 MS      Units: mg/L  
 Client Matrix: Water  
 Dilution: 10  
 Analysis Date: 12/21/2013 0231  
 Prep Date: N/A  
 Leach Date: N/A

MSD Lab Sample ID: 280-50530-C-4 MSD  
 Client Matrix: Water  
 Dilution: 10  
 Analysis Date: 12/21/2013 0249  
 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	210	250	250	445	449
Sulfate	420	250	250	641	647

**Duplicate - Batch: 280-206593**

**Method: 300.0  
Preparation: N/A**

Lab Sample ID: 280-50530-C-4 DU  
 Client Matrix: Water  
 Dilution: 10  
 Analysis Date: 12/21/2013 0214  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206593  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_IC6  
 Lab File ID: 153.TXT  
 Initial Weight/Volume:  
 Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Chloride	210	205	1	15	
Sulfate	420	413	1	15	



**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Method Blank - Batch: 280-206359**

**Method: 350.1  
Preparation: N/A**

Lab Sample ID:	MB 280-206359/21	Analysis Batch:	280-206359	Instrument ID:	WC_Alph 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\122013D.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	12/20/2013 1322	Units:	mg/L	Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Ammonia (as N)	ND		0.030	0.030

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-206359**

**Method: 350.1  
Preparation: N/A**

LCS Lab Sample ID:	LCS 280-206359/19	Analysis Batch:	280-206359	Instrument ID:	WC_Alph 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\122013D.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/20/2013 1317	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-206359/20	Analysis Batch:	280-206359	Instrument ID:	WC_Alph 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\122013D.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/20/2013 1319	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					
Ammonia (as N)	99	99	90 - 110	0	10		

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-206359**

**Method: 350.1  
Preparation: N/A**

LCS Lab Sample ID:	LCS 280-206359/19	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-206359/20
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/20/2013 1317			Analysis Date:	12/20/2013 1319
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
Ammonia (as N)	2.50	2.50	2.48	2.47

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206359**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-49908-A-1 MS	Analysis Batch: 280-206359	Instrument ID: WC_Alph 3
Client Matrix: Water	Prep Batch: N/A	Lab File ID: E:\FLOW_4\122013D.RST
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 20 mL
Analysis Date: 12/20/2013 1326		Final Weight/Volume: 20 mL
Prep Date: N/A		
Leach Date: N/A		

MSD Lab Sample ID: 280-49908-A-1 MSD	Analysis Batch: 280-206359	Instrument ID: WC_Alph 3
Client Matrix: Water	Prep Batch: N/A	Lab File ID: E:\FLOW_4\122013D.RST
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 20 mL
Analysis Date: 12/20/2013 1329		Final Weight/Volume: 20 mL
Prep Date: N/A		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Ammonia (as N)	99	96	90 - 110	1	10		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206359**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-49908-A-1 MS	Units: mg/L	MSD Lab Sample ID: 280-49908-A-1 MSD
Client Matrix: Water		Client Matrix: Water
Dilution: 1.0		Dilution: 1.0
Analysis Date: 12/20/2013 1326		Analysis Date: 12/20/2013 1329
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)	2.5	1.00	1.00	3.49	3.45

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Method Blank - Batch: 280-206591**

Lab Sample ID: MB 280-206591/21  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/24/2013 1049  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206591  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

**Method: 350.1  
 Preparation: N/A**

Instrument ID: WC\_Alph 3  
 Lab File ID: E:\FLOW\_4\122413.RST  
 Initial Weight/Volume: 10 mL  
 Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL	RL
Ammonia (as N)	ND		0.030	0.030

**Lab Control Sample/  
 Lab Control Sample Duplicate Recovery Report - Batch: 280-206591**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-206591/19  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/24/2013 1044  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206591  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 3  
 Lab File ID: E:\FLOW\_4\122413.RST  
 Initial Weight/Volume: 100 mL  
 Final Weight/Volume: 100 mL

LCSD Lab Sample ID: LCSD 280-206591/20  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/24/2013 1047  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206591  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 3  
 Lab File ID: E:\FLOW\_4\122413.RST  
 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)	100	101	90 - 110	0	10		

**Laboratory Control/  
 Laboratory Duplicate Data Report - Batch: 280-206591**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-206591/19  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/24/2013 1044  
 Prep Date: N/A  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-206591/20  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/24/2013 1047  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia (as N)	2.50	2.50	2.51	2.51

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206591**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID:	280-50151-B-4 MS	Analysis Batch:	280-206591	Instrument ID:	WC_Alph 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\122413.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	12/24/2013 1136			Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50151-B-4 MSD	Analysis Batch:	280-206591	Instrument ID:	WC_Alph 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\122413.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	12/24/2013 1138			Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Ammonia (as N)	110	110	90 - 110	0	10		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206591**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID:	280-50151-B-4 MS	Units:	mg/L	MSD Lab Sample ID:	280-50151-B-4 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/24/2013 1136			Analysis Date:	12/24/2013 1138
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)	1.1	1.00	1.00	2.24	2.24

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Method Blank - Batch: 280-206377**

**Method: 353.2  
Preparation: N/A**

Lab Sample ID: MB 280-206377/1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/10/2013 2059  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-206377  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: No Equipment Assigned  
Lab File ID: N/A  
Initial Weight/Volume:  
Final Weight/Volume:

Analyte	Result	Qual	RL	RL
Nitrate as N	ND		0.050	0.050

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Method Blank - Batch: 280-204966**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID: MB 280-204966/6  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1906  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-204966  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_AT2  
 Lab File ID: 121113a.txt  
 Initial Weight/Volume:  
 Final Weight/Volume:

Analyte	Result	Qual	RL	RL
Alkalinity, Total (As CaCO3)	ND		5.0	5.0
Alkalinity, Bicarbonate (As CaCO3)	ND		5.0	5.0

**Lab Control Sample/**

**Method: SM 2320B**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-204966**

**Preparation: N/A**

LCS Lab Sample ID: LCS 280-204966/4  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1848  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-204966  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_AT2  
 Lab File ID: 121113a.txt  
 Initial Weight/Volume:  
 Final Weight/Volume:

LCSD Lab Sample ID: LCSD 280-204966/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1858  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-204966  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_AT2  
 Lab File ID: 121113a.txt  
 Initial Weight/Volume:  
 Final Weight/Volume:

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Alkalinity, Total (As CaCO3)	99	98	90 - 110	1	10		

**Laboratory Control/**

**Method: SM 2320B**

**Laboratory Duplicate Data Report - Batch: 280-204966**

**Preparation: N/A**

LCS Lab Sample ID: LCS 280-204966/4  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1848  
 Prep Date: N/A  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-204966/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/11/2013 1858  
 Prep 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	198	197

## Quality Control Results

Client: Waste Management

Job Number: 280-50090-1

**Duplicate - Batch: 280-204966**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID: 200-19926-N-5 DU  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/11/2013 1926  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-204966  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: WC\_AT2  
Lab File ID: 121113a.txt  
Initial Weight/Volume:  
Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Alkalinity, Total (As CaCO3)	530	537	0.6	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Method Blank - Batch: 280-205045**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	MB 280-205045/1	Analysis Batch:	280-205045	Instrument ID:	No Equipment Assigned
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:	12/12/2013 1548	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Dissolved Solids (TDS)	ND		5.0	5.0

**Lab Control Sample/**

**Method: SM 2540C**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-205045**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-205045/2	Analysis Batch:	280-205045	Instrument ID:	No Equipment Assigned
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:	12/12/2013 1548	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-205045/3	Analysis Batch:	280-205045	Instrument ID:	No Equipment Assigned
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:	12/12/2013 1548	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)	98	97	86 - 110	2	20		

**Laboratory Control/**

**Method: SM 2540C**

**Laboratory Duplicate Data Report - Batch: 280-205045**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-205045/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-205045/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/12/2013 1548			Analysis Date:	12/12/2013 1548
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	492	484



# Quality Control Results

Client: Waste Management

Job Number: 280-50090-1

**Duplicate - Batch: 280-205045**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	280-50150-A-1 DU	Analysis Batch:	280-205045	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/12/2013 1548	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)	1400	1380	2	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Method Blank - Batch: 280-204720**

**Method: SM 2540D**

**Preparation: N/A**

Lab Sample ID:	MB 280-204720/1	Analysis Batch:	280-204720	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/11/2013 0742	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Suspended Solids	ND		4.0	4.0

**Lab Control Sample/**

**Method: SM 2540D**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-204720**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-204720/2	Analysis Batch:	280-204720	Instrument ID:	No Equipment Assigned
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:	12/11/2013 0742	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-204720/3	Analysis Batch:	280-204720	Instrument ID:	No Equipment Assigned
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:	12/11/2013 0742	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Suspended Solids	90	94	86 - 114	4	20		

**Laboratory Control/**

**Method: SM 2540D**

**Laboratory Duplicate Data Report - Batch: 280-204720**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-204720/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-204720/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/11/2013 0742			Analysis Date:	12/11/2013 0742
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 Suspended Solids	100	100	90.0	94.0

## Quality Control Results

Client: Waste Management

Job Number: 280-50090-1

**Duplicate - Batch: 280-204720**

**Method: SM 2540D**

**Preparation: N/A**

Lab Sample ID:	280-50038-B-1 DU	Analysis Batch:	280-204720	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/11/2013 0742	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Suspended Solids	ND	ND	NC	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Method Blank - Batch: 280-205760**

**Method: SM 5310B**

**Preparation: N/A**

Lab Sample ID:	MB 280-205760/5	Analysis Batch:	280-205760	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121713.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/17/2013 1716	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Organic Carbon - Average	ND		1.0	1.0

**Lab Control Sample/**

**Method: SM 5310B**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-205760**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-205760/3	Analysis Batch:	280-205760	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121713.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/17/2013 1638	Units:	mg/L	Final Weight/Volume:	200 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-205760/4	Analysis Batch:	280-205760	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121713.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/17/2013 1657	Units:	mg/L	Final Weight/Volume:	200 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	103	103	88 - 112	0	15		

**Laboratory Control/**

**Method: SM 5310B**

**Laboratory Duplicate Data Report - Batch: 280-205760**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-205760/3	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-205760/4
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/17/2013 1638			Analysis Date:	12/17/2013 1657
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	25.7	25.6

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205760**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID:	280-50029-D-1 MS	Analysis Batch:	280-205760	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121713.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/17/2013 1807			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50029-D-1 MSD	Analysis Batch:	280-205760	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121713.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/17/2013 1825			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	104	104	88 - 112	1	15		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205760**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID:	280-50029-D-1 MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	12/17/2013 1807		
Prep Date:	N/A		
Leach Date:	N/A		

MSD Lab Sample ID:	280-50029-D-1 MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	12/17/2013 1825
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	ND	25.0	25.0	26.1	25.9

## Quality Control Results

Client: Waste Management

Job Number: 280-50090-1

### Laboratory Chronicle

Lab ID: 280-50090-1

Client ID: MW-2B1

Sample Date/Time: 12/05/2013 10:04

Received Date/Time: 12/09/2013 09:10

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-50090-F-1		480-157104		12/12/2013 01:14	1	TAL BUF	LCH
A:8260C	280-50090-F-1		480-157104		12/12/2013 01:14	1	TAL BUF	LCH
P:5030C	280-50090-K-1		480-157208		12/12/2013 13:22	1	TAL BUF	TRB
A:8260C SIM	280-50090-K-1		480-157208		12/12/2013 13:22	1	TAL BUF	TRB
P:3005A	280-50090-C-1-E		280-204779	280-204520	12/10/2013 12:00	1	TAL DEN	LLB
A:6010B	280-50090-C-1-E		280-204779	280-204520	12/10/2013 22:08	1	TAL DEN	SJS
P:3005A	280-50090-C-1-A		280-205009	280-204518	12/11/2013 07:30	1	TAL DEN	WAW
A:6010B	280-50090-C-1-A		280-205009	280-204518	12/11/2013 20:25	1	TAL DEN	JKH
P:3005A	280-50090-C-1-B		280-204735	280-204519	12/10/2013 12:00	1	TAL DEN	LLB
A:6020	280-50090-C-1-B		280-204735	280-204519	12/11/2013 03:18	1	TAL DEN	TEL
P:3005A	280-50090-C-1-D		280-204735	280-204525	12/10/2013 12:00	1	TAL DEN	LLB
A:6020	280-50090-C-1-D		280-204735	280-204525	12/11/2013 03:40	1	TAL DEN	TEL
A:300.0	280-50090-A-1		280-206593		12/20/2013 23:21	1	TAL DEN	TLP
A:350.1	280-50090-E-1		280-206591		12/24/2013 11:13	1	TAL DEN	RSN
A:353.2	280-50090-A-1		280-206377		12/10/2013 20:59	1	TAL DEN	RKS
A:SM 2320B	280-50090-A-1		280-204966		12/11/2013 20:56	1	TAL DEN	AFH
A:SM 2540C	280-50090-A-1		280-205045		12/12/2013 15:48	1	TAL DEN	ELJ
A:SM 2540D	280-50090-A-1		280-204720		12/11/2013 07:42	1	TAL DEN	BAN
A:SM 5310B	280-50090-E-1		280-205760		12/17/2013 19:48	1	TAL DEN	CCJ

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**Laboratory Chronicle**

Lab ID: 280-50090-2

Client ID: MW-39

Sample Date/Time: 12/05/2013 11:00

Received Date/Time: 12/09/2013 09:10

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-50090-F-2		480-157104		12/12/2013 01:39	1	TAL BUF	LCH
A:8260C	280-50090-F-2		480-157104		12/12/2013 01:39	1	TAL BUF	LCH
P:5030C	280-50090-K-2		480-157208		12/12/2013 13:47	1	TAL BUF	TRB
A:8260C SIM	280-50090-K-2		480-157208		12/12/2013 13:47	1	TAL BUF	TRB
P:3005A	280-50090-C-2-G		280-204779	280-204520	12/10/2013 12:00	1	TAL DEN	LLB
A:6010B	280-50090-C-2-G		280-204779	280-204520	12/10/2013 22:10	1	TAL DEN	SJS
P:3005A	280-50090-C-2-A		280-205009	280-204518	12/11/2013 07:30	1	TAL DEN	WAW
A:6010B	280-50090-C-2-A		280-205009	280-204518	12/11/2013 20:28	1	TAL DEN	JKH
P:3005A	280-50090-C-2-B		280-204735	280-204519	12/10/2013 12:00	1	TAL DEN	LLB
A:6020	280-50090-C-2-B		280-204735	280-204519	12/11/2013 03:21	1	TAL DEN	TEL
P:3005A	280-50090-C-2-D		280-204735	280-204525	12/10/2013 12:00	1	TAL DEN	LLB
A:6020	280-50090-C-2-D		280-204735	280-204525	12/11/2013 03:43	1	TAL DEN	TEL
A:300.0	280-50090-A-2		280-206593		12/20/2013 23:38	1	TAL DEN	TLP
A:350.1	280-50090-E-2		280-206359		12/20/2013 14:11	1	TAL DEN	RKS
A:353.2	280-50090-A-2		280-206377		12/10/2013 20:59	1	TAL DEN	RKS
A:SM 2320B	280-50090-A-2		280-204966		12/11/2013 21:02	1	TAL DEN	AFH
A:SM 2540C	280-50090-A-2		280-205045		12/12/2013 15:48	1	TAL DEN	ELJ
A:SM 2540D	280-50090-A-2		280-204720		12/11/2013 07:42	1	TAL DEN	BAN
A:SM 5310B	280-50090-E-2		280-205760		12/17/2013 20:03	1	TAL DEN	CCJ

Lab ID: 280-50090-2 MS

Client ID: MW-39

Sample Date/Time: 12/05/2013 11:00

Received Date/Time: 12/09/2013 09:10

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-50090-C-2-E MS		280-204735	280-204525	12/10/2013 12:00	1	TAL DEN	LLB
A:6020	280-50090-C-2-E MS		280-204735	280-204525	12/11/2013 03:52	1	TAL DEN	TEL

Lab ID: 280-50090-2 MSD

Client ID: MW-39

Sample Date/Time: 12/05/2013 11:00

Received Date/Time: 12/09/2013 09:10

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-50090-C-2-F MSD		280-204735	280-204525	12/10/2013 12:00	1	TAL DEN	LLB
A:6020	280-50090-C-2-F MSD		280-204735	280-204525	12/11/2013 03:55	1	TAL DEN	TEL

## Quality Control Results

Client: Waste Management

Job Number: 280-50090-1

### Laboratory Chronicle

Lab ID: 280-50090-3

Client ID: TRIP BLANK

Sample Date/Time: 12/05/2013 10:04

Received Date/Time: 12/09/2013 09:10

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-50090-A-3		480-157104		12/12/2013 02:05	1	TAL BUF	LCH
A:8260C	280-50090-A-3		480-157104		12/12/2013 02:05	1	TAL BUF	LCH
P:5030C	280-50090-B-3		480-157208		12/12/2013 14:11	1	TAL BUF	TRB
A:8260C SIM	280-50090-B-3		480-157208		12/12/2013 14:11	1	TAL BUF	TRB

Lab ID: 280-50090-4

Client ID: MW-33A

Sample Date/Time: 12/05/2013 14:50

Received Date/Time: 12/09/2013 09:10

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-50090-F-4		480-157104		12/12/2013 02:30	1	TAL BUF	LCH
A:8260C	280-50090-F-4		480-157104		12/12/2013 02:30	1	TAL BUF	LCH
P:5030C	280-50090-K-4		480-157208		12/12/2013 14:35	1	TAL BUF	TRB
A:8260C SIM	280-50090-K-4		480-157208		12/12/2013 14:35	1	TAL BUF	TRB
P:3005A	280-50090-C-4-E		280-204779	280-204520	12/10/2013 12:00	1	TAL DEN	LLB
A:6010B	280-50090-C-4-E		280-204779	280-204520	12/10/2013 22:13	1	TAL DEN	SJS
P:3005A	280-50090-C-4-A		280-205009	280-204518	12/11/2013 07:30	1	TAL DEN	WAW
A:6010B	280-50090-C-4-A		280-205009	280-204518	12/11/2013 20:30	1	TAL DEN	JKH
P:3005A	280-50090-C-4-B		280-204735	280-204519	12/10/2013 12:00	1	TAL DEN	LLB
A:6020	280-50090-C-4-B		280-204735	280-204519	12/11/2013 03:24	1	TAL DEN	TEL
P:3005A	280-50090-C-4-D		280-204735	280-204525	12/10/2013 12:00	1	TAL DEN	LLB
A:6020	280-50090-C-4-D		280-204735	280-204525	12/11/2013 04:04	1	TAL DEN	TEL
A:300.0	280-50090-A-4		280-206593		12/20/2013 23:56	1	TAL DEN	TLP
A:350.1	280-50090-E-4		280-206359		12/20/2013 14:13	1	TAL DEN	RKS
A:353.2	280-50090-A-4		280-206377		12/10/2013 20:59	1	TAL DEN	RKS
A:SM 2320B	280-50090-A-4		280-204966		12/11/2013 21:10	1	TAL DEN	AFH
A:SM 2540C	280-50090-A-4		280-205045		12/12/2013 15:48	1	TAL DEN	ELJ
A:SM 2540D	280-50090-A-4		280-204720		12/11/2013 07:42	1	TAL DEN	BAN
A:SM 5310B	280-50090-E-4		280-205760		12/17/2013 20:53	1	TAL DEN	CCJ



## Quality Control Results

Client: Waste Management

Job Number: 280-50090-1

### 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:5030C	MB 480-157104/6		480-157104		12/12/2013 00:13	1	TAL BUF	LCH
A:8260C	MB 480-157104/6		480-157104		12/12/2013 00:13	1	TAL BUF	LCH
P:5030C	MB 480-157208/7		480-157208		12/12/2013 12:30	1	TAL BUF	TRB
A:8260C SIM	MB 480-157208/7		480-157208		12/12/2013 12:30	1	TAL BUF	TRB
P:3005A	MB 280-204520/1-A		280-204779	280-204520	12/10/2013 12:00	1	TAL DEN	LLB
A:6010B	MB 280-204520/1-A		280-204779	280-204520	12/10/2013 22:01	1	TAL DEN	SJS
P:3005A	MB 280-204518/1-A		280-205009	280-204518	12/11/2013 07:30	1	TAL DEN	WAW
A:6010B	MB 280-204518/1-A		280-205009	280-204518	12/11/2013 19:38	1	TAL DEN	JKH
P:3005A	MB 280-204519/1-A		280-204735	280-204519	12/10/2013 12:00	1	TAL DEN	LLB
A:6020	MB 280-204519/1-A		280-204735	280-204519	12/11/2013 02:41	1	TAL DEN	TEL
P:3005A	MB 280-204525/1-A		280-204735	280-204525	12/10/2013 12:00	1	TAL DEN	LLB
A:6020	MB 280-204525/1-A		280-204735	280-204525	12/11/2013 03:34	1	TAL DEN	TEL
A:300.0	MB 280-206593/6		280-206593		12/20/2013 14:37	1	TAL DEN	TLP
A:350.1	MB 280-206359/21		280-206359		12/20/2013 13:22	1	TAL DEN	RKS
A:350.1	MB 280-206591/21		280-206591		12/24/2013 10:49	1	TAL DEN	RSN
A:353.2	MB 280-206377/1		280-206377		12/10/2013 20:59	1	TAL DEN	RKS
A:SM 2320B	MB 280-204966/6		280-204966		12/11/2013 19:06	1	TAL DEN	AFH
A:SM 2540C	MB 280-205045/1		280-205045		12/12/2013 15:48	1	TAL DEN	ELJ
A:SM 2540D	MB 280-204720/1		280-204720		12/11/2013 07:42	1	TAL DEN	BAN
A:SM 5310B	MB 280-205760/5		280-205760		12/17/2013 17:16	1	TAL DEN	CCJ

**Quality Control Results**

Client: Waste Management

Job Number: 280-50090-1

**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:5030C	LCS 480-157104/4		480-157104		12/11/2013 23:22	1	TAL BUF	LCH
A:8260C	LCS 480-157104/4		480-157104		12/11/2013 23:22	1	TAL BUF	LCH
P:5030C	LCS 480-157208/5		480-157208		12/12/2013 11:38	1	TAL BUF	TRB
A:8260C SIM	LCS 480-157208/5		480-157208		12/12/2013 11:38	1	TAL BUF	TRB
P:3005A	LCS 280-204520/2-A		280-204779	280-204520	12/10/2013 12:00	1	TAL DEN	LLB
A:6010B	LCS 280-204520/2-A		280-204779	280-204520	12/10/2013 22:03	1	TAL DEN	SJS
P:3005A	LCS 280-204518/2-A		280-205009	280-204518	12/11/2013 07:30	1	TAL DEN	WAW
A:6010B	LCS 280-204518/2-A		280-205009	280-204518	12/11/2013 19:41	1	TAL DEN	JKH
P:3005A	LCS 280-204519/2-A		280-204735	280-204519	12/10/2013 12:00	1	TAL DEN	LLB
A:6020	LCS 280-204519/2-A		280-204735	280-204519	12/11/2013 02:44	1	TAL DEN	TEL
P:3005A	LCS 280-204525/2-A		280-204735	280-204525	12/10/2013 12:00	1	TAL DEN	LLB
A:6020	LCS 280-204525/2-A		280-204735	280-204525	12/11/2013 03:37	1	TAL DEN	TEL
A:300.0	LCS 280-206593/4		280-206593		12/20/2013 14:03	1	TAL DEN	TLP
A:350.1	LCS 280-206359/19		280-206359		12/20/2013 13:17	1	TAL DEN	RKS
A:350.1	LCS 280-206591/19		280-206591		12/24/2013 10:44	1	TAL DEN	RSN
A:SM 2320B	LCS 280-204966/4		280-204966		12/11/2013 18:48	1	TAL DEN	AFH
A:SM 2540C	LCS 280-205045/2		280-205045		12/12/2013 15:48	1	TAL DEN	ELJ
A:SM 2540D	LCS 280-204720/2		280-204720		12/11/2013 07:42	1	TAL DEN	BAN
A:SM 5310B	LCS 280-205760/3		280-205760		12/17/2013 16:38	1	TAL DEN	CCJ

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
P:5030C	LCSD 480-157208/12		480-157208		12/12/2013 12:55	1	TAL BUF	TRB
A:8260C SIM	LCSD 480-157208/12		480-157208		12/12/2013 12:55	1	TAL BUF	TRB
A:300.0	LCSD 280-206593/5		280-206593		12/20/2013 14:20	1	TAL DEN	TLP
A:350.1	LCSD 280-206359/20		280-206359		12/20/2013 13:19	1	TAL DEN	RKS
A:350.1	LCSD 280-206591/20		280-206591		12/24/2013 10:47	1	TAL DEN	RSN
A:SM 2320B	LCSD 280-204966/5		280-204966		12/11/2013 18:58	1	TAL DEN	AFH
A:SM 2540C	LCSD 280-205045/3		280-205045		12/12/2013 15:48	1	TAL DEN	ELJ
A:SM 2540D	LCSD 280-204720/3		280-204720		12/11/2013 07:42	1	TAL DEN	BAN
A:SM 5310B	LCSD 280-205760/4		280-205760		12/17/2013 16:57	1	TAL DEN	CCJ

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 280-206593/3		280-206593		12/20/2013 13:45	1	TAL DEN	TLP

## Quality Control Results

Client: Waste Management

Job Number: 280-50090-1

### Laboratory Chronicle

Lab ID: MS

Client ID: N/A

Sample Date/Time: 12/05/2013 09:40

Received Date/Time: 12/06/2013 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	480-51473-D-2 MS		480-157104		12/12/2013 08:24	1	TAL BUF	LCH
A:8260C	480-51473-D-2 MS		480-157104		12/12/2013 08:24	1	TAL BUF	LCH
P:3005A	280-50062-A-5-G MS		280-204779	280-204520	12/10/2013 12:00	1	TAL DEN	LLB
A:6010B	280-50062-A-5-G MS		280-204779	280-204520	12/10/2013 23:11	1	TAL DEN	SJS
P:3005A	280-50025-C-11-C MS		280-205009	280-204518	12/11/2013 07:30	1	TAL DEN	WAW
A:6010B	280-50025-C-11-C MS		280-205009	280-204518	12/11/2013 20:21	1	TAL DEN	JKH
P:3005A	280-50021-M-1-C MS		280-204735	280-204519	12/10/2013 12:00	1	TAL DEN	LLB
A:6020	280-50021-M-1-C MS		280-204735	280-204519	12/11/2013 02:56	1	TAL DEN	TEL
A:300.0	280-50530-C-4 MS		280-206593		12/21/2013 02:31	10	TAL DEN	TLP
A:350.1	280-49908-A-1 MS		280-206359		12/20/2013 13:26	1	TAL DEN	RKS
A:350.1	280-50151-B-4 MS		280-206591		12/24/2013 11:36	1	TAL DEN	RSN
A:SM 5310B	280-50029-D-1 MS		280-205760		12/17/2013 18:07	1	TAL DEN	CCJ

Lab ID: MSD

Client ID: N/A

Sample Date/Time: 12/05/2013 09:40

Received Date/Time: 12/06/2013 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	480-51473-D-2 MSD		480-157104		12/12/2013 08:50	1	TAL BUF	LCH
A:8260C	480-51473-D-2 MSD		480-157104		12/12/2013 08:50	1	TAL BUF	LCH
P:3005A	280-50062-A-5-H MSD		280-204779	280-204520	12/10/2013 12:00	1	TAL DEN	LLB
A:6010B	280-50062-A-5-H MSD		280-204779	280-204520	12/10/2013 23:14	1	TAL DEN	SJS
P:3005A	280-50025-C-11-D MSD		280-205009	280-204518	12/11/2013 07:30	1	TAL DEN	WAW
A:6010B	280-50025-C-11-D MSD		280-205009	280-204518	12/11/2013 20:23	1	TAL DEN	JKH
P:3005A	280-50021-M-1-D MSD		280-204735	280-204519	12/10/2013 12:00	1	TAL DEN	LLB
A:6020	280-50021-M-1-D MSD		280-204735	280-204519	12/11/2013 03:00	1	TAL DEN	TEL
A:300.0	280-50530-C-4 MSD		280-206593		12/21/2013 02:49	10	TAL DEN	TLP
A:350.1	280-49908-A-1 MSD		280-206359		12/20/2013 13:29	1	TAL DEN	RKS
A:350.1	280-50151-B-4 MSD		280-206591		12/24/2013 11:38	1	TAL DEN	RSN
A:SM 5310B	280-50029-D-1 MSD		280-205760		12/17/2013 18:25	1	TAL DEN	CCJ

## Quality Control Results

Client: Waste Management

Job Number: 280-50090-1

### Laboratory Chronicle

Lab ID: DU

Client ID: N/A

Sample Date/Time: 12/19/2013 11:00

Received Date/Time: 12/20/2013 11:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-50530-C-4 DU		280-206593		12/21/2013 02:14	10	TAL DEN	TLP
A:SM 2320B	200-19926-N-5 DU		280-204966		12/11/2013 19:26	1	TAL DEN	AFH
A:SM 2540C	280-50150-A-1 DU		280-205045		12/12/2013 15:48	1	TAL DEN	ELJ
A:SM 2540D	280-50038-B-1 DU		280-204720		12/11/2013 07:42	1	TAL DEN	BAN

#### Lab References:

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver

**TestAmerica Denver**  
 4955 Yarrow Street  
 Arvada, CO 80002  
 Phone (303) 736-0100 Fax (303) 431-7171

**Chain of Custody**



**estAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING

280-50090 Chain of Custody

<b>Client Information</b> Client Contact: Mr. Charles Luckie Company: Olympic View Transfer Station - SCS Engineers Address: 2405-140th Ave NE #107 City: Bellevue State, Zip: WA, 98005 Phone: 425-289-5454 Email: charles.luckie@olympicview.com Project Name: WAO2 Olympic View Sanitary LF Event Desc: Quarterly GW App/III - Mar Jun Sep Dec Site: Washington		Sampler: <u>Antoine S.A. Ndou</u> Phone: <u>425-289-5452</u> E-Mail: <u>betsy.sara@testamericainc.com</u> Due Date Requested: <u>Standard</u> TAT Requested (days): <u>Standard</u> PO #: <u>Standard</u> WC #: <u>Standard</u> Project #: <u>28002692</u> SSOW#: <u>Standard</u>		Job #: <u>01204027.17</u> IC No: <u>30-17318-3224-1</u> Page: <u>1 of 1</u> Job #: <u>01204027.17</u>	
<b>Analysis Requested</b> TDS/Alks/Cl/SO4/NO3(cad) <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> I <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> D Dissolved Metals <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> I <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> D Ammonia/TOC <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> I <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> D 8200B - long list (TA Buffalo) <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> I <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> D 8260B SIM (TA Buffalo) <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> I <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> D Total Metals <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> I <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> D TSS <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> I <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> D Dissolved Arsenic (direct sub to ARI) <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> I <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> D Total Arsenic (direct sub to ARI) <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> I <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> D Total: Number of containers		<b>Sample Identification</b> Sample ID: <u>MW-2131</u> Sample Date: <u>12/5/13</u> Sample Time: <u>1004</u> Matrix: <u>U</u> Sample Type: <u>C</u> Preservation Code: <u>U</u> Sample ID: <u>MW-39</u> Sample Date: <u>↓</u> Sample Time: <u>1100</u> Matrix: <u>↓</u> Sample Type: <u>↓</u> Preservation Code: <u>↓</u> Sample ID: <u>MW-33A</u> Sample Date: <u>↓</u> Sample Time: <u>1450</u> Matrix: <u>↓</u> Sample Type: <u>↓</u> Preservation Code: <u>↓</u> Sample ID: <u>Tap Blank</u> Sample Date: <u>↓</u> Sample Time: <u>↓</u> Matrix: <u>↓</u> Sample Type: <u>↓</u> Preservation Code: <u>↓</u>		<b>Special Instructions/Note:</b> Short Hold: NO3(cad) Arsenic - Direct sub to ARI	
<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b> <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		<b>Special Instructions/QC Requirements:</b>	
<b>Empty Kit Relinquished by:</b>		<b>Date:</b>		<b>Method of Shipment:</b>	
<b>Relinquished by:</b> <u>[Signature]</u>		<b>Date/Time:</b> <u>12/4/13 1630</u>		<b>Company:</b> <u>SCS</u>	
<b>Relinquished by:</b> <u>[Signature]</u>		<b>Date/Time:</b>		<b>Company:</b>	
<b>Relinquished by:</b>		<b>Date/Time:</b>		<b>Company:</b>	
<b>Custody Seals Intact:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No		<b>Custody Seal No.:</b> <u># 102386</u>		<b>Cooler Temperature(s) °C and Other Remarks:</b> <u>1.3 JEAH 12-5-13</u>	

## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-50090-1

**Login Number: 50090**  
**List Number: 1**  
**Creator: Dedio, Michael T**

**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?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	False	NO3 expired in transit
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	N/A	Yes: Preservation labels on samples match COC
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.	N/A	

## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-50090-1

**Login Number: 50090**  
**List Number: 1**  
**Creator: Goliszek, Gregory T**

**List Source: TestAmerica Buffalo**  
**List Creation: 12/11/13 07:47 PM**

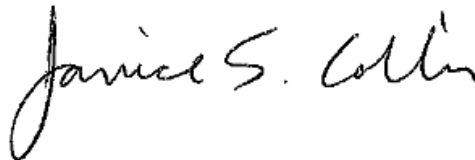
Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7 #3
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: 280-50343-1

Job Description: WA02|Olympic View Sanitary LF

For:  
Waste Management  
Olympic View Transfer Station  
9300 Southwest Barney White Road  
Bremerton, WA 98312  
Attention: Mr. Charles Luckie



Approved for release.  
Janice S Collins  
Project Management Assistant I  
12/31/2013 10:09 AM

---

Designee for  
Betsy A Sara, Project Manager II  
4955 Yarrow Street, Arvada, CO, 80002  
(303)736-0189  
betsy.sara@testamericainc.com  
12/31/2013

cc: Mr. Sam Adlington  
Mr. Matt O'Hare  
Mr. Phil Perley  
Ms. Elena Ramirez  
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 . . . . .	16
Laboratory Chronicle . . . . .	28
Client Chain of Custody . . . . .	31
Sample Receipt Checklist . . . . .	33

## **CASE NARRATIVE**

**Client: Waste Management**

**Project: WA02|Olympic View Sanitary LF**

**Report Number: 280-50343-1**

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 12/14/2013; the sample arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 3.8 C.

### **Holding Times**

All holding times were within established control limits.

### **Method Blanks**

All 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)**

All MS and MSD samples were within established control limits.

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-50343-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-50343-1</b>	<b>OVSL-20131213-LPLCD</b>					
Specific Conductivity		2324			umhos/cm	Field Sampling
Dissolved Oxygen		13.2			mg/L	Field Sampling
eH		197.9			millivolts	Field Sampling
Turbidity		9.1			NTU	Field Sampling
Temperature		8.2			Degrees C	Field Sampling
pH		6.53			SU	Field Sampling
Chloride		610		20	mg/L	300.0
Sulfate		200		20	mg/L	300.0
Ammonia (as N)		20		0.30	mg/L	350.1
Alkalinity		940		5.0	mg/L	SM 2320B
Bicarbonate Alkalinity as CaCO3		940		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		2400		10	mg/L	SM 2540C
Total Organic Carbon - Average		75		2.0	mg/L	SM 5310B
<b><i>Total Recoverable</i></b>						
Calcium, Total		48		0.040	mg/L	6010B
Iron, Total		1.3		0.060	mg/L	6010B
Magnesium, Total		28		0.050	mg/L	6010B
Manganese, Total		1.1		0.050	mg/L	6010B
Potassium, Total		66		1.0	mg/L	6010B
Sodium, Total		770		1.0	mg/L	6010B

## METHOD SUMMARY

Client: Waste Management

Job Number: 280-50343-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		SW846 3005A
Anions, Ion Chromatography	TAL DEN	MCAWW 300.0	
Nitrogen, Ammonia	TAL DEN	MCAWW 350.1	
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: 280-50343-1

<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	Newcome, Robin S	RSN
SM SM 2320B	Hoefler, Alexandra F	AFH
SM SM 2540C	Janssen, Elizabeth L	ELJ
SM SM 5310B	Jewell, Connie C	CCJ

## SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-50343-1

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
280-50343-1	OVSL-20131213-LPLCD	Water	12/13/2013 0900	12/14/2013 1415

# **SAMPLE RESULTS**

**Analytical Data**

Client: Waste Management

Job Number: 280-50343-1

**Client Sample ID: OVSL-20131213-LPLCD**

Lab Sample ID: 280-50343-1

Date Sampled: 12/13/2013 0900

Client Matrix: Water

Date Received: 12/14/2013 1415

---

**6010B Metals (ICP)-Total Recoverable**

Analysis Method:	6010B	Analysis Batch:	280-205883	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-205623	Lab File ID:	25A4121813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/19/2013 0525			Final Weight/Volume:	50 mL
Prep Date:	12/17/2013 1433				

---

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Total	48		0.040	0.040
Iron, Total	1.3		0.060	0.060
Magnesium, Total	28		0.050	0.050
Manganese, Total	1.1		0.050	0.050
Potassium, Total	66		1.0	1.0
Sodium, Total	770		1.0	1.0



Client: Waste Management

Job Number: 280-50343-1

General Chemistry

Client Sample ID: OVSL-20131213-LPLCD

Lab Sample ID: 280-50343-1

Date Sampled: 12/13/2013 0900

Client Matrix: Water

Date Received: 12/14/2013 1415

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	610		mg/L	20	20	20	300.0
	Analysis Batch: 280-206885			Analysis Date: 12/27/2013 1433			
Sulfate	200		mg/L	20	20	20	300.0
	Analysis Batch: 280-206885			Analysis Date: 12/27/2013 1433			
Ammonia (as N)	20		mg/L	0.30	0.30	10	350.1
	Analysis Batch: 280-206591			Analysis Date: 12/24/2013 1506			
Alkalinity	940		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-205702			Analysis Date: 12/18/2013 0008			
Bicarbonate Alkalinity as CaCO3	940		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-205702			Analysis Date: 12/18/2013 0008			
Total Dissolved Solids (TDS)	2400		mg/L	10	10	1.0	SM 2540C
	Analysis Batch: 280-205986			Analysis Date: 12/19/2013 1441			
Total Organic Carbon - Average	75		mg/L	2.0	2.0	2.0	SM 5310B
	Analysis Batch: 280-206902			Analysis Date: 12/29/2013 0935			

Client: Waste Management

Job Number: 280-50343-1

Field Service / Mobile Lab

Client Sample ID: OVSL-20131213-LPLCD

Lab Sample ID: 280-50343-1

Date Sampled: 12/13/2013 0900

Client Matrix: Water

Date Received: 12/14/2013 1415

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Specific Conductivity	2324		umhos/cm	1.0	Field Sampling	280-205456	12/13/2013 0900
Dissolved Oxygen	13.2		mg/L	1.0	Field Sampling	280-205456	12/13/2013 0900
eH	197.9		millivolts	1.0	Field Sampling	280-205456	12/13/2013 0900
Turbidity	9.1		NTU	1.0	Field Sampling	280-205456	12/13/2013 0900
Temperature	8.2		Degrees C	1.0	Field Sampling	280-205456	12/13/2013 0900
pH	6.53		SU	1.0	Field Sampling	280-205456	12/13/2013 0900

## DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-50343-1

<b>Lab Section</b>	<b>Qualifier</b>	<b>Description</b>
Metals	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
General Chemistry	E	Result exceeded calibration range.

# QUALITY CONTROL RESULTS

## Quality Control Results

Client: Waste Management

Job Number: 280-50343-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Prep Batch: 280-205623</b>					
LCS 280-205623/2-A	Lab Control Sample	R	Water	3005A	
MB 280-205623/1-A	Method Blank	R	Water	3005A	
280-50320-E-1-C MS	Matrix Spike	R	Water	3005A	
280-50320-E-1-D MSD	Matrix Spike Duplicate	R	Water	3005A	
280-50343-1	OVSL-20131213-LPLCD	R	Water	3005A	
<b>Analysis Batch:280-205883</b>					
LCS 280-205623/2-A	Lab Control Sample	R	Water	6010B	280-205623
MB 280-205623/1-A	Method Blank	R	Water	6010B	280-205623
280-50320-E-1-C MS	Matrix Spike	R	Water	6010B	280-205623
280-50320-E-1-D MSD	Matrix Spike Duplicate	R	Water	6010B	280-205623
280-50343-1	OVSL-20131213-LPLCD	R	Water	6010B	280-205623

**Report Basis**

R = Total Recoverable

**Field Service / Mobile Lab**

<b>Analysis Batch:280-205456</b>					
280-50343-1	OVSL-20131213-LPLCD	T	Water	Field Sampling	

**Report Basis**

T = Total

## Quality Control Results

Client: Waste Management

Job Number: 280-50343-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-205702</b>					
LCS 280-205702/31	Lab Control Sample	T	Water	SM 2320B	
LCSD 280-205702/32	Lab Control Sample Duplicate	T	Water	SM 2320B	
MB 280-205702/33	Method Blank	T	Water	SM 2320B	
280-50343-1	OVSL-20131213-LPLCD	T	Water	SM 2320B	
280-50344-A-13 DU	Duplicate	T	Water	SM 2320B	
<b>Analysis Batch:280-205986</b>					
LCS 280-205986/2	Lab Control Sample	T	Water	SM 2540C	
LCSD 280-205986/3	Lab Control Sample Duplicate	T	Water	SM 2540C	
MB 280-205986/1	Method Blank	T	Water	SM 2540C	
200-20055-K-3 DU	Duplicate	T	Water	SM 2540C	
280-50343-1	OVSL-20131213-LPLCD	T	Water	SM 2540C	
<b>Analysis Batch:280-206591</b>					
LCS 280-206591/104	Lab Control Sample	T	Water	350.1	
LCSD 280-206591/105	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-206591/106	Method Blank	T	Water	350.1	
280-50343-1	OVSL-20131213-LPLCD	T	Water	350.1	
<b>Analysis Batch:280-206885</b>					
LCS 280-206885/4	Lab Control Sample	T	Water	300.0	
LCSD 280-206885/5	Lab Control Sample Duplicate	T	Water	300.0	
MB 280-206885/6	Method Blank	T	Water	300.0	
280-50343-1	OVSL-20131213-LPLCD	T	Water	300.0	
280-50343-1DU	Duplicate	T	Water	300.0	
280-50343-1MS	Matrix Spike	T	Water	300.0	
280-50343-1MSD	Matrix Spike Duplicate	T	Water	300.0	
<b>Analysis Batch:280-206902</b>					
LCS 280-206902/55	Lab Control Sample	T	Water	SM 5310B	
LCSD 280-206902/56	Lab Control Sample Duplicate	T	Water	SM 5310B	
MB 280-206902/57	Method Blank	T	Water	SM 5310B	
280-50269-H-1 MS	Matrix Spike	T	Water	SM 5310B	
280-50269-H-1 MSD	Matrix Spike Duplicate	T	Water	SM 5310B	
280-50343-1	OVSL-20131213-LPLCD	T	Water	SM 5310B	

**Report Basis**

T = Total

**Quality Control Results**

Client: Waste Management

Job Number: 280-50343-1

**Method Blank - Batch: 280-205623**

Lab Sample ID: MB 280-205623/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/19/2013 0438  
 Prep Date: 12/17/2013 1433  
 Leach Date: N/A

Analysis Batch: 280-205883  
 Prep Batch: 280-205623  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_025  
 Lab File ID: 25A4121813.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Calcium, Total	ND		0.040	0.040
Iron, Total	ND		0.060	0.060
Magnesium, Total	ND		0.050	0.050
Manganese, Total	ND		0.050	0.050
Potassium, Total	ND		1.0	1.0
Sodium, Total	ND		1.0	1.0

**Lab Control Sample - Batch: 280-205623**

Lab Sample ID: LCS 280-205623/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/19/2013 0440  
 Prep Date: 12/17/2013 1433  
 Leach Date: N/A

Analysis Batch: 280-205883  
 Prep Batch: 280-205623  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_025  
 Lab File ID: 25A4121813.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Calcium, Total	50.0	49.7	99	90 - 111	
Iron, Total	1.00	0.983	98	89 - 115	
Magnesium, Total	50.0	48.6	97	90 - 113	
Manganese, Total	0.500	0.476	95	90 - 110	
Potassium, Total	50.0	51.6	103	89 - 114	
Sodium, Total	50.0	52.0	104	90 - 115	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50343-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205623**

**Method: 6010B  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-50320-E-1-C MS	Analysis Batch: 280-205883	Instrument ID: MT_025
Client Matrix: Water	Prep Batch: 280-205623	Lab File ID: 25A4121813.asc
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 50 mL
Analysis Date: 12/19/2013 0447		Final Weight/Volume: 50 mL
Prep Date: 12/17/2013 1433		
Leach Date: N/A		

MSD Lab Sample ID: 280-50320-E-1-D MSD	Analysis Batch: 280-205883	Instrument ID: MT_025
Client Matrix: Water	Prep Batch: 280-205623	Lab File ID: 25A4121813.asc
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 50 mL
Analysis Date: 12/19/2013 0450		Final Weight/Volume: 50 mL
Prep Date: 12/17/2013 1433		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Calcium, Total	99	88	48 - 153	3	20		
Iron, Total	104	88	52 - 155	2	20	4	4
Magnesium, Total	100	95	62 - 146	2	20		
Manganese, Total	96	88	79 - 121	1	20	4	4
Potassium, Total	109	108	76 - 132	1	20		
Sodium, Total	121	102	70 - 203	2	20	4	4

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205623**

**Method: 6010B  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-50320-E-1-C MS	Units: mg/L	MSD Lab Sample ID: 280-50320-E-1-D MSD
Client Matrix: Water		Client Matrix: Water
Dilution: 1.0		Dilution: 1.0
Analysis Date: 12/19/2013 0447		Analysis Date: 12/19/2013 0450
Prep Date: 12/17/2013 1433		Prep Date: 12/17/2013 1433
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, Total	150	50.0	50.0	201	195	
Iron, Total	9.5	1.00	1.00	10.5	10.3	4
Magnesium, Total	100	50.0	50.0	151	149	
Manganese, Total	2.2	0.500	0.500	2.65	2.61	4
Potassium, Total	2.9	50.0	50.0	57.5	57.0	
Sodium, Total	500	50.0	50.0	556	546	4



**Quality Control Results**

Client: Waste Management

Job Number: 280-50343-1

**Method Blank - Batch: 280-206885**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	MB 280-206885/6	Analysis Batch:	280-206885	Instrument ID:	WC_IC7
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	115.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/27/2013 1140	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Chloride	ND		1.0	1.0
Sulfate	ND		1.0	1.0

**Method Reporting Limit Check - Batch: 280-206885**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	MRL 280-206885/3	Analysis Batch:	280-206885	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:	
Analysis Date:	12/27/2013 1052	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	1.00	ND	90	50 - 150	
Sulfate	1.00	ND	131	50 - 150	

**Lab Control Sample/**

**Method: 300.0**  
**Preparation: N/A**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-206885**

LCS Lab Sample ID:	LCS 280-206885/4	Analysis Batch:	280-206885	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:	
Analysis Date:	12/27/2013 1108	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-206885/5	Analysis Batch:	280-206885	Instrument ID:	WC_IC7
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	114.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/27/2013 1124	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Chloride	102	101	90 - 110	0	10		
Sulfate	106	105	90 - 110	1	10		

**Quality Control Results**

Client: Waste Management

Job Number: 280-50343-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-206885**

**Method: 300.0  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-206885/4 Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/27/2013 1108  
 Prep Date: N/A  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 280-206885/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/27/2013 1124  
 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	25.4	25.3
Sulfate	25.0	25.0	26.6	26.2

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206885**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 280-50343-1  
 Client Matrix: Water  
 Dilution: 20  
 Analysis Date: 12/28/2013 0114  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206885  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: WC\_IC7  
 Lab File ID: 153.TXT  
 Initial Weight/Volume:  
 Final Weight/Volume: 5 mL

MSD Lab Sample ID: 280-50343-1  
 Client Matrix: Water  
 Dilution: 20  
 Analysis Date: 12/28/2013 0130  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206885  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: WC\_IC7  
 Lab File ID: 154.TXT  
 Initial Weight/Volume:  
 Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chloride	103	102	80 - 120	0	20	E	E
Sulfate	105	103	80 - 120	1	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-50343-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206885**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 280-50343-1                      Units: mg/L  
 Client Matrix: Water  
 Dilution: 20  
 Analysis Date: 12/28/2013 0114  
 Prep Date: N/A  
 Leach Date: N/A

MSD Lab Sample ID: 280-50343-1  
 Client Matrix: Water  
 Dilution: 20  
 Analysis Date: 12/28/2013 0130  
 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	610	500	500	1120 E	1110 E
Sulfate	200	500	500	722	713

**Duplicate - Batch: 280-206885**

**Method: 300.0  
Preparation: N/A**

Lab Sample ID: 280-50343-1  
 Client Matrix: Water  
 Dilution: 20  
 Analysis Date: 12/28/2013 0059  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206885  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_IC7  
 Lab File ID: 152.TXT  
 Initial Weight/Volume:  
 Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Chloride	610	599	1	15	
Sulfate	200	202	2	15	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50343-1

**Method Blank - Batch: 280-206591**

Lab Sample ID: MB 280-206591/106  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/24/2013 1408  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206591  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

**Method: 350.1  
 Preparation: N/A**

Instrument ID: WC\_Alph 3  
 Lab File ID: E:\FLOW\_4\122413.RST  
 Initial Weight/Volume: 10 mL  
 Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL	RL
Ammonia (as N)	ND		0.030	0.030

**Lab Control Sample/  
 Lab Control Sample Duplicate Recovery Report - Batch: 280-206591**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-206591/104  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/24/2013 1403  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206591  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 3  
 Lab File ID: E:\FLOW\_4\122413.RST  
 Initial Weight/Volume: 100 mL  
 Final Weight/Volume: 100 mL

LCSD Lab Sample ID: LCSD 280-206591/105  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/24/2013 1405  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206591  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 3  
 Lab File ID: E:\FLOW\_4\122413.RST  
 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)	108	108	90 - 110	0	10		

**Laboratory Control/  
 Laboratory Duplicate Data Report - Batch: 280-206591**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-206591/104  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/24/2013 1403  
 Prep Date: N/A  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-206591/105  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/24/2013 1405  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia (as N)	2.50	2.50	2.71	2.70

**Quality Control Results**

Client: Waste Management

Job Number: 280-50343-1

**Method Blank - Batch: 280-205702**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID: MB 280-205702/33  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/17/2013 2212  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-205702  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_AT2  
 Lab File ID: 121713a.txt  
 Initial Weight/Volume:  
 Final Weight/Volume:

Analyte	Result	Qual	RL	RL
Alkalinity	ND		5.0	5.0
Bicarbonate Alkalinity as CaCO3	ND		5.0	5.0

**Lab Control Sample/**

**Method: SM 2320B**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-205702**

**Preparation: N/A**

LCS Lab Sample ID: LCS 280-205702/31  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/17/2013 2154  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-205702  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_AT2  
 Lab File ID: 121713a.txt  
 Initial Weight/Volume:  
 Final Weight/Volume:

LCSD Lab Sample ID: LCSD 280-205702/32  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/17/2013 2204  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-205702  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_AT2  
 Lab File ID: 121713a.txt  
 Initial Weight/Volume:  
 Final Weight/Volume:

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Alkalinity	101	103	90 - 110	2	10		

**Laboratory Control/**

**Method: SM 2320B**

**Laboratory Duplicate Data Report - Batch: 280-205702**

**Preparation: N/A**

LCS Lab Sample ID: LCS 280-205702/31  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/17/2013 2154  
 Prep Date: N/A  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-205702/32  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/17/2013 2204  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Alkalinity	200	200	203	206

**Quality Control Results**

Client: Waste Management

Job Number: 280-50343-1

**Duplicate - Batch: 280-205702**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID: 280-50344-A-13 DU  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/17/2013 2232  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-205702  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: WC\_AT2  
Lab File ID: 121713a.txt  
Initial Weight/Volume:  
Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Alkalinity	660	655	0.5	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50343-1

**Method Blank - Batch: 280-205986**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	MB 280-205986/1	Analysis Batch:	280-205986	Instrument ID:	No Equipment Assigned
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:	12/19/2013 1441	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Dissolved Solids (TDS)	ND		5.0	5.0

**Lab Control Sample/**

**Method: SM 2540C**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-205986**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-205986/2	Analysis Batch:	280-205986	Instrument ID:	No Equipment Assigned
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:	12/19/2013 1441	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-205986/3	Analysis Batch:	280-205986	Instrument ID:	No Equipment Assigned
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:	12/19/2013 1441	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	98	86 - 110	0	20		

**Laboratory Control/**

**Method: SM 2540C**

**Laboratory Duplicate Data Report - Batch: 280-205986**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-205986/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-205986/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/19/2013 1441			Analysis Date:	12/19/2013 1441
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	486	488

## Quality Control Results

Client: Waste Management

Job Number: 280-50343-1

**Duplicate - Batch: 280-205986**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	200-20055-K-3 DU	Analysis Batch:	280-205986	Instrument ID:	No Equipment Assigned
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:	12/19/2013 1441	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	599	0.3	10	



**Quality Control Results**

Client: Waste Management

Job Number: 280-50343-1

**Method Blank - Batch: 280-206902**

**Method: SM 5310B**

**Preparation: N/A**

Lab Sample ID:	MB 280-206902/57	Analysis Batch:	280-206902	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122813.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/29/2013 0807	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Organic Carbon - Average	ND		1.0	1.0

**Lab Control Sample/**

**Method: SM 5310B**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-206902**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-206902/55	Analysis Batch:	280-206902	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122813.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/29/2013 0732	Units:	mg/L	Final Weight/Volume:	200 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-206902/56	Analysis Batch:	280-206902	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122813.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/29/2013 0750	Units:	mg/L	Final Weight/Volume:	200 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	102	103	88 - 112	1	15		

**Laboratory Control/**

**Method: SM 5310B**

**Laboratory Duplicate Data Report - Batch: 280-206902**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-206902/55	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-206902/56
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/29/2013 0732			Analysis Date:	12/29/2013 0750
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	25.6	25.7

**Quality Control Results**

Client: Waste Management

Job Number: 280-50343-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206902**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID:	280-50269-H-1 MS	Analysis Batch:	280-206902	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122813.txt
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/29/2013 0858			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50269-H-1 MSD	Analysis Batch:	280-206902	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122813.txt
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/29/2013 0917			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	106	106	88 - 112	0	15		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206902**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID:	280-50269-H-1 MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	5.0		
Analysis Date:	12/29/2013 0858		
Prep Date:	N/A		
Leach Date:	N/A		

MSD Lab Sample ID:	280-50269-H-1 MSD
Client Matrix:	Water
Dilution:	5.0
Analysis Date:	12/29/2013 0917
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	87	125	125	220	219

**Quality Control Results**

Client: Waste Management

Job Number: 280-50343-1

**Laboratory Chronicle**

Lab ID: 280-50343-1

Client ID: OVSL-20131213-LPLCD

Sample Date/Time: 12/13/2013 09:00

Received Date/Time: 12/14/2013 14:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-50343-D-1-A		280-205883	280-205623	12/17/2013 14:33	1	TAL DEN	LLB
A:6010B	280-50343-D-1-A		280-205883	280-205623	12/19/2013 05:25	1	TAL DEN	JKH
A:300.0	280-50343-A-1		280-206885		12/27/2013 14:33	20	TAL DEN	TLP
A:350.1	280-50343-B-1		280-206591		12/24/2013 15:06	10	TAL DEN	RSN
A:SM 2320B	280-50343-A-1		280-205702		12/18/2013 00:08	1	TAL DEN	AFH
A:SM 2540C	280-50343-A-1		280-205986		12/19/2013 14:41	1	TAL DEN	ELJ
A:SM 5310B	280-50343-B-1		280-206902		12/29/2013 09:35	2	TAL DEN	CCJ
A:Field Sampling	280-50343-A-1		280-205456		12/13/2013 09:00	1	TAL DEN	FS

Lab ID: 280-50343-1 MS

Client ID: OVSL-20131213-LPLCD

Sample Date/Time: 12/13/2013 09:00

Received Date/Time: 12/14/2013 14:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-50343-A-1 MS		280-206885		12/28/2013 01:14	20	TAL DEN	TLP

Lab ID: 280-50343-1 MSD

Client ID: OVSL-20131213-LPLCD

Sample Date/Time: 12/13/2013 09:00

Received Date/Time: 12/14/2013 14:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-50343-A-1 MSD		280-206885		12/28/2013 01:30	20	TAL DEN	TLP

Lab ID: 280-50343-1 DU

Client ID: OVSL-20131213-LPLCD

Sample Date/Time: 12/13/2013 09:00

Received Date/Time: 12/14/2013 14:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-50343-A-1 DU		280-206885		12/28/2013 00:59	20	TAL DEN	TLP

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:3005A	MB 280-205623/1-A		280-205883	280-205623	12/17/2013 14:33	1	TAL DEN	LLB
A:6010B	MB 280-205623/1-A		280-205883	280-205623	12/19/2013 04:38	1	TAL DEN	JKH
A:300.0	MB 280-206885/6		280-206885		12/27/2013 11:40	1	TAL DEN	TLP
A:350.1	MB 280-206591/106		280-206591		12/24/2013 14:08	1	TAL DEN	RSN
A:SM 2320B	MB 280-205702/33		280-205702		12/17/2013 22:12	1	TAL DEN	AFH
A:SM 2540C	MB 280-205986/1		280-205986		12/19/2013 14:41	1	TAL DEN	ELJ
A:SM 5310B	MB 280-206902/57		280-206902		12/29/2013 08:07	1	TAL DEN	CCJ

**Quality Control Results**

Client: Waste Management

Job Number: 280-50343-1

**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:3005A	LCS 280-205623/2-A		280-205883	280-205623	12/17/2013 14:33	1	TAL DEN	LLB
A:6010B	LCS 280-205623/2-A		280-205883	280-205623	12/19/2013 04:40	1	TAL DEN	JKH
A:300.0	LCS 280-206885/4		280-206885		12/27/2013 11:08	1	TAL DEN	TLP
A:350.1	LCS 280-206591/104		280-206591		12/24/2013 14:03	1	TAL DEN	RSN
A:SM 2320B	LCS 280-205702/31		280-205702		12/17/2013 21:54	1	TAL DEN	AFH
A:SM 2540C	LCS 280-205986/2		280-205986		12/19/2013 14:41	1	TAL DEN	ELJ
A:SM 5310B	LCS 280-206902/55		280-206902		12/29/2013 07:32	1	TAL DEN	CCJ

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 280-206885/5		280-206885		12/27/2013 11:24	1	TAL DEN	TLP
A:350.1	LCSD 280-206591/105		280-206591		12/24/2013 14:05	1	TAL DEN	RSN
A:SM 2320B	LCSD 280-205702/32		280-205702		12/17/2013 22:04	1	TAL DEN	AFH
A:SM 2540C	LCSD 280-205986/3		280-205986		12/19/2013 14:41	1	TAL DEN	ELJ
A:SM 5310B	LCSD 280-206902/56		280-206902		12/29/2013 07:50	1	TAL DEN	CCJ

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 280-206885/3		280-206885		12/27/2013 10:52	1	TAL DEN	TLP

Lab ID: MS

Client ID: N/A

Sample Date/Time: 12/12/2013 16:37

Received Date/Time: 12/14/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-50320-E-1-C MS		280-205883	280-205623	12/17/2013 14:33	1	TAL DEN	LLB
A:6010B	280-50320-E-1-C MS		280-205883	280-205623	12/19/2013 04:47	1	TAL DEN	JKH
A:SM 5310B	280-50269-H-1 MS		280-206902		12/29/2013 08:58	5	TAL DEN	CCJ

## Quality Control Results

Client: Waste Management

Job Number: 280-50343-1

### Laboratory Chronicle

Lab ID: MSD

Client ID: N/A

Sample Date/Time: 12/12/2013 16:37

Received Date/Time: 12/14/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-50320-E-1-D MSD		280-205883	280-205623	12/17/2013 14:33	1	TAL DEN	LLB
A:6010B	280-50320-E-1-D MSD		280-205883	280-205623	12/19/2013 04:50	1	TAL DEN	JKH
A:SM 5310B	280-50269-H-1 MSD		280-206902		12/29/2013 09:17	5	TAL DEN	CCJ

Lab ID: DU

Client ID: N/A

Sample Date/Time: 12/13/2013 08:55

Received Date/Time: 12/14/2013 14:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2320B	280-50344-A-13 DU		280-205702		12/17/2013 22:32	1	TAL DEN	AFH
A:SM 2540C	200-20055-K-3 DU		280-205986		12/19/2013 14:41	1	TAL DEN	ELJ

#### Lab References:

TAL DEN = TestAmerica Denver



Te 495  
 AN: Phc

# Chain of Custody Record

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING

Client: Mr. Charles Luckie Company: Waste Management Address: Olympic View Transfer Station 9300 Southwest Barney White Rd City: Bremerton State, Zip: WA, 98312 Phone: 303-914-1434(Tel) Email: cluckie@wrn.com Project Name: WAO2(Olympic View: Sanitary LF) Event Desc: Quarterly Leachate Appll - Mar Jun Sep D Site: Washington		Sampler: Bradley Beach Lab F/W: Sara, Betsy A Phone: 360-703-8156 E-Mail: betsy.sara@testamericainc.com		Camer Tracking No(s): COC No: 280-17323-8080.1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): PO #: Purchase Order not required WO #:		<b>Analysis Requested</b>			
Sample Identification: OYSL-20131213-LPLCD		Sample Date: 12/13/13	Sample Time: 0900	Sample Type (C=comp, G=grab): G	Matrix (W=water, S=solid, O=wastewater, B=biological, T=tissue, A=air): W
Field Filtered Sample (Yes or No): <input checked="" type="checkbox"/> Yes		TDS/Ars/C/SO4: X	Total Metals: X	Ammonia/TOC: X	Special Instructions/Note:
Possible Hazard Identification: <input checked="" type="checkbox"/> Non-Hazard, <input type="checkbox"/> Flammable, <input type="checkbox"/> Skin Irritant, <input type="checkbox"/> Poison B, <input type="checkbox"/> Unknown, <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): <input type="checkbox"/> Return To Client, <input checked="" type="checkbox"/> Disposal By Lab, <input type="checkbox"/> Archive For Months			
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Method of Shipment:			
Relinquished by: <i>[Signature]</i>		Date/Time: 12/13/13 0900		Date/Time: 12/13/13 1415	
Relinquished by: <i>[Signature]</i>		Date/Time:		Date/Time:	
Relinquished by:		Date/Time:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks: 5.8 SF 3B4 12-14-13			

# FIELD INFORMATION FORM



Site Name: OVSL  
 Site No.: SO3702 Sample Point: LP LCD  
OVSL-201312-13-LPLCD 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: 121313 0900 \_\_\_\_\_  
 PURGE DATE (MM DD YY) PURGE TIME (2400 Hr Clock) ELAPSED HRS (hrs:mn) 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: \_\_\_\_\_ A-Submersible Pump D-Bailer Filter Type: \_\_\_\_\_ A-In-line Disposable C-Vacuum  
 Sampling Device: F 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) \_\_\_\_\_ (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 Site/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)
		1st							
	2nd								
	3rd								
	4th								

Suggested range for 3 conseq. 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) 121313 pH (std) 6.53 CONDUCTANCE ( $\mu$ mhos/cm @ 25°C) 2324 TEMP. (°C) 8.2 TURBIDITY (ntu) 9.1 DO (mg/L-ppm) 1.32 eH/ORP (mV) 197.9 Other: \_\_\_\_\_ Units \_\_\_\_\_  
 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: Clean / Colored Odor: Slight Color: Light Straw Other: \_\_\_\_\_  
 Weather Conditions (required daily, or as conditions change): Foggy / Overcast Direction/Speed: 0 Outlook: Same 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):  
12/13/13 Bradley Beach [Signature] SOS-FS  
 Date Name Signature Company

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

## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-50343-1

**Login Number: 50343**  
**List Number: 1**  
**Creator: Dedio, Michael T**

**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?	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	N/A	Yes: Preservation labels on samples match COC
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.	N/A	
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.	N/A	



## ANALYTICAL REPORT

Job Number: 280-50359-1

Job Description: WA02|Olympic View Sanitary LF

For:  
Waste Management  
Olympic View Transfer Station  
9300 Southwest Barney White Road  
Bremerton, WA 98312  
Attention: Mr. Charles Luckie



Approved for release.  
Betsy A Sara  
Project Manager II  
12/31/2013 4:50 PM

---

Betsy A Sara, Project Manager II  
4955 Yarrow Street, Arvada, CO, 80002  
(303)736-0189  
betsy.sara@testamericainc.com  
12/31/2013

cc: Mr. Sam Adlington  
Mr. Matt O'Hare  
Mr. Phil Perley  
Ms. Elena Ramirez  
Mr. Dan Venchiarutti

The test results in this report relate only to the samples in this report and meet all requirements of NELAP, 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.

**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 . . . . .	8
Method / Analyst Summary . . . . .	9
Sample Summary . . . . .	10
Sample Results . . . . .	11
Sample Datasheets . . . . .	12
Data Qualifiers . . . . .	57
QC Results . . . . .	58
Qc Association Summary . . . . .	59
Surrogate Recovery Report . . . . .	65
Qc Reports . . . . .	68
Laboratory Chronicle . . . . .	105
Client Chain of Custody . . . . .	113
Sample Receipt Checklist . . . . .	114

## CASE NARRATIVE

Client: Waste Management

Project: WA02|Olympic View Sanitary LF

Report Number: 280-50359-1

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 12/17/2013; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 1.8° C and 4.5° C.

The container labels do not match the chain of custody for sample MW-4. The sample is listed as MW-14 on the chain of custody and as MW-4 on the containers. The sample was logged as MW-4 per the addendum. The client was notified.

A Trip Blank was received but was not listed on the chain of custody. The laboratory proceeded with the 8260B analysis. The client was notified.

### Holding Times

All holding times were within established control limits.

### Method Blanks

All 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 Total Antimony and Total Barium Method 6010B. 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.

Sample MW-33C 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 CCV closing off ICP-MS prep batch 205620 was above the upper control limit for Total Antimony. Results are still considered valid because Total Antimony was not detected at or above the reporting limit in the associated samples.

The Method 6020 CCV and CCBs in the middle of ICP-MS prep batch 206039 was above the upper control limit for Dissolved Selenium. Results are still considered valid because Dissolved Selenium was not detected at or above the reporting limit in the associated samples.

### General Comments

The analyses for Volatile Organics by Method 8260C and Volatile Organics by Method 8260C 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: 280-50359-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-50359-1</b>	<b>MW-35</b>					
Chloride		1.7		1.0	mg/L	300.0
Sulfate		2.6		1.0	mg/L	300.0
Nitrate as N		0.40		0.050	mg/L	353.2
Alkalinity, Total (As CaCO3)		78		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		78		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		95		5.0	mg/L	SM 2540C
<b><i>Dissolved</i></b>						
Calcium, Dissolved		14		0.040	mg/L	6010B
Magnesium, Dissolved		8.4		0.050	mg/L	6010B
Sodium, Dissolved		5.9		1.0	mg/L	6010B
Barium, Dissolved		0.0029		0.0010	mg/L	6020
Vanadium, Dissolved		0.0044		0.0020	mg/L	6020
<b><i>Total Recoverable</i></b>						
Barium, Total		0.0031		0.0010	mg/L	6020
Vanadium, Total		0.0046		0.0020	mg/L	6020
<b>280-50359-2</b>	<b>MW-4</b>					
Vinyl chloride		0.068		0.020	ug/L	8260C SIM
Chloride		2.1		1.0	mg/L	300.0
Sulfate		4.6		1.0	mg/L	300.0
Alkalinity, Total (As CaCO3)		64		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		64		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		94		5.0	mg/L	SM 2540C
<b><i>Dissolved</i></b>						
Calcium, Dissolved		12		0.040	mg/L	6010B
Magnesium, Dissolved		5.9		0.050	mg/L	6010B
Sodium, Dissolved		7.0		1.0	mg/L	6010B
Barium, Dissolved		0.0020		0.0010	mg/L	6020
Manganese, Dissolved		0.91		0.0010	mg/L	6020
<b><i>Total Recoverable</i></b>						
Iron, Total		0.062		0.060	mg/L	6010B
Barium, Total		0.0048		0.0010	mg/L	6020
Manganese, Total		1.3		0.0010	mg/L	6020
Vanadium, Total		0.0023		0.0020	mg/L	6020

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-50359-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-50359-3</b>	<b>MW-16</b>					
Sulfate		2.3		1.0	mg/L	300.0
Ammonia (as N)		0.096		0.030	mg/L	350.1
Nitrate as N		0.75		0.050	mg/L	353.2
Alkalinity, Total (As CaCO <sub>3</sub> )		62		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO <sub>3</sub> )		62		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		92		5.0	mg/L	SM 2540C
<b><i>Dissolved</i></b>						
Calcium, Dissolved		11		0.040	mg/L	6010B
Magnesium, Dissolved		5.9		0.050	mg/L	6010B
Sodium, Dissolved		5.7		1.0	mg/L	6010B
Barium, Dissolved		0.0036		0.0010	mg/L	6020
Chromium, Dissolved		0.0070		0.0030	mg/L	6020
Manganese, Dissolved		0.012		0.0010	mg/L	6020
Vanadium, Dissolved		0.0034		0.0020	mg/L	6020
<b><i>Total Recoverable</i></b>						
Iron, Total		0.068		0.060	mg/L	6010B
Barium, Total		0.0043		0.0010	mg/L	6020
Chromium, Total		0.0080		0.0030	mg/L	6020
Manganese, Total		0.013		0.0010	mg/L	6020
Vanadium, Total		0.0039		0.0020	mg/L	6020

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-50359-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-50359-4</b>	<b>MW-32</b>					
Trichloroethene		0.68	J	1.0	ug/L	8260C
Vinyl chloride		0.35		0.020	ug/L	8260C SIM
Chloride		12		1.0	mg/L	300.0
Sulfate		18		1.0	mg/L	300.0
Alkalinity, Total (As CaCO3)		130		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		130		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		230		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		28		0.040	mg/L	6010B
Iron, Dissolved		0.68		0.060	mg/L	6010B
Magnesium, Dissolved		13		0.050	mg/L	6010B
Potassium, Dissolved		1.2		1.0	mg/L	6010B
Sodium, Dissolved		16		1.0	mg/L	6010B
Barium, Dissolved		0.0050		0.0010	mg/L	6020
Chromium, Dissolved		0.0033		0.0030	mg/L	6020
Manganese, Dissolved		2.2		0.0010	mg/L	6020
<b><i>Total Recoverable</i></b>						
Iron, Total		0.82		0.060	mg/L	6010B
Barium, Total		0.0064		0.0010	mg/L	6020
Manganese, Total		2.3		0.0010	mg/L	6020
<b>280-50359-5</b>	<b>MW-33C</b>					
Chloride		3.0		1.0	mg/L	300.0
Sulfate		9.7		1.0	mg/L	300.0
Alkalinity, Total (As CaCO3)		69		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		69		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		110		5.0	mg/L	SM 2540C
<b><i>Dissolved</i></b>						
Calcium, Dissolved		16		0.040	mg/L	6010B
Iron, Dissolved		0.088		0.060	mg/L	6010B
Magnesium, Dissolved		6.5		0.050	mg/L	6010B
Potassium, Dissolved		1.2		1.0	mg/L	6010B
Sodium, Dissolved		4.3		1.0	mg/L	6010B
Barium, Dissolved		0.0036		0.0010	mg/L	6020
Manganese, Dissolved		0.14		0.0010	mg/L	6020
<b><i>Total Recoverable</i></b>						
Iron, Total		0.31		0.060	mg/L	6010B
Barium, Total		0.0053		0.0010	mg/L	6020
Manganese, Total		0.19		0.0010	mg/L	6020

## METHOD SUMMARY

Client: Waste Management

Job Number: 280-50359-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		SW846 3005A
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Metals (ICP/MS)	TAL DEN	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		SW846 3005A
Metals (ICP/MS)	TAL DEN	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		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	
Alkalinity	TAL DEN	SM SM 2320B	
Solids, Total Dissolved (TDS)	TAL DEN	SM SM 2540C	
Solids, Total Suspended (TSS)	TAL DEN	SM SM 2540D	
Organic Carbon, Total (TOC)	TAL DEN	SM SM 5310B	
Volatile Organic Compounds by GC/MS	TAL BUF	SW846 8260C	
Purge and Trap	TAL BUF		SW846 5030C
Volatile Organic Compounds (GC/MS)	TAL BUF	SW846 8260C SIM	
Purge and Trap	TAL BUF		SW846 5030C

**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: 280-50359-1

<b>Method</b>	<b>Analyst</b>	<b>Analyst ID</b>
SW846 8260C	Dias, Nicole M	NMD1
SW846 8260C	Hill, Leah C	LCH
SW846 8260C SIM	Brandt, Todd R	TRB
SW846 6010B	Harre, John K	JKH
SW846 6020	Lill, Thomas E	TEL
SW846 6020	Trudell, Lynn-Anne M	LMT
MCAWW 300.0	Phan, Thu L	TLP
MCAWW 350.1	Newcome, Robin S	RSN
EPA 353.2	Sullivan, Roxanne K	RKS
SM SM 2320B	Hoefler, Alexandra F	AFH
SM SM 2540C	Janssen, Elizabeth L	ELJ
SM SM 2540D	Neeley, Beth A	BAN
SM SM 5310B	Jewell, Connie C	CCJ

## SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-50359-1

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
280-50359-1	MW-35	Water	12/16/2013 0932	12/17/2013 0945
280-50359-2	MW-4	Water	12/16/2013 0932	12/17/2013 0945
280-50359-3	MW-16	Water	12/16/2013 1048	12/17/2013 0945
280-50359-4	MW-32	Water	12/16/2013 1056	12/17/2013 0945
280-50359-5	MW-33C	Water	12/16/2013 1237	12/17/2013 0945
280-50359-6TB	TRIP BLANK	Water	12/16/2013 0932	12/17/2013 0945

# **SAMPLE RESULTS**

## Analytical Data

Client: Waste Management

Job Number: 280-50359-1

**Client Sample ID: MW-35**

Lab Sample ID: 280-50359-1

Date Sampled: 12/16/2013 0932

Client Matrix: Water

Date Received: 12/17/2013 0945

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method: 8260C	Analysis Batch: 480-159074	Instrument ID: HP5973C	
Prep Method: 5030C	Prep Batch: N/A	Lab File ID: C35497.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/23/2013 1307		Final Weight/Volume: 5 mL	
Prep Date: 12/23/2013 1307			

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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-50359-1

**Client Sample ID: MW-35**

Lab Sample ID: 280-50359-1

Date Sampled: 12/16/2013 0932

Client Matrix: Water

Date Received: 12/17/2013 0945

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-159074	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35497.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2013 1307			Final Weight/Volume:	5 mL
Prep Date:	12/23/2013 1307				

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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-50359-1

**Client Sample ID: MW-35**

Lab Sample ID: 280-50359-1

Date Sampled: 12/16/2013 0932

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-159074	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35497.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2013 1307			Final Weight/Volume:	5 mL
Prep Date:	12/23/2013 1307				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	114		66 - 137
4-Bromofluorobenzene (Surr)	91		73 - 120
Toluene-d8 (Surr)	90		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-50359-1

**Client Sample ID: MW-35**

Lab Sample ID: 280-50359-1

Date Sampled: 12/16/2013 0932

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-159074	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35497.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2013 1307			Final Weight/Volume:	5 mL
Prep Date:	12/23/2013 1307				

**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: 280-50359-1

**Client Sample ID:** MW-4

Lab Sample ID: 280-50359-2

Date Sampled: 12/16/2013 0932

Client Matrix: Water

Date Received: 12/17/2013 0945

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-158899	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35473.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/21/2013 0307			Final Weight/Volume:	5 mL
Prep Date:	12/21/2013 0307				

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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-50359-1

**Client Sample ID:** MW-4

Lab Sample ID: 280-50359-2

Date Sampled: 12/16/2013 0932

Client Matrix: Water

Date Received: 12/17/2013 0945

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-158899	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35473.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/21/2013 0307			Final Weight/Volume:	5 mL
Prep Date:	12/21/2013 0307				

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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-50359-1

**Client Sample ID: MW-4**

Lab Sample ID: 280-50359-2

Date Sampled: 12/16/2013 0932

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-158899	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35473.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/21/2013 0307			Final Weight/Volume:	5 mL
Prep Date:	12/21/2013 0307				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	115		66 - 137
4-Bromofluorobenzene (Surr)	90		73 - 120
Toluene-d8 (Surr)	89		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-50359-1

**Client Sample ID: MW-4**

Lab Sample ID: 280-50359-2

Date Sampled: 12/16/2013 0932

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-158899	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35473.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/21/2013 0307			Final Weight/Volume:	5 mL
Prep Date:	12/21/2013 0307				

**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: 280-50359-1

**Client Sample ID: MW-16**

Lab Sample ID: 280-50359-3

Date Sampled: 12/16/2013 1048

Client Matrix: Water

Date Received: 12/17/2013 0945

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method: 8260C	Analysis Batch: 480-158899	Instrument ID: HP5973C	
Prep Method: 5030C	Prep Batch: N/A	Lab File ID: C35474.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/21/2013 0336		Final Weight/Volume: 5 mL	
Prep Date: 12/21/2013 0336			

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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-50359-1

**Client Sample ID: MW-16**

Lab Sample ID: 280-50359-3

Date Sampled: 12/16/2013 1048

Client Matrix: Water

Date Received: 12/17/2013 0945

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method: 8260C	Analysis Batch: 480-158899	Instrument ID: HP5973C	
Prep Method: 5030C	Prep Batch: N/A	Lab File ID: C35474.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/21/2013 0336		Final Weight/Volume: 5 mL	
Prep Date: 12/21/2013 0336			

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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-50359-1

**Client Sample ID: MW-16**

Lab Sample ID: 280-50359-3

Date Sampled: 12/16/2013 1048

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-158899	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35474.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/21/2013 0336			Final Weight/Volume:	5 mL
Prep Date:	12/21/2013 0336				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	118		66 - 137
4-Bromofluorobenzene (Surr)	90		73 - 120
Toluene-d8 (Surr)	90		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-50359-1

**Client Sample ID: MW-16**

Lab Sample ID: 280-50359-3

Date Sampled: 12/16/2013 1048

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-158899	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35474.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/21/2013 0336			Final Weight/Volume:	5 mL
Prep Date:	12/21/2013 0336				

**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: 280-50359-1

**Client Sample ID: MW-32**

Lab Sample ID: 280-50359-4

Date Sampled: 12/16/2013 1056

Client Matrix: Water

Date Received: 12/17/2013 0945

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method: 8260C	Analysis Batch: 480-158899	Instrument ID: HP5973C	
Prep Method: 5030C	Prep Batch: N/A	Lab File ID: C35475.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/21/2013 0401		Final Weight/Volume: 5 mL	
Prep Date: 12/21/2013 0401			

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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-50359-1

**Client Sample ID: MW-32**

Lab Sample ID: 280-50359-4

Date Sampled: 12/16/2013 1056

Client Matrix: Water

Date Received: 12/17/2013 0945

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method: 8260C	Analysis Batch: 480-158899	Instrument ID: HP5973C	
Prep Method: 5030C	Prep Batch: N/A	Lab File ID: C35475.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/21/2013 0401		Final Weight/Volume: 5 mL	
Prep Date: 12/21/2013 0401			

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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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	0.68	J	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: 280-50359-1

**Client Sample ID: MW-32**

Lab Sample ID: 280-50359-4

Date Sampled: 12/16/2013 1056

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-158899	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35475.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/21/2013 0401			Final Weight/Volume:	5 mL
Prep Date:	12/21/2013 0401				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	112		66 - 137
4-Bromofluorobenzene (Surr)	90		73 - 120
Toluene-d8 (Surr)	89		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-50359-1

**Client Sample ID: MW-32**

Lab Sample ID: 280-50359-4

Date Sampled: 12/16/2013 1056

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-158899	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35475.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/21/2013 0401			Final Weight/Volume:	5 mL
Prep Date:	12/21/2013 0401				

**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: 280-50359-1

**Client Sample ID: MW-33C**

Lab Sample ID: 280-50359-5

Date Sampled: 12/16/2013 1237

Client Matrix: Water

Date Received: 12/17/2013 0945

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method: 8260C	Analysis Batch: 480-159074	Instrument ID: HP5973C	
Prep Method: 5030C	Prep Batch: N/A	Lab File ID: C35498.D	
Dilution: 1.0		Initial Weight/Volume: 5 mL	
Analysis Date: 12/23/2013 1332		Final Weight/Volume: 5 mL	
Prep Date: 12/23/2013 1332			

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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-50359-1

**Client Sample ID: MW-33C**

Lab Sample ID: 280-50359-5

Date Sampled: 12/16/2013 1237

Client Matrix: Water

Date Received: 12/17/2013 0945

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-159074	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35498.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2013 1332			Final Weight/Volume:	5 mL
Prep Date:	12/23/2013 1332				

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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-50359-1

**Client Sample ID: MW-33C**

Lab Sample ID: 280-50359-5

Date Sampled: 12/16/2013 1237

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-159074	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35498.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2013 1332			Final Weight/Volume:	5 mL
Prep Date:	12/23/2013 1332				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	113		66 - 137
4-Bromofluorobenzene (Surr)	91		73 - 120
Toluene-d8 (Surr)	89		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-50359-1

**Client Sample ID: MW-33C**

Lab Sample ID: 280-50359-5

Date Sampled: 12/16/2013 1237

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-159074	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35498.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2013 1332			Final Weight/Volume:	5 mL
Prep Date:	12/23/2013 1332				

**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: 280-50359-1

**Client Sample ID:** TRIP BLANK

Lab Sample ID: 280-50359-6TB

Date Sampled: 12/16/2013 0932

Client Matrix: Water

Date Received: 12/17/2013 0945

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-159074	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35499.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2013 1357			Final Weight/Volume:	5 mL
Prep Date:	12/23/2013 1357				

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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-50359-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 280-50359-6TB

Date Sampled: 12/16/2013 0932

Client Matrix: Water

Date Received: 12/17/2013 0945

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-159074	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35499.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2013 1357			Final Weight/Volume:	5 mL
Prep Date:	12/23/2013 1357				

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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-50359-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 280-50359-6TB

Date Sampled: 12/16/2013 0932

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-159074	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35499.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2013 1357			Final Weight/Volume:	5 mL
Prep Date:	12/23/2013 1357				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	114		66 - 137
4-Bromofluorobenzene (Surr)	90		73 - 120
Toluene-d8 (Surr)	86		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-50359-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 280-50359-6TB

Date Sampled: 12/16/2013 0932

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-159074	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35499.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/23/2013 1357			Final Weight/Volume:	5 mL
Prep Date:	12/23/2013 1357				

**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: 280-50359-1

**Client Sample ID: MW-35**

Lab Sample ID: 280-50359-1

Date Sampled: 12/16/2013 0932

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260C SIM	Analysis Batch:	480-159161	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J6995.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/23/2013 1519			Final Weight/Volume:	25 mL
Prep Date:	12/23/2013 1519				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.0040	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	100		50 - 150
TBA-d9 (Surr)	99		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-50359-1

**Client Sample ID: MW-4**

Lab Sample ID: 280-50359-2

Date Sampled: 12/16/2013 0932

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260C SIM	Analysis Batch:	480-159161	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J6996.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/23/2013 1543			Final Weight/Volume:	25 mL
Prep Date:	12/23/2013 1543				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.068		0.0040	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	102		50 - 150
TBA-d9 (Surr)	103		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-50359-1

**Client Sample ID: MW-16**

Lab Sample ID: 280-50359-3

Date Sampled: 12/16/2013 1048

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260C SIM	Analysis Batch:	480-159161	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J6997.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/23/2013 1607			Final Weight/Volume:	25 mL
Prep Date:	12/23/2013 1607				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.0040	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	101		50 - 150
TBA-d9 (Surr)	102		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-50359-1

**Client Sample ID: MW-32**

Lab Sample ID: 280-50359-4

Date Sampled: 12/16/2013 1056

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260C SIM	Analysis Batch:	480-159161	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J6998.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/23/2013 1631			Final Weight/Volume:	25 mL
Prep Date:	12/23/2013 1631				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.35		0.0040	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	101		50 - 150
TBA-d9 (Surr)	106		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-50359-1

**Client Sample ID: MW-33C**

Lab Sample ID: 280-50359-5

Date Sampled: 12/16/2013 1237

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260C SIM	Analysis Batch:	480-159161	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J6999.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/23/2013 1655			Final Weight/Volume:	25 mL
Prep Date:	12/23/2013 1655				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.0040	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	101		50 - 150
TBA-d9 (Surr)	102		50 - 150



**Analytical Data**

Client: Waste Management

Job Number: 280-50359-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 280-50359-6TB

Date Sampled: 12/16/2013 0932

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260C SIM	Analysis Batch:	480-159161	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J7000.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/23/2013 1719			Final Weight/Volume:	25 mL
Prep Date:	12/23/2013 1719				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.0040	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	100		50 - 150
TBA-d9 (Surr)	101		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-50359-1

**Client Sample ID: MW-35**

Lab Sample ID: 280-50359-1

Date Sampled: 12/16/2013 0932

Client Matrix: Water

Date Received: 12/17/2013 0945

**6010B Metals (ICP)-Total Recoverable**

Analysis Method:	6010B	Analysis Batch:	280-205883	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-205623	Lab File ID:	25A4121813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/19/2013 0513			Final Weight/Volume:	50 mL
Prep Date:	12/17/2013 1433				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	ND		0.060	0.060

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-205883	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-205627	Lab File ID:	25A4121813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/19/2013 0417			Final Weight/Volume:	50 mL
Prep Date:	12/17/2013 1447				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	14		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	ND		0.060	0.060
Magnesium, Dissolved	8.4		0.050	0.050
Potassium, Dissolved	ND		1.0	1.0
Sodium, Dissolved	5.9		1.0	1.0

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-205904	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-205620	Lab File ID:	081SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/18/2013 2152			Final Weight/Volume:	50 mL
Prep Date:	12/17/2013 1422				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND	^	0.0010	0.0010
Barium, Total	0.0031		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Selenium, Total	ND		0.0010	0.0010
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	0.0046		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

Analytical Data

Client: Waste Management

Job Number: 280-50359-1

Client Sample ID: MW-35

Lab Sample ID: 280-50359-1

Date Sampled: 12/16/2013 0932

Client Matrix: Water

Date Received: 12/17/2013 0945

6020 Metals (ICP/MS)-Total Recoverable

Analysis Method:	6020	Analysis Batch:	280-206303	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-205965	Lab File ID:	174SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2013 2216			Final Weight/Volume:	50 mL
Prep Date:	12/19/2013 1326				

Analyte	Result (mg/L)	Qualifier	RL	RL
Manganese, Total	ND		0.0010	0.0010

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-206333	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-206039	Lab File ID:	156AREF.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/21/2013 0044			Final Weight/Volume:	50 mL
Prep Date:	12/20/2013 1215				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.0029		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	ND		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	ND		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	0.0044		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-50359-1

**Client Sample ID: MW-4**

Lab Sample ID: 280-50359-2

Date Sampled: 12/16/2013 0932

Client Matrix: Water

Date Received: 12/17/2013 0945

**6010B Metals (ICP)-Total Recoverable**

Analysis Method:	6010B	Analysis Batch:	280-205883	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-205623	Lab File ID:	25A4121813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/19/2013 0515			Final Weight/Volume:	50 mL
Prep Date:	12/17/2013 1433				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	0.062		0.060	0.060

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-205883	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-205627	Lab File ID:	25A4121813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/19/2013 0419			Final Weight/Volume:	50 mL
Prep Date:	12/17/2013 1447				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	12		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	ND		0.060	0.060
Magnesium, Dissolved	5.9		0.050	0.050
Potassium, Dissolved	ND		1.0	1.0
Sodium, Dissolved	7.0		1.0	1.0

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-205904	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-205620	Lab File ID:	082SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/18/2013 2155			Final Weight/Volume:	50 mL
Prep Date:	12/17/2013 1422				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND	^	0.0010	0.0010
Barium, Total	0.0048		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Selenium, Total	ND		0.0010	0.0010
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	0.0023		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

Analytical Data

Client: Waste Management

Job Number: 280-50359-1

Client Sample ID: MW-4

Lab Sample ID: 280-50359-2

Date Sampled: 12/16/2013 0932

Client Matrix: Water

Date Received: 12/17/2013 0945

6020 Metals (ICP/MS)-Total Recoverable

Analysis Method:	6020	Analysis Batch:	280-206303	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-205965	Lab File ID:	181SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2013 2242			Final Weight/Volume:	50 mL
Prep Date:	12/19/2013 1326				

Analyte	Result (mg/L)	Qualifier	RL	RL
Manganese, Total	1.3		0.0010	0.0010

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-206333	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-206039	Lab File ID:	161SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/21/2013 0059			Final Weight/Volume:	50 mL
Prep Date:	12/20/2013 1215				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.0020		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	0.91		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	ND		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

## Analytical Data

Client: Waste Management

Job Number: 280-50359-1

**Client Sample ID: MW-16**

Lab Sample ID: 280-50359-3

Date Sampled: 12/16/2013 1048

Client Matrix: Water

Date Received: 12/17/2013 0945

### 6010B Metals (ICP)-Total Recoverable

Analysis Method:	6010B	Analysis Batch:	280-205883	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-205623	Lab File ID:	25A4121813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/19/2013 0518			Final Weight/Volume:	50 mL
Prep Date:	12/17/2013 1433				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	0.068		0.060	0.060

### 6010B Metals (ICP)-Dissolved

Analysis Method:	6010B	Analysis Batch:	280-205883	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-205627	Lab File ID:	25A4121813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/19/2013 0422			Final Weight/Volume:	50 mL
Prep Date:	12/17/2013 1447				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	11		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	ND		0.060	0.060
Magnesium, Dissolved	5.9		0.050	0.050
Potassium, Dissolved	ND		1.0	1.0
Sodium, Dissolved	5.7		1.0	1.0

### 6020 Metals (ICP/MS)-Total Recoverable

Analysis Method:	6020	Analysis Batch:	280-205904	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-205620	Lab File ID:	083SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/18/2013 2158			Final Weight/Volume:	50 mL
Prep Date:	12/17/2013 1422				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND	^	0.0010	0.0010
Barium, Total	0.0043		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	0.0080		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Selenium, Total	ND		0.0010	0.0010
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	0.0039		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-50359-1

**Client Sample ID: MW-16**

Lab Sample ID: 280-50359-3

Date Sampled: 12/16/2013 1048

Client Matrix: Water

Date Received: 12/17/2013 0945

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method: 6020	Analysis Batch: 280-206303	Instrument ID: MT_077
Prep Method: 3005A	Prep Batch: 280-205965	Lab File ID: 182SMPL.d
Dilution: 1.0		Initial Weight/Volume: 50 mL
Analysis Date: 12/20/2013 2246		Final Weight/Volume: 50 mL
Prep Date: 12/19/2013 1326		

Analyte	Result (mg/L)	Qualifier	RL	RL
Manganese, Total	0.013		0.0010	0.0010

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method: 6020	Analysis Batch: 280-206333	Instrument ID: MT_024
Prep Method: 3005A	Prep Batch: 280-206039	Lab File ID: 164SMPL.D
Dilution: 1.0		Initial Weight/Volume: 50 mL
Analysis Date: 12/21/2013 0108		Final Weight/Volume: 50 mL
Prep Date: 12/20/2013 1215		

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.0036		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	0.0070		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	0.012		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	ND	^	0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	0.0034		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-50359-1

**Client Sample ID: MW-32**

Lab Sample ID: 280-50359-4

Date Sampled: 12/16/2013 1056

Client Matrix: Water

Date Received: 12/17/2013 0945

**6010B Metals (ICP)-Total Recoverable**

Analysis Method:	6010B	Analysis Batch:	280-205883	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-205623	Lab File ID:	25A4121813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/19/2013 0520			Final Weight/Volume:	50 mL
Prep Date:	12/17/2013 1433				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	0.82		0.060	0.060

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-205883	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-205627	Lab File ID:	25A4121813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/19/2013 0424			Final Weight/Volume:	50 mL
Prep Date:	12/17/2013 1447				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	28		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	0.68		0.060	0.060
Magnesium, Dissolved	13		0.050	0.050
Potassium, Dissolved	1.2		1.0	1.0
Sodium, Dissolved	16		1.0	1.0

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-205904	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-205620	Lab File ID:	084SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/18/2013 2201			Final Weight/Volume:	50 mL
Prep Date:	12/17/2013 1422				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND	^	0.0010	0.0010
Barium, Total	0.0064		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Selenium, Total	ND		0.0010	0.0010
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	ND		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050



**Analytical Data**

Client: Waste Management

Job Number: 280-50359-1

**Client Sample ID: MW-32**

Lab Sample ID: 280-50359-4

Date Sampled: 12/16/2013 1056

Client Matrix: Water

Date Received: 12/17/2013 0945

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method: 6020	Analysis Batch: 280-206303	Instrument ID: MT_077
Prep Method: 3005A	Prep Batch: 280-205965	Lab File ID: 183SMPL.d
Dilution: 1.0		Initial Weight/Volume: 50 mL
Analysis Date: 12/20/2013 2249		Final Weight/Volume: 50 mL
Prep Date: 12/19/2013 1326		

Analyte	Result (mg/L)	Qualifier	RL	RL
Manganese, Total	2.3		0.0010	0.0010

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method: 6020	Analysis Batch: 280-206333	Instrument ID: MT_024
Prep Method: 3005A	Prep Batch: 280-206039	Lab File ID: 165SMPL.D
Dilution: 1.0		Initial Weight/Volume: 50 mL
Analysis Date: 12/21/2013 0111		Final Weight/Volume: 50 mL
Prep Date: 12/20/2013 1215		

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.0050		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	0.0033		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	2.2		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	ND	^	0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-50359-1

**Client Sample ID: MW-33C**

Lab Sample ID: 280-50359-5  
 Client Matrix: Water

Date Sampled: 12/16/2013 1237  
 Date Received: 12/17/2013 0945

**6010B Metals (ICP)-Total Recoverable**

Analysis Method:	6010B	Analysis Batch:	280-205883	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-205623	Lab File ID:	25A4121813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/19/2013 0523			Final Weight/Volume:	50 mL
Prep Date:	12/17/2013 1433				

Analyte	Result (mg/L)	Qualifier	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	0.31		0.060	0.060

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-205883	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-205627	Lab File ID:	25A4121813.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/19/2013 0426			Final Weight/Volume:	50 mL
Prep Date:	12/17/2013 1447				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	16		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	0.088		0.060	0.060
Magnesium, Dissolved	6.5		0.050	0.050
Potassium, Dissolved	1.2		1.0	1.0
Sodium, Dissolved	4.3		1.0	1.0

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method:	6020	Analysis Batch:	280-205904	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-205620	Lab File ID:	085SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/18/2013 2204			Final Weight/Volume:	50 mL
Prep Date:	12/17/2013 1422				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Total	ND	^	0.0010	0.0010
Barium, Total	0.0053		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Selenium, Total	ND		0.0010	0.0010
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	ND		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

**Analytical Data**

Client: Waste Management

Job Number: 280-50359-1

**Client Sample ID: MW-33C**

Lab Sample ID: 280-50359-5  
 Client Matrix: Water

Date Sampled: 12/16/2013 1237  
 Date Received: 12/17/2013 0945

**6020 Metals (ICP/MS)-Total Recoverable**

Analysis Method: 6020	Analysis Batch: 280-206303	Instrument ID: MT_077
Prep Method: 3005A	Prep Batch: 280-205965	Lab File ID: 184SMPL.d
Dilution: 1.0		Initial Weight/Volume: 50 mL
Analysis Date: 12/20/2013 2253		Final Weight/Volume: 50 mL
Prep Date: 12/19/2013 1326		

Analyte	Result (mg/L)	Qualifier	RL	RL
Manganese, Total	0.19		0.0010	0.0010

**6020 Metals (ICP/MS)-Dissolved**

Analysis Method: 6020	Analysis Batch: 280-206333	Instrument ID: MT_024
Prep Method: 3005A	Prep Batch: 280-206039	Lab File ID: 166SMPL.D
Dilution: 1.0		Initial Weight/Volume: 50 mL
Analysis Date: 12/21/2013 0114		Final Weight/Volume: 50 mL
Prep Date: 12/20/2013 1215		

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	0.0036		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	0.14		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	ND	^	0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

Client: Waste Management

Job Number: 280-50359-1

General Chemistry

Client Sample ID: MW-35

Lab Sample ID: 280-50359-1

Date Sampled: 12/16/2013 0932

Client Matrix: Water

Date Received: 12/17/2013 0945

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	1.7		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-206950			Analysis Date: 12/28/2013 1339			
Sulfate	2.6		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-206950			Analysis Date: 12/28/2013 1339			
Ammonia (as N)	ND		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-206844			Analysis Date: 12/27/2013 1359			
Nitrate as N	0.40		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206988			Analysis Date: 12/17/2013 1735			
Alkalinity, Total (As CaCO3)	78		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-206112			Analysis Date: 12/19/2013 1443			
Alkalinity, Bicarbonate (As CaCO3)	78		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-206112			Analysis Date: 12/19/2013 1443			
Total Dissolved Solids (TDS)	95		mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-206101			Analysis Date: 12/20/2013 0959			
Total Suspended Solids	ND		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-205678			Analysis Date: 12/18/2013 0726			
Total Organic Carbon - Average	ND		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-206900			Analysis Date: 12/28/2013 1302			

Client: Waste Management

Job Number: 280-50359-1

General Chemistry

Client Sample ID: MW-4

Lab Sample ID: 280-50359-2

Date Sampled: 12/16/2013 0932

Client Matrix: Water

Date Received: 12/17/2013 0945

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	2.1		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-206950			Analysis Date: 12/28/2013 1514			
Sulfate	4.6		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-206950			Analysis Date: 12/28/2013 1514			
Ammonia (as N)	ND		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-206844			Analysis Date: 12/27/2013 1402			
Nitrate as N	ND		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206988			Analysis Date: 12/17/2013 1735			
Alkalinity, Total (As CaCO3)	64		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-206112			Analysis Date: 12/19/2013 1458			
Alkalinity, Bicarbonate (As CaCO3)	64		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-206112			Analysis Date: 12/19/2013 1458			
Total Dissolved Solids (TDS)	94		mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-206101			Analysis Date: 12/20/2013 0959			
Total Suspended Solids	ND		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-205678			Analysis Date: 12/18/2013 0726			
Total Organic Carbon - Average	ND		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-206900			Analysis Date: 12/28/2013 1348			

Client: Waste Management

Job Number: 280-50359-1

General Chemistry

Client Sample ID: MW-16

Lab Sample ID: 280-50359-3

Date Sampled: 12/16/2013 1048

Client Matrix: Water

Date Received: 12/17/2013 0945

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	ND		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-206950			Analysis Date: 12/28/2013 1529			
Sulfate	2.3		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-206950			Analysis Date: 12/28/2013 1529			
Ammonia (as N)	0.096		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-206844			Analysis Date: 12/27/2013 1404			
Nitrate as N	0.75		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206988			Analysis Date: 12/17/2013 1735			
Alkalinity, Total (As CaCO3)	62		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-206112			Analysis Date: 12/19/2013 1504			
Alkalinity, Bicarbonate (As CaCO3)	62		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-206112			Analysis Date: 12/19/2013 1504			
Total Dissolved Solids (TDS)	92		mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-206101			Analysis Date: 12/20/2013 0959			
Total Suspended Solids	ND		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-205678			Analysis Date: 12/18/2013 0726			
Total Organic Carbon - Average	ND		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-206900			Analysis Date: 12/28/2013 1403			

Client: Waste Management

Job Number: 280-50359-1

General Chemistry

Client Sample ID: MW-32

Lab Sample ID: 280-50359-4

Date Sampled: 12/16/2013 1056

Client Matrix: Water

Date Received: 12/17/2013 0945

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	12		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-206950			Analysis Date: 12/28/2013 1545			
Sulfate	18		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-206950			Analysis Date: 12/28/2013 1545			
Ammonia (as N)	ND		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-206844			Analysis Date: 12/27/2013 1406			
Nitrate as N	ND		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206988			Analysis Date: 12/17/2013 1735			
Alkalinity, Total (As CaCO3)	130		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-206112			Analysis Date: 12/19/2013 1512			
Alkalinity, Bicarbonate (As CaCO3)	130		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-206112			Analysis Date: 12/19/2013 1512			
Total Dissolved Solids (TDS)	230		mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-206101			Analysis Date: 12/20/2013 0959			
Total Suspended Solids	ND		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-205678			Analysis Date: 12/18/2013 0726			
Total Organic Carbon - Average	1.3		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-206900			Analysis Date: 12/28/2013 1418			

Client: Waste Management

Job Number: 280-50359-1

General Chemistry

Client Sample ID: MW-33C

Lab Sample ID: 280-50359-5

Date Sampled: 12/16/2013 1237

Client Matrix: Water

Date Received: 12/17/2013 0945

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	3.0		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-206950			Analysis Date: 12/28/2013 1601			
Sulfate	9.7		mg/L	1.0	1.0	1.0	300.0
	Analysis Batch: 280-206950			Analysis Date: 12/28/2013 1601			
Ammonia (as N)	ND		mg/L	0.030	0.030	1.0	350.1
	Analysis Batch: 280-206844			Analysis Date: 12/27/2013 1409			
Nitrate as N	ND		mg/L	0.050	0.050	1.0	353.2
	Analysis Batch: 280-206988			Analysis Date: 12/17/2013 1735			
Alkalinity, Total (As CaCO3)	69		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-206112			Analysis Date: 12/19/2013 1519			
Alkalinity, Bicarbonate (As CaCO3)	69		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-206112			Analysis Date: 12/19/2013 1519			
Total Dissolved Solids (TDS)	110		mg/L	5.0	5.0	1.0	SM 2540C
	Analysis Batch: 280-206101			Analysis Date: 12/20/2013 0959			
Total Suspended Solids	ND		mg/L	4.0	4.0	1.0	SM 2540D
	Analysis Batch: 280-205678			Analysis Date: 12/18/2013 0726			
Total Organic Carbon - Average	ND		mg/L	1.0	1.0	1.0	SM 5310B
	Analysis Batch: 280-206900			Analysis Date: 12/28/2013 1433			



## DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-50359-1

Lab Section	Qualifier	Description
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	^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F	MS/MSD Recovery and/or RPD exceeds the control limits
General Chemistry	F	MS/MSD Recovery and/or RPD exceeds the control limits

# QUALITY CONTROL RESULTS

## Quality Control Results

Client: Waste Management

Job Number: 280-50359-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Prep Batch: 480-158522</b>					
480-52219-A-1-B MS	Matrix Spike	P	Water		
480-52219-A-1-B MSD	Matrix Spike Duplicate	P	Water		
<b>Analysis Batch:480-158899</b>					
LCS 480-158899/4	Lab Control Sample	T	Water	8260C	
MB 480-158899/6	Method Blank	T	Water	8260C	
280-50359-2	MW-4	T	Water	8260C	
280-50359-3	MW-16	T	Water	8260C	
280-50359-4	MW-32	T	Water	8260C	
<b>Analysis Batch:480-159074</b>					
LCS 480-159074/5	Lab Control Sample	T	Water	8260C	
MB 480-159074/7	Method Blank	T	Water	8260C	
280-50359-1	MW-35	T	Water	8260C	
280-50359-5	MW-33C	T	Water	8260C	
280-50359-6TB	TRIP BLANK	T	Water	8260C	
480-52219-A-1-B MS	Matrix Spike	P	Water	8260C	
480-52219-A-1-B MSD	Matrix Spike Duplicate	P	Water	8260C	
<b>Analysis Batch:480-159161</b>					
LCS 480-159161/3	Lab Control Sample	T	Water	8260C SIM	
LCSD 480-159161/4	Lab Control Sample Duplicate	T	Water	8260C SIM	
MB 480-159161/5	Method Blank	T	Water	8260C SIM	
280-50359-1	MW-35	T	Water	8260C SIM	
280-50359-2	MW-4	T	Water	8260C SIM	
280-50359-3	MW-16	T	Water	8260C SIM	
280-50359-4	MW-32	T	Water	8260C SIM	
280-50359-5	MW-33C	T	Water	8260C SIM	
280-50359-6TB	TRIP BLANK	T	Water	8260C SIM	
280-50392-I-1 MS	Matrix Spike	T	Water	8260C SIM	
280-50392-I-1 MSD	Matrix Spike Duplicate	T	Water	8260C SIM	

**Report Basis**

P = TCLP

T = Total

## Quality Control Results

Client: Waste Management

Job Number: 280-50359-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
<b>Metals</b>					
<b>Prep Batch: 280-205620</b>					
LCS 280-205620/2-A	Lab Control Sample	R	Water	3005A	
MB 280-205620/1-A	Method Blank	R	Water	3005A	
280-50341-A-1-B MS	Matrix Spike	R	Water	3005A	
280-50341-A-1-C MSD	Matrix Spike Duplicate	R	Water	3005A	
280-50359-1	MW-35	R	Water	3005A	
280-50359-2	MW-4	R	Water	3005A	
280-50359-3	MW-16	R	Water	3005A	
280-50359-4	MW-32	R	Water	3005A	
280-50359-5	MW-33C	R	Water	3005A	
<b>Prep Batch: 280-205623</b>					
LCS 280-205623/2-A	Lab Control Sample	R	Water	3005A	
MB 280-205623/1-A	Method Blank	R	Water	3005A	
280-50320-E-1-C MS	Matrix Spike	R	Water	3005A	
280-50320-E-1-D MSD	Matrix Spike Duplicate	R	Water	3005A	
280-50359-1	MW-35	R	Water	3005A	
280-50359-2	MW-4	R	Water	3005A	
280-50359-3	MW-16	R	Water	3005A	
280-50359-4	MW-32	R	Water	3005A	
280-50359-5	MW-33C	R	Water	3005A	
<b>Prep Batch: 280-205627</b>					
LCS 280-205627/2-A	Lab Control Sample	R	Water	3005A	
MB 280-205627/1-A	Method Blank	R	Water	3005A	
280-50280-J-1-E MS	Matrix Spike	D	Water	3005A	
280-50280-J-1-F MSD	Matrix Spike Duplicate	D	Water	3005A	
280-50359-1	MW-35	D	Water	3005A	
280-50359-2	MW-4	D	Water	3005A	
280-50359-3	MW-16	D	Water	3005A	
280-50359-4	MW-32	D	Water	3005A	
280-50359-5	MW-33C	D	Water	3005A	

## Quality Control Results

Client: Waste Management

Job Number: 280-50359-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
<b>Metals</b>					
<b>Analysis Batch:280-205883</b>					
LCS 280-205623/2-A	Lab Control Sample	R	Water	6010B	280-205623
MB 280-205623/1-A	Method Blank	R	Water	6010B	280-205623
LCS 280-205627/2-A	Lab Control Sample	R	Water	6010B	280-205627
MB 280-205627/1-A	Method Blank	R	Water	6010B	280-205627
280-50280-J-1-E MS	Matrix Spike	D	Water	6010B	280-205627
280-50280-J-1-F MSD	Matrix Spike Duplicate	D	Water	6010B	280-205627
280-50320-E-1-C MS	Matrix Spike	R	Water	6010B	280-205623
280-50320-E-1-D MSD	Matrix Spike Duplicate	R	Water	6010B	280-205623
280-50359-1	MW-35	R	Water	6010B	280-205623
280-50359-1	MW-35	D	Water	6010B	280-205627
280-50359-2	MW-4	R	Water	6010B	280-205623
280-50359-2	MW-4	D	Water	6010B	280-205627
280-50359-3	MW-16	R	Water	6010B	280-205623
280-50359-3	MW-16	D	Water	6010B	280-205627
280-50359-4	MW-32	R	Water	6010B	280-205623
280-50359-4	MW-32	D	Water	6010B	280-205627
280-50359-5	MW-33C	R	Water	6010B	280-205623
280-50359-5	MW-33C	D	Water	6010B	280-205627
<b>Analysis Batch:280-205904</b>					
LCS 280-205620/2-A	Lab Control Sample	R	Water	6020	280-205620
MB 280-205620/1-A	Method Blank	R	Water	6020	280-205620
280-50341-A-1-B MS	Matrix Spike	R	Water	6020	280-205620
280-50341-A-1-C MSD	Matrix Spike Duplicate	R	Water	6020	280-205620
280-50359-1	MW-35	R	Water	6020	280-205620
280-50359-2	MW-4	R	Water	6020	280-205620
280-50359-3	MW-16	R	Water	6020	280-205620
280-50359-4	MW-32	R	Water	6020	280-205620
280-50359-5	MW-33C	R	Water	6020	280-205620
<b>Prep Batch: 280-205965</b>					
LCS 280-205965/2-A	Lab Control Sample	R	Water	3005A	
MB 280-205965/1-A	Method Blank	R	Water	3005A	
280-50359-1	MW-35	R	Water	3005A	
280-50359-1MS	Matrix Spike	R	Water	3005A	
280-50359-1MSD	Matrix Spike Duplicate	R	Water	3005A	
280-50359-2	MW-4	R	Water	3005A	
280-50359-3	MW-16	R	Water	3005A	
280-50359-4	MW-32	R	Water	3005A	
280-50359-5	MW-33C	R	Water	3005A	

## Quality Control Results

Client: Waste Management

Job Number: 280-50359-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Prep Batch: 280-206039</b>					
LCS 280-206039/2-A	Lab Control Sample	R	Water	3005A	
MB 280-206039/1-A	Method Blank	R	Water	3005A	
280-50359-1	MW-35	D	Water	3005A	
280-50359-1MS	Matrix Spike	D	Water	3005A	
280-50359-1MSD	Matrix Spike Duplicate	D	Water	3005A	
280-50359-2	MW-4	D	Water	3005A	
280-50359-3	MW-16	D	Water	3005A	
280-50359-4	MW-32	D	Water	3005A	
280-50359-5	MW-33C	D	Water	3005A	
<b>Analysis Batch:280-206303</b>					
LCS 280-205965/2-A	Lab Control Sample	R	Water	6020	280-205965
MB 280-205965/1-A	Method Blank	R	Water	6020	280-205965
280-50359-1	MW-35	R	Water	6020	280-205965
280-50359-1MS	Matrix Spike	R	Water	6020	280-205965
280-50359-1MSD	Matrix Spike Duplicate	R	Water	6020	280-205965
280-50359-2	MW-4	R	Water	6020	280-205965
280-50359-3	MW-16	R	Water	6020	280-205965
280-50359-4	MW-32	R	Water	6020	280-205965
280-50359-5	MW-33C	R	Water	6020	280-205965
<b>Analysis Batch:280-206333</b>					
LCS 280-206039/2-A	Lab Control Sample	R	Water	6020	280-206039
MB 280-206039/1-A	Method Blank	R	Water	6020	280-206039
280-50359-1	MW-35	D	Water	6020	280-206039
280-50359-1MS	Matrix Spike	D	Water	6020	280-206039
280-50359-1MSD	Matrix Spike Duplicate	D	Water	6020	280-206039
280-50359-2	MW-4	D	Water	6020	280-206039
280-50359-3	MW-16	D	Water	6020	280-206039
280-50359-4	MW-32	D	Water	6020	280-206039
280-50359-5	MW-33C	D	Water	6020	280-206039

**Report Basis**

D = Dissolved

R = Total Recoverable

## Quality Control Results

Client: Waste Management

Job Number: 280-50359-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-205678</b>					
LCS 280-205678/2	Lab Control Sample	T	Water	SM 2540D	
LCSD 280-205678/3	Lab Control Sample Duplicate	T	Water	SM 2540D	
MB 280-205678/1	Method Blank	T	Water	SM 2540D	
280-50359-1	MW-35	T	Water	SM 2540D	
280-50359-2	MW-4	T	Water	SM 2540D	
280-50359-2DU	Duplicate	T	Water	SM 2540D	
280-50359-3	MW-16	T	Water	SM 2540D	
280-50359-4	MW-32	T	Water	SM 2540D	
280-50359-5	MW-33C	T	Water	SM 2540D	
<b>Analysis Batch:280-206101</b>					
LCS 280-206101/2	Lab Control Sample	T	Water	SM 2540C	
LCSD 280-206101/3	Lab Control Sample Duplicate	T	Water	SM 2540C	
MB 280-206101/1	Method Blank	T	Water	SM 2540C	
280-50359-1	MW-35	T	Water	SM 2540C	
280-50359-2	MW-4	T	Water	SM 2540C	
280-50359-3	MW-16	T	Water	SM 2540C	
280-50359-4	MW-32	T	Water	SM 2540C	
280-50359-4DU	Duplicate	T	Water	SM 2540C	
280-50359-5	MW-33C	T	Water	SM 2540C	
<b>Analysis Batch:280-206112</b>					
LCS 280-206112/4	Lab Control Sample	T	Water	SM 2320B	
LCSD 280-206112/5	Lab Control Sample Duplicate	T	Water	SM 2320B	
MB 280-206112/6	Method Blank	T	Water	SM 2320B	
280-50359-1	MW-35	T	Water	SM 2320B	
280-50359-1DU	Duplicate	T	Water	SM 2320B	
280-50359-2	MW-4	T	Water	SM 2320B	
280-50359-3	MW-16	T	Water	SM 2320B	
280-50359-4	MW-32	T	Water	SM 2320B	
280-50359-5	MW-33C	T	Water	SM 2320B	
<b>Analysis Batch:280-206844</b>					
LCS 280-206844/58	Lab Control Sample	T	Water	350.1	
LCSD 280-206844/59	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-206844/60	Method Blank	T	Water	350.1	
280-50359-1	MW-35	T	Water	350.1	
280-50359-2	MW-4	T	Water	350.1	
280-50359-3	MW-16	T	Water	350.1	
280-50359-4	MW-32	T	Water	350.1	
280-50359-5	MW-33C	T	Water	350.1	
280-50359-5MS	Matrix Spike	T	Water	350.1	
280-50359-5MSD	Matrix Spike Duplicate	T	Water	350.1	

## Quality Control Results

Client: Waste Management

Job Number: 280-50359-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-206900</b>					
LCS 280-206900/68	Lab Control Sample	T	Water	SM 5310B	
LCSD 280-206900/69	Lab Control Sample Duplicate	T	Water	SM 5310B	
MB 280-206900/70	Method Blank	T	Water	SM 5310B	
280-50195-E-8 MS	Matrix Spike	T	Water	SM 5310B	
280-50195-E-8 MSD	Matrix Spike Duplicate	T	Water	SM 5310B	
280-50359-1	MW-35	T	Water	SM 5310B	
280-50359-2	MW-4	T	Water	SM 5310B	
280-50359-3	MW-16	T	Water	SM 5310B	
280-50359-4	MW-32	T	Water	SM 5310B	
280-50359-5	MW-33C	T	Water	SM 5310B	
<b>Analysis Batch:280-206950</b>					
LCS 280-206950/4	Lab Control Sample	T	Water	300.0	
LCSD 280-206950/5	Lab Control Sample Duplicate	T	Water	300.0	
MB 280-206950/6	Method Blank	T	Water	300.0	
280-50359-1	MW-35	T	Water	300.0	
280-50359-1DU	Duplicate	T	Water	300.0	
280-50359-1MS	Matrix Spike	T	Water	300.0	
280-50359-1MSD	Matrix Spike Duplicate	T	Water	300.0	
280-50359-2	MW-4	T	Water	300.0	
280-50359-3	MW-16	T	Water	300.0	
280-50359-4	MW-32	T	Water	300.0	
280-50359-5	MW-33C	T	Water	300.0	
<b>Analysis Batch:280-206988</b>					
MB 280-206988/1	Method Blank	T	Water	353.2	
280-50359-1	MW-35	T	Water	353.2	
280-50359-2	MW-4	T	Water	353.2	
280-50359-3	MW-16	T	Water	353.2	
280-50359-4	MW-32	T	Water	353.2	
280-50359-5	MW-33C	T	Water	353.2	

**Report Basis**

T = Total



Client: Waste Management

Job Number: 280-50359-1

**Surrogate Recovery Report**

**8260C Volatile Organic Compounds by GC/MS**

**Client Matrix: Water**

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec
280-50359-1	MW-35	114	91	90
280-50359-2	MW-4	115	90	89
280-50359-3	MW-16	118	90	90
280-50359-4	MW-32	112	90	89
280-50359-5	MW-33C	113	91	89
280-50359-6	TRIP BLANK	114	90	86
MB 480-158899/6		112	93	91
MB 480-159074/7		111	91	89
LCS 480-158899/4		106	95	91
LCS 480-159074/5		107	95	92

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	66-137
BFB = 4-Bromofluorobenzene (Surr)	73-120
TOL = Toluene-d8 (Surr)	71-126

Client: Waste Management

Job Number: 280-50359-1

**Surrogate Recovery Report**

**8260C Volatile Organic Compounds by GC/MS**

**Client Matrix: Water TCLP**

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec
480-52219-A-1-B MS		103	90	87
480-52219-A-1-B MSD		102	92	87

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	66-137
BFB = 4-Bromofluorobenzene (Surr)	73-120
TOL = Toluene-d8 (Surr)	71-126

Client: Waste Management

Job Number: 280-50359-1

**Surrogate Recovery Report**

**8260C SIM Volatile Organic Compounds (GC/MS)**

**Client Matrix: Water**

Lab Sample ID	Client Sample ID	DBFM %Rec	TBA %Rec
280-50359-1	MW-35	100	99
280-50359-2	MW-4	102	103
280-50359-3	MW-16	101	102
280-50359-4	MW-32	101	106
280-50359-5	MW-33C	101	102
280-50359-6	TRIP BLANK	100	101
MB 480-159161/5		100	99
LCS 480-159161/3		100	101
LCSD 480-159161/4		101	103
280-50392-I-1 MS		101	89
280-50392-I-1 MSD		101	91

Surrogate	Acceptance Limits
DBFM = Dibromofluoromethane (Surr)	50-150
TBA = TBA-d9 (Surr)	50-150

## Quality Control Results

Client: Waste Management

Job Number: 280-50359-1

**Method Blank - Batch: 480-158899**

**Method: 8260C  
Preparation: 5030C**

Lab Sample ID: MB 480-158899/6  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2013 0020  
 Prep Date: 12/21/2013 0020  
 Leach Date: N/A

Analysis Batch: 480-158899  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973C  
 Lab File ID: C35467.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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-50359-1

**Method Blank - Batch: 480-158899**

**Method: 8260C  
Preparation: 5030C**

Lab Sample ID: MB 480-158899/6  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2013 0020  
 Prep Date: 12/21/2013 0020  
 Leach Date: N/A

Analysis Batch: 480-158899  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973C  
 Lab File ID: C35467.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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-50359-1

**Method Blank - Batch: 480-158899**

**Method: 8260C  
Preparation: 5030C**

Lab Sample ID: MB 480-158899/6  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2013 0020  
 Prep Date: 12/21/2013 0020  
 Leach Date: N/A

Analysis Batch: 480-158899  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973C  
 Lab File ID: C35467.D  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

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)	112	66 - 137
4-Bromofluorobenzene (Surr)	93	73 - 120
Toluene-d8 (Surr)	91	71 - 126

**Method Blank TICs- Batch: 480-158899**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qual
67-72-1	Hexachloroethane TIC	0.00	ND	

## Quality Control Results

Client: Waste Management

Job Number: 280-50359-1

**Lab Control Sample - Batch: 480-158899**

**Method: 8260C**

**Preparation: 5030C**

Lab Sample ID:	LCS 480-158899/4	Analysis Batch:	480-158899	Instrument ID:	HP5973C
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C35465.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/20/2013 2329	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/20/2013 2329				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethane	25.0	28.6	114	71 - 129	
1,1-Dichloroethene	25.0	28.5	114	58 - 121	
1,2,4-Trimethylbenzene	25.0	25.2	101	76 - 121	
1,2-Dichlorobenzene	25.0	23.8	95	80 - 124	
1,2-Dichloroethane	25.0	28.3	113	75 - 127	
Benzene	25.0	28.1	113	71 - 124	
Chlorobenzene	25.0	23.5	94	72 - 120	
cis-1,2-Dichloroethene	25.0	27.2	109	74 - 124	
Ethylbenzene	25.0	23.7	95	77 - 123	
Methyl tert-butyl ether	25.0	27.2	109	64 - 127	
m-Xylene & p-Xylene	50.0	49.3	99	76 - 122	
o-Xylene	25.0	23.9	96	76 - 122	
Tetrachloroethene	25.0	24.0	96	74 - 122	
Toluene	25.0	24.4	97	80 - 122	
trans-1,2-Dichloroethene	25.0	27.9	112	73 - 127	
Trichloroethene	25.0	28.1	112	74 - 123	
<hr/>					
Surrogate		% Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		106		66 - 137	
4-Bromofluorobenzene (Surr)		95		73 - 120	
Toluene-d8 (Surr)		91		71 - 126	

## Quality Control Results

Client: Waste Management

Job Number: 280-50359-1

**Method Blank - Batch: 480-159074**

**Method: 8260C  
Preparation: 5030C**

Lab Sample ID: MB 480-159074/7  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/23/2013 1229  
 Prep Date: 12/23/2013 1229  
 Leach Date: N/A

Analysis Batch: 480-159074  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973C  
 Lab File ID: C35496.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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-50359-1

**Method Blank - Batch: 480-159074**

**Method: 8260C  
Preparation: 5030C**

Lab Sample ID: MB 480-159074/7  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/23/2013 1229  
 Prep Date: 12/23/2013 1229  
 Leach Date: N/A

Analysis Batch: 480-159074  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973C  
 Lab File ID: C35496.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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-50359-1

Method Blank - Batch: 480-159074

Method: 8260C  
Preparation: 5030C

Lab Sample ID: MB 480-159074/7  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/23/2013 1229  
Prep Date: 12/23/2013 1229  
Leach Date: N/A

Analysis Batch: 480-159074  
Prep Batch: N/A  
Leach Batch: N/A  
Units: ug/L

Instrument ID: HP5973C  
Lab File ID: C35496.D  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

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)	111	66 - 137
4-Bromofluorobenzene (Surr)	91	73 - 120
Toluene-d8 (Surr)	89	71 - 126

Method Blank TICs- Batch: 480-159074

Cas Number	Analyte	RT	Est. Result (ug/L)	Qual
67-72-1	Hexachloroethane TIC	0.00	ND	

## Quality Control Results

Client: Waste Management

Job Number: 280-50359-1

**Lab Control Sample - Batch: 480-159074**

**Method: 8260C**

**Preparation: 5030C**

Lab Sample ID: LCS 480-159074/5	Analysis Batch: 480-159074	Instrument ID: HP5973C
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C35494.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/23/2013 1138	Units: ug/L	Final Weight/Volume: 5 mL
Prep Date: 12/23/2013 1138		
Leach Date: N/A		

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethane	25.0	26.6	106	71 - 129	
1,1-Dichloroethene	25.0	25.7	103	58 - 121	
1,2,4-Trimethylbenzene	25.0	22.8	91	76 - 121	
1,2-Dichlorobenzene	25.0	21.3	85	80 - 124	
1,2-Dichloroethane	25.0	26.6	106	75 - 127	
Benzene	25.0	26.2	105	71 - 124	
Chlorobenzene	25.0	21.4	85	72 - 120	
cis-1,2-Dichloroethene	25.0	25.0	100	74 - 124	
Ethylbenzene	25.0	21.8	87	77 - 123	
Methyl tert-butyl ether	25.0	26.6	107	64 - 127	
m-Xylene & p-Xylene	50.0	44.8	90	76 - 122	
o-Xylene	25.0	21.7	87	76 - 122	
Tetrachloroethene	25.0	22.1	88	74 - 122	
Toluene	25.0	22.0	88	80 - 122	
trans-1,2-Dichloroethene	25.0	25.1	101	73 - 127	
Trichloroethene	25.0	26.0	104	74 - 123	
<hr/>					
Surrogate		% Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		107		66 - 137	
4-Bromofluorobenzene (Surr)		95		73 - 120	
Toluene-d8 (Surr)		92		71 - 126	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-159074**

**Method: 8260C  
Preparation: 5030C  
TCLP**

MS Lab Sample ID: 480-52219-A-1-B MS	Analysis Batch: 480-159074	Instrument ID: HP5973C
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C35516.D
Dilution: 10	Leach Batch: 480-158522	Initial Weight/Volume: 5 mL
Analysis Date: 12/23/2013 2106		Final Weight/Volume: 5 mL
Prep Date: 12/23/2013 2106		
Leach Date: 12/19/2013 1112		

MSD Lab Sample ID: 480-52219-A-1-B MSD	Analysis Batch: 480-159074	Instrument ID: HP5973C
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C35517.D
Dilution: 10	Leach Batch: 480-158522	Initial Weight/Volume: 5 mL
Analysis Date: 12/23/2013 2132		Final Weight/Volume: 5 mL
Prep Date: 12/23/2013 2132		
Leach Date: 12/19/2013 1112		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
1,1-Dichloroethane	109	104	71 - 129	4	20		
1,2-Dichloroethane	106	104	75 - 127	2	20		
Benzene	108	104	71 - 124	4	13		
Chlorobenzene	87	85	72 - 120	2	25		
Tetrachloroethene	88	86	74 - 122	2	20		
Trichloroethene	105	101	74 - 123	4	16		
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
1,2-Dichloroethane-d4 (Surr)	103		102	66 - 137			
4-Bromofluorobenzene (Surr)	90		92	73 - 120			
Toluene-d8 (Surr)	87		87	71 - 126			

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-159074**

**Method: 8260C  
Preparation: 5030C  
TCLP**

MS Lab Sample ID: 480-52219-A-1-B MS	Units: ug/L	MSD Lab Sample ID: 480-52219-A-1-B MSD
Client Matrix: Water		Client Matrix: Water
Dilution: 10		Dilution: 10
Analysis Date: 12/23/2013 2106		Analysis Date: 12/23/2013 2132
Prep Date: 12/23/2013 2106		Prep Date: 12/23/2013 2132
Leach Date: 12/19/2013 1112		Leach Date: 12/19/2013 1112

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
1,1-Dichloroethane	ND	250	250	272	261
1,2-Dichloroethane	ND	250	250	266	261
Benzene	ND	250	250	269	259
Chlorobenzene	ND	250	250	217	213
Tetrachloroethene	ND	250	250	220	216
Trichloroethene	ND	250	250	263	253

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Method Blank - Batch: 480-159161**

**Method: 8260C SIM  
Preparation: 5030C**

Lab Sample ID:	MB 480-159161/5	Analysis Batch:	480-159161	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J6994.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/23/2013 1450	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/23/2013 1450				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Vinyl chloride	ND		0.0040	0.020
Surrogate	% Rec		Acceptance Limits	
Dibromofluoromethane (Surr)	100		50 - 150	
TBA-d9 (Surr)	99		50 - 150	

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 480-159161**

**Method: 8260C SIM  
Preparation: 5030C**

LCS Lab Sample ID:	LCS 480-159161/3	Analysis Batch:	480-159161	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J6992.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/23/2013 1358	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/23/2013 1358				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 480-159161/4	Analysis Batch:	480-159161	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J6993.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/23/2013 1426	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/23/2013 1426				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Vinyl chloride	96	97	50 - 150	1	20		
Surrogate	LCS % Rec		LCSD % Rec	Acceptance Limits			
Dibromofluoromethane (Surr)	100		101	50 - 150			
TBA-d9 (Surr)	101		103	50 - 150			

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 480-159161**

**Method: 8260C SIM  
Preparation: 5030C**

LCS Lab Sample ID: LCS 480-159161/3      Units: ug/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/23/2013 1358  
 Prep Date: 12/23/2013 1358  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 480-159161/4  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/23/2013 1426  
 Prep Date: 12/23/2013 1426  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Vinyl chloride	0.200	0.200	0.191	0.194

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-159161**

**Method: 8260C SIM  
Preparation: 5030C**

MS Lab Sample ID: 280-50392-I-1 MS  
 Client Matrix: Water  
 Dilution: 20  
 Analysis Date: 12/23/2013 2258  
 Prep Date: 12/23/2013 2258  
 Leach Date: N/A

Analysis Batch: 480-159161  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: HP5973J  
 Lab File ID: J7014.D  
 Initial Weight/Volume: 25 mL  
 Final Weight/Volume: 25 mL

MSD Lab Sample ID: 280-50392-I-1 MSD  
 Client Matrix: Water  
 Dilution: 20  
 Analysis Date: 12/23/2013 2323  
 Prep Date: 12/23/2013 2323  
 Leach Date: N/A

Analysis Batch: 480-159161  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: HP5973J  
 Lab File ID: J7015.D  
 Initial Weight/Volume: 25 mL  
 Final Weight/Volume: 25 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Vinyl chloride	88	89	50 - 150	1	20		
Surrogate		MS % Rec	MSD % Rec			Acceptance Limits	
Dibromofluoromethane (Surr)		101	101			50 - 150	
TBA-d9 (Surr)		89	91			50 - 150	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-159161**

**Method: 8260C SIM  
Preparation: 5030C**

MS Lab Sample ID: 280-50392-I-1 MS                      Units: ug/L  
Client Matrix: Water  
Dilution: 20  
Analysis Date: 12/23/2013 2258  
Prep Date: 12/23/2013 2258  
Leach Date: N/A

MSD Lab Sample ID: 280-50392-I-1 MSD  
Client Matrix: Water  
Dilution: 20  
Analysis Date: 12/23/2013 2323  
Prep Date: 12/23/2013 2323  
Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Vinyl chloride	ND	4.00	4.00	3.53	3.57

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Method Blank - Batch: 280-205623**

Lab Sample ID: MB 280-205623/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/19/2013 0438  
 Prep Date: 12/17/2013 1433  
 Leach Date: N/A

Analysis Batch: 280-205883  
 Prep Batch: 280-205623  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_025  
 Lab File ID: 25A4121813.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Cobalt, Total	ND		0.0030	0.0030
Iron, Total	ND		0.060	0.060

**Lab Control Sample - Batch: 280-205623**

Lab Sample ID: LCS 280-205623/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/19/2013 0440  
 Prep Date: 12/17/2013 1433  
 Leach Date: N/A

Analysis Batch: 280-205883  
 Prep Batch: 280-205623  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_025  
 Lab File ID: 25A4121813.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cobalt, Total	0.500	0.488	98	89 - 111	
Iron, Total	1.00	0.983	98	89 - 115	

**Matrix Spike/  
 Matrix Spike Duplicate Recovery Report - Batch: 280-205623**

MS Lab Sample ID: 280-50320-E-1-C MS  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/19/2013 0447  
 Prep Date: 12/17/2013 1433  
 Leach Date: N/A

Analysis Batch: 280-205883  
 Prep Batch: 280-205623  
 Leach Batch: N/A

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_025  
 Lab File ID: 25A4121813.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-50320-E-1-D MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/19/2013 0450  
 Prep Date: 12/17/2013 1433  
 Leach Date: N/A

Analysis Batch: 280-205883  
 Prep Batch: 280-205623  
 Leach Batch: N/A

Instrument ID: MT\_025  
 Lab File ID: 25A4121813.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Cobalt, Total	96	96	82 - 119	0	20		
Iron, Total	104	88	52 - 155	2	20	4	4



**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205623**

**Method: 6010B  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-50320-E-1-C MS      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/19/2013 0447  
 Prep Date: 12/17/2013 1433  
 Leach Date: N/A

MSD Lab Sample ID: 280-50320-E-1-D MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/19/2013 0450  
 Prep Date: 12/17/2013 1433  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Cobalt, Total	ND	0.500	0.500	0.481	0.479
Iron, Total	9.5	1.00	1.00	10.5    4	10.3    4

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Method Blank - Batch: 280-205627**

Lab Sample ID: MB 280-205627/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/19/2013 0331  
 Prep Date: 12/17/2013 1447  
 Leach Date: N/A

Analysis Batch: 280-205883  
 Prep Batch: 280-205627  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_025  
 Lab File ID: 25A4121813.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Calcium, Dissolved	ND		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	ND		0.060	0.060
Magnesium, Dissolved	ND		0.050	0.050
Potassium, Dissolved	ND		1.0	1.0
Sodium, Dissolved	ND		1.0	1.0

**Lab Control Sample - Batch: 280-205627**

Lab Sample ID: LCS 280-205627/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/19/2013 0333  
 Prep Date: 12/17/2013 1447  
 Leach Date: N/A

Analysis Batch: 280-205883  
 Prep Batch: 280-205627  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_025  
 Lab File ID: 25A4121813.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Calcium, Dissolved	50.0	48.6	97	90 - 111	
Cobalt, Dissolved	0.500	0.481	96	89 - 111	
Iron, Dissolved	1.00	0.973	97	89 - 115	
Magnesium, Dissolved	50.0	47.6	95	90 - 113	
Potassium, Dissolved	50.0	50.5	101	89 - 114	
Sodium, Dissolved	50.0	50.6	101	90 - 115	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205627**

**Method: 6010B  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-50280-J-1-E MS  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/19/2013 0341  
Prep Date: 12/17/2013 1447  
Leach Date: N/A

Analysis Batch: 280-205883  
Prep Batch: 280-205627  
Leach Batch: N/A

Instrument ID: MT\_025  
Lab File ID: 25A4121813.asc  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-50280-J-1-F MSD  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/19/2013 0343  
Prep Date: 12/17/2013 1447  
Leach Date: N/A

Analysis Batch: 280-205883  
Prep Batch: 280-205627  
Leach Batch: N/A

Instrument ID: MT\_025  
Lab File ID: 25A4121813.asc  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Calcium, Dissolved	98	98	48 - 153	0	20		
Cobalt, Dissolved	95	96	82 - 119	1	20		
Iron, Dissolved	97	98	52 - 155	0	20		
Magnesium, Dissolved	93	92	62 - 146	0	20		
Potassium, Dissolved	109	109	76 - 132	1	20		
Sodium, Dissolved	115	125	70 - 203	0	20	4	4

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205627**

**Method: 6010B  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-50280-J-1-E MS      Units: mg/L  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/19/2013 0341  
Prep Date: 12/17/2013 1447  
Leach Date: N/A

MSD Lab Sample ID: 280-50280-J-1-F MSD  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/19/2013 0343  
Prep Date: 12/17/2013 1447  
Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS		MSD	
				Result/Qual	MSD	Result/Qual	MSD
Calcium, Dissolved	23	50.0	50.0	72.1		72.4	
Cobalt, Dissolved	ND	0.500	0.500	0.475		0.478	
Iron, Dissolved	0.98	1.00	1.00	1.95		1.96	
Magnesium, Dissolved	6.0	50.0	50.0	52.3		52.2	
Potassium, Dissolved	4.5	50.0	50.0	58.8		59.2	
Sodium, Dissolved	1200	50.0	50.0	1220	4	1230	4

## Quality Control Results

Client: Waste Management

Job Number: 280-50359-1

**Method Blank - Batch: 280-205620**

Lab Sample ID: MB 280-205620/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/18/2013 2103  
 Prep Date: 12/17/2013 1422  
 Leach Date: N/A

Analysis Batch: 280-205904  
 Prep Batch: 280-205620  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_024  
 Lab File ID: 065\_BLK.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Antimony, Total	ND		0.0010	0.0010
Barium, Total	ND		0.0010	0.0010
Beryllium, Total	ND		0.0010	0.0010
Cadmium, Total	ND		0.00020	0.00020
Chromium, Total	ND		0.0030	0.0030
Copper, Total	ND		0.0020	0.0020
Lead, Total	ND		0.0010	0.0010
Nickel, Total	ND		0.0040	0.0040
Selenium, Total	ND		0.0010	0.0010
Silver, Total	ND		0.0020	0.0020
Thallium, Total	ND		0.0010	0.0010
Vanadium, Total	ND		0.0020	0.0020
Zinc, Total	ND		0.0050	0.0050

**Lab Control Sample - Batch: 280-205620**

Lab Sample ID: LCS 280-205620/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/18/2013 2106  
 Prep Date: 12/17/2013 1422  
 Leach Date: N/A

Analysis Batch: 280-205904  
 Prep Batch: 280-205620  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_024  
 Lab File ID: 066\_LCS.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony, Total	0.0400	0.0401	100	85 - 115	
Barium, Total	0.0400	0.0420	105	85 - 118	
Beryllium, Total	0.0400	0.0406	101	80 - 125	
Cadmium, Total	0.0400	0.0426	106	85 - 115	
Chromium, Total	0.0400	0.0418	104	84 - 121	
Copper, Total	0.0400	0.0441	110	85 - 119	
Lead, Total	0.0400	0.0432	108	85 - 118	
Nickel, Total	0.0400	0.0432	108	85 - 119	
Selenium, Total	0.0400	0.0424	106	77 - 122	
Silver, Total	0.0400	0.0428	107	85 - 115	
Thallium, Total	0.0400	0.0425	106	85 - 118	
Vanadium, Total	0.0400	0.0411	103	85 - 120	
Zinc, Total	0.0400	0.0424	106	83 - 122	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205620**

**Method: 6020  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-50341-A-1-B MS	Analysis Batch: 280-205904	Instrument ID: MT_024
Client Matrix: Water	Prep Batch: 280-205620	Lab File ID: 070_MS.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 50 mL
Analysis Date: 12/18/2013 2118		Final Weight/Volume: 50 mL
Prep Date: 12/17/2013 1422		
Leach Date: N/A		

MSD Lab Sample ID: 280-50341-A-1-C MSD	Analysis Batch: 280-205904	Instrument ID: MT_024
Client Matrix: Water	Prep Batch: 280-205620	Lab File ID: 071_MS.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 50 mL
Analysis Date: 12/18/2013 2121		Final Weight/Volume: 50 mL
Prep Date: 12/17/2013 1422		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Antimony, Total	116	119	85 - 115	3	20	F	F
Barium, Total	110	126	85 - 118	4	20		F
Beryllium, Total	105	114	80 - 125	8	20		
Cadmium, Total	105	109	85 - 115	4	20		
Chromium, Total	104	106	84 - 121	2	20		
Copper, Total	105	107	85 - 119	1	20		
Lead, Total	102	104	85 - 118	2	20		
Nickel, Total	105	106	85 - 119	1	20		
Selenium, Total	104	109	77 - 122	5	20		
Silver, Total	100	103	85 - 115	3	20		
Thallium, Total	101	103	85 - 118	2	20		
Vanadium, Total	106	110	85 - 120	3	20		
Zinc, Total	107	112	83 - 122	4	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205620**

**Method: 6020  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-50341-A-1-B MS      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/18/2013 2118  
 Prep Date: 12/17/2013 1422  
 Leach Date: N/A

MSD Lab Sample ID: 280-50341-A-1-C MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/18/2013 2121  
 Prep Date: 12/17/2013 1422  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Antimony, Total	ND	0.0400	0.0400	0.0462 F	0.0478 F
Barium, Total	0.11	0.0400	0.0400	0.151	0.157 F
Beryllium, Total	ND	0.0400	0.0400	0.0420	0.0455
Cadmium, Total	ND	0.0400	0.0400	0.0421	0.0437
Chromium, Total	ND	0.0400	0.0400	0.0416	0.0424
Copper, Total	ND	0.0400	0.0400	0.0420	0.0426
Lead, Total	ND	0.0400	0.0400	0.0408	0.0418
Nickel, Total	ND	0.0400	0.0400	0.0420	0.0424
Selenium, Total	ND	0.0400	0.0400	0.0415	0.0435
Silver, Total	ND	0.0400	0.0400	0.0402	0.0414
Thallium, Total	ND	0.0400	0.0400	0.0403	0.0411
Vanadium, Total	ND	0.0400	0.0400	0.0424	0.0439
Zinc, Total	ND	0.0400	0.0400	0.0429	0.0446

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Method Blank - Batch: 280-205965**

Lab Sample ID: MB 280-205965/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2013 2208  
 Prep Date: 12/19/2013 1326  
 Leach Date: N/A

Analysis Batch: 280-206303  
 Prep Batch: 280-205965  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_077  
 Lab File ID: 172\_BLK.d  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Manganese, Total	ND		0.0010	0.0010

**Lab Control Sample - Batch: 280-205965**

Lab Sample ID: LCS 280-205965/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2013 2212  
 Prep Date: 12/19/2013 1326  
 Leach Date: N/A

Analysis Batch: 280-206303  
 Prep Batch: 280-205965  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_077  
 Lab File ID: 173\_LCS.d  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Manganese, Total	0.0400	0.0389	97	85 - 117	

**Matrix Spike/  
 Matrix Spike Duplicate Recovery Report - Batch: 280-205965**

MS Lab Sample ID: 280-50359-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2013 2223  
 Prep Date: 12/19/2013 1326  
 Leach Date: N/A

Analysis Batch: 280-206303  
 Prep Batch: 280-205965  
 Leach Batch: N/A

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_077  
 Lab File ID: 176SMPL.d  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-50359-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2013 2227  
 Prep Date: 12/19/2013 1326  
 Leach Date: N/A

Analysis Batch: 280-206303  
 Prep Batch: 280-205965  
 Leach Batch: N/A

Instrument ID: MT\_077  
 Lab File ID: 177SMPL.d  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Manganese, Total	93	93	85 - 117	0	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205965**

**Method: 6020  
Preparation: 3005A  
Total Recoverable**

MS Lab Sample ID: 280-50359-1                      Units: mg/L  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/20/2013 2223  
Prep Date: 12/19/2013 1326  
Leach Date: N/A

MSD Lab Sample ID: 280-50359-1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/20/2013 2227  
Prep Date: 12/19/2013 1326  
Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Manganese, Total	ND	0.0400	0.0400	0.0372	0.0371



## Quality Control Results

Client: Waste Management

Job Number: 280-50359-1

**Method Blank - Batch: 280-206039**

Lab Sample ID: MB 280-206039/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2013 0038  
 Prep Date: 12/20/2013 1215  
 Leach Date: N/A

Analysis Batch: 280-206333  
 Prep Batch: 280-206039  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_024  
 Lab File ID: 154\_BLK.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	ND		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	ND		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	ND		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

**Lab Control Sample - Batch: 280-206039**

Lab Sample ID: LCS 280-206039/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2013 0041  
 Prep Date: 12/20/2013 1215  
 Leach Date: N/A

Analysis Batch: 280-206333  
 Prep Batch: 280-206039  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_024  
 Lab File ID: 155\_LCS.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony, Dissolved	0.0400	0.0380	95	85 - 115	
Barium, Dissolved	0.0400	0.0407	102	85 - 118	
Beryllium, Dissolved	0.0400	0.0401	100	80 - 125	
Cadmium, Dissolved	0.0400	0.0395	99	85 - 115	
Chromium, Dissolved	0.0400	0.0411	103	84 - 121	
Copper, Dissolved	0.0400	0.0427	107	85 - 119	
Lead, Dissolved	0.0400	0.0406	101	85 - 118	
Manganese, Dissolved	0.0400	0.0413	103	85 - 117	
Nickel, Dissolved	0.0400	0.0419	105	85 - 119	
Selenium, Dissolved	0.0400	0.0415	104	77 - 122	
Silver, Dissolved	0.0400	0.0403	101	85 - 115	
Thallium, Dissolved	0.0400	0.0403	101	85 - 118	
Vanadium, Dissolved	0.0400	0.0407	102	85 - 120	
Zinc, Dissolved	0.0400	0.0421	105	83 - 122	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206039**

**Method: 6020  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-50359-1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/21/2013 0053  
Prep Date: 12/20/2013 1215  
Leach Date: N/A

Analysis Batch: 280-206333  
Prep Batch: 280-206039  
Leach Batch: N/A

Instrument ID: MT\_024  
Lab File ID: 159\_MS.D  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-50359-1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/21/2013 0056  
Prep Date: 12/20/2013 1215  
Leach Date: N/A

Analysis Batch: 280-206333  
Prep Batch: 280-206039  
Leach Batch: N/A

Instrument ID: MT\_024  
Lab File ID: 160\_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	101	98	85 - 115	2	20		
Barium, Dissolved	100	101	85 - 118	1	20		
Beryllium, Dissolved	103	103	80 - 125	0	20		
Cadmium, Dissolved	100	99	85 - 115	1	20		
Chromium, Dissolved	106	106	84 - 121	0	20		
Copper, Dissolved	102	103	85 - 119	1	20		
Lead, Dissolved	100	100	85 - 118	0	20		
Manganese, Dissolved	101	99	85 - 117	2	20		
Nickel, Dissolved	100	100	85 - 119	1	20		
Selenium, Dissolved	103	103	77 - 122	1	20		
Silver, Dissolved	98	100	85 - 115	1	20		
Thallium, Dissolved	99	100	85 - 118	1	20		
Vanadium, Dissolved	99	99	85 - 120	0	20		
Zinc, Dissolved	103	104	83 - 122	1	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206039**

**Method: 6020  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-50359-1                      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2013 0053  
 Prep Date: 12/20/2013 1215  
 Leach Date: N/A

MSD Lab Sample ID: 280-50359-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2013 0056  
 Prep Date: 12/20/2013 1215  
 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	0.0403	0.0394
Barium, Dissolved	0.0029	0.0400	0.0400	0.0430	0.0434
Beryllium, Dissolved	ND	0.0400	0.0400	0.0413	0.0413
Cadmium, Dissolved	ND	0.0400	0.0400	0.0402	0.0398
Chromium, Dissolved	ND	0.0400	0.0400	0.0426	0.0424
Copper, Dissolved	ND	0.0400	0.0400	0.0409	0.0411
Lead, Dissolved	ND	0.0400	0.0400	0.0399	0.0398
Manganese, Dissolved	ND	0.0400	0.0400	0.0405	0.0397
Nickel, Dissolved	ND	0.0400	0.0400	0.0399	0.0402
Selenium, Dissolved	ND	0.0400	0.0400	0.0411	0.0414
Silver, Dissolved	ND	0.0400	0.0400	0.0394	0.0398
Thallium, Dissolved	ND	0.0400	0.0400	0.0397	0.0400
Vanadium, Dissolved	0.0044	0.0400	0.0400	0.0441	0.0442
Zinc, Dissolved	ND	0.0400	0.0400	0.0414	0.0418

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Method Blank - Batch: 280-206950**

Lab Sample ID: MB 280-206950/6  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/28/2013 1132  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206950  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

**Method: 300.0  
 Preparation: N/A**

Instrument ID: WC\_IC7  
 Lab File ID: 115.TXT  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	Result	Qual	RL	RL
Chloride	ND		1.0	1.0
Sulfate	ND		1.0	1.0

**Method Reporting Limit Check - Batch: 280-206950**

Lab Sample ID: MRL 280-206950/3  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/28/2013 1045  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206950  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

**Method: 300.0  
 Preparation: N/A**

Instrument ID: WC\_IC7  
 Lab File ID: 112.TXT  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	1.00	ND	95	50 - 150	
Sulfate	1.00	ND	144	50 - 150	

**Lab Control Sample/**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-206950**

**Method: 300.0  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-206950/4  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/28/2013 1101  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206950  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_IC7  
 Lab File ID: 113.TXT  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 280-206950/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/28/2013 1116  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206950  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_IC7  
 Lab File ID: 114.TXT  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Chloride	98	97	90 - 110	1	10		
Sulfate	104	101	90 - 110	3	10		

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-206950**

**Method: 300.0  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-206950/4 Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/28/2013 1101  
 Prep Date: N/A  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 280-206950/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/28/2013 1116  
 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	24.6	24.3
Sulfate	25.0	25.0	26.1	25.2

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206950**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 280-50359-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/28/2013 1410  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206950  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: WC\_IC7  
 Lab File ID: 125.TXT  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

MSD Lab Sample ID: 280-50359-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/28/2013 1458  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206950  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: WC\_IC7  
 Lab File ID: 128.TXT  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chloride	112	109	80 - 120	2	20		
Sulfate	113	110	80 - 120	2	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206950**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 280-50359-1                      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/28/2013 1410  
 Prep Date: N/A  
 Leach Date: N/A

MSD Lab Sample ID: 280-50359-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/28/2013 1458  
 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	1.7	25.0	25.0	29.7	29.1
Sulfate	2.6	25.0	25.0	30.9	30.2

**Duplicate - Batch: 280-206950**

**Method: 300.0  
Preparation: N/A**

Lab Sample ID: 280-50359-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/28/2013 1355  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206950  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_IC7  
 Lab File ID: 124.TXT  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Chloride	1.7	1.72	0.8	15	
Sulfate	2.6	2.51	5	15	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Method Blank - Batch: 280-206844**

Lab Sample ID: MB 280-206844/60  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/27/2013 1324  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206844  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

**Method: 350.1  
 Preparation: N/A**

Instrument ID: WC\_Alph 3  
 Lab File ID: E:\FLOW\_4\122713.RST  
 Initial Weight/Volume: 10 mL  
 Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL	RL
Ammonia (as N)	ND		0.030	0.030

**Lab Control Sample/  
 Lab Control Sample Duplicate Recovery Report - Batch: 280-206844**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-206844/58  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/27/2013 1320  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206844  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 3  
 Lab File ID: E:\FLOW\_4\122713.RST  
 Initial Weight/Volume: 100 mL  
 Final Weight/Volume: 100 mL

LCSD Lab Sample ID: LCSD 280-206844/59  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/27/2013 1322  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206844  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 3  
 Lab File ID: E:\FLOW\_4\122713.RST  
 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)	102	103	90 - 110	1	10		

**Laboratory Control/  
 Laboratory Duplicate Data Report - Batch: 280-206844**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-206844/58  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/27/2013 1320  
 Prep Date: N/A  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-206844/59  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/27/2013 1322  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia (as N)	2.50	2.50	2.56	2.57

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206844**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-50359-5	Analysis Batch: 280-206844	Instrument ID: WC_Alph 3
Client Matrix: Water	Prep Batch: N/A	Lab File ID: E:\FLOW_4\122713.RST
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 10 mL
Analysis Date: 12/27/2013 1425		Final Weight/Volume: 10 mL
Prep Date: N/A		
Leach Date: N/A		

MSD Lab Sample ID: 280-50359-5	Analysis Batch: 280-206844	Instrument ID: WC_Alph 3
Client Matrix: Water	Prep Batch: N/A	Lab File ID: E:\FLOW_4\122713.RST
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 10 mL
Analysis Date: 12/27/2013 1427		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					
Ammonia (as N)	116	122	90 - 110	5	10	F	F

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206844**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-50359-5	Units: mg/L	MSD Lab Sample ID: 280-50359-5
Client Matrix: Water		Client Matrix: Water
Dilution: 1.0		Dilution: 1.0
Analysis Date: 12/27/2013 1425		Analysis Date: 12/27/2013 1427
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	1.00	1.00	1.16 F	1.22 F



## Quality Control Results

Client: Waste Management

Job Number: 280-50359-1

### Method Blank - Batch: 280-206988

### Method: 353.2 Preparation: N/A

Lab Sample ID: MB 280-206988/1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/17/2013 1735  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-206988  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: No Equipment Assigned  
Lab File ID: N/A  
Initial Weight/Volume:  
Final Weight/Volume:

Analyte	Result	Qual	RL	RL
Nitrate as N	ND		0.050	0.050

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Method Blank - Batch: 280-206112**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID: MB 280-206112/6  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/19/2013 1435  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206112  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_AT2  
 Lab File ID: 121913a.txt  
 Initial Weight/Volume:  
 Final Weight/Volume:

Analyte	Result	Qual	RL	RL
Alkalinity, Total (As CaCO3)	ND		5.0	5.0
Alkalinity, Bicarbonate (As CaCO3)	ND		5.0	5.0

**Lab Control Sample - Batch: 280-206112**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID: LCS 280-206112/4  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/19/2013 1417  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206112  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_AT2  
 Lab File ID: 121913a.txt  
 Initial Weight/Volume:  
 Final Weight/Volume:

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Alkalinity, Total (As CaCO3)	200	201	100	90 - 110	

**Duplicate - Batch: 280-206112**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID: 280-50359-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/19/2013 1450  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206112  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_AT2  
 Lab File ID: 121913a.txt  
 Initial Weight/Volume:  
 Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Alkalinity, Total (As CaCO3)	78	77.9	0.3	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Method Blank - Batch: 280-206101**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	MB 280-206101/1	Analysis Batch:	280-206101	Instrument ID:	No Equipment Assigned
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:	12/20/2013 0959	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Dissolved Solids (TDS)	ND		5.0	5.0

**Lab Control Sample/**

**Method: SM 2540C**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-206101**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-206101/2	Analysis Batch:	280-206101	Instrument ID:	No Equipment Assigned
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:	12/20/2013 0959	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-206101/3	Analysis Batch:	280-206101	Instrument ID:	No Equipment Assigned
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:	12/20/2013 0959	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)	96	97	86 - 110	1	20		

**Laboratory Control/**

**Method: SM 2540C**

**Laboratory Duplicate Data Report - Batch: 280-206101**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-206101/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-206101/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/20/2013 0959			Analysis Date:	12/20/2013 0959
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	481	485

# Quality Control Results

Client: Waste Management

Job Number: 280-50359-1

**Duplicate - Batch: 280-206101**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	280-50359-4	Analysis Batch:	280-206101	Instrument ID:	No Equipment Assigned
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:	12/20/2013 0959	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)	230	212	6	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Method Blank - Batch: 280-205678**

**Method: SM 2540D**

**Preparation: N/A**

Lab Sample ID:	MB 280-205678/1	Analysis Batch:	280-205678	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/18/2013 0726	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Suspended Solids	ND		4.0	4.0

**Lab Control Sample/**

**Method: SM 2540D**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-205678**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-205678/2	Analysis Batch:	280-205678	Instrument ID:	No Equipment Assigned
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:	12/18/2013 0726	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-205678/3	Analysis Batch:	280-205678	Instrument ID:	No Equipment Assigned
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:	12/18/2013 0726	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Suspended Solids	99	92	86 - 114	7	20		

**Laboratory Control/**

**Method: SM 2540D**

**Laboratory Duplicate Data Report - Batch: 280-205678**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-205678/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-205678/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/18/2013 0726			Analysis Date:	12/18/2013 0726
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 Suspended Solids	100	100	99.0	92.0

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Duplicate - Batch: 280-205678**

**Method: SM 2540D**

**Preparation: N/A**

Lab Sample ID:	280-50359-2	Analysis Batch:	280-205678	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/18/2013 0726	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Suspended Solids	ND	ND	NC	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Method Blank - Batch: 280-206900**

**Method: SM 5310B**

**Preparation: N/A**

Lab Sample ID:	MB 280-206900/70	Analysis Batch:	280-206900	Instrument ID:	WC_SHI3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122713.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/28/2013 1146	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Organic Carbon - Average	ND		1.0	1.0

**Lab Control Sample/**

**Method: SM 5310B**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-206900**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-206900/68	Analysis Batch:	280-206900	Instrument ID:	WC_SHI3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122713.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/28/2013 1116	Units:	mg/L	Final Weight/Volume:	200 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-206900/69	Analysis Batch:	280-206900	Instrument ID:	WC_SHI3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122713.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/28/2013 1131	Units:	mg/L	Final Weight/Volume:	200 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	106	106	88 - 112	0	15		

**Laboratory Control/**

**Method: SM 5310B**

**Laboratory Duplicate Data Report - Batch: 280-206900**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-206900/68	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-206900/69
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/28/2013 1116			Analysis Date:	12/28/2013 1131
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	26.5	26.5

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206900**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID:	280-50195-E-8 MS	Analysis Batch:	280-206900	Instrument ID:	WC_SHI3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122713.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/28/2013 1232			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50195-E-8 MSD	Analysis Batch:	280-206900	Instrument ID:	WC_SHI3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122713.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/28/2013 1247			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	104	104	88 - 112	0	15		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206900**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID:	280-50195-E-8 MS	Units:	mg/L	MSD Lab Sample ID:	280-50195-E-8 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/28/2013 1232			Analysis Date:	12/28/2013 1247
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	ND	25.0	25.0	25.9	26.0



## Quality Control Results

Client: Waste Management

Job Number: 280-50359-1

### Laboratory Chronicle

Lab ID: 280-50359-1

Client ID: MW-35

Sample Date/Time: 12/16/2013 09:32

Received Date/Time: 12/17/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-50359-G-1		480-159074		12/23/2013 13:07	1	TAL BUF	NMD1
A:8260C	280-50359-G-1		480-159074		12/23/2013 13:07	1	TAL BUF	NMD1
P:5030C	280-50359-K-1		480-159161		12/23/2013 15:19	1	TAL BUF	TRB
A:8260C SIM	280-50359-K-1		480-159161		12/23/2013 15:19	1	TAL BUF	TRB
P:3005A	280-50359-C-1-C		280-205883	280-205627	12/17/2013 14:47	1	TAL DEN	LLB
A:6010B	280-50359-C-1-C		280-205883	280-205627	12/19/2013 04:17	1	TAL DEN	JKH
P:3005A	280-50359-C-1-B		280-205883	280-205623	12/17/2013 14:33	1	TAL DEN	LLB
A:6010B	280-50359-C-1-B		280-205883	280-205623	12/19/2013 05:13	1	TAL DEN	JKH
P:3005A	280-50359-C-1-A		280-205904	280-205620	12/17/2013 14:22	1	TAL DEN	LLB
A:6020	280-50359-C-1-A		280-205904	280-205620	12/18/2013 21:52	1	TAL DEN	TEL
P:3005A	280-50359-C-1-D		280-206303	280-205965	12/19/2013 13:26	1	TAL DEN	WAW
A:6020	280-50359-C-1-D		280-206303	280-205965	12/20/2013 22:16	1	TAL DEN	LMT
P:3005A	280-50359-C-1-G		280-206333	280-206039	12/20/2013 12:15	1	TAL DEN	LLB
A:6020	280-50359-C-1-G		280-206333	280-206039	12/21/2013 00:44	1	TAL DEN	TEL
A:300.0	280-50359-B-1		280-206950		12/28/2013 13:39	1	TAL DEN	TLP
A:350.1	280-50359-E-1		280-206844		12/27/2013 13:59	1	TAL DEN	RSN
A:353.2	280-50359-A-1		280-206988		12/17/2013 17:35	1	TAL DEN	RKS
A:SM 2320B	280-50359-B-1		280-206112		12/19/2013 14:43	1	TAL DEN	AFH
A:SM 2540C	280-50359-B-1		280-206101		12/20/2013 09:59	1	TAL DEN	ELJ
A:SM 2540D	280-50359-B-1		280-205678		12/18/2013 07:26	1	TAL DEN	BAN
A:SM 5310B	280-50359-E-1		280-206900		12/28/2013 13:02	1	TAL DEN	CCJ

Lab ID: 280-50359-1 MS

Client ID: MW-35

Sample Date/Time: 12/16/2013 09:32

Received Date/Time: 12/17/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-50359-C-1-E MS		280-206303	280-205965	12/19/2013 13:26	1	TAL DEN	WAW
A:6020	280-50359-C-1-E MS		280-206303	280-205965	12/20/2013 22:23	1	TAL DEN	LMT
P:3005A	280-50359-C-1-H MS		280-206333	280-206039	12/20/2013 12:15	1	TAL DEN	LLB
A:6020	280-50359-C-1-H MS		280-206333	280-206039	12/21/2013 00:53	1	TAL DEN	TEL
A:300.0	280-50359-B-1 MS		280-206950		12/28/2013 14:10	1	TAL DEN	TLP

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Laboratory Chronicle**

Lab ID: 280-50359-1 MSD

Client ID: MW-35

Sample Date/Time: 12/16/2013 09:32

Received Date/Time: 12/17/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-50359-C-1-F MSD		280-206303	280-205965	12/19/2013 13:26	1	TAL DEN	WAW
A:6020	280-50359-C-1-F MSD		280-206303	280-205965	12/20/2013 22:27	1	TAL DEN	LMT
P:3005A	280-50359-C-1-I MSD		280-206333	280-206039	12/20/2013 12:15	1	TAL DEN	LLB
A:6020	280-50359-C-1-I MSD		280-206333	280-206039	12/21/2013 00:56	1	TAL DEN	TEL
A:300.0	280-50359-B-1 MSD		280-206950		12/28/2013 14:58	1	TAL DEN	TLP

Lab ID: 280-50359-1 DU

Client ID: MW-35

Sample Date/Time: 12/16/2013 09:32

Received Date/Time: 12/17/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-50359-B-1 DU		280-206950		12/28/2013 13:55	1	TAL DEN	TLP
A:SM 2320B	280-50359-B-1 DU		280-206112		12/19/2013 14:50	1	TAL DEN	AFH

Lab ID: 280-50359-2

Client ID: MW-4

Sample Date/Time: 12/16/2013 09:32

Received Date/Time: 12/17/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-50359-F-2		480-158899		12/21/2013 03:07	1	TAL BUF	LCH
A:8260C	280-50359-F-2		480-158899		12/21/2013 03:07	1	TAL BUF	LCH
P:5030C	280-50359-K-2		480-159161		12/23/2013 15:43	1	TAL BUF	TRB
A:8260C SIM	280-50359-K-2		480-159161		12/23/2013 15:43	1	TAL BUF	TRB
P:3005A	280-50359-C-2-C		280-205883	280-205627	12/17/2013 14:47	1	TAL DEN	LLB
A:6010B	280-50359-C-2-C		280-205883	280-205627	12/19/2013 04:19	1	TAL DEN	JKH
P:3005A	280-50359-C-2-B		280-205883	280-205623	12/17/2013 14:33	1	TAL DEN	LLB
A:6010B	280-50359-C-2-B		280-205883	280-205623	12/19/2013 05:15	1	TAL DEN	JKH
P:3005A	280-50359-C-2-A		280-205904	280-205620	12/17/2013 14:22	1	TAL DEN	LLB
A:6020	280-50359-C-2-A		280-205904	280-205620	12/18/2013 21:55	1	TAL DEN	TEL
P:3005A	280-50359-C-2-D		280-206303	280-205965	12/19/2013 13:26	1	TAL DEN	WAW
A:6020	280-50359-C-2-D		280-206303	280-205965	12/20/2013 22:42	1	TAL DEN	LMT
P:3005A	280-50359-C-2-E		280-206333	280-206039	12/20/2013 12:15	1	TAL DEN	LLB
A:6020	280-50359-C-2-E		280-206333	280-206039	12/21/2013 00:59	1	TAL DEN	TEL
A:300.0	280-50359-B-2		280-206950		12/28/2013 15:14	1	TAL DEN	TLP
A:350.1	280-50359-E-2		280-206844		12/27/2013 14:02	1	TAL DEN	RSN
A:353.2	280-50359-A-2		280-206988		12/17/2013 17:35	1	TAL DEN	RKS
A:SM 2320B	280-50359-B-2		280-206112		12/19/2013 14:58	1	TAL DEN	AFH
A:SM 2540C	280-50359-B-2		280-206101		12/20/2013 09:59	1	TAL DEN	ELJ
A:SM 2540D	280-50359-B-2		280-205678		12/18/2013 07:26	1	TAL DEN	BAN
A:SM 5310B	280-50359-E-2		280-206900		12/28/2013 13:48	1	TAL DEN	CCJ

## Quality Control Results

Client: Waste Management

Job Number: 280-50359-1

### Laboratory Chronicle

Lab ID: 280-50359-2 DU

Client ID: MW-4

Sample Date/Time: 12/16/2013 09:32

Received Date/Time: 12/17/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2540D	280-50359-B-2 DU		280-205678		12/18/2013 07:26	1	TAL DEN	BAN

Lab ID: 280-50359-3

Client ID: MW-16

Sample Date/Time: 12/16/2013 10:48

Received Date/Time: 12/17/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-50359-F-3		480-158899		12/21/2013 03:36	1	TAL BUF	LCH
A:8260C	280-50359-F-3		480-158899		12/21/2013 03:36	1	TAL BUF	LCH
P:5030C	280-50359-K-3		480-159161		12/23/2013 16:07	1	TAL BUF	TRB
A:8260C SIM	280-50359-K-3		480-159161		12/23/2013 16:07	1	TAL BUF	TRB
P:3005A	280-50359-C-3-C		280-205883	280-205627	12/17/2013 14:47	1	TAL DEN	LLB
A:6010B	280-50359-C-3-C		280-205883	280-205627	12/19/2013 04:22	1	TAL DEN	JKH
P:3005A	280-50359-C-3-B		280-205883	280-205623	12/17/2013 14:33	1	TAL DEN	LLB
A:6010B	280-50359-C-3-B		280-205883	280-205623	12/19/2013 05:18	1	TAL DEN	JKH
P:3005A	280-50359-C-3-A		280-205904	280-205620	12/17/2013 14:22	1	TAL DEN	LLB
A:6020	280-50359-C-3-A		280-205904	280-205620	12/18/2013 21:58	1	TAL DEN	TEL
P:3005A	280-50359-C-3-D		280-206303	280-205965	12/19/2013 13:26	1	TAL DEN	WAW
A:6020	280-50359-C-3-D		280-206303	280-205965	12/20/2013 22:46	1	TAL DEN	LMT
P:3005A	280-50359-C-3-E		280-206333	280-206039	12/20/2013 12:15	1	TAL DEN	LLB
A:6020	280-50359-C-3-E		280-206333	280-206039	12/21/2013 01:08	1	TAL DEN	TEL
A:300.0	280-50359-B-3		280-206950		12/28/2013 15:29	1	TAL DEN	TLP
A:350.1	280-50359-E-3		280-206844		12/27/2013 14:04	1	TAL DEN	RSN
A:353.2	280-50359-A-3		280-206988		12/17/2013 17:35	1	TAL DEN	RKS
A:SM 2320B	280-50359-B-3		280-206112		12/19/2013 15:04	1	TAL DEN	AFH
A:SM 2540C	280-50359-B-3		280-206101		12/20/2013 09:59	1	TAL DEN	ELJ
A:SM 2540D	280-50359-B-3		280-205678		12/18/2013 07:26	1	TAL DEN	BAN
A:SM 5310B	280-50359-E-3		280-206900		12/28/2013 14:03	1	TAL DEN	CCJ

## Quality Control Results

Client: Waste Management

Job Number: 280-50359-1

### Laboratory Chronicle

Lab ID: 280-50359-4

Client ID: MW-32

Sample Date/Time: 12/16/2013 10:56

Received Date/Time: 12/17/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-50359-F-4		480-158899		12/21/2013 04:01	1	TAL BUF	LCH
A:8260C	280-50359-F-4		480-158899		12/21/2013 04:01	1	TAL BUF	LCH
P:5030C	280-50359-K-4		480-159161		12/23/2013 16:31	1	TAL BUF	TRB
A:8260C SIM	280-50359-K-4		480-159161		12/23/2013 16:31	1	TAL BUF	TRB
P:3005A	280-50359-C-4-C		280-205883	280-205627	12/17/2013 14:47	1	TAL DEN	LLB
A:6010B	280-50359-C-4-C		280-205883	280-205627	12/19/2013 04:24	1	TAL DEN	JKH
P:3005A	280-50359-C-4-B		280-205883	280-205623	12/17/2013 14:33	1	TAL DEN	LLB
A:6010B	280-50359-C-4-B		280-205883	280-205623	12/19/2013 05:20	1	TAL DEN	JKH
P:3005A	280-50359-C-4-A		280-205904	280-205620	12/17/2013 14:22	1	TAL DEN	LLB
A:6020	280-50359-C-4-A		280-205904	280-205620	12/18/2013 22:01	1	TAL DEN	TEL
P:3005A	280-50359-C-4-D		280-206303	280-205965	12/19/2013 13:26	1	TAL DEN	WAW
A:6020	280-50359-C-4-D		280-206303	280-205965	12/20/2013 22:49	1	TAL DEN	LMT
P:3005A	280-50359-C-4-E		280-206333	280-206039	12/20/2013 12:15	1	TAL DEN	LLB
A:6020	280-50359-C-4-E		280-206333	280-206039	12/21/2013 01:11	1	TAL DEN	TEL
A:300.0	280-50359-B-4		280-206950		12/28/2013 15:45	1	TAL DEN	TLP
A:350.1	280-50359-E-4		280-206844		12/27/2013 14:06	1	TAL DEN	RSN
A:353.2	280-50359-A-4		280-206988		12/17/2013 17:35	1	TAL DEN	RKS
A:SM 2320B	280-50359-B-4		280-206112		12/19/2013 15:12	1	TAL DEN	AFH
A:SM 2540C	280-50359-B-4		280-206101		12/20/2013 09:59	1	TAL DEN	ELJ
A:SM 2540D	280-50359-B-4		280-205678		12/18/2013 07:26	1	TAL DEN	BAN
A:SM 5310B	280-50359-E-4		280-206900		12/28/2013 14:18	1	TAL DEN	CCJ

Lab ID: 280-50359-4 DU

Client ID: MW-32

Sample Date/Time: 12/16/2013 10:56

Received Date/Time: 12/17/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2540C	280-50359-B-4 DU		280-206101		12/20/2013 09:59	1	TAL DEN	ELJ

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**Laboratory Chronicle**

Lab ID: 280-50359-5

Client ID: MW-33C

Sample Date/Time: 12/16/2013 12:37

Received Date/Time: 12/17/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-50359-G-5		480-159074		12/23/2013 13:32	1	TAL BUF	NMD1
A:8260C	280-50359-G-5		480-159074		12/23/2013 13:32	1	TAL BUF	NMD1
P:5030C	280-50359-K-5		480-159161		12/23/2013 16:55	1	TAL BUF	TRB
A:8260C SIM	280-50359-K-5		480-159161		12/23/2013 16:55	1	TAL BUF	TRB
P:3005A	280-50359-C-5-C		280-205883	280-205627	12/17/2013 14:47	1	TAL DEN	LLB
A:6010B	280-50359-C-5-C		280-205883	280-205627	12/19/2013 04:26	1	TAL DEN	JKH
P:3005A	280-50359-C-5-B		280-205883	280-205623	12/17/2013 14:33	1	TAL DEN	LLB
A:6010B	280-50359-C-5-B		280-205883	280-205623	12/19/2013 05:23	1	TAL DEN	JKH
P:3005A	280-50359-C-5-A		280-205904	280-205620	12/17/2013 14:22	1	TAL DEN	LLB
A:6020	280-50359-C-5-A		280-205904	280-205620	12/18/2013 22:04	1	TAL DEN	TEL
P:3005A	280-50359-C-5-D		280-206303	280-205965	12/19/2013 13:26	1	TAL DEN	WAW
A:6020	280-50359-C-5-D		280-206303	280-205965	12/20/2013 22:53	1	TAL DEN	LMT
P:3005A	280-50359-C-5-E		280-206333	280-206039	12/20/2013 12:15	1	TAL DEN	LLB
A:6020	280-50359-C-5-E		280-206333	280-206039	12/21/2013 01:14	1	TAL DEN	TEL
A:300.0	280-50359-B-5		280-206950		12/28/2013 16:01	1	TAL DEN	TLP
A:350.1	280-50359-E-5		280-206844		12/27/2013 14:09	1	TAL DEN	RSN
A:353.2	280-50359-A-5		280-206988		12/17/2013 17:35	1	TAL DEN	RKS
A:SM 2320B	280-50359-B-5		280-206112		12/19/2013 15:19	1	TAL DEN	AFH
A:SM 2540C	280-50359-B-5		280-206101		12/20/2013 09:59	1	TAL DEN	ELJ
A:SM 2540D	280-50359-B-5		280-205678		12/18/2013 07:26	1	TAL DEN	BAN
A:SM 5310B	280-50359-E-5		280-206900		12/28/2013 14:33	1	TAL DEN	CCJ

Lab ID: 280-50359-5 MS

Client ID: MW-33C

Sample Date/Time: 12/16/2013 12:37

Received Date/Time: 12/17/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:350.1	280-50359-E-5 MS		280-206844		12/27/2013 14:25	1	TAL DEN	RSN

Lab ID: 280-50359-5 MSD

Client ID: MW-33C

Sample Date/Time: 12/16/2013 12:37

Received Date/Time: 12/17/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:350.1	280-50359-E-5 MSD		280-206844		12/27/2013 14:27	1	TAL DEN	RSN

## Quality Control Results

Client: Waste Management

Job Number: 280-50359-1

### Laboratory Chronicle

Lab ID: 280-50359-6

Client ID: TRIP BLANK

Sample Date/Time: 12/16/2013 09:32

Received Date/Time: 12/17/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-50359-B-6		480-159074		12/23/2013 13:57	1	TAL BUF	NMD1
A:8260C	280-50359-B-6		480-159074		12/23/2013 13:57	1	TAL BUF	NMD1
P:5030C	280-50359-A-6		480-159161		12/23/2013 17:19	1	TAL BUF	TRB
A:8260C SIM	280-50359-A-6		480-159161		12/23/2013 17:19	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:5030C	MB 480-158899/6		480-158899		12/21/2013 00:20	1	TAL BUF	LCH
A:8260C	MB 480-158899/6		480-158899		12/21/2013 00:20	1	TAL BUF	LCH
P:5030C	MB 480-159074/7		480-159074		12/23/2013 12:29	1	TAL BUF	NMD1
A:8260C	MB 480-159074/7		480-159074		12/23/2013 12:29	1	TAL BUF	NMD1
P:5030C	MB 480-159161/5		480-159161		12/23/2013 14:50	1	TAL BUF	TRB
A:8260C SIM	MB 480-159161/5		480-159161		12/23/2013 14:50	1	TAL BUF	TRB
P:3005A	MB 280-205627/1-A		280-205883	280-205627	12/17/2013 14:47	1	TAL DEN	LLB
A:6010B	MB 280-205627/1-A		280-205883	280-205627	12/19/2013 03:31	1	TAL DEN	JKH
P:3005A	MB 280-205623/1-A		280-205883	280-205623	12/17/2013 14:33	1	TAL DEN	LLB
A:6010B	MB 280-205623/1-A		280-205883	280-205623	12/19/2013 04:38	1	TAL DEN	JKH
P:3005A	MB 280-205620/1-A		280-205904	280-205620	12/17/2013 14:22	1	TAL DEN	LLB
A:6020	MB 280-205620/1-A		280-205904	280-205620	12/18/2013 21:03	1	TAL DEN	TEL
P:3005A	MB 280-205965/1-A		280-206303	280-205965	12/19/2013 13:26	1	TAL DEN	WAW
A:6020	MB 280-205965/1-A		280-206303	280-205965	12/20/2013 22:08	1	TAL DEN	LMT
P:3005A	MB 280-206039/1-A		280-206333	280-206039	12/20/2013 12:15	1	TAL DEN	LLB
A:6020	MB 280-206039/1-A		280-206333	280-206039	12/21/2013 00:38	1	TAL DEN	TEL
A:300.0	MB 280-206950/6		280-206950		12/28/2013 11:32	1	TAL DEN	TLP
A:350.1	MB 280-206844/60		280-206844		12/27/2013 13:24	1	TAL DEN	RSN
A:353.2	MB 280-206988/1		280-206988		12/17/2013 17:35	1	TAL DEN	RKS
A:SM 2320B	MB 280-206112/6		280-206112		12/19/2013 14:35	1	TAL DEN	AFH
A:SM 2540C	MB 280-206101/1		280-206101		12/20/2013 09:59	1	TAL DEN	ELJ
A:SM 2540D	MB 280-205678/1		280-205678		12/18/2013 07:26	1	TAL DEN	BAN
A:SM 5310B	MB 280-206900/70		280-206900		12/28/2013 11:46	1	TAL DEN	CCJ

**Quality Control Results**

Client: Waste Management

Job Number: 280-50359-1

**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:5030C	LCS 480-158899/4		480-158899		12/20/2013 23:29	1	TAL BUF	LCH
A:8260C	LCS 480-158899/4		480-158899		12/20/2013 23:29	1	TAL BUF	LCH
P:5030C	LCS 480-159074/5		480-159074		12/23/2013 11:38	1	TAL BUF	NMD1
A:8260C	LCS 480-159074/5		480-159074		12/23/2013 11:38	1	TAL BUF	NMD1
P:5030C	LCS 480-159161/3		480-159161		12/23/2013 13:58	1	TAL BUF	TRB
A:8260C SIM	LCS 480-159161/3		480-159161		12/23/2013 13:58	1	TAL BUF	TRB
P:3005A	LCS 280-205627/2-A		280-205883	280-205627	12/17/2013 14:47	1	TAL DEN	LLB
A:6010B	LCS 280-205627/2-A		280-205883	280-205627	12/19/2013 03:33	1	TAL DEN	JKH
P:3005A	LCS 280-205623/2-A		280-205883	280-205623	12/17/2013 14:33	1	TAL DEN	LLB
A:6010B	LCS 280-205623/2-A		280-205883	280-205623	12/19/2013 04:40	1	TAL DEN	JKH
P:3005A	LCS 280-205620/2-A		280-205904	280-205620	12/17/2013 14:22	1	TAL DEN	LLB
A:6020	LCS 280-205620/2-A		280-205904	280-205620	12/18/2013 21:06	1	TAL DEN	TEL
P:3005A	LCS 280-205965/2-A		280-206303	280-205965	12/19/2013 13:26	1	TAL DEN	WAW
A:6020	LCS 280-205965/2-A		280-206303	280-205965	12/20/2013 22:12	1	TAL DEN	LMT
P:3005A	LCS 280-206039/2-A		280-206333	280-206039	12/20/2013 12:15	1	TAL DEN	LLB
A:6020	LCS 280-206039/2-A		280-206333	280-206039	12/21/2013 00:41	1	TAL DEN	TEL
A:300.0	LCS 280-206950/4		280-206950		12/28/2013 11:01	1	TAL DEN	TLP
A:350.1	LCS 280-206844/58		280-206844		12/27/2013 13:20	1	TAL DEN	RSN
A:SM 2320B	LCS 280-206112/4		280-206112		12/19/2013 14:17	1	TAL DEN	AFH
A:SM 2540C	LCS 280-206101/2		280-206101		12/20/2013 09:59	1	TAL DEN	ELJ
A:SM 2540D	LCS 280-205678/2		280-205678		12/18/2013 07:26	1	TAL DEN	BAN
A:SM 5310B	LCS 280-206900/68		280-206900		12/28/2013 11:16	1	TAL DEN	CCJ

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
P:5030C	LCSD 480-159161/4		480-159161		12/23/2013 14:26	1	TAL BUF	TRB
A:8260C SIM	LCSD 480-159161/4		480-159161		12/23/2013 14:26	1	TAL BUF	TRB
A:300.0	LCSD 280-206950/5		280-206950		12/28/2013 11:16	1	TAL DEN	TLP
A:350.1	LCSD 280-206844/59		280-206844		12/27/2013 13:22	1	TAL DEN	RSN
A:SM 2320B	LCSD 280-206112/5		280-206112		12/19/2013 14:27	1	TAL DEN	AFH
A:SM 2540C	LCSD 280-206101/3		280-206101		12/20/2013 09:59	1	TAL DEN	ELJ
A:SM 2540D	LCSD 280-205678/3		280-205678		12/18/2013 07:26	1	TAL DEN	BAN
A:SM 5310B	LCSD 280-206900/69		280-206900		12/28/2013 11:31	1	TAL DEN	CCJ

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 280-206950/3		280-206950		12/28/2013 10:45	1	TAL DEN	TLP

## Quality Control Results

Client: Waste Management

Job Number: 280-50359-1

### Laboratory Chronicle

Lab ID: MS

Client ID: N/A

Sample Date/Time: 12/13/2013 09:00

Received Date/Time: 12/14/2013 01:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	480-52219-A-1-B MS		480-159074		12/23/2013 21:06	10	TAL BUF	NMD1
A:8260C	480-52219-A-1-B MS		480-159074		12/23/2013 21:06	10	TAL BUF	NMD1
P:5030C	280-50392-I-1 MS		480-159161		12/23/2013 22:58	20	TAL BUF	TRB
A:8260C SIM	280-50392-I-1 MS		480-159161		12/23/2013 22:58	20	TAL BUF	TRB
P:3005A	280-50280-J-1-E MS		280-205883	280-205627	12/17/2013 14:47	1	TAL DEN	LLB
A:6010B	280-50280-J-1-E MS		280-205883	280-205627	12/19/2013 03:41	1	TAL DEN	JKH
P:3005A	280-50320-E-1-C MS		280-205883	280-205623	12/17/2013 14:33	1	TAL DEN	LLB
A:6010B	280-50320-E-1-C MS		280-205883	280-205623	12/19/2013 04:47	1	TAL DEN	JKH
P:3005A	280-50341-A-1-B MS		280-205904	280-205620	12/17/2013 14:22	1	TAL DEN	LLB
A:6020	280-50341-A-1-B MS		280-205904	280-205620	12/18/2013 21:18	1	TAL DEN	TEL
A:SM 5310B	280-50195-E-8 MS		280-206900		12/28/2013 12:32	1	TAL DEN	CCJ

Lab ID: MSD

Client ID: N/A

Sample Date/Time: 12/13/2013 09:00

Received Date/Time: 12/14/2013 01:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	480-52219-A-1-B MSD		480-159074		12/23/2013 21:32	10	TAL BUF	NMD1
A:8260C	480-52219-A-1-B MSD		480-159074		12/23/2013 21:32	10	TAL BUF	NMD1
P:5030C	280-50392-I-1 MSD		480-159161		12/23/2013 23:23	20	TAL BUF	TRB
A:8260C SIM	280-50392-I-1 MSD		480-159161		12/23/2013 23:23	20	TAL BUF	TRB
P:3005A	280-50280-J-1-F MSD		280-205883	280-205627	12/17/2013 14:47	1	TAL DEN	LLB
A:6010B	280-50280-J-1-F MSD		280-205883	280-205627	12/19/2013 03:43	1	TAL DEN	JKH
P:3005A	280-50320-E-1-D MSD		280-205883	280-205623	12/17/2013 14:33	1	TAL DEN	LLB
A:6010B	280-50320-E-1-D MSD		280-205883	280-205623	12/19/2013 04:50	1	TAL DEN	JKH
P:3005A	280-50341-A-1-C MSD		280-205904	280-205620	12/17/2013 14:22	1	TAL DEN	LLB
A:6020	280-50341-A-1-C MSD		280-205904	280-205620	12/18/2013 21:21	1	TAL DEN	TEL
A:SM 5310B	280-50195-E-8 MSD		280-206900		12/28/2013 12:47	1	TAL DEN	CCJ

**Lab References:**

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver





Te 485 ARVE Pho

# Chain of Custody Record



THE LEADER IN ENVIRONMENTAL TESTING

Client: Mr. Charles Luckie  
 Address: 9300 Southwest Barney White Road, Bremerton, WA, 98312  
 Project Name: WA02/Olympic View Sanitary LF  
 Event Desc: Quarterly GW App/II - Mar Jun Sep Dec  
 City: Washington

Sampler: Matt O'Hare  
 Lab PM: Sara, Betsy A  
 Phone: 425-289-5452  
 E-Mail: betsy.sara@testamericainc.com

Carrier Tracking No(s): 280-17318-3224.1  
 COC No: 280-17318-3224.1  
 Page: 1

Company: Olympic View Transfer Station  
 Address: 9300 Southwest Barney White Road, Bremerton, WA, 98312  
 State, Zip: WA, 98312  
 PO #: [blank]  
 WO #: [blank]  
 Project #: 28002692  
 SSOW#: [blank]

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=other)	Field Filtered Sample (Yes or No)		Perform (MS/MD) (Yes or No)		Analysis Requested										Special Instructions/Note:					
					TDS/AI/ks/C/SO4/NO3(cad)	Disolved Metals	Ammonia/TOC	8260B - long list (TA Buffalo)	8260B SIM (TA Buffalo)	Total Metals	TSS	Disolved Arsenic (direct sub to ARI)	Total Arsenic (direct sub to ARI)	Total Number of Containers										
MW-35	12/16/13	0932	C	W	Y	Y	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Short Hold: NO3(cad)
MW-14	12/16/13	0932	C	W	Y	Y	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Arsenic - Direct sub to ARI
MW-16	12/16/13	1048	C	W	Y	Y	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-32	12/16/13	1056	C	W	Y	Y	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-33C	12/16/13	1237	C	W	Y	Y	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

Due Date Requested: Standard  
 TAT Requested (days): [blank]  
 PO #: [blank]  
 WO #: [blank]  
 Project #: 28002692  
 SSOW#: [blank]

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For Months

Special Instructions/QC Requirements:  
 Empty Kit Relinquished by: [blank]  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)

Relinquished by: Andrew McDonald  
 Date/Time: 12/16/13  
 Company: SCS  
 Relinquished by: [blank]  
 Date/Time: [blank]  
 Company: [blank]  
 Relinquished by: [blank]  
 Date/Time: [blank]  
 Company: [blank]

Custody Seal Intact: Δ Yes Δ No  
 Custody Seal No: 102388, 102389  
 Cooler Temperature(s) °C and Other Remarks: 4.5, 1.8 18U 12/17/13

## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-50359-1

**Login Number: 50359**  
**List Number: 1**  
**Creator: Dedio, Michael T**

**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.	False	Trip blanks received not listed on COC
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	False	ID on COC is MW-14, labels MW-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	N/A	
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.	N/A	

## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-50359-1

**Login Number: 50359**  
**List Number: 1**  
**Creator: Goliszek, Gregory T**

**List Source: TestAmerica Buffalo**  
**List Creation: 12/18/13 09:25 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	4.1 #2
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: 280-50392-1

Job Description: WA02|Olympic View Sanitary LF

For:  
Waste Management  
Olympic View Transfer Station  
9300 Southwest Barney White Road  
Bremerton, WA 98312  
Attention: Mr. Charles Luckie



Approved for release.  
Betsy A Sara  
Project Manager II  
12/31/2013 5:28 PM

---

Betsy A Sara, Project Manager II  
4955 Yarrow Street, Arvada, CO, 80002  
(303)736-0189  
betsy.sara@testamericainc.com  
12/31/2013

cc: Mr. Sam Adlington  
Mr. Matt O'Hare  
Mr. Phil Perley  
Ms. Elena Ramirez  
Mr. Dan Venchiarutti

The test results in this report relate only to the samples in this report and meet all requirements of NELAP, 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.

**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 . . . . .	6
Method / Analyst Summary . . . . .	7
Sample Summary . . . . .	8
Sample Results . . . . .	9
Sample Datasheets . . . . .	10
Data Qualifiers . . . . .	18
QC Results . . . . .	19
Qc Association Summary . . . . .	20
Surrogate Recovery Report . . . . .	24
Qc Reports . . . . .	26
Laboratory Chronicle . . . . .	53
Client Chain of Custody . . . . .	57
Sample Receipt Checklist . . . . .	58

## CASE NARRATIVE

Client: Waste Management

Project: WA02|Olympic View Sanitary LF

Report Number: 280-50392-1

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 12/17/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 3.3 C.

Due to a laboratory error, the trip blank sample was analyzed for Method 8260C SIM instead of the requested 8260C.

### Holding Times

All holding times were within established control limits.

### Method Blanks

Total Dissolved Solids (TDS) Method 2540C was detected in the Method Blank above the project established reporting limit, however, the requested reporting limit for TDS is below TestAmerica Denver's standard reporting limit and, therefore, no corrective action has been taken for this anomaly. It must be noted that results reported below TestAmerica Denver's standard reporting limits may result in false positive/false negative results, less accurate quantitation and potential misidentification at the lower concentrations.

All other Method Blanks 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 Trichloroethene Method 8260C. 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.

Sample MW-33C (50359) 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.

### Organics

The Method 8260C reporting limits for the sample L-INF are elevated due to foamy matrix.

### Metals

The bracketing Continuing Calibration Verification Samples (CCV) surrounding the Method Blank were above control limits for Dissolved Sodium during Method 6010B analysis. Because the data are considered to be biased high and Dissolved Sodium was not detected in the Method Blank sample above the reporting limit, corrective action was deemed unnecessary.

**General Comments**

The analyses for Volatile Organics by Method 8260C and Volatile Organics by Method 8260C 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: 280-50392-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-50392-1</b>	<b>L-INF</b>					
Tetrahydrofuran		12	J	25	ug/L	8260C
Chloride		770		20	mg/L	300.0
Sulfate		290		20	mg/L	300.0
Ammonia (as N)		3.0		1.5	mg/L	350.1
Nitrate/Nitrite		83		0.50	mg/L	353.2
Alkalinity, Total (As CaCO3)		520		5.0	mg/L	SM 2320B
Alkalinity, Bicarbonate (As CaCO3)		520		5.0	mg/L	SM 2320B
Total Dissolved Solids (TDS)		2700	B	20	mg/L	SM 2540C
Total Organic Carbon - Average		85		2.0	mg/L	SM 5310B
<b><i>Dissolved</i></b>						
Calcium, Dissolved		100		0.040	mg/L	6010B
Cobalt, Dissolved		0.012		0.0030	mg/L	6010B
Iron, Dissolved		0.23		0.060	mg/L	6010B
Magnesium, Dissolved		69		0.050	mg/L	6010B
Potassium, Dissolved		100		1.0	mg/L	6010B
Sodium, Dissolved		650		1.0	mg/L	6010B
Antimony, Dissolved		0.0058		0.0010	mg/L	6020
Barium, Dissolved		0.10		0.0010	mg/L	6020
Cadmium, Dissolved		0.00026		0.00020	mg/L	6020
Chromium, Dissolved		0.0067		0.0030	mg/L	6020
Copper, Dissolved		0.021		0.0020	mg/L	6020
Manganese, Dissolved		0.69		0.0010	mg/L	6020
Nickel, Dissolved		0.087		0.0040	mg/L	6020
Vanadium, Dissolved		0.0095		0.0020	mg/L	6020
Zinc, Dissolved		0.044		0.0050	mg/L	6020



## METHOD SUMMARY

Client: Waste Management

Job Number: 280-50392-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Appendix I Metals (ICP/MS)	TAL DEN	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Anions, Ion Chromatography	TAL DEN	MCAWW 300.0	
Nitrogen, Ammonia	TAL DEN	MCAWW 350.1	
Nitrogen, Nitrate-Nitrite	TAL DEN	MCAWW 353.2	
Alkalinity	TAL DEN	SM SM 2320B	
Solids, Total Dissolved (TDS)	TAL DEN	SM SM 2540C	
Organic Carbon, Total (TOC)	TAL DEN	SM SM 5310B	
Volatile Organic Compounds by GC/MS	TAL BUF	SW846 8260C	
Purge and Trap	TAL BUF		SW846 5030C
Volatile Organic Compounds (GC/MS)	TAL BUF	SW846 8260C SIM	
Purge and Trap	TAL BUF		SW846 5030C

**Lab References:**

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver

**Method References:**

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: 280-50392-1

<b>Method</b>	<b>Analyst</b>	<b>Analyst ID</b>
SW846 8260C	Larson, Renee A	RAL
SW846 8260C SIM	Brandt, Todd R	TRB
SW846 6010B	Harre, John K	JKH
SW846 6020	Lill, Thomas E	TEL
MCAWW 300.0	Phan, Thu L	TLP
MCAWW 350.1	Newcome, Robin S	RSN
MCAWW 353.2	Ayala, Delaina V	DVA
SM SM 2320B	Hoeffler, Alexandra F	AFH
SM SM 2540C	Janssen, Elizabeth L	ELJ
SM SM 5310B	Jewell, Connie C	CCJ

## SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-50392-1

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
280-50392-1	L-INF	Water	12/16/2013 0820	12/17/2013 0945
280-50392-2TB	TRIP BLANK	Water	12/16/2013 0820	12/17/2013 0945

# **SAMPLE RESULTS**

## Analytical Data

Client: Waste Management

Job Number: 280-50392-1

**Client Sample ID:** L-INF

Lab Sample ID: 280-50392-1

Date Sampled: 12/16/2013 0820

Client Matrix: Water

Date Received: 12/17/2013 0945

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-159211	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35527.D
Dilution:	5.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/24/2013 1243			Final Weight/Volume:	5 mL
Prep Date:	12/24/2013 1243				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1,2-Tetrachloroethane	ND		1.8	5.0
1,1,1-Trichloroethane	ND		4.1	5.0
1,1,2,2-Tetrachloroethane	ND		1.1	5.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.6	5.0
1,1,2-Trichloroethane	ND		1.2	5.0
1,1-Dichloroethane	ND		1.9	5.0
1,1-Dichloroethene	ND		1.5	5.0
1,1-Dichloropropene	ND		3.6	5.0
1,2,3-Trichlorobenzene	ND		2.1	5.0
1,2,3-Trichloropropane	ND		4.5	5.0
1,2,4-Trichlorobenzene	ND		2.1	5.0
1,2,4-Trimethylbenzene	ND		3.8	5.0
1,2-Dibromo-3-Chloropropane	ND		2.0	5.0
1,2-Dibromoethane (EDB)	ND		3.7	5.0
1,2-Dichlorobenzene	ND		4.0	5.0
1,2-Dichloroethane	ND		1.1	5.0
1,2-Dichloroethene, Total	ND		3.5	10
1,2-Dichloropropane	ND		3.6	5.0
1,3,5-Trichlorobenzene	ND		1.2	5.0
1,3,5-Trimethylbenzene	ND		3.9	5.0
1,3-Dichlorobenzene	ND		3.9	5.0
1,3-Dichloropropane	ND		3.8	5.0
1,4-Dichlorobenzene	ND		4.2	5.0
1,4-Dioxane	ND		47	200
2,2-Dichloropropane	ND		2.0	5.0
2-Butanone (MEK)	ND		6.6	50
2-Chloroethyl vinyl ether	ND		4.8	25
2-Hexanone	ND		6.2	25
4-Methyl-2-pentanone (MIBK)	ND		11	25
Acetone	ND		15	50
Acetonitrile	ND		130	200
Acrolein	ND		90	100
Acrylonitrile	ND		4.2	25
Benzene	ND		2.1	5.0
Bromobenzene	ND		4.0	5.0
Bromochloromethane	ND		4.4	5.0
Bromodichloromethane	ND		2.0	5.0
Bromoform	ND		1.3	5.0
Bromomethane	ND		3.5	5.0
Butyl alcohol, n-	ND		44	200
Butyl alcohol, tert-	ND		70	100
Carbon disulfide	ND		0.95	5.0
Carbon tetrachloride	ND		1.4	5.0
Chlorobenzene	ND		3.8	5.0
Chlorodifluoromethane	ND		1.3	5.0
Chloroethane	ND		1.6	5.0

## Analytical Data

Client: Waste Management

Job Number: 280-50392-1

**Client Sample ID:** L-INF

Lab Sample ID: 280-50392-1

Date Sampled: 12/16/2013 0820

Client Matrix: Water

Date Received: 12/17/2013 0945

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-159211	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35527.D
Dilution:	5.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/24/2013 1243			Final Weight/Volume:	5 mL
Prep Date:	12/24/2013 1243				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloroform	ND		1.7	5.0
Chloromethane	ND		1.8	5.0
cis-1,2-Dichloroethene	ND		4.1	5.0
cis-1,3-Dichloropropene	ND		1.8	5.0
Cyclohexane	ND		0.90	5.0
Dibromochloromethane	ND		1.6	5.0
Dibromomethane	ND		2.1	5.0
Dichlorodifluoromethane	ND		3.4	5.0
Dichlorofluoromethane	ND		1.7	5.0
Ethyl acetate	ND		3.3	5.0
Ethyl ether	ND		3.6	5.0
Ethyl tert-butyl ether	ND		1.5	5.0
Ethylbenzene	ND		3.7	5.0
Hexachlorobutadiene	ND		1.4	5.0
Hexane	ND		2.0	50
Iodomethane	ND		1.5	5.0
Isobutanol	ND		100	200
Isopropyl ether	ND		3.0	5.0
Isopropylbenzene	ND		4.0	5.0
Methacrylonitrile	ND		3.5	25
Methyl acetate	ND		2.5	5.0
Methyl tert-butyl ether	ND		0.80	5.0
Methylcyclohexane	ND		0.80	5.0
Methylene Chloride	ND		2.2	5.0
m-Xylene & p-Xylene	ND		3.3	10
Naphthalene	ND		2.2	5.0
n-Butylbenzene	ND		3.2	5.0
N-Propylbenzene	ND		3.5	5.0
o-Chlorotoluene	ND		4.3	5.0
o-Xylene	ND		3.8	5.0
p-Chlorotoluene	ND		4.2	5.0
p-Cymene	ND		1.6	5.0
sec-Butylbenzene	ND		3.8	5.0
Styrene	ND		3.7	5.0
Tert-amyl methyl ether	ND		1.4	5.0
tert-Butylbenzene	ND		4.1	5.0
Tetrachloroethene	ND		1.8	5.0
Tetrahydrofuran	12	J	6.3	25
Toluene	ND		2.6	5.0
trans-1,2-Dichloroethene	ND		4.5	5.0
trans-1,3-Dichloropropene	ND		1.9	5.0
trans-1,4-Dichloro-2-butene	ND		11	25
Trichloroethene	ND		2.3	5.0
Trichlorofluoromethane	ND		4.4	5.0
Vinyl acetate	ND		4.3	25
Vinyl chloride	ND		4.5	5.0

**Analytical Data**

Client: Waste Management

Job Number: 280-50392-1

**Client Sample ID: L-INF**

Lab Sample ID: 280-50392-1

Date Sampled: 12/16/2013 0820

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-159211	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35527.D
Dilution:	5.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/24/2013 1243			Final Weight/Volume:	5 mL
Prep Date:	12/24/2013 1243				

---

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	108		66 - 137
4-Bromofluorobenzene (Surr)	92		73 - 120
Toluene-d8 (Surr)	87		71 - 126

**Analytical Data**

Client: Waste Management

Job Number: 280-50392-1

**Client Sample ID: L-INF**

Lab Sample ID: 280-50392-1

Date Sampled: 12/16/2013 0820

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method:	8260C	Analysis Batch:	480-159211	Instrument ID:	HP5973C
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	C35527.D
Dilution:	5.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/24/2013 1243			Final Weight/Volume:	5 mL
Prep Date:	12/24/2013 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: 280-50392-1

**Client Sample ID: L-INF**

Lab Sample ID: 280-50392-1

Date Sampled: 12/16/2013 0820

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260C SIM	Analysis Batch:	480-159161	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J7001.D
Dilution:	20			Initial Weight/Volume:	25 mL
Analysis Date:	12/23/2013 1743			Final Weight/Volume:	25 mL
Prep Date:	12/23/2013 1743				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.080	0.40

---

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	101		50 - 150
TBA-d9 (Surr)	101		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-50392-1

**Client Sample ID: TRIP BLANK**

Lab Sample ID: 280-50392-2TB

Date Sampled: 12/16/2013 0820

Client Matrix: Water

Date Received: 12/17/2013 0945

---

**8260C SIM Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260C SIM	Analysis Batch:	480-159161	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J7002.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	12/23/2013 1811			Final Weight/Volume:	25 mL
Prep Date:	12/23/2013 1811				

---

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	ND		0.0040	0.020

---

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	101		50 - 150
TBA-d9 (Surr)	103		50 - 150

**Analytical Data**

Client: Waste Management

Job Number: 280-50392-1

**Client Sample ID:** L-INF

Lab Sample ID: 280-50392-1

Date Sampled: 12/16/2013 0820

Client Matrix: Water

Date Received: 12/17/2013 0945

**6010B Metals (ICP)-Dissolved**

Analysis Method:	6010B	Analysis Batch:	280-206068	Instrument ID:	MT_025
Prep Method:	3005A	Prep Batch:	280-205803	Lab File ID:	25A6121913.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2013 0311			Final Weight/Volume:	50 mL
Prep Date:	12/19/2013 1300				

Analyte	Result (mg/L)	Qualifier	RL	RL
Calcium, Dissolved	100		0.040	0.040
Cobalt, Dissolved	0.012		0.0030	0.0030
Iron, Dissolved	0.23		0.060	0.060
Magnesium, Dissolved	69		0.050	0.050
Potassium, Dissolved	100		1.0	1.0
Sodium, Dissolved	650		1.0	1.0

**6020 Appendix I Metals (ICP/MS)-Dissolved**

Analysis Method:	6020	Analysis Batch:	280-206333	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-206039	Lab File ID:	167SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/21/2013 0117			Final Weight/Volume:	50 mL
Prep Date:	12/20/2013 1215				

Analyte	Result (mg/L)	Qualifier	RL	RL
Antimony, Dissolved	0.0058		0.0010	0.0010
Barium, Dissolved	0.10		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	0.00026		0.00020	0.00020
Chromium, Dissolved	0.0067		0.0030	0.0030
Copper, Dissolved	0.021		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	0.69		0.0010	0.0010
Nickel, Dissolved	0.087		0.0040	0.0040
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	0.0095		0.0020	0.0020
Zinc, Dissolved	0.044		0.0050	0.0050

Analysis Method:	6020	Analysis Batch:	280-206545	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-206039	Lab File ID:	176SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/24/2013 0228			Final Weight/Volume:	50 mL
Prep Date:	12/20/2013 1215				

Analyte	Result (mg/L)	Qualifier	RL	RL
Selenium, Dissolved	ND		0.0010	0.0010

Client: Waste Management

Job Number: 280-50392-1

General Chemistry

Client Sample ID: L-INF

Lab Sample ID: 280-50392-1

Date Sampled: 12/16/2013 0820

Client Matrix: Water

Date Received: 12/17/2013 0945

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Chloride	770		mg/L	20	20	20	300.0
	Analysis Batch: 280-206955			Analysis Date: 12/28/2013 2000			
Sulfate	290		mg/L	20	20	20	300.0
	Analysis Batch: 280-206955			Analysis Date: 12/28/2013 2000			
Ammonia (as N)	3.0		mg/L	1.5	1.5	50	350.1
	Analysis Batch: 280-206844			Analysis Date: 12/27/2013 1430			
Nitrate/Nitrite	83		mg/L	0.50	0.50	10	353.2
	Analysis Batch: 280-206903			Analysis Date: 12/29/2013 1420			
Alkalinity, Total (As CaCO3)	520		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-206661			Analysis Date: 12/24/2013 1653			
Alkalinity, Bicarbonate (As CaCO3)	520		mg/L	5.0	5.0	1.0	SM 2320B
	Analysis Batch: 280-206661			Analysis Date: 12/24/2013 1653			
Total Dissolved Solids (TDS)	2700	B	mg/L	20	20	1.0	SM 2540C
	Analysis Batch: 280-206133			Analysis Date: 12/20/2013 1229			
Total Organic Carbon - Average	85		mg/L	2.0	2.0	2.0	SM 5310B
	Analysis Batch: 280-206902			Analysis Date: 12/29/2013 0954			

## DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-50392-1

Lab Section	Qualifier	Description
GC/MS VOA		
	F	MS/MSD Recovery and/or RPD 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		
	^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
General Chemistry		
	B	Compound was found in the blank and sample.
	F	MS/MSD Recovery and/or RPD exceeds the control limits
	E	Result exceeded calibration range.

# QUALITY CONTROL RESULTS

## Quality Control Results

Client: Waste Management

Job Number: 280-50392-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Analysis Batch:480-159161</b>					
LCS 480-159161/3	Lab Control Sample	T	Water	8260C SIM	
LCSD 480-159161/4	Lab Control Sample Duplicate	T	Water	8260C SIM	
MB 480-159161/5	Method Blank	T	Water	8260C SIM	
280-50392-1	L-INF	T	Water	8260C SIM	
280-50392-1MS	Matrix Spike	T	Water	8260C SIM	
280-50392-1MSD	Matrix Spike Duplicate	T	Water	8260C SIM	
280-50392-2TB	TRIP BLANK	T	Water	8260C SIM	
<b>Analysis Batch:480-159211</b>					
LCS 480-159211/5	Lab Control Sample	T	Water	8260C	
MB 480-159211/7	Method Blank	T	Water	8260C	
280-50392-1	L-INF	T	Water	8260C	
480-52517-A-1 MS	Matrix Spike	T	Water	8260C	
480-52517-A-1 MSD	Matrix Spike Duplicate	T	Water	8260C	

#### Report Basis

T = Total

## Quality Control Results

Client: Waste Management

Job Number: 280-50392-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Prep Batch: 280-205803</b>					
LCS 280-205803/2-A	Lab Control Sample	R	Water	3005A	
MB 280-205803/1-A	Method Blank	R	Water	3005A	
280-50392-1	L-INF	D	Water	3005A	
280-50414-C-1-B MS	Matrix Spike	D	Water	3005A	
280-50414-C-1-C MSD	Matrix Spike Duplicate	D	Water	3005A	
<b>Prep Batch: 280-206039</b>					
LCS 280-206039/2-A	Lab Control Sample	R	Water	3005A	
MB 280-206039/1-A	Method Blank	R	Water	3005A	
280-50359-C-1-H MS	Matrix Spike	D	Water	3005A	
280-50359-C-1-I MSD	Matrix Spike Duplicate	D	Water	3005A	
280-50392-1	L-INF	D	Water	3005A	
<b>Analysis Batch:280-206068</b>					
LCS 280-205803/2-A	Lab Control Sample	R	Water	6010B	280-205803
MB 280-205803/1-A	Method Blank	R	Water	6010B	280-205803
280-50392-1	L-INF	D	Water	6010B	280-205803
280-50414-C-1-B MS	Matrix Spike	D	Water	6010B	280-205803
280-50414-C-1-C MSD	Matrix Spike Duplicate	D	Water	6010B	280-205803
<b>Analysis Batch:280-206333</b>					
LCS 280-206039/2-A	Lab Control Sample	R	Water	6020	280-206039
MB 280-206039/1-A	Method Blank	R	Water	6020	280-206039
280-50359-C-1-H MS	Matrix Spike	D	Water	6020	280-206039
280-50359-C-1-I MSD	Matrix Spike Duplicate	D	Water	6020	280-206039
280-50392-1	L-INF	D	Water	6020	280-206039
<b>Analysis Batch:280-206545</b>					
280-50392-1	L-INF	D	Water	6020	280-206039

**Report Basis**

D = Dissolved

R = Total Recoverable



## Quality Control Results

Client: Waste Management

Job Number: 280-50392-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-206133</b>					
LCS 280-206133/2	Lab Control Sample	T	Water	SM 2540C	
LCSD 280-206133/3	Lab Control Sample Duplicate	T	Water	SM 2540C	
MB 280-206133/1	Method Blank	T	Water	SM 2540C	
280-50375-H-3 DU	Duplicate	T	Water	SM 2540C	
280-50392-1	L-INF	T	Water	SM 2540C	
<b>Analysis Batch:280-206661</b>					
LCS 280-206661/4	Lab Control Sample	T	Water	SM 2320B	
LCSD 280-206661/5	Lab Control Sample Duplicate	T	Water	SM 2320B	
MB 280-206661/6	Method Blank	T	Water	SM 2320B	
280-50392-1	L-INF	T	Water	SM 2320B	
280-50392-1DU	Duplicate	T	Water	SM 2320B	
<b>Analysis Batch:280-206844</b>					
LCS 280-206844/58	Lab Control Sample	T	Water	350.1	
LCSD 280-206844/59	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-206844/60	Method Blank	T	Water	350.1	
280-50359-E-5 MS	Matrix Spike	T	Water	350.1	
280-50359-E-5 MSD	Matrix Spike Duplicate	T	Water	350.1	
280-50392-1	L-INF	T	Water	350.1	
<b>Analysis Batch:280-206902</b>					
LCS 280-206902/55	Lab Control Sample	T	Water	SM 5310B	
LCSD 280-206902/56	Lab Control Sample Duplicate	T	Water	SM 5310B	
MB 280-206902/57	Method Blank	T	Water	SM 5310B	
280-50269-H-1 MS	Matrix Spike	T	Water	SM 5310B	
280-50269-H-1 MSD	Matrix Spike Duplicate	T	Water	SM 5310B	
280-50392-1	L-INF	T	Water	SM 5310B	
<b>Analysis Batch:280-206903</b>					
LCS 280-206903/69	Lab Control Sample	T	Water	353.2	
LCSD 280-206903/70	Lab Control Sample Duplicate	T	Water	353.2	
MB 280-206903/68	Method Blank	T	Water	353.2	
280-50376-I-1 MS	Matrix Spike	T	Water	353.2	
280-50376-I-1 MSD	Matrix Spike Duplicate	T	Water	353.2	
280-50392-1	L-INF	T	Water	353.2	

## Quality Control Results

Client: Waste Management

Job Number: 280-50392-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-206955</b>					
LCS 280-206955/4	Lab Control Sample	T	Water	300.0	
LCSD 280-206955/5	Lab Control Sample Duplicate	T	Water	300.0	
MB 280-206955/6	Method Blank	T	Water	300.0	
550-16370-B-1 DU	Duplicate	T	Water	300.0	
550-16370-B-1 MS	Matrix Spike	T	Water	300.0	
550-16370-B-1 MSD	Matrix Spike Duplicate	T	Water	300.0	
280-50392-1	L-INF	T	Water	300.0	
280-50468-A-3 DU	Duplicate	T	Water	300.0	
280-50468-A-3 MS	Matrix Spike	T	Water	300.0	
280-50468-A-3 MSD	Matrix Spike Duplicate	T	Water	300.0	

#### Report Basis

T = Total

Client: Waste Management

Job Number: 280-50392-1

**Surrogate Recovery Report**

**8260C Volatile Organic Compounds by GC/MS**

**Client Matrix: Water**

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec
280-50392-1	L-INF	108	92	87
MB 480-159211/7		105	90	87
LCS 480-159211/5		100	91	87
480-52517-A-1 MS		100	89	87
480-52517-A-1 MSD		100	92	87

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	66-137
BFB = 4-Bromofluorobenzene (Surr)	73-120
TOL = Toluene-d8 (Surr)	71-126

Client: Waste Management

Job Number: 280-50392-1

**Surrogate Recovery Report**

**8260C SIM Volatile Organic Compounds (GC/MS)**

**Client Matrix: Water**

Lab Sample ID	Client Sample ID	DBFM %Rec	TBA %Rec
280-50392-1	L-INF	101	101
280-50392-2	TRIP BLANK	101	103
MB 480-159161/5		100	99
LCS 480-159161/3		100	101
LCSD 480-159161/4		101	103
280-50392-1 MS	L-INF MS	101	89
280-50392-1 MSD	L-INF MSD	101	91

Surrogate	Acceptance Limits
DBFM = Dibromofluoromethane (Surr)	50-150
TBA = TBA-d9 (Surr)	50-150

## Quality Control Results

Client: Waste Management

Job Number: 280-50392-1

**Method Blank - Batch: 480-159211**

**Method: 8260C  
Preparation: 5030C**

Lab Sample ID: MB 480-159211/7  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/24/2013 1126  
 Prep Date: 12/24/2013 1126  
 Leach Date: N/A

Analysis Batch: 480-159211  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973C  
 Lab File ID: C35524.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
2-Hexanone	ND		1.2	5.0
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
Butyl alcohol, n-	ND		8.9	40
Butyl alcohol, tert-	ND		14	20
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: 280-50392-1

**Method Blank - Batch: 480-159211**

**Method: 8260C  
Preparation: 5030C**

Lab Sample ID: MB 480-159211/7  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/24/2013 1126  
 Prep Date: 12/24/2013 1126  
 Leach Date: N/A

Analysis Batch: 480-159211  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973C  
 Lab File ID: C35524.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
n-Butylbenzene	ND		0.64	1.0
N-Propylbenzene	ND		0.69	1.0
o-Chlorotoluene	ND		0.86	1.0
o-Xylene	ND		0.76	1.0
p-Chlorotoluene	ND		0.84	1.0
p-Cymene	ND		0.31	1.0
sec-Butylbenzene	ND		0.75	1.0
Styrene	ND		0.73	1.0
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: 280-50392-1

**Method Blank - Batch: 480-159211**

**Method: 8260C  
Preparation: 5030C**

Lab Sample ID: MB 480-159211/7  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/24/2013 1126  
 Prep Date: 12/24/2013 1126  
 Leach Date: N/A

Analysis Batch: 480-159211  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

Instrument ID: HP5973C  
 Lab File ID: C35524.D  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

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)	105	66 - 137
4-Bromofluorobenzene (Surr)	90	73 - 120
Toluene-d8 (Surr)	87	71 - 126

**Method Blank TICs- Batch: 480-159211**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qual
67-72-1	Hexachloroethane TIC	0.00	ND	

## Quality Control Results

Client: Waste Management

Job Number: 280-50392-1

**Lab Control Sample - Batch: 480-159211**

**Method: 8260C**  
**Preparation: 5030C**

Lab Sample ID: LCS 480-159211/5	Analysis Batch: 480-159211	Instrument ID: HP5973C
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C35522.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/24/2013 0954	Units: ug/L	Final Weight/Volume: 5 mL
Prep Date: 12/24/2013 0954		
Leach Date: N/A		

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethane	25.0	26.4	105	71 - 129	
1,1-Dichloroethene	25.0	23.9	95	58 - 121	
1,2,4-Trimethylbenzene	25.0	23.1	93	76 - 121	
1,2-Dichlorobenzene	25.0	22.0	88	80 - 124	
1,2-Dichloroethane	25.0	26.7	107	75 - 127	
Benzene	25.0	26.5	106	71 - 124	
Chlorobenzene	25.0	22.2	89	72 - 120	
cis-1,2-Dichloroethene	25.0	25.4	102	74 - 124	
Ethylbenzene	25.0	22.0	88	77 - 123	
Methyl tert-butyl ether	25.0	25.5	102	64 - 127	
m-Xylene & p-Xylene	50.0	45.7	91	76 - 122	
o-Xylene	25.0	22.6	90	76 - 122	
Tetrachloroethene	25.0	21.7	87	74 - 122	
Toluene	25.0	22.4	90	80 - 122	
trans-1,2-Dichloroethene	25.0	24.6	99	73 - 127	
Trichloroethene	25.0	25.9	104	74 - 123	
Surrogate		% Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		100		66 - 137	
4-Bromofluorobenzene (Surr)		91		73 - 120	
Toluene-d8 (Surr)		87		71 - 126	



**Quality Control Results**

Client: Waste Management

Job Number: 280-50392-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-159211**

**Method: 8260C  
Preparation: 5030C**

MS Lab Sample ID: 480-52517-A-1 MS	Analysis Batch: 480-159211	Instrument ID: HP5973C
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C35544.D
Dilution: 4.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/24/2013 1955		Final Weight/Volume: 5 mL
Prep Date: 12/24/2013 1955		
Leach Date: N/A		

MSD Lab Sample ID: 480-52517-A-1 MSD	Analysis Batch: 480-159211	Instrument ID: HP5973C
Client Matrix: Water	Prep Batch: N/A	Lab File ID: C35545.D
Dilution: 4.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 12/24/2013 2020		Final Weight/Volume: 5 mL
Prep Date: 12/24/2013 2020		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
1,1-Dichloroethane	114	109	71 - 129	5	20		
1,1-Dichloroethene	113	108	58 - 121	5	16		
1,2,4-Trimethylbenzene	92	90	76 - 121	2	20		
1,2-Dichlorobenzene	86	85	80 - 124	1	20		
1,2-Dichloroethane	109	107	75 - 127	2	20		
Benzene	112	109	71 - 124	3	13		
Chlorobenzene	89	88	72 - 120	2	25		
cis-1,2-Dichloroethene	101	93	74 - 124	4	15		
Ethylbenzene	90	89	77 - 123	2	15		
Methyl tert-butyl ether	107	109	64 - 127	1	37		
m-Xylene & p-Xylene	93	93	76 - 122	0	16		
o-Xylene	89	90	76 - 122	1	16		
Tetrachloroethene	83	80	74 - 122	3	20		
Toluene	93	90	80 - 122	3	15		
trans-1,2-Dichloroethene	109	105	73 - 127	4	20		
Trichloroethene	75	65	74 - 123	3	16		F
Surrogate		MS % Rec	MSD % Rec		Acceptance Limits		
1,2-Dichloroethane-d4 (Surr)		100	100		66 - 137		
4-Bromofluorobenzene (Surr)		89	92		73 - 120		
Toluene-d8 (Surr)		87	87		71 - 126		

**Quality Control Results**

Client: Waste Management

Job Number: 280-50392-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-159211**

**Method: 8260C  
Preparation: 5030C**

MS Lab Sample ID: 480-52517-A-1 MS      Units: ug/L  
 Client Matrix: Water  
 Dilution: 4.0  
 Analysis Date: 12/24/2013 1955  
 Prep Date: 12/24/2013 1955  
 Leach Date: N/A

MSD Lab Sample ID: 480-52517-A-1 MSD  
 Client Matrix: Water  
 Dilution: 4.0  
 Analysis Date: 12/24/2013 2020  
 Prep Date: 12/24/2013 2020  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual	
1,1-Dichloroethane	ND	100	100	114	109	
1,1-Dichloroethene	ND	100	100	113	108	
1,2,4-Trimethylbenzene	ND	100	100	91.8	90.1	
1,2-Dichlorobenzene	ND	100	100	86.2	85.3	
1,2-Dichloroethane	ND	100	100	109	107	
Benzene	ND	100	100	112	109	
Chlorobenzene	ND	100	100	89.4	87.9	
cis-1,2-Dichloroethene	87	100	100	189	181	
Ethylbenzene	ND	100	100	90.0	88.5	
Methyl tert-butyl ether	ND	100	100	107	109	
m-Xylene & p-Xylene	ND	200	200	186	185	
o-Xylene	ND	100	100	88.7	89.5	
Tetrachloroethene	53	100	100	136	133	
Toluene	ND	100	100	92.7	90.2	
trans-1,2-Dichloroethene	ND	100	100	109	105	
Trichloroethene	230	100	100	308	299	F

**Quality Control Results**

Client: Waste Management

Job Number: 280-50392-1

**Method Blank - Batch: 480-159161**

**Method: 8260C SIM  
Preparation: 5030C**

Lab Sample ID:	MB 480-159161/5	Analysis Batch:	480-159161	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J6994.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/23/2013 1450	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/23/2013 1450				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Vinyl chloride	ND		0.0040	0.020
Surrogate	% Rec		Acceptance Limits	
Dibromofluoromethane (Surr)	100		50 - 150	
TBA-d9 (Surr)	99		50 - 150	

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 480-159161**

**Method: 8260C SIM  
Preparation: 5030C**

LCS Lab Sample ID:	LCS 480-159161/3	Analysis Batch:	480-159161	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J6992.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/23/2013 1358	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/23/2013 1358				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 480-159161/4	Analysis Batch:	480-159161	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J6993.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/23/2013 1426	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	12/23/2013 1426				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Vinyl chloride	96	97	50 - 150	1	20		
Surrogate	LCS % Rec		LCSD % Rec	Acceptance Limits			
Dibromofluoromethane (Surr)	100		101	50 - 150			
TBA-d9 (Surr)	101		103	50 - 150			

**Quality Control Results**

Client: Waste Management

Job Number: 280-50392-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 480-159161**

**Method: 8260C SIM  
Preparation: 5030C**

LCS Lab Sample ID: LCS 480-159161/3 Units: ug/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/23/2013 1358  
 Prep Date: 12/23/2013 1358  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 480-159161/4  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/23/2013 1426  
 Prep Date: 12/23/2013 1426  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Vinyl chloride	0.200	0.200	0.191	0.194

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-159161**

**Method: 8260C SIM  
Preparation: 5030C**

MS Lab Sample ID: 280-50392-1  
 Client Matrix: Water  
 Dilution: 20  
 Analysis Date: 12/23/2013 2258  
 Prep Date: 12/23/2013 2258  
 Leach Date: N/A

Analysis Batch: 480-159161  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: HP5973J  
 Lab File ID: J7014.D  
 Initial Weight/Volume: 25 mL  
 Final Weight/Volume: 25 mL

MSD Lab Sample ID: 280-50392-1  
 Client Matrix: Water  
 Dilution: 20  
 Analysis Date: 12/23/2013 2323  
 Prep Date: 12/23/2013 2323  
 Leach Date: N/A

Analysis Batch: 480-159161  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: HP5973J  
 Lab File ID: J7015.D  
 Initial Weight/Volume: 25 mL  
 Final Weight/Volume: 25 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Vinyl chloride	88	89	50 - 150	1	20		
Surrogate		MS % Rec	MSD % Rec			Acceptance Limits	
Dibromofluoromethane (Surr)		101	101			50 - 150	
TBA-d9 (Surr)		89	91			50 - 150	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50392-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 480-159161**

**Method: 8260C SIM  
Preparation: 5030C**

MS Lab Sample ID: 280-50392-1                      Units: ug/L  
Client Matrix: Water  
Dilution: 20  
Analysis Date: 12/23/2013 2258  
Prep Date: 12/23/2013 2258  
Leach Date: N/A

MSD Lab Sample ID: 280-50392-1  
Client Matrix: Water  
Dilution: 20  
Analysis Date: 12/23/2013 2323  
Prep Date: 12/23/2013 2323  
Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Vinyl chloride	ND	4.00	4.00	3.53	3.57

## Quality Control Results

Client: Waste Management

Job Number: 280-50392-1

**Method Blank - Batch: 280-205803**

Lab Sample ID: MB 280-205803/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2013 0255  
 Prep Date: 12/19/2013 1300  
 Leach Date: N/A

Analysis Batch: 280-206068  
 Prep Batch: 280-205803  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_025  
 Lab File ID: 25A6121913.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Calcium, Dissolved	ND		0.040	0.040
Cobalt, Dissolved	ND		0.0030	0.0030
Iron, Dissolved	ND		0.060	0.060
Magnesium, Dissolved	ND		0.050	0.050
Potassium, Dissolved	ND		1.0	1.0
Sodium, Dissolved	ND	^	1.0	1.0

**Lab Control Sample - Batch: 280-205803**

Lab Sample ID: LCS 280-205803/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/20/2013 0257  
 Prep Date: 12/19/2013 1300  
 Leach Date: N/A

Analysis Batch: 280-206068  
 Prep Batch: 280-205803  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6010B  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_025  
 Lab File ID: 25A6121913.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Calcium, Dissolved	50.0	46.2	92	90 - 111	
Cobalt, Dissolved	0.500	0.482	96	89 - 111	
Iron, Dissolved	1.00	0.930	93	89 - 115	
Magnesium, Dissolved	50.0	52.2	104	90 - 113	
Potassium, Dissolved	50.0	48.1	96	89 - 114	
Sodium, Dissolved	50.0	49.2	98	90 - 115	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50392-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205803**

**Method: 6010B  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-50414-C-1-B MS	Analysis Batch: 280-206068	Instrument ID: MT_025
Client Matrix: Water	Prep Batch: 280-205803	Lab File ID: 25A6121913.asc
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 50 mL
Analysis Date: 12/20/2013 0304		Final Weight/Volume: 50 mL
Prep Date: 12/19/2013 1300		
Leach Date: N/A		

MSD Lab Sample ID: 280-50414-C-1-C MSD	Analysis Batch: 280-206068	Instrument ID: MT_025
Client Matrix: Water	Prep Batch: 280-205803	Lab File ID: 25A6121913.asc
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 50 mL
Analysis Date: 12/20/2013 0306		Final Weight/Volume: 50 mL
Prep Date: 12/19/2013 1300		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Calcium, Dissolved	87	76	48 - 153	3	20		
Cobalt, Dissolved	95	93	82 - 119	2	20		
Iron, Dissolved	93	90	52 - 155	3	20		
Magnesium, Dissolved	103	99	62 - 146	2	20		
Potassium, Dissolved	100	96	76 - 132	4	20		
Sodium, Dissolved	108	86	70 - 203	5	20		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-205803**

**Method: 6010B  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-50414-C-1-B MS	Units: mg/L	MSD Lab Sample ID: 280-50414-C-1-C MSD
Client Matrix: Water		Client Matrix: Water
Dilution: 1.0		Dilution: 1.0
Analysis Date: 12/20/2013 0304		Analysis Date: 12/20/2013 0306
Prep Date: 12/19/2013 1300		Prep Date: 12/19/2013 1300
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	120	50.0	50.0	168	162
Cobalt, Dissolved	ND	0.500	0.500	0.474	0.466
Iron, Dissolved	ND	1.00	1.00	0.933	0.902
Magnesium, Dissolved	39	50.0	50.0	89.9	88.0
Potassium, Dissolved	4.9	50.0	50.0	54.9	53.0
Sodium, Dissolved	160	50.0	50.0	209	199

## Quality Control Results

Client: Waste Management

Job Number: 280-50392-1

**Method Blank - Batch: 280-206039**

Lab Sample ID: MB 280-206039/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2013 0038  
 Prep Date: 12/20/2013 1215  
 Leach Date: N/A

Analysis Batch: 280-206333  
 Prep Batch: 280-206039  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_024  
 Lab File ID: 154\_BLK.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Antimony, Dissolved	ND		0.0010	0.0010
Barium, Dissolved	ND		0.0010	0.0010
Beryllium, Dissolved	ND		0.0010	0.0010
Cadmium, Dissolved	ND		0.00020	0.00020
Chromium, Dissolved	ND		0.0030	0.0030
Copper, Dissolved	ND		0.0020	0.0020
Lead, Dissolved	ND		0.0010	0.0010
Manganese, Dissolved	ND		0.0010	0.0010
Nickel, Dissolved	ND		0.0040	0.0040
Selenium, Dissolved	ND		0.0010	0.0010
Silver, Dissolved	ND		0.0020	0.0020
Thallium, Dissolved	ND		0.0010	0.0010
Vanadium, Dissolved	ND		0.0020	0.0020
Zinc, Dissolved	ND		0.0050	0.0050

**Lab Control Sample - Batch: 280-206039**

Lab Sample ID: LCS 280-206039/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2013 0041  
 Prep Date: 12/20/2013 1215  
 Leach Date: N/A

Analysis Batch: 280-206333  
 Prep Batch: 280-206039  
 Leach Batch: N/A  
 Units: mg/L

**Method: 6020  
 Preparation: 3005A  
 Total Recoverable**

Instrument ID: MT\_024  
 Lab File ID: 155\_LCS.D  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony, Dissolved	0.0400	0.0380	95	85 - 115	
Barium, Dissolved	0.0400	0.0407	102	85 - 118	
Beryllium, Dissolved	0.0400	0.0401	100	80 - 125	
Cadmium, Dissolved	0.0400	0.0395	99	85 - 115	
Chromium, Dissolved	0.0400	0.0411	103	84 - 121	
Copper, Dissolved	0.0400	0.0427	107	85 - 119	
Lead, Dissolved	0.0400	0.0406	101	85 - 118	
Manganese, Dissolved	0.0400	0.0413	103	85 - 117	
Nickel, Dissolved	0.0400	0.0419	105	85 - 119	
Selenium, Dissolved	0.0400	0.0415	104	77 - 122	
Silver, Dissolved	0.0400	0.0403	101	85 - 115	
Thallium, Dissolved	0.0400	0.0403	101	85 - 118	
Vanadium, Dissolved	0.0400	0.0407	102	85 - 120	
Zinc, Dissolved	0.0400	0.0421	105	83 - 122	



**Quality Control Results**

Client: Waste Management

Job Number: 280-50392-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206039**

**Method: 6020  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-50359-C-1-H MS  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/21/2013 0053  
Prep Date: 12/20/2013 1215  
Leach Date: N/A

Analysis Batch: 280-206333  
Prep Batch: 280-206039  
Leach Batch: N/A

Instrument ID: MT\_024  
Lab File ID: 159\_MS.D  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-50359-C-1-I MSD  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/21/2013 0056  
Prep Date: 12/20/2013 1215  
Leach Date: N/A

Analysis Batch: 280-206333  
Prep Batch: 280-206039  
Leach Batch: N/A

Instrument ID: MT\_024  
Lab File ID: 160\_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	101	98	85 - 115	2	20		
Barium, Dissolved	100	101	85 - 118	1	20		
Beryllium, Dissolved	103	103	80 - 125	0	20		
Cadmium, Dissolved	100	99	85 - 115	1	20		
Chromium, Dissolved	106	106	84 - 121	0	20		
Copper, Dissolved	102	103	85 - 119	1	20		
Lead, Dissolved	100	100	85 - 118	0	20		
Manganese, Dissolved	101	99	85 - 117	2	20		
Nickel, Dissolved	100	100	85 - 119	1	20		
Selenium, Dissolved	103	103	77 - 122	1	20		
Silver, Dissolved	98	100	85 - 115	1	20		
Thallium, Dissolved	99	100	85 - 118	1	20		
Vanadium, Dissolved	99	99	85 - 120	0	20		
Zinc, Dissolved	103	104	83 - 122	1	20		

**Quality Control Results**

Client: Waste Management

Job Number: 280-50392-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206039**

**Method: 6020  
Preparation: 3005A  
Dissolved**

MS Lab Sample ID: 280-50359-C-1-H MS      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2013 0053  
 Prep Date: 12/20/2013 1215  
 Leach Date: N/A

MSD Lab Sample ID: 280-50359-C-1-I MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/21/2013 0056  
 Prep Date: 12/20/2013 1215  
 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	0.0403	0.0394
Barium, Dissolved	0.0029	0.0400	0.0400	0.0430	0.0434
Beryllium, Dissolved	ND	0.0400	0.0400	0.0413	0.0413
Cadmium, Dissolved	ND	0.0400	0.0400	0.0402	0.0398
Chromium, Dissolved	ND	0.0400	0.0400	0.0426	0.0424
Copper, Dissolved	ND	0.0400	0.0400	0.0409	0.0411
Lead, Dissolved	ND	0.0400	0.0400	0.0399	0.0398
Manganese, Dissolved	ND	0.0400	0.0400	0.0405	0.0397
Nickel, Dissolved	ND	0.0400	0.0400	0.0399	0.0402
Selenium, Dissolved	ND	0.0400	0.0400	0.0411	0.0414
Silver, Dissolved	ND	0.0400	0.0400	0.0394	0.0398
Thallium, Dissolved	ND	0.0400	0.0400	0.0397	0.0400
Vanadium, Dissolved	0.0044	0.0400	0.0400	0.0441	0.0442
Zinc, Dissolved	ND	0.0400	0.0400	0.0414	0.0418

**Quality Control Results**

Client: Waste Management

Job Number: 280-50392-1

**Method Blank - Batch: 280-206955**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	MB 280-206955/6	Analysis Batch:	280-206955	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	115.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/28/2013 1226	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Chloride	ND		1.0	1.0
Sulfate	ND		1.0	1.0

**Method Reporting Limit Check - Batch: 280-206955**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID:	MRL 280-206955/3	Analysis Batch:	280-206955	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	112.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/28/2013 1136	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	1.00	ND	112	50 - 150	
Sulfate	1.00	ND	92	50 - 150	

**Lab Control Sample/**

**Method: 300.0**  
**Preparation: N/A**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-206955**

LCS Lab Sample ID:	LCS 280-206955/4	Analysis Batch:	280-206955	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	113.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/28/2013 1153	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-206955/5	Analysis Batch:	280-206955	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	114.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/28/2013 1210	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					
Chloride	98	98	90 - 110	0	10		
Sulfate	97	97	90 - 110	0	10		

**Quality Control Results**

Client: Waste Management

Job Number: 280-50392-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-206955**

**Method: 300.0  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-206955/4 Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/28/2013 1153  
 Prep Date: N/A  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 280-206955/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/28/2013 1210  
 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	24.5	24.5
Sulfate	25.0	25.0	24.3	24.3

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206955**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 550-16370-B-1 MS Analysis Batch: 280-206955  
 Client Matrix: Water Prep Batch: N/A  
 Dilution: 1.0 Leach Batch: N/A  
 Analysis Date: 12/28/2013 1802  
 Prep Date: N/A  
 Leach Date: N/A

Instrument ID: WC\_IC8  
 Lab File ID: 135.TXT  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

MSD Lab Sample ID: 550-16370-B-1 MSD Analysis Batch: 280-206955  
 Client Matrix: Water Prep Batch: N/A  
 Dilution: 1.0 Leach Batch: N/A  
 Analysis Date: 12/28/2013 1819  
 Prep Date: N/A  
 Leach Date: N/A

Instrument ID: WC\_IC8  
 Lab File ID: 136.TXT  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chloride	105	105	80 - 120	0	20	E	E
Sulfate	105	102	80 - 120	1	20	E	E

**Quality Control Results**

Client: Waste Management

Job Number: 280-50392-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206955**

**Method: 300.0  
Preparation: N/A**

MS Lab Sample ID: 550-16370-B-1 MS      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/28/2013 1802  
 Prep Date: N/A  
 Leach Date: N/A

MSD Lab Sample ID: 550-16370-B-1 MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/28/2013 1819  
 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	62	25.0	25.0	88.4 E	88.4 E
Sulfate	27	25.0	25.0	53.2 E	52.5 E

**Duplicate - Batch: 280-206955**

**Method: 300.0  
Preparation: N/A**

Lab Sample ID: 550-16370-B-1 DU  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/28/2013 1746  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206955  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_IC8  
 Lab File ID: 134.TXT  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Chloride	62	62.0	0.2	15	E
Sulfate	27	26.9	0.1	15	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50392-1

**Method Blank - Batch: 280-206844**

Lab Sample ID: MB 280-206844/60  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/27/2013 1324  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206844  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

**Method: 350.1  
 Preparation: N/A**

Instrument ID: WC\_Alph 3  
 Lab File ID: E:\FLOW\_4\122713.RST  
 Initial Weight/Volume: 10 mL  
 Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL	RL
Ammonia (as N)	ND		0.030	0.030

**Lab Control Sample/  
 Lab Control Sample Duplicate Recovery Report - Batch: 280-206844**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-206844/58  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/27/2013 1320  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206844  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 3  
 Lab File ID: E:\FLOW\_4\122713.RST  
 Initial Weight/Volume: 100 mL  
 Final Weight/Volume: 100 mL

LCSD Lab Sample ID: LCSD 280-206844/59  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/27/2013 1322  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206844  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Alph 3  
 Lab File ID: E:\FLOW\_4\122713.RST  
 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)	102	103	90 - 110	1	10		

**Laboratory Control/  
 Laboratory Duplicate Data Report - Batch: 280-206844**

**Method: 350.1  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-206844/58  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/27/2013 1320  
 Prep Date: N/A  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-206844/59  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/27/2013 1322  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia (as N)	2.50	2.50	2.56	2.57

**Quality Control Results**

Client: Waste Management

Job Number: 280-50392-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206844**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-50359-E-5 MS	Analysis Batch: 280-206844	Instrument ID: WC_Alph 3
Client Matrix: Water	Prep Batch: N/A	Lab File ID: E:\FLOW_4\122713.RST
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 10 mL
Analysis Date: 12/27/2013 1425		Final Weight/Volume: 10 mL
Prep Date: N/A		
Leach Date: N/A		

MSD Lab Sample ID: 280-50359-E-5 MSD	Analysis Batch: 280-206844	Instrument ID: WC_Alph 3
Client Matrix: Water	Prep Batch: N/A	Lab File ID: E:\FLOW_4\122713.RST
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 10 mL
Analysis Date: 12/27/2013 1427		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					
Ammonia (as N)	116	122	90 - 110	5	10	F	F

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206844**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-50359-E-5 MS	Units: mg/L	MSD Lab Sample ID: 280-50359-E-5 MSD
Client Matrix: Water		Client Matrix: Water
Dilution: 1.0		Dilution: 1.0
Analysis Date: 12/27/2013 1425		Analysis Date: 12/27/2013 1427
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	1.00	1.00	1.16 F	1.22 F

**Quality Control Results**

Client: Waste Management

Job Number: 280-50392-1

**Method Blank - Batch: 280-206903**

**Method: 353.2**  
**Preparation: N/A**

Lab Sample ID:	MB 280-206903/68	Analysis Batch:	280-206903	Instrument ID:	WC_Alph 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1228NXNS.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/29/2013 1311	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Nitrate/Nitrite	ND		0.050	0.050

**Method Reporting Limit Check - Batch: 280-206903**

**Method: 353.2**  
**Preparation: N/A**

Lab Sample ID:	MRL 280-206903/18	Analysis Batch:	280-206903	Instrument ID:	WC_Alph 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1228NXNS.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/29/2013 1156	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate/Nitrite	0.100	0.122	122	50 - 150	

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-206903**

**Method: 353.2**  
**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-206903/69	Analysis Batch:	280-206903	Instrument ID:	WC_Alph 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1228NXNS.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/29/2013 1313	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-206903/70	Analysis Batch:	280-206903	Instrument ID:	WC_Alph 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1228NXNS.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/29/2013 1314	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					
Nitrate/Nitrite	107	103	90 - 110	4	10		



**Quality Control Results**

Client: Waste Management

Job Number: 280-50392-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-206903**

**Method: 353.2  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-206903/69 Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/29/2013 1313  
 Prep Date: N/A  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 280-206903/70  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/29/2013 1314  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrate/Nitrite	5.00	5.00	5.37	5.14

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206903**

**Method: 353.2  
Preparation: N/A**

MS Lab Sample ID: 280-50376-I-1 MS Analysis Batch: 280-206903  
 Client Matrix: Water Prep Batch: N/A  
 Dilution: 1.0 Leach Batch: N/A  
 Analysis Date: 12/29/2013 1352  
 Prep Date: N/A  
 Leach Date: N/A

Instrument ID: WC\_Alp 2  
 Lab File ID: C:\FLOW\_4\1228NXNS.R5  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

MSD Lab Sample ID: 280-50376-I-1 MSD Analysis Batch: 280-206903  
 Client Matrix: Water Prep Batch: N/A  
 Dilution: 1.0 Leach Batch: N/A  
 Analysis Date: 12/29/2013 1353  
 Prep Date: N/A  
 Leach Date: N/A

Instrument ID: WC\_Alp 2  
 Lab File ID: C:\FLOW\_4\1228NXNS.R5  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Nitrate/Nitrite	106	104	90 - 110	1	10		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206903**

**Method: 353.2  
Preparation: N/A**

MS Lab Sample ID: 280-50376-I-1 MS Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/29/2013 1352  
 Prep Date: N/A  
 Leach Date: N/A

MSD Lab Sample ID: 280-50376-I-1 MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/29/2013 1353  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Nitrate/Nitrite	ND	4.00	4.00	4.23	4.17

**Quality Control Results**

Client: Waste Management

Job Number: 280-50392-1

**Method Blank - Batch: 280-206661**

Lab Sample ID: MB 280-206661/6  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/24/2013 1648  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206661  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

**Method: SM 2320B  
 Preparation: N/A**

Instrument ID: WC-AT3  
 Lab File ID: 122413a.TXT  
 Initial Weight/Volume:  
 Final Weight/Volume:

Analyte	Result	Qual	RL	RL
Alkalinity, Total (As CaCO3)	ND		5.0	5.0
Alkalinity, Bicarbonate (As CaCO3)	ND		5.0	5.0

**Lab Control Sample/  
 Lab Control Sample Duplicate Recovery Report - Batch: 280-206661**

**Method: SM 2320B  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-206661/4  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/24/2013 1638  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206661  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC-AT3  
 Lab File ID: 122413a.TXT  
 Initial Weight/Volume:  
 Final Weight/Volume:

LCSD Lab Sample ID: LCSD 280-206661/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/24/2013 1643  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-206661  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC-AT3  
 Lab File ID: 122413a.TXT  
 Initial Weight/Volume:  
 Final Weight/Volume:

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Alkalinity, Total (As CaCO3)	101	100	90 - 110	1	10		

**Laboratory Control/  
 Laboratory Duplicate Data Report - Batch: 280-206661**

**Method: SM 2320B  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-206661/4  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/24/2013 1638  
 Prep Date: N/A  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-206661/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 12/24/2013 1643  
 Prep 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	203	201

# Quality Control Results

Client: Waste Management

Job Number: 280-50392-1

**Duplicate - Batch: 280-206661**

**Method: SM 2320B**

**Preparation: N/A**

Lab Sample ID: 280-50392-1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 12/24/2013 1658  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-206661  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: WC-AT3  
Lab File ID: 122413a.TXT  
Initial Weight/Volume:  
Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Alkalinity, Total (As CaCO3)	520	494	6	10	

## Quality Control Results

Client: Waste Management

Job Number: 280-50392-1

**Method Blank - Batch: 280-206133**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	MB 280-206133/1	Analysis Batch:	280-206133	Instrument ID:	No Equipment Assigned
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:	12/20/2013 1229	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Dissolved Solids (TDS)	9.00		5.0	5.0

**Lab Control Sample/**

**Method: SM 2540C**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-206133**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-206133/2	Analysis Batch:	280-206133	Instrument ID:	No Equipment Assigned
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:	12/20/2013 1229	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-206133/3	Analysis Batch:	280-206133	Instrument ID:	No Equipment Assigned
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:	12/20/2013 1229	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	<u>% Rec.</u>		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Dissolved Solids (TDS)	101	100	86 - 110	1	20		

**Laboratory Control/**

**Method: SM 2540C**

**Laboratory Duplicate Data Report - Batch: 280-206133**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-206133/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-206133/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/20/2013 1229			Analysis Date:	12/20/2013 1229
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	505	501

## Quality Control Results

Client: Waste Management

Job Number: 280-50392-1

**Duplicate - Batch: 280-206133**

**Method: SM 2540C**

**Preparation: N/A**

Lab Sample ID:	280-50375-H-3 DU	Analysis Batch:	280-206133	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/20/2013 1229	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)	24000	23400	0.9	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-50392-1

**Method Blank - Batch: 280-206902**

**Method: SM 5310B**

**Preparation: N/A**

Lab Sample ID:	MB 280-206902/57	Analysis Batch:	280-206902	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122813.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/29/2013 0807	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Organic Carbon - Average	ND		1.0	1.0

**Lab Control Sample/**

**Method: SM 5310B**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-206902**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-206902/55	Analysis Batch:	280-206902	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122813.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/29/2013 0732	Units:	mg/L	Final Weight/Volume:	200 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-206902/56	Analysis Batch:	280-206902	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122813.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/29/2013 0750	Units:	mg/L	Final Weight/Volume:	200 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	102	103	88 - 112	1	15		

**Laboratory Control/**

**Method: SM 5310B**

**Laboratory Duplicate Data Report - Batch: 280-206902**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-206902/55	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-206902/56
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/29/2013 0732			Analysis Date:	12/29/2013 0750
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	25.6	25.7

**Quality Control Results**

Client: Waste Management

Job Number: 280-50392-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206902**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID:	280-50269-H-1 MS	Analysis Batch:	280-206902	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122813.txt
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/29/2013 0858			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50269-H-1 MSD	Analysis Batch:	280-206902	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122813.txt
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/29/2013 0917			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	106	106	88 - 112	0	15		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-206902**

**Method: SM 5310B  
Preparation: N/A**

MS Lab Sample ID:	280-50269-H-1 MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	5.0		
Analysis Date:	12/29/2013 0858		
Prep Date:	N/A		
Leach Date:	N/A		

MSD Lab Sample ID:	280-50269-H-1 MSD
Client Matrix:	Water
Dilution:	5.0
Analysis Date:	12/29/2013 0917
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	87	125	125	220	219

**Quality Control Results**

Client: Waste Management

Job Number: 280-50392-1

**Laboratory Chronicle**

Lab ID: 280-50392-1

Client ID: L-INF

Sample Date/Time: 12/16/2013 08:20

Received Date/Time: 12/17/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-50392-D-1		480-159211		12/24/2013 12:43	5	TAL BUF	RAL
A:8260C	280-50392-D-1		480-159211		12/24/2013 12:43	5	TAL BUF	RAL
P:5030C	280-50392-I-1		480-159161		12/23/2013 17:43	20	TAL BUF	TRB
A:8260C SIM	280-50392-I-1		480-159161		12/23/2013 17:43	20	TAL BUF	TRB
P:3005A	280-50392-C-1-A		280-206068	280-205803	12/19/2013 13:00	1	TAL DEN	WAW
A:6010B	280-50392-C-1-A		280-206068	280-205803	12/20/2013 03:11	1	TAL DEN	JKH
P:3005A	280-50392-C-1-B		280-206333	280-206039	12/20/2013 12:15	1	TAL DEN	LLB
A:6020	280-50392-C-1-B		280-206333	280-206039	12/21/2013 01:17	1	TAL DEN	TEL
P:3005A	280-50392-C-1-B		280-206545	280-206039	12/20/2013 12:15	1	TAL DEN	LLB
A:6020	280-50392-C-1-B		280-206545	280-206039	12/24/2013 02:28	1	TAL DEN	TEL
A:300.0	280-50392-A-1		280-206955		12/28/2013 20:00	20	TAL DEN	TLP
A:350.1	280-50392-B-1		280-206844		12/27/2013 14:30	50	TAL DEN	RSN
A:353.2	280-50392-B-1		280-206903		12/29/2013 14:20	10	TAL DEN	DVA
A:SM 2320B	280-50392-A-1		280-206661		12/24/2013 16:53	1	TAL DEN	AFH
A:SM 2540C	280-50392-A-1		280-206133		12/20/2013 12:29	1	TAL DEN	ELJ
A:SM 5310B	280-50392-B-1		280-206902		12/29/2013 09:54	2	TAL DEN	CCJ

Lab ID: 280-50392-1 MS

Client ID: L-INF

Sample Date/Time: 12/16/2013 08:20

Received Date/Time: 12/17/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-50392-I-1 MS		480-159161		12/23/2013 22:58	20	TAL BUF	TRB
A:8260C SIM	280-50392-I-1 MS		480-159161		12/23/2013 22:58	20	TAL BUF	TRB

Lab ID: 280-50392-1 MSD

Client ID: L-INF

Sample Date/Time: 12/16/2013 08:20

Received Date/Time: 12/17/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-50392-I-1 MSD		480-159161		12/23/2013 23:23	20	TAL BUF	TRB
A:8260C SIM	280-50392-I-1 MSD		480-159161		12/23/2013 23:23	20	TAL BUF	TRB

Lab ID: 280-50392-1 DU

Client ID: L-INF

Sample Date/Time: 12/16/2013 08:20

Received Date/Time: 12/17/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2320B	280-50392-A-1 DU		280-206661		12/24/2013 16:58	1	TAL DEN	AFH



**Quality Control Results**

Client: Waste Management

Job Number: 280-50392-1

**Laboratory Chronicle**

Lab ID: 280-50392-2

Client ID: TRIP BLANK

Sample Date/Time: 12/16/2013 08:20

Received Date/Time: 12/17/2013 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-50392-A-2		480-159161		12/23/2013 18:11	1	TAL BUF	TRB
A:8260C SIM	280-50392-A-2		480-159161		12/23/2013 18:11	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:5030C	MB 480-159211/7		480-159211		12/24/2013 11:26	1	TAL BUF	RAL
A:8260C	MB 480-159211/7		480-159211		12/24/2013 11:26	1	TAL BUF	RAL
P:5030C	MB 480-159161/5		480-159161		12/23/2013 14:50	1	TAL BUF	TRB
A:8260C SIM	MB 480-159161/5		480-159161		12/23/2013 14:50	1	TAL BUF	TRB
P:3005A	MB 280-205803/1-A		280-206068	280-205803	12/19/2013 13:00	1	TAL DEN	WAW
A:6010B	MB 280-205803/1-A		280-206068	280-205803	12/20/2013 02:55	1	TAL DEN	JKH
P:3005A	MB 280-206039/1-A		280-206333	280-206039	12/20/2013 12:15	1	TAL DEN	LLB
A:6020	MB 280-206039/1-A		280-206333	280-206039	12/21/2013 00:38	1	TAL DEN	TEL
A:300.0	MB 280-206955/6		280-206955		12/28/2013 12:26	1	TAL DEN	TLP
A:350.1	MB 280-206844/60		280-206844		12/27/2013 13:24	1	TAL DEN	RSN
A:353.2	MB 280-206903/68		280-206903		12/29/2013 13:11	1	TAL DEN	DVA
A:SM 2320B	MB 280-206661/6		280-206661		12/24/2013 16:48	1	TAL DEN	AFH
A:SM 2540C	MB 280-206133/1		280-206133		12/20/2013 12:29	1	TAL DEN	ELJ
A:SM 5310B	MB 280-206902/57		280-206902		12/29/2013 08:07	1	TAL DEN	CCJ

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:5030C	LCS 480-159211/5		480-159211		12/24/2013 09:54	1	TAL BUF	RAL
A:8260C	LCS 480-159211/5		480-159211		12/24/2013 09:54	1	TAL BUF	RAL
P:5030C	LCS 480-159161/3		480-159161		12/23/2013 13:58	1	TAL BUF	TRB
A:8260C SIM	LCS 480-159161/3		480-159161		12/23/2013 13:58	1	TAL BUF	TRB
P:3005A	LCS 280-205803/2-A		280-206068	280-205803	12/19/2013 13:00	1	TAL DEN	WAW
A:6010B	LCS 280-205803/2-A		280-206068	280-205803	12/20/2013 02:57	1	TAL DEN	JKH
P:3005A	LCS 280-206039/2-A		280-206333	280-206039	12/20/2013 12:15	1	TAL DEN	LLB
A:6020	LCS 280-206039/2-A		280-206333	280-206039	12/21/2013 00:41	1	TAL DEN	TEL
A:300.0	LCS 280-206955/4		280-206955		12/28/2013 11:53	1	TAL DEN	TLP
A:350.1	LCS 280-206844/58		280-206844		12/27/2013 13:20	1	TAL DEN	RSN
A:353.2	LCS 280-206903/69		280-206903		12/29/2013 13:13	1	TAL DEN	DVA
A:SM 2320B	LCS 280-206661/4		280-206661		12/24/2013 16:38	1	TAL DEN	AFH
A:SM 2540C	LCS 280-206133/2		280-206133		12/20/2013 12:29	1	TAL DEN	ELJ
A:SM 5310B	LCS 280-206902/55		280-206902		12/29/2013 07:32	1	TAL DEN	CCJ

**Quality Control Results**

Client: Waste Management

Job Number: 280-50392-1

**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
P:5030C	LCSD 480-159161/4		480-159161		12/23/2013 14:26	1	TAL BUF	TRB
A:8260C SIM	LCSD 480-159161/4		480-159161		12/23/2013 14:26	1	TAL BUF	TRB
A:300.0	LCSD 280-206955/5		280-206955		12/28/2013 12:10	1	TAL DEN	TLP
A:350.1	LCSD 280-206844/59		280-206844		12/27/2013 13:22	1	TAL DEN	RSN
A:353.2	LCSD 280-206903/70		280-206903		12/29/2013 13:14	1	TAL DEN	DVA
A:SM 2320B	LCSD 280-206661/5		280-206661		12/24/2013 16:43	1	TAL DEN	AFH
A:SM 2540C	LCSD 280-206133/3		280-206133		12/20/2013 12:29	1	TAL DEN	ELJ
A:SM 5310B	LCSD 280-206902/56		280-206902		12/29/2013 07:50	1	TAL DEN	CCJ

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 280-206955/3		280-206955		12/28/2013 11:36	1	TAL DEN	TLP
A:353.2	MRL 280-206903/18		280-206903		12/29/2013 11:56	1	TAL DEN	DVA

Lab ID: MS

Client ID: N/A

Sample Date/Time: 12/23/2013 10:30

Received Date/Time: 12/24/2013 11:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	480-52517-A-1 MS		480-159211		12/24/2013 19:55	4	TAL BUF	RAL
A:8260C	480-52517-A-1 MS		480-159211		12/24/2013 19:55	4	TAL BUF	RAL
P:3005A	280-50414-C-1-B MS		280-206068	280-205803	12/19/2013 13:00	1	TAL DEN	WAW
A:6010B	280-50414-C-1-B MS		280-206068	280-205803	12/20/2013 03:04	1	TAL DEN	JKH
P:3005A	280-50359-C-1-H MS		280-206333	280-206039	12/20/2013 12:15	1	TAL DEN	LLB
A:6020	280-50359-C-1-H MS		280-206333	280-206039	12/21/2013 00:53	1	TAL DEN	TEL
A:300.0	550-16370-B-1 MS		280-206955		12/28/2013 18:02	1	TAL DEN	TLP
A:350.1	280-50359-E-5 MS		280-206844		12/27/2013 14:25	1	TAL DEN	RSN
A:353.2	280-50376-I-1 MS		280-206903		12/29/2013 13:52	1	TAL DEN	DVA
A:SM 5310B	280-50269-H-1 MS		280-206902		12/29/2013 08:58	5	TAL DEN	CCJ

## Quality Control Results

Client: Waste Management

Job Number: 280-50392-1

### Laboratory Chronicle

Lab ID: MSD

Client ID: N/A

Sample Date/Time: 12/23/2013 10:30

Received Date/Time: 12/24/2013 11:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	480-52517-A-1 MSD		480-159211		12/24/2013 20:20	4	TAL BUF	RAL
A:8260C	480-52517-A-1 MSD		480-159211		12/24/2013 20:20	4	TAL BUF	RAL
P:3005A	280-50414-C-1-C MSD		280-206068	280-205803	12/19/2013 13:00	1	TAL DEN	WAW
A:6010B	280-50414-C-1-C MSD		280-206068	280-205803	12/20/2013 03:06	1	TAL DEN	JKH
P:3005A	280-50359-C-1-I MSD		280-206333	280-206039	12/20/2013 12:15	1	TAL DEN	LLB
A:6020	280-50359-C-1-I MSD		280-206333	280-206039	12/21/2013 00:56	1	TAL DEN	TEL
A:300.0	550-16370-B-1 MSD		280-206955		12/28/2013 18:19	1	TAL DEN	TLP
A:350.1	280-50359-E-5 MSD		280-206844		12/27/2013 14:27	1	TAL DEN	RSN
A:353.2	280-50376-I-1 MSD		280-206903		12/29/2013 13:53	1	TAL DEN	DVA
A:SM 5310B	280-50269-H-1 MSD		280-206902		12/29/2013 09:17	5	TAL DEN	CCJ

Lab ID: DU

Client ID: N/A

Sample Date/Time: 12/18/2013 08:00

Received Date/Time: 12/18/2013 15:55

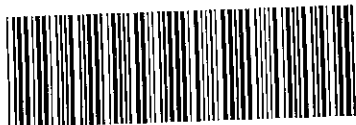
Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	550-16370-B-1 DU		280-206955		12/28/2013 17:46	1	TAL DEN	TLP
A:SM 2540C	280-50375-H-3 DU		280-206133		12/20/2013 12:29	1	TAL DEN	ELJ

#### Lab References:

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver

Tes  
4955  
Arvad  
Phone



280-50392 Chain of Custody

# Chain of Custody Record

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

<b>Client</b> Client Contact: Mr. Charles Luckie Company: Olympic View Transfer Station Address: 9300 Southwest Barney White Road City: Bremerton State, Zip: WA, 98312 Phone:  Email:  Project Name: WA02 Olympic View Sanitary LF Site: Washington		Sampler: <u>Matt O'Hare</u> Lab PM: Sara, Betsy A E-Mail: betsy.sara@testamericainc.com Carrier Tracking No(s):  COC No: 280-29114-4071.1 Page: Page 1 of 1 Job #:												
Due Date Requested: <u>Standard</u> TAT Requested (days):  PO #:  WO #:  Project #: 28002692-Annual OBW-TB/L-INF App I/II -Dec SSOW#:		<b>Analysis Requested</b>						<b>Preservation Codes:</b> A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify) Other:						
<b>Sample Identification</b>		<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Type</b> (C=Comp, G=grab)	<b>Matrix</b> (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perfluorinated (Yes or No)	8260B - VOA	8260B_SIM - Vinyl chloride	Cl/SO4/Alk/TDS	Dissolved Metals	Ammonia/NOX/TTC	Total Number of containers	<b>Special Instructions/Note:</b>
L- INF Trip Blank		12/14/13	0820	G	W	X	X	X	X	X	X	X	X	X
<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Radiological						<b>Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)</b> <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months								
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements:								
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment								
Relinquished by: <u>Andrew McDonald</u>		Date/Time: <u>12/16/13 1320</u>		Company: <u>SCS</u>		Received by: <u>[Signature]</u>		Date/Time: <u>12/17/13 9:45</u>		Company: <u>TA-Denver</u>				
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:				
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:				
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.: <u>102387</u>				Cooler Temperature(s) °C and Other Remarks: <u>3.3 IR4 MS 12-17-13</u>								

Page 57 of 59

## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-50392-1

**Login Number: 50392**  
**List Number: 1**  
**Creator: Dedio, Michael T**

**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?	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	N/A	Yes: Preservation labels on samples match COC
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.	N/A	

## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-50392-1

**Login Number: 50392**  
**List Number: 1**  
**Creator: Goliszek, Gregory T**

**List Source: TestAmerica Buffalo**  
**List Creation: 12/19/13 09:23 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	3.8 #2
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: 280-50527-1

Job Description: WA02|Olympic View Sanitary LF

For:  
Waste Management  
Olympic View Transfer Station  
9300 Southwest Barney White Road  
Bremerton, WA 98312  
Attention: Mr. Charles Luckie



Approved for release.  
Betsy A Sara  
Project Manager II  
12/20/2013 3:40 PM

---

Betsy A Sara, Project Manager II  
4955 Yarrow Street, Arvada, CO, 80002  
(303)736-0189  
betsy.sara@testamericainc.com  
12/20/2013

cc: Mr. Sam Adlington  
Mr. Matt O'Hare  
Mr. Phil Perley  
Ms. Elena Ramirez  
Mr. Dan Venchiarutti

The test results in this report relate only to the samples in this report and meet all requirements of NELAP, 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.

**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
Subcontracted Data .....	4



The analysis for Total Arsenic and Dissolved Arsenic Method 200.8 was performed by ARI. Their address and phone number are:  
Analytical Resources, Inc.  
4611 S. 134th Place  
Tukwila, WA 98168-3240  
Phone: 206-695-6200



**Analytical Resources, Incorporated**  
Analytical Chemists and Consultants

16 December 2013

Betsy Sara  
Test America-Denver  
4955 Yarrow Street  
Arvada, CO 80002

**RE: Project: OVSL**  
**ARI Job No.: XQ72**

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 eighteen water samples on December 6, 2013. The samples were received in good condition. The samples were analyzed for total and 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.

Mark D. Harris  
Project Manager  
206/695-6210  
[markh@arilabs.com](mailto:markh@arilabs.com)

Enclosures

cc: file XQ72

MDH/mdh

# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: **X072**  
 ARI Client Company: SCS Engineers  
 Client Contact: Elena Ramirez  
 Client Project Name: OVSL  
 Client Project # 04204027.17



Turn-around Requested: Standard  
 Date: 12/6/13  
 Phone: 425-289-5454  
 Page: 1 of 2  
 Cooler Temps: 1.2

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	
					Low-Level Dissolved Arsenic	Low-Level Arsenic		
MW-43	12/2/2013	1249	W	2	X			
MS/MSD	12/2/2013	1249	W	4	X			
MW-29A	12/3/2013	1049	W	2	X			
DUP-1	12/3/2013	1049	W	2	X			
MW-42	12/3/2013	1234	W	2	X			
MW-19C	12/3/2013	1402	W	2	X			
MW-13A	12/3/2013	1427	W	2	X			
MW-13B	12/3/2013	1332	W	2	X			
MW-34A	12/3/2013	1133	W	2	X			
MW-34C	12/3/2013	1037	W	2	X			
Comments/Special Instructions	Relinquished by (Signature) <i>[Signature]</i>		Received by (Signature) <i>[Signature]</i>		Relinquished by (Signature) <i>[Signature]</i>		Received by (Signature) <i>[Signature]</i>	
	Printed Name: Matt O'Hare		Printed Name: Rahul Elenc-Kamiset		Printed Name: Rahul Elenc-Kamiset		Printed Name: A. Viggardson	
	Company: SCS Engineers		Company: SCS Engineers		Company: SCS Engineers		Company: ARI	
	Date & Time: 12/6/13		Date & Time: 12/6/2013 3:43		Date & Time: 12/6/2013 17:26		Date & Time: 12/6/13 17:26	

**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 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.

# Chain of Custody Record & Laboratory Analysis Request

Analytical Resources, Incorporated  
 Analytical Chemists and Consultants  
 4611 South 134th Place, Suite 100  
 Tukwila, WA 98168  
 206-695-6200 206-695-6201 (fax)



Date: 12/6/13  
 Page: 2 of 2  
 No. of Coolers: 2  
 Cooler Temps:

Turn-around Requested: Standard  
 ARI Assigned Number: X072  
 ARI Client Company: SCS Engineers  
 Phone: 425-289-5454  
 Client Contact: Elena Ramirez  
 Client Project Name: OVSL

Analysis Requested

Loc Level Dissolved Arsenic	Loc Level Total Arsenic						
-----------------------------------	-------------------------------	--	--	--	--	--	--

Sample ID	Date	Time	Matrix	No Containers	Analysis Requested		Notes/Comments
					Loc Level Dissolved Arsenic	Loc Level Total Arsenic	
MW-20	12/4/2013	1035	W	2	X		
MW-23A	12/4/2013	1320	W	2	X		
MW-36A	12/4/2013	1520	W	2	X		
MW-15R	12/4/2013	1430	W	2	X		
MW-24	12/4/2013	1153	W	2	X		
DUP-2	12/4/2013	1320	W	2	X		
MW-2B1	12/5/2013	1004	W	2	X		
MW-39	12/5/2013	1100	W	2	X		
MW-33A	12/5/2013	1450	W	2	X		

Comments/Special Instructions	Relinquished by (Signature)	Received by (Signature)
	Printed Name: Matt O'Hare	Printed Name: Karel Ramon
	Company: SCS Engineers	Company: SCS Engineers
	Date & Time: 12/6/13 15:43	Date & Time: 12/6/2013 17:56:26

Relinquished by (Signature): [Signature]  
 Printed Name: Karel Ramon  
 Company: SCS Engineers  
 Date & Time: 12/6/2013 17:56:26

Received by (Signature): [Signature]  
 Printed Name: A. Volgarden  
 Company: ARI  
 Date & Time: 12/6/13 17:56

**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 receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/ISMS protocol will be stored frozen for up to one year and then discarded.



# Cooler Receipt Form

ARI Client SCS Engineers  
 COC No(s): \_\_\_\_\_ (NA)  
 Assigned ARI Job No: XQ72

Project Name: ENVSL  
 Delivered by: Fed-Ex UPS Courier Hand Delivered Other: \_\_\_\_\_  
 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) \_\_\_\_\_  
 Time: 1726 1.2  
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877957

Cooler Accepted by: AV Date: 12/6/13 Time: 1726

**Complete custody forms and attach all shipping documents**

**Log-In Phase:**

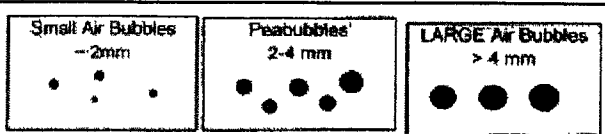
Was a temperature blank included in the cooler? YES (NO)  
 What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: \_\_\_\_\_  
 Was sufficient ice used (if appropriate)? NA (YES) NO  
 Were all bottles sealed in individual plastic bags? YES (NO)  
 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: JM Date: 12/9/13 Time: 725

**\*\* 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" (< 2 mm)  
 Peabubbles → "pb" (2 to < 4 mm)  
 Large → "lg" (4 to < 6 mm)  
 Headspace → "hs" (> 6 mm)



ARI Job No: XQ72

PC: Mark  
VTSR: 12/06/13

Inquiry Number: NONE  
Analysis Requested: 12/09/13  
Contact: Sara, Betsy  
Client: Test America  
Logged by: JM  
Sample Set Used: Yes-481  
Validatable Package: No  
Deliverables:

Project #: 04204027.17  
Project: OVSI  
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	TPHD <2	Fe2+ <2	DMET DOC FLT FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY	
13-26913 XQ72A	MW-43						TOT															
13-26914 XQ72B	MW-29A						TOT															
13-26915 XQ72C	DUP-1						TOT															
13-26916 XQ72D	MW-42						TOT															
13-26917 XQ72E	MW-19C						TOT															
13-26918 XQ72F	MW-13A						TOT															
13-26919 XQ72G	MW-13B						TOT															
13-26920 XQ72H	MW-34A						TOT															
13-26921 XQ72I	MW-34C						TOT															
13-26922 XQ72J	MW-20						TOT															
13-26923 XQ72K	MW-23A						TOT															
13-26924 XQ72L	MW-36A						TOT															
13-26925 XQ72M	MW-15R						TOT															
13-26926 XQ72N	MW-24						TOT															

P. Pass

Checked By JM Date 12/9/13



ARI Job No: XQ72

Client: Test America

Project #: 04204027.17  
 Project: OVSL

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	TPHD <2	Fe2+ <2	DMET DOC FLT FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
13-26927 XQ720	DUP-2						TOT P														
13-26928 XQ72P	MW-2B1						TOT P														
13-26929 XQ72Q	MW-39						TOT P														
13-26930 XQ72R	MW-33A						TOT P														
13-26931 XQ72S	MW-43						DSS P									Y					
13-26932 XQ72T	MW-29A						DSS P									Y					
13-26933 XQ72U	DUP-1						DSS P									Y					
13-26934 XQ72V	MW-42						DSS P									Y					
13-26935 XQ72W	MW-19C						DSS P									Y					
13-26936 XQ72X	MW-13A						DSS P									Y					
13-26937 XQ72Y	MW-13B						DSS P									Y					
13-26938 XQ72Z	MW-34A						DSS P									Y					
13-26939 XQ72AA	MW-34C						DSS P									Y					
13-26940 XQ72AB	MW-20						DSS P									Y					
13-26941 XQ72AC	MW-23A						DSS P									Y					
13-26942 XQ72AD	MW-36A						DSS P									Y					
13-26943 XQ72AE	MW-15R						DSS P									Y					

Checked By JM Date 12/9/13



Client: Test America

Project #: 04204027.17  
Project: OVSL

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	TPHD <2	Fe2+ <2	DMET DOC FLT FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
13-26944 XQ72AF	MW-24						DIS									Y					
13-26945 XQ72AG	DUP-2						DIS									Y					
13-26946 XQ72AH	MW-2B1						DIS									Y					
13-26947 XQ72AJ	MW-39						DIS									Y					
13-26948 XQ72AJ	MW-33A						DIS									Y					

Checked By JM Date 12/9/13



# Sample ID Cross Reference Report



ARI Job No: XQ72  
 Client: Test America  
 Project Event: 04204027.17  
 Project Name: OVSL

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. MW-43	XQ72A	13-26913	Water	12/02/13 12:49	12/06/13 17:26
2. MW-29A	XQ72B	13-26914	Water	12/03/13 10:49	12/06/13 17:26
3. DUP-1	XQ72C	13-26915	Water	12/03/13 10:49	12/06/13 17:26
4. MW-42	XQ72D	13-26916	Water	12/03/13 12:34	12/06/13 17:26
5. MW-19C	XQ72E	13-26917	Water	12/03/13 14:02	12/06/13 17:26
6. MW-13A	XQ72F	13-26918	Water	12/03/13 14:27	12/06/13 17:26
7. MW-13B	XQ72G	13-26919	Water	12/03/13 13:32	12/06/13 17:26
8. MW-34A	XQ72H	13-26920	Water	12/03/13 11:33	12/06/13 17:26
9. MW-34C	XQ72I	13-26921	Water	12/03/13 10:37	12/06/13 17:26
10. MW-20	XQ72J	13-26922	Water	12/04/13 10:35	12/06/13 17:26
11. MW-23A	XQ72K	13-26923	Water	12/04/13 13:20	12/06/13 17:26
12. MW-36A	XQ72L	13-26924	Water	12/04/13 15:20	12/06/13 17:26
13. MW-15R	XQ72M	13-26925	Water	12/04/13 14:30	12/06/13 17:26
14. MW-24	XQ72N	13-26926	Water	12/04/13 11:53	12/06/13 17:26
15. DUP-2	XQ72O	13-26927	Water	12/04/13 13:20	12/06/13 17:26
16. MW-2B1	XQ72P	13-26928	Water	12/05/13 10:04	12/06/13 17:26
17. MW-39	XQ72Q	13-26929	Water	12/05/13 11:00	12/06/13 17:26
18. MW-33A	XQ72R	13-26930	Water	12/05/13 14:50	12/06/13 17:26
19. MW-43	XQ72S	13-26931	Water	12/02/13 12:49	12/06/13 17:26
20. MW-29A	XQ72T	13-26932	Water	12/03/13 10:49	12/06/13 17:26
21. DUP-1	XQ72U	13-26933	Water	12/03/13 10:49	12/06/13 17:26
22. MW-42	XQ72V	13-26934	Water	12/03/13 12:34	12/06/13 17:26
23. MW-19C	XQ72W	13-26935	Water	12/03/13 14:02	12/06/13 17:26
24. MW-13A	XQ72X	13-26936	Water	12/03/13 14:27	12/06/13 17:26
25. MW-13B	XQ72Y	13-26937	Water	12/03/13 13:32	12/06/13 17:26
26. MW-34A	XQ72Z	13-26938	Water	12/03/13 11:33	12/06/13 17:26
27. MW-34C	XQ72AA	13-26939	Water	12/03/13 10:37	12/06/13 17:26
28. MW-20	XQ72AB	13-26940	Water	12/04/13 10:35	12/06/13 17:26
29. MW-23A	XQ72AC	13-26941	Water	12/04/13 13:20	12/06/13 17:26
30. MW-36A	XQ72AD	13-26942	Water	12/04/13 15:20	12/06/13 17:26
31. MW-15R	XQ72AE	13-26943	Water	12/04/13 14:30	12/06/13 17:26
32. MW-24	XQ72AF	13-26944	Water	12/04/13 11:53	12/06/13 17:26
33. DUP-2	XQ72AG	13-26945	Water	12/04/13 13:20	12/06/13 17:26
34. MW-2B1	XQ72AH	13-26946	Water	12/05/13 10:04	12/06/13 17:26
35. MW-39	XQ72AI	13-26947	Water	12/05/13 11:00	12/06/13 17:26
36. MW-33A	XQ72AJ	13-26948	Water	12/05/13 14:50	12/06/13 17:26



## Data Reporting Qualifiers

Effective 2/14/2011

### Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- \* Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but  $\geq$  the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is  $\leq 5$  times the Reporting Limit and the replicate control limit defaults to  $\pm 1$  RL instead of the normal 20% RPD

### Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- \* Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ( $< 20\%$  RSD,  $< 20\%$  Drift or minimum RRF).



- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by  $\geq 40\%$  RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



## Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: MW-43  
SAMPLE

Lab Sample ID: XQ72A

LIMS ID: 13-26913

Matrix: Water

Data Release Authorized

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/02/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/11/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00004	U

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

**Sample ID: MW-43  
DUPLICATE**

Lab Sample ID: XQ72A  
LIMS ID: 13-26913  
Matrix: Water  
Data Release Authorized  
Reported: 12/16/13



QC Report No: XQ72-Test America  
Project: OVSL  
04204027.17  
Date Sampled: 12/02/13  
Date Received: 12/06/13

**MATRIX DUPLICATE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	200.8	0.00004 U	0.00004 U	0.0%	+/- 0.00004	L

Reported in mg/L

\*-Control Limit Not Met  
L-RPD Invalid, Limit = Detection Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: MW-43  
MATRIX SPIKE

Lab Sample ID: XQ72A


QC Report No: XQ72-Test America

LIMS ID: 13-26913

Project: OVSL

Matrix: Water

04204027.17

Data Release Authorized: 

Date Sampled: 12/02/13

Reported: 12/16/13

Date Received: 12/06/13

**MATRIX SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	200.8	0.00004 U	0.00414	0.00500	82.8%	

Reported in mg/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**

**TOTAL METALS**

Page 1 of 1

Sample ID: MW-29A  
SAMPLE

Lab Sample ID: XQ72B

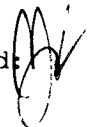
QC Report No: XQ72-Test America

LIMS ID: 13-26914

Project: OVSL

Matrix: Water

04204027.17

Data Release Authorized: 

Date Sampled: 12/03/13

Reported: 12/16/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/11/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00149	

U-Analyte undetected at given RL

RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

**Sample ID: DUP-1  
SAMPLE**

Lab Sample ID: XQ72C

LIMS ID: 13-26915

Matrix: Water

Data Release Authorized: 

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/03/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/11/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00157	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: MW-42  
SAMPLE

Lab Sample ID: XQ72D


QC Report No: XQ72-Test America

LIMS ID: 13-26916

Project: OVSL

Matrix: Water

04204027.17

Data Release Authorized: 

Date Sampled: 12/03/13

Reported: 12/16/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/11/13	200.8	12/13/13	7440-38-2	Arsenic	0.0001	0.0015	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: MW-19C  
SAMPLE

Lab Sample ID: XQ72E

LIMS ID: 13-26917

Matrix: Water

Data Release Authorized: 

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/03/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/11/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00287	

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: MW-13A  
SAMPLE

Lab Sample ID: XQ72F

LIMS ID: 13-26918

Matrix: Water

Data Release Authorized: 

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/03/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/11/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00017	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: MW-13B  
SAMPLE

Lab Sample ID: XQ72G

LIMS ID: 13-26919

Matrix: Water

Data Release Authorized:

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/03/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/11/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00028	


U-Analyte undetected at given RL  
RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**  
Page 1 of 1

**Sample ID: MW-34A**  
**SAMPLE**

Lab Sample ID: XQ72H  
LIMS ID: 13-26920  
Matrix: Water  
Data Release Authorized:   
Reported: 12/16/13

QC Report No: XQ72-Test America  
Project: OVSL  
04204027.17  
Date Sampled: 12/03/13  
Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/11/13	200.8	12/13/13	7440-38-2	Arsenic	0.0001	0.0004	

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

**Sample ID: MW-34C  
SAMPLE**

Lab Sample ID: XQ72I

LIMS ID: 13-26921

Matrix: Water

Data Release Authorized: 

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/03/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/11/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.0252	

U-Analyte undetected at given RL

RL-Reporting Limit



INORGANICS ANALYSIS DATA SHEET

TOTAL METALS  
Page 1 of 1

Sample ID: MW-20  
SAMPLE

Lab Sample ID: XQ72J  
LIMS ID: 13-26922  
Matrix: Water  
Data Release Authorized:  
Reported: 12/16/13

QC Report No: XQ72-Test America  
Project: OVSL  
04204027.17  
Date Sampled: 12/04/13  
Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/11/13	200.8	12/13/13	7440-38-2	Arsenic	0.0001	0.0002	

U-Analyte undetected at given RL  
RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: MW-23A  
SAMPLE

Lab Sample ID: XQ72K

LIMS ID: 13-26923

Matrix: Water

Data Release Authorized: 

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/04/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/11/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00016	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

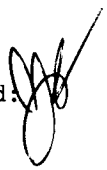
Page 1 of 1

Sample ID: MW-36A  
SAMPLE

Lab Sample ID: XQ72L

LIMS ID: 13-26924

Matrix: Water

Data Release Authorized: 

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/04/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/11/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00063	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: MW-15R  
SAMPLE

Lab Sample ID: XQ72M

LIMS ID: 13-26925

Matrix: Water

Data Release Authorized: 

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/04/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/11/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00019	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: MW-24  
SAMPLE

Lab Sample ID: XQ72N

LIMS ID: 13-26926

Matrix: Water

Data Release Authorized: 

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/04/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/11/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00074	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

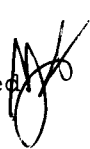
Page 1 of 1

Sample ID: DUP-2  
SAMPLE

Lab Sample ID: XQ720

LIMS ID: 13-26927

Matrix: Water

Data Release Authorized 

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/04/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/11/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00018	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

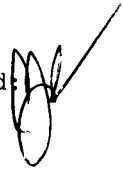
Page 1 of 1

Sample ID: MW-2B1  
SAMPLE

Lab Sample ID: XQ72P

LIMS ID: 13-26928

Matrix: Water

Data Release Authorized: 

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/05/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/11/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00030	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: MW-39  
SAMPLE

Lab Sample ID: XQ72Q

LIMS ID: 13-26929

Matrix: Water

Data Release Authorized: 

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/05/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/11/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00150	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

**Sample ID: MW-33A  
SAMPLE**

Lab Sample ID: XQ72R

LIMS ID: 13-26930

Matrix: Water

Data Release Authorized:

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/05/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/11/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00030	


U-Analyte undetected at given RL  
RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET  
DISSOLVED METALS**

Page 1 of 1

Sample ID: MW-43  
SAMPLE

Lab Sample ID: XQ72S  
LIMS ID: 13-26931  
Matrix: Water  
Data Release Authorized:   
Reported: 12/16/13

QC Report No: XQ72-Test America  
Project: OVSL  
04204027.17  
Date Sampled: 12/02/13  
Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/12/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00004	U

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

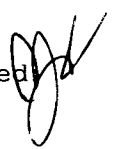
**DISSOLVED METALS**

Page 1 of 1

Sample ID: MW-43  
DUPLICATE

Lab Sample ID: XQ72S  
LIMS ID: 13-26931  
Matrix: Water  
Data Release Authorized  
Reported: 12/16/13

QC Report No: XQ72-Test America  
Project: OVSL  
04204027.17  
Date Sampled: 12/02/13  
Date Received: 12/06/13



**MATRIX DUPLICATE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	200.8	0.00004 U	0.00004 U	0.0%	+/- 0.00004	L


Reported in mg/L

\*-Control Limit Not Met

L-RPD Invalid, Limit = Detection Limit

**INORGANICS ANALYSIS DATA SHEET**  
**DISSOLVED METALS**  
 Page 1 of 1

**Sample ID: MW-43**  
**MATRIX SPIKE**

Lab Sample ID: XQ72S  
 LIMS ID: 13-26931  
 Matrix: Water  
 Data Release Authorized:   
 Reported: 12/16/13

QC Report No: XQ72-Test America  
 Project: OVSL  
 04204027.17  
 Date Sampled: 12/02/13  
 Date Received: 12/06/13

**MATRIX SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	200.8	0.00004 U	0.00426	0.005	85.2%	

Reported in mg/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-29A  
SAMPLE

Lab Sample ID: XQ72T

LIMS ID: 13-26932

Matrix: Water

Data Release Authorized 

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/03/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/12/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00142	

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: XQ72U


QC Report No: XQ72-Test America

LIMS ID: 13-26933

Project: OVSL

Matrix: Water

04204027.17

Data Release Authorized: 

Date Sampled: 12/03/13

Reported: 12/16/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/12/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00147	

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: XQ72V

LIMS ID: 13-26934

Matrix: Water

Data Release Authorized

Reported: 12/16/13

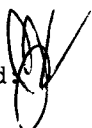
QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/03/13

Date Received: 12/06/13



Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/12/13	200.8	12/13/13	7440-38-2	Arsenic	0.0001	0.0015	

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: XQ72W

LIMS ID: 13-26935

Matrix: Water

Data Release Authorized: 

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/03/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/12/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00261	

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: XQ72X  
LIMS ID: 13-26936  
Matrix: Water  
Data Release Authorized  
Reported: 12/16/13



QC Report No: XQ72-Test America  
Project: OVSL  
04204027.17  
Date Sampled: 12/03/13  
Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/12/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00017	

U-Analyte undetected at given RL  
RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

**Sample ID: MW-13B  
SAMPLE**

Lab Sample ID: XQ72Y  
LIMS ID: 13-26937  
Matrix: Water  
Data Release Authorized:  
Reported: 12/16/13

QC Report No: XQ72-Test America  
Project: OVSL  
04204027.17  
Date Sampled: 12/03/13  
Date Received: 12/06/13


Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/12/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00028	

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET  
DISSOLVED METALS**

**Sample ID: MW-34A  
SAMPLE**

Page 1 of 1

Lab Sample ID: XQ72Z  
LIMS ID: 13-26938  
Matrix: Water  
Data Release Authorized:   
Reported: 12/16/13

QC Report No: XQ72-Test America  
Project: OVSL  
04204027.17  
Date Sampled: 12/03/13  
Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/12/13	200.8	12/13/13	7440-38-2	Arsenic	0.0001	0.0004	

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET  
DISSOLVED METALS**

**Sample ID: MW-34C  
SAMPLE**

Page 1 of 1

Lab Sample ID: XQ72AA  
LIMS ID: 13-26939  
Matrix: Water  
Data Release Authorized  
Reported: 12/16/13




QC Report No: XQ72-Test America  
Project: OVSL  
04204027.17  
Date Sampled: 12/03/13  
Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/12/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00113	

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: XQ72AB  
LIMS ID: 13-26940  
Matrix: Water  
Data Release Authorized:   
Reported: 12/16/13

QC Report No: XQ72-Test America  
Project: OVSL  
04204027.17  
Date Sampled: 12/04/13  
Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/12/13	200.8	12/13/13	7440-38-2	Arsenic	0.0001	0.0002	

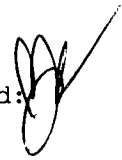
U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET  
DISSOLVED METALS**

**Sample ID: MW-23A  
SAMPLE**

Page 1 of 1

Lab Sample ID: XQ72AC  
LIMS ID: 13-26941  
Matrix: Water  
Data Release Authorized:  
Reported: 12/16/13



QC Report No: XQ72-Test America  
Project: OVSL  
04204027.17  
Date Sampled: 12/04/13  
Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/12/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00011	

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: XQ72AD

LIMS ID: 13-26942

Matrix: Water

Data Release Authorized: 

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/04/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/12/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00057	

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: XQ72AE

LIMS ID: 13-26943

Matrix: Water

Data Release Authorized: 

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/04/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/12/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00018	

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: XQ72AF


QC Report No: XQ72-Test America

LIMS ID: 13-26944

Project: OVSL

Matrix: Water

04204027.17

Data Release Authorized: 

Date Sampled: 12/04/13

Reported: 12/16/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/12/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00023	

U-Analyte undetected at given RL  
RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

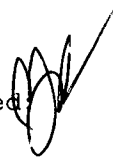
**DISSOLVED METALS**

Page 1 of 1

Sample ID: DUP-2  
SAMPLE

Lab Sample ID: XQ72AG  
LIMS ID: 13-26945  
Matrix: Water  
Data Release Authorized  
Reported: 12/16/13

QC Report No: XQ72-Test America  
Project: OVSL  
04204027.17  
Date Sampled: 12/04/13  
Date Received: 12/06/13



Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/12/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00011	

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: XQ72AH

LIMS ID: 13-26946

Matrix: Water

Data Release Authorized: 

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/05/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/12/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00014	

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: XQ72AI

LIMS ID: 13-26947

Matrix: Water

Data Release Authorized: 

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/05/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/12/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00153	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

Sample ID: MW-33A  
SAMPLE

Lab Sample ID: XQ72AJ

LIMS ID: 13-26948

Matrix: Water

Data Release Authorized:

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

Date Sampled: 12/05/13

Date Received: 12/06/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/12/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00015	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

**Sample ID: LAB CONTROL**

Lab Sample ID: XQ72LCS

LIMS ID: 13-26914

Matrix: Water

Data Release Authorized: 

Reported: 12/16/13

QC Report No: XQ72-Test America

Project: OVSL

04204027.17

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	0.00435	0.00500	87.0%	

Reported in mg/L

N-Control limit not met

Control Limits: 80-120%

**INORGANICS ANALYSIS DATA SHEET  
DISSOLVED METALS**

**Sample ID: LAB CONTROL**

Page 1 of 1

Lab Sample ID: XQ72LCS


QC Report No: XQ72-Test America

LIMS ID: 13-26932

Project: OVSL

Matrix: Water

04204027.17

Data Release Authorized: 

Date Sampled: NA

Reported: 12/16/13

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	0.00437	0.00500	87.4%	

Reported in mg/L

N-Control limit not met

Control Limits: 80-120%

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

**Sample ID: METHOD BLANK**

Page 1 of 1

Lab Sample ID: XQ72MB


QC Report No: XQ72-Test America

LIMS ID: 13-26914

Project: OVSL

Matrix: Water

04204027.17

Data Release Authorized: 

Date Sampled: NA

Reported: 12/16/13

Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/11/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00004	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET  
DISSOLVED METALS**

**Sample ID: METHOD BLANK**

Page 1 of 1

Lab Sample ID: XQ72MB

QC Report No: XQ72-Test America

LIMS ID: 13-26932

Project: OVSL

Matrix: Water

04204027.17

Data Release Authorized:

Date Sampled: NA

Reported: 12/16/13

Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/12/13	200.8	12/13/13	7440-38-2	Arsenic	0.00004	0.00004	U

U-Analyte undetected at given RL  
RL-Reporting Limit



## ANALYTICAL REPORT

Job Number: 280-50654-1

Job Description: WA02|Olympic View Sanitary LF

For:  
Waste Management  
Olympic View Transfer Station  
9300 Southwest Barney White Road  
Bremerton, WA 98312  
Attention: Mr. Charles Luckie



Approved for release.  
Betsy A Sara  
Project Manager II  
12/27/2013 9:14 AM

---

Betsy A Sara, Project Manager II  
4955 Yarrow Street, Arvada, CO, 80002  
(303)736-0189  
betsy.sara@testamericainc.com  
12/27/2013

cc: Mr. Sam Adlington  
Mr. Matt O'Hare  
Mr. Phil Perley  
Ms. Elena Ramirez  
Mr. Dan Venchiarutti

The test results in this report relate only to the samples in this report and meet all requirements of NELAP, 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.

**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
Subcontracted Data .....	4

The analysis for Total Arsenic and Dissolved Arsenic Method 200.8 was performed by ARI. Their address and phone number are:  
Analytical Resources, Inc.  
4611 S. 134th Place  
Tukwila, WA 98168-3240  
Phone: 206-695-6200



**Analytical Resources, Incorporated**  
Analytical Chemists and Consultants

24 December 2013

Betsy Sara  
Test America-Denver  
4955 Yarrow Street  
Arvada, CO 80002

**RE: Project: OVSL**  
**ARI Job No.: XR80**

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 five water samples on December 18, 2013. The samples were received in good condition. The samples were analyzed for total and 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.

  
Mark D. Harris  
Project Manager  
206/695-6210  
[markh@arilabs.com](mailto:markh@arilabs.com)

Enclosures

cc: file XR80

MDH/mdh

# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: XR50 Turn-around Requested: Standard Date: 12/18/13  
 ARI Client Company: SCS Engineers Phone: 425-746-4600 Page: 1 of 1  
 Client Contact: Elena Ramirez 425-289-5445 Cooler Temps: \_\_\_\_\_  
 Client Project Name: OVSL No. of Coolers: \_\_\_\_\_  
 Client Project #: 04204027.17 Samplers: Matt O'Hare and Andrew McDonald

Sample ID	Date	Time	Matrix	No. Containers
MW-4	12/16/2013	0932	W	2
MW-35	12/17/2013	0932	W	2
MW-32	12/18/2013	1056	W	2
MW-16	12/19/2013	1048	W	2
MW-33C	12/20/2013	1237	W	2

Analysis Requested		Notes/Comments	
Low Level Dissolved Aresenic	Low Level Total Arsenic		
X	X		
X	X		
X	X		
X	X		
X	X		

Comments/Special Instructions

Relinquished by: (Signature) <u>[Signature]</u>	Received by: (Signature) <u>[Signature]</u>
Printed Name: <u>Matthew O'Hare</u>	Printed Name: <u>Rob Hudson</u>
Company: <u>SCS</u>	Company: _____
Date & Time: <u>12/18/2013 1000</u>	Date & Time: <u>12/18/13 1090</u>

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 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.

XP00 : 00000



# Cooler Receipt Form

ARI Client: SCS Engineers  
COC No(s): \_\_\_\_\_ NA  
Assigned ARI Job No: X190

Project Name: 051  
Delivered by: Fed-Ex UPS Courier Hand Delivered Other: \_\_\_\_\_  
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)  
Time: 1120

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 70877952

Cooler Accepted by: \_\_\_\_\_ Date: 12/18/13 Time: 1040

**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: \_\_\_\_\_

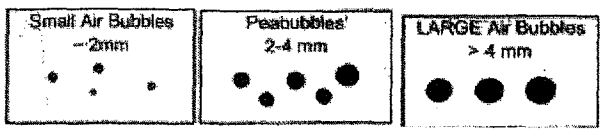
Samples Logged by: JS Date: 12-18-13 Time: 1133

**\*\* 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:**  
*dates wrong on chain  
All samples on 12-16-13*

By: JS Date: 12-18-13



Small → "sm" (< 2 mm)  
Peabubbles → "pb" (2 to < 4 mm)  
Large → "lg" (4 to < 6 mm)  
Headspace → "hs" (> 6 mm)

**Subject:** RE: XR80-OVSL  
**From:** "Ramirez, Elena" <ERamirez@scsengineers.com>  
**Date:** 12/19/2013 11:52 AM  
**To:** "Sara, Betsy" <Betsy.Sara@testamericainc.com>, Mark Harris <markh@arilabs.com>  
**CC:** "O'Hare, Matthew" <mohare@scsengineers.com>, "McDonald, Andrew" <AMcDonald@scsengineers.com>

Hi Betsy and Mark,

Yes, there is an error on the COC for the sampling dates. They should all read 12/16/2013 and labeled on the sample bottles.

Thanks for the catch.

Elena Ramirez, LG  
Project Geologist  
SCS Engineers  
2405 140th Ave. NE, Suite 107  
Bellevue WA 98005 USA  
425-289-5454 (Direct)  
425-746-4600 (Main)  
425-746-6747 (Fax)  
[eramirez@scsengineers.com](mailto:eramirez@scsengineers.com)

-----Original Message-----

**From:** Sara, Betsy [<mailto:Betsy.Sara@testamericainc.com>]  
**Sent:** Wednesday, December 18, 2013 12:48 PM  
**To:** Mark Harris  
**Cc:** Ramirez, Elena  
**Subject:** RE: XR80-OVSL

Hi Elena,

Would you please confirm the sample dates for Mark at ARI?

Thanks!

Betsy

-----Original Message-----

**From:** Mark Harris [<mailto:markh@arilabs.com>]  
**Sent:** Wednesday, December 18, 2013 1:43 PM  
**To:** Sara, Betsy  
**Subject:** XR80-OVSL

Betsy:

These samples were received today. The dates on the COC for four of the five samples appears incorrect. We've assumed they were all sampled on 12/16/13.

Let me know if we have that incorrect.

Mark H.

--

Mark Harris  
Project Manager  
Analytical Resources, Inc.  
206/695-6210  
[markh@arilabs.com](mailto:markh@arilabs.com)

How was your customer experience?

Please take our 5 minute online customer survey <<https://www.surveymonkey.com/s/WPDBVJK>>.

This correspondence contains confidential information from Analytical Resources, Inc. (ARI) The information contained herein is intended solely for the use of the individual(s) named above. If you are not the intended recipient, any copying, distribution, disclosure, or use of the text and/or attached document(s) is strictly prohibited.

If you have received this correspondence in error, please notify sender immediately. Thank you.



# Sample ID Cross Reference Report



ARI Job No: XR80  
Client: Test America  
Project Event: 040204027.17  
Project Name: OVSL

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. MW-4	XR80A	13-27568	Water	12/16/13 09:32	12/18/13 10:40
2. MW-35	XR80B	13-27569	Water	12/16/13 09:32	12/18/13 10:40
3. MW-32	XR80C	13-27570	Water	12/16/13 10:56	12/18/13 10:40
4. MW-16	XR80D	13-27571	Water	12/16/13 10:48	12/18/13 10:40
5. MW-33C	XR80E	13-27572	Water	12/16/13 12:37	12/18/13 10:40
6. MW-4	XR80F	13-27573	Water	12/16/13 09:32	12/18/13 10:40
7. MW-35	XR80G	13-27574	Water	12/16/13 09:32	12/18/13 10:40
8. MW-32	XR80H	13-27575	Water	12/16/13 10:56	12/18/13 10:40
9. MW-16	XR80I	13-27576	Water	12/16/13 10:48	12/18/13 10:40
10. MW-33C	XR80J	13-27577	Water	12/16/13 12:37	12/18/13 10:40

Printed 12/18/13 Page 1 of 1



## Data Reporting Qualifiers

Effective 2/14/2011

### Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- \* Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but  $\geq$  the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is  $\leq 5$  times the Reporting Limit and the replicate control limit defaults to  $\pm 1$  RL instead of the normal 20% RPD

### Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- \* Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ( $< 20\%$  RSD,  $< 20\%$  Drift or minimum RRF).



- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by  $\geq 40\%$  RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



## Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

**INORGANICS ANALYSIS DATA SHEET**  
**TOTAL METALS**  
 Page 1 of 1

Sample ID: MW-4  
 SAMPLE

Lab Sample ID: XR80A  
 LIMS ID: 13-27568  
 Matrix: Water  
 Data Release Authorized:  
 Reported: 12/24/13



QC Report No: XR80-Test America  
 Project: OVSL  
 04204027.17  
 Date Sampled: 12/16/13  
 Date Received: 12/18/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/19/13	200.8	12/23/13	7440-38-2	Arsenic	0.00004	0.00072	

U-Analyte undetected at given RL  
 RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**  
Page 1 of 1

**Sample ID: MW-4**  
**DUPLICATE**

Lab Sample ID: XR80A  
LIMS ID: 13-27568  
Matrix: Water  
Data Release Authorized:  
Reported: 12/24/13

QC Report No: XR80-Test America  
Project: OVSL  
04204027.17  
Date Sampled: 12/16/13  
Date Received: 12/18/13

**MATRIX DUPLICATE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	200.8	0.00072	0.00072	0.0%	+/- 20%	

Reported in mg/L

\*-Control Limit Not Met  
L-RPD Invalid, Limit = Detection Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: MW-4

**MATRIX SPIKE**

Lab Sample ID: XR80A  
LIMS ID: 13-27568  
Matrix: Water  
Data Release Authorized:  
Reported: 12/24/13

*ef*

QC Report No: XR80-Test America  
Project: OVSL  
04204027.17  
Date Sampled: 12/16/13  
Date Received: 12/18/13

**MATRIX SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	200.8	0.00072	0.00513	0.00500	88.2%	

Reported in mg/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**

**TOTAL METALS**

Page 1 of 1

Sample ID: MW-35  
SAMPLE

Lab Sample ID: XR80B

LIMS ID: 13-27569

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 12/24/13

QC Report No: XR80-Test America

Project: OVSL

04204027.17

Date Sampled: 12/16/13

Date Received: 12/18/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/19/13	200.8	12/23/13	7440-38-2	Arsenic	0.00004	0.00012	

U-Analyte undetected at given RL

RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: MW-32  
SAMPLE

Lab Sample ID: XR80C

LIMS ID: 13-27570

Matrix: Water

Data Release Authorized: *EF*

Reported: 12/24/13

QC Report No: XR80-Test America

Project: OVSL

04204027.17

Date Sampled: 12/16/13

Date Received: 12/18/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/19/13	200.8	12/23/13	7440-38-2	Arsenic	0.00004	0.00883	

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

**Sample ID: MW-16  
SAMPLE**

Lab Sample ID: XR80D

LIMS ID: 13-27571

Matrix: Water

Data Release Authorized: *EF*

Reported: 12/24/13

QC Report No: XR80-Test America

Project: OVSL

04204027.17

Date Sampled: 12/16/13

Date Received: 12/18/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/19/13	200.8	12/23/13	7440-38-2	Arsenic	0.00004	0.00029	

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

**Sample ID: MW-33C  
SAMPLE**

Page 1 of 1

Lab Sample ID: XR80E  
LIMS ID: 13-27572  
Matrix: Water  
Data Release Authorized:  
Reported: 12/24/13

*af*

QC Report No: XR80-Test America  
Project: OVSL  
04204027.17  
Date Sampled: 12/16/13  
Date Received: 12/18/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/19/13	200.8	12/23/13	7440-38-2	Arsenic	0.00004	0.00229	

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: XR80F  
LIMS ID: 13-27573  
Matrix: Water  
Data Release Authorized:  
Reported: 12/24/13

*df*

QC Report No: XR80-Test America  
Project: OVSL  
04204027.17  
Date Sampled: 12/16/13  
Date Received: 12/18/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/19/13	200.8	12/23/13	7440-38-2	Arsenic	0.00004	0.00058	

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

Sample ID: MW-4

DUPLICATE

Lab Sample ID: XR80F

QC Report No: XR80-Test America

LIMS ID: 13-27573

Project: OVSL

Matrix: Water

04204027.17

Data Release Authorized: *AD*

Date Sampled: 12/16/13

Reported: 12/24/13

Date Received: 12/18/13

**MATRIX DUPLICATE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	200.8	0.00058	0.00057	1.7%	+/- 20%	

Reported in mg/L

\*-Control Limit Not Met

L-RPD Invalid, Limit = Detection Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

Sample ID: MW-4

**MATRIX SPIKE**

Lab Sample ID: XR80F

LIMS ID: 13-27573

Matrix: Water

Data Release Authorized:

Reported: 12/24/13

*EF*

QC Report No: XR80-Test America

Project: OVSL

04204027.17

Date Sampled: 12/16/13

Date Received: 12/18/13

**MATRIX SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	200.8	0.00058	0.00509	0.005	90.2%	

Reported in mg/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  
SAMPLE

Lab Sample ID: XR80G

QC Report No: XR80-Test America

LIMS ID: 13-27574

Project: OVSL

Matrix: Water

04204027.17

Data Release Authorized: *[Signature]*

Date Sampled: 12/16/13

Reported: 12/24/13

Date Received: 12/18/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/19/13	200.8	12/23/13	7440-38-2	Arsenic	0.00004	0.00012	

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: XR80H  
LIMS ID: 13-27575  
Matrix: Water  
Data Release Authorized: *af*  
Reported: 12/24/13

QC Report No: XR80-Test America  
Project: OVSL  
04204027.17  
Date Sampled: 12/16/13  
Date Received: 12/18/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/19/13	200.8	12/23/13	7440-38-2	Arsenic	0.00004	0.0100	

U-Analyte undetected at given RL  
RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET  
DISSOLVED METALS**

**Sample ID: MW-16  
SAMPLE**

Page 1 of 1

Lab Sample ID: XR80I  
LIMS ID: 13-27576  
Matrix: Water  
Data Release Authorized:  
Reported: 12/24/13

*[Handwritten Signature]*

QC Report No: XR80-Test America  
Project: OVSL  
04204027.17  
Date Sampled: 12/16/13  
Date Received: 12/18/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/19/13	200.8	12/23/13	7440-38-2	Arsenic	0.00004	0.00027	

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: XR80J  
LIMS ID: 13-27577  
Matrix: Water  
Data Release Authorized:  
Reported: 12/24/13

*DF*

QC Report No: XR80-Test America  
Project: OVSL  
04204027.17  
Date Sampled: 12/16/13  
Date Received: 12/18/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/19/13	200.8	12/23/13	7440-38-2	Arsenic	0.00004	0.00211	

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

**Sample ID: METHOD BLANK**

Page 1 of 1

Lab Sample ID: XR80MB

QC Report No: XR80-Test America

LIMS ID: 13-27572

Project: OVSL

Matrix: Water

04204027.17

Data Release Authorized: *ES*

Date Sampled: NA

Reported: 12/24/13

Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/19/13	200.8	12/23/13	7440-38-2	Arsenic	0.00004	0.00004	U

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

**Sample ID: LAB CONTROL**

Page 1 of 1

Lab Sample ID: XR80LCS  
 LIMS ID: 13-27572  
 Matrix: Water  
 Data Release Authorized:  
 Reported: 12/24/13

*EF*

QC Report No: XR80-Test America  
 Project: OVSL  
 04204027.17  
 Date Sampled: NA  
 Date Received: NA

**BLANK SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	200.8	0.00475	0.00500	95.0%	

Reported in mg/L

N-Control limit not met  
 Control Limits: 80-120%

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: XR80MB  
LIMS ID: 13-27577  
Matrix: Water  
Data Release Authorized:  
Reported: 12/24/13



QC Report No: XR80-Test America  
Project: OVSL  
04204027.17  
Date Sampled: NA  
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	12/19/13	200.8	12/23/13	7440-38-2	Arsenic	0.00004	0.00004	U

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**  
**DISSOLVED METALS**  
Page 1 of 1

**Sample ID: LAB CONTROL**

Lab Sample ID: XR80LCS  
LIMS ID: 13-27577  
Matrix: Water  
Data Release Authorized:  
Reported: 12/24/13



QC Report No: XR80-Test America  
Project: OVSL  
04204027.17  
Date Sampled: NA  
Date Received: NA

**BLANK SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	200.8	0.00498	0.00500	99.6%	

Reported in mg/L

N-Control limit not met  
Control Limits: 80-120%

APPENDIX C

2013 ANNUAL TIME SERIES, TREND TEST,  
AND PREDICTION LIMIT EVALUATION





**Olympic View Sanitary Landfill**  
**Annual Statistical Evaluation & Summary**  
**2013 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 2014**

---

**CONTENTS:**

1. *Statistical Trend Analysis (showing status through Q4 2013)*
  2. *Prediction Limits for Detection Monitoring*
    - a. *2013 Prediction Limits (showing status through Q4 2013)*
    - b. *Updated Prediction Limits for Use in 2014 Monitoring Year*
  3. *2013 Annual UCL Calculations for Preliminary Groundwater Cleanup Goals*
-

# 1. Statistical Trend Analysis

- Trend Results Summary Table (showing status through Q4 2013) (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 2013 REPORT**

**Trend Test Period:** January 2005 through September 2013

**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,

\*no longer routinely sampled; \*\*sampled semi-annually

**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	MW-19C (graph 533)
Vinyl Chloride	None	MW-19C (graph 555) MW-23A (graph 557) MW-24 (graph 558)

**TABLE 1-1**

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

	Significant Increasing Trends	Significant Decreasing Trends
Antimony, dissolved	None	None
Arsenic, dissolved	None	MW-16 (graph 92) MW-19C (graph 93) MW-24 (graph 96) MW-33C (graph 101) MW-34C (graph 103) MW-36A (graph 105)
Barium, dissolved	MW-20 (graph 116)	MW-15R (graph 113) MW-19C (graph 115) MW-24 (graph 118) MW-29A (graph 119) MW-34C (graph 125) MW-36A (graph 127) MW-4 (graph 129)
Beryllium, dissolved	None	None
Cadmium, dissolved	None	None
Chromium, dissolved	MW-34A (graph 234)	MW-16 (graph 224)
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)	MW-16 (graph 400) MW-35 (graph 412) MW-36A (graph 413)	None
pH	MW-23A (graph 425) MW-42 (graph 438)	None

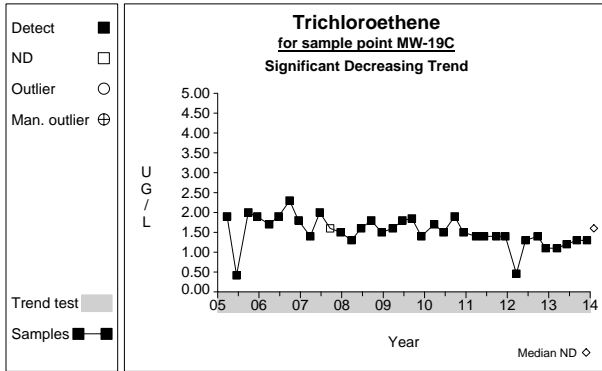
**TABLE 1-1**

Specific Conductivity	None	MW-15R (graph 531) MW-19C (graph 533) MW-23A (graph 535) MW-24 (graph 536) MW-29A (graph 537) MW-2B1 (graph 538) MW-32 (graph 539) MW-33A (graph 540) MW-33C (graph 541) MW-34A (graph 542) MW-34C (graph 543) MW-36A (graph 545) MW-4 (graph 547)
Temperature	MW-20 (graph 578) MW-2B1 (graph 582) MW-32 (graph 583) MW-34A (graph 586) MW-34C (graph 587)	MW-24 (graph 580)
Calcium, dissolved	None	MW-15R (graph 179) MW-23A (graph 183) MW-24 (graph 184) MW-29A (graph 185) MW-2B1 (graph 186) MW-33A (graph 188) MW-34C (graph 191) MW-36A (graph 193) MW-9 (graph 198)
Bicarbonate Alkalinity (as CaCO <sub>3</sub> )	MW-13A (graph 1) MW-13B (graph 2) MW-35 (graph 16)	MW-23A (graph 7) MW-24 (graph 8) MW-36A (graph 17)
Magnesium, dissolved	MW-13A (graph 331)	MW-15R (graph 333) MW-23A (graph 337) MW-24 (graph 338) MW-33A (graph 342) MW-34A (graph 344) MW-36A (graph 347)
Sulfate	MW-20 (graph 556) MW-24 (graph 558)	MW-13A (graph 551) MW-13B (graph 552) MW-19C (graph 555) MW-23A (graph 557) MW-34A (graph 564) MW-4 (graph 569)

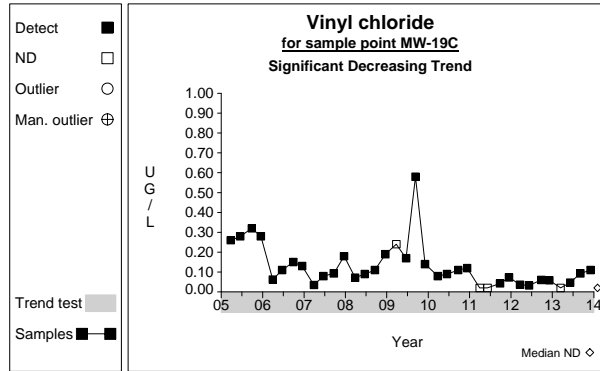
**TABLE 1-1**

Sodium, dissolved	None	MW-19C (graph 511) MW-23A (graph 513) MW-24 (graph 514) MW-34A (graph 520) MW-34C (graph 521)
Chloride	None	MW-2B1 (graph 208) MW-34A (graph 212) MW-34C (graph 213) MW-36A (graph 215)
Potassium, dissolved	MW-42 (graph 460)	None
Total Alkalinity as CaCO <sub>3</sub>	MW-13A (graph 23) MW-13B (graph 24) MW-35 (graph 38)	MW-23A (graph 29) MW-24 (graph 30) MW-36A (graph 39)
Iron, dissolved	None	MW-19C (graph 291) MW-24 (graph 294) MW-32 (graph 297) MW-34C (graph 301) MW-9 (graph 308)
Manganese, dissolved	None	MW-15R (graph 355) MW-23A (graph 359) MW-24 (graph 360) MW-34C (graph 367)
Ammonia (as N)	None	MW-19C (graph 49) MW-29A (graph 53)
Total Organic Carbon	None	None
Total Dissolved Solids	None	MW-15R (graph 619) MW-23A (graph 623) MW-24 (graph 624) MW-33A (graph 628) MW-34C (graph 631)

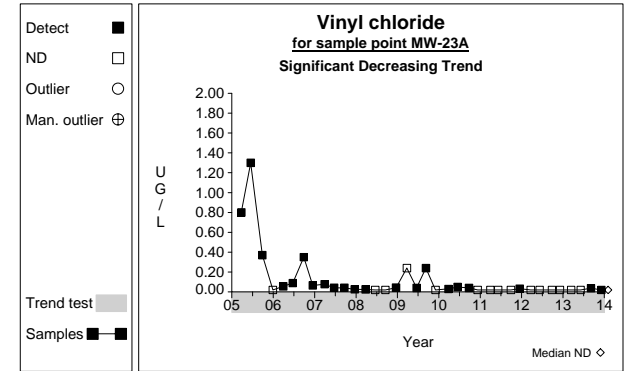
## Time Series



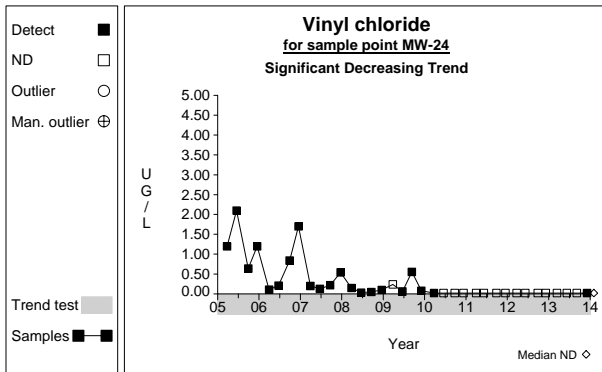
**Graph 533**



**Graph 555**

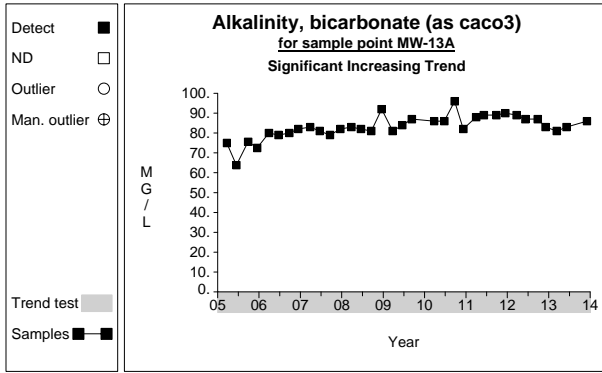


**Graph 557**

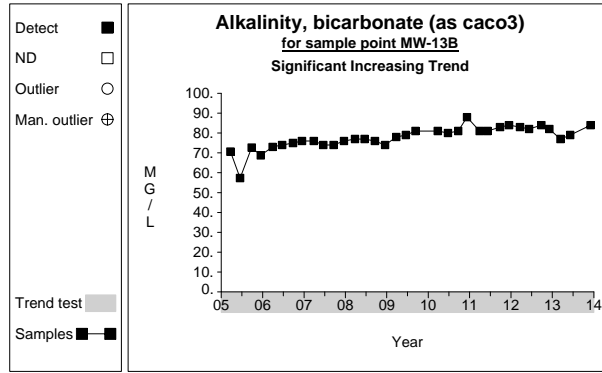


**Graph 558**

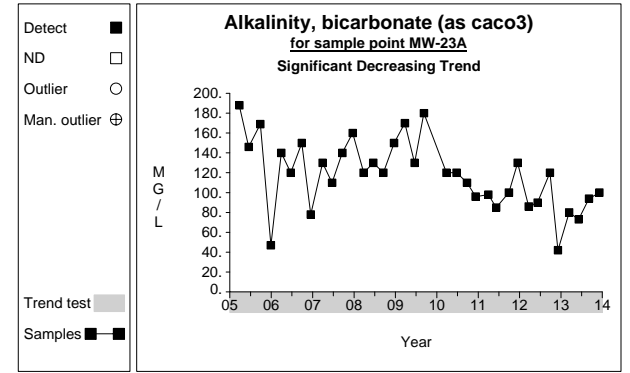
# Time Series



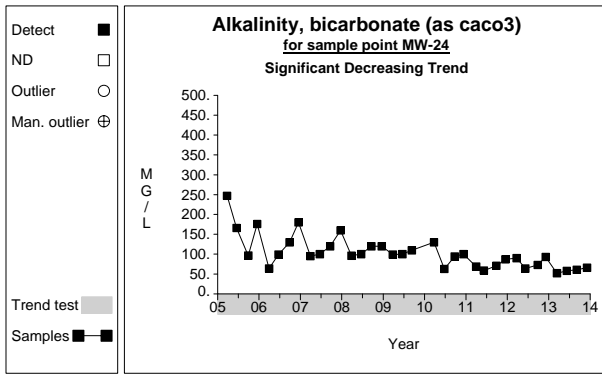
Graph 1



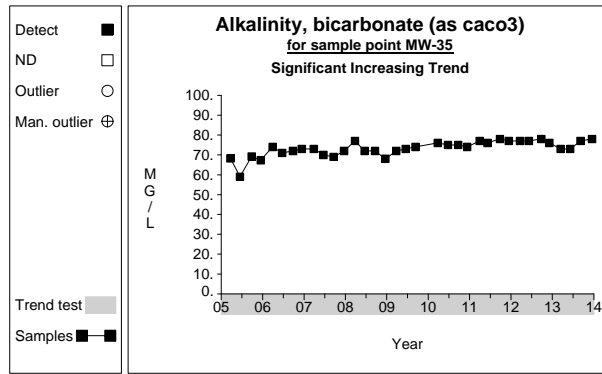
Graph 2



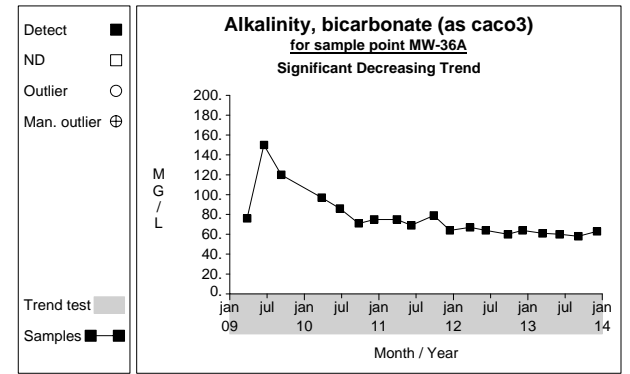
Graph 7



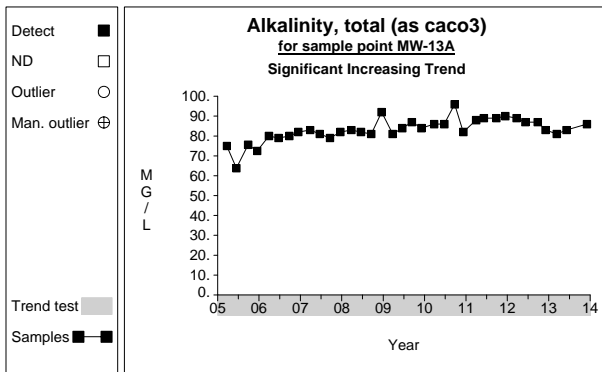
Graph 8



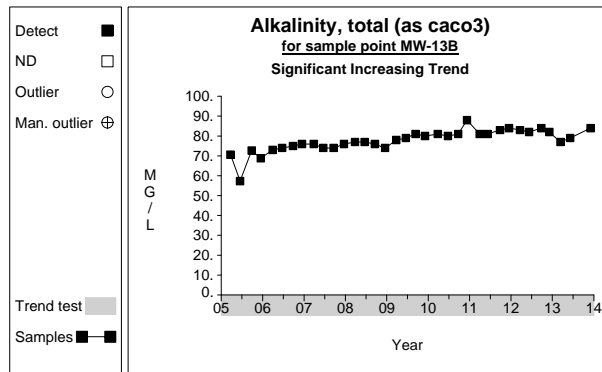
Graph 16



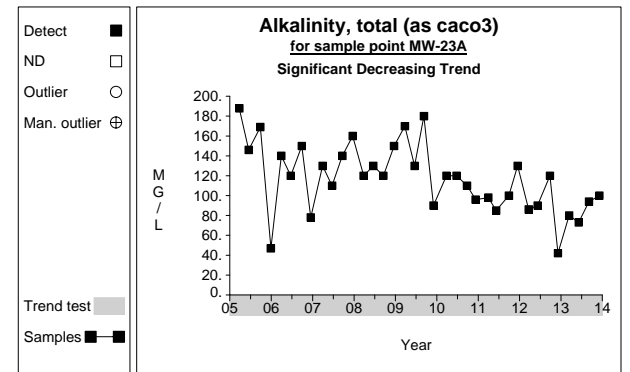
Graph 17



Graph 23



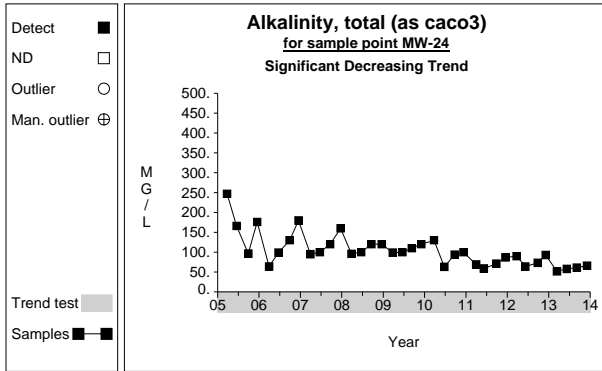
Graph 24



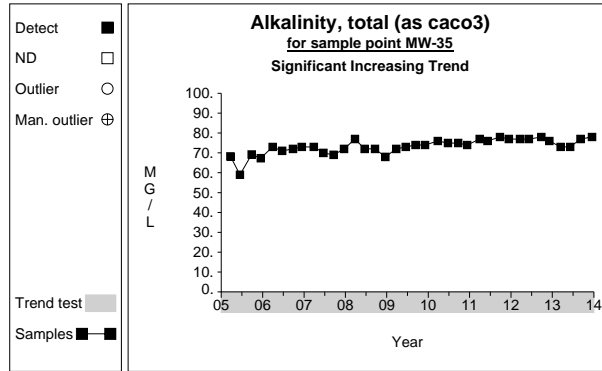
Graph 29



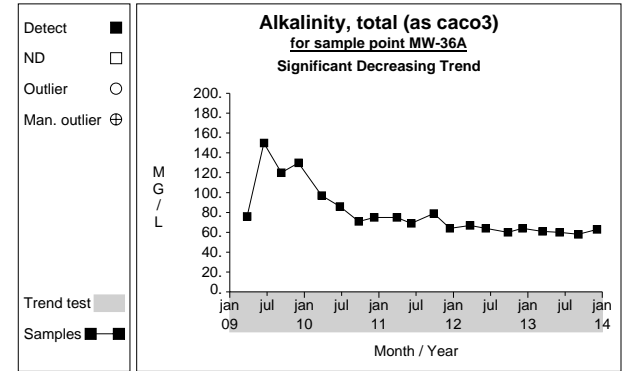
# Time Series



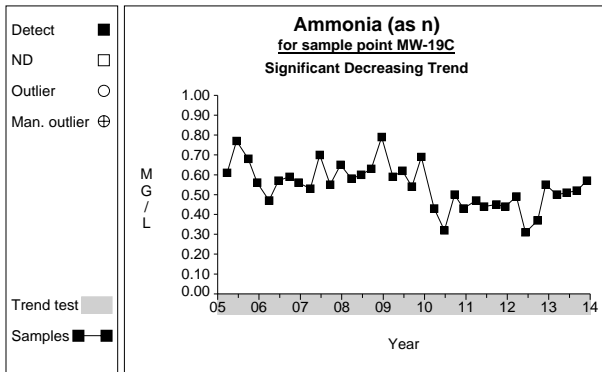
Graph 30



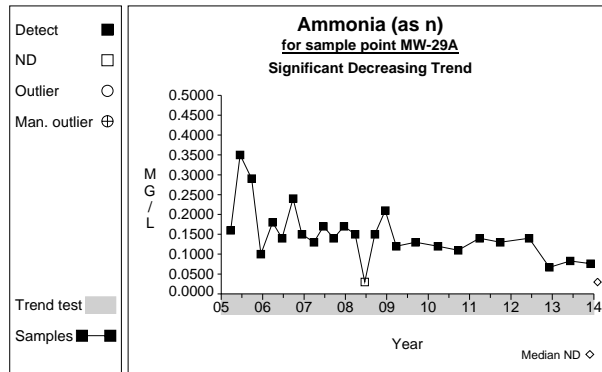
Graph 38



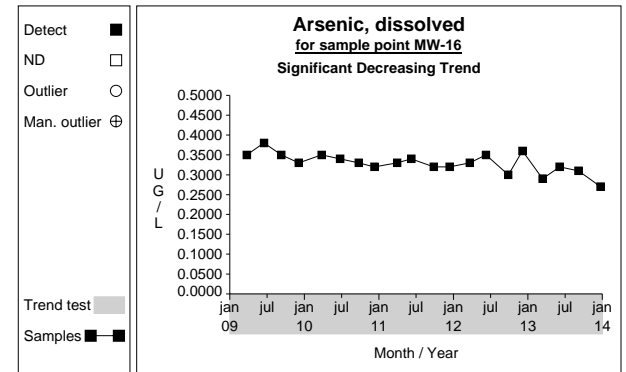
Graph 39



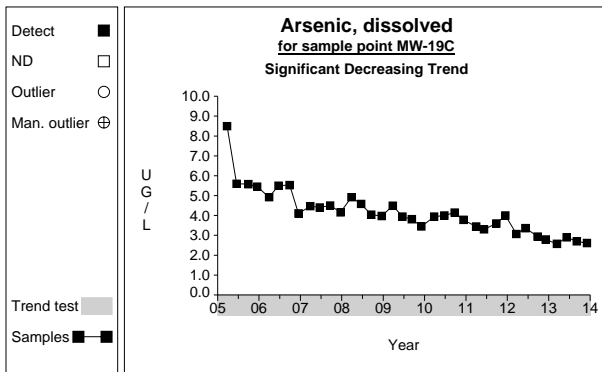
Graph 49



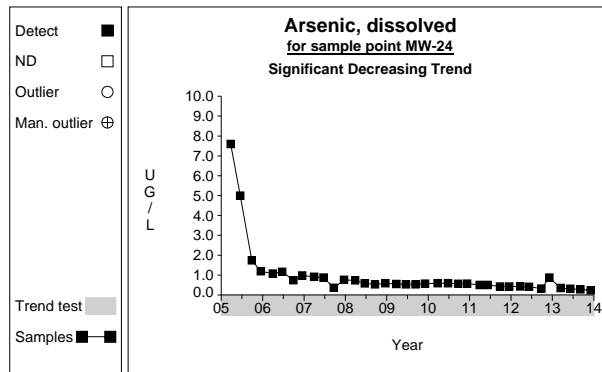
Graph 53



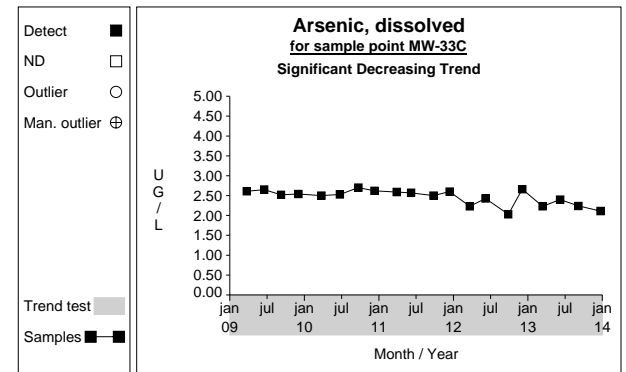
Graph 92



Graph 93

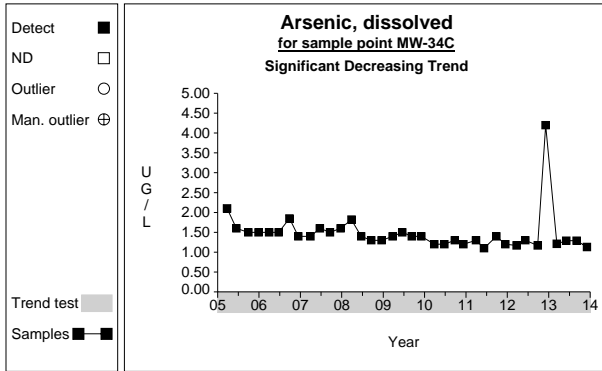


Graph 96

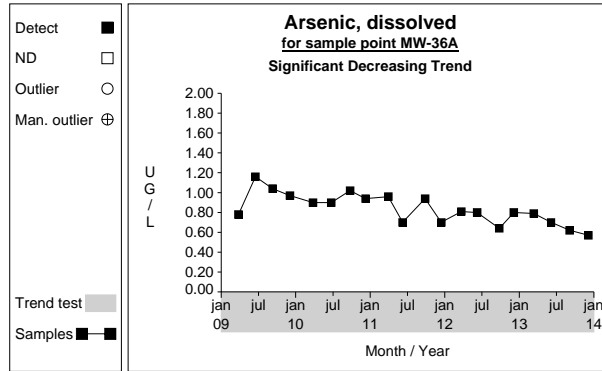


Graph 101

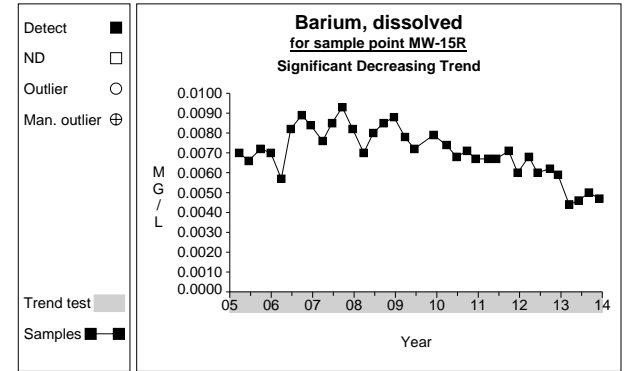
# Time Series



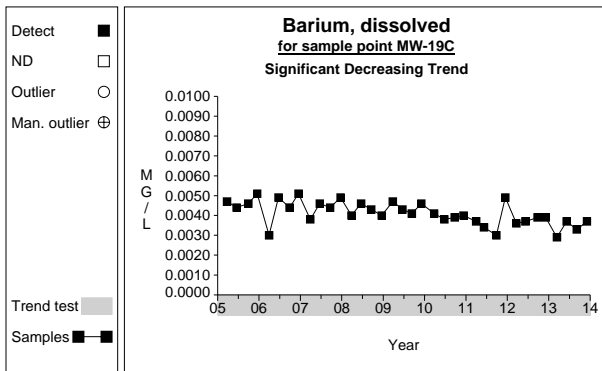
**Graph 103**



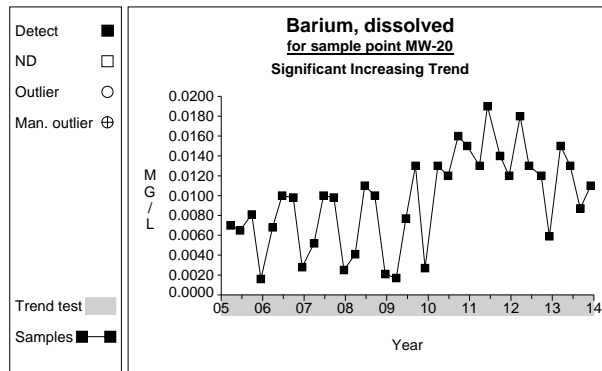
**Graph 105**



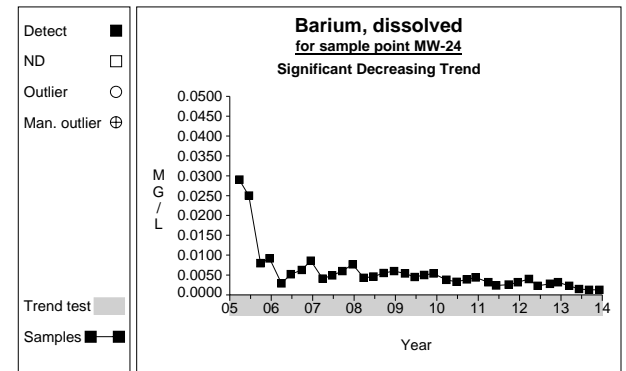
**Graph 113**



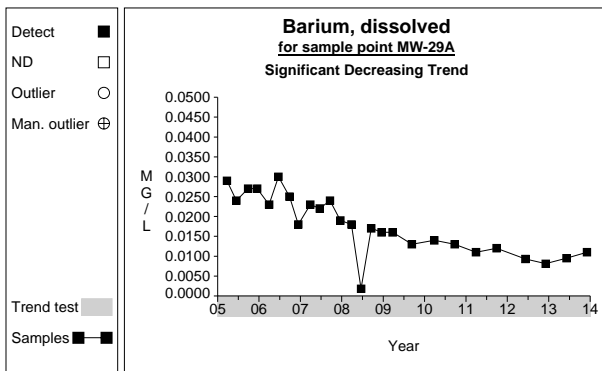
**Graph 115**



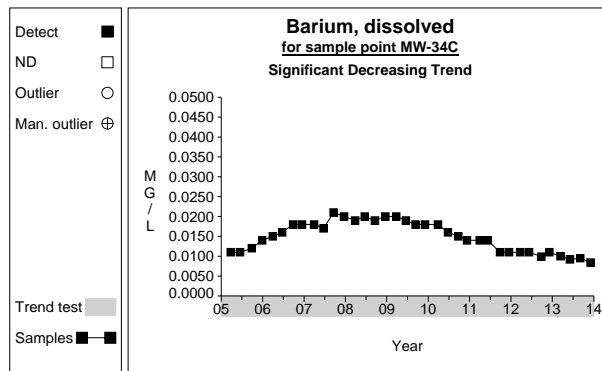
**Graph 116**



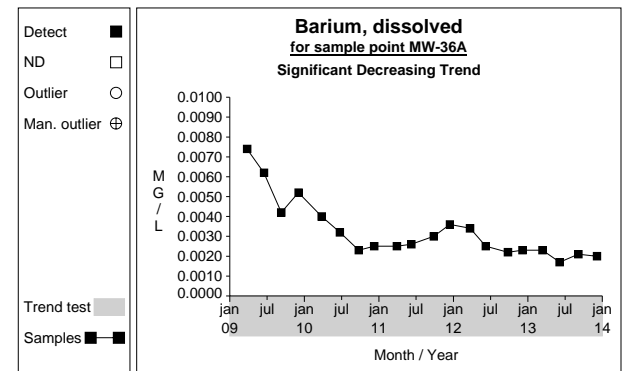
**Graph 118**



**Graph 119**

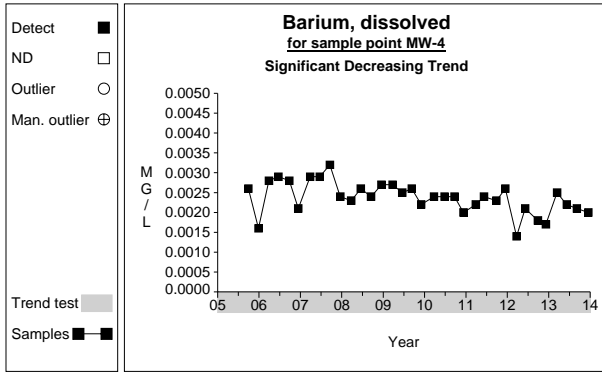


**Graph 125**

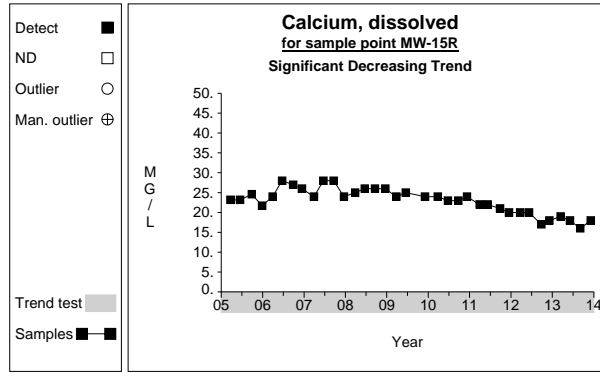


**Graph 127**

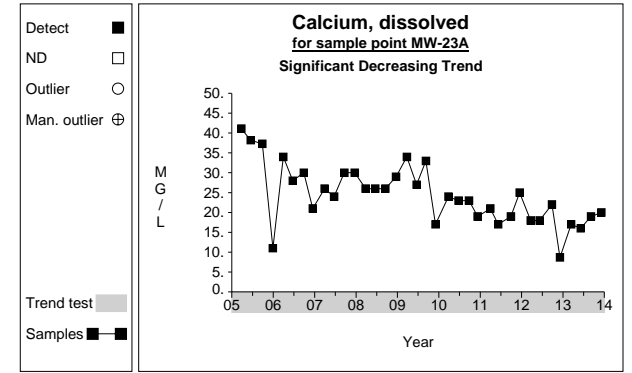
# Time Series



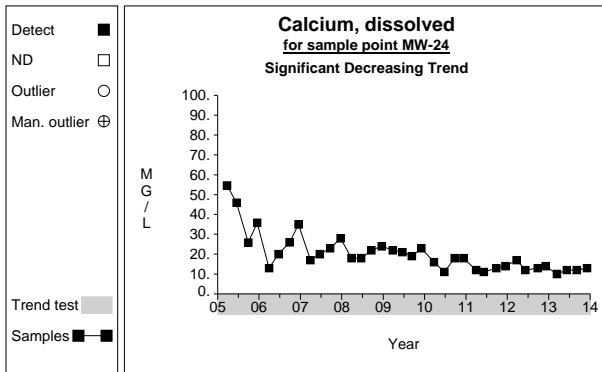
Graph 129



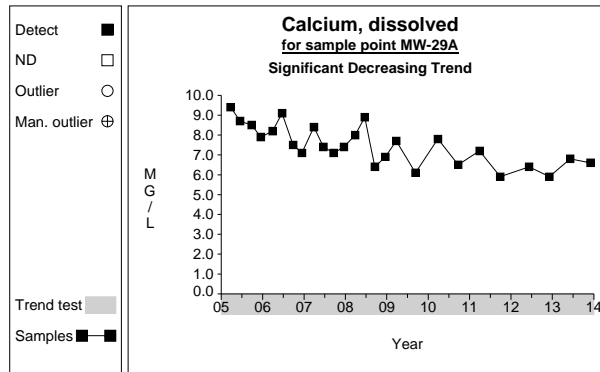
Graph 179



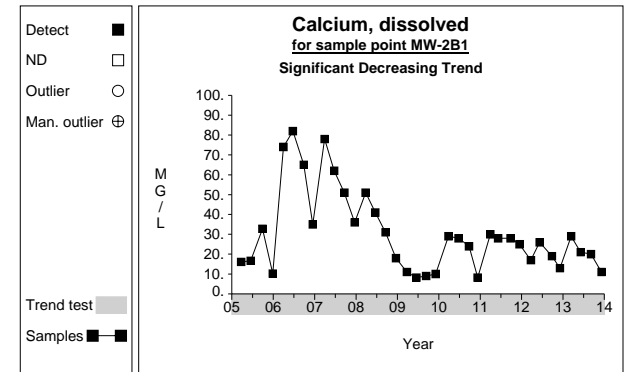
Graph 183



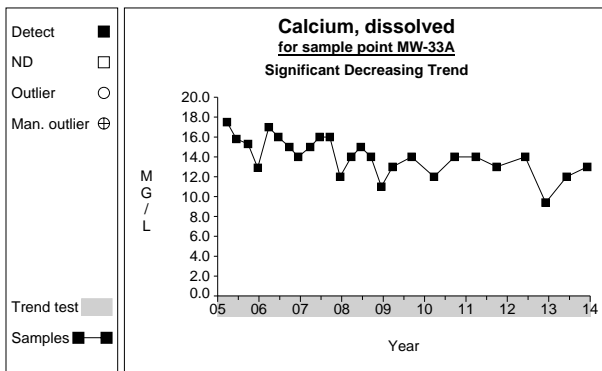
Graph 184



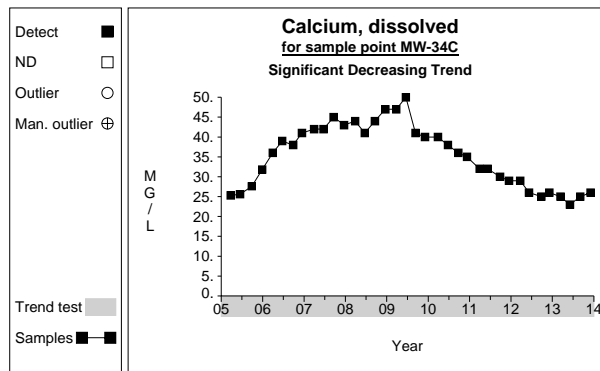
Graph 185



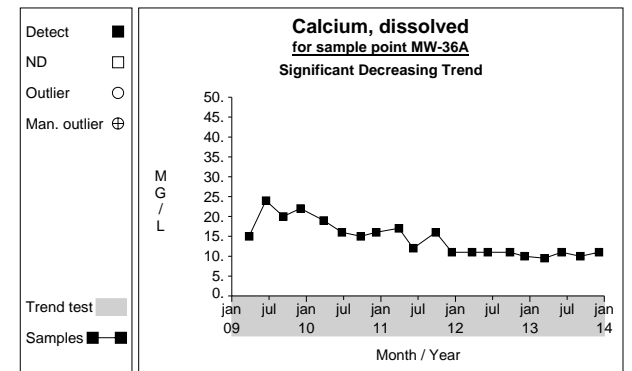
Graph 186



Graph 188

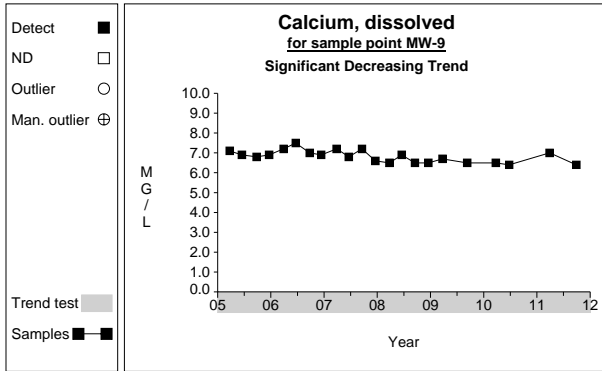


Graph 191

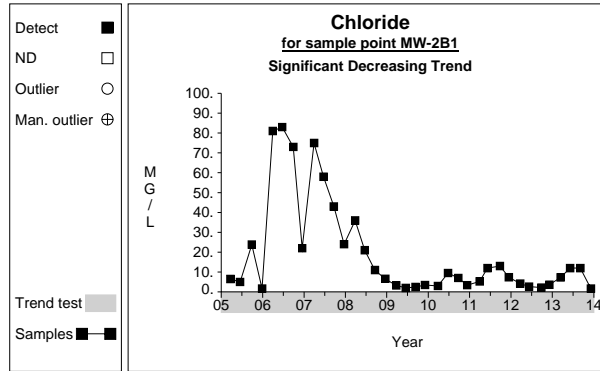


Graph 193

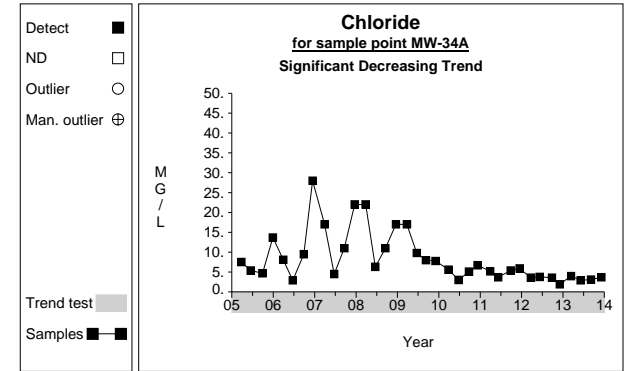
# Time Series



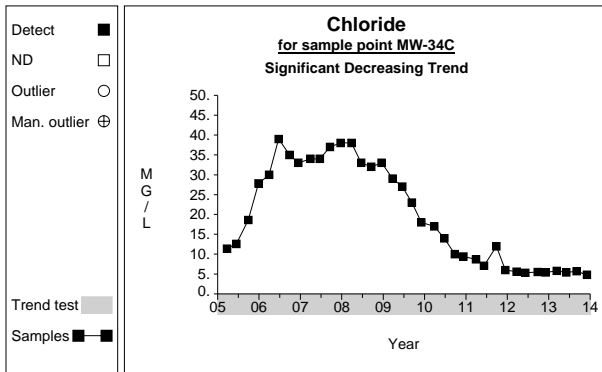
Graph 198



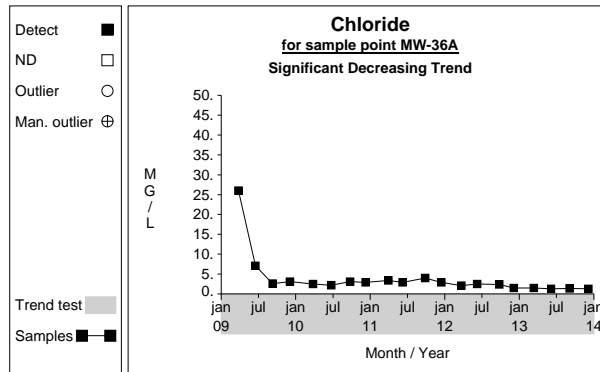
Graph 208



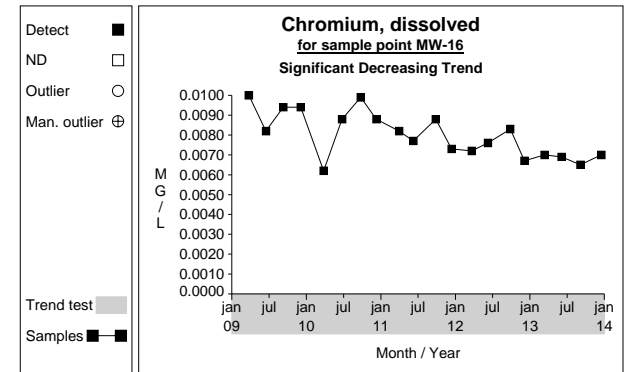
Graph 212



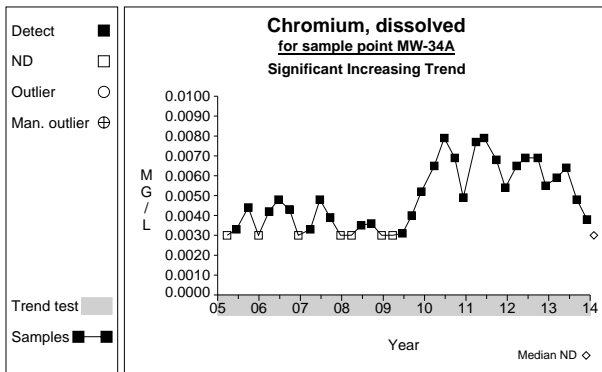
Graph 213



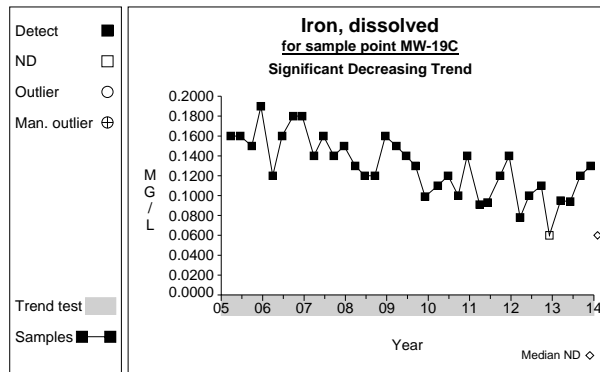
Graph 215



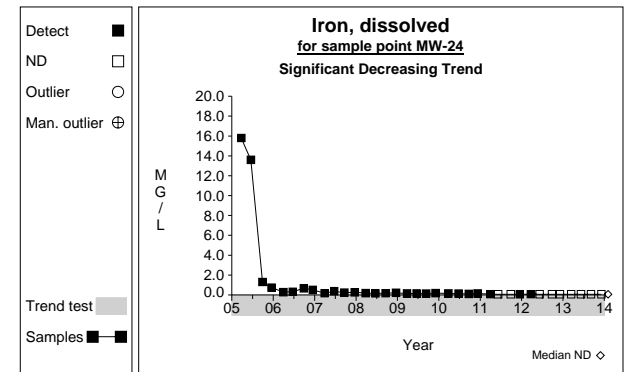
Graph 224



Graph 234

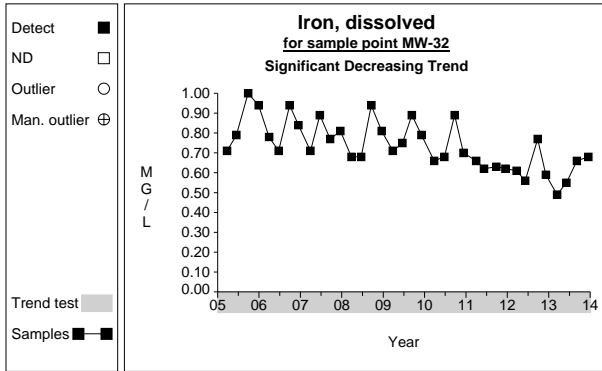


Graph 291

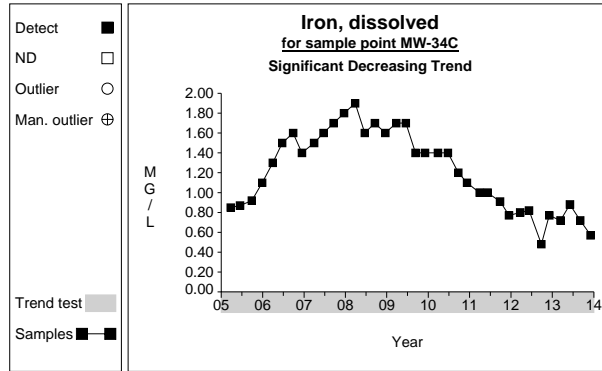


Graph 294

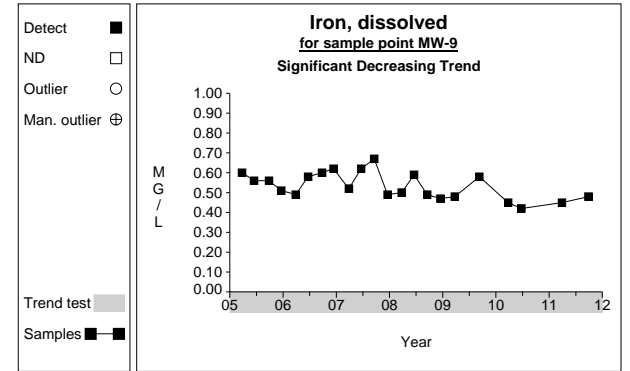
# Time Series



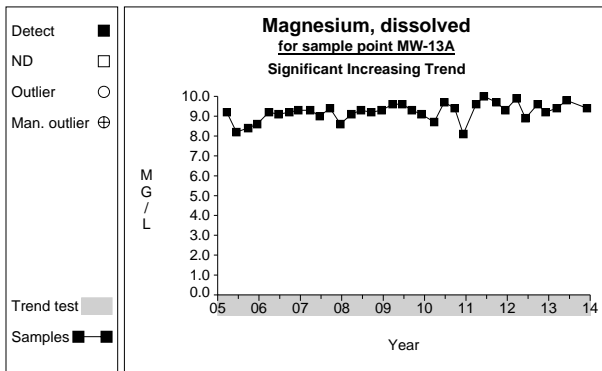
**Graph 297**



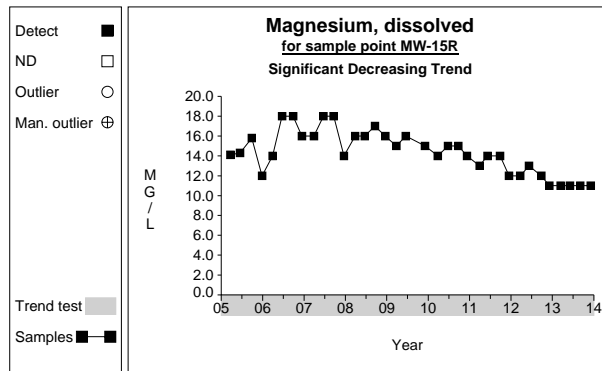
**Graph 301**



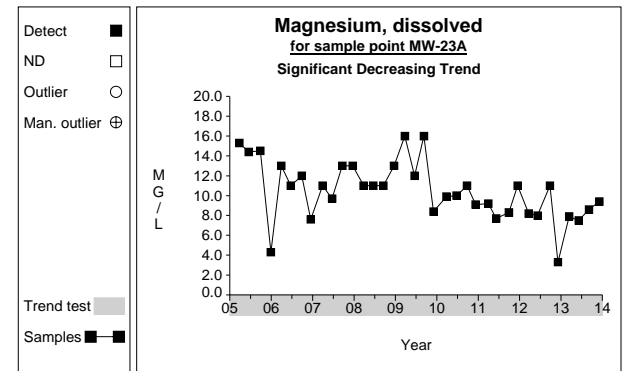
**Graph 308**



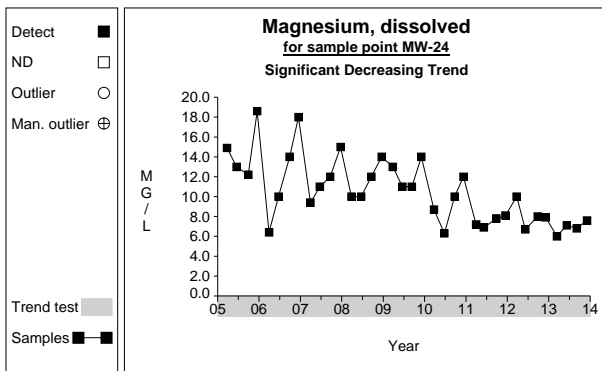
**Graph 331**



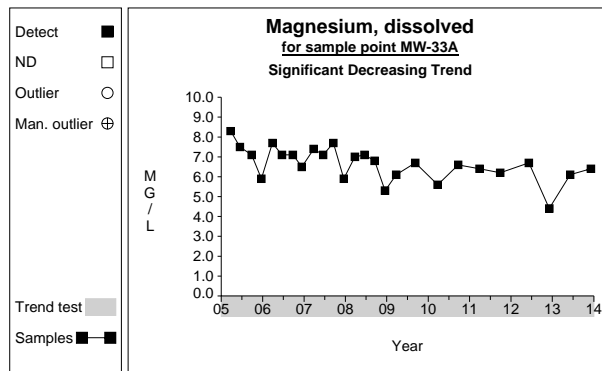
**Graph 333**



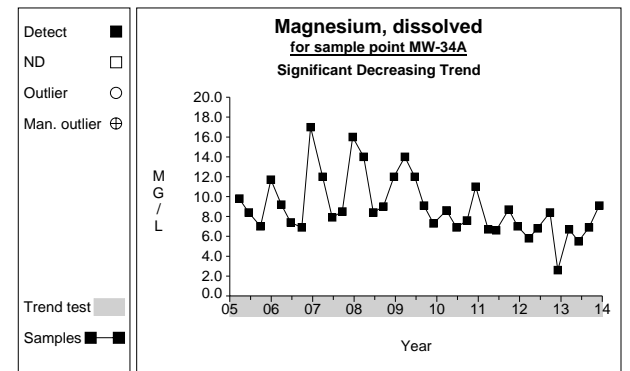
**Graph 337**



**Graph 338**

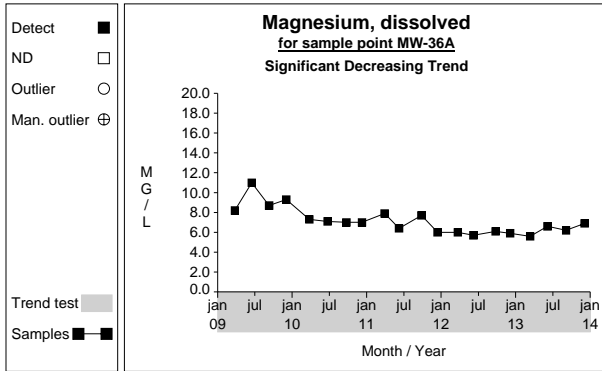


**Graph 342**

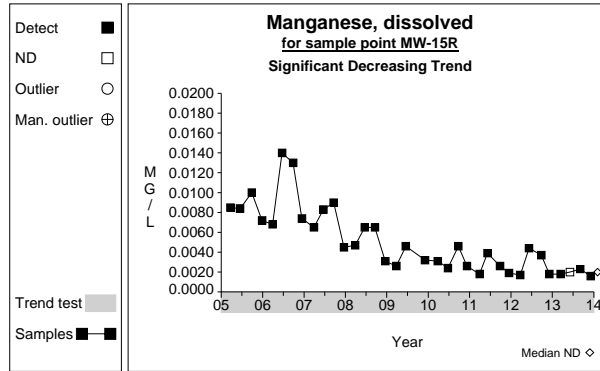


**Graph 344**

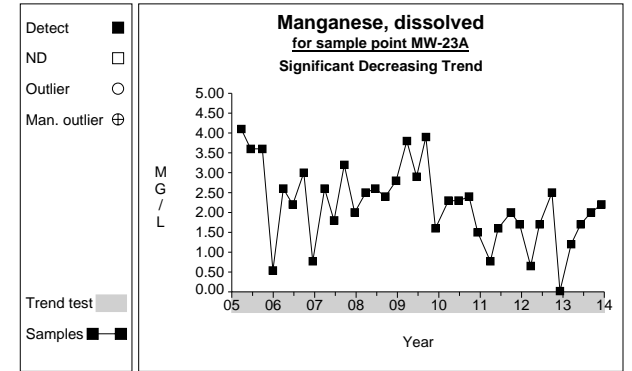
# Time Series



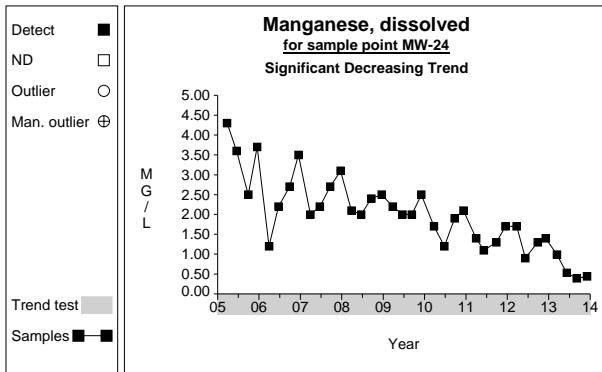
**Graph 347**



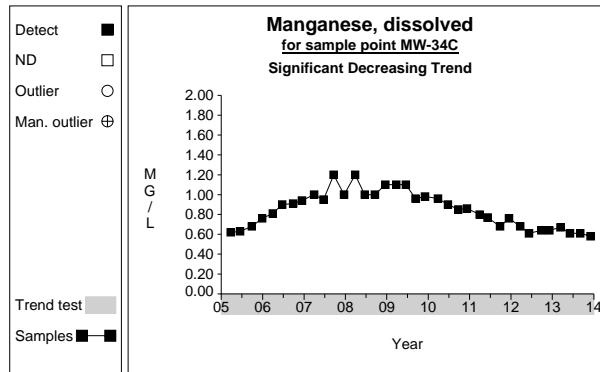
**Graph 355**



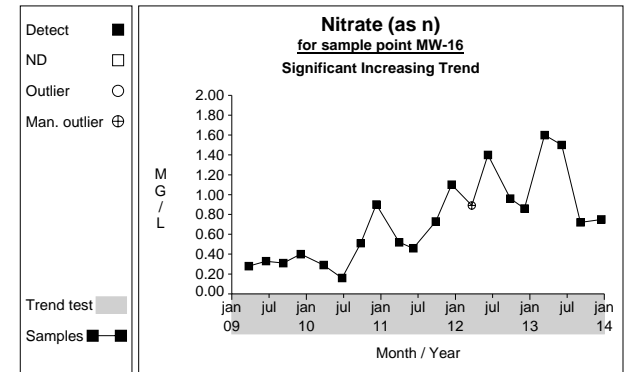
**Graph 359**



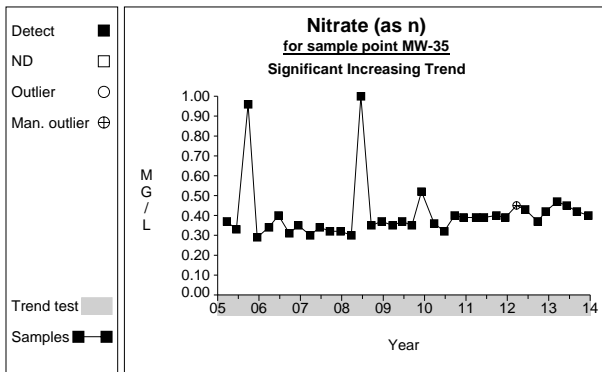
**Graph 360**



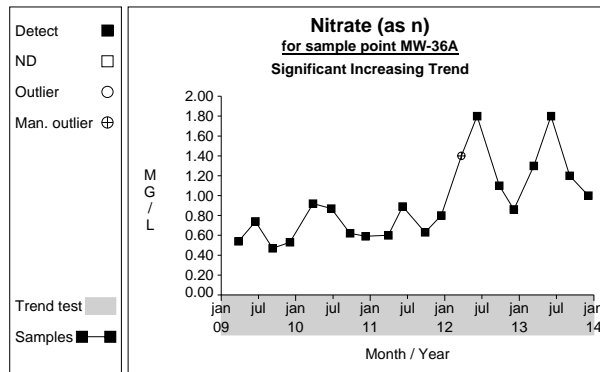
**Graph 367**



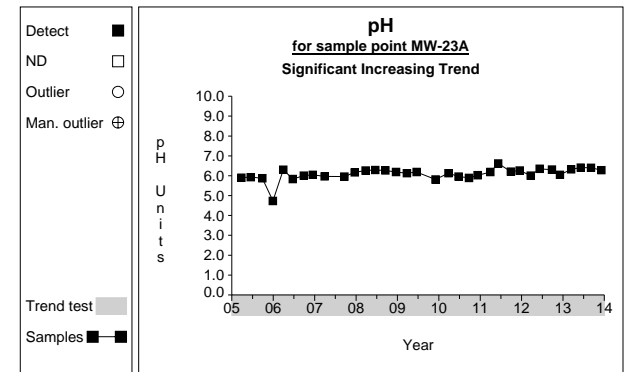
**Graph 400**



**Graph 412**

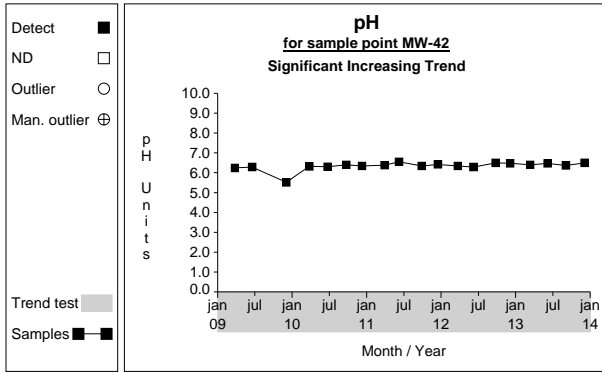


**Graph 413**

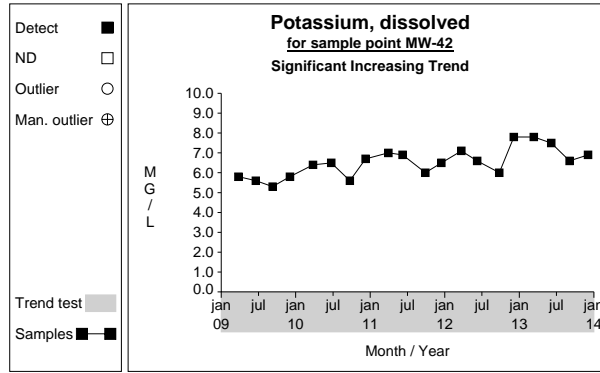


**Graph 425**

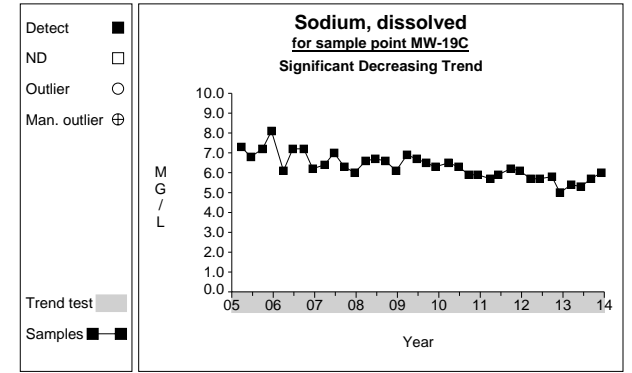
# Time Series



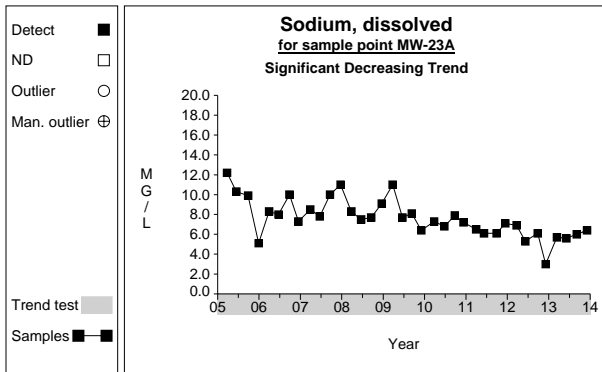
Graph 438



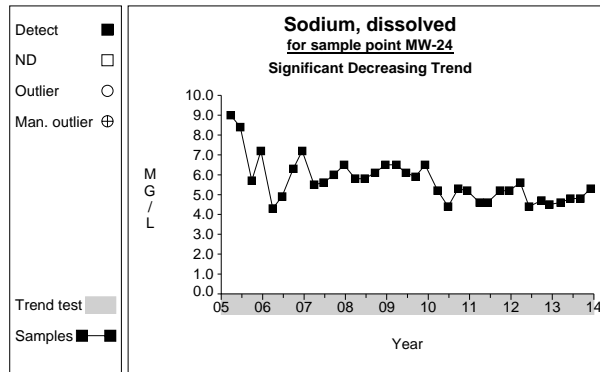
Graph 460



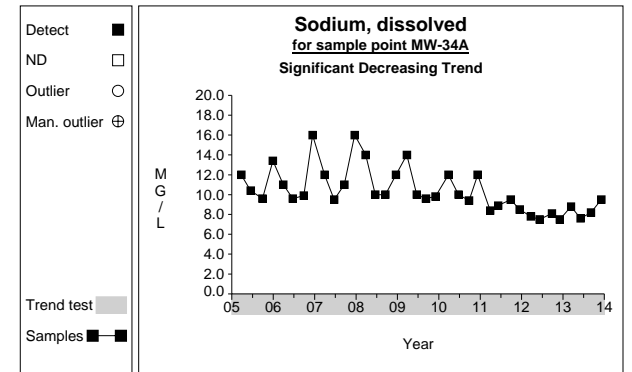
Graph 511



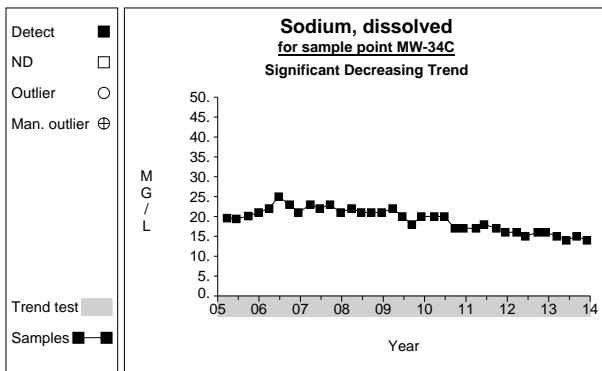
Graph 513



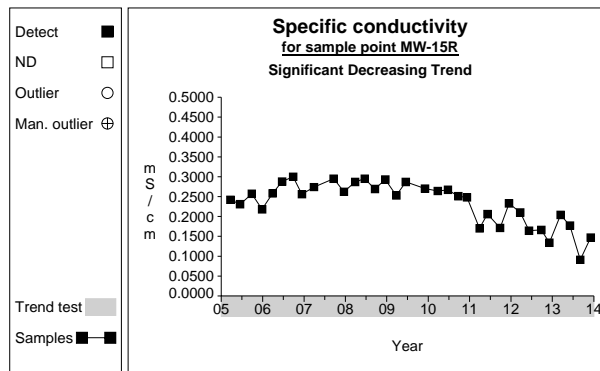
Graph 514



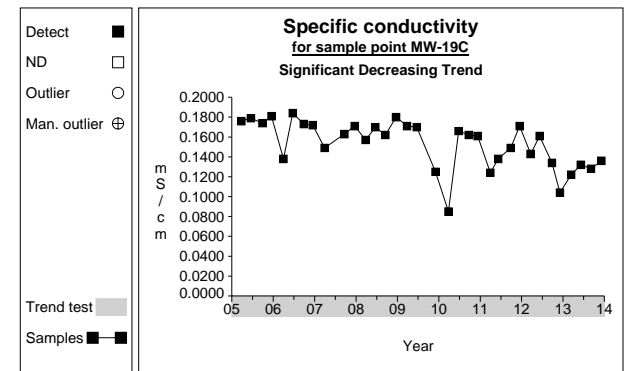
Graph 520



Graph 521

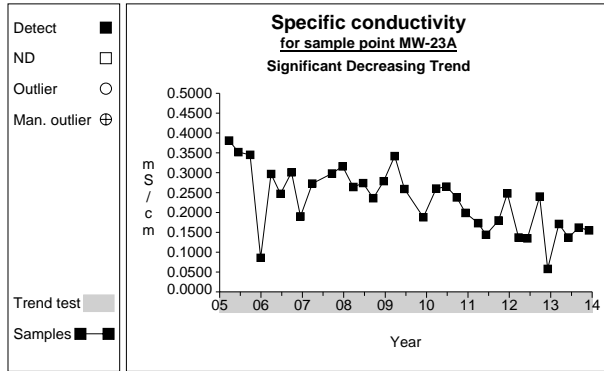


Graph 531

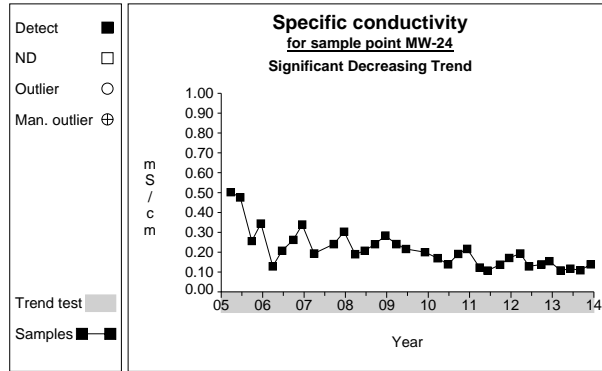


Graph 533

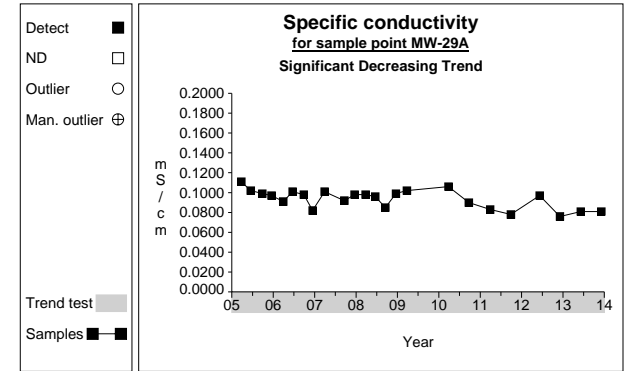
# Time Series



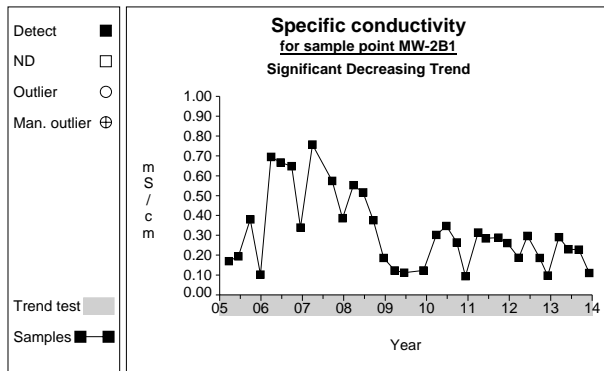
Graph 535



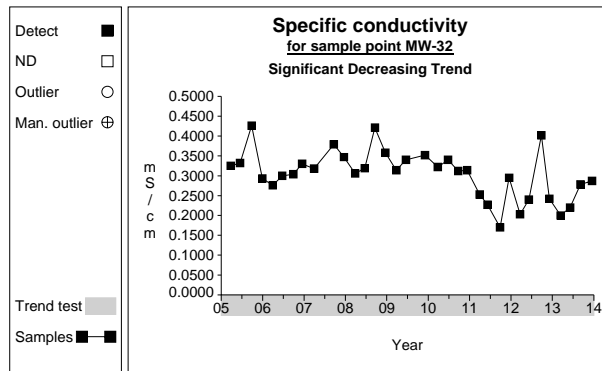
Graph 536



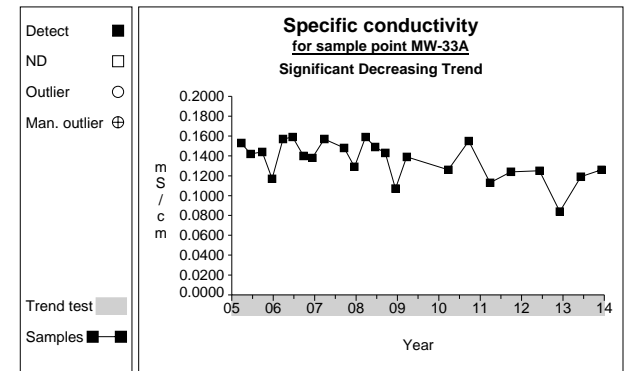
Graph 537



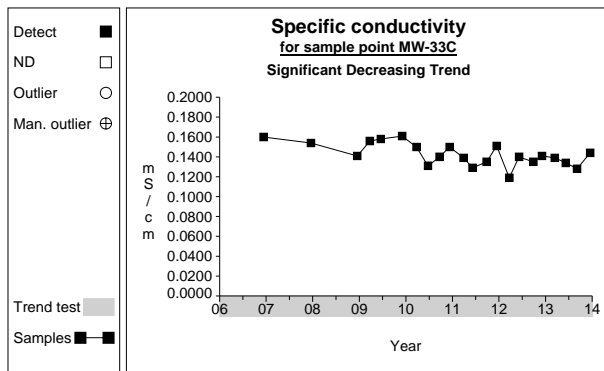
Graph 538



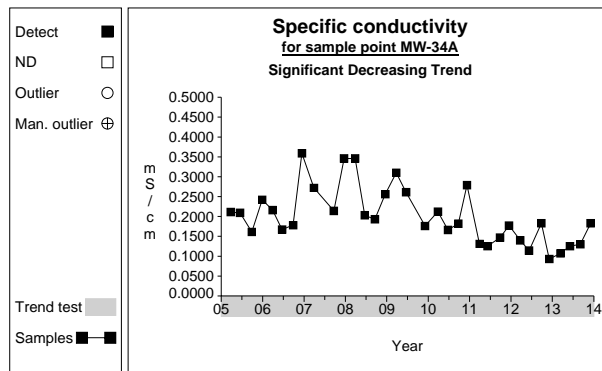
Graph 539



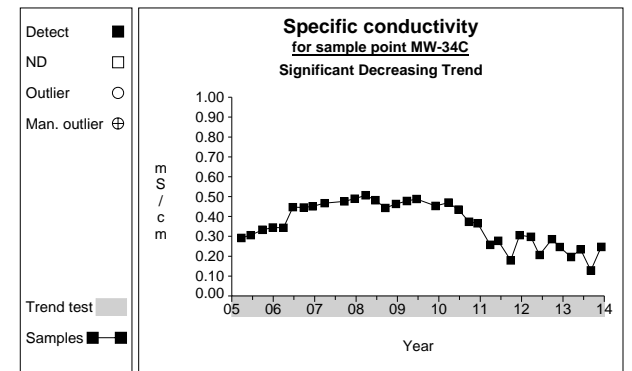
Graph 540



Graph 541



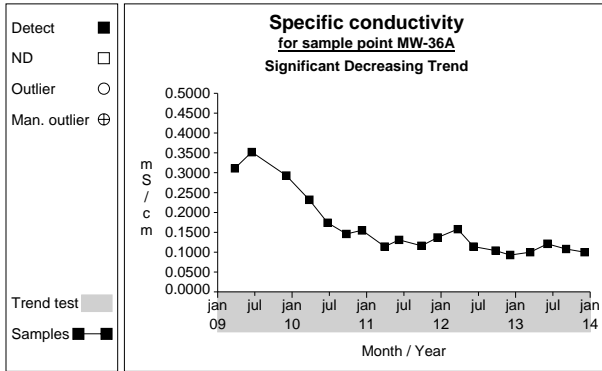
Graph 542



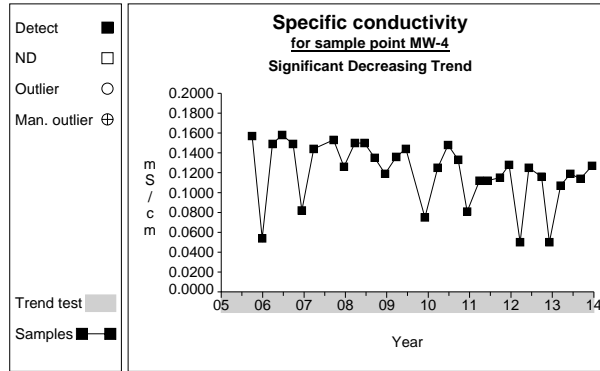
Graph 543



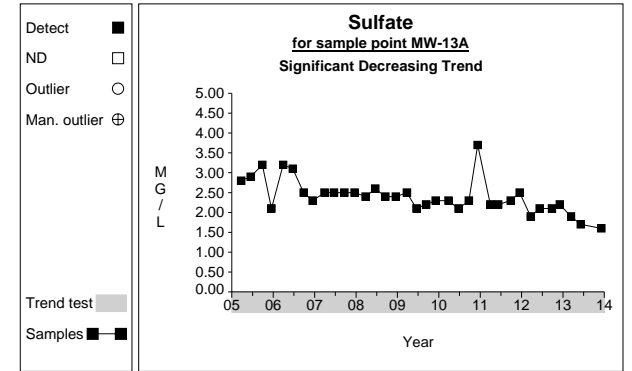
# Time Series



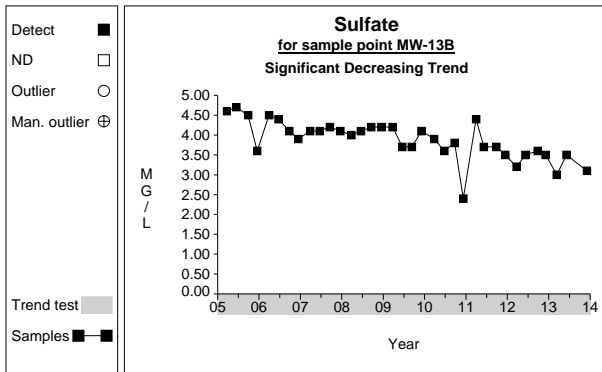
**Graph 545**



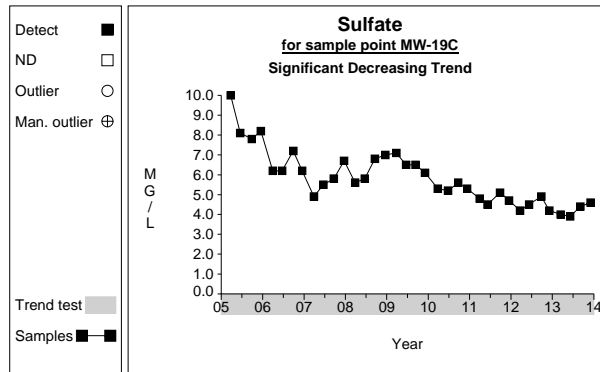
**Graph 547**



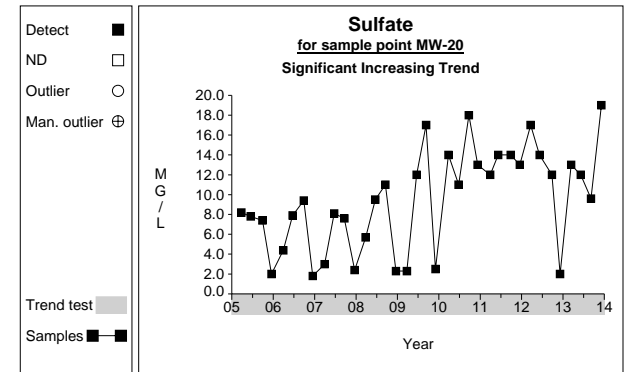
**Graph 551**



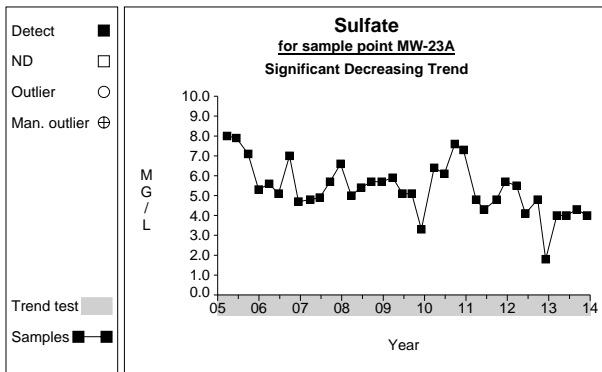
**Graph 552**



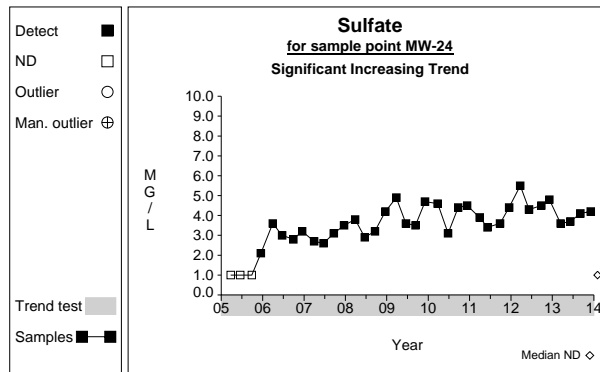
**Graph 555**



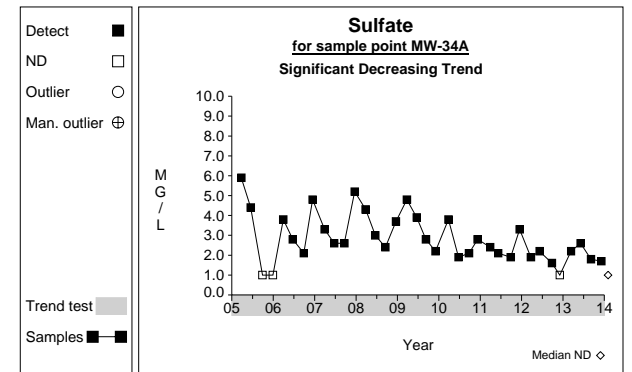
**Graph 556**



**Graph 557**

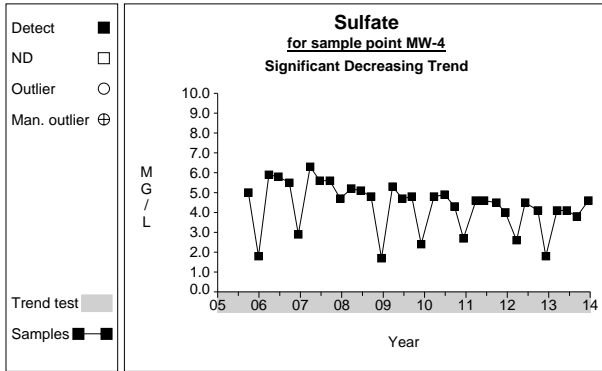


**Graph 558**

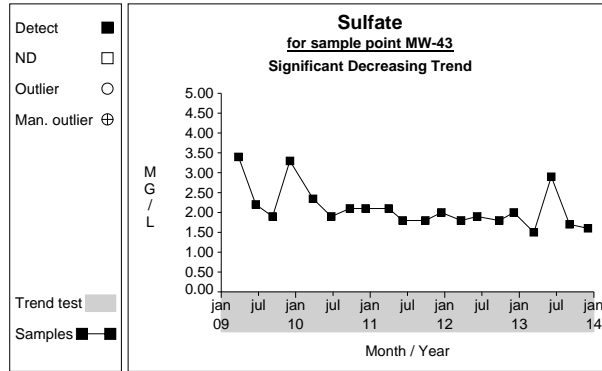


**Graph 564**

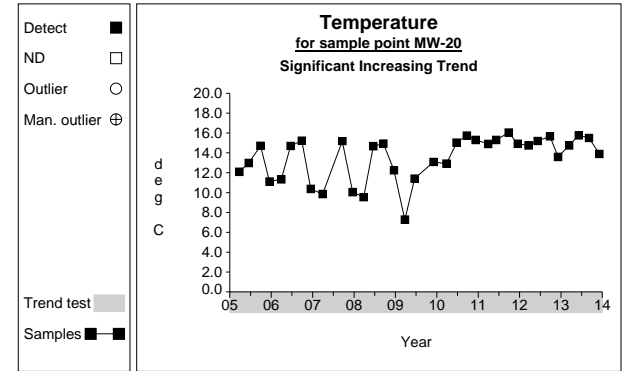
# Time Series



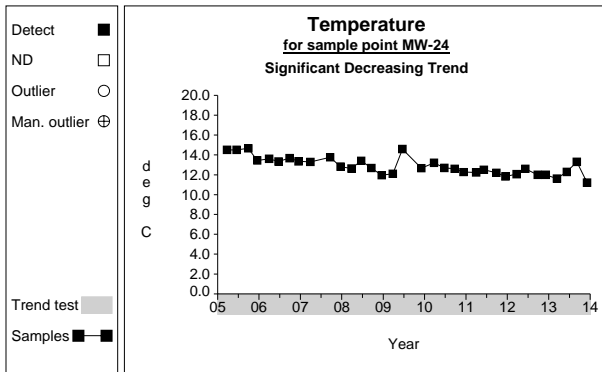
Graph 569



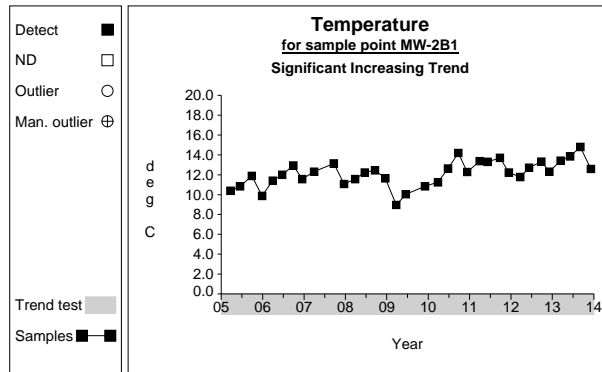
Graph 571



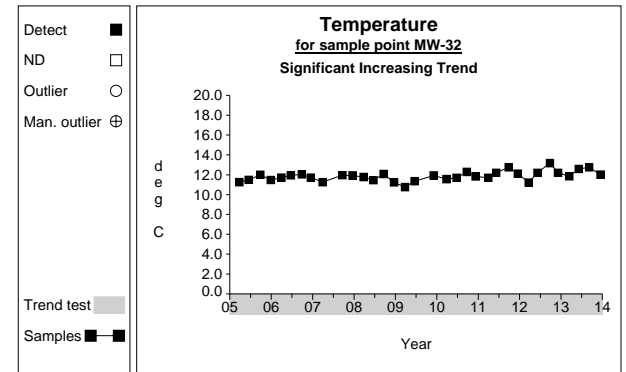
Graph 578



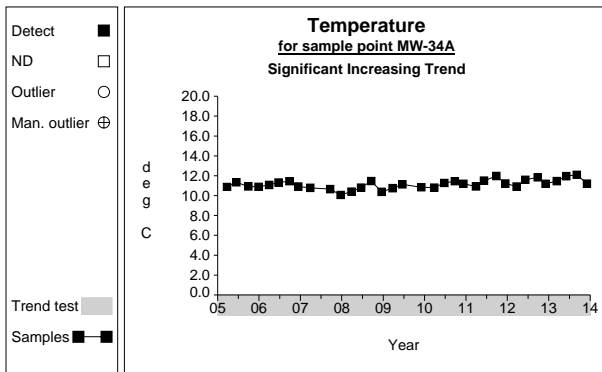
Graph 580



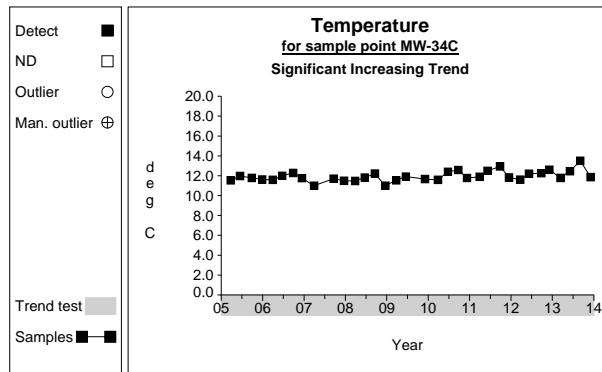
Graph 582



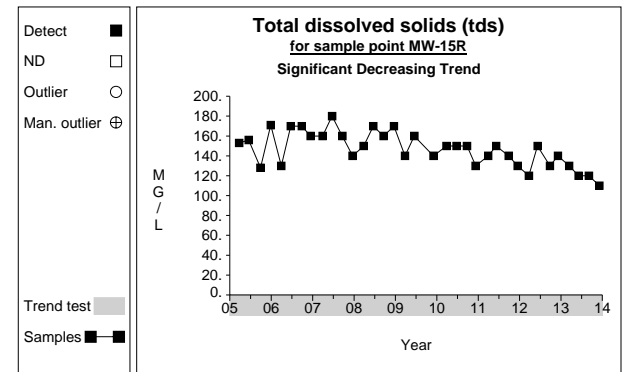
Graph 583



Graph 586

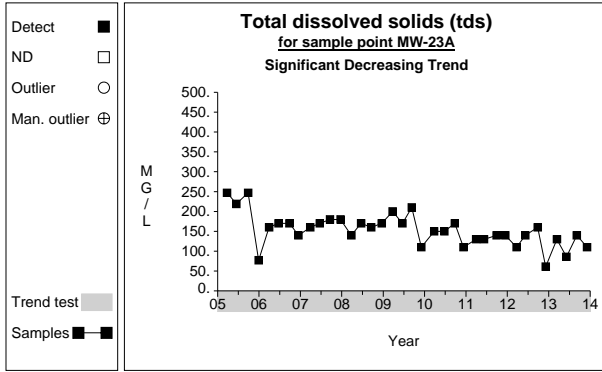


Graph 587

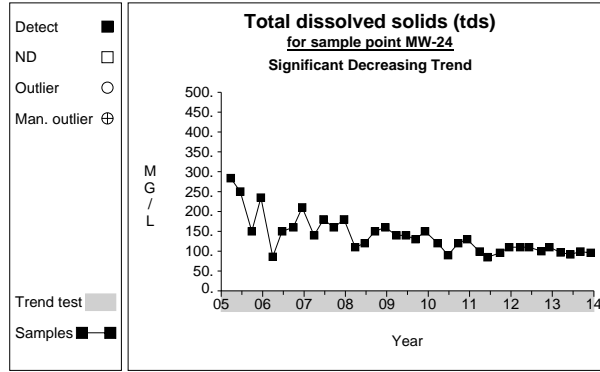


Graph 619

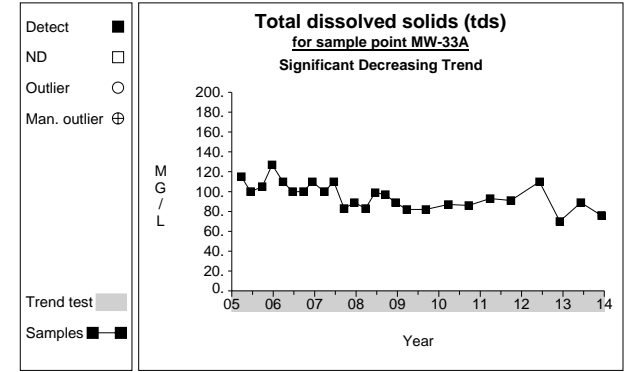
## Time Series



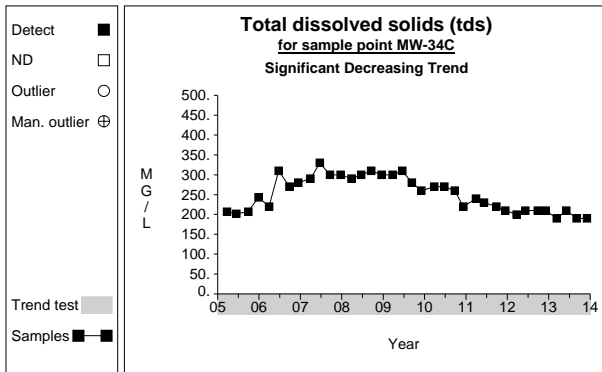
**Graph 623**



**Graph 624**



**Graph 628**



**Graph 631**

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

- 2013 Prediction Limits and Q4 2013 Exceedance Summary Table (Table 2-1)
- Updated Prediction Limits for Use During 2014 Monitoring Year (Table 2-2)
- Upgradient Data used in 2014 Prediction Limit Calculations (Table 2-3)
- Results of Shapiro-Wilk Test for Normality for 2014 Upgradient Data (Table 2-4)
- Comparison of 2013 Prediction Limits with 2014 Prediction Limits (Table 2-5)

**TABLE 2-1**  
**SUMMARY OF CURRENT PREDICTION LIMIT EXCEEDANCES**  
**Q4 2013**  
**Olympic View Sanitary Landfill**

**Statistical Methodology:**

1. Inter-Well Prediction Limits using DUMPStat™
2. Upgradient Data Set: pooled data from wells MW-13A, MW-13B, MW-16, and MW-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
  - \*no longer routinely sampled, therefore no results presented
  - \*\*sampled semi-annually, most current results presented
4. Parameters: all Appendix I and II inorganic and ground water quality parameters
5. Background Data Sets: January 2005 - December 2012
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

<u>Parameter</u>	<u>Unit</u>	<u>Well</u>	<u>Latest Result</u>	<u>Date Sampled</u>	<u>Prediction Limit</u>
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-32	130	12/16/2013	96
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-34A	97	12/03/2013	96
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-34C	130	12/03/2013	96
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-39	99	12/05/2013	96
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-42	220	12/03/2013	96
Alkalinity, total (as cacO3)	MG/L	MW-32	130	12/16/2013	96
Alkalinity, total (as cacO3)	MG/L	MW-34A	97	12/03/2013	96
Alkalinity, total (as cacO3)	MG/L	MW-34C	130	12/03/2013	96
Alkalinity, total (as cacO3)	MG/L	MW-39	99	12/05/2013	96
Alkalinity, total (as cacO3)	MG/L	MW-42	220	12/03/2013	96
Ammonia (as n)	MG/L	MW-39	0.43	12/05/2013	0.34
Ammonia (as n)	MG/L	MW-42	6.0	12/03/2013	0.34
Arsenic, dissolved	UG/L	MW-29A	1.42	12/03/2013	0.38
Arsenic, dissolved	UG/L	MW-32	10	12/23/2013	0.38
Arsenic, dissolved	UG/L	MW-33C	2.11	12/23/2013	0.38
Arsenic, dissolved	UG/L	MW-34A	0.4	12/03/2013	0.38
Arsenic, dissolved	UG/L	MW-34C	1.13	12/03/2013	0.38
Arsenic, dissolved	UG/L	MW-36A	0.57	12/04/2013	0.38
Arsenic, dissolved	UG/L	MW-39	1.53	12/05/2013	0.38
Arsenic, dissolved	UG/L	MW-42	1.5	12/03/2013	0.38
Barium, dissolved	MG/L	MW-29A	0.011	12/03/2013	0.0052
Barium, dissolved	MG/L	MW-34C	0.0084	12/03/2013	0.0052
Barium, dissolved	MG/L	MW-39	0.012	12/05/2013	0.0052
Barium, dissolved	MG/L	MW-42	0.11	12/03/2013	0.0052
Calcium, dissolved	MG/L	MW-15R	18	12/04/2013	17.1
Calcium, dissolved	MG/L	MW-32	28	12/16/2013	17.1
Calcium, dissolved	MG/L	MW-34A	18	12/03/2013	17.1

<u>Parameter</u>	<u>Unit</u>	<u>Well</u>	<u>Latest Result</u>	<u>Date Sampled</u>	<u>Prediction Limit</u>
Calcium, dissolved	MG/L	MW-34C	26	12/03/2013	17.1
Calcium, dissolved	MG/L	MW-42	40	12/03/2013	17.1
Chloride	MG/L	MW-32	12	12/16/2013	3.91
Chloride	MG/L	MW-34C	4.8	12/03/2013	3.91
Chloride	MG/L	MW-39	4.8	12/05/2013	3.91
Chloride	MG/L	MW-42	18	12/03/2013	3.91
Cobalt, dissolved	MG/L	MW-39	0.0078	12/05/2013	0.003
Iron, dissolved	MG/L	MW-29A	3.9	12/03/2013	0.097
Iron, dissolved	MG/L	MW-32	0.68	12/16/2013	0.097
Iron, dissolved	MG/L	MW-33A	0.46	12/05/2013	0.097
Iron, dissolved	MG/L	MW-34C	0.57	12/03/2013	0.097
Iron, dissolved	MG/L	MW-39	36	12/05/2013	0.097
Iron, dissolved	MG/L	MW-42	25	12/03/2013	0.097
Iron, dissolved	MG/L	MW-43	0.87	12/02/2013	0.097
Magnesium, dissolved	MG/L	MW-15R	11	12/04/2013	10.74
Magnesium, dissolved	MG/L	MW-32	13	12/16/2013	10.74
Magnesium, dissolved	MG/L	MW-34C	11	12/03/2013	10.74
Magnesium, dissolved	MG/L	MW-42	16	12/03/2013	10.74
Manganese, dissolved	MG/L	MW-29A	1.3	12/03/2013	0.0067
Manganese, dissolved	MG/L	MW-32	2.2	12/16/2013	0.0067
Manganese, dissolved	MG/L	MW-33A	0.017	12/05/2013	0.0067
Manganese, dissolved	MG/L	MW-33C	0.14	12/16/2013	0.0067
Manganese, dissolved	MG/L	MW-34C	0.58	12/03/2013	0.0067
Manganese, dissolved	MG/L	MW-39	0.46	12/05/2013	0.0067
Manganese, dissolved	MG/L	MW-42	4.6	12/03/2013	0.0067
Manganese, dissolved	MG/L	MW-43	0.24	12/02/2013	0.0067
Nitrate (as n)	MG/L	MW-39	5.5	12/05/2013	1.8
pH	pH Units	MW-43	5.61	12/02/2013	5.87 - 8.27
Potassium, dissolved	MG/L	MW-32	1.2	12/16/2013	1.0
Potassium, dissolved	MG/L	MW-33C	1.2	12/16/2013	1.0
Potassium, dissolved	MG/L	MW-42	6.9	12/03/2013	1.0
Selenium, dissolved	MG/L	MW-34A	0.0013	12/03/2013	0.0011
Selenium, dissolved	MG/L	MW-34C	0.002	12/03/2013	0.0011
Selenium, dissolved	MG/L	MW-42	0.0022	12/03/2013	0.0011
Sodium, dissolved	MG/L	MW-32	16	12/16/2013	6.2
Sodium, dissolved	MG/L	MW-34A	9.5	12/03/2013	6.2
Sodium, dissolved	MG/L	MW-34C	14	12/03/2013	6.2
Sodium, dissolved	MG/L	MW-36A	6.9	12/04/2013	6.2
Sodium, dissolved	MG/L	MW-39	8.1	12/05/2013	6.2
Sodium, dissolved	MG/L	MW-42	20	12/03/2013	6.2
Specific conductivity	mS/cm	MW-32	0.287	12/16/2013	0.18
Specific conductivity	mS/cm	MW-34A	0.183	12/03/2013	0.18
Specific conductivity	mS/cm	MW-34C	0.247	12/03/2013	0.18
Specific conductivity	mS/cm	MW-39	0.242	12/05/2013	0.18
Specific conductivity	mS/cm	MW-42	0.454	12/03/2013	0.18

<u>Parameter</u>	<u>Unit</u>	<u>Well</u>	<u>Latest Result</u>	<u>Date Sampled</u>	<u>Prediction Limit</u>
Sulfate	MG/L	MW-32	18	12/16/2013	9.9
Sulfate	MG/L	MW-42	11	12/03/2013	9.9
Temperature	deg C	MW-32	12.01	12/16/2013	11.09
Temperature	deg C	MW-34A	11.21	12/03/2013	11.09
Temperature	deg C	MW-34C	11.87	12/03/2013	11.09
Temperature	deg C	MW-42	11.7	12/03/2013	11.09
Temperature	deg C	MW-43	11.8	12/02/2013	11.09
Total dissolved solids (tds)	MG/L	MW-32	230	12/16/2013	175
Total dissolved solids (tds)	MG/L	MW-34C	190	12/03/2013	175
Total dissolved solids (tds)	MG/L	MW-42	260	12/03/2013	175
Total organic carbon (toc)	MG/L	MW-42	7.1	12/03/2013	6.0

---

**TABLE 2-2**  
**STATISTICAL PREDICTION LIMITS UPDATED FOR 2014 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 2013 (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	nonparametric	122	122			96	0.99
Alkalinity, total (as CaCO <sub>3</sub> )	MG/L	nonparametric	126	126			96	0.99
Ammonia (as N)	MG/L	nonparametric	123	71			0.340	0.99
Antimony, dissolved	MG/L	nonparametric	126	0			Current RL*	0.99
Arsenic, dissolved	UG/L	nonparametric	123	123			0.380	0.99
Barium, dissolved	MG/L	nonparametric	126	125			0.0052	0.99
Beryllium, dissolved	MG/L	nonparametric	126	0			Current RL*	0.99
Cadmium, dissolved	MG/L	nonparametric	126	0			Current RL*	0.99
Calcium, dissolved	MG/L	nonparametric	126	126			17.10	0.99
Chloride	MG/L	normal	126	125	2.51	0.627	4.00	
Chromium, dissolved	MG/L	nonparametric	126	44			0.033	0.99
Cobalt, dissolved	MG/L	nonparametric	126	0			Current RL*	0.99
Copper, dissolved	MG/L	nonparametric	126	4			0.0094	0.99
Iron, dissolved	MG/L	nonparametric	126	4			0.097	0.99
Lead, dissolved	MG/L	nonparametric	126	0			Current RL*	0.99
Magnesium, dissolved	MG/L	normal	126	126	8.33	1.060	10.86	
Manganese, dissolved	MG/L	nonparametric	126	11			0.014	0.99
Nickel, dissolved	MG/L	nonparametric	126	0			Current RL*	0.99
Nitrate (as N)	MG/L	nonparametric	122	122			1.80	0.99
pH	pH Units	normal	119	119	7.07	0.444	5.89 - 8.24	
Potassium, dissolved	MG/L	nonparametric	126	12			1.00	0.99
Selenium, dissolved	MG/L	nonparametric	126	4			0.0033	0.99
Silver, dissolved	MG/L	nonparametric	126	0			Current RL*	0.99
Sodium, dissolved	MG/L	nonparametric	126	126			6.20	0.99
Specific conductivity	mS/cm	nonparametric	119	119			0.18	0.99
Sulfate	MG/L	nonparametric	126	125			9.90	0.99
Temperature	deg C	normal	119	119			11.96	0.99
Thallium, dissolved	MG/L	nonparametric	126	0			Current RL*	0.99
Total dissolved solids (tds)	MG/L	nonparametric	126	126			175	0.99
Total organic carbon (toc)	MG/L	nonparametric	126	7			6.0	0.99
Vanadium, dissolved	MG/L	nonparametric	126	125			0.0066	0.99
Zinc, dissolved	MG/L	nonparametric	93	1			0.0096	0.99

<sup>[1]</sup> Distributional Assumption based on Multiple Group Shapiro-Wilk Test (results presented on Table 2-4 herein).

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

<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-13A	03/21/2012	89.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-13A	06/08/2012	87.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-13A	09/26/2012	87.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-13A	12/03/2012	83.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-13A	03/11/2013	81.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-13A	06/05/2013	83.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-13A	12/03/2013	86.0000
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-13B	03/21/2012	83.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-13B	06/08/2012	82.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-13B	09/26/2012	84.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-13B	12/03/2012	82.0000

\* - 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-13B	03/11/2013	77.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-13B	06/05/2013	79.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-13B	12/03/2013	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
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-16	03/21/2012	50.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-16	06/08/2012	49.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-16	09/27/2012	57.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-16	12/04/2012	64.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-16	03/12/2013	51.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-16	06/04/2013	50.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-16	09/05/2013	62.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-16	12/16/2013	62.0000
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, bicarbonate (as cacO3)	MG/L	MW-35	03/21/2012	77.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	06/06/2012	77.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	09/26/2012	78.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	12/04/2012	76.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	03/13/2013	73.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	06/06/2013	73.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	09/05/2013	77.0000
Alkalinity, bicarbonate (as cacO3)	MG/L	MW-35	12/16/2013	78.0000
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

\* - 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-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-13A	03/21/2012	89.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	06/08/2012	87.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	09/26/2012	87.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	12/03/2012	83.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	03/11/2013	81.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	06/05/2013	83.0000
Alkalinity, total (as cacO3)	MG/L	MW-13A	12/03/2013	86.0000
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
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-13B	03/21/2012	83.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	06/08/2012	82.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	09/26/2012	84.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	12/03/2012	82.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	03/11/2013	77.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	06/05/2013	79.0000
Alkalinity, total (as cacO3)	MG/L	MW-13B	12/03/2013	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

\* - 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-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-16	03/21/2012		50.0000
Alkalinity, total (as cacO3)	MG/L	MW-16	06/08/2012		49.0000
Alkalinity, total (as cacO3)	MG/L	MW-16	09/27/2012		57.0000
Alkalinity, total (as cacO3)	MG/L	MW-16	12/04/2012		64.0000
Alkalinity, total (as cacO3)	MG/L	MW-16	03/12/2013		51.0000
Alkalinity, total (as cacO3)	MG/L	MW-16	06/04/2013		50.0000
Alkalinity, total (as cacO3)	MG/L	MW-16	09/05/2013		62.0000
Alkalinity, total (as cacO3)	MG/L	MW-16	12/16/2013		62.0000
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
Alkalinity, total (as cacO3)	MG/L	MW-35	03/21/2012		77.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	06/06/2012		77.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	09/26/2012		78.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	12/04/2012		76.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	03/13/2013		73.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	06/06/2013		73.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	09/05/2013		77.0000
Alkalinity, total (as cacO3)	MG/L	MW-35	12/16/2013		78.0000
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	ND	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
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

\* - 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	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-13A	03/21/2012		0.0390
Ammonia (as n)	MG/L	MW-13A	06/08/2012		0.2800
Ammonia (as n)	MG/L	MW-13A	09/26/2012		0.0870
Ammonia (as n)	MG/L	MW-13A	12/03/2012		0.1200
Ammonia (as n)	MG/L	MW-13A	03/11/2013	ND	0.0300
Ammonia (as n)	MG/L	MW-13A	06/05/2013	ND	0.0300
Ammonia (as n)	MG/L	MW-13A	12/03/2013	ND	0.0300
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-13B	03/21/2012	ND	0.0300
Ammonia (as n)	MG/L	MW-13B	06/08/2012		0.2000
Ammonia (as n)	MG/L	MW-13B	09/26/2012		0.0760
Ammonia (as n)	MG/L	MW-13B	12/03/2012	ND	0.0300
Ammonia (as n)	MG/L	MW-13B	03/11/2013	ND	0.0300
Ammonia (as n)	MG/L	MW-13B	06/05/2013	ND	0.0300
Ammonia (as n)	MG/L	MW-13B	12/03/2013	ND	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

\* - 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-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-16	03/21/2012		0.0420
Ammonia (as n)	MG/L	MW-16	06/08/2012		0.3400
Ammonia (as n)	MG/L	MW-16	09/27/2012		0.3000
Ammonia (as n)	MG/L	MW-16	12/04/2012	ND	0.0300
Ammonia (as n)	MG/L	MW-16	03/12/2013	ND	0.0300
Ammonia (as n)	MG/L	MW-16	06/04/2013	ND	0.0300
Ammonia (as n)	MG/L	MW-16	09/05/2013	ND	0.0300
Ammonia (as n)	MG/L	MW-16	12/16/2013		0.0960
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
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
Ammonia (as n)	MG/L	MW-35	03/21/2012		0.0300
Ammonia (as n)	MG/L	MW-35	06/06/2012		0.6000 *
Ammonia (as n)	MG/L	MW-35	09/26/2012		0.0690
Ammonia (as n)	MG/L	MW-35	12/04/2012	ND	0.0300
Ammonia (as n)	MG/L	MW-35	03/13/2013	ND	0.0300
Ammonia (as n)	MG/L	MW-35	06/06/2013	ND	0.0300
Ammonia (as n)	MG/L	MW-35	09/05/2013	ND	0.0300
Ammonia (as n)	MG/L	MW-35	12/16/2013	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

\* - 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-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-13A	03/21/2012	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	06/08/2012	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	09/26/2012	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	12/03/2012	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	03/11/2013	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	06/05/2013	ND	0.0010
Antimony, dissolved	MG/L	MW-13A	12/03/2013	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
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-13B	03/21/2012	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	06/08/2012	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	09/26/2012	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	12/03/2012	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	03/11/2013	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	06/05/2013	ND	0.0010
Antimony, dissolved	MG/L	MW-13B	12/03/2013	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-16	03/21/2012	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-16	06/08/2012	ND	0.0010
Antimony, dissolved	MG/L	MW-16	09/27/2012	ND	0.0010
Antimony, dissolved	MG/L	MW-16	12/04/2012	ND	0.0010
Antimony, dissolved	MG/L	MW-16	03/12/2013	ND	0.0010
Antimony, dissolved	MG/L	MW-16	06/04/2013	ND	0.0010
Antimony, dissolved	MG/L	MW-16	09/05/2013	ND	0.0010
Antimony, dissolved	MG/L	MW-16	12/16/2013	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
Antimony, dissolved	MG/L	MW-35	03/21/2012	ND	0.0010
Antimony, dissolved	MG/L	MW-35	06/06/2012	ND	0.0010
Antimony, dissolved	MG/L	MW-35	09/26/2012	ND	0.0010
Antimony, dissolved	MG/L	MW-35	12/04/2012	ND	0.0010
Antimony, dissolved	MG/L	MW-35	03/13/2013	ND	0.0010
Antimony, dissolved	MG/L	MW-35	06/06/2013	ND	0.0010
Antimony, dissolved	MG/L	MW-35	09/05/2013	ND	0.0010
Antimony, dissolved	MG/L	MW-35	12/16/2013	ND	0.0010
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
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

\* - 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	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-13A	03/21/2012		0.2000	
Arsenic, dissolved	UG/L	MW-13A	06/08/2012		0.2300	
Arsenic, dissolved	UG/L	MW-13A	09/26/2012		0.2000	
Arsenic, dissolved	UG/L	MW-13A	12/03/2012		0.2000	
Arsenic, dissolved	UG/L	MW-13A	03/11/2013		0.2100	
Arsenic, dissolved	UG/L	MW-13A	06/05/2013		0.1800	
Arsenic, dissolved	UG/L	MW-13A	12/03/2013		0.1700	
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-13B	03/21/2012		0.3000	
Arsenic, dissolved	UG/L	MW-13B	06/08/2012		0.3700	
Arsenic, dissolved	UG/L	MW-13B	09/26/2012		0.3100	
Arsenic, dissolved	UG/L	MW-13B	12/03/2012		0.3600	
Arsenic, dissolved	UG/L	MW-13B	03/11/2013		0.3300	
Arsenic, dissolved	UG/L	MW-13B	06/05/2013		0.3100	
Arsenic, dissolved	UG/L	MW-13B	12/03/2013		0.2800	
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-16	03/21/2012		0.3300	
Arsenic, dissolved	UG/L	MW-16	06/08/2012		0.3500	
Arsenic, dissolved	UG/L	MW-16	09/27/2012		0.3000	
Arsenic, dissolved	UG/L	MW-16	12/04/2012		0.3600	
Arsenic, dissolved	UG/L	MW-16	03/12/2013		0.2900	

\* - 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-16	06/04/2013		0.3200	
Arsenic, dissolved	UG/L	MW-16	09/05/2013		0.3100	
Arsenic, dissolved	UG/L	MW-16	12/23/2013		0.2700	
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	
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	
Arsenic, dissolved	UG/L	MW-35	03/21/2012		0.1100	
Arsenic, dissolved	UG/L	MW-35	06/06/2012		0.1300	
Arsenic, dissolved	UG/L	MW-35	09/26/2012		0.1300	
Arsenic, dissolved	UG/L	MW-35	12/04/2012		0.1300	
Arsenic, dissolved	UG/L	MW-35	03/13/2013		0.1200	
Arsenic, dissolved	UG/L	MW-35	06/06/2013		0.1100	
Arsenic, dissolved	UG/L	MW-35	09/05/2013		0.1300	
Arsenic, dissolved	UG/L	MW-35	12/23/2013		0.1200	
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	

\* - 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-13A	09/27/2011	0.0026
Barium, dissolved	MG/L	MW-13A	12/14/2011	0.0030
Barium, dissolved	MG/L	MW-13A	03/21/2012	0.0030
Barium, dissolved	MG/L	MW-13A	06/08/2012	0.0028
Barium, dissolved	MG/L	MW-13A	09/26/2012	0.0029
Barium, dissolved	MG/L	MW-13A	12/03/2012	0.0029
Barium, dissolved	MG/L	MW-13A	03/11/2013	0.0029
Barium, dissolved	MG/L	MW-13A	06/05/2013	0.0034
Barium, dissolved	MG/L	MW-13A	12/03/2013	0.0028
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
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-13B	03/21/2012	0.0031
Barium, dissolved	MG/L	MW-13B	06/08/2012	0.0035
Barium, dissolved	MG/L	MW-13B	09/26/2012	0.0036
Barium, dissolved	MG/L	MW-13B	12/03/2012	0.0035
Barium, dissolved	MG/L	MW-13B	03/11/2013	0.0040
Barium, dissolved	MG/L	MW-13B	06/05/2013	0.0030
Barium, dissolved	MG/L	MW-13B	12/03/2013	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-16	03/21/2012	0.0030
Barium, dissolved	MG/L	MW-16	06/08/2012	0.0032
Barium, dissolved	MG/L	MW-16	09/27/2012	0.0036
Barium, dissolved	MG/L	MW-16	12/04/2012	0.0037
Barium, dissolved	MG/L	MW-16	03/12/2013	0.0037
Barium, dissolved	MG/L	MW-16	06/04/2013	0.0024
Barium, dissolved	MG/L	MW-16	09/05/2013	0.0039
Barium, dissolved	MG/L	MW-16	12/16/2013	0.0036
Barium, dissolved	MG/L	MW-35	03/22/2005	0.0030

\* - 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-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
Barium, dissolved	MG/L	MW-35	03/21/2012		0.0039
Barium, dissolved	MG/L	MW-35	06/06/2012		0.0028
Barium, dissolved	MG/L	MW-35	09/26/2012		0.0030
Barium, dissolved	MG/L	MW-35	12/04/2012		0.0029
Barium, dissolved	MG/L	MW-35	03/13/2013		0.0032
Barium, dissolved	MG/L	MW-35	06/06/2013		0.0031
Barium, dissolved	MG/L	MW-35	09/05/2013		0.0029
Barium, dissolved	MG/L	MW-35	12/16/2013		0.0029
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
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-13A	03/21/2012	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	06/08/2012	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	09/26/2012	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	12/03/2012	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	03/11/2013	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	06/05/2013	ND	0.0010
Beryllium, dissolved	MG/L	MW-13A	12/03/2013	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-13B	03/21/2012	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	06/08/2012	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	09/26/2012	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	12/03/2012	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	03/11/2013	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	06/05/2013	ND	0.0010
Beryllium, dissolved	MG/L	MW-13B	12/03/2013	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-16	03/21/2012	ND	0.0010
Beryllium, dissolved	MG/L	MW-16	06/08/2012	ND	0.0010
Beryllium, dissolved	MG/L	MW-16	09/27/2012	ND	0.0010
Beryllium, dissolved	MG/L	MW-16	12/04/2012	ND	0.0010
Beryllium, dissolved	MG/L	MW-16	03/12/2013	ND	0.0010
Beryllium, dissolved	MG/L	MW-16	06/04/2013	ND	0.0010
Beryllium, dissolved	MG/L	MW-16	09/05/2013	ND	0.0010
Beryllium, dissolved	MG/L	MW-16	12/16/2013	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

\* - 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	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
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
Beryllium, dissolved	MG/L	MW-35	03/21/2012	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	06/06/2012	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	09/26/2012	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	12/04/2012	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	03/13/2013	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	06/06/2013	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	09/05/2013	ND	0.0010
Beryllium, dissolved	MG/L	MW-35	12/16/2013	ND	0.0010
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-13A	03/21/2012	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	06/08/2012	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	09/26/2012	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	12/03/2012	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	03/11/2013	ND	0.0002
Cadmium, dissolved	MG/L	MW-13A	06/05/2013	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-13A	12/03/2013	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
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-13B	03/21/2012	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	06/08/2012	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	09/26/2012	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	12/03/2012	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	03/11/2013	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	06/05/2013	ND	0.0002
Cadmium, dissolved	MG/L	MW-13B	12/03/2013	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-16	03/21/2012	ND	0.0002
Cadmium, dissolved	MG/L	MW-16	06/08/2012	ND	0.0002
Cadmium, dissolved	MG/L	MW-16	09/27/2012	ND	0.0002
Cadmium, dissolved	MG/L	MW-16	12/04/2012	ND	0.0002
Cadmium, dissolved	MG/L	MW-16	03/12/2013	ND	0.0002
Cadmium, dissolved	MG/L	MW-16	06/04/2013	ND	0.0002
Cadmium, dissolved	MG/L	MW-16	09/05/2013	ND	0.0002
Cadmium, dissolved	MG/L	MW-16	12/16/2013	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

\* - 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-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
Cadmium, dissolved	MG/L	MW-35	03/21/2012	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	06/06/2012	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	09/26/2012	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	12/04/2012	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	03/13/2013	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	06/06/2013	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	09/05/2013	ND	0.0002
Cadmium, dissolved	MG/L	MW-35	12/16/2013	ND	0.0002
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
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-13A	03/21/2012		16.0000
Calcium, dissolved	MG/L	MW-13A	06/08/2012		15.0000
Calcium, dissolved	MG/L	MW-13A	09/26/2012		15.0000
Calcium, dissolved	MG/L	MW-13A	12/03/2012		16.0000
Calcium, dissolved	MG/L	MW-13A	03/11/2013		16.0000
Calcium, dissolved	MG/L	MW-13A	06/05/2013		16.0000
Calcium, dissolved	MG/L	MW-13A	12/03/2013		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

\* - 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-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-13B	03/21/2012	16.0000
Calcium, dissolved	MG/L	MW-13B	06/08/2012	16.0000
Calcium, dissolved	MG/L	MW-13B	09/26/2012	16.0000
Calcium, dissolved	MG/L	MW-13B	12/03/2012	17.0000
Calcium, dissolved	MG/L	MW-13B	03/11/2013	17.0000
Calcium, dissolved	MG/L	MW-13B	06/05/2013	17.0000
Calcium, dissolved	MG/L	MW-13B	12/03/2013	17.0000
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-16	03/21/2012	8.9000
Calcium, dissolved	MG/L	MW-16	06/08/2012	9.1000
Calcium, dissolved	MG/L	MW-16	09/27/2012	11.0000
Calcium, dissolved	MG/L	MW-16	12/04/2012	11.0000
Calcium, dissolved	MG/L	MW-16	03/12/2013	10.0000
Calcium, dissolved	MG/L	MW-16	06/04/2013	10.0000
Calcium, dissolved	MG/L	MW-16	09/05/2013	11.0000
Calcium, dissolved	MG/L	MW-16	12/16/2013	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

\* - 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	06/18/2008	13.0000
Calcium, dissolved	MG/L	MW-35	09/18/2008	13.0000
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
Calcium, dissolved	MG/L	MW-35	03/21/2012	14.0000
Calcium, dissolved	MG/L	MW-35	06/06/2012	13.0000
Calcium, dissolved	MG/L	MW-35	09/26/2012	13.0000
Calcium, dissolved	MG/L	MW-35	12/04/2012	14.0000
Calcium, dissolved	MG/L	MW-35	03/13/2013	14.0000
Calcium, dissolved	MG/L	MW-35	06/06/2013	13.0000
Calcium, dissolved	MG/L	MW-35	09/05/2013	13.0000
Calcium, dissolved	MG/L	MW-35	12/16/2013	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-13A	03/21/2012	2.7000
Chloride	MG/L	MW-13A	06/08/2012	3.0000
Chloride	MG/L	MW-13A	09/26/2012	2.6000
Chloride	MG/L	MW-13A	12/03/2012	1.8000
Chloride	MG/L	MW-13A	03/11/2013	3.0000
Chloride	MG/L	MW-13A	06/05/2013	1.7000
Chloride	MG/L	MW-13A	12/03/2013	1.7000
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

\* - 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	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
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-13B	03/21/2012		2.8000
Chloride	MG/L	MW-13B	06/08/2012		3.4000
Chloride	MG/L	MW-13B	09/26/2012		2.9000
Chloride	MG/L	MW-13B	12/03/2012		2.1000
Chloride	MG/L	MW-13B	03/11/2013		2.1000
Chloride	MG/L	MW-13B	06/05/2013		2.0000
Chloride	MG/L	MW-13B	12/03/2013		1.9000
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-16	03/21/2012		2.2000
Chloride	MG/L	MW-16	06/08/2012		2.8000
Chloride	MG/L	MW-16	09/27/2012		1.0000
Chloride	MG/L	MW-16	12/04/2012		1.3000
Chloride	MG/L	MW-16	03/12/2013		1.3000
Chloride	MG/L	MW-16	06/04/2013		1.3000
Chloride	MG/L	MW-16	09/05/2013		1.3000
Chloride	MG/L	MW-16	12/16/2013	ND	1.0000
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

\* - 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-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
Chloride	MG/L	MW-35	03/21/2012		2.9000
Chloride	MG/L	MW-35	06/06/2012		1.3000
Chloride	MG/L	MW-35	09/26/2012		2.4000
Chloride	MG/L	MW-35	12/04/2012		1.9000
Chloride	MG/L	MW-35	03/13/2013		1.8000
Chloride	MG/L	MW-35	06/06/2013		1.7000
Chloride	MG/L	MW-35	09/05/2013		1.8000
Chloride	MG/L	MW-35	12/16/2013		1.7000
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
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-13A	03/21/2012	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	06/08/2012	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	09/26/2012	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	12/03/2012	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	03/11/2013	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	06/05/2013	ND	0.0030
Chromium, dissolved	MG/L	MW-13A	12/03/2013	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

\* - 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-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-13B	03/21/2012		0.0033
Chromium, dissolved	MG/L	MW-13B	06/08/2012		0.0030
Chromium, dissolved	MG/L	MW-13B	09/26/2012		0.0031
Chromium, dissolved	MG/L	MW-13B	12/03/2012	ND	0.0030
Chromium, dissolved	MG/L	MW-13B	03/11/2013		0.0030
Chromium, dissolved	MG/L	MW-13B	06/05/2013		0.0032
Chromium, dissolved	MG/L	MW-13B	12/03/2013		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-16	03/21/2012		0.0072
Chromium, dissolved	MG/L	MW-16	06/08/2012		0.0076
Chromium, dissolved	MG/L	MW-16	09/27/2012		0.0083
Chromium, dissolved	MG/L	MW-16	12/04/2012		0.0067
Chromium, dissolved	MG/L	MW-16	03/12/2013		0.0070
Chromium, dissolved	MG/L	MW-16	06/04/2013		0.0069
Chromium, dissolved	MG/L	MW-16	09/05/2013		0.0065
Chromium, dissolved	MG/L	MW-16	12/16/2013		0.0070
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
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

\* - 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	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
Chromium, dissolved	MG/L	MW-35	03/21/2012	ND	0.0030
Chromium, dissolved	MG/L	MW-35	06/06/2012	ND	0.0030
Chromium, dissolved	MG/L	MW-35	09/26/2012	ND	0.0030
Chromium, dissolved	MG/L	MW-35	12/04/2012	ND	0.0030
Chromium, dissolved	MG/L	MW-35	03/13/2013	ND	0.0030
Chromium, dissolved	MG/L	MW-35	06/06/2013	ND	0.0030
Chromium, dissolved	MG/L	MW-35	09/05/2013	ND	0.0030
Chromium, dissolved	MG/L	MW-35	12/16/2013	ND	0.0030
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-13A	03/21/2012	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	06/08/2012	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	09/26/2012	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	12/03/2012	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	03/11/2013	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	06/05/2013	ND	0.0030
Cobalt, dissolved	MG/L	MW-13A	12/03/2013	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

\* - 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	12/16/2008	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
Cobalt, dissolved	MG/L	MW-13B	12/14/2011	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	03/21/2012	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	06/08/2012	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	09/26/2012	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	12/03/2012	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	03/11/2013	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	06/05/2013	ND	0.0030
Cobalt, dissolved	MG/L	MW-13B	12/03/2013	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-16	03/21/2012	ND	0.0030
Cobalt, dissolved	MG/L	MW-16	06/08/2012	ND	0.0030
Cobalt, dissolved	MG/L	MW-16	09/27/2012	ND	0.0030
Cobalt, dissolved	MG/L	MW-16	12/04/2012	ND	0.0030
Cobalt, dissolved	MG/L	MW-16	03/12/2013	ND	0.0030
Cobalt, dissolved	MG/L	MW-16	06/04/2013	ND	0.0030
Cobalt, dissolved	MG/L	MW-16	09/05/2013	ND	0.0030
Cobalt, dissolved	MG/L	MW-16	12/16/2013	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

\* - 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-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
Cobalt, dissolved	MG/L	MW-35	03/21/2012	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	06/06/2012	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	09/26/2012	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	12/04/2012	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	03/13/2013	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	06/06/2013	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	09/05/2013	ND	0.0030
Cobalt, dissolved	MG/L	MW-35	12/16/2013	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
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-13A	03/21/2012	ND	0.0020
Copper, dissolved	MG/L	MW-13A	06/08/2012	ND	0.0020
Copper, dissolved	MG/L	MW-13A	09/26/2012	ND	0.0020
Copper, dissolved	MG/L	MW-13A	12/03/2012	ND	0.0020
Copper, dissolved	MG/L	MW-13A	03/11/2013	ND	0.0020
Copper, dissolved	MG/L	MW-13A	06/05/2013	ND	0.0020
Copper, dissolved	MG/L	MW-13A	12/03/2013		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

\* - 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-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-13B	03/21/2012	ND	0.0020
Copper, dissolved	MG/L	MW-13B	06/08/2012	ND	0.0020
Copper, dissolved	MG/L	MW-13B	09/26/2012	ND	0.0020
Copper, dissolved	MG/L	MW-13B	12/03/2012	ND	0.0020
Copper, dissolved	MG/L	MW-13B	03/11/2013	ND	0.0020
Copper, dissolved	MG/L	MW-13B	06/05/2013	ND	0.0020
Copper, dissolved	MG/L	MW-13B	12/03/2013		0.0044
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-16	03/21/2012	ND	0.0020
Copper, dissolved	MG/L	MW-16	06/08/2012	ND	0.0020
Copper, dissolved	MG/L	MW-16	09/27/2012	ND	0.0020
Copper, dissolved	MG/L	MW-16	12/04/2012	ND	0.0020
Copper, dissolved	MG/L	MW-16	03/12/2013	ND	0.0020
Copper, dissolved	MG/L	MW-16	06/04/2013	ND	0.0020
Copper, dissolved	MG/L	MW-16	09/05/2013	ND	0.0020
Copper, dissolved	MG/L	MW-16	12/16/2013	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
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
Copper, dissolved	MG/L	MW-35	03/21/2012	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	06/06/2012	ND	0.0020
Copper, dissolved	MG/L	MW-35	09/26/2012	ND	0.0020
Copper, dissolved	MG/L	MW-35	12/04/2012	ND	0.0020
Copper, dissolved	MG/L	MW-35	03/13/2013	ND	0.0020
Copper, dissolved	MG/L	MW-35	06/06/2013	ND	0.0020
Copper, dissolved	MG/L	MW-35	09/05/2013	ND	0.0020
Copper, dissolved	MG/L	MW-35	12/16/2013	ND	0.0020
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-13A	03/21/2012	ND	0.0600
Iron, dissolved	MG/L	MW-13A	06/08/2012	ND	0.0600
Iron, dissolved	MG/L	MW-13A	09/26/2012	ND	0.0600
Iron, dissolved	MG/L	MW-13A	12/03/2012	ND	0.0600
Iron, dissolved	MG/L	MW-13A	03/11/2013	ND	0.0600
Iron, dissolved	MG/L	MW-13A	06/05/2013	ND	0.0600
Iron, dissolved	MG/L	MW-13A	12/03/2013	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

\* - 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-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-13B	03/21/2012	ND	0.0600
Iron, dissolved	MG/L	MW-13B	06/08/2012	ND	0.0600
Iron, dissolved	MG/L	MW-13B	09/26/2012	ND	0.0600
Iron, dissolved	MG/L	MW-13B	12/03/2012	ND	0.0600
Iron, dissolved	MG/L	MW-13B	03/11/2013	ND	0.0600
Iron, dissolved	MG/L	MW-13B	06/05/2013	ND	0.0600
Iron, dissolved	MG/L	MW-13B	12/03/2013	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
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-16	03/21/2012	ND	0.0600
Iron, dissolved	MG/L	MW-16	06/08/2012	ND	0.0600
Iron, dissolved	MG/L	MW-16	09/27/2012	ND	0.0600
Iron, dissolved	MG/L	MW-16	12/04/2012	ND	0.0600
Iron, dissolved	MG/L	MW-16	03/12/2013	ND	0.0600
Iron, dissolved	MG/L	MW-16	06/04/2013	ND	0.0600
Iron, dissolved	MG/L	MW-16	09/05/2013	ND	0.0600
Iron, dissolved	MG/L	MW-16	12/16/2013	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
Iron, dissolved	MG/L	MW-35	03/21/2012	ND	0.0600
Iron, dissolved	MG/L	MW-35	06/06/2012		0.0700
Iron, dissolved	MG/L	MW-35	09/26/2012	ND	0.0600
Iron, dissolved	MG/L	MW-35	12/04/2012	ND	0.0600
Iron, dissolved	MG/L	MW-35	03/13/2013	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-35	06/06/2013	ND	0.0600
Iron, dissolved	MG/L	MW-35	09/05/2013	ND	0.0600
Iron, dissolved	MG/L	MW-35	12/16/2013	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
Lead, dissolved	MG/L	MW-13A	12/14/2011	ND	0.0010
Lead, dissolved	MG/L	MW-13A	03/21/2012	ND	0.0010
Lead, dissolved	MG/L	MW-13A	06/08/2012	ND	0.0010
Lead, dissolved	MG/L	MW-13A	09/26/2012	ND	0.0010
Lead, dissolved	MG/L	MW-13A	12/03/2012	ND	0.0010
Lead, dissolved	MG/L	MW-13A	03/11/2013	ND	0.0010
Lead, dissolved	MG/L	MW-13A	06/05/2013	ND	0.0010
Lead, dissolved	MG/L	MW-13A	12/03/2013	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

\* - 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-13B	12/14/2011	ND	0.0010
Lead, dissolved	MG/L	MW-13B	03/21/2012	ND	0.0010
Lead, dissolved	MG/L	MW-13B	06/08/2012	ND	0.0010
Lead, dissolved	MG/L	MW-13B	09/26/2012	ND	0.0010
Lead, dissolved	MG/L	MW-13B	12/03/2012	ND	0.0010
Lead, dissolved	MG/L	MW-13B	03/11/2013	ND	0.0010
Lead, dissolved	MG/L	MW-13B	06/05/2013	ND	0.0010
Lead, dissolved	MG/L	MW-13B	12/03/2013	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-16	03/21/2012	ND	0.0010
Lead, dissolved	MG/L	MW-16	06/08/2012	ND	0.0010
Lead, dissolved	MG/L	MW-16	09/27/2012	ND	0.0010
Lead, dissolved	MG/L	MW-16	12/04/2012	ND	0.0010
Lead, dissolved	MG/L	MW-16	03/12/2013	ND	0.0010
Lead, dissolved	MG/L	MW-16	06/04/2013	ND	0.0010
Lead, dissolved	MG/L	MW-16	09/05/2013	ND	0.0010
Lead, dissolved	MG/L	MW-16	12/16/2013	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
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
Lead, dissolved	MG/L	MW-35	03/21/2012	ND	0.0010
Lead, dissolved	MG/L	MW-35	06/06/2012	ND	0.0010
Lead, dissolved	MG/L	MW-35	09/26/2012	ND	0.0010
Lead, dissolved	MG/L	MW-35	12/04/2012	ND	0.0010
Lead, dissolved	MG/L	MW-35	03/13/2013	ND	0.0010
Lead, dissolved	MG/L	MW-35	06/06/2013	ND	0.0010
Lead, dissolved	MG/L	MW-35	09/05/2013	ND	0.0010
Lead, dissolved	MG/L	MW-35	12/16/2013	ND	0.0010
Magnesium, dissolved	MG/L	MW-13A	03/22/2005		9.2000

\* - 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-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-13A	03/21/2012	9.9000
Magnesium, dissolved	MG/L	MW-13A	06/08/2012	8.9000
Magnesium, dissolved	MG/L	MW-13A	09/26/2012	9.6000
Magnesium, dissolved	MG/L	MW-13A	12/03/2012	9.2000
Magnesium, dissolved	MG/L	MW-13A	03/11/2013	9.4000
Magnesium, dissolved	MG/L	MW-13A	06/05/2013	9.8000
Magnesium, dissolved	MG/L	MW-13A	12/03/2013	9.4000
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-13B	03/21/2012	8.5000
Magnesium, dissolved	MG/L	MW-13B	06/08/2012	8.1000
Magnesium, dissolved	MG/L	MW-13B	09/26/2012	8.6000

\* - 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-13B	12/03/2012		8.2000
Magnesium, dissolved	MG/L	MW-13B	03/11/2013		8.6000
Magnesium, dissolved	MG/L	MW-13B	06/05/2013		8.9000
Magnesium, dissolved	MG/L	MW-13B	12/03/2013		8.9000
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
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-16	03/21/2012		5.5000
Magnesium, dissolved	MG/L	MW-16	06/08/2012		5.0000
Magnesium, dissolved	MG/L	MW-16	09/27/2012		6.4000
Magnesium, dissolved	MG/L	MW-16	12/04/2012		6.6000
Magnesium, dissolved	MG/L	MW-16	03/12/2013		5.6000
Magnesium, dissolved	MG/L	MW-16	06/04/2013		5.8000
Magnesium, dissolved	MG/L	MW-16	09/05/2013		6.0000
Magnesium, dissolved	MG/L	MW-16	12/16/2013		5.9000
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
Magnesium, dissolved	MG/L	MW-35	03/21/2012		9.0000
Magnesium, dissolved	MG/L	MW-35	06/06/2012		8.3000
Magnesium, dissolved	MG/L	MW-35	09/26/2012		8.9000
Magnesium, dissolved	MG/L	MW-35	12/04/2012		8.6000
Magnesium, dissolved	MG/L	MW-35	03/13/2013		9.2000
Magnesium, dissolved	MG/L	MW-35	06/06/2013		8.5000
Magnesium, dissolved	MG/L	MW-35	09/05/2013		8.1000
Magnesium, dissolved	MG/L	MW-35	12/16/2013		8.4000
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

\* - 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-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-13A	03/21/2012	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	06/08/2012	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	09/26/2012	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	12/03/2012	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	03/11/2013	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	06/05/2013	ND	0.0010
Manganese, dissolved	MG/L	MW-13A	12/03/2013	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
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-13B	03/21/2012	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	06/08/2012	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	09/26/2012	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	12/03/2012	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	03/11/2013	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	06/05/2013	ND	0.0010
Manganese, dissolved	MG/L	MW-13B	12/03/2013	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-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-16	03/21/2012	ND	0.0010
Manganese, dissolved	MG/L	MW-16	06/08/2012	ND	0.0010
Manganese, dissolved	MG/L	MW-16	09/27/2012	ND	0.0010
Manganese, dissolved	MG/L	MW-16	12/04/2012	ND	0.0010
Manganese, dissolved	MG/L	MW-16	03/12/2013		0.0019
Manganese, dissolved	MG/L	MW-16	06/04/2013		0.0057
Manganese, dissolved	MG/L	MW-16	09/05/2013		0.0140
Manganese, dissolved	MG/L	MW-16	12/16/2013		0.0120
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
Manganese, dissolved	MG/L	MW-35	12/13/2011	ND	0.0050
Manganese, dissolved	MG/L	MW-35	03/21/2012	ND	0.0010
Manganese, dissolved	MG/L	MW-35	06/06/2012	ND	0.0010
Manganese, dissolved	MG/L	MW-35	09/26/2012	ND	0.0010
Manganese, dissolved	MG/L	MW-35	12/04/2012	ND	0.0010
Manganese, dissolved	MG/L	MW-35	03/13/2013	ND	0.0010
Manganese, dissolved	MG/L	MW-35	06/06/2013	ND	0.0010
Manganese, dissolved	MG/L	MW-35	09/05/2013	ND	0.0010
Manganese, dissolved	MG/L	MW-35	12/16/2013	ND	0.0010
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

\* - 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-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-13A	03/21/2012	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	06/08/2012	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	09/26/2012	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	12/03/2012	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	03/11/2013	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	06/05/2013	ND	0.0040
Nickel, dissolved	MG/L	MW-13A	12/03/2013	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-13B	03/21/2012	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	06/08/2012	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	09/26/2012	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	12/03/2012	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	03/11/2013	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	06/05/2013	ND	0.0040
Nickel, dissolved	MG/L	MW-13B	12/03/2013	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

\* - 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	03/25/2010	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
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-16	03/21/2012	ND	0.0040
Nickel, dissolved	MG/L	MW-16	06/08/2012	ND	0.0040
Nickel, dissolved	MG/L	MW-16	09/27/2012	ND	0.0040
Nickel, dissolved	MG/L	MW-16	12/04/2012	ND	0.0040
Nickel, dissolved	MG/L	MW-16	03/12/2013	ND	0.0040
Nickel, dissolved	MG/L	MW-16	06/04/2013	ND	0.0040
Nickel, dissolved	MG/L	MW-16	09/05/2013	ND	0.0040
Nickel, dissolved	MG/L	MW-16	12/16/2013	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
Nickel, dissolved	MG/L	MW-35	03/21/2012	ND	0.0040
Nickel, dissolved	MG/L	MW-35	06/06/2012	ND	0.0040
Nickel, dissolved	MG/L	MW-35	09/26/2012	ND	0.0040
Nickel, dissolved	MG/L	MW-35	12/04/2012	ND	0.0040
Nickel, dissolved	MG/L	MW-35	03/13/2013	ND	0.0040
Nickel, dissolved	MG/L	MW-35	06/06/2013	ND	0.0040
Nickel, dissolved	MG/L	MW-35	09/05/2013	ND	0.0040
Nickel, dissolved	MG/L	MW-35	12/16/2013	ND	0.0040
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

\* - 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-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-13A	03/21/2012	9.4000 *
Nitrate (as n)	MG/L	MW-13A	06/08/2012	0.4500
Nitrate (as n)	MG/L	MW-13A	09/26/2012	0.4200
Nitrate (as n)	MG/L	MW-13A	12/03/2012	0.5400
Nitrate (as n)	MG/L	MW-13A	03/11/2013	0.4600
Nitrate (as n)	MG/L	MW-13A	06/05/2013	0.4900
Nitrate (as n)	MG/L	MW-13A	12/03/2013	0.4700
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
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-13B	03/21/2012	9.7000 *
Nitrate (as n)	MG/L	MW-13B	06/08/2012	0.4500
Nitrate (as n)	MG/L	MW-13B	09/26/2012	0.4000
Nitrate (as n)	MG/L	MW-13B	12/03/2012	0.4200
Nitrate (as n)	MG/L	MW-13B	03/11/2013	0.4300
Nitrate (as n)	MG/L	MW-13B	06/05/2013	0.4900
Nitrate (as n)	MG/L	MW-13B	12/03/2013	0.5100
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

\* - 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-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-16	03/21/2012	0.8900 *
Nitrate (as n)	MG/L	MW-16	06/08/2012	1.4000
Nitrate (as n)	MG/L	MW-16	09/27/2012	0.9600
Nitrate (as n)	MG/L	MW-16	12/04/2012	0.8600
Nitrate (as n)	MG/L	MW-16	03/12/2013	1.6000
Nitrate (as n)	MG/L	MW-16	06/04/2013	1.5000
Nitrate (as n)	MG/L	MW-16	09/05/2013	0.7200
Nitrate (as n)	MG/L	MW-16	12/16/2013	0.7500
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
Nitrate (as n)	MG/L	MW-35	03/21/2012	0.4500 *
Nitrate (as n)	MG/L	MW-35	06/06/2012	0.4300
Nitrate (as n)	MG/L	MW-35	09/26/2012	0.3700
Nitrate (as n)	MG/L	MW-35	12/04/2012	0.4200
Nitrate (as n)	MG/L	MW-35	03/13/2013	0.4700
Nitrate (as n)	MG/L	MW-35	06/06/2013	0.4500
Nitrate (as n)	MG/L	MW-35	09/05/2013	0.4200
Nitrate (as n)	MG/L	MW-35	12/16/2013	0.4000
pH	pH Units	MW-13A	03/22/2005	7.0100
pH	pH Units	MW-13A	06/15/2005	7.2100
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

\* - 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	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-13A	03/21/2012	6.7800
pH	pH Units	MW-13A	06/08/2012	6.7200
pH	pH Units	MW-13A	09/26/2012	7.3500
pH	pH Units	MW-13A	12/03/2012	6.9500
pH	pH Units	MW-13A	03/11/2013	7.1800
pH	pH Units	MW-13A	06/05/2013	7.3300
pH	pH Units	MW-13A	12/03/2013	7.1600
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-13B	03/21/2012	7.0900
pH	pH Units	MW-13B	06/08/2012	7.1500
pH	pH Units	MW-13B	09/26/2012	7.3200
pH	pH Units	MW-13B	12/03/2012	7.3200
pH	pH Units	MW-13B	03/11/2013	7.4200
pH	pH Units	MW-13B	06/05/2013	7.2700
pH	pH Units	MW-13B	12/03/2013	7.3400
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-16	03/21/2012	6.3200
pH	pH Units	MW-16	06/08/2012	6.2500
pH	pH Units	MW-16	09/27/2012	6.2600
pH	pH Units	MW-16	12/04/2012	6.2200
pH	pH Units	MW-16	03/12/2013	6.3500

\* - 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-16	06/04/2013		6.4500
pH	pH Units	MW-16	09/05/2013		6.6200
pH	pH Units	MW-16	12/16/2013		6.3200
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
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
pH	pH Units	MW-35	03/21/2012		7.0200
pH	pH Units	MW-35	06/06/2012		6.9800
pH	pH Units	MW-35	09/26/2012		7.1100
pH	pH Units	MW-35	12/04/2012		7.1600
pH	pH Units	MW-35	03/13/2013		7.0600
pH	pH Units	MW-35	06/06/2013		7.3700
pH	pH Units	MW-35	09/05/2013		7.1000
pH	pH Units	MW-35	12/16/2013		7.1500
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

\* - 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-13A	03/21/2012	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	06/08/2012	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	09/26/2012	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	12/03/2012	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	03/11/2013	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	06/05/2013	ND	1.0000
Potassium, dissolved	MG/L	MW-13A	12/03/2013	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
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-13B	03/21/2012	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	06/08/2012	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	09/26/2012	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	12/03/2012	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	03/11/2013	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	06/05/2013	ND	1.0000
Potassium, dissolved	MG/L	MW-13B	12/03/2013	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-16	03/21/2012	ND	1.0000
Potassium, dissolved	MG/L	MW-16	06/08/2012	ND	1.0000
Potassium, dissolved	MG/L	MW-16	09/27/2012	ND	1.0000
Potassium, dissolved	MG/L	MW-16	12/04/2012	ND	1.0000
Potassium, dissolved	MG/L	MW-16	03/12/2013	ND	1.0000
Potassium, dissolved	MG/L	MW-16	06/04/2013	ND	1.0000
Potassium, dissolved	MG/L	MW-16	09/05/2013	ND	1.0000
Potassium, dissolved	MG/L	MW-16	12/16/2013	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

\* - 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-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
Potassium, dissolved	MG/L	MW-35	03/21/2012	ND	1.0000
Potassium, dissolved	MG/L	MW-35	06/06/2012	ND	1.0000
Potassium, dissolved	MG/L	MW-35	09/26/2012	ND	1.0000
Potassium, dissolved	MG/L	MW-35	12/04/2012	ND	1.0000
Potassium, dissolved	MG/L	MW-35	03/13/2013	ND	1.0000
Potassium, dissolved	MG/L	MW-35	06/06/2013	ND	1.0000
Potassium, dissolved	MG/L	MW-35	09/05/2013	ND	1.0000
Potassium, dissolved	MG/L	MW-35	12/16/2013	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
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	ND	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-13A	03/21/2012	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	06/08/2012	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	09/26/2012	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	12/03/2012	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	03/11/2013	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	06/05/2013	ND	0.0010
Selenium, dissolved	MG/L	MW-13A	12/03/2013		0.0030
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-13B	03/21/2012	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	06/08/2012	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	09/26/2012	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	12/03/2012	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	03/11/2013	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	06/05/2013	ND	0.0010
Selenium, dissolved	MG/L	MW-13B	12/03/2013		0.0033
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-16	03/21/2012	ND	0.0010
Selenium, dissolved	MG/L	MW-16	06/08/2012	ND	0.0010
Selenium, dissolved	MG/L	MW-16	09/27/2012	ND	0.0010
Selenium, dissolved	MG/L	MW-16	12/04/2012	ND	0.0010
Selenium, dissolved	MG/L	MW-16	03/12/2013	ND	0.0010
Selenium, dissolved	MG/L	MW-16	06/04/2013	ND	0.0010
Selenium, dissolved	MG/L	MW-16	09/05/2013	ND	0.0010
Selenium, dissolved	MG/L	MW-16	12/16/2013	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

\* - 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	12/12/2006	ND	0.0010
Selenium, dissolved	MG/L	MW-35	03/27/2007	ND	0.0010
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
Selenium, dissolved	MG/L	MW-35	03/21/2012	ND	0.0010
Selenium, dissolved	MG/L	MW-35	06/06/2012	ND	0.0010
Selenium, dissolved	MG/L	MW-35	09/26/2012	ND	0.0010
Selenium, dissolved	MG/L	MW-35	12/04/2012	ND	0.0010
Selenium, dissolved	MG/L	MW-35	03/13/2013	ND	0.0010
Selenium, dissolved	MG/L	MW-35	06/06/2013	ND	0.0010
Selenium, dissolved	MG/L	MW-35	09/05/2013	ND	0.0010
Selenium, dissolved	MG/L	MW-35	12/16/2013	ND	0.0010
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-13A	03/21/2012	ND	0.0020
Silver, dissolved	MG/L	MW-13A	06/08/2012	ND	0.0020
Silver, dissolved	MG/L	MW-13A	09/26/2012	ND	0.0020
Silver, dissolved	MG/L	MW-13A	12/03/2012	ND	0.0020
Silver, dissolved	MG/L	MW-13A	03/11/2013	ND	0.0020
Silver, dissolved	MG/L	MW-13A	06/05/2013	ND	0.0020
Silver, dissolved	MG/L	MW-13A	12/03/2013	ND	0.0020
Silver, dissolved	MG/L	MW-13B	03/22/2005	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	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
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-13B	03/21/2012	ND	0.0020
Silver, dissolved	MG/L	MW-13B	06/08/2012	ND	0.0020
Silver, dissolved	MG/L	MW-13B	09/26/2012	ND	0.0020
Silver, dissolved	MG/L	MW-13B	12/03/2012	ND	0.0020
Silver, dissolved	MG/L	MW-13B	03/11/2013	ND	0.0020
Silver, dissolved	MG/L	MW-13B	06/05/2013	ND	0.0020
Silver, dissolved	MG/L	MW-13B	12/03/2013	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-16	03/21/2012	ND	0.0020
Silver, dissolved	MG/L	MW-16	06/08/2012	ND	0.0020
Silver, dissolved	MG/L	MW-16	09/27/2012	ND	0.0020
Silver, dissolved	MG/L	MW-16	12/04/2012	ND	0.0020
Silver, dissolved	MG/L	MW-16	03/12/2013	ND	0.0020
Silver, dissolved	MG/L	MW-16	06/04/2013	ND	0.0020
Silver, dissolved	MG/L	MW-16	09/05/2013	ND	0.0020
Silver, dissolved	MG/L	MW-16	12/16/2013	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

\* - 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-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
Silver, dissolved	MG/L	MW-35	03/21/2012	ND	0.0020
Silver, dissolved	MG/L	MW-35	06/06/2012	ND	0.0020
Silver, dissolved	MG/L	MW-35	09/26/2012	ND	0.0020
Silver, dissolved	MG/L	MW-35	12/04/2012	ND	0.0020
Silver, dissolved	MG/L	MW-35	03/13/2013	ND	0.0020
Silver, dissolved	MG/L	MW-35	06/06/2013	ND	0.0020
Silver, dissolved	MG/L	MW-35	09/05/2013	ND	0.0020
Silver, dissolved	MG/L	MW-35	12/16/2013	ND	0.0020
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
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-13A	03/21/2012		5.3000
Sodium, dissolved	MG/L	MW-13A	06/08/2012		5.2000
Sodium, dissolved	MG/L	MW-13A	09/26/2012		5.2000
Sodium, dissolved	MG/L	MW-13A	12/03/2012		5.5000
Sodium, dissolved	MG/L	MW-13A	03/11/2013		5.7000
Sodium, dissolved	MG/L	MW-13A	06/05/2013		5.6000
Sodium, dissolved	MG/L	MW-13A	12/03/2013		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

\* - 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-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-13B	03/21/2012	4.9000
Sodium, dissolved	MG/L	MW-13B	06/08/2012	5.1000
Sodium, dissolved	MG/L	MW-13B	09/26/2012	5.0000
Sodium, dissolved	MG/L	MW-13B	12/03/2012	5.7000
Sodium, dissolved	MG/L	MW-13B	03/11/2013	5.3000
Sodium, dissolved	MG/L	MW-13B	06/05/2013	5.4000
Sodium, dissolved	MG/L	MW-13B	12/03/2013	5.4000
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-16	03/21/2012	4.7000
Sodium, dissolved	MG/L	MW-16	06/08/2012	4.8000
Sodium, dissolved	MG/L	MW-16	09/27/2012	5.4000
Sodium, dissolved	MG/L	MW-16	12/04/2012	4.7000
Sodium, dissolved	MG/L	MW-16	03/12/2013	5.1000
Sodium, dissolved	MG/L	MW-16	06/04/2013	5.3000
Sodium, dissolved	MG/L	MW-16	09/05/2013	6.2000
Sodium, dissolved	MG/L	MW-16	12/16/2013	5.7000
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
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

\* - 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	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
Sodium, dissolved	MG/L	MW-35	03/21/2012	5.0000
Sodium, dissolved	MG/L	MW-35	06/06/2012	4.8000
Sodium, dissolved	MG/L	MW-35	09/26/2012	4.9000
Sodium, dissolved	MG/L	MW-35	12/04/2012	4.5000
Sodium, dissolved	MG/L	MW-35	03/13/2013	4.9000
Sodium, dissolved	MG/L	MW-35	06/06/2013	4.9000
Sodium, dissolved	MG/L	MW-35	09/05/2013	4.9000
Sodium, dissolved	MG/L	MW-35	12/16/2013	5.9000
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-13A	03/21/2012	0.1710
Specific conductivity	mS/cm	MW-13A	06/08/2012	0.1800
Specific conductivity	mS/cm	MW-13A	09/26/2012	0.1500
Specific conductivity	mS/cm	MW-13A	12/03/2012	0.1070
Specific conductivity	mS/cm	MW-13A	03/11/2013	0.1450
Specific conductivity	mS/cm	MW-13A	06/05/2013	0.1470
Specific conductivity	mS/cm	MW-13A	12/03/2013	0.1560
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

\* - 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	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
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-13B	03/21/2012	0.1650
Specific conductivity	mS/cm	MW-13B	06/08/2012	0.1750
Specific conductivity	mS/cm	MW-13B	09/26/2012	0.1480
Specific conductivity	mS/cm	MW-13B	12/03/2012	0.1400
Specific conductivity	mS/cm	MW-13B	03/11/2013	0.1440
Specific conductivity	mS/cm	MW-13B	06/05/2013	0.1440
Specific conductivity	mS/cm	MW-13B	12/03/2013	0.1540
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-16	03/21/2012	0.0790
Specific conductivity	mS/cm	MW-16	06/08/2012	0.1180
Specific conductivity	mS/cm	MW-16	09/27/2012	0.1060
Specific conductivity	mS/cm	MW-16	12/04/2012	0.0850
Specific conductivity	mS/cm	MW-16	03/12/2013	0.1180
Specific conductivity	mS/cm	MW-16	06/04/2013	0.1030
Specific conductivity	mS/cm	MW-16	09/05/2013	0.1100
Specific conductivity	mS/cm	MW-16	12/16/2013	0.0960
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

\* - 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-35	09/26/2011	0.1310
Specific conductivity	mS/cm	MW-35	12/13/2011	0.1480
Specific conductivity	mS/cm	MW-35	03/21/2012	0.1520
Specific conductivity	mS/cm	MW-35	06/06/2012	0.1380
Specific conductivity	mS/cm	MW-35	09/26/2012	0.1350
Specific conductivity	mS/cm	MW-35	12/04/2012	0.1480
Specific conductivity	mS/cm	MW-35	03/13/2013	0.1320
Specific conductivity	mS/cm	MW-35	06/06/2013	0.1330
Specific conductivity	mS/cm	MW-35	09/05/2013	0.1320
Specific conductivity	mS/cm	MW-35	12/16/2013	0.1210
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
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-13A	03/21/2012	1.9000
Sulfate	MG/L	MW-13A	06/08/2012	2.1000
Sulfate	MG/L	MW-13A	09/26/2012	2.1000
Sulfate	MG/L	MW-13A	12/03/2012	2.2000
Sulfate	MG/L	MW-13A	03/11/2013	1.9000
Sulfate	MG/L	MW-13A	06/05/2013	1.7000
Sulfate	MG/L	MW-13A	12/03/2013	1.6000
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

\* - 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-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-13B	03/21/2012		3.2000
Sulfate	MG/L	MW-13B	06/08/2012		3.5000
Sulfate	MG/L	MW-13B	09/26/2012		3.6000
Sulfate	MG/L	MW-13B	12/03/2012		3.5000
Sulfate	MG/L	MW-13B	03/11/2013		3.0000
Sulfate	MG/L	MW-13B	06/05/2013		3.5000
Sulfate	MG/L	MW-13B	12/03/2013		3.1000
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-16	03/21/2012		1.6000
Sulfate	MG/L	MW-16	06/08/2012		3.0000
Sulfate	MG/L	MW-16	09/27/2012		3.1000
Sulfate	MG/L	MW-16	12/04/2012		3.0000
Sulfate	MG/L	MW-16	03/12/2013		1.9000
Sulfate	MG/L	MW-16	06/04/2013		2.7000
Sulfate	MG/L	MW-16	09/05/2013		1.7000
Sulfate	MG/L	MW-16	12/16/2013		2.3000
Sulfate	MG/L	MW-35	03/22/2005		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	ND	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
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
Sulfate	MG/L	MW-35	03/21/2012		2.1000
Sulfate	MG/L	MW-35	06/06/2012		2.4000

\* - 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	09/26/2012	2.4000
Sulfate	MG/L	MW-35	12/04/2012	2.5000
Sulfate	MG/L	MW-35	03/13/2013	2.3000
Sulfate	MG/L	MW-35	06/06/2013	2.0000
Sulfate	MG/L	MW-35	09/05/2013	2.1000
Sulfate	MG/L	MW-35	12/16/2013	2.6000
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-13A	03/21/2012	8.7400
Temperature	deg C	MW-13A	06/08/2012	9.3000
Temperature	deg C	MW-13A	09/26/2012	10.0400
Temperature	deg C	MW-13A	12/03/2012	9.2000
Temperature	deg C	MW-13A	03/11/2013	9.2200
Temperature	deg C	MW-13A	06/05/2013	11.9600
Temperature	deg C	MW-13A	12/03/2013	8.9300
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

\* - 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-13B	03/21/2012		8.5000
Temperature	deg C	MW-13B	06/08/2012		9.4000
Temperature	deg C	MW-13B	09/26/2012		10.5900
Temperature	deg C	MW-13B	12/03/2012		9.2000
Temperature	deg C	MW-13B	03/11/2013		9.1500
Temperature	deg C	MW-13B	06/05/2013		11.4100
Temperature	deg C	MW-13B	12/03/2013		9.4400
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
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-16	03/21/2012		8.8200
Temperature	deg C	MW-16	06/08/2012		9.2000
Temperature	deg C	MW-16	09/27/2012		9.0600
Temperature	deg C	MW-16	12/04/2012		9.1000
Temperature	deg C	MW-16	03/12/2013		9.0200
Temperature	deg C	MW-16	06/04/2013		9.4700
Temperature	deg C	MW-16	09/05/2013		9.3600
Temperature	deg C	MW-16	12/16/2013		9.0400
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
Temperature	deg C	MW-35	03/21/2012		9.7800
Temperature	deg C	MW-35	06/06/2012		10.3000
Temperature	deg C	MW-35	09/26/2012		10.2000
Temperature	deg C	MW-35	12/04/2012		9.8000
Temperature	deg C	MW-35	03/13/2013		9.7500
Temperature	deg C	MW-35	06/06/2013		10.8300
Temperature	deg C	MW-35	09/05/2013		10.0900
Temperature	deg C	MW-35	12/16/2013		9.8400
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

\* - 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-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-13A	03/21/2012	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	06/08/2012	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	09/26/2012	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	12/03/2012	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	03/11/2013	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	06/05/2013	ND	0.0010
Thallium, dissolved	MG/L	MW-13A	12/03/2013	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
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-13B	03/21/2012	ND	0.0010
Thallium, dissolved	MG/L	MW-13B	06/08/2012	ND	0.0010
Thallium, dissolved	MG/L	MW-13B	09/26/2012	ND	0.0010
Thallium, dissolved	MG/L	MW-13B	12/03/2012	ND	0.0010
Thallium, dissolved	MG/L	MW-13B	03/11/2013	ND	0.0010
Thallium, dissolved	MG/L	MW-13B	06/05/2013	ND	0.0010
Thallium, dissolved	MG/L	MW-13B	12/03/2013	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-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-16	03/21/2012	ND	0.0010
Thallium, dissolved	MG/L	MW-16	06/08/2012	ND	0.0010
Thallium, dissolved	MG/L	MW-16	09/27/2012	ND	0.0010
Thallium, dissolved	MG/L	MW-16	12/04/2012	ND	0.0010
Thallium, dissolved	MG/L	MW-16	03/12/2013	ND	0.0010
Thallium, dissolved	MG/L	MW-16	06/04/2013	ND	0.0010
Thallium, dissolved	MG/L	MW-16	09/05/2013	ND	0.0010
Thallium, dissolved	MG/L	MW-16	12/16/2013	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
Thallium, dissolved	MG/L	MW-35	03/21/2012	ND	0.0010
Thallium, dissolved	MG/L	MW-35	06/06/2012	ND	0.0010
Thallium, dissolved	MG/L	MW-35	09/26/2012	ND	0.0010
Thallium, dissolved	MG/L	MW-35	12/04/2012	ND	0.0010
Thallium, dissolved	MG/L	MW-35	03/13/2013	ND	0.0010
Thallium, dissolved	MG/L	MW-35	06/06/2013	ND	0.0010
Thallium, dissolved	MG/L	MW-35	09/05/2013	ND	0.0010
Thallium, dissolved	MG/L	MW-35	12/16/2013	ND	0.0010
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
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

\* - 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	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-13A	03/21/2012	93.0000
Total dissolved solids (tds)	MG/L	MW-13A	06/08/2012	120.0000
Total dissolved solids (tds)	MG/L	MW-13A	09/26/2012	120.0000
Total dissolved solids (tds)	MG/L	MW-13A	12/03/2012	88.0000
Total dissolved solids (tds)	MG/L	MW-13A	03/11/2013	100.0000
Total dissolved solids (tds)	MG/L	MW-13A	06/05/2013	100.0000
Total dissolved solids (tds)	MG/L	MW-13A	12/03/2013	98.0000
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-13B	03/21/2012	100.0000
Total dissolved solids (tds)	MG/L	MW-13B	06/08/2012	110.0000
Total dissolved solids (tds)	MG/L	MW-13B	09/26/2012	110.0000
Total dissolved solids (tds)	MG/L	MW-13B	12/03/2012	93.0000
Total dissolved solids (tds)	MG/L	MW-13B	03/11/2013	100.0000
Total dissolved solids (tds)	MG/L	MW-13B	06/05/2013	98.0000
Total dissolved solids (tds)	MG/L	MW-13B	12/03/2013	99.0000
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

\* - 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-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-16	03/21/2012		71.0000
Total dissolved solids (tds)	MG/L	MW-16	06/08/2012		95.0000
Total dissolved solids (tds)	MG/L	MW-16	09/27/2012		87.0000
Total dissolved solids (tds)	MG/L	MW-16	12/04/2012		100.0000
Total dissolved solids (tds)	MG/L	MW-16	03/12/2013		100.0000
Total dissolved solids (tds)	MG/L	MW-16	06/04/2013		68.0000
Total dissolved solids (tds)	MG/L	MW-16	09/05/2013		100.0000
Total dissolved solids (tds)	MG/L	MW-16	12/16/2013		92.0000
Total dissolved solids (tds)	MG/L	MW-35	03/22/2005		100.0000
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 dissolved solids (tds)	MG/L	MW-35	03/21/2012		85.0000
Total dissolved solids (tds)	MG/L	MW-35	06/06/2012		120.0000
Total dissolved solids (tds)	MG/L	MW-35	09/26/2012		110.0000
Total dissolved solids (tds)	MG/L	MW-35	12/04/2012		100.0000
Total dissolved solids (tds)	MG/L	MW-35	03/13/2013		96.0000
Total dissolved solids (tds)	MG/L	MW-35	06/06/2013		90.0000
Total dissolved solids (tds)	MG/L	MW-35	09/05/2013		100.0000
Total dissolved solids (tds)	MG/L	MW-35	12/16/2013		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

\* - 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-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-13A	03/21/2012	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	06/08/2012	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	09/26/2012	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	12/03/2012	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	03/11/2013	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	06/05/2013	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13A	12/03/2013	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
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-13B	03/21/2012	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	06/08/2012	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	09/26/2012	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	12/03/2012	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	03/11/2013	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	06/05/2013	ND	1.0000
Total organic carbon (toc)	MG/L	MW-13B	12/03/2013	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

\* - 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-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-16	03/21/2012	ND	1.0000
Total organic carbon (toc)	MG/L	MW-16	06/08/2012	ND	1.0000
Total organic carbon (toc)	MG/L	MW-16	09/27/2012	ND	1.0000
Total organic carbon (toc)	MG/L	MW-16	12/04/2012	ND	1.0000
Total organic carbon (toc)	MG/L	MW-16	03/12/2013	ND	1.0000
Total organic carbon (toc)	MG/L	MW-16	06/04/2013	ND	1.0000
Total organic carbon (toc)	MG/L	MW-16	09/05/2013	ND	1.0000
Total organic carbon (toc)	MG/L	MW-16	12/16/2013	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
Total organic carbon (toc)	MG/L	MW-35	03/21/2012	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	06/06/2012	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	09/26/2012	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	12/04/2012	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	03/13/2013	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	06/06/2013	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	09/05/2013	ND	1.0000
Total organic carbon (toc)	MG/L	MW-35	12/16/2013	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
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

\* - 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	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-13A	03/21/2012	0.0037
Vanadium, dissolved	MG/L	MW-13A	06/08/2012	0.0039
Vanadium, dissolved	MG/L	MW-13A	09/26/2012	0.0039
Vanadium, dissolved	MG/L	MW-13A	12/03/2012	0.0037
Vanadium, dissolved	MG/L	MW-13A	03/11/2013	0.0043
Vanadium, dissolved	MG/L	MW-13A	06/05/2013	0.0035
Vanadium, dissolved	MG/L	MW-13A	12/03/2013	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-13B	03/21/2012	0.0055
Vanadium, dissolved	MG/L	MW-13B	06/08/2012	0.0055
Vanadium, dissolved	MG/L	MW-13B	09/26/2012	0.0055
Vanadium, dissolved	MG/L	MW-13B	12/03/2012	0.0052
Vanadium, dissolved	MG/L	MW-13B	03/11/2013	0.0053
Vanadium, dissolved	MG/L	MW-13B	06/05/2013	0.0055
Vanadium, dissolved	MG/L	MW-13B	12/03/2013	0.0057
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

\* - 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-16	03/21/2012		0.0042
Vanadium, dissolved	MG/L	MW-16	06/08/2012		0.0033
Vanadium, dissolved	MG/L	MW-16	09/27/2012		0.0043
Vanadium, dissolved	MG/L	MW-16	12/04/2012		0.0034
Vanadium, dissolved	MG/L	MW-16	03/12/2013		0.0033
Vanadium, dissolved	MG/L	MW-16	06/04/2013		0.0038
Vanadium, dissolved	MG/L	MW-16	09/05/2013		0.0037
Vanadium, dissolved	MG/L	MW-16	12/16/2013		0.0034
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
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
Vanadium, dissolved	MG/L	MW-35	03/21/2012		0.0046
Vanadium, dissolved	MG/L	MW-35	06/06/2012		0.0042
Vanadium, dissolved	MG/L	MW-35	09/26/2012		0.0043
Vanadium, dissolved	MG/L	MW-35	12/04/2012		0.0041
Vanadium, dissolved	MG/L	MW-35	03/13/2013		0.0041
Vanadium, dissolved	MG/L	MW-35	06/06/2013		0.0044
Vanadium, dissolved	MG/L	MW-35	09/05/2013		0.0042
Vanadium, dissolved	MG/L	MW-35	12/16/2013		0.0044
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-13A	03/21/2012	ND	0.0050
Zinc, dissolved	MG/L	MW-13A	06/08/2012	ND	0.0050
Zinc, dissolved	MG/L	MW-13A	09/26/2012	ND	0.0050
Zinc, dissolved	MG/L	MW-13A	12/03/2012	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-13A	03/11/2013	ND	0.0050
Zinc, dissolved	MG/L	MW-13A	06/05/2013	ND	0.0050
Zinc, dissolved	MG/L	MW-13A	12/03/2013	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-13B	03/21/2012	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	06/08/2012	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	09/26/2012	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	12/03/2012	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	03/11/2013	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	06/05/2013	ND	0.0050
Zinc, dissolved	MG/L	MW-13B	12/03/2013	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
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-16	03/21/2012	ND	0.0050
Zinc, dissolved	MG/L	MW-16	06/08/2012	ND	0.0050
Zinc, dissolved	MG/L	MW-16	09/27/2012	ND	0.0050
Zinc, dissolved	MG/L	MW-16	12/04/2012	ND	0.0050
Zinc, dissolved	MG/L	MW-16	03/12/2013	ND	0.0050
Zinc, dissolved	MG/L	MW-16	06/04/2013	ND	0.0050
Zinc, dissolved	MG/L	MW-16	09/05/2013	ND	0.0050
Zinc, dissolved	MG/L	MW-16	12/16/2013	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
Zinc, dissolved	MG/L	MW-35	03/21/2012	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-35	06/06/2012	ND	0.0050
Zinc, dissolved	MG/L	MW-35	09/26/2012	ND	0.0050
Zinc, dissolved	MG/L	MW-35	12/04/2012	ND	0.0050
Zinc, dissolved	MG/L	MW-35	03/13/2013	ND	0.0050
Zinc, dissolved	MG/L	MW-35	06/06/2013	ND	0.0050
Zinc, dissolved	MG/L	MW-35	09/05/2013	ND	0.0050
Zinc, dissolved	MG/L	MW-35	12/16/2013	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)	122	1.000	2.932	4.197	2.326	nonpar
Alkalinity, total (as caco3)	126	1.000	2.656	3.929	2.326	nonpar
Ammonia (as n)	71	0.577	7.442	7.048	2.326	nonpar
Antimony, dissolved	0	0.000				nonpar
Arsenic, dissolved	123	1.000	6.274	6.352	2.326	nonpar
Barium, dissolved	125	0.992	4.212	4.209	2.326	nonpar
Beryllium, dissolved	0	0.000				nonpar
Cadmium, dissolved	0	0.000				nonpar
Calcium, dissolved	126	1.000	6.983	6.773	2.326	nonpar
Chloride	125	0.992	1.692	1.666	2.326	normal
Chromium, dissolved	44	0.349	1.876	1.873	2.326	nonpar
Cobalt, dissolved	0	0.000				nonpar
Copper, dissolved	4	0.032				nonpar
Iron, dissolved	4	0.032				nonpar
Lead, dissolved	0	0.000				nonpar
Magnesium, dissolved	126	1.000	1.169	0.617	2.326	normal
Manganese, dissolved	11	0.087	2.449	2.443	2.326	nonpar
Nickel, dissolved	0	0.000				nonpar
Nitrate (as n)	122	1.000	12.134	10.784	2.326	nonpar
pH	119	1.000	1.592	1.987	2.326	normal
Potassium, dissolved	12	0.095	0.153	0.091	2.326	nonpar
Selenium, dissolved	4	0.032				nonpar
Silver, dissolved	0	0.000				nonpar
Sodium, dissolved	126	1.000	3.162	3.057	2.326	nonpar
Specific conductivity	119	1.000	7.146	7.262	2.326	nonpar
Sulfate	125	0.992	5.090	4.626	2.326	nonpar
Temperature	119	1.000	3.164	2.421	2.326	nonpar
Thallium, dissolved	0	0.000				nonpar
Total dissolved solids (tds)	126	1.000	5.335	4.262	2.326	nonpar
Total organic carbon (toc)	7	0.056	0.146	1.287	2.326	nonpar
Vanadium, dissolved	125	0.992	4.853	4.852	2.326	nonpar
Zinc, dissolved	1	0.011				nonpar

Fit to distribution is confirmed if  $G < \text{critical value}$ .

If detection frequency is  $< 50\%$  nonparametric limit is used.

Data in this table are based on pooled data shown in Table 2-3, outliers excluded

**TABLE 2-5**  
**COMPARISON OF UPDATED (2014) PREDICTION LIMITS**  
**TO PREVIOUS YEAR (2013) PREDICTION LIMITS**  
**Olympic View Sanitary Landfill**

<b>Constituent</b>	<b>2013 Pred. Limit</b>	<b>Distributional Assumption</b>	<b>2014 Pred. Limit</b>	<b>Distributional Assumption</b>
Alkalinity, bicarbonate (as caco3)	96	nonparametric	96	nonparametric
Alkalinity, total (as caco3)	96	nonparametric	96	nonparametric
Ammonia (as n)	0.34	nonparametric	0.34	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	3.91	normal	4.00	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	10.74	normal	10.86	normal
Manganese, dissolved	0.0067	nonparametric	0.014	nonparametric
Nickel, dissolved	Current RL*	nonparametric	Current RL*	nonparametric
Nitrate (as n)	1.80	nonparametric	1.80	nonparametric
pH	5.87 - 8.27	normal	5.89 - 8.24	normal
Potassium, dissolved	1.00	nonparametric	1.00	nonparametric
Selenium, dissolved	0.0011	nonparametric	0.0033	nonparametric
Silver, dissolved	Current RL*	nonparametric	Current RL*	nonparametric
Sodium, dissolved	6.20	nonparametric	6.20	nonparametric
Specific conductivity	0.18	nonparametric	0.18	nonparametric
Sulfate	9.90	nonparametric	9.90	nonparametric
Temperature	11.09	normal	11.96	nonparametric
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**

- 2013 Annual Preliminary Groundwater Cleanup Goals Statistical Evaluation Summary (Table 3-1)

**TABLE 3-1: 2013 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, 2011 through December 31, 2013

**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	12	0%	0.38 (ND)	0.38	ug/L	B	50	ug/L	No	No
MW-15R	Compliance	1,4-Dichlorobenzene	12	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
MW-15R	Compliance	Arsenic, dissolved	12	100%	0.26	0.23	ug/L	LN	0.462	ug/L	No	No
MW-15R	Compliance	Iron, dissolved	12	0%	0.06 (ND)	0.06	mg/L	B	0.30	mg/L	No	No
MW-15R	Compliance	Manganese, dissolved	12	92%	0.0044	0.003	mg/L	Z	0.05	mg/L	No	Yes (▼)
MW-15R	Compliance	cis-1,2-dichloroethene	12	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No
MW-15R	Compliance	Ethyl ether	12	0%	0.72 (ND)	0.72	ug/L	B	50	ug/L	No	No
MW-15R	Compliance	Trichloroethene	12	0%	0.46 (ND)	0.46	ug/L	B	1.0	ug/L	No	No
MW-15R	Compliance	Vinyl Chloride	12	58%	0.046	0.04	ug/L	LN	0.20	ug/L	No	No
MW-15R	Compliance	Ammonia as N	12 <sup>[7]</sup>	50%	0.069	0.069	mg/L	LN	0.19	mg/L	No	No
MW-34A	Compliance	1,1-Dichloroethane	12	0%	0.38 (ND)	0.38	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%	0.57	0.50	ug/L	LN	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	0%	0.0010	0.0010	mg/L	B	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	12	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	8.3%	0.023	0.023	ug/L	A	0.20	ug/L	No	No
MW-34A	Compliance	Ammonia as N	12	58%	0.15	0.08	mg/L	LN	0.19	mg/L	No	No
MW-34C	Compliance	1,1-Dichloroethane	12	0%	0.38 (ND)	0.38	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%	4.2	1.89	ug/L	Z	0.462	ug/L	Yes	Yes (▼)
MW-34C	Compliance	Iron, dissolved	12	100%	1.0	0.89	mg/L	LN	0.30	mg/L	Yes	Yes (▼)
MW-34C	Compliance	Manganese, dissolved	12	100%	0.80	0.71	mg/L	LN	0.05	mg/L	Yes	Yes (▼)
MW-34C	Compliance	cis-1,2-dichloroethene	12	0%	0.81 (ND)	0.81	ug/L	B	35	ug/L	No	No

**TABLE 3-1: 2013 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, 2011 through December 31, 2013**Wells Evaluated:** (1) Compliance -- MW-15R, MW-34A, MW-34C, MW-39, MW-42, MW-43; (2) Downgradient -- MW-9<sup>+</sup>, 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	Ethyl ether	12	0%	0.72 (ND)	0.72	ug/L	B	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%	0.16	0.14	ug/L	LN	0.20	ug/L	No	No
MW-34C	Compliance	Ammonia as N	12	50%	0.18	0.18	mg/L	A	0.19	mg/L	No	No
MW-39	Compliance	1,1-Dichloroethane	12	0%	0.38 (ND)	0.38	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%	2.23	1.71	ug/L	Z	0.462	ug/L	Yes	No
MW-39	Compliance	Iron, dissolved	12	92%	41.0	32.6	mg/L	Z	0.30	mg/L	Yes	No
MW-39	Compliance	Manganese, dissolved	12	100%	0.53	0.44	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)	0.02	ug/L	B	0.20	ug/L	No	No
MW-39	Compliance	Ammonia as N	12	100%	0.43	0.35	mg/L	Z	0.19	mg/L	Yes	No
MW-42	Compliance	1,1-Dichloroethane	12	0%	0.38 (ND)	0.38	ug/L	B	50	ug/L	No	No
MW-42	Compliance	1,4-Dichlorobenzene	12	0%	0.84 (ND)	0.84	ug/L	B	2.0	ug/L	No	No
MW-42	Compliance	Arsenic, dissolved	12	100%	1.7	1.6	ug/L	Z	0.462	ug/L	Yes	No
MW-42	Compliance	Iron, dissolved	12	100%	28	26.8	mg/L	LN	0.30	mg/L	Yes	No
MW-42	Compliance	Manganese, dissolved	12	100%	5.4	5.1	mg/L	LN	0.05	mg/L	Yes	No
MW-42	Compliance	cis-1,2-dichloroethene	12	0%	0.81 (ND)	0.81	ug/L	B	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	83%	0.15	0.12	ug/L	LN	0.20	ug/L	No	No
MW-42	Compliance	Ammonia as N	12	92%	59.0	16.7	mg/L	Z	0.19	mg/L	Yes	No
MW-43	Compliance	1,1-Dichloroethane	12	0%	0.38 (ND)	0.38	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

**TABLE 3-1: 2013 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, 2011 through December 31, 2013

**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	Arsenic, dissolved	12	33%	0.05	0.05	ug/L	A	0.462	ug/L	No	No
MW-43	Compliance	Iron, dissolved	12	83%	0.87	0.51	mg/L	N	0.30	mg/L	Yes	No
MW-43	Compliance	Manganese, dissolved	12	100%	0.37	0.24	mg/L	N	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	8.3%	0.036	0.036	ug/L	A	0.20	ug/L	No	No
MW-43	Compliance	Ammonia as N	12	92%	0.18	0.18	mg/L	LN	0.19	mg/L	No	No
MW-29A	Downgradient	1,1-Dichloroethane	6	0%	0.38 (ND)	0.38	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	1.82	ug/L	LN	0.462	ug/L	Yes	No
MW-29A	Downgradient	Iron, dissolved	6	100%	4.2	4.07	mg/L	LN	0.30	mg/L	Yes	No
MW-29A	Downgradient	Manganese, dissolved	6	100%	1.4	1.38	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
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)	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	Z	0.19	mg/L	No	No
MW-32	Downgradient	1,1-Dichloroethane	12	0%	0.38 (ND)	0.38	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%	11.4	10.0	ug/L	LN	0.462	ug/L	Yes	No
MW-32	Downgradient	Iron, dissolved	12	100%	0.77	0.66	mg/L	Z	0.30	mg/L	Yes	Yes (▼)
MW-32	Downgradient	Manganese, dissolved	12	100%	2.7	2.24	mg/L	Z	0.05	mg/L	Yes	No
MW-32	Downgradient	cis-1,2-dichloroethene	12	0%	0.81 (ND)	0.81	ug/L	B	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	58%	0.70	0.57	ug/L	LN	1.0	ug/L	No	No
MW-32	Downgradient	Vinyl Chloride	12	100%	0.63	0.47	ug/L	LN	0.20	ug/L	Yes	No

**TABLE 3-1: 2013 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, 2011 through December 31, 2013**Wells Evaluated:** (1) Compliance -- MW-15R, MW-34A, MW-34C, MW-39, MW-42, MW-43; (2) Downgradient -- MW-9<sup>+</sup>, 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-32	Downgradient	Ammonia as N	12	58%	0.17	0.11	mg/L	LN	0.19	mg/L	No	No
MW-33A	Downgradient	1,1-Dichloroethane	6	0%	0.38 (ND)	0.38	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%	0.37	0.24	ug/L	Z	0.462	ug/L	No	No
MW-33A	Downgradient	Iron, dissolved	6	83%	2.1	2.1	mg/L	A**	0.30	mg/L	Yes	No
MW-33A	Downgradient	Manganese, dissolved	6	100%	0.081	0.08	mg/L	A**	0.05	mg/L	Yes	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)	0.02	ug/L	B	0.20	ug/L	No	No
MW-33A	Downgradient	Ammonia as N	6	83%	0.28	0.25	mg/L	N	0.19	mg/L	Yes	No
MW-33C	Downgradient	1,1-Dichloroethane	12	0%	0.38 (ND)	0.38	ug/L	B	50	ug/L	No	No
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%	2.66	2.50	ug/L	LN	0.462	ug/L	Yes	Yes (▼)
MW-33C	Downgradient	Iron, dissolved	12	8.3%	0.088	0.088	mg/L	A	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)	0.02	ug/L	B	0.20	ug/L	No	No
MW-33C	Downgradient	Ammonia as N	12	50%	0.15	0.20	mg/L	LN	0.19	mg/L	Yes	No
MW-36A	Downgradient	1,1-Dichloroethane	12	0%	0.38 (ND)	0.38	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%	0.96	0.82	ug/L	LN	0.462	ug/L	Yes	Yes (▼)
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%	0.0038	0.003	mg/L	LN	0.05	mg/L	No	No

**TABLE 3-1: 2013 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, 2011 through December 31, 2013

**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-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	8.3%	0.063	0.063	ug/L	A	0.20	ug/L	No	No
MW-36A	Downgradient	Ammonia as N	12 <sup>[8]</sup>	50%	0.077	0.077	mg/L	A	0.19	mg/L	No	No

**NOTES:**  
 \* Well MW-9 is no longer routinely sampled and no longer included on this table

<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 2013; arrows indicated increasing (▲) or decreasing (▼) trends.

<sup>[7]</sup> For MW-15R, gross outlier of 0.31 mg/L from 6-7-12 sampling event was removed prior to UCL calculation

<sup>[8]</sup> For MW-36A, gross outlier of 0.30 mg/L from 6-7-12 sampling event was removed prior to UCL calculation

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.

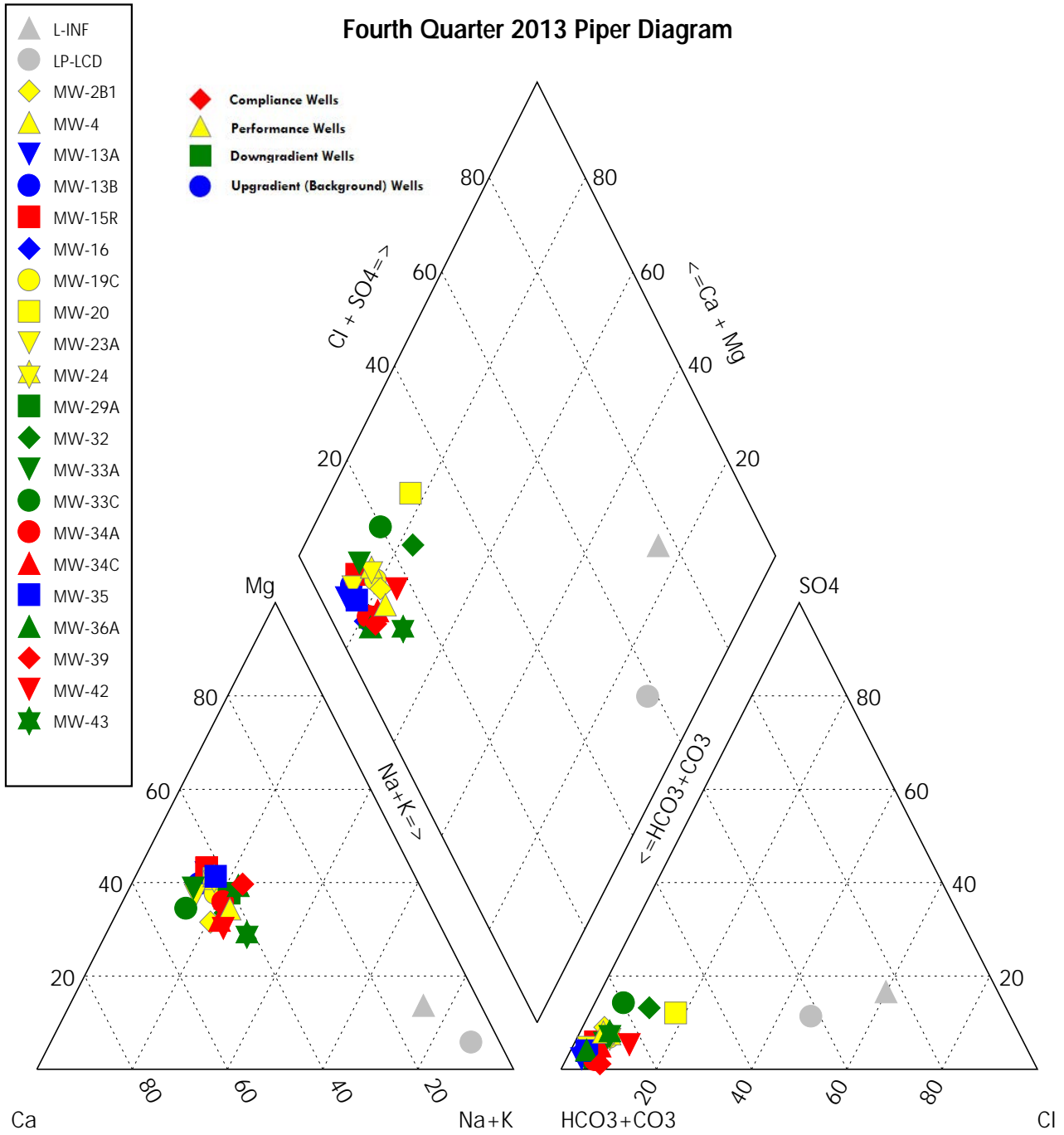
Z = the 95% UCL of the mean is calculated using the Z-score method in MTCASat since neither normal nor lognormal distribution can be determined.

APPENDIX D  
FOURTH QUARTER 2013  
GROUNDWATER GEOCHEMICAL EVALUATION





### Fourth Quarter 2013 Piper Diagram



DESCRIPTION: Fourth Quarter 2013 Piper Diagram

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013

## CATION/ANION BALANCE

Location MW-13A  
Sample Date 12/3/2013

### CATIONS

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	5.5	0.239
K	0.02258	1	0.0256
Ca	0.04990	16	0.798
Mg	0.8229	9.4	0.774
Sum of Cations			1.837

### ANIONS

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	1.7	0.04795
SO4	0.02082	1.6	0.03333
NO3	0.01613		
HCO3	0.01639	86	1.41
Sum of Anions			1.49
Sum of Ions			3.33
Balance (% Difference)			10.4

DESCRIPTION: Fourth Quarter 2013 Cation/Anion Balance

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013

## CATION/ANION BALANCE

Location MW-13B  
Sample Date 12/3/2013

### CATIONS

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	5.4	0.235
K	0.02258	1	0.0256
Ca	0.04990	17	0.848
Mg	0.8229	8.9	0.732
Sum of Cations			1.84

### ANIONS

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	1.9	0.0536
SO4	0.02082	3.1	0.0646
NO3	0.01613		
HCO3	0.01639	84	1.377
Sum of Anions			1.495
Sum of Ions			3.336
Balance (% Difference)			10.38

DESCRIPTION: Fourth Quarter 2013 Cation/Anion Balance

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013

## CATION/ANION BALANCE

Location MW-15R  
Sample Date 12/4/2013

### CATIONS

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	6.2	0.2697
K	0.02258	1	0.0256
Ca	0.04990	18	0.898
Mg	0.8229	11	0.905
Sum of Cations			2.1

### ANIONS

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	2.6	0.0733
SO4	0.02082	4.8	0.1
NO3	0.01613		
HCO3	0.01639	94	1.54
Sum of Anions			1.714
Sum of Ions			3.81
Balance (% Difference)			10.1

DESCRIPTION: Fourth Quarter 2013 Cation/Anion Balance

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013

## CATION/ANION BALANCE

Location MW-16  
Sample Date 12/16/2013

### CATIONS

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	5.7	0.248
K	0.02258	1	0.0256
Ca	0.04990	11	0.549
Mg	0.8229	5.9	0.4855
Sum of Cations			1.308

### ANIONS

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	1	0.0282
SO4	0.02082	2.3	0.0479
NO3	0.01613		
HCO3	0.01639	62	1.016
Sum of Anions			1.092
Sum of Ions			2.4
Balance (% Difference)			8.99

DESCRIPTION: Fourth Quarter 2013 Cation/Anion Balance

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013

## CATION/ANION BALANCE

Location MW-19C  
Sample Date 12/3/2013

### CATIONS

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	6	0.261
K	0.02258	1.4	0.0358
Ca	0.04990	14	0.699
Mg	0.8229	7.3	0.601
Sum of Cations			1.596

### ANIONS

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	3.3	0.093
SO4	0.02082	4.6	0.0958
NO3	0.01613		
HCO3	0.01639	74	1.213
Sum of Anions			1.402
Sum of Ions			3.0
Balance (% Difference)			6.49

DESCRIPTION: Fourth Quarter 2013 Cation/Anion Balance

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013

## CATION/ANION BALANCE

Location MW-20  
Sample Date 12/4/2013

### CATIONS

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	14	0.609
K	0.02258	3.9	0.0997
Ca	0.04990	36	1.796
Mg	0.8229	21	1.728
Sum of Cations			4.23

### ANIONS

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	21	0.592
SO4	0.02082	19	0.396
NO3	0.01613		
HCO3	0.01639	140	2.294
Sum of Anions			3.28
Sum of Ions			7.52
Balance (% Difference)			12.65

DESCRIPTION: Fourth Quarter 2013 Cation/Anion Balance

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013

## CATION/ANION BALANCE

Location MW-23A  
Sample Date 12/4/2013

### CATIONS

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	6.4	0.2784
K	0.02258	1	0.0256
Ca	0.04990	20	0.998
Mg	0.8229	9.4	0.774
Sum of Cations			2.076

### ANIONS

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	2.1	0.0592
SO4	0.02082	4	0.0833
NO3	0.01613		
HCO3	0.01639	100	1.64
Sum of Anions			1.78
Sum of Ions			3.86
Balance (% Difference)			7.62

DESCRIPTION: Fourth Quarter 2013 Cation/Anion Balance

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013



## CATION/ANION BALANCE

Location MW-24  
Sample Date 12/4/2013

### CATIONS

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	5.3	0.2305
K	0.02258	1	0.0256
Ca	0.04990	13	0.649
Mg	0.8229	7.6	0.625
Sum of Cations			1.53

### ANIONS

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	3	0.0846
SO4	0.02082	4.2	0.0875
NO3	0.01613		
HCO3	0.01639	66	1.082
Sum of Anions			1.254
Sum of Ions			2.784
Balance (% Difference)			9.93

DESCRIPTION: Fourth Quarter 2013 Cation/Anion Balance

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013

## CATION/ANION BALANCE

Location MW-29A  
Sample Date 12/3/2013

### CATIONS

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	3.4	0.148
K	0.02258	1	0.0256
Ca	0.04990	6.6	0.3294
Mg	0.8229	3.7	0.3045
Sum of Cations			0.807

### ANIONS

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	1.7	0.04795
SO4	0.02082	1	0.02083
NO3	0.01613		
HCO3	0.01639	46	0.754
Sum of Anions			0.823
Sum of Ions			1.63
Balance (% Difference)			-0.944

DESCRIPTION: Fourth Quarter 2013 Cation/Anion Balance

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013

## CATION/ANION BALANCE

Location MW-2B1  
Sample Date 12/5/2013

### CATIONS

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	4.8	0.2088
K	0.02258	1.1	0.02813
Ca	0.04990	11	0.549
Mg	0.8229	4.4	0.362
Sum of Cations			1.148

### ANIONS

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	1.7	0.04795
SO4	0.02082	4.4	0.0917
NO3	0.01613		
HCO3	0.01639	54	0.885
Sum of Anions			1.025
Sum of Ions			2.173
Balance (% Difference)			5.68

DESCRIPTION: Fourth Quarter 2013 Cation/Anion Balance

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013

## CATION/ANION BALANCE

Location MW-32  
Sample Date 12/16/2013

### CATIONS

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	16	0.696
K	0.02258	1.2	0.0307
Ca	0.04990	28	1.397
Mg	0.8229	13	1.07
Sum of Cations			3.194

### ANIONS

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	12	0.3385
SO4	0.02082	18	0.375
NO3	0.01613		
HCO3	0.01639	130	2.13
Sum of Anions			2.844
Sum of Ions			6.04
Balance (% Difference)			5.79

DESCRIPTION: Fourth Quarter 2013 Cation/Anion Balance

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013

## CATION/ANION BALANCE

Location MW-33A  
Sample Date 12/5/2013

### CATIONS

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	3.6	0.1566
K	0.02258	1	0.0256
Ca	0.04990	13	0.649
Mg	0.8229	6.4	0.527
Sum of Cations			1.358

### ANIONS

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	2.5	0.0705
SO4	0.02082	3	0.0625
NO3	0.01613		
HCO3	0.01639	60	0.983
Sum of Anions			1.116
Sum of Ions			2.474
Balance (% Difference)			9.75

DESCRIPTION: Fourth Quarter 2013 Cation/Anion Balance

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013

## CATION/ANION BALANCE

Location MW-33C  
Sample Date 12/16/2013

### CATIONS

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	4.3	0.187
K	0.02258	1.2	0.0307
Ca	0.04990	16	0.798
Mg	0.8229	6.5	0.535
Sum of Cations			1.55

### ANIONS

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	3	0.0846
SO4	0.02082	9.7	0.202
NO3	0.01613		
HCO3	0.01639	69	1.13
Sum of Anions			1.418
Sum of Ions			2.97
Balance (% Difference)			4.5

DESCRIPTION: Fourth Quarter 2013 Cation/Anion Balance

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013

## CATION/ANION BALANCE

Location MW-34A  
Sample Date 12/3/2013

### CATIONS

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	9.5	0.413
K	0.02258	1	0.0256
Ca	0.04990	18	0.898
Mg	0.8229	9.1	0.749
Sum of Cations			2.086

### ANIONS

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	3.7	0.1044
SO4	0.02082	1.7	0.0354
NO3	0.01613		
HCO3	0.01639	97	1.59
Sum of Anions			1.73
Sum of Ions			3.815
Balance (% Difference)			9.34

DESCRIPTION: Fourth Quarter 2013 Cation/Anion Balance

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013

## CATION/ANION BALANCE

Location MW-34C  
Sample Date 12/3/2013

### CATIONS

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	14	0.609
K	0.02258	1	0.0256
Ca	0.04990	26	1.297
Mg	0.8229	11	0.905
Sum of Cations			2.84

### ANIONS

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	4.8	0.1354
SO4	0.02082	5.7	0.1188
NO3	0.01613		
HCO3	0.01639	130	2.13
Sum of Anions			2.385
Sum of Ions			5.22
Balance (% Difference)			8.67

DESCRIPTION: Fourth Quarter 2013 Cation/Anion Balance

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013



## CATION/ANION BALANCE

Location MW-35  
Sample Date 12/16/2013

### CATIONS

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	5.9	0.2566
K	0.02258	1	0.0256
Ca	0.04990	14	0.699
Mg	0.8229	8.4	0.691
Sum of Cations			1.672

### ANIONS

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	1.7	0.04795
SO4	0.02082	2.6	0.0542
NO3	0.01613		
HCO3	0.01639	78	1.278
Sum of Anions			1.38
Sum of Ions			3.05
Balance (% Difference)			9.55

DESCRIPTION: Fourth Quarter 2013 Cation/Anion Balance

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013

## CATION/ANION BALANCE

Location MW-36A  
Sample Date 12/4/2013

### CATIONS

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	6.9	0.3
K	0.02258	1	0.0256
Ca	0.04990	11	0.549
Mg	0.8229	6.9	0.568
Sum of Cations			1.442

### ANIONS

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	1.3	0.0367
SO4	0.02082	2.2	0.0458
NO3	0.01613		
HCO3	0.01639	63	1.032
Sum of Anions			1.115
Sum of Ions			2.557
Balance (% Difference)			12.8

DESCRIPTION: Fourth Quarter 2013 Cation/Anion Balance

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013

## CATION/ANION BALANCE

Location MW-39  
Sample Date 12/5/2013

### CATIONS

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	8.1	0.352
K	0.02258	1	0.0256
Ca	0.04990	12	0.599
Mg	0.8229	7.8	0.642
Sum of Cations			1.62

### ANIONS

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	4.8	0.1354
SO4	0.02082	1	0.02083
NO3	0.01613		
HCO3	0.01639	99	1.622
Sum of Anions			1.78
Sum of Ions			3.4
Balance (% Difference)			-4.71

DESCRIPTION: Fourth Quarter 2013 Cation/Anion Balance

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013

## CATION/ANION BALANCE

Location MW-4  
Sample Date 12/16/2013

### CATIONS

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	7	0.3045
K	0.02258	1	0.0256
Ca	0.04990	12	0.599
Mg	0.8229	5.9	0.4855
Sum of Cations			1.414

### ANIONS

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	2.1	0.0592
SO4	0.02082	4.6	0.0958
NO3	0.01613		
HCO3	0.01639	64	1.049
Sum of Anions			1.204
Sum of Ions			2.62
Balance (% Difference)			8.04

DESCRIPTION: Fourth Quarter 2013 Cation/Anion Balance

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013

## CATION/ANION BALANCE

Location MW-42  
Sample Date 12/3/2013

### CATIONS

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	20	0.87
K	0.02258	6.9	0.1765
Ca	0.04990	40	1.996
Mg	0.8229	16	1.317
Sum of Cations			4.36

### ANIONS

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	18	0.508
SO4	0.02082	11	0.229
NO3	0.01613		
HCO3	0.01639	220	3.606
Sum of Anions			4.34
Sum of Ions			8.7
Balance (% Difference)			0.192

DESCRIPTION: Fourth Quarter 2013 Cation/Anion Balance

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013

## CATION/ANION BALANCE

Location MW-43  
Sample Date 12/2/2013

### CATIONS

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	3.1	0.1348
K	0.02258	1	0.0256
Ca	0.04990	4.5	0.2246
Mg	0.8229	1.9	0.1563
Sum of Cations			0.541

### ANIONS

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	1	0.0282
SO4	0.02082	1.6	0.03333
NO3	0.01613		
HCO3	0.01639	23	0.377
Sum of Anions			0.4385
Sum of Ions			0.98
Balance (% Difference)			10.5

DESCRIPTION: Fourth Quarter 2013 Cation/Anion Balance

PROJECT: Olympic View Sanitary Landfill

PROJECT NO: 04204027.17

CLIENT: Waste Management

DATE: December 2013

**CATION/ANION BALANCE**

**Location** L-INF  
**Sample Date** 12/16/2013

**CATIONS**

<b>Major Ions</b>	<b>Conversion Factor</b>	<b>mg/L</b>	<b>meq/L</b>
Na	0.04350	650	28.3
K	0.02258	100	2.56
Ca	0.04990	100	4.99
Mg	0.8229	69	5.68
<b>Sum of Cations</b>			<b>41.5</b>

**ANIONS**

<b>Major Ions</b>	<b>Conversion Factor</b>	<b>mg/L</b>	<b>meq/L</b>
Cl	0.02821	770	21.7
SO4	0.02082	290	6.04
NO3	0.01613		
HCO3	0.01639	520	8.52
<b>Sum of Anions</b>			<b>36.3</b>
<b>Sum of Ions</b>			<b>77.8</b>
<b>Balance (% Difference)</b>			<b>6.7</b>

**DESCRIPTION** Fourth Quarter 2013 Cation/Anion Balance

**PROJECT:** Olympic View Sanitary Landfill

**PROJECT NO:** 04204027.17

**CLIENT:** Waste Management

**DATE:** December 2013

**CATION/ANION BALANCE**

**Location** LP-LCD  
**Sample Date** 12/13/2013

**CATIONS**

Major Ions	Conversion Factor	mg/L	meq/L
Na	0.04350	770	33.5
K	0.02258	66	1.688
Ca	0.04990	48	2.395
Mg	0.8229	28	2.304
Sum of Cations			39.9

**ANIONS**

Major Ions	Conversion Factor	mg/L	meq/L
Cl	0.02821	610	17.2
SO4	0.02082	200	4.17
NO3	0.01613		
HCO3	0.01639	940	15.4
Sum of Anions			36.8
Sum of Ions			76.7
Balance (%Difference)			4.05

**DESCRIPTION:** Fourth Quarter 2013 Cation/Anion Balance

**PROJECT:** Olympic View Sanitary Landfill

**PROJECT NO:** 04204027.17

**CLIENT:** Waste Management

**DATE:** December 2013



APPENDIX E  
LANDFILL GAS MONIOTIRNG RESULTS



**Table E1. Historical Results of Methane (CH<sub>4</sub>) Measurements  
2013 Annual Monitoring Report  
Olympic View Sanitary Landfill, Port Orchard, Washington**

Date Monitored	OV-GP-07	OV-GP-08	OV-GP-9S	OV-GP-9D	OV-GP10S	OV-GP10D	OV-GP11S	OV-GP11D	OV-GP12S	OV-GP12M	OV-GP12D	OV-GP13S	OV-GP13M	OV-GP13D	OV-GP14	OV-GP15	OV-GP16
12/13/2013	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	3.4	0.0
7/13/2013	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	2.7	0.0
5/13/2013	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
2/13/2013	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	0.6	0.0
11/12/2012	0.1	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
8/12/2012	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
5/18/2012	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	0.2	0.0
3/12/2012	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	2.9	0.0
12/22/2011	0.0	0.0	0.0	—	0.0	—	0.0	—	0.0	0.0	—	0.0	0.0	—	0.0	1.5	0.0
9/27/2011	0.0	0.0	0.0	—	0.0	—	0.0	—	0.0	0.0	—	0.0	0.0	—	0.0	0.3	0.0
6/29/2011	0.1	0.0	0.0	—	0.0	—	0.0	—	0.0	0.0	—	0.0	0.0	—	0.0	1.0	0.0
3/16/2011	0.0	0.0	0.0	—	0.0	—	0.0	—	0.0	0.0	—	0.0	0.0	—	0.0	0.0	0.0
12/22/2010	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
9/27/2010	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
6/29/2010	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
3/16/2010	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	0.2	0.0
12/8/2009	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	1.7	0.0
9/4/2009	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
6/5/2009	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
3/3/2009	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	0.9	0.1
12/1/2008	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	1.4	0.0
9/5/2008	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	5.8	0.0
6/23/2008	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	4.9	0.0
3/5/2008	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	9.4	0.0
12/28/2007	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	5.7	0.0
9/30/2007	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	9.3	0.0
6/15/2007	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	7.6	0.0
3/30/2007	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	6.2	1.6

**Notes:**  
 OV-GP = Gas Probe  
 S = Shallow Monitoring Zone  
 M = Middle Monitoring Zone  
 D = Deep Monitoring Zone  
 Detected CH<sub>4</sub>>0.3% vol.  
 — Screened interval submerged

**Table E2. Historical Results of Carbon Dioxide (CO<sub>2</sub>) Measurements  
2013 Annual Monitoring Report  
Olympic View Sanitary Landfill, Port Orchard, Washington**

Date Monitored	OV-GP-07	OV-GP-08	OV-GP-9S	OV-GP-9D	OV-GP10S	OV-GP10D	OV-GP11S	OV-GP11D	OV-GP12S	OV-GP12M	OV-GP12D	OV-GP13S	OV-GP13M	OV-GP13D	OV-GP14	OV-GP15	OV-GP16
12/13/2013	9.6	5.4	2.6	1.7	1.1	0.9	3.5	3.6	1.7	1.9	1.7	3.9	3.8	3.7	8.5	9.5	5.1
7/13/2013	9.6	4.5	2.9	1.5	1.1	0.7	3.9	0.4	1.8	1.7	0.4	3.5	3.1	3.1	7.8	7.8	7.4
5/13/2013	6.2	2.6	2.3	1.7	0.8	0.7	2.4	2.2	1.9	1.0	0.8	2.3	2.6	0.1	5.3	4.0	5.0
2/13/2013	4.2	2.5	1.7	1.5	0.7	0.7	1.8	2.4	1.1	0.9	0.8	2.3	2.4	0.8	5.1	6.2	3.9
11/20/2012	8.3	2.8	1.9	1.6	0.9	0.7	2.2	2.9	1.3	1.2	1.2	2.9	2.1	3.0	7.5	3.5	4.8
8/20/2012	9.6	4.6	2.5	1.4	0.8	0.6	2.8	2.8	1.8	1.5	—	3.5	2.1	1.6	7.9	1.7	6.1
5/18/2012	6.0	3.1	2.6	1.7	0.8	0.6	2.1	—	2.2	1.1	—	2.6	1.7	1.1	5.7	3.4	5.1
3/12/2012	4.2	1.7	2.3	1.7	0.7	0.7	1.7	2.4	1.9	1.9	0.1	3.0	3.2	2.8	—	6.2	4.4
12/22/2011	1.5	5.5	3.2	—	1.3	—	1.3	—	1.4	1.0	—	2.0	2.0	—	5.1	5.2	4.6
9/27/2011	9.7	4.7	1.7	—	0.7	—	1.8	—	0.7	0.7	—	2.9	1.8	—	8.9	8.8	2.4
6/29/2011	6.6	3.0	3.0	—	0.7	—	2.1	—	2.3	0.9	—	3.4	3.0	—	6.4	3.9	6.2
3/16/2011	1.5	0.5	2.1	—	0.7	—	1.4	—	2.4	1.7	—	3	3.1	—	0.3	0.3	3.8
12/22/2010	8.3	2.4	2.3	1.7	3.2	2.8	2.4	2.1	2.2	1.8	1.0	3.9	3.5	19.5	3.4	1.3	6.7
9/27/2010	11.0	4.1	2.1	1.5	0.9	1.0	2.0	0.4	1.9	1.3	0.7	1.1	3.2	20.7	10.2	0.8	7.4
6/29/2010	8.0	0.2	3.5	1.6	0.9	0.7	2.5	1.6	2.3	2.2	0.7	2.7	3.0	14.9	7.3	0.2	9.3
3/16/2010	5.1	2.1	2.5	1.7	0.2	0.7	1.9	1.7	1.5	1.3	1.4	1.2	3.2	15.6	6.0	1.9	7.0
12/8/2009	6.9	6.1	2.3	1.7	0.1	0.4	1.8	0.2	1.5	1.8	0.2	1.5	3.3	3.3	10.0	2.8	7.1
9/4/2009	11.3	6.8	2.7	2.0	0.9	0.9	2.6	2.0	2.4	2.7	2.2	3.4	3.8	13.9	11.7	5.1	1.9
6/5/2009	7.6	4.9	3.2	1.9	0.6	0.6	2.2	1.6	2.3	2.3	1.5	2.9	3.8	12.4	8.2	2.4	2.0
3/3/2009	7.7	2.8	2.1	1.4	0.6	0.6	1.6	1.4	1.5	1.4	1.3	2.1	4.0	3.6	8.0	2.4	1.1
12/1/2008	9.2	7.0	0.7	0.7	2.9	1.7	2.0	1.6	2.3	2.3	1.8	2.9	4.2	12.4	9.9	2.9	1.8
9/5/2008	10.3	6.2	3.0	1.9	1.0	0.8	2.8	2.1	3.1	2.6	2.3	4.2	4.7	3.9	9.8	14.3	1.9
6/23/2008	8.5	4.6	2.9	1.6	0.8	0.7	2.5	1.8	1.8	2.0	1.0	3.4	4.4	4.3	7.5	12.4	2.3
3/5/2008	4.9	2.6	2.3	1.6	0.6	0.7	2.0	1.7	1.0	0.8	1.1	2.3	4.7	5.0	6.6	8.9	1.2
12/28/2007	7.7	1.2	2.2	1.8	0.9	0.8	2.3	1.9	5.3	5.3	2.2	2.9	5.7	4.2	8.2	8.5	1.5
9/30/2007	11.7	7.1	2.4	1.6	1.0	0.7	2.7	1.7	2.7	3.1	2.2	4.4	5.9	6.0	11.0	18.1	1.5
6/15/2007	8.1	4.3	3.2	1.7	0.9	0.7	2.7	1.5	2.7	2.5	0.6	3.6	6.6	6.6	8.1	12.5	1.8
3/30/2007	4.7	0.8	2.5	2.0	0.7	0.7	1.8	1.5	2.2	2.1	1.1	2.7	7.5	8.2	0.1	8.8	19.1

**Notes:**  
 OV-GP = Gas Probe  
 S = Shallow Monitoring Zone  
 M = Middle Monitoring Zone  
 D = Deep Monitoring Zone  
 Detected CO<sub>2</sub>>0.3% vol.  
 — Screened interval submerged

**Table E3. Historical Results of Oxygen (O<sub>2</sub>) Measurements**  
**2013 Annual Monitoring Report**  
**Olympic View Sanitary Landfill, Port Orchard, Washington**

Date Monitored	OV-GP-07	OV-GP-08	OV-GP-9S	OV-GP-9D	OV-GP10S	OV-GP10D	OV-GP11S	OV-GP11D	OV-GP12S	OV-GP12M	OV-GP12D	OV-GP13S	OV-GP13M	OV-GP13D	OV-GP14	OV-GP15	OV-GP16
12/13/2013	4.9	6.3	19.4	19.6	20.1	19.3	17.6	11.5	18.5	17.8	16.6	17.6	17.3	17.3	3.9	1.2	16.1
7/13/2013	4.4	5.8	18.5	19.1	20.0	19.2	16.9	20.2	17.3	16.3	19.1	17.0	17.7	18.0	0.0	0.0	13.6
5/13/2013	4.5	8.4	18.8	19.0	20.1	18.7	18.2	15.7	19.6	20.0	18.7	18.2	17.9	20.8	6.2	7.2	15.4
2/13/2013	4.0	7.4	19.2	18.2	20.4	18.4	18.9	14.2	20.5	20.2	18.1	18.6	17.1	20.2	5.8	0.3	15.9
11/20/2012	4.8	4.5	18.0	19.5	20.2	19.7	18.9	14.0	18.9	18.9	16.8	17.9	18.9	18.1	5.2	7.2	13.8
8/20/2012	5.0	6.7	18.5	18.4	19.3	18.6	17.9	12.5	18.3	18.0	—	16.9	17.5	18.4	4.3	19.1	15.3
5/18/2012	4.2	5.8	17.7	18.7	19.8	19.3	18.1	—	19.2	19.3	—	18.0	19.1	19.8	5.5	13.0	15.0
3/12/2012	3.5	5.4	18.6	19.0	20.1	18.6	19.1	15.4	18.0	17.7	21.4	18.2	17.6	18.3	—	0.0	15.6
12/22/2011	20.0	5.7	17.6	—	19.8	—	18.9	—	19.6	19.3	—	17.7	18.4	—	6.7	12.4	15.2
9/27/2011	8.9	10.8	19.9	—	20.6	—	20.0	—	20.4	19.9	—	18.3	18.8	—	7.6	4.4	18.8
6/29/2011	3.6	6.5	17.9	—	20.2	—	18.7	—	19.4	19.8	—	17.2	14.9	—	4.8	6.5	14.8
3/16/2011	20.1	20.7	18.3	—	20.5	—	16.5	—	16.7	17.4	—	16.6	15	—	20.6	20.4	15.3
12/22/2010	1.8	2.4	16.3	17.8	11.1	10.1	16.5	16.4	16.1	16.1	18.8	14.7	14.5	19.5	18.6	19.4	11.2
9/27/2010	6.6	9.7	18.5	19.0	20.5	20.6	19.1	20.5	19.0	19.0	19.4	17.5	15.3	20.7	8.2	20.3	12.6
6/29/2010	3.5	20.1	16.6	18.0	19.3	18.3	17.3	18.1	16.8	16.8	18.4	15.8	13.4	14.9	4.5	19.6	9.2
3/16/2010	3.0	8.5	18.4	19.3	21.6	19.3	18.0	18.9	20.9	20.9	18.0	17.0	12.7	15.6	2.8	10.0	10.4
12/8/2009	2.5	6.0	16.6	18.8	21.3	21.6	19.3	21.7	17.9	17.9	20.1	17.9	15.2	15.7	1.8	5.3	10.4
9/4/2009	7.5	6.4	19.8	19.8	21.1	20.2	20.1	19.6	15.9	15.9	14.3	17.3	14.3	13.9	3.0	3.3	19.3
6/5/2009	2.4	3.4	17.0	18.3	20.1	18.9	18.3	19.0	16.3	16.3	17.0	15.3	12.6	12.4	3.0	6.2	18.9
3/3/2009	2.9	7.5	18.8	18.9	20.4	18.9	18.8	19.3	19.0	19.0	16.7	16.3	13.4	13.7	2.7	0.0	19.5
12/1/2008	1.4	1.0	20.2	19.6	17.6	19.1	18.9	19.1	16.5	16.5	15.2	16.4	13.1	12.4	1.6	0.0	18.8
9/5/2008	6.8	8.0	18.9	19.3	20.5	19.7	19.1	19.4	17.1	17.1	14.4	15.8	11.7	13.0	5.0	0.0	19.5
6/23/2008	6.0	10.8	18.5	19.3	20.1	19.3	18.9	19.2	17.5	17.5	18.1	16.3	11.3	10.5	4.3	0.0	19.1
3/5/2008	4.0	13.6	19.3	19.5	20.2	18.7	18.8	18.2	20.0	20.0	18.4	15.4	8.8	8.5	5.5	0.0	20.3
12/28/2007	3.9	5.7	17.7	18.9	20.3	19.0	18.8	18.5	15.0	15.0	15.3	14.7	6.0	10.6	2.2	0.3	19.6
9/30/2007	6.2	5.7	19.7	19.3	20.0	19.5	19.2	19.6	16.4	13.9	12.2	14.5	7.8	6.5	4.3	0.0	19.7
6/15/2007	4.8	7.2	18.4	18.8	20.1	18.9	18.1	18.8	17.7	17.7	18.4	15.3	6.6	5.5	3.7	0.0	20.0
3/30/2007	4.6	6.8	17.7	18.1	19.9	18.4	17.7	16.7	17.1	17.1	17.0	12.7	2.5	2.1	20.9	0.0	18.8

**Notes:**  
OV-GP = Gas Probe  
S = Shallow Monitoring Zone  
M = Middle Monitoring Zone  
D = Deep Monitoring Zone  
Depressed O<sub>2</sub><20.3% vol.  
— Screened interval submerged