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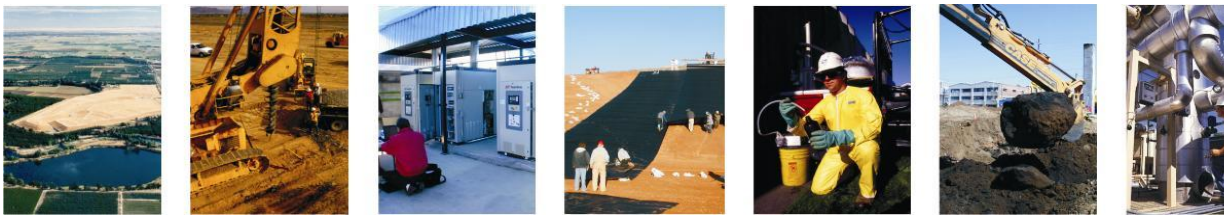

2012 Annual Monitoring Report

Remedial Action at the Hansville Landfill

Kitsap County, WA

Presented to:

KITSAP COUNTY/
WASTE MANAGEMEMENT OF WASHINGTON, INC

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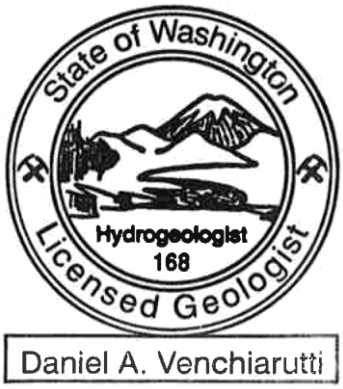

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ACRONYMS

bgs	below ground surface
CAP	Cleanup Action Plan
CH4	methane
CMP	Compliance Monitoring Plan
CO2	carbon dioxide
COCs	contaminants of concern
COD	chemical oxygen demand
County	Kitsap County
Ecology	Washington State Department of Ecology
Eh	oxidation-reduction potential/redox
ft-msl	feet above mean sea level
GP	gas probe
HDPE	high density polyethylene
KCSL	Kitsap County Sanitary Landfill
Landfill	Hansville Landfill solid waste disposal area, the demolition waste disposal area, and the septage disposal area located on the Landfill Property
LEL	lower explosive limit
LFG	landfill gas
Landfill Property	Total area and facilities encompassed by the Hansville Landfill property boundary
LCL	lower confidence limit
mg/L	milligrams per liter
µg/L	micrograms per liter
msl	mean sea level
MCL	maximum contaminant level
MDL	method detection limit
MRL	method reporting limit
MTCA	Model Toxics Control Act
MW	groundwater monitoring well
NA	not applicable
ND	non-detect
NM	not measured
O&M	operation and maintenance
O2	oxygen
PCL	preliminary cleanup level
PVC	polyvinyl chloride
QAP	Quality Assurance Plan
QA/QC	Quality Assurance/Quality Control
RCW	Revised Code of Washington

RFQ	Request for Qualifications
RI/FS	Remedial Investigation/Feasibility Study
SAP	Sampling and Analysis Plan
SCL	Site Cleanup Level
SCS	SCS Engineers
SEPA	State Environmental Policy Act
SHA	Site Hazard Assessment
Site	Landfill Property boundary plus the extent of groundwater and surface water contamination impacts from the Landfill on Port Gamble S'Klallam Tribal property
SW	surface water monitoring stations
TOC	total organic carbon
TSS	total suspended solids
UCL	upper confidence limit
VOCs	volatile organic compounds
WAC	Washington Administrative Code
WMW	Waste Management of Washington, Inc.

1.0 INTRODUCTION

This annual summary report describes the results of quarterly environmental monitoring (groundwater, surface water, and landfill gas) conducted at the Hansville Landfill Site during 2012. The landfill monitoring was conducted on behalf of Kitsap County (the County) and Waste Management of Washington, Inc. (WMW). Groundwater and surface water were sampled quarterly during January, April, July, and October, respectively. Landfill gas measurements were generally recorded on a monthly basis.

Site monitoring activities completed during the 2012 reporting period were performed in accordance with the final Cleanup Action Plan (CAP) for the Hansville Landfill. The CAP, which was approved in August 2011, is the central component of the Amended Consent Decree (No. 95-2-03005-1) that was formally executed on August 5, 2011. The environmental sampling, data management and reporting required under the final CAP is documented in *Compliance Monitoring Plan, with Sampling & Analysis Plan (SAP) and Quality Assurance Plan (QAP), Remedial Action at the Hansville Landfill, Kitsap County, WA,* SCS Engineers, dated September 2011.

1.1 REGULATORY FRAMEWORK

The Hansville Landfill is a former municipal landfill that stopped accepting waste and officially closed in 1989. The closure met the requirements of Chapter 173-304 Washington Administrative Code (WAC). The closure consisted of final site grading, surface capping (including the installation of a high-density polyethylene [HDPE] liner over three distinct disposal areas), and the installation of surface water controls. A passive landfill gas collection system, including horizontal piping installed beneath the HDPE liner and a flaring station, was also constructed at this time. In 1991, an active landfill gas extraction and flaring system was installed within the municipal solid waste and demolition landfill units to better control methane migration and the removal of volatile organic compounds (VOCs) from subsurface soil and groundwater.

Also, in 1991, the Washington Department of Ecology (Ecology) performed a Site Hazard Assessment (SHA) under the Model Toxics Control Act (MTCA) Regulations which resulted in an initial ranking of 3. This ranking was subsequently changed to a 1 (the highest rank on a scale of 1 to 5) in 1992, based on changes in the state ranking model. Throughout this period, Kitsap County Sanitary Landfill (KCSL, which merged into WMW) conducted additional investigations, continued environmental monitoring, and implemented additional improvements at the Site as part of a corrective action program.

In October 1995, Ecology signed a consent decree with the County and KCSL to conduct a Remedial Investigation/Feasibility Study (RI/FS) for the Site. The RI was completed in 2007 and the FS was completed in 2009. The RI/FS identified arsenic and vinyl chloride in groundwater (and in seepage to surface water) as the primary contaminants of concern (COCs) related to the landfill. The highest concentrations of these COCs generally occur adjacent to the waste disposal areas with decreasing concentrations at increasing distances from the landfill.

Based on these findings, site-specific cleanup levels were developed for arsenic, vinyl chloride and manganese in groundwater, and arsenic and vinyl chloride in surface water.

Based on the FS findings, a preferred remedial alternative of Natural Attenuation of Groundwater with Enhanced Monitoring and Institutional Controls was selected for implementation at the Hansville Landfill Site. The CAP was specifically developed to implement the selected remedy. Along with a restrictive covenant for the Landfill Property, the CAP was incorporated into the Amended Consent Decree executed on August 5, 2011. A Compliance Monitoring Plan (CMP), including a MTCA compliant SAP and QAP, was prepared by SCS in September 2011 to document the revised monitoring program to be executed under the CAP. Compliance monitoring under the CAP was initiated during the fourth quarter of 2011 and continues through the present time.

1.2 REPORT CONTENTS

This report includes:

- A Site description and background sections. Figure 1 shows the Landfill Property location (Appendix A).
- A summary of the 2012 groundwater and surface water monitoring activities, including water level measurements and sample collection and analysis techniques. Figure 2 illustrates the locations of the groundwater monitoring wells and surface water sampling stations on the Site (Appendix A).
- Summary data tables of the fourth quarter 2012 water quality monitoring results including water table elevations, analytical data, and a contour map depicting groundwater elevations and flow directions for the quarter (Appendix B).
- Summary data tables and groundwater contour maps, previously reported, for the preceding three quarters of 2012 (Appendix C).
- An evaluation of water quality results, including comparisons to regulatory standards, tracking natural attenuation parameters, and statistical analysis (Appendix D), as defined under the CAP.
- A presentation of the fourth quarter 2012 landfill gas monitoring results, including a summary table for the reporting period (Appendix B). Figure 3 illustrates the layout of the landfill gas system and monitoring probe locations (Appendix A).
- Summary landfill gas data tables, previously reported, for the preceding three quarters of 2012 (Appendix C).
- Field report forms and laboratory analytical reports (including data validation summaries) for the fourth quarter 2012 (Appendix E and F, respectively).

All terms used in this report are consistent with those defined in the Consent Decree as well as in Revised Code of Washington (RCW) 70.1050.020 and WAC 173-340-200.

2.0 SITE BACKGROUND

2.1 SITE LOCATION AND DESCRIPTION

The Site subject to the CAP and subject to the monitoring described in this report contains the Landfill, the Landfill Property, and a portion of land owned by the Port Gamble S'Klallam Tribe. The closed Hansville Landfill is located on an approximately 73-acre parcel within the northeast quarter of Section 9, Township 27 North, Range 2 East of the Willamette Meridian, in Kitsap County, Washington. It consists of three separate, inactive disposal areas. These include the following:

- 13-acre municipal solid waste disposal cell situated within the central portion of the property;
- 4-acre demolition disposal cell situated on the northeast corner of the property, which accepted construction, demolition, and land clearing wastes; and
- 1/3-acre septage lagoon located immediately southwest of the demolition disposal area, which accepted residential septic tank waste until 1982. A second septage disposal area was also reportedly located near the northeast corner of the demolition disposal area.

The Site lies approximately five miles south of the unincorporated community of Hansville on the northernmost reach of the Kitsap Peninsula and is situated on the upper portions of several west sloping drainages with perennial creeks that ultimately discharge into Port Gamble Bay. The topography ranges between 310 and 390 feet above mean sea level (msl). A Landfill Property location map is provided as Figure 1 (Appendix A).

The County owns the Landfill Property and currently operates a drop box, known as a recycling and garbage facility in Kitsap County, on the eastern end. This portion of property has been used for solid waste transfer and/or recycling operations since the landfill ceased accepting refuse in 1989. The remaining portions of the Landfill Property are largely comprised of a soil borrow area and wooded land. As previously mentioned, the landfill was active between approximately 1962 and 1989. Prior to development of the landfill, the property was undeveloped forested land.

The property is bordered to the south and west by lands owned by the Port Gamble S'Klallam Tribe. Tribal lands in the immediate vicinity of the Landfill Property principally consist of woodland and recreational land, with scattered commercial (a tribal casino) and rural residential development further to the south and southwest. Surrounding areas to the north and east of the Landfill Property are zoned low-density residential, rural wooded, or light industrial and are sparsely developed. The area directly east of the Landfill Property has been recently cleared and is reportedly under development for light industrial use. The nearest permanent residence is located approximately 1,500 ft east of the solid waste disposal area.

As part of the landfill closure activities the three disposal areas were capped, a landfill gas extraction/flaring system was installed and surface water drainage controls were implemented. The passive landfill gas extraction system was upgraded in 1991 to an active system that

includes interior landfill gas extraction wells and trenches (installed in refuse), perimeter gas extraction wells located in native soil adjacent to the solid waste disposal area, a condensate collection system, and a fenced blower/flare facility. A series of seven landfill gas monitoring probes are also located in the vicinity of the property borders to monitor for potential offsite methane migration. The surface water drainage control system controls storm water flow and minimizes erosion and offsite migration of sediment-bearing water. Drainage and erosion protection improvements include hydroseeding, culverts, and drainage ditches.

2.2 LOCAL AND REGIONAL HYDROGEOLOGY

The regional near-surface geology in the vicinity of the Hansville Landfill is dominated by glacio-fluvial and glacio-lacustrine deposits associated with the Vashon glaciation. The RI (Parametrix, 2007) identifies the following main stratigraphic units at the site (from ground surface downward):

- Sand - This unit was reported in all the investigative borings from the ground surface to depths ranging from 62 to 142 feet below ground surface (bgs). The sand deposit consists primarily of poorly graded, fine- and medium-grained sand with trace amounts of silt and gravel. The material is dark yellowish brown to dark gray in color, dense to very dense, and dry to saturated. The RI references the sand unit as the upper aquifer. This unit has been interpreted as outwash associated within the Vashon Drift.

- Transition Zone - This zone was reported at three boring locations (MW-8, MW-9, and MW-14) and is approximately 15 feet thick. It consists of interbedded layers of sand, silty sand, and silt and does not appear to be areally extensive.

- Silt - This unit was reported in all the soil borings advanced through the upper aquifer. It occurred at elevations ranging from approximately 175 feet above msl (at MW-14) to 217 feet msl (at MW-9). The silt is dark gray, slightly to moderately plastic, very dense, and dry. This unit has been interpreted to be the Kitsap Formation.

Groundwater in the immediate vicinity of the landfill occurs within the upper aquifer at depths ranging between 41 feet bgs (at MW-1) to 104 feet bgs (at MW-5). The water table beneath the landfill is reported to range between 251 and 271 feet above msl. To the west (downgradient) of the landfill, groundwater within the upper aquifer reportedly occurs between 7 feet bgs (at MW-12I) and 45 feet bgs (at MW-8). The corresponding water table elevations recorded in these wells has historically ranged from approximately 238 to 260 feet above msl.

Groundwater flow in the upper aquifer in the vicinity of the Hansville Landfill has been consistently reported to be towards the west-southwest. The 2007 RI noted that groundwater from the upper aquifer discharges into the headwaters of several perennial creeks west (downgradient) of the landfill. These creeks reportedly include Little Boston Creek, Creek A, Creek B, Creek C, and Middle Creek. Within the deeper hydrologic unit, the dense silts reported for the Kitsap Formation have a relatively low hydraulic conductivity, restricting vertical movement of groundwater through the formation.

2.3 HISTORY OF LANDFILL COMPLIANCE MONITORING

2.3.1 Water Quality

Groundwater monitoring was initiated at the site in 1982 with the installation of three groundwater monitoring wells (MW-1 through MW-3). Three additional groundwater monitoring wells (MW-4 though MW-6) were added to the monitoring program in 1988. Beginning in 1996, more groundwater wells were installed as part of a phased RI including three wells (MW-7 through MW-12) during Phase I, and five wells (MW-8D, MW-12I, MW-13S, MW-13D, and MW-14) during Phase II.

Monitoring of surface water commenced in 1991 at two locations on Middle Creek (SW-1 and SW-2). Two additional locations (SW-SB and SW-3) were added in 1992 and 1994, respectively. Seven new surface water sampling locations (SW-4, SW-5, SW-6, SW-7, SW-8, SW-9, and SW-10) were subsequently established during the 1996 RI.

Four comprehensive quarterly RI sampling events for groundwater and surface water were conducted between August 1996 and June 1997. Ecology-directed quarterly monitoring was initiated in March 1998 using a subset of the groundwater and surface water locations established during the RI. In the first quarter of 2000, Ecology approved further streamlining of the monitoring program, which remained largely unchanged through the third quarter of 2011. The streamlined monitoring program included:

- Quarterly sampling of six (6) groundwater monitoring wells (MW-5, MW-6, MW-7, MW-12I, MW-13D and MW-14). The groundwater parameter suite included: alkalinity, ammonia, bicarbonate, carbonate, chloride, chemical oxygen demand (COD), hydroxide (alkalinity), nitrate, nitrite, sulfate, total organic carbon (TOC), total coliform, dissolved metals (calcium, copper, iron, lead, magnesium, manganese, potassium, sodium and low-level arsenic), and vinyl chloride by SIM. Annual sampling and analysis is also conducted for the volatile organic compounds (VOCs) suite.
- Quarterly sampling of five (5) surface water monitoring stations (SW-1, SW-4, SW-6, SW-7 and SW-10). The surface water parameter suite included all the groundwater parameters (except that fecal coliform replaced total coliform analysis), as well as total suspended solids (TSS), turbidity and hardness.

Beginning with the fourth quarter 2011 sampling event, the water quality monitoring program was further modified to comply with the final CAP developed for the site. As detailed in Section 2.4, the CAP-defined water quality monitoring program includes quarterly monitoring of six (6) groundwater compliance wells and four (4) surface water sampling stations.

2.3.2 Landfill Gas

Closure construction was completed at the landfill in 1990, including the installation of a passive gas collection system. The passive landfill gas collection system in the solid waste disposal areas was subsequently converted to an active extraction and flaring system in 1991. Additional modifications to the gas system were completed in 1994 to separate the perimeter gas extraction

well flow from the in-refuse gas extraction well and trench flow. The perimeter gas extraction system ceased operation in 1995 (Parametrix, 2011).

The landfill gas control system layout is shown on Figure 3 (Appendix A). Four gas probes (GP-1 through GP-4) were initially installed on the property in 1990 to monitor landfill gas migration. An additional gas migration probe (GP-5) was subsequently installed in 1994. The probes were placed in the native soils around the perimeter of the property to a depth approximately equal to the depth of refuse. All probes are single-completion except GP-2, which is a triple-completion probe screened within a shallow, middle and deeper zone. Monitoring frequency for gas was increased to quarterly in 1987 and monthly in 1991.

Two additional gas probes (GP-6 and GP-7) were installed for the RI in 1996 (Parametrix 2007). Probe GP-6 was installed near the northeastern corner of the landfill near the demolition disposal area. Probe GP-7 was installed adjacent to groundwater monitoring well MW-9 southwest of the solid waste disposal area on Tribal land. These additional probes were constructed as single-completions and are screened in the soil column above the saturated zone of the upper aquifer.

A downsized flare was installed in 2003 to handle the decreased volume of landfill gas generated at the landfill. In November 2006, system piping was upgraded from aboveground polyvinyl chloride (PVC) to below ground high density polyethylene (HDPE) pipe within the solid waste disposal area and demolition footprint areas.

Routine landfill gas monitoring included field measurements for methane gas, oxygen gas, carbon dioxide gas, and pressure at 21 extraction well/trench ports, 2 blower/flare ports, and the 7 perimeter gas probes. The final CAP, which was implemented during the final quarter of 2011, requires that quarterly landfill gas monitoring continue to be performed at these locations.

2.4 CURRENT MONITORING PROGRAM UNDER THE SITE REMEDY

Beginning with the fourth quarter of 2011, the compliance monitoring program for the Hansville Landfill Site transitioned to that outlined in the final CAP. As previously noted, the CAP identified arsenic and vinyl chloride in groundwater and surface water as the primary COCs. Manganese was also identified as an additional COC. The table below summarizes the final site-specific cleanup levels that have been established for the site.

FINAL SITE CLEANUP LEVELS – HANSVILLE LANDFILL REMEDY [1]			
Chemical	**Media**	**Site Cleanup Level (µg/L)**	**Origin of Cleanup Level**
Vinyl chloride	Groundwater	0.025	EPA Human Health, 2004
Arsenic		5	Background
Manganese		2,240	Method B Formula Value
Vinyl chloride	Surface Water	0.025	EPA Human Health, 2004
Arsenic		5	Background

[1] As referenced in Section 5.3 in the June 2011 Cleanup Action Plan.

The groundwater, surface water and landfill gas monitoring networks specified in the final CAP are as follows:

- Groundwater: One (1) upgradient monitoring well (MW-5) and five (5) downgradient monitoring wells (MW-6, MW-7, MW-12I, MW-13D and MW-14).
- Surface Water: Four (4) monitoring stations (SW-1, SW-4, SW-6 and SW-7).
- Landfill Gas: Twenty-one (21) extraction well/trench ports, two (2) blower/flare ports, and seven (7) perimeter gas probes (GP-1 through GP-7, with GP-2 being a triple completion).

Under the final CAP, water quality parameters to be analyzed quarterly for both groundwater and surface water include: arsenic, manganese, chloride, ammonia, nitrate, nitrite, bicarbonate, carbonate, alkalinity, sulfate, TOC, orthophosphate, and vinyl chloride (by SIM). A full EPA method 8260 scan for VOCs is also conducted annually. Landfill gas field measurements continue to include methane gas, oxygen gas, and carbon dioxide gas (by percent volume), as well as gas pressure and gas temperature.

3.0 2012 GROUNDWATER AND SURFACE WATER MONITORING

Water quality monitoring for groundwater and surface water was conducted at the Hansville Landfill Site by SCS on January 31st, April 19th, July 5th and October 2nd, 2012. Dual sampling crews were utilized for each event, which permitted the water quality monitoring activities to be completed during the course of a single field day.

Consistent with the procedures detailed in the Compliance Monitoring Plan (SCS, 2011), six groundwater monitoring wells (MW-5, MW-6, MW-7, MW-12I, MW-13D, and MW-14) were purged and sampled utilizing low-flow/low-volume collection techniques using dedicated Grundfos submersible electric pumps. Prior to initiating purging activities, an electronic water level meter was deployed to record depth to water measurements at each well location. Stabilization during purging and sampling was documented through field measurement of pH, specific conductivity, dissolved oxygen, oxidation-reduction potential/redox (Eh) and temperature. Samples tested for dissolved metals were field-filtered through a 0.45-micron filter. A field duplicate was collected during each monitoring event.

Surface water samples (SW-1, SW-4, SW-6 and SW-7) were collected directly from the surface flow into laboratory-provided containers. Samples to be tested for dissolved metals were field-filtered through a 0.45-micron filter. Surface water samples were tested in the field for pH, specific conductivity, dissolved oxygen, oxidation-reduction potential/redox (Eh) and temperature.

All water quality samples were submitted to TestAmerica, Inc. (Denver, Colorado) for chemical analysis, except for low-level dissolved arsenic, which were sent to Analytical Resources, Inc. in Tukwila, Washington. Groundwater and surface water samples collected during the 2012 quarterly monitoring events were analyzed for the CAP-defined parameter suite previously detailed in Section 2.4. The full suite of VOCs was analyzed as part of the January 2012 quarterly event. Analytical results for the fourth quarter 2012 are tabulated in Appendix B. Summary data tables for the three preceding 2012 monitoring quarters, which have been previously reported, are attached in Appendix C.

A quality assurance/quality control (QA/QC) evaluation of the laboratory data was conducted for each quarterly event. The QA/QC evaluation included evaluating data for completeness, and reviewing the data package for holding times, method blanks, trip blanks, laboratory control samples, laboratory duplicates, and matrix spike/matrix spike duplicates. With the exception of a single holding time delay, no significant data quality issues were identified for the 2012 analytical data set. During the third quarter event, nitrate, nitrite and orthophosphate were analyzed slightly outside their 48 hour holding time due to an express sample shipment delay. In addition, EPA 8260 analysis of the January 2012 VOC trip blank reported 50 µg/L acetonitrile. However, this analyte was not reported above the 40 µg/L method detection limit in any of the primary water quality samples. Where appropriate, qualifiers were added to the reported results, as noted on each data table.

Standard analytical protocols were followed in the analysis of the samples, and laboratory quality control samples analyzed in conjunction with the samples in this project remained within established control limits. Limitations are stated and clearly identified in the report where applicable. Based on this review, the data were found to be acceptable as reported by the laboratory for the intended use in this project.

3.1 WATER QUALITY RESULTS

3.1.1 Groundwater Elevations

Depth to groundwater measurements and calculated water table elevations for the fourth quarter 2012 monitoring event are presented in Table 1 (Appendix B). A potentiometric surface map illustrating groundwater flow across the Site during October 2012 is presented as Figure 4 (Appendix B). Tabulated groundwater data and groundwater contour maps previously reported for the first three quarters of the 2012 monitoring year are attached in Appendix C.

Water table elevations measured over the current reporting period were generally stable, ranging between 237.20 feet msl (MW-12I in October) to 265.00 feet msl (MW-5 in April). These data are consistent with the past several year's monitoring results (SCS 2011, Parametrix 2010), and continue to indicate that groundwater in the upper aquifer flows to the west and southwest and discharges to the headwaters of creeks downgradient of the landfill.

3.1.2 Groundwater Quality

Chemicals of Concerns

Downgradient well MW-14 was the only location where arsenic concentrations were detected above the 0.005 mg/L site-specific groundwater cleanup level during the 2012 reporting period. The reported concentrations ranged between 0.00788 mg/L (in April) and 0.0216 mg/L (in July). Low, but detectable, levels of arsenic (ranging from 0.00105 at MW-7 in October to 0.0036 mg/L at MW-6 in July) were consistently reported during all four quarters in the remaining groundwater wells. Time-series diagrams for arsenic in groundwater are provided in Appendix D.

In addition, MW-14 was the only monitoring well where manganese routinely exceeded its 2.24 mg/L site-specific groundwater cleanup level during 2012. These reported exceedances ranged between 2.3 mg/L (in October) to 2.6 mg/L (in April). However, the manganese concentration (2.20 mg/L) reported in July 2012 remained slightly below its groundwater cleanup level. The highest manganese levels at the site have generally been observed in those wells (MW-6 and MW-14) situated immediately downgradient of the solid waste landfill.

Vinyl chloride exceeded its 0.025 µg/L site-specific groundwater cleanup level in three wells during the 2012 reporting period. These exceedances were detected in MW-6 (ranging from 0.18 µg/L in April to 0.43 µg/L in October), MW-12I (ranging from 0.13 µg/L in April to 0.34 µg/L in October) and MW-14 (ranging from 0.24 µg/L in July to 0.35 µg/L in April). During 2012, the most elevated vinyl chloride concentrations were generally observed during the fourth quarter (October) event. A full EPA 8260 analysis conducted during the January event reported

sporadic, low-level detections of several additional VOCs, including 1,1-dichloroethane, cis-1,2-dichloroethene, trans-1,2-dichloroethene, dichlorofluromethane, ethyl ether, acetone and acetonitrile in the groundwater samples. However, none of these latter VOC detections approached their respective groundwater protection standards. Time-series diagrams for vinyl chloride in groundwater are also provided in Appendix D.

The most elevated levels of Hansville Landfill Site COCs (arsenic, manganese and vinyl chloride) continue to be observed in groundwater well MW-14, which is situated on the downgradient (southwest) edge of the solid waste landfill. As noted during past monitoring years, concentrations of site COCs continue to decrease with increasing distance from the landfill.

Geochemical Parameters Indicative of Natural Attenuation

The final CAP identified two field (dissolved oxygen and redox) and three laboratory (sulfate, orthophosphate, and TOC) groundwater analytes as geochemical indicator parameters to be tracked under the site remedy to monitor natural attenuation processes at the Hansville Landfill Site. Low dissolved oxygen levels, low or negative redox, and low sulfate concentrations are typically associated with the reducing/anoxic groundwater conditions that are typically encountered immediately beneath and downgradient of solid waste landfills. Elevated orthophosphate levels are often associated with septic wastes leakage, and may result in excessive nutrient loading if discharged to surface waters. Decay of organic materials (such as decomposing refuse) can elevate TOC in groundwater beneath and downgradient of a landfill.

For the Hansville Landfill Site, the most reduced groundwater conditions observed during 2012 were reported in downgradient wells MW-6, MW-13D and MW-14. These wells typically maintained the lowest dissolved oxygen (0.1 to 0.61 mg/L) and redox (-113 to 43 mV) levels. The most oxidized groundwater conditions were noted in upgradient well MW-5, and to a lesser extent in well MW-7 (which is the most cross-gradient well in the monitoring network). Both sulfate and TOC levels remained generally low during 2012, with sulfate concentrations ranging from 5.2 mg/L (MW-7 in October) to 21 mg/L (MW-6 in January and October) and TOC concentrations ranging from 0.32 mg/L (MW-5 in January) to 2.7 mg/L (MW-12I in January and April). Orthophosphate was not detected in any of the groundwater (or surface water) samples analyzed during this monitoring event.

The 2012 geochemical indicator parameter results continue to suggest that reductive groundwater conditions occur immediately beneath and downgradient of the Hansville landfill. It should also be noted that landfill leachate indicator parameter results, showing relatively low, but higher than background, levels of ammonia, chloride and nitrate/nitrite, support the conclusion that the landfill continues to locally affect groundwater quality.

3.1.3 Surface Water Quality

None of the surface water samples analyzed during the 2012 monitoring period reported any of the Hansville Landfill COCs at levels in excess of their site-specific cleanup levels. However, low, but detectable concentrations of arsenic and manganese were consistently reported during the monitoring year. Arsenic concentrations in surface water ranged between 0.00092 mg/L

(SW-7 in January) to 0.00319 mg/L (SW-6 in July). Manganese concentrations ranged between 0.00032 mg/L (SW-1 in April) to 0.12 mg/L (SW-6 in July). In addition, two surface water samples (SW-4 and SW-6) that were also analyzed for dissolved lead at the request of Ecology during the January event, did not report any detectable concentrations of this analyte.

With the exception of several J-qualified vinyl chloride detections (i.e., estimated values below the laboratory reporting limit) ranging between 0.0040 and 0.0091 µg/L (in SW-4, in January and April, respectively), VOCs were not detected in any of the surface water samples analyzed during the reporting year.

As reported for previous monitoring years, surface water stations SW-4 and SW-6, which are situated immediately west (downgradient) of the landfill, generally report the highest levels of site COCs and related landfill indicator parameters. However, the levels of arsenic and vinyl chloride observed at these locations during 2012 remain substantially reduced from those initially reported at the Site. Similarly, levels of chloride (ranging from 3.2 mg/L [SW-1 in July] to 28 mg/L [SW-4 in Oct]), sulfate (ranging from 4.1 mg/L [SW-6 in July] to 28 mg/L [SW-4 in October]), TOC (ranging from 1.7 mg/L [SW-1 in October] to 23 mg/L [SW-6 in January], and ammonia (ND [non-detect] to 0.076 mg/L [SW-4 in July] at these locations have also declined over the same period. In addition, orthophosphate was not detected in any of the surface water monitoring locations during 2012.

3.2 STATISTICAL EVALUATION

Consistent with Appendix D of the final Hansville Landfill CAP, groundwater data reported for the 2012 monitoring period were statistically evaluated for selected site COCs. Vinyl chloride and arsenic results that exceeded their respective site-specific cleanup standards during 2012 were evaluated through a statistical trend analysis and a three-year projection of the calculated trendlines. In addition, the statistical mean and the upper and lower confidence limits (UCL and LCL) were calculated for all of the vinyl chloride and arsenic data obtained over the reporting period.

The statistical analysis was performed using AquaChem (ver. 5.1) software and curve-fitting modules of Microsoft Excel (ver. 2007). Summary statistics, including calculated means, Mann-Kendal /Sens Slope Test trends, and UCL/LCL results are provided in Table D-1 (Appendix D). Time-series charts for arsenic and vinyl chloride, including trend projections where appropriate, are also provided in Appendix D.

3.2.1 Statistical Trend Analysis and Time-Series Plots

During the 2012 reporting period, three downgradient groundwater monitoring wells (MW-6, MW-12I and MW-14) reported vinyl chloride concentrations that exceeded the 0.025 µg/L site-specific cleanup standard. Downgradient well MW-14 also reported arsenic concentrations in excess of the 0.005 mg/L site-specific arsenic cleanup standard.

Mann-Kendall tests performed for these wells generated negative values (indicative of a possible decreasing trend) for vinyl chloride in MW-12I and for both arsenic and vinyl chloride in MW-14. Downgradient well MW-6 reported a positive Mann-Kendall result (indicative of a possible

increasing trend) for vinyl chloride. Follow-up Sens Slope tests for these same wells confirmed a statistically significant decreasing trend in arsenic levels in downgradiant well MW-14. The Sens Slope analysis did not confirm any statistically significant trends (either increasing or decreasing) for vinyl chloride in MW-6, MW-12I or MW-14. It should be noted, however, that the negative Sens Slope results continue to be reported for vinyl chloride concentrations in MW-12I and MW-14.

Vinyl chloride and arsenic data reported since January 2007 are plotted versus time (time series graphs) for all the remaining groundwater wells monitored during 2012 (Appendix D).

3.2.2 Trend Projections

Vinyl chloride concentration trends in downgradient wells MW-6, MW-12I and MW-14, and arsenic concentration trends in downgradient MW-14, were projected through 2015 (a three-year projection) to evaluate the convergence of these COCs towards their respective site-specific cleanup levels. Both an exponential decay attenuation curve and a least-squares regression line have been overlain on the time-series charts for these wells (Appendix D).

The MW-6, MW-12I and MW-14 vinyl chloride trendlines and the MW-14 arsenic trendline all continue to show a decreasing slope. In general, the least-squares projections predict a slightly more rapid reduction in vinyl chloride levels in wells MW-12I and MW-14 than is forecast using the attenuation curve method. Both methods predict similar future reductions in vinyl chloride concentrations in MW-6 and arsenic concentrations in MW-14.

3.2.3 Calculation of Upper and Lower Confidence Limits

Using the statistical procedures and assumptions documented in Appendix D of the final CAP, the AquaChem software was used to calculate the mean and the 95% normal confidence UCL and LCL for the 2012 vinyl chloride and arsenic concentrations in the groundwater monitoring wells in accordance with ASTM D7048-04. The calculated mean, UCL and LCL for these COCs were then compared to the site specific cleanup levels (0.025 µg/L and 0.005 mg/L for vinyl chloride and arsenic, respectively) to determine the position of the UCL/LCL relative to the cleanup levels (above or below) and confirm whether the confidence limits are still converging and approaching the cleanup level.

As summarized in Table D-1, the calculated means for the 2012 vinyl chloride results in downgradient wells MW-6, MW-12I and MW-14 (which were 0.243 µg/L, 0.203 µg/L and 0.30 µg/L, respectively) exceeded the 0.025 µg/L site specific cleanup level. Both the calculated UCLs and LCLs for vinyl chloride in these same three groundwater monitoring wells also exceeded this parameter's site specific cleanup level. However, the calculated UCL/LCL values for vinyl chloride in the remaining groundwater monitoring wells (MW-5, MW-7 and MW-13D) continue to remain well below the 0.025 µg/L cleanup level.

The calculated mean, UCL and LCL for arsenic in MW-14 (0.0201 mg/L, 0.024 mg/L and 0.0166 mg/L, respectively) all exceeded the parameter's 0.005 mg/L site specific cleanup level. However, none of the UCL/LCL values calculated for arsenic in the remaining groundwater monitoring wells (MW-5, MW-6, MW-7, MW-12I and MW-13D) exceeded this site specific cleanup level.

4.0 LANDFILL GAS MONITORING

During 2012, the gas collection system, including the interior wells and trenches and the blower/flare facility, were monitored and adjusted on an approximately monthly basis. Performance parameters include methane, oxygen, carbon dioxide, static pressure and temperature. The landfill gas collection system operated normally throughout the reporting year.

Landfill gas probes were also monitored on an approximately monthly schedule for methane, oxygen, carbon dioxide, and static pressure. The monitoring instruments were calibrated on the previous day according to manufacturer recommendations. A zero check against ambient (atmospheric) conditions was performed on each instrument prior to use. Given the inherit sensitivity of the GEM-2000 portable multi-gas analyzer, the detection limit for field measurements of methane can range between 0.3 to 0.5 percent by volume.

4.1 GAS MONITORING RESULTS

Landfill gas monitoring data for the fourth quarter 2012 (October through December) are presented in Table 4 (Appendix B). Landfill gas monitoring data tables that were previously reported during the preceding 2012 quarters are also attached in Appendix C. Adjusted air flow though the LFG extraction system during the fourth quarter 2012 ranged between 7 and 13 standard cubic feet per minute (scfm). Over the entire 2012 reporting period, the adjusted air flow ranged between 7 and 20 scfm.

During the fourth quarter of 2012, methane concentrations measured within the active landfill extraction system ranged between 0.0 and 11.2 methane (by percent volume). A similar range of methane concentrations were reported in the active extraction system during the second and third 2012 quarters. Slightly higher methane levels (up to 25.3 percent methane by volume) were reported in portions of the system during the first quarter of 2012.

The regulatory limit for landfill gas probes stated in WAC 173-304-460 is 5 percent methane by volume (the lower explosive limit [LEL]) at the site boundary. During 2012, detectable methane concentrations were not reported above the equipment detection limits in any of the perimeter gas probes. Over the reporting year, oxygen concentrations in the perimeter probes ranged between 13.5 and 21.0 percent volume, with most measurements remaining near ambient conditions. Carbon dioxide levels measured during the reporting period ranged between 0.1 and 5.4 percent volume.

The 2012 landfill gas monitoring results continue to indicate that the site remains in compliance with the subsurface methane threshold limits at the property boundary. The data also indicate that landfill gas remains present in the soils immediately surrounding and under the solid waste disposal areas. Overall, the landfill gas extraction and monitoring systems at the Hansville Landfill operated within design parameters during the reporting period.

5.0 REFERENCES

American Society for Testing and Materials. *Standard Guide for Applying Statistical Methods for Assessment and Corrective Action Environmental Monitoring Programs.* ASTM International D7048 – 04. 2010

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Appendix A

Site Figures

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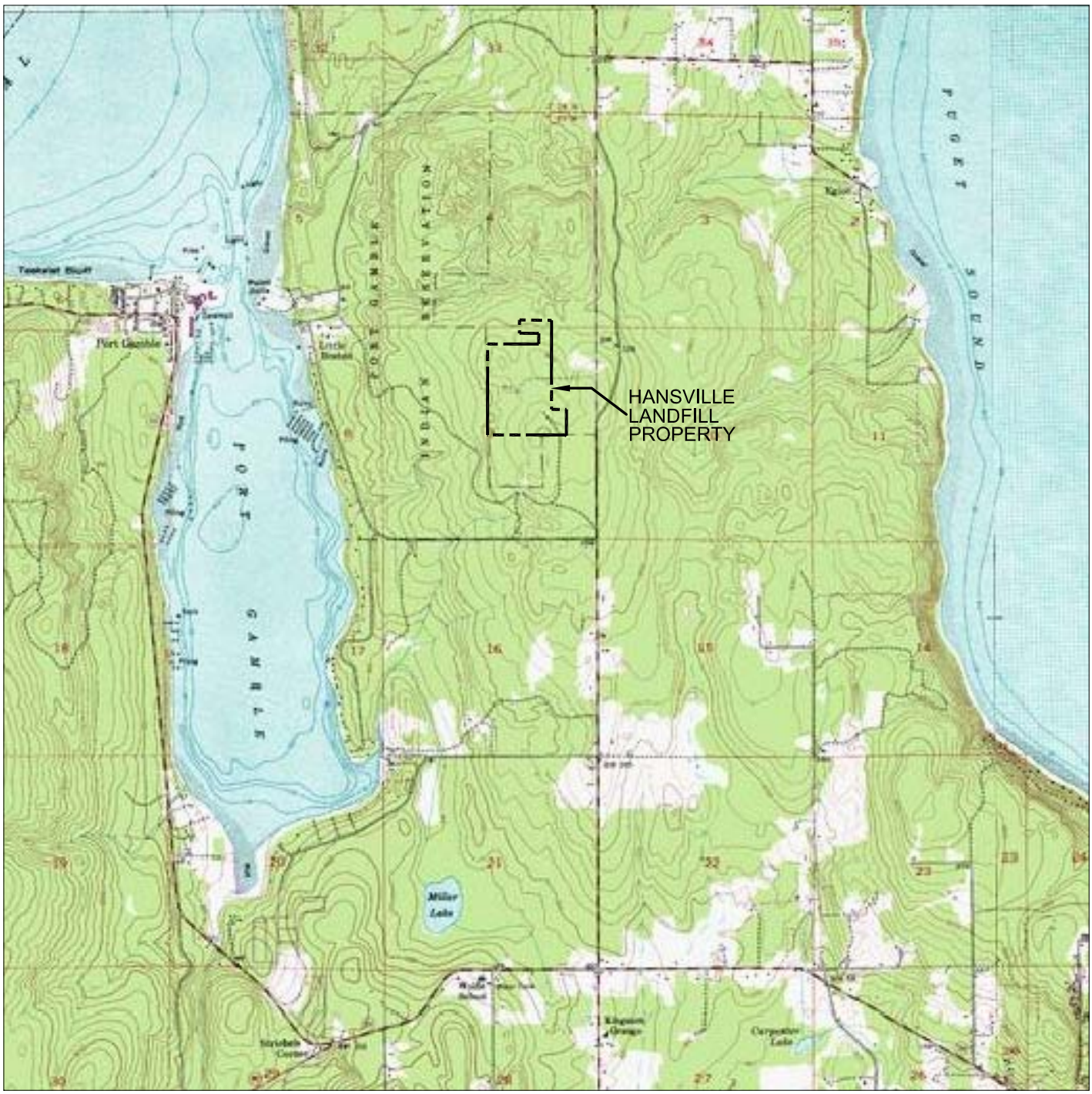

SOURCE: USGS

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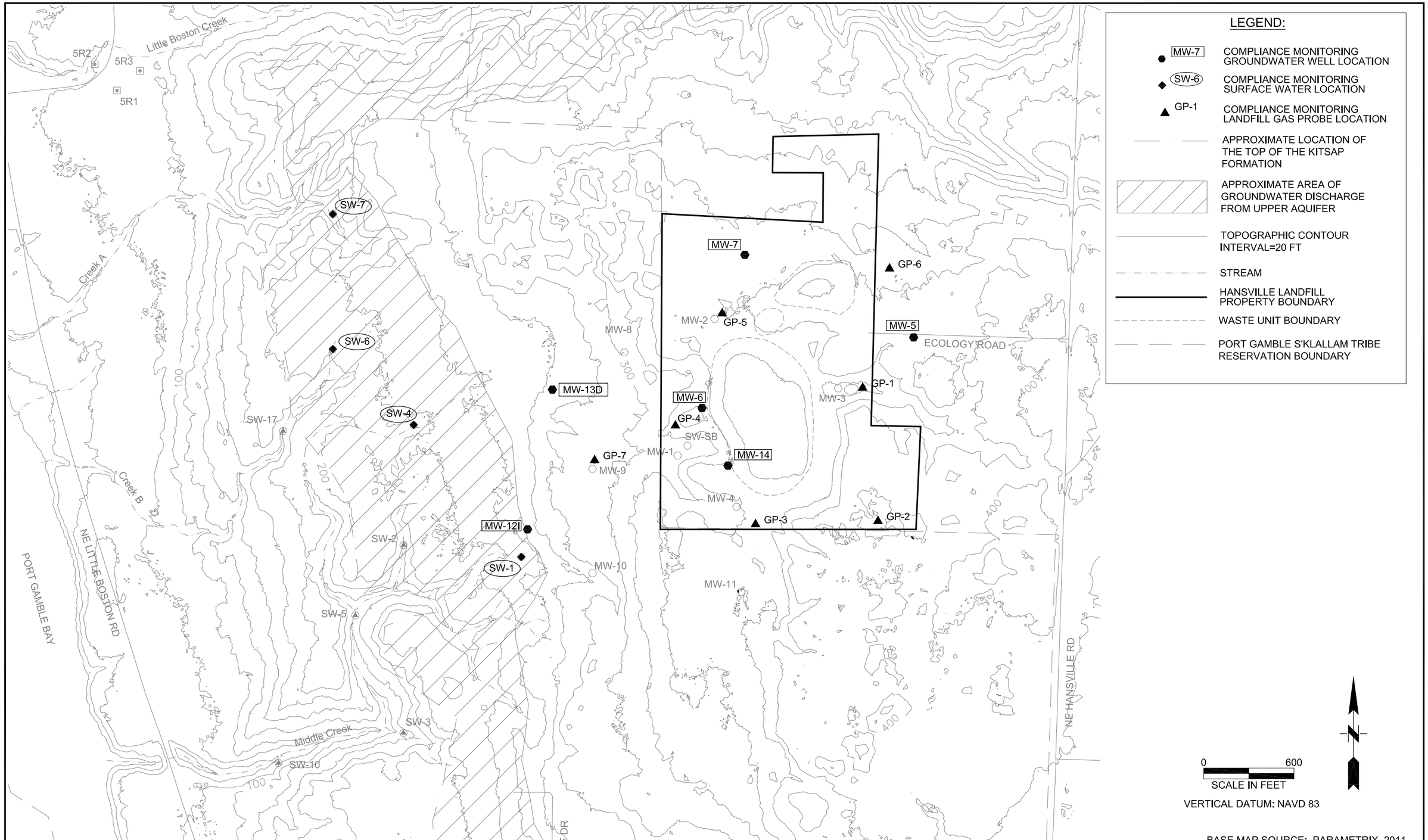
PROJECT NO. 04211017.00	DES BY L.L.
SCALE NA	CHK BY D.V.
CAD FILE FIGURE 1	APP BY G.H.

LANDFILL PROPERTY LOCATION MAP

HANSVILLE LANDFILL SITE
KITSAP COUNTY, WASHINGTON

DATE SEP 2011

FIGURE 1



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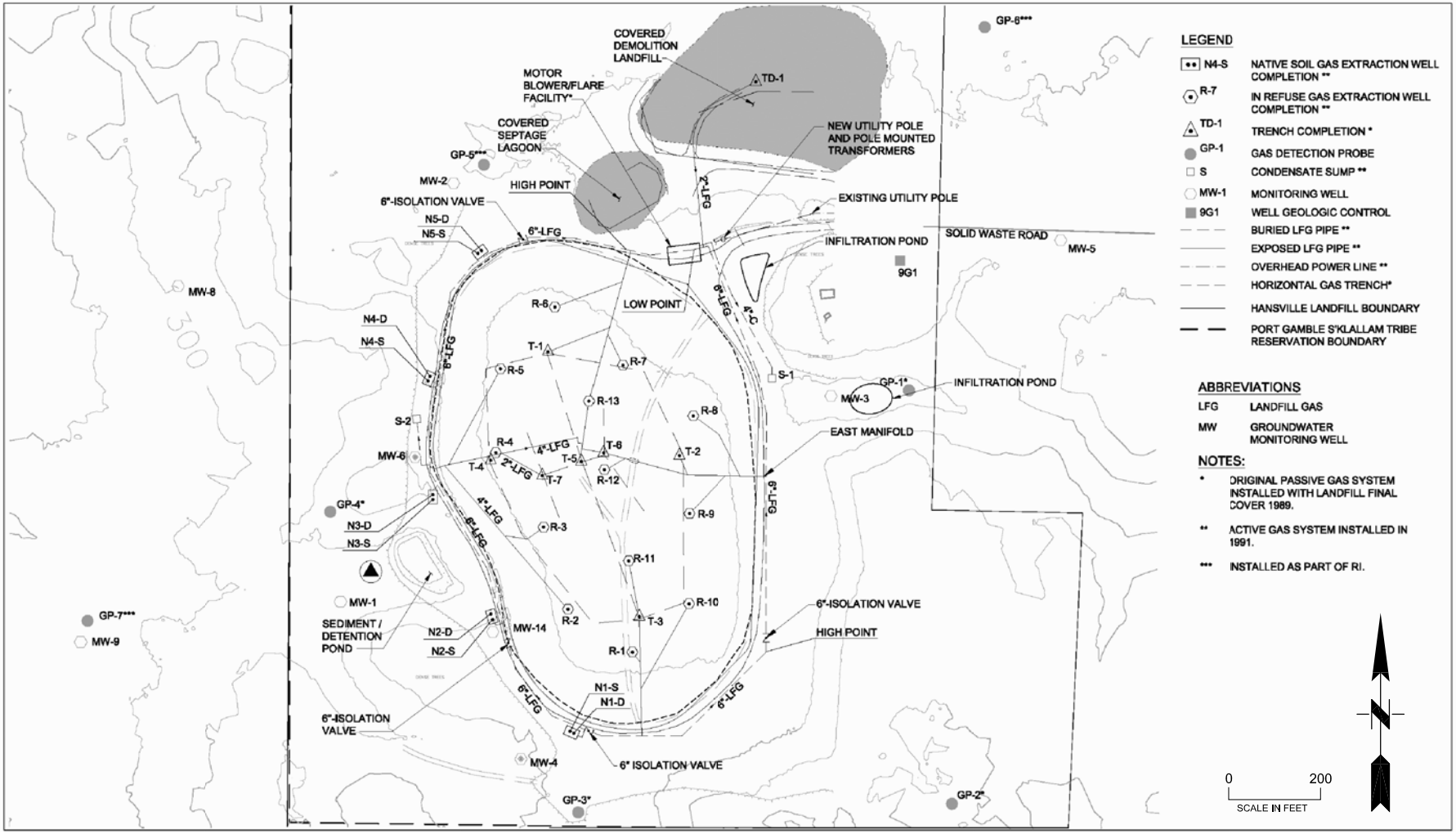
PROJECT NO. 042110017.00	DES BY L.L.	COMPLIANCE MONITORING LOCATIONS HANSVILLE LANDFILL KITSAP COUNTY, WASHINGTON	DATE SEPT 2011
SCALE AS SHOWN	CHK BY D.V.		FIGURE 2
CAD FILE FIGURE 2	APP BY G.H.		



BASE MAP SOURCE: PARAMETRIX, 2004

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PROJECT NO.	DES BY
04211017.00	L.L
SCALE	CHK BY
AS SHOWN	D.V.
CAD FILE	APP BY
FIGURE 3	G.H.

LANDFILL GAS SYSTEM & PROBE LOCATIONS

HANSVILLE LANDFILL
KITSAP COUNTY, WASHINGTON

DATE JANUARY 2011

FIGURE 3

Appendix B

Fourth Quarter (October) 2012 Summary Data Tables For Groundwater, Surface Water and Landfill Gas & October 2012 Groundwater Contour Map

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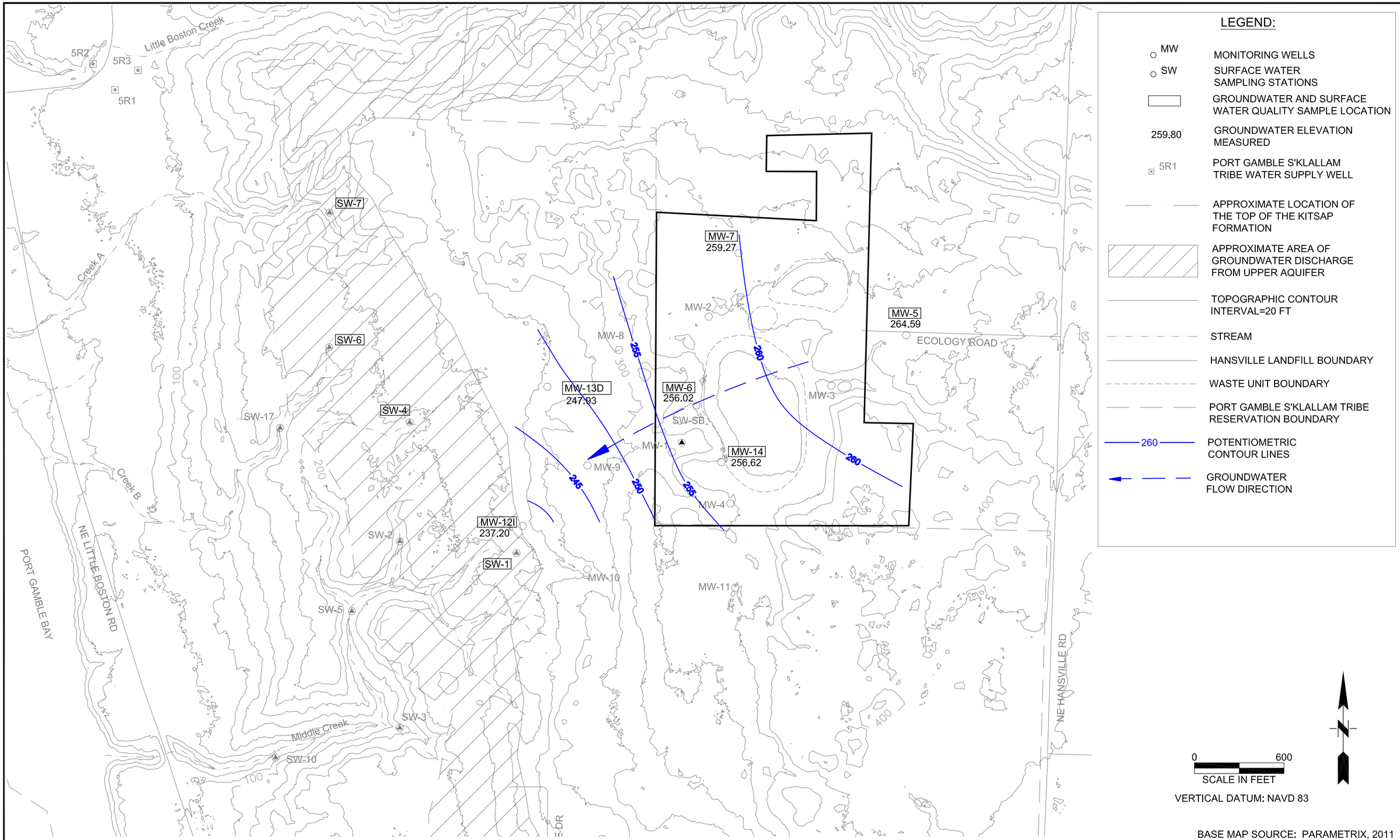
Table 1. Water Level Elevations, Groundwater Monitoring Wells, October 2, 2012
Hansville Landfill, Kitsap County, Washington

Location ID	Elevations (ft-msl)		Screen Elevation (ft-msl)		Depth to Water (feet)	Water Level Elevation (ft-msl)
	Ground	PVC	Top	Bottom		
MW-5	363.7	366.9	244	234	102.31	264.59
MW-6	332.0	332.7	260	245	76.68	256.02
MW-7	344.3	346.0	259	244	86.73	259.27
MW-12I	245.6	248.1	217	207	10.90	237.20
MW-13D	258.1	260.4	205	195	12.47	247.93
MW-14	338.6	341.1	262	247	84.48	256.62

PVC: PVC wellhead casing measuring point elevation.
ft-msl: Elevation in feet above mean sea level.



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PROJECT NO. 042110017.01	DES BY L.L.	UPPER AQUIFER GROUNDWATER CONTOURS OCTOBER 2, 2012	DATE DECEMBER 2012
SCALE AS SHOWN	CHK BY D.V.	HANSVILLE LANDFILL KITSAP COUNTY, WASHINGTON	FIGURE 4
CAD FILE FIGURE 4	APP BY G.H.		

Table 2. Hansville Landfill Groundwater Data, Fourth Quarter 2012 Monitoring Event - October 2, 2012

Parameter	Site Cleanup Level (SCL) [1]	MW-05	MW-06	MW-06 DUP	MW-07	MW-12I	MW-13D	MW-14	Trip Blank
Field Parameters									
Dissolved Oxygen (mg/L)		8.01	0.25	--	2.15	0.12	0.15	0.30	--
pH (units)		7.47	7.04	--	6.81	7.32	7.53	6.99	--
Specific Conductivity (uS)		117	282	--	253	192	209	244	--
Temperature (degrees C)		10.9	15.2	--	12.1	10.5	11	14.6	--
Redox (Mv)		65	43	--	129	56	-67	-103	--
Conventional Parmeters (mg/L, unless otherwise shown)									
Alkalinity		57	140 B	130 B	160 B	110	100 B	130 B	--
Ammonia (As N)		0.10 B	0.030 U	0.030 U	0.087	0.072 B	0.093 B	0.089 B	--
Bicarbonate		57	140	130	160	110	100	130	--
Carbonate		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--
Chloride		3.1	15	14	2.0	5.7	11	7.3	--
Nitrate (As N)		0.60	1.9	1.8	0.81	0.5 U	0.5 U	0.5 U	--
Nitrite (As N)		0.5 U	0.20 J	0.23 J	0.5 U	0.5 U	0.5 U	0.5 U	--
Sulfate		9.0	21	21	5.2	8.3	18	16	--
Total Organic Carbon (TOC)		0.4 J	0.93 J	0.86 J	1.5	2.3	0.54 J	1.0	--
Orthophoshate (As P)		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--
Dissolved Metals (mg/L)									
Arsenic	0.005	0.00177	0.00330	0.00311	0.00105	0.00205	0.00316	0.0212	--
Manganese	2.24	0.00063 J	0.410	0.420	0.001 U	0.065	0.041	2.3	--
Volatile Organics Compounds (ug/L) - only detected EPA method 8260 compounds as shown.									
Vinyl chloride	0.025	0.02 U	0.43	0.43	0.02 U	0.34	0.02 U	0.27	0.02 U

1 SCLs defined in August 2011 consent decree/cleanup action plan.

-- Not Tested.

Shaded results exceed site cleanup levels.

DUP The MW-6 DUP identifer is blind duplicate MW-20DD.

J Result is an estimate below the reporting limit.

U Compound not dectected at reporting limit.

B Analyte was detected in the blank.

H Sample was not analyzed within method specific holding time (48 hours).

Table 3. Hansville Landfill Surface Water Data, Fourth Quarter 2012 Monitoring Event - October 2, 2012

Parameter	Site Cleanup Level (SCL) [1]	SW-1	SW-4	SW-6	SW-7	Trip Blank
Field Parameters						
Dissolved Oxygen (mg/L)		8.28	8.26	7.23	7.26	--
pH (units)		7.40	7.50	7.90	7.29	--
Specific Conductivity (uS)		221	474	152	168	--
Temperature (degrees C)		11.0	11.3	11.8	11.2	--
Redox (Mv)		-7.8	-3.6	-6.1	4.0	--
Conventional Parmeters (mg/L, unless otherwise shown)						
Alkalinity		93 B	210 B	68 B	68 B	--
Ammonia (As N)		0.036	0.035	0.022 J	0.024 J	--
Bicarbonate		93	210	68	68	--
Carbonate		5.0 U	5.0 U	5.0 U	5.0 U	--
Chloride		6.0	28	5.7	3.4	--
Nitrate (As N)		1.9	1.2	0.09 J	0.68	--
Nitrite (As N)		0.5 U	0.5 U	0.5 U	0.5 U	--
Sulfate		12	28	5.6	6.7	--
Total Organic Carbon (TOC)		1.7	3.2	9.4	6.5	--
Orthophoshate (As P)		0.5 U	0.5 U	0.5 U	0.5 U	--
Dissolved Metals (mg/L)						
Arsenic	0.005	0.00146	0.00176	0.00216	0.00141	--
Manganese	2.24	0.00037 J	0.056	0.061	0.011	--
Volatile Organics Compounds (ug/L) - only detected EPA method 8260 compounds as shown.						
Vinyl chloride	0.025	0.02 U	0.0089 J	0.02 U	0.02 U	0.02 U

1 SCLs defined in August 2011 consent decree/cleanup action plan.

-- Not Tested.

Shaded results exceed site cleanup levels.

J Result is an estimate below the reporting limit.

U Compound not dectected at reporting limit.

B Analyte was detected in the blank.

H Sample was not analyzed within method specific holding time (48 hours).

Table 4: Hansville LF - Probe Data - 10/01/2012 through 10/31/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Rel Press (H2O inch)	Comments
Probe 1	10/17/2012 11:02	0	0.3	20.6	79.1			0.09	
Probe 2 Deep	10/17/2012 10:55	0	0.1	20.8	79.1			-0.41	
Probe 2 Middle	10/17/2012 10:46	0	0.3	20.6	79.1			-0.95	
Probe 2 Shallow	10/17/2012 10:42	0	0.1	20.9	79			-10.79	
Probe 3	10/17/2012 10:36	0	0.7	20.4	78.9			-7.98	
Probe 4	10/17/2012 10:28	0	1.1	19.8	79.1			-9.71	
Probe 5	10/17/2012 10:14	0	0.6	20.1	79.3			-0.2	
Probe 6	10/17/2012 7:50	0	0.9	20.3	78.8			0.08	
Probe 7	10/17/2012 10:24	0	1.6	19	79.4			0.16	
Field Technician and Weather Conditions									
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**			
BB	10/17/12	53	29.99	Partly Cloudy	Calm	N			

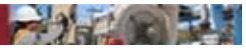

Table 4 (continued): Hansville LF - Well Data - 10/01/2012 through 10/31/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Adj Temp (deg F)	Init Flow (scfm)	Adj Flow (scfm)	System Press (H2O inch)	Rel Press (H2O inch)	Comments
Extraction Well 001	10/17/2012 9:07	7.2	12	0.2	80.6	-0.4	-0.4	61	61	4	0			No Change
Extraction Well 002	10/17/2012 9:03	2.6	13.5	3.6	80.3	-0.7	-0.7	60	60	5	5			No Change
Extraction Well 003	10/17/2012 8:59	7.9	12.9	0.9	78.3	-0.8	-0.8	59	59	5	5			No Change
Extraction Well 004	10/17/2012 8:51	4.2	13.1	3.5	79.2	-0.8	-0.8	54	54	5	5			No Change
Extraction Well 005	10/17/2012 8:14	1.7	13.6	4.9	79.8	-0.6	-0.6	61	61	2	2			No Change
Extraction Well 006	10/17/2012 8:05	2.7	15.5	3.4	78.4	-0.7	-0.7	59	59	2	2			No Change
Extraction Well 007	10/17/2012 7:59	0	1.4	18.3	80.3	-0.4	-0.4	56	56	2	2			No Change
Extraction Well 008	10/17/2012 8:22	6.9	17	0.3	75.8	-0.3	-0.3	50	50	2	2			No Change
Extraction Well 009	10/17/2012 8:29	1.3	15.2	1.3	82.2	-0.8	-0.8	61	61	7	7			No Change
Extraction Well 010	10/17/2012 9:17	5.5	8.7	1.3	84.5	-0.6	-0.6	56	56	3	3			No Change
Extraction Well 011	10/17/2012 9:18	3.6	8.2	0	88.2	-0.8	-0.8	58	58	3	3			No Change
Extraction Well 012	10/17/2012 8:33	11.2	5.8	0	83	-0.8	-0.8	53	53	3	3			No Change
Extraction Well 013	10/17/2012 8:18	2.5	11.2	2.3	84	-0.6	-0.6	57	57	3	3			No Change
Native Soil Extraction We	10/17/2012 9:31	0	4.4	15.9	79.7	-0.9	-0.9	55	55	3	3			No Change
Native Soil Extraction We	10/17/2012 9:28	0	5.5	14.9	79.6	-0.8	-0.8	57	57	3	3			No Change
Native Soil Extraction We	10/17/2012 9:39	0	1.4	19.8	78.8	-1	-1	56	56	3	3			No Change
Native Soil Extraction We	10/17/2012 9:35	0	2.5	18.2	79.3	-1	-1	54	54	3	3			No Change
Native Soil Extraction We	10/17/2012 9:46	0	3.2	17.7	79.1	-0.8	-0.8	58	58	3	3			No Change; Valve 100% Closed
Native Soil Extraction We	10/17/2012 9:43	0	2.3	17.9	79.8	-0.8	-0.8	56	56	3	3			No Change
Native Soil Extraction We	10/17/2012 9:52	0	2	19.1	78.9	-0.9	-0.9	52	52	5	5			No Change
Native Soil Extraction We	10/17/2012 9:49	0	3.1	18.3	78.6	-0.9	-0.9	59	59	5	5			No Change
Native Soil Extraction We	10/17/2012 9:58	0	1.6	19.5	78.9	-0.4	-0.4	59	59	3	3			No Change
Native Soil Extraction We	10/17/2012 9:56	0	3.4	17.2	79.4	-1	-1	56	56	4	4			No Change
Trench Well TD-1	10/17/2012 7:45	4.9	21.6	0.1	73.4	0	0	48	48	2	2			No Change
Trench Well TR-1	10/17/2012 8:10	0.7	17.4	1.4	80.5	-0.7	-0.7	51	51	4	4			No Change
Trench Well TR-2	10/17/2012 8:26	7.7	17.6	0	74.7	-0.7	-0.7	52	52	7	7			No Change
Trench Well TR-3	10/17/2012 9:11	7.4	16.4	0	76.2	-0.5	-0.5	58	58	3	3			No Change
Trench Well TR-4	10/17/2012 8:54	3.7	18.2	0.4	77.7	-0.8	-0.8	54	54	7	7			No Change
Trench Well TR-5	10/17/2012 8:43	6.4	16.9	0.6	76.1	-0.7	-0.7	60	60	3	3			No Change
Trench Well TR-6	10/17/2012 8:38	8	9.1	7.7	75.2	-0.7	-0.7	49	49	5	5			No Change
Trench Well TR-7	10/17/2012 8:47	10	16	0.3	73.7	-0.7	-0.7	62	62	5	5			No Change
Well with minimum temperature during reporting period														
Trench Well TD-1	10/17/2012 7:45	Init = 48 Adj = 48												
Well with maximum temperature during reporting period														
Trench Well TR-7	10/17/2012 8:47	Init = 62 Adj = 62												
Field Technician and Weather Conditions														
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**								
BB	10/17/12	53	30.02	Partly Cloudy	Calm	N								

Table 4 (continued): Hansville LF - Sample Port Data - 10/01/2012 through 10/31/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Adj Temp (deg F)	Init Flow (scfm)	Adj Flow (scfm)	System Press (H2O inch)	Rel Press (H2O inch)	Comments
Blower Inlet	10/17/2012 7:36	2.9	9.5	8.8	78.8	-1.1	-1.1	61	61	8	8			
Blower Outlet	10/17/2012 7:40	2.5	8.2	10.5	78.8	0.7	0.7	80	80	12	12			No Change
Field Technician and Weather Conditions														
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**								
BB	10/17/12	53	30.02	Partly Cloudy	Calm	N								

Table 4 (continued): Hansville LF - Probe Data - 11/01/2012 through 11/30/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Rel Press (H2O inch)	Comments
Probe 1	11/21/2012 10:40	0	0.9	19.8	79.3			0.27	
Probe 2 Deep	11/21/2012 10:34	0	0.1	20.6	79.3			-0.93	
Probe 2 Middle	11/21/2012 10:32	0	0.2	20.3	79.5			-0.46	
Probe 2 Shallow	11/21/2012 10:30	0	0.2	20.5	79.3			-0.46	
Probe 3	11/21/2012 10:26	0	0.8	19.7	79.5			0.15	
Probe 4	11/21/2012 10:15	0	1.7	19.1	79.2			-11.36	
Probe 5	11/21/2012 10:08	0	0.2	20.7	79.1			-0.37	
Probe 6	11/21/2012 7:47	0	0.3	20.8	78.9			-0.23	
Probe 7	11/21/2012 10:20	0	1.2	19.2	79.6			-0.1	
Field Technician and Weather Conditions									
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**			
BB	11/21/12	51	29.39	Cloudy	Breezy Wind	S			

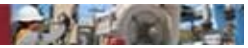

Table 4 (continued): Hansville LF - Well Data - 11/01/2012 through 11/30/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Adj Temp (deg F)	Init Flow (scfm)	Adj Flow (scfm)	System Press (H2O inch)	Rel Press (H2O inch)	Comments
Extraction Well 001	11/21/2012 9:27	4.3	8.2	5.2	82.3	-2.2	-2.2	48	48	4	4			No Change
Extraction Well 002	11/21/2012 9:13	0.1	8.6	8.5	82.8	-2.2	-2.2	60	60	3	3			Closed valve 1/2 to 1 turn
Extraction Well 003	11/21/2012 9:09	2	8.7	6.5	82.8	-2.2	-2.2	57	5	4	4			Closed valve 1/2 turn or less
Extraction Well 004	11/21/2012 9:01	0.9	8.9	8.2	82	-2.2	-2.2	52	52	5	5			No Change
Extraction Well 005	11/21/2012 8:12	0.2	8.3	10.1	81.4	-1.8	-1.8	51	51	4	4			Closed valve 1/2 turn or less
Extraction Well 006	11/21/2012 8:08	0	0.5	20.5	79	-1.9	-1.9	40	40	2	2			Closed valve 1/2 turn or less
Extraction Well 007	11/21/2012 8:01	0	1.1	19.7	79.2	-1.7	-1.7	49	49	4	4			Closed valve 1/2 turn or less
Extraction Well 008	11/21/2012 7:55	0.2	4	15.3	80.5	-1.7	-1.7	48	48	5	5			No Change
Extraction Well 009	11/21/2012 8:34	0.1	9.8	6.7	83.4	-2.2	-2.2	54	54	5	5			Closed valve 1/2 to 1 turn
Extraction Well 010	11/21/2012 9:22	4.3	4.3	7.4	84	-2.2	-2.2	57	57	4	4			No Change
Extraction Well 011	11/21/2012 9:18	0	0.3	20.4	79.3	-2.2	-2.2	51	51	6	6			Closed valve 1/2 to 1 turn
Extraction Well 012	11/21/2012 8:44	1.3	1.3	15.5	81.9	-2.2	-2.2	43	43	5	5			Closed valve 1/2 to 1 turn
Extraction Well 013	11/21/2012 8:24	0.1	2.8	17.8	79.3	-2	-2	41	41	3	3			Closed valve 1/2 turn or less
Native Soil Extraction We	11/21/2012 9:41	0.6	5.3	13.7	80.4	-2.2	-2.3	52	52	6	6			No Change
Native Soil Extraction We	11/21/2012 9:38	0.8	6.4	12.5	80.3	-1.8	-1.8	50	50	6	6			No Change
Native Soil Extraction We	11/21/2012 9:46	1.1	3	15.7	80.2	-1.3	-1.2	56	56	5	5			No Change
Native Soil Extraction We	11/21/2012 9:44	0	0.4	20.3	79.3	-1.2	-1.2	53	53	4	4			No Change
Native Soil Extraction We	11/21/2012 9:53	0.7	3.2	16.2	79.9	-1.6	-1.6	53	53	5	5			No Change
Native Soil Extraction We	11/21/2012 9:51	0.2	1.8	18.3	79.7	-1.4	-1.4	52	52	5	5			No Change
Native Soil Extraction We	11/21/2012 9:59	0.9	3.9	15.7	79.5	-2	-2	58	58	6	6			No Change
Native Soil Extraction We	11/21/2012 9:57	0.9	4.8	15.1	79.2	-1.9	-1.9	50	50	6	6			No Change
Native Soil Extraction We	11/21/2012 10:04	0	0.4	20.5	79.1	-1.4	-1.4	53	53	6	6			No Change
Native Soil Extraction We	11/21/2012 10:02	0.4	3.8	16.2	79.6	-2.2	-2.2	52	52	6	6			No Change
Trench Well TD-1	11/21/2012 7:43	6.5	19.7	0.1	73.7	-0.5	-0.5	43	43	3	3			No Change
Trench Well TR-1	11/21/2012 8:17	4.3	14.6	1.3	79.8	-1.8	-1.8	48	48	4	4			No Change; Valve 100% Closed
Trench Well TR-2	11/21/2012 8:30	3.5	11.2	4.2	81.1	-2	-2	41	41	7	7			No Change
Trench Well TR-3	11/21/2012 9:31	5.8	15.6	0.3	78.3	-2.2	-2.2	54	54	5	5			No Change
Trench Well TR-4	11/21/2012 9:03	2.5	15.3	1.3	80.9	-2.2	-2.2	57	57	5	5			No Change
Trench Well TR-5	11/21/2012 8:48	5.5	13.4	1.6	79.5	-2.2	-2.2	56	56	5	5			No Change
Trench Well TR-6	11/21/2012 8:39	10.6	10.4	4	75	-2.1	-2.1	49	49	5	5			No Change
Trench Well TR-7	11/21/2012 8:56	6.9	9.6	6.3	77.2	-2.3	-2.3	52	52	5	5			No Change
Well with minimum temperature during reporting period														
Extraction Well 003	11/21/2012 9:09	Init = 57 Adj = 5												
Well with maximum temperature during reporting period														
Extraction Well 002	11/21/2012 9:13	Init = 60 Adj = 60												
Field Technician and Weather Conditions														
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**								
BB	11/21/12	51	29.37	Cloudy	Breezy Wind	S								

Table 4 (continued): Hansville LF - Sample Port Data - 11/01/2012 through 11/30/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Adj Temp (deg F)	Init Flow (scfm)	Adj Flow (scfm)	System Press (H2O inch)	Rel Press (H2O inch)	Comments
Blower Inlet	11/21/2012 10:46	2	8.3	10.4	79.3	-2.6	-2.6	52	52	7	7			No Change
Blower Outlet	11/21/2012 10:49	1.6	7.3	11.9	79.2	1.2	1.3	77	77	12	12			No Change
Field Technician and Weather Conditions														
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**								
BB	11/21/12	51	29.37	Cloudy	Breezy Wind	S								

Table 4 (continued): Hansville LF - Probe Data - 12/01/2012 through 12/31/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Rel Press (H2O inch)	Comments
Probe 1	12/19/2012 10:07	0	2.8	19.9	77.3			-0.68	
Probe 2 Deep	12/19/2012 10:17	0	0.4	20.9	78.7			0.21	
Probe 2 Middle	12/19/2012 10:15	0	0.6	20.6	78.8			-0.96	
Probe 2 Shallow	12/19/2012 10:13	0	1.5	20.2	78.3			-0.83	
Probe 3	12/19/2012 10:33	0	1.2	20.2	78.6			0.24	
Probe 4	12/19/2012 10:29	0	1.3	19.6	79.1			0.13	
Probe 5	12/19/2012 11:06	0	3.2	18.8	78			-0.7	
Probe 6	12/19/2012 8:31	0	3.8	15.8	80.4			0.22	
Probe 7	12/19/2012 10:24	0	0.7	19.9	79.4			-2.04	
Field Technician and Weather Conditions									
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**			
BB	12/19/12	33	29.43	Cloudy	Calm	N			

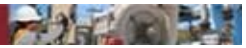

Table 4 (continued): Hansville LF - Well Data - 12/01/2012 through 12/31/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Adj Temp (deg F)	Init Flow (scfm)	Adj Flow (scfm)	System Press (H2O inch)	Rel Press (H2O inch)	Comments
Extraction Well 001	12/19/2012 9:49	2.7	7.8	2.1	87.4	0.4	0.4	50	50	3	3			No Change
Extraction Well 002	12/19/2012 9:57	0.1	9.8	3.2	86.9	0.3	0.3	40	40	2	2			No Change
Extraction Well 003	12/19/2012 9:27	3.7	11.5	0	84.8	0.2	0.2	44	44	2	2			No Change
Extraction Well 004	12/19/2012 9:17	0.5	6.6	3.7	89.2	0.3	0.3	39	39	2	2			No Change
Extraction Well 005	12/19/2012 9:10	0.5	12.1	0.2	87.2	0.4	0.4	41	41	1	1			No Change
Extraction Well 006	12/19/2012 9:03	2.4	12.7	0.9	84	0.4	0.4	40	40	1	1			No Change
Extraction Well 007	12/19/2012 8:55	2.2	13	0	84.8	1.1	1.1	41	41	4	4			No Change
Extraction Well 008	12/19/2012 8:43	0.6	5.7	1.1	92.6	0.6	0.6	45	45	3	3			No Change
Extraction Well 009	12/19/2012 8:50	0.2	6.6	3.5	89.7	0.5	0.5	49	49	3	3			No Change
Extraction Well 010	12/19/2012 9:46	2.7	7.7	2.4	87.2	0.3	0.4	41	41	3	3			No Change
Extraction Well 011	12/19/2012 10:00	3.1	8.7	0.4	87.8	0.4	0.4	47	47	2	2			No Change
Extraction Well 012	12/19/2012 9:40	1.8	5.8	0.4	92	0.4	0.4	42	42	2	2			No Change
Extraction Well 013	12/19/2012 8:59	0.5	7.2	0.3	92	0.9	0.9	39	39	2	2			No Change
Native Soil Extraction We	12/19/2012 10:39	0.9	6.1	9.4	83.6	0.3	0.3	41	41	2	2			No Change
Native Soil Extraction We	12/19/2012 10:38	0	4.9	12.5	82.6	0.5	0.5	40	40	2	2			No Change
Native Soil Extraction We	12/19/2012 10:45	3	9.6	2.5	84.9	0.3	0.3	37	37	3	3			No Change
Native Soil Extraction We	12/19/2012 10:43	1.3	8.3	6.6	83.8	0.1	-0.1	38	38	2	2			No Change
Native Soil Extraction We	12/19/2012 10:51	1.3	9.3	4.5	84.9	0.3	0.3	33	33	2	2			No Change
Native Soil Extraction We	12/19/2012 10:49	0.7	8.9	5.5	84.9	0.3	0.3	40	40	2	2			No Change
Native Soil Extraction We	12/19/2012 10:57	3.6	11.1	1.1	84.2	0.3	0.3	37	37	3	3			No Change
Native Soil Extraction We	12/19/2012 10:56	2.7	11.2	1.5	84.6	0.3	0.3	35	35	3	3			No Change
Native Soil Extraction We	12/19/2012 11:03	1.8	6.6	9.9	81.7	0.3	0.3	39	39	2	2			No Change
Native Soil Extraction We	12/19/2012 11:01	1.9	6.9	10.7	80.5	0.3	0.3	40	40	2	2			No Change
Trench Well TD-1	12/19/2012 8:28	3.4	9.7	0.7	86.2	0.3	0.3	43	43	4	4			No Change
Trench Well TR-1	12/19/2012 9:07	2.7	13.1	0	84.2	0.4	0.4	37	37	3	3			No Change
Trench Well TR-2	12/19/2012 8:47	0.8	8.4	1.5	89.3	0.6	0.6	39	39	5	5			No Change
Trench Well TR-3	12/19/2012 9:53	4.5	11	0.5	84	0.5	0.5	52	52	7	7			No Change
Trench Well TR-4	12/19/2012 9:21	2.3	12.5	0	85.2	0	-0.1	51	51	4	4			No Change
Trench Well TR-5	12/19/2012 9:35	3	11.1	0	85.9	0.3	0.3	51	51	6	6			No Change
Trench Well TR-6	12/19/2012 9:37	5.9	9.2	0	84.9	0.4	0.4	38	38	3	3			No Change
Trench Well TR-7	12/19/2012 9:24	6	11	0	83	0.3	0.3	59	59	4	4			No Change
Well with minimum temperature during reporting period														
Native Soil Extraction We	12/19/2012 10:51	Init = 33 Adj = 33												
Well with maximum temperature during reporting period														
Trench Well TR-7	12/19/2012 9:24	Init = 59 Adj = 59												
Field Technician and Weather Conditions														
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**								
BB	12/19/12	33	29.4	Cloudy	Calm	N								

Table 4 (continued): Hansville LF - Sample Port Data - 12/01/2012 through 12/31/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Adj Temp (deg F)	Init Flow (scfm)	Adj Flow (scfm)	System Press (H2O inch)	Rel Press (H2O inch)	Comments
Blower Inlet	12/19/2012 11:12	3	10.5	1.1	85.4	0.1	0.1	43	43	8	8			No Change
Blower Outlet	12/19/2012 11:15	2.7	9.8	3	84.5	0	0	60	60	13	13			No Change
Field Technician and Weather Conditions														
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**								
BB	12/19/12	33	29.4	Cloudy	Calm	N								

Appendix C

Summary of Previous Quarter Monitoring Results (Q3, Q2 and Q1 2012)

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Q3 - JULY 2012 SUMMARY TABLES
& GROUNDWATER FLOW MAP

Table A-1. Water Level Elevations, Groundwater Monitoring Wells, July 5, 2012
Hansville Landfill, Kitsap County, Washington

Location ID	Elevations (ft-msl)		Screen Elevation (ft-msl)		Depth to Water (feet)	Water Level Elevation (ft-msl)
	Ground	PVC	Top	Bottom		
MW-5	363.7	366.9	244	234	102.00	264.90
MW-6	332.0	332.7	260	245	75.63	257.07
MW-7	344.3	346.0	259	244	86.28	259.72
MW-12I	245.6	248.1	217	207	10.58	237.52
MW-13D	258.1	260.4	205	195	11.95	248.45
MW-14	338.6	341.1	262	247	83.95	257.15

PVC: PVC wellhead casing measuring point elevation.
ft-msl: Elevation in feet above mean sea level.

Table A-2. Hansville Landfill Groundwater Data, Third Quarter 2012 Monitoring Event - July 5, 2012

Parameter	Site Cleanup Level (SCL) [1]	MW-05	MW-06	MW-06 DUP	MW-07	MW-12I	MW-13D	MW-14	Trip Blank
Field Parameters									
Dissolved Oxygen (mg/L)		6.69	0.36	--	1.34	0.22	0.10	0.26	--
pH (units)		7.18	6.82	--	6.60	7.22	7.43	6.79	--
Specific Conductivity (uS)		126	275	--	286	177	239	279	--
Temperature (degrees C)		13.5	17.8	--	13.6	12.4	11.3	15.5	--
Redox (Mv)		19	-21	--	66	-41	-113	-65	--
Conventional Parmeters (mg/L, unless otherwise shown)									
Alkalinity		57	130	130	170	92	110	140	--
Ammonia (As N)		0.067 B	0.061 B	0.068 B	0.065 B	0.064 B	0.064 B	0.077 B	--
Bicarbonate		57	130	130	170	92	110	140	--
Carbonate		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--
Chloride		2.8	9.0	8.6	1.3	3.5	8.1	6.7	--
Nitrate (As N)		0.59 H	0.99 H	0.96 H	0.99 H	0.5 UH	0.5 JH	0.5 UH	--
Nitrite (As N)		0.5 UH	0.11 JH	0.11 JH	0.5 UH	0.5 UH	0.5 UH	0.5 UH	--
Sulfate		9.0	20	19	5.9	7.5	18	16	--
Total Organic Carbon (TOC)		0.43 J	0.84 J	0.81 J	1.4	2.2	0.49 J	0.97 J	--
Orthophoshate (As P)		0.5 UH	0.5 UH	0.5 UH	0.5 UH	0.5 UH	0.5 UH	0.5 UH	--
Dissolved Metals (mg/L)									
Arsenic	0.005	0.0021	0.0036	0.0036	0.00112	0.0025	0.0034	0.0216	--
Manganese	2.24	0.00038 J	0.410	0.400	0.00033 J	0.071	0.049	2.2	--
Volatile Organics Compounds (ug/L) - only detected EPA method 8260 compounds as shown.									
Vinyl chloride	0.025	0.02 U	0.22	0.22	0.02 U	0.15	0.0049 J	0.24	0.02 U

1 SCLs defined in August 2011 consent decree/cleanup action plan.

-- Not Tested.

Shaded results exceed site cleanup levels.

DUP The MW-6 DUP identifer is blind duplicate MW-20DD.

J Result is an estimate below the reporting limit.

U Compound not dectected at reporting limit.

B Analyte was detected in the blank.

H Sample was not analyzed within method specific holding time (48 hours).

Table A-3. Hansville Landfill Surface Water Data, Third Quarter 2012 Monitoring Event - July 5, 2012

Parameter	Site Cleanup Level (SCL) [1]	SW-1	SW-4	SW-6	SW-7	Trip Blank
Field Parameters						
Dissolved Oxygen (mg/L)		1.64	1.95	0.40	1.90	--
pH (units)		7.47	7.61	7.77	7.66	--
Specific Conductivity (uS)		236	440	140	170	--
Temperature (degrees C)		13.6	12.0	13.2	12.5	--
Redox (Mv)		2.36	26.5	199	260	--
Conventional Parmeters (mg/L, unless otherwise shown)						
Alkalinity		93	190	54	60	--
Ammonia (As N)		0.064 B	0.076 B	0.063 B	0.068 B	--
Bicarbonate		93	190	54	60	--
Carbonate		5.0 U	5.0 U	5.0 U	5.0 U	--
Chloride		3.2	19	3.4	3.6	--
Nitrate (As N)		1.8 H	1.2 H	0.15 JH	0.65 H	--
Nitrite (As N)		0.5 UH	0.5 UH	0.5 UH	0.5 UH	--
Sulfate		12	25	4.1	6.2	--
Total Organic Carbon (TOC)		2.2	5.7	19	9.6	--
Orthophoshate (As P)		0.5 UH	0.5 UH	0.5 UH	0.5 UH	--
Dissolved Metals (mg/L)						
Arsenic	0.005	0.00155	0.00147	0.00319	0.00144	--
Manganese	2.24	0.00042 J	0.064	0.120	0.006	--
Volatile Organics Compounds (ug/L) - only detected EPA method 8260 compounds as shown.						
Vinyl chloride	0.025	0.02 U	0.0091 J	0.0046 J	0.02 U	0.02 U

1 SCLs defined in August 2011 consent decree/cleanup action plan.

-- Not Tested.

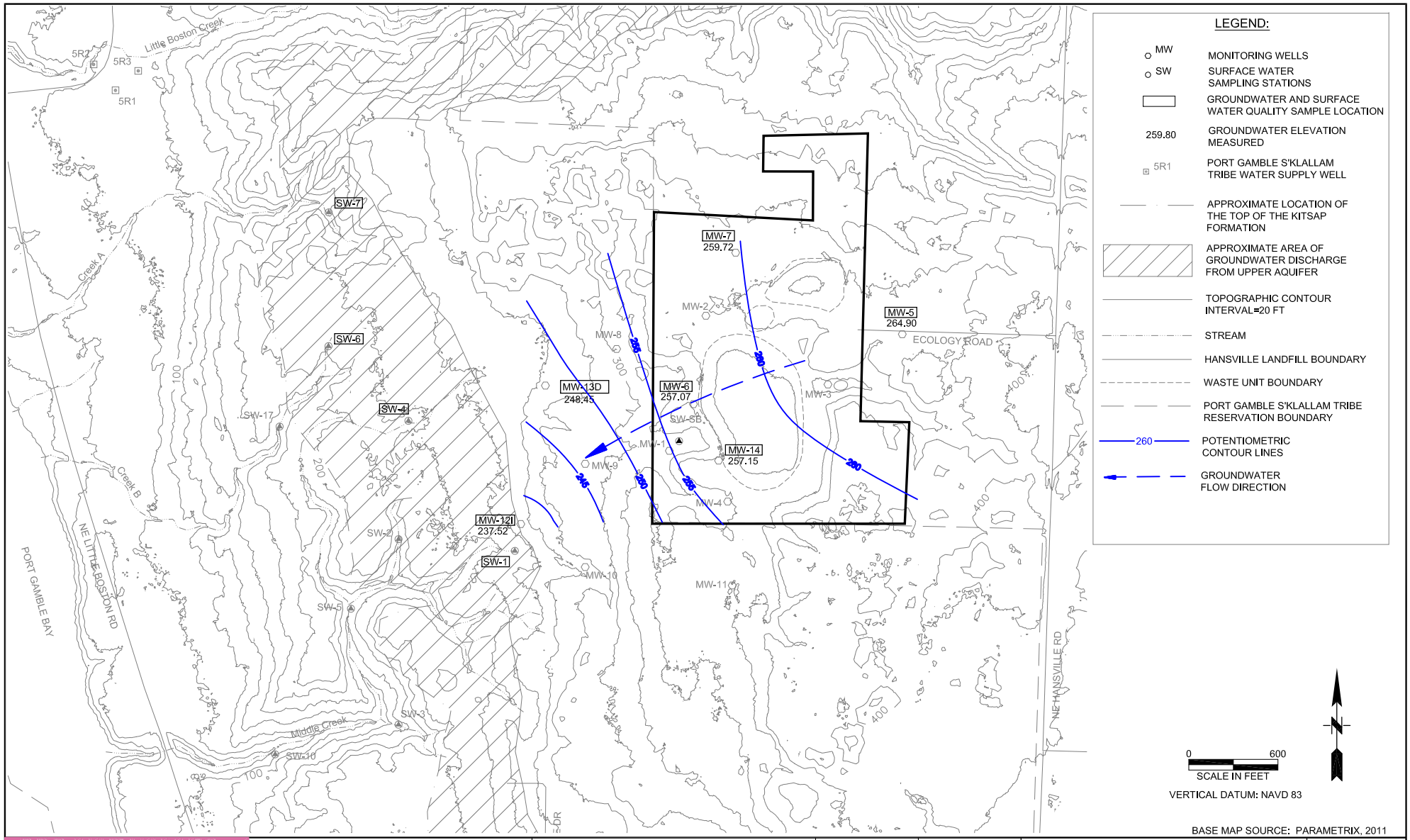
Shaded results exceed site cleanup levels.

J Result is an estimate below the reporting limit.

U Compound not dectected at reporting limit.

B Analyte was detected in the blank.

H Sample was not analyzed within method specific holding time (48 hours).



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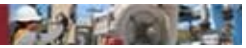
PROJECT NO. 042110017.01	DES BY L.L.	UPPER AQUIFER GROUNDWATER CONTOURS JULY 5, 2012 HANSVILLE LANDFILL KITSAP COUNTY, WASHINGTON	DATE SEPT 2012
SCALE AS SHOWN	CHK BY D.V.		FIGURE A-1
CAD FILE FIGURE A-1	APP BY G.H.		

Hansville LF - Probe Data - 07/01/2012 through 07/31/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Rel Press (H2O inch)	Comments
Probe 1	7/18/2012 11:29	0	0.6	20.2	79.2			0.62	
Probe 2 Deep	7/18/2012 11:23	0	0	20.8	79.2			-13.42	
Probe 2 Middle	7/18/2012 11:21	0	0.1	20.3	79.6			-8.51	
Probe 2 Shallow	7/18/2012 11:18	0	0.1	20.8	79.1			0.51	
Probe 3	7/18/2012 11:12	0	0.8	20.1	79.1			-0.23	
Probe 4	7/18/2012 11:05	0	0.2	20.7	79.1			0.43	
Probe 5	7/18/2012 10:46	0	0.8	19.8	79.4			0.34	
Probe 6	7/18/2012 7:59	0	0.3	20.8	78.9			-0.21	
Probe 7	7/18/2012 10:59	0	1.2	19.9	78.9			-15.26	

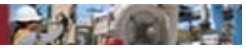
Field Technician and Weather Conditions

Technician	Date	Ambient Temp (deg F)	Baro Press (in -Hg)	General Weather	Wind Speed	Wind Direction			
BB	07/18/12	66	29.53	Partly Cloudy	Calm	N			



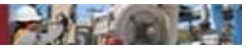
Hansville LF - Probe Data - 08/01/2012 through 08/31/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Rel Press (H2O inch)	Comments
Probe 1	8/15/2012 11:31	0	0.6	19.8	79.6			0.51	
Probe 2 Deep	8/15/2012 11:21	0	0.2	19.9	79.9			0.31	
Probe 2 Middle	8/15/2012 11:18	0	0.2	19.6	80.2			-3.14	
Probe 2 Shallow	8/15/2012 11:17	0	0	20.3	79.7			0.17	
Probe 3	8/15/2012 11:09	0	0.8	20	79.2			0.45	
Probe 4	8/15/2012 10:56	0	1.4	19.2	79.4			-4.21	
Probe 5	8/15/2012 10:44	0	0.5	19.6	79.9			0.6	
Probe 6	8/15/2012 8:22	0	1.5	18	80.5			0.24	
Probe 7	8/15/2012 11:01	0	1.3	18.8	79.9			0.96	
Field Technician and Weather Conditions									
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**			
BB	08/15/12	71	29.49	Clear	Calm	N			



Hansville LF - Probe Data - 09/01/2012 through 09/30/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Rel Press (H2O inch)	Comments
Probe 1	9/19/2012 11:03	0	0.5	20.4	79.1			0.17	
Probe 2 Deep	9/19/2012 10:55	0	0.1	20.3	79.6			-0.33	
Probe 2 Middle	9/19/2012 10:51	0	0.2	20.3	79.5			-0.02	
Probe 2 Shallow	9/19/2012 10:47	0	0.1	20.8	79.1			0.06	
Probe 3	9/19/2012 10:39	0	0.7	20.2	79.1			0.12	
Probe 4	9/19/2012 10:32	0	1.2	19.9	78.9			-0.07	
Probe 5	9/19/2012 10:17	0	0.7	20.2	79.1			0.12	
Probe 6	9/19/2012 7:52	0	1.1	19.6	79.3			0.13	
Probe 7	9/19/2012 10:26	0	0.9	19.9	79.2			0.19	
Field Technician and Weather Conditions									
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**			
BB	09/19/12	59	29.68	Cloudy	Calm	N			



Hansville LF - Well Data - 07/01/2012 through 07/31/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Adj Temp (deg F)	Init Flow (scfm)	Adj Flow (scfm)	System Press (H2O inch)	Rel Press (H2O inch)	Comments
Extraction Well 001	7/18/2012 9:33	3.9	8.9	5.1	82.1	-0.8	-0.8	63	63	2	2			No Change
Extraction Well 002	7/18/2012 9:30	1.6	9.3	7.5	81.6	-1.9	-1.9	67	67	9	0			No Change
Extraction Well 003	7/18/2012 9:25	6.1	10.4	7.3	76.2	-1.1	-1	66	66	4	4			No Change
Extraction Well 004	7/18/2012 9:13	2.2	7.8	10.1	79.9	-1	-0.9	71	71	2	2			No Change
Extraction Well 005	7/18/2012 8:17	0.9	10.7	7.7	80.7	-1.5	-1.5	69	69	3	3			No Change
Extraction Well 006	7/18/2012 8:10	0.1	4.2	15	80.7	-1.7	-1.7	70	70	2	2			No Change
Extraction Well 007	7/18/2012 8:06	6	14.5	2.1	77.4	-1.1	-1.1	68	68	4	4			No Change
Extraction Well 008	7/18/2012 8:32	4.5	13.7	3.8	78	-1.4	-1.4	62	62	3	3			No Change
Extraction Well 009	7/18/2012 8:41	0.5	5.3	13.1	81.1	-0.7	-0.7	68	68	3	3			No Change
Extraction Well 010	7/18/2012 9:41	1.8	6.4	7.6	84.2	-1.7	-1.7	64	64	3	3			No Change
Extraction Well 011	7/18/2012 9:47	2.9	3.9	9.7	83.5	-1.3	-1.3	68	68	4	4			No Change
Extraction Well 012	7/18/2012 8:55	5	2.8	10.7	81.5	-1.3	-1.2	68	68	3	3			No Change
Extraction Well 013	7/18/2012 8:27	4.5	11.1	3.4	81	-1.4	-1.3	65	65	3	3			No Change
Native Soil Extraction We	7/18/2012 10:01	0	1.7	18.7	79.6	-0.3	-0.3	61	61	2	2			No Change
Native Soil Extraction We	7/18/2012 10:04	0	5.5	13.5	81	-0.4	-0.4	60	60	4	4			No Change
Native Soil Extraction We	7/18/2012 10:20	0	1.3	19.2	79.5	-0.3	-0.3	63	63	4	4			No Change
Native Soil Extraction We	7/18/2012 10:17	0	1.5	18.5	80	0	0	69	69	3	3			No Change
Native Soil Extraction We	7/18/2012 10:27	0	2.5	17.7	79.8	0	0	71	71	3	3			No Change
Native Soil Extraction We	7/18/2012 10:24	0	3.1	16.7	80.2	0	0	70	70	3	3			No Change
Native Soil Extraction We	7/18/2012 10:33	0	1.2	19.4	79.4	0.2	0.2	69	69	2	2			No Change
Native Soil Extraction We	7/18/2012 10:30	0	2.8	18.1	79.1	0	0	62	62	2	2			No Change
Native Soil Extraction We	7/18/2012 10:39	0	1.8	18.4	79.8	-1.1	-1.1	60	60	7	7			No Change
Native Soil Extraction We	7/18/2012 10:37	0	0.1	20.7	79.2	-1.2	-1.2	68	68	2	2			No Change
Trench Well TD-1	7/18/2012 7:54	4.8	20.1	0.5	74.6	-0.2	-0.2	63	63	3	3			No Change
Trench Well TR-1	7/18/2012 8:22	2.1	14	3.9	80	-1.5	-1.5	65	65	3	3			No Change
Trench Well TR-2	7/18/2012 8:36	5.2	11.7	5.6	77.5	-1	-1	65	65	5	5			No Change
Trench Well TR-3	7/18/2012 9:38	4.8	12	4.7	78.5	-1.4	-1.4	60	60	10	10			No Change
Trench Well TR-4	7/18/2012 9:16	2.5	14.3	2.7	80.5	-1.1	-1.1	68	68	5	5			No Change
Trench Well TR-5	7/18/2012 8:59	2.3	9.7	8.2	79.8	-1.3	-1.3	61	61	2	2			No Change
Trench Well TR-6	7/18/2012 8:51	6.1	9.6	5.1	79.2	-1	-1	69	69	4	4			No Change
Trench Well TR-7	7/18/2012 9:20	6.5	8.9	7.1	77.5	-1.1	-1.1	69	69	7	7			No Change
Well with minimum temperature during reporting period														
Trench Well TR-3	7/18/2012 9:38	Init = 60 Adj = 60												
Native Soil Extraction We	7/18/2012 10:04	Init = 60 Adj = 60												
Native Soil Extraction We	7/18/2012 10:39	Init = 60 Adj = 60												
Well with maximum temperature during reporting period														
Extraction Well 004	7/18/2012 9:13	Init = 71 Adj = 71												
Native Soil Extraction We	7/18/2012 10:27	Init = 71 Adj = 71												
Field Technician and Weather Conditions														
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**								
BB	07/18/12	66	29.56	Partly Cloudy	Calm	N								

Hansville LF - Well Data - 08/01/2012 through 08/31/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Adj Temp (deg F)	Init Flow (scfm)	Adj Flow (scfm)	System Press (H2O inch)	Rel Press (H2O inch)	Comments
Extraction Well 001	8/15/2012 9:37	4.3	9.2	3.4	83.1	-0.1	-0.1	88	88	2	2			No Change
Extraction Well 002	8/15/2012 9:33	1.2	7.1	10.4	81.3	-1.3	-0.9	80	80	6	4			Closed valve > 1 turn
Extraction Well 003	8/15/2012 9:28	7.8	11.8	4.3	76.1	-1.2	-0.9	72	72	4	2			Closed valve 1/2 to 1 turn
Extraction Well 004	8/15/2012 9:15	3.5	9.9	7.1	79.5	-0.6	-0.3	82	82	3	2			Closed valve 1/2 turn or less
Extraction Well 005	8/15/2012 8:38	1.3	13.3	4.2	81.2	-0.5	-0.4	80	80	3	2			Closed valve 1/2 turn or less
Extraction Well 006	8/15/2012 8:34	0.6	4.1	15.8	79.5	-0.8	-0.8	76	76	3	3			Closed valve 1/2 turn or less
Extraction Well 007	8/15/2012 8:28	5.8	15	1	78.2	-0.3	-0.3	70	70	4	4			No Change
Extraction Well 008	8/15/2012 8:51	4.9	15.3	1.4	78.4	-0.5	-0.5	69	69	3	2			Closed valve 1/2 turn or less
Extraction Well 009	8/15/2012 9:56	0.8	8.3	8.2	82.7	-0.2	0	81	81	4	2			Closed valve 1/2 to 1 turn
Extraction Well 010	8/15/2012 9:45	3.1	5.6	8	83.3	-1.1	-1	78	78	6	6			No Change
Extraction Well 011	8/15/2012 9:52	4.9	5	6.6	83.5	-0.8	-0.8	70	70	8	8			No Change
Extraction Well 012	8/15/2012 9:05	2.9	1.6	14.8	80.7	-0.9	-0.6	71	71	3	1			Closed valve 1/2 to 1 turn
Extraction Well 013	8/15/2012 8:47	4.9	11.8	1.9	81.4	-0.4	-0.4	77	77	3	2			Closed valve 1/2 turn or less
Native Soil Extraction We	8/15/2012 10:07	0	3.9	15.3	80.8	0	0.1	64	64	3	1			Closed valve 1/2 to 1 turn
Native Soil Extraction We	8/15/2012 10:04	0	5.3	13.5	81.2	-0.2	0	68	68	3	2			Closed valve 1/2 to 1 turn
Native Soil Extraction We	8/15/2012 10:15	0	1.2	19.2	79.6	-1.2	-0.7	61	61	6	4			Closed valve > 1 turn
Native Soil Extraction We	8/15/2012 10:12	0	1.5	18.7	79.8	0	0.2	70	70	3	2			Closed valve 1/2 to 1 turn
Native Soil Extraction We	8/15/2012 10:22	0	2.6	17.3	80.1	0	0.2	71	71	3	2			Closed valve 1/2 to 1 turn
Native Soil Extraction We	8/15/2012 10:19	0	3.5	15.7	80.8	0	0.1	69	69	3	2			Closed valve 1/2 turn or less
Native Soil Extraction We	8/15/2012 10:28	0	1.2	18.9	79.9	0.2	0.2	72	72	2	2			No Change
Native Soil Extraction We	8/15/2012 10:25	0	2.5	18	79.5	0	0	67	67	2	2			No Change
Native Soil Extraction We	8/15/2012 10:35	0	1.4	18.7	79.9	-0.9	-0.2	60	60	8	4			Closed valve > 1 turn
Native Soil Extraction We	8/15/2012 10:32	0	3.1	15.8	81.1	-1	-0.4	62	62	8	5			Closed valve > 1 turn
Trench Well TD-1	8/15/2012 8:17	7	21.2	0	71.8	0.1	0.1	80	80	2	2			No Change
Trench Well TR-1	8/15/2012 8:43	1.1	15.8	1.8	81.3	-0.6	-0.6	72	72	4	3			Closed valve 1/2 turn or less
Trench Well TR-2	8/15/2012 8:55	8.9	14.5	1.1	75.5	-0.6	-0.6	81	81	6	4			Closed valve 1/2 to 1 turn
Trench Well TR-3	8/15/2012 9:41	6.2	13.5	2.7	77.6	-0.7	-0.6	63	63	9	7			Closed valve > 1 turn
Trench Well TR-4	8/15/2012 9:18	3.2	14.4	1.9	80.5	-0.5	-0.5	79	79	6	6			No Change
Trench Well TR-5	8/15/2012 9:09	6.7	13.8	1.6	77.9	-0.8	-0.7	68	68	10	8			Closed valve 1/2 to 1 turn
Trench Well TR-6	8/15/2012 9:00	13.2	7.2	1.1	78.5	-0.6	-0.6	75	75	7	7			No Change
Trench Well TR-7	8/15/2012 9:23	15	11.2	0.8	73	-0.5	-0.5	71	71	6	5			Closed valve 1/2 turn or less
Well with minimum temperature during reporting period														
Native Soil Extraction We	8/15/2012 10:35	Init = 60 Adj = 60												
Well with maximum temperature during reporting period														
Extraction Well 001	8/15/2012 9:37	Init = 88 Adj = 88												
Field Technician and Weather Conditions														
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**								
BB	08/15/12	71	29.52	Clear	Calm	N								

Hansville LF - Well Data - 09/01/2012 through 09/30/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Adj Temp (deg F)	Init Flow (scfm)	Adj Flow (scfm)	System Press (H2O inch)	Rel Press (H2O inch)	Comments
Extraction Well 001	9/19/2012 9:21	5.4	12.3	0	82.3	-1	-51.5	63	63	3	3			No Change
Extraction Well 002	9/19/2012 9:09	0.8	7.6	10.3	81.3	-1.1	-1.1	65	65	3	3			No Change
Extraction Well 003	9/19/2012 9:04	7.9	11.5	2.8	77.8	-1.1	-1.1	62	62	5	5			No Change
Extraction Well 003	9/19/2012 9:04	7.9	11.5	2.8	77.8	-1.1	-1.1	62	62	5	5			No Change
Extraction Well 004	9/19/2012 8:54	0	0.3	20.8	78.9	-1.1	-1.1	67	6	2	2			No Change
Extraction Well 005	9/19/2012 8:10	1.7	15.5	2	80.8	-1.2	-1.2	66	66	3	3			No Change
Extraction Well 006	9/19/2012 8:02	3.3	15.7	2.5	78.5	-1.5	-1.5	68	68	2	2			No Change
Extraction Well 007	9/19/2012 7:57	5.4	14.7	1.9	78	-0.5	-0.5	61	61	4	4			No Change
Extraction Well 008	9/19/2012 8:19	5.7	16.5	0.1	77.7	-1.1	-1.1	59	59	3	3			No Change
Extraction Well 009	9/19/2012 8:28	1.2	12.9	3.9	82	-1.2	-1.2	62	62	2	2			No Change
Extraction Well 010	9/19/2012 9:26	2.4	4.9	9.7	83	-1.1	-1.1	62	62	7	7			No Change
Extraction Well 011	9/19/2012 9:14	3.2	4.4	10	82.4	-1.1	-1.1	66	66	6	6			No Change
Extraction Well 012	9/19/2012 8:38	1.3	1.2	17.3	80.2	-1	-1	60	60	3	3			No Change
Extraction Well 013	9/19/2012 8:15	4.2	11.5	3.3	81	-1.1	-1.1	62	62	3	3			No Change
Native Soil Extraction We	9/19/2012 9:40	0	2.7	17.5	79.8	-1	-1	59	59	2	2			No Change
Native Soil Extraction We	9/19/2012 9:37	0	5.3	14.5	80.2	-1.1	-1.1	59	59	2	2			No Change
Native Soil Extraction We	9/19/2012 9:47	0	1.3	19.5	79.2	-1	-1	59	59	4	4			No Change
Native Soil Extraction We	9/19/2012 9:45	0	1.3	18.9	79.8	-1	-1	60	60	2	2			No Change
Native Soil Extraction We	9/19/2012 9:54	0	2.3	18.2	79.5	-0.7	-0.7	59	59	2	2			No Change
Native Soil Extraction We	9/19/2012 9:52	0	3.6	16.4	80	-0.4	-0.4	60	60	2	2			No Change
Native Soil Extraction We	9/19/2012 10:00	0	1.6	19.4	79	-0.8	-0.8	58	58	2	2			No Change
Native Soil Extraction We	9/19/2012 9:58	0	2.7	18.5	78.8	-0.9	-0.9	58	58	2	2			No Change
Native Soil Extraction We	9/19/2012 10:09	0	1.5	19.3	79.2	-0.4	-0.4	60	60	2	2			No Change
Native Soil Extraction We	9/19/2012 10:06	0	3.3	16.9	79.8	-0.9	-0.9	59	59	2	2			No Change
Trench Well TD-1	9/19/2012 7:45	4.4	21	0.3	74.3	0	0.1	59	59	3	3			No Change
Trench Well TR-1	9/19/2012 8:06	2.8	17.6	0	79.6	-0.8	-0.8	58	58	4	4			No Change
Trench Well TR-2	9/19/2012 8:23	9.7	16.7	0	73.6	-1	-1	60	60	6	6			No Change
Trench Well TR-3	9/19/2012 9:18	4.3	11.6	6.2	77.9	-1	-1	61	61	7	7			No Change
Trench Well TR-4	9/19/2012 8:57	2.5	12.2	6.8	78.5	-1	-1	63	63	3	3			No Change
Trench Well TR-5	9/19/2012 8:42	5.6	15.7	1	77.7	-0.9	-0.9	61	61	6	6			No Change
Trench Well TR-6	9/19/2012 8:33	9.4	4.7	7.9	78	-0.9	-0.9	57	57	4	4			No Change
Trench Well TR-7	9/19/2012 8:46	7.3	7.1	6.8	78.8	-1	-1	70	70	4	4			No Change
Well with minimum temperature during reporting period														
Extraction Well 004	9/19/2012 8:54	Init = 67 Adj = 6												
Well with maximum temperature during reporting period														
Trench Well TR-7	9/19/2012 8:46	Init = 70 Adj = 70												
Field Technician and Weather Conditions														
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**								
BB	09/19/12	0	29.7	Cloudy	Calm	N								
BB	09/19/12	59	29.71	Cloudy	Calm	N								

Hansville LF - Sample Port Data - 07/01/2012 through 07/31/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Adj Temp (deg F)	Init Flow (scfm)	Adj Flow (scfm)	System Press (H2O inch)	Rel Press (H2O inch)	Comments
Blower Inlet	7/18/2012 7:46	3.2	9.3	8.1	79.4	-3.6	-3.6	68	68	12	12			No Change
Blower Outlet	7/18/2012 7:49	2.8	8.4	9.5	79.3	0.9	0.7	102	102	20	20			No Change
Field Technician and Weather Conditions														
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**								
BB	07/18/12	66	29.56	Partly Cloudy	Calm	N								

Hansville LF - Sample Port Data - 08/01/2012 through 08/31/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Adj Temp (deg F)	Init Flow (scfm)	Adj Flow (scfm)	System Press (H2O inch)	Rel Press (H2O inch)	Comments
Blower Inlet	8/15/2012 8:08	3.9	9.3	7.8	79	-1.7	-1.7	69	69	11	11			
Blower Outlet	8/15/2012 8:11	3.3	8.2	9.5	79	1.2	1.2	106	106	12	12			No Change
Field Technician and Weather Conditions														
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**								
BB	08/15/12	71	29.52	Clear	Calm	N								

Hansville LF - Sample Port Data - 09/01/2012 through 09/30/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Adj Temp (deg F)	Init Flow (scfm)	Adj Flow (scfm)	System Press (H2O inch)	Rel Press (H2O inch)	Comments
Blower Inlet	9/19/2012 7:37	3.9	9.8	7.3	79	-2.1	-2.1	63	63	7	7			No Change
Blower Outlet	9/19/2012 7:40	3.4	8.5	9.1	79	0.8	0.9	89	89	11	11			No Change
Field Technician and Weather Conditions														
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**								
BB	09/19/12	59	29.71	Cloudy	Calm	N								

Q2 - APRIL 2012 SUMMARY TABLES
& GROUNDWATER FLOW MAP

Table A-1. Water Level Elevations, Groundwater Monitoring Wells, April 19, 2012
Hansville Landfill, Kitsap County, Washington

Location ID	Elevations (ft-msl)		Screen Elevation (ft-msl)		Depth to Water (feet)	Water Level Elevation (ft-msl)
	Ground	PVC	Top	Bottom		
MW-5	363.7	366.9	244	234	102.00	264.90
MW-6	332.0	332.7	260	245	75.50	257.20
MW-7	344.3	346.0	259	244	86.25	259.75
MW-12I	245.6	248.1	217	207	10.35	237.75
MW-13D	258.1	260.4	205	195	11.66	248.74
MW-14	338.6	341.1	262	247	83.38	257.72

PVC: PVC wellhead casing measuring point elevation.
ft-msl: Elevation in feet above mean sea level.

Table A-2. Hansville Landfill Groundwater Data, Second Quarter 2012 Monitoring Event - April 19, 2012

Parameter	Site Cleanup Level (SCL) [1]	MW-05	MW-06	MW-06 DUP	MW-07	MW-12I	MW-13D	MW-14	Trip Blank
Field Parameters									
Dissolved Oxygen (mg/L)		6.15	0.37	--	1.34	0.06	0.18	0.57	--
pH (units)		7.26	6.97	--	6.78	7.22	7.43	6.83	--
Specific Conductivity (uS)		118	288	--	267	150	224	258	--
Temperature (degrees C)		12.5	17.8	--	13.4	11.3	11.5	17.2	--
Redox (Mv)		33	21	--	97	9	-86	-76	--
Conventional Parmeters (mg/L, unless otherwise shown)									
Alkalinity		58	140	150	170	86	110	140	--
Ammonia (As N)		0.030 U	0.033 J	0.030 U	0.031 J	0.030 U	0.030 U	0.0093 J	--
Bicarbonate		58	140	150	170	86	110	140	--
Carbonate		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--
Chloride		2.6	10	10	1.5	2.7	7.2	4.8	--
Nitrate (As N)		0.60	0.67	0.59	1.2	0.5 U	0.089 J	0.052 J	--
Nitrite (As N)		0.5 U	0.068 J	0.060 J	0.5 U	0.5 U	0.5 U	0.5 U	--
Sulfate		9.2	20	21	6.3	6.1	19	17	--
Total Organic Carbon (TOC)		0.51 J	0.87 J	0.89 J	1.5	2.7	0.37 J	0.80 J	--
Orthophoshate (As P)		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--
Dissolved Metals (mg/L)									
Arsenic	0.005	0.00192	0.00320	0.00314	0.00110	0.0021	0.00307	0.00788	--
Manganese	2.24	0.00051 J	0.560	0.550	0.00033 J	0.045	0.049	2.6	--
Volatile Organics Compounds (ug/L) - only detected EPA method 8260 compounds as shown.									
Vinyl chloride	0.025	0.02 U	0.18	0.18	0.02 U	0.13	0.016 J	0.35	0.02 U

1 SCLs defined in August 2011 consent decree/cleanup action plan.

-- Not Tested.

Shaded results exceed site cleanup levels.

DUP The MW-6 DUP identifer is blind duplicate MW-20DD.

J Result is an estimate below the reporting limit.

U Compound not dectected at reporting limit.

B Analyte was detected in the blank.

Table A-3. Hansville Landfill Surface Water Data, Second Quarter 2012 Monitoring Event - April 19, 2012

Parameter	Site Cleanup Level (SCL) [1]	SW-1	SW-4	SW-6	SW-7	Trip Blank
Field Parameters						
Dissolved Oxygen (mg/L)		1.65	2.19	3.70	2.93	--
pH (units)		7.88	6.66	7.76	7.44	--
Specific Conductivity (uS)		230	379	97	209	--
Temperature (degrees C)		9.96	8.75	8.49	8.43	--
Redox (Mv)		2.9	37.8	31.5	--	--
Conventional Parmeters (mg/L, unless otherwise shown)						
Alkalinity		93	170	35	47	--
Ammonia (As N)		0.03 U	0.03 U	0.03 U	0.016 J	--
Bicarbonate		93	170	35	47	--
Carbonate		5.0 U	5.0 U	5.0 U	5.0 U	--
Chloride		4.0	15	3.5	3.4	--
Nitrate (As N)		2.3	1.3	0.49 J	1.3	--
Nitrite (As N)		0.5 U	0.5 U	0.5 U	0.5 U	--
Sulfate		13	23	6.0	6.8	--
Total Organic Carbon (TOC)		2.0 B	7.7	19	9.3	--
Orthophoshate (As P)		0.5 U	0.5 U	0.5 U	0.5 U	--
Dissolved Metals (mg/L)						
Arsenic	0.005	0.00148	0.00163	0.00162	0.00112	--
Manganese	2.24	0.00032 J	0.058	0.043	0.0043	--
Volatile Organics Compounds (ug/L) - only detected EPA method 8260 compounds as shown.						
Vinyl chloride	0.025	0.02 U	0.02 U	0.009 J	0.02 U	0.02 U

1 SCLs defined in August 2011 consent decree/cleanup action plan.

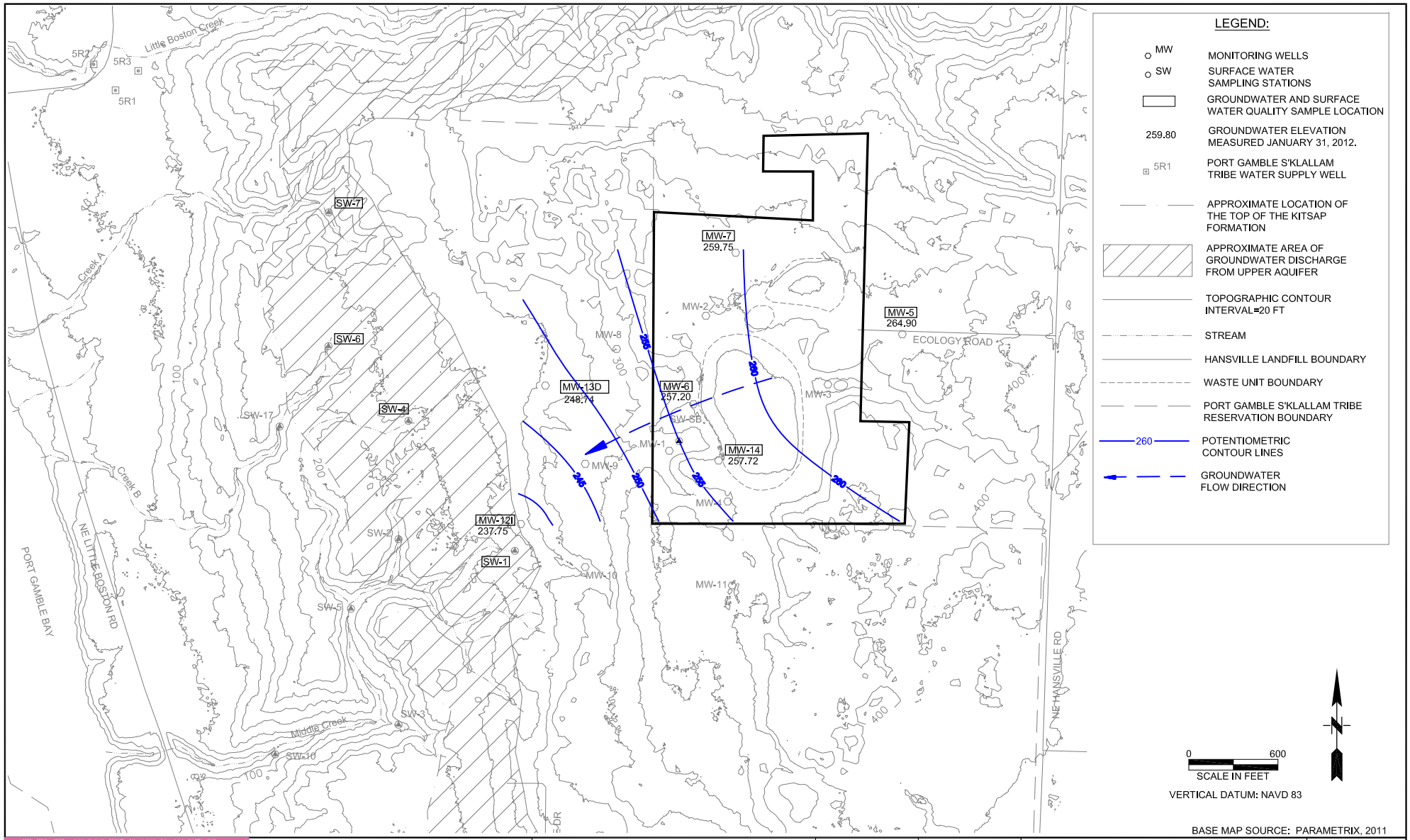
-- Not Tested.

Shaded results exceed site cleanup levels.

J Result is an estimate below the reporting limit.

U Compound not dectected at reporting limit.

B Analyte was detected in the blank.



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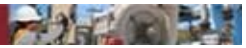
PROJECT NO. 042110017.01	DES BY L.L.	UPPER AQUIFER GROUNDWATER CONTOURS APRIL 19, 2012 HANSVILLE LANDFILL KITSAP COUNTY, WASHINGTON	DATE MAY 2012
SCALE AS SHOWN	CHK BY D.V.		FIGURE A-1
CAD FILE FIGURE A-1	APP BY G.H.		

Hansville LF - Probe Data - 04/01/2012 through 04/30/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Rel Press (H2O inch)	Comments
Probe 1	4/19/2012 11:34	0	1.1	19.3	79.6			-0.26	
Probe 2 Deep	4/19/2012 11:47	0	1	17.4	81.6			-0.22	
Probe 2 Middle	4/19/2012 11:44	0	0.6	19.4	80			-5.29	
Probe 2 Shallow	4/19/2012 11:41	0	0.7	19.6	79.7			-0.25	
Probe 3	4/19/2012 11:52	0	1	19.6	79.4			-0.27	
Probe 4	4/19/2012 12:00	0	1.9	18.8	79.3			-0.23	
Probe 5	4/19/2012 11:26	0	1.3	19	79.7			-0.25	
Probe 6	4/19/2012 11:18	0	4.3	15.2	80.5			-0.18	
Probe 7	4/19/2012 12:06	0	1.5	18.9	79.6			0.13	
Field Technician and Weather Conditions									
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**			
BB	04/19/12	49	29.59	Cloudy	Calm	N			

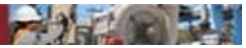
Hansville LF - Probe Data - 05/01/2012 through 05/31/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Rel Press (H2O inch)	Comments
Probe 1	5/16/2012 10:39	0	0.9	20	79.1			0	
Probe 2 Deep	5/16/2012 10:52	0	0.4	18.9	80.7			-0.05	
Probe 2 Middle	5/16/2012 10:49	0	0.3	19.6	80.1			0	
Probe 2 Shallow	5/16/2012 10:46	0	0.1	20.9	79			0.24	
Probe 3	5/16/2012 11:01	0	0.8	20.2	79			-0.21	
Probe 4	5/16/2012 11:09	0	1.6	19.4	79			0.05	
Probe 5	5/16/2012 10:32	0	0.6	19.7	79.7			0.13	
Probe 6	5/16/2012 10:24	0	2.9	15.6	81.5			-9.83	
Probe 7	5/16/2012 11:15	0	1.1	19.4	79.5			0.08	
Field Technician and Weather Conditions									
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**			
BB	05/16/12	58	29.62	Clear	Calm	N			



Hansville LF - Probe Data - 06/01/2012 through 06/30/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Rel Press (H2O inch)	Comments
Probe 1	6/21/2012 8:21	0	1.6	18.8	79.6			0.14	
Probe 2 Deep	6/21/2012 8:15	0	0.4	19.9	79.7			-0.19	
Probe 2 Middle	6/21/2012 8:12	0	0.6	19.5	79.9			0.14	
Probe 2 Shallow	6/21/2012 8:10	0	0.7	19.5	79.8			0.05	
Probe 3	6/21/2012 8:06	0	1	19.9	79.1			0.09	
Probe 4	6/21/2012 7:39	0	1.7	19.2	79.1			0.05	
Probe 5	6/21/2012 7:55	0	0.9	19.6	79.5			0.09	
Probe 6	6/21/2012 8:00	0	4.9	14	81.1			0.18	
Probe 7	6/21/2012 7:45	0	0.4	20.7	78.9			0.14	
Field Technician and Weather Conditions									
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**			
BB	06/21/12	61	29.53	Clear	Calm	N			



Hansville LF - Well Data - 04/01/2012 through 04/30/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Adj Temp (deg F)	Init Flow (scfm)	Adj Flow (scfm)	System Press (H2O inch)	Rel Press (H2O inch)	Comments
Extraction Well 001	4/19/2012 9:51	5.7	11.2	0.7	82.4	-1.8	-1.8	50	50	0	0			
Extraction Well 002	4/19/2012 9:46	0	0.8	20.1	79.1	-1.2	-1.1	52	52	0	0			
Extraction Well 003	4/19/2012 9:29	10.6	15.6	0	73.8	-1.1	-1.1	48	48	1	1			
Extraction Well 004	4/19/2012 9:18	0.1	2.9	16.7	80.3	-1.1	-1	50	50	0	0			
Extraction Well 005	4/19/2012 8:40	0.9	14.4	3	81.7	-1.3	-1.2	48	48	1	1			
Extraction Well 006	4/19/2012 8:30	0.2	5.9	13.2	80.7	-1.1	-1.1	48	48	1	1			
Extraction Well 007	4/19/2012 8:24	7.3	15.4	1.1	76.2	-0.5	-0.5	50	50	1	1			
Extraction Well 008	4/19/2012 10:20	7.6	17	0	75.4	-1.4	-1.4	52	52	2	2			
Extraction Well 009	4/19/2012 10:14	1.4	9.5	2.1	87	-1.2	-1.2	50	50	0	0			
Extraction Well 010	4/19/2012 10:01	6.3	10	2.8	80.9	-1.7	-1.7	50	50	0	0			
Extraction Well 011	4/19/2012 9:40	1.8	2.8	14.4	81	-1.4	-1.3	55	55	1	1			
Extraction Well 012	4/19/2012 8:55	10.6	4.9	3.1	81.4	-1.3	-1.3	52	52	1	1			
Extraction Well 013	4/19/2012 8:45	5.5	11.1	3.1	80.3	-1	-0.9	52	52	1	1			
Native Soil Extraction We	4/19/2012 10:28	0	5.1	13.8	81.1	-0.4	-0.4	50	50	0	0			
Native Soil Extraction We	4/19/2012 10:33	0	6.5	11.3	82.2	-1.1	-1.1	50	50	0	0			
Native Soil Extraction We	4/19/2012 10:41	0	1.5	19.4	79.1	-1.2	-1.2	50	50	1	1			
Native Soil Extraction We	4/19/2012 10:38	0	3.6	15.8	80.6	-0.7	-0.7	50	50	1	1			
Native Soil Extraction We	4/19/2012 10:52	0	3.7	17.1	79.2	-0.9	-0.9	52	52	2	2			
Native Soil Extraction We	4/19/2012 10:48	0	0.6	20.4	79	-0.6	-0.7	52	52	2	2			
Native Soil Extraction We	4/19/2012 10:59	0	2.3	19.3	78.4	-0.5	-0.5	50	50	2	2			
Native Soil Extraction We	4/19/2012 10:56	0	4.2	16.9	78.9	-0.9	-0.9	50	50	2	2			
Native Soil Extraction We	4/19/2012 11:10	0	0.1	20.8	79.1	-0.4	-0.4	50	50	1	1			
Native Soil Extraction We	4/19/2012 11:06	0	0.3	20.9	78.8	-0.4	-0.4	50	50	1	1			
Trench Well TD-1	4/19/2012 8:15	5.6	19.8	0	74.6	-0.2	-0.2	55	55	1	1			
Trench Well TR-1	4/19/2012 8:35	0.4	12.8	3.8	83	-1.3	-1.3	50	50	1	1			
Trench Well TR-2	4/19/2012 10:17	9.1	14.5	0	76.4	-1.5	-1.5	50	50	3	3			
Trench Well TR-3	4/19/2012 9:55	2.7	4.5	14.1	78.7	-3.1	-3.1	52	52	3	3			
Trench Well TR-4	4/19/2012 9:23	1.7	10.3	4.7	83.3	-1.4	-1.4	50	50	2	2			
Trench Well TR-5	4/19/2012 9:04	3.7	13.5	0.8	82	-1.4	-1.4	50	50	1	1			
Trench Well TR-6	4/19/2012 8:59	11.3	6.3	5.3	77.1	-1.5	-1.5	50	50	2	2			
Trench Well TR-7	4/19/2012 9:13	8.4	12.8	0.2	78.6	-1.5	-1.5	52	52	1	1			
Well with minimum temperature during reporting period														
Extraction Well 006	4/19/2012 8:30	Init = 48 Adj = 48												
Extraction Well 005	4/19/2012 8:40	Init = 48 Adj = 48												
Extraction Well 003	4/19/2012 9:29	Init = 48 Adj = 48												
Well with maximum temperature during reporting period														
Trench Well TD-1	4/19/2012 8:15	Init = 55 Adj = 55												
Extraction Well 011	4/19/2012 9:40	Init = 55 Adj = 55												
Field Technician and Weather Conditions														
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**								
BB	04/19/12	49	29.57	Cloudy	Calm	N								

Hansville LF - Well Data - 05/01/2012 through 05/31/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Adj Temp (deg F)	Init Flow (scfm)	Adj Flow (scfm)	System Press (H2O inch)	Rel Press (H2O inch)	Comments
Extraction Well 001	5/16/2012 8:50	4.6	9.3	3.5	82.6	-0.6	-0.6	55	55	1	1			
Extraction Well 002	5/16/2012 8:41	0	0.3	20.6	79.1	-3.2	-3.2	55	55	1	1			
Extraction Well 003	5/16/2012 8:36	6	10.4	6.8	76.8	-1.1	-1	55	55	1	1			
Extraction Well 004	5/16/2012 8:28	0	1.1	19.1	79.8	-1.1	-1	55	55	1	1			
Extraction Well 005	5/16/2012 8:01	0.4	6.4	13	80.2	-0.9	-0.9	55	55	3	3			
Extraction Well 006	5/16/2012 7:53	0.1	2.8	16.7	80.4	-1.1	-1.1	55	55	1	1			
Extraction Well 007	5/16/2012 7:48	3.5	8.1	10.1	78.3	-0.6	-0.6	55	55	3	3			
Extraction Well 008	5/16/2012 9:17	3.9	10.9	6.9	78.3	-1	-1	55	55	5	5			
Extraction Well 009	5/16/2012 9:08	0.8	7.2	8.1	83.9	-0.8	-0.8	55	55	4	4			
Extraction Well 010	5/16/2012 8:57	2	3.2	13.7	81.1	-1.1	-1.1	55	55	1	1			
Extraction Well 011	5/16/2012 9:01	1.2	1.1	16.4	81.3	-0.8	-0.8	55	55	1	1			
Extraction Well 012	5/16/2012 8:15	0.6	0.4	19.8	79.2	-0.9	-0.9	55	55	1	1			
Extraction Well 013	5/16/2012 8:06	2.3	4.7	12.8	80.2	-0.8	-0.8	55	55	2	2			
Native Soil Extraction We	5/16/2012 9:24	0	3.7	16	80.3	-0.1	-0.1	55	55	1	1			
Native Soil Extraction We	5/16/2012 9:21	0	5.3	13.3	81.4	-0.8	-0.8	55	55	4	4			
Native Soil Extraction We	5/16/2012 9:31	0	1.3	19.3	79.4	-0.7	-0.7	55	55	3	3			
Native Soil Extraction We	5/16/2012 9:28	0	2.4	17.4	80.2	-0.2	-0.2	55	55	1	1			
Native Soil Extraction We	5/16/2012 9:37	0	3.1	17.1	79.8	-0.5	-0.5	55	55	3	3			
Native Soil Extraction We	5/16/2012 9:35	0	3.6	15.8	80.6	-0.3	-0.3	55	55	2	2			
Native Soil Extraction We	5/16/2012 9:45	0	1.3	19.6	79.1	-0.1	-0.1	55	55	2	2			
Native Soil Extraction We	5/16/2012 9:42	0	3	17.8	79.2	-0.5	-0.5	55	55	2	2			
Native Soil Extraction We	5/16/2012 9:52	0	2.1	18.2	79.7	-1.7	-1.7	55	55	1	1			
Native Soil Extraction We	5/16/2012 9:49	0	2.5	17	80.5	-0.3	-0.2	55	55	0	0			
Trench Well TD-1	5/16/2012 7:41	5.1	19.5	0.2	75.2	-0.1	-0.1	55	55	2	2			
Trench Well TR-1	5/16/2012 7:57	0.7	10.1	7.4	81.8	-1.3	-1.3	55	55	2	2			
Trench Well TR-2	5/16/2012 9:14	4.5	8.3	8.4	78.8	-1.1	-1.1	55	55	8	8			
Trench Well TR-3	5/16/2012 8:53	6.7	12.5	2.1	78.7	-2	-2	55	55	9	9			
Trench Well TR-4	5/16/2012 8:31	1.1	9.3	7.4	82.2	-1.2	-1.2	55	55	8	8			
Trench Well TR-5	5/16/2012 8:18	1.6	9.5	7.1	81.8	-1.2	-1.2	55	55	1	1			
Trench Well TR-6	5/16/2012 8:11	6.2	5.9	8.4	79.5	-1.3	-1.3	55	55	6	6			
Trench Well TR-7	5/16/2012 8:24	3.8	7	9.7	79.5	-1.3	-1.3	55	55	7	7			

Well with minimum temperature during reporting period		
Trench Well TD-1	5/16/2012 7:41	Init = 55 Adj = 55
Extraction Well 007	5/16/2012 7:48	Init = 55 Adj = 55
Extraction Well 006	5/16/2012 7:53	Init = 55 Adj = 55
Trench Well TR-1	5/16/2012 7:57	Init = 55 Adj = 55
Extraction Well 005	5/16/2012 8:01	Init = 55 Adj = 55
Extraction Well 013	5/16/2012 8:06	Init = 55 Adj = 55
Trench Well TR-6	5/16/2012 8:11	Init = 55 Adj = 55
Extraction Well 012	5/16/2012 8:15	Init = 55 Adj = 55
Trench Well TR-5	5/16/2012 8:18	Init = 55 Adj = 55
Trench Well TR-7	5/16/2012 8:24	Init = 55 Adj = 55
Extraction Well 004	5/16/2012 8:28	Init = 55 Adj = 55
Trench Well TR-4	5/16/2012 8:31	Init = 55 Adj = 55
Extraction Well 003	5/16/2012 8:36	Init = 55 Adj = 55
Extraction Well 002	5/16/2012 8:41	Init = 55 Adj = 55
Extraction Well 001	5/16/2012 8:50	Init = 55 Adj = 55
Trench Well TR-3	5/16/2012 8:53	Init = 55 Adj = 55
Extraction Well 010	5/16/2012 8:57	Init = 55 Adj = 55
Extraction Well 011	5/16/2012 9:01	Init = 55 Adj = 55

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Adj Temp (deg F)	Init Flow (scfm)	Adj Flow (scfm)	System Press (H2O inch)	Rel Press (H2O inch)	Comments
Extraction Well 009	5/16/2012 9:08	Init = 55 Adj = 55												
Trench Well TR-2	5/16/2012 9:14	Init = 55 Adj = 55												
Extraction Well 008	5/16/2012 9:17	Init = 55 Adj = 55												
Native Soil Extraction We	5/16/2012 9:21	Init = 55 Adj = 55												
Native Soil Extraction We	5/16/2012 9:24	Init = 55 Adj = 55												
Native Soil Extraction We	5/16/2012 9:28	Init = 55 Adj = 55												
Native Soil Extraction We	5/16/2012 9:31	Init = 55 Adj = 55												
Native Soil Extraction We	5/16/2012 9:35	Init = 55 Adj = 55												
Native Soil Extraction We	5/16/2012 9:37	Init = 55 Adj = 55												
Native Soil Extraction We	5/16/2012 9:42	Init = 55 Adj = 55												
Native Soil Extraction We	5/16/2012 9:45	Init = 55 Adj = 55												
Native Soil Extraction We	5/16/2012 9:49	Init = 55 Adj = 55												
Native Soil Extraction We	5/16/2012 9:52	Init = 55 Adj = 55												
Well with maximum temperature during reporting period														
Trench Well TD-1	5/16/2012 7:41	Init = 55 Adj = 55												
Extraction Well 007	5/16/2012 7:48	Init = 55 Adj = 55												
Extraction Well 006	5/16/2012 7:53	Init = 55 Adj = 55												
Trench Well TR-1	5/16/2012 7:57	Init = 55 Adj = 55												
Extraction Well 005	5/16/2012 8:01	Init = 55 Adj = 55												
Extraction Well 013	5/16/2012 8:06	Init = 55 Adj = 55												
Trench Well TR-6	5/16/2012 8:11	Init = 55 Adj = 55												
Extraction Well 012	5/16/2012 8:15	Init = 55 Adj = 55												
Trench Well TR-5	5/16/2012 8:18	Init = 55 Adj = 55												
Trench Well TR-7	5/16/2012 8:24	Init = 55 Adj = 55												
Extraction Well 004	5/16/2012 8:28	Init = 55 Adj = 55												
Trench Well TR-4	5/16/2012 8:31	Init = 55 Adj = 55												
Extraction Well 003	5/16/2012 8:36	Init = 55 Adj = 55												
Extraction Well 002	5/16/2012 8:41	Init = 55 Adj = 55												
Extraction Well 001	5/16/2012 8:50	Init = 55 Adj = 55												
Trench Well TR-3	5/16/2012 8:53	Init = 55 Adj = 55												
Extraction Well 010	5/16/2012 8:57	Init = 55 Adj = 55												
Extraction Well 011	5/16/2012 9:01	Init = 55 Adj = 55												
Extraction Well 009	5/16/2012 9:08	Init = 55 Adj = 55												
Trench Well TR-2	5/16/2012 9:14	Init = 55 Adj = 55												
Extraction Well 008	5/16/2012 9:17	Init = 55 Adj = 55												
Native Soil Extraction We	5/16/2012 9:21	Init = 55 Adj = 55												
Native Soil Extraction We	5/16/2012 9:24	Init = 55 Adj = 55												
Native Soil Extraction We	5/16/2012 9:28	Init = 55 Adj = 55												
Native Soil Extraction We	5/16/2012 9:31	Init = 55 Adj = 55												
Native Soil Extraction We	5/16/2012 9:35	Init = 55 Adj = 55												
Native Soil Extraction We	5/16/2012 9:37	Init = 55 Adj = 55												
Native Soil Extraction We	5/16/2012 9:42	Init = 55 Adj = 55												
Native Soil Extraction We	5/16/2012 9:45	Init = 55 Adj = 55												
Native Soil Extraction We	5/16/2012 9:49	Init = 55 Adj = 55												
Native Soil Extraction We	5/16/2012 9:52	Init = 55 Adj = 55												
Field Technician and Weather Conditions														
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**								
BB	05/16/12	58	29.62	Clear	Calm	N								

Hansville LF - Well Data - 06/01/2012 through 06/30/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Adj Temp (deg F)	Init Flow (scfm)	Adj Flow (scfm)	System Press (H2O inch)	Rel Press (H2O inch)	Comments
Extraction Well 001	6/20/2012 10:30	4.8	11.2	0	84	0.5	0.5	81	81	3	3			No Change
Extraction Well 002	6/20/2012 9:56	1.4	7.9	8.9	81.8	-1.9	-1.9	75	75	8	8			No Change
Extraction Well 003	6/20/2012 9:40	0.2	0.4	20.2	79.2	0.1	0.1	85	85	1	1			No Change
Extraction Well 004	6/20/2012 9:19	5	13.4	3.2	78.4	0	0	79	79	2	2			No Change
Extraction Well 005	6/20/2012 8:28	1.1	12.3	5.6	81	-0.3	-0.3	70	70	3	3			No Change
Extraction Well 006	6/20/2012 8:13	0.3	6.1	12	81.6	-0.5	-0.4	71	71	1	1			No Change
Extraction Well 007	6/20/2012 8:06	6.4	15.6	0.7	77.3	0	0	68	68	1	1			No Change
Extraction Well 008	6/20/2012 8:41	3.8	11.9	5.8	78.5	-0.5	-0.5	62	62	4	4			No Change
Extraction Well 009	6/20/2012 8:53	0.9	9.8	5.5	83.8	-0.2	-0.2	70	70	3	3			No Change
Extraction Well 010	6/20/2012 10:36	1.8	3.5	12.4	82.3	0	0	72	72	4	4			No Change
Extraction Well 011	6/20/2012 10:16	4.1	4.8	5.9	85.2	0.2	0.2	72	72	1	1			No Change
Extraction Well 012	6/20/2012 9:08	8.6	3.4	7.1	80.9	-0.1	-0.1	81	81	1	1			No Change
Extraction Well 013	6/20/2012 8:35	4.6	10	4.2	81.2	-0.2	-0.2	72	72	2	2			No Change
Native Soil Extraction We	6/20/2012 10:55	0	4.1	15.1	80.8	0.6	0.7	76	76	1	1			No Change
Native Soil Extraction We	6/20/2012 10:52	0.1	5.7	12.6	81.6	0.1	0.1	61	61	7	7			No Change
Native Soil Extraction We	6/20/2012 11:04	0	1.1	18.8	80.1	0	0	62	62	4	4			No Change
Native Soil Extraction We	6/20/2012 11:02	0	2.5	16.8	80.7	0.5	0.5	78	78	2	2			No Change
Native Soil Extraction We	6/20/2012 11:16	0	2.6	16.9	80.5	0.5	0.4	81	81	2	2			No Change
Native Soil Extraction We	6/20/2012 11:13	0	0.4	19.3	80.3	0.5	0.5	80	80	2	2			No Change
Native Soil Extraction We	6/20/2012 11:25	0	1.3	18.7	80	0.6	0.6	85	85	1	1			No Change
Native Soil Extraction We	6/20/2012 11:22	0	2.9	17.3	79.8	0.3	0.3	68	68	2	2			No Change
Native Soil Extraction We	6/20/2012 11:37	0	1.7	17.4	80.9	-0.8	-0.8	58	58	7	7			No Change
Native Soil Extraction We	6/20/2012 11:35	0	0.2	19.7	80.1	0.7	0.7	89	89	1	1			No Change
Trench Well TD-1	6/20/2012 7:58	6	21.2	0	72.8	0	0	73	73	1	1			No Change
Trench Well TR-1	6/20/2012 8:21	1.9	12.5	4.9	80.7	-0.5	-0.5	69	69	2	2			No Change
Trench Well TR-2	6/20/2012 8:47	5.5	9.7	6.9	77.9	-0.5	-0.4	68	68	4	4			No Change
Trench Well TR-3	6/20/2012 10:22	6.4	11.5	3.6	78.5	-0.7	-0.7	58	58	9	9			No Change
Trench Well TR-4	6/20/2012 9:23	2.4	12.6	3.5	81.5	-0.3	-0.3	69	69	7	7			No Change
Trench Well TR-5	6/20/2012 9:11	1.5	8.7	8.7	81.1	-0.3	-0.3	80	80	3	3			No Change
Trench Well TR-6	6/20/2012 9:04	6.1	5.5	8.5	79.9	-0.4	-0.4	67	67	5	5			No Change
Trench Well TR-7	6/20/2012 9:30	5.7	11.1	4	79.2	-0.3	-0.3	62	62	6	6			No Change
Well with minimum temperature during reporting period														
Trench Well TR-3	6/20/2012 10:22	Init = 58 Adj = 58												
Native Soil Extraction We	6/20/2012 11:37	Init = 58 Adj = 58												
Well with maximum temperature during reporting period														
Native Soil Extraction We	6/20/2012 11:35	Init = 89 Adj = 89												
Field Technician and Weather Conditions														
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**								
BB	06/20/12	68	29.7	Clear	Calm	N								

Hansville LF - Sample Port Data - 05/01/2012 through 05/31/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Adj Temp (deg F)	Init Flow (scfm)	Adj Flow (scfm)	System Press (H2O inch)	Rel Press (H2O inch)	Comments
Blower Inlet	5/16/2012 9:58	0	0	20.8	79.2	-3	-2.9	55	55	12	12			
Blower Outlet	5/16/2012 9:56	3.2	8	8.4	80.4	1.1	1.1	55	55	15	15			
Field Technician and Weather Conditions														
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**								
BB	05/16/12	58	29.62	Clear	Calm	N								

Hansville LF - Sample Port Data - 06/01/2012 through 06/30/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Adj Temp (deg F)	Init Flow (scfm)	Adj Flow (scfm)	System Press (H2O inch)	Rel Press (H2O inch)	Comments
Blower Inlet	6/20/2012 7:47	4.1	10.6	5.8	79.5	-3	-3	64	64	9	9			No Change
Blower Outlet	6/20/2012 7:50	3.5	9.2	7.8	79.5	0.9	0.9	108	108	11	11			No Change
Field Technician and Weather Conditions														
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**								
BB	06/20/12	68	29.7	Clear	Calm	N								

Q1 - JANUARY 2012 SUMMARY TABLES
& GROUNDWATER FLOW MAP

Table A-1. Water Level Elevations, Groundwater Monitoring Wells, January 31, 2012
Hansville Landfill, Kitsap County, Washington

Location ID	Elevations (ft-msl)		Screen Elevation (ft-msl)		Depth to Water (feet)	Water Level Elevation (ft-msl)
	Ground	PVC	Top	Bottom		
MW-5	363.7	366.9	244	234	101.90	265.00
MW-6	332.0	332.7	260	245	75.55	257.15
MW-7	344.3	346.0	259	244	86.20	259.80
MW-12I	245.6	248.1	217	207	10.40	237.70
MW-13D	258.1	260.4	205	195	11.80	248.60
MW-14	338.6	341.1	262	247	83.35	257.75

PVC: PVC wellhead casing measuring point elevation.

ft-msl: Elevation in feet above mean sea level.

Table A-2. Hansville Landfill Groundwater Data, First Quarter 2012 Monitoring Event - January 31, 2012

Parameter	Site Cleanup Level (SCL) [1]	MW-05	MW-06	MW-06 DUP	MW-07	MW-12I	MW-13D	MW-14	Trip Blank
Field Parameters									
Dissolved Oxygen (mg/L)		8.5	0.61	--	1.7	0.01	0.12	0.23	--
pH (units)		7.36	6.94	--	6.85	7.32	7.56	6.86	--
Specific Conductivity (uS)		140	333	--	286	173	218	241	--
Temperature (degrees C)		13.8	16.9	--	12.9	10.9	11.09	14.8	--
Redox (Mv)		62.2	11	--	85	-3.1	-44.7	-59	--
Conventional Parmeters (mg/L, unless otherwise shown)									
Alkalinity		61 B	150 B	150 B	160 B	87 B	120 B	120 B	--
Ammonia (As N)		0.078	0.060	0.030 U	0.140	0.030 U	0.030 U	0.030 U	--
Bicarbonate		61 B	150 B	150 B	160 B	87 B	120 B	120 B	--
Carbonate		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--
Chloride		2.6	12	12	2.3	2.9	13	5.2	--
Nitrate (As N)		0.63	1.9	1.9	1.1	0.5 U	0.5 U	0.5 U	--
Nitrite (As N)		0.5 U	0.094 J	0.093 J	0.5 U	0.5 U	0.5 U	0.5 U	--
Sulfate		9.3	21	21	6.2	6.3	19	14	--
Total Organic Carbon (TOC)		0.32 J	0.92 J	0.9 J	1.3	2.7	0.45 J	0.89 J	--
Orthophoshate (As P)		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--
Dissolved Metals (mg/L)									
Arsenic	0.005	0.0019	0.00346	0.00319	0.00106	0.00222	0.00293	0.0194	--
Manganese	2.24	0.0007 J	0.490	0.450	0.001 U	0.073	0.049	2.4	--
Volatile Organics Compounds (ug/L) - only detected EPA method 8260 compounds as shown.									
Vinyl chloride	0.025	0.02 U	0.35	0.30	0.02 U	0.19	0.02 U	0.28	0.02 U
1,1-Dichloroethane		1.0 U	1.3	1.4	1.0 U	1.1 J	1.0 U	0.57 J	1.0 U
cis-1,2-Dichloroethene		1.0 U	1.0 U	1.0 U	1.0 U	1.1	1.0 U	4.8	1.0 U
trans-1,2-Dichloroethene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1	1.0 U
Dichlorofluromethane		1.0 U	0.76 J	0.76 J	1.0 U	1.0 U	1.0 U	1.2	1.0 U
Ethyl ether		1.0 U	4.0	3.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Acetone		3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.7 J
Acetonitrile		40 U	40 U	40 U	40 U	40 U	40 U	40 U	50

1 SCLs defined in August 2011 consent decree/cleanup action plan.

-- Not Tested.

Shaded results exceed site cleanup levels.

DUP The MW-6 DUP identifer is blind duplicate MW-20DD.

J Result is an estimate below the reporting limit.

U Compound not dectected at reporting limit.

B Analyte was detected in the blank.

Table A-3. Hansville Landfill Surface Water Data, First Quarter 2012 Monitoring Event - January 31, 2012

Parameter	Site Cleanup Level (SCL) [1]	SW-1	SW-4	SW-6	SW-7	Trip Blank
Field Parameters						
Dissolved Oxygen (mg/L)		0.15	0.23	0.40	0.09	--
pH (units)		7.72	6.90	7.34	7.14	--
Specific Conductivity (uS)		232	356	101	137	--
Temperature (degrees C)		8.38	7.3	6.36	6.76	--
Redox (Mv)		61	82	73	89	--
Conventional Parmeters (mg/L, unless otherwise shown)						
Alkalinity		96 B	150 B	27 B	41 B	--
Ammonia (As N)		0.07	0.056	0.041	0.03 U	--
Bicarbonate		96 B	150 B	27 B	41 B	--
Carbonate		5.0 U	5.0 U	5.0 U	5.0 U	--
Chloride		5.2	16	4.2	4.0	--
Nitrate (As N)		2.4	1.6	1.9	2.1	--
Nitrite (As N)		0.5 U	0.5 U	0.5 U	0.5 U	--
Sulfate		13	21	7.0	7.1	--
Total Organic Carbon (TOC)		2.8	11	23	10	--
Orthophoshate (As P)		0.5 U	0.5 U	0.5 U	0.5 U	--
Dissolved Metals (mg/L)						
Arsenic	0.005	0.00144	0.00156	0.00134	0.00092	--
Manganese	2.24	0.00045 J	0.062	0.019	0.0023	--
Lead		--	0.001 U	0.001 U	--	--
Volatile Organics Compounds (ug/L) - only detected EPA method 8260 compounds as shown.						
Vinyl chloride	0.025	0.02 U	0.004 J	0.02 U	0.02 U	0.02 U
Acetone		3.0 U	3.0 U	3.0 U	3.0 U	3.7 J
Acetonitrile		40 U	40 U	40 U	40 U	50

1 SCLs defined in August 2011 consent decree/cleanup action plan.

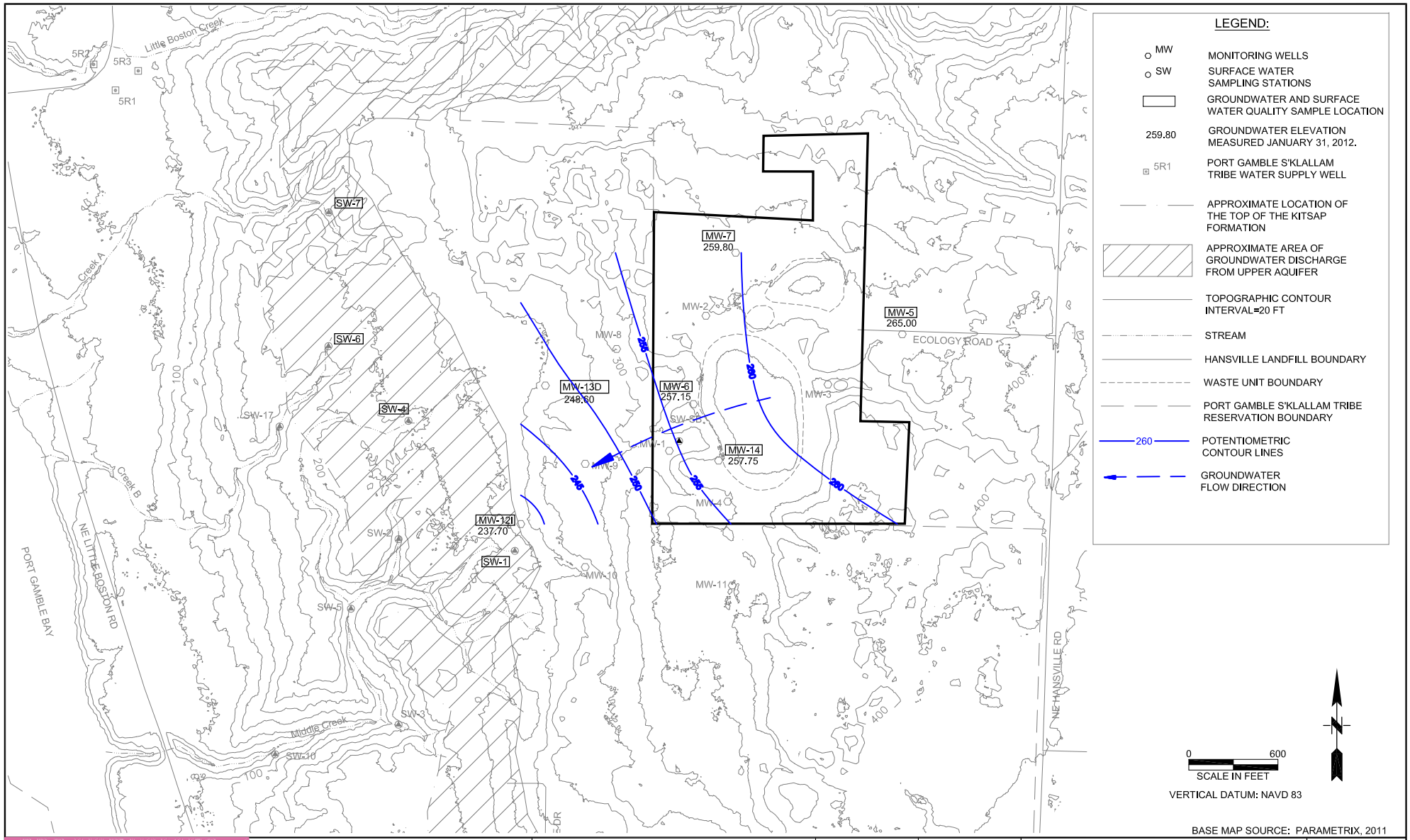
-- Not Tested.

Shaded results exceed site cleanup levels.

J Result is an estimate below the reporting limit.

U Compound not dectected at reporting limit.

B Analyte was detected in the blank.



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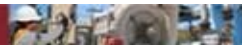
PROJECT NO. 042110017.00	DES BY L.L.	UPPER AQUIFER GROUNDWATER CONTOURS JANUARY 31, 2012 HANSVILLE LANDFILL KITSAP COUNTY, WASHINGTON	DATE MAR 2011
SCALE AS SHOWN	CHK BY D.V.		FIGURE A-1
CAD FILE FIGURE A-1	APP BY G.H.		

Hansville LF - Probe Data - 01/01/2012 through 01/31/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Rel Press (H2O inch)	Comments
Probe 1	1/25/2012 12:46	0	0.6	19.9	79.5			-0.18	
Probe 2 Deep	1/25/2012 13:27	0	0.1	20.1	79.8			-1.36	
Probe 2 Middle	1/25/2012 13:24	0	0.1	20.1	79.8			-0.86	
Probe 2 Shallow	1/25/2012 13:21	0	0.2	20	79.8			-0.16	
Probe 3	1/25/2012 11:33	0	0.8	20.1	79.1			0	
Probe 4	1/25/2012 13:53	0	1.9	18.5	79.6			0.18	
Probe 5	1/25/2012 11:11	0	0.2	20.5	79.3			0.04	
Probe 6	1/25/2012 10:26	0	0.2	20.9	78.9			0	
Probe 7	1/25/2012 13:08	0	0.7	19.2	80.1			0.09	

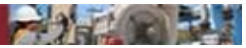
Field Technician and Weather Conditions

Technician	Date	Ambient Temp (deg F)	Baro Press (in -Hg)	General Weather	Wind Speed	Wind Direction			
EL	01/25/12	45	29.74	Raining	Breezy Wind	S			



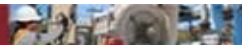
Hansville LF - Probe Data - 02/01/2012 through 02/29/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Rel Press (H2O inch)	Comments
Probe 1	2/28/2012 16:41	0	1.7	18.8	79.5			0.2	
Probe 2 Deep	2/28/2012 16:30	0	1	17.8	81.2			2.02	
Probe 2 Middle	2/28/2012 16:26	0	0.8	18.7	80.5			1.11	
Probe 2 Shallow	2/28/2012 16:22	0	0.8	19.3	79.9			0.18	
Probe 3	2/28/2012 16:14	0	1.2	19.5	79.3			-0.11	
Probe 4	2/28/2012 15:40	0	1.9	19.1	79			0.05	
Probe 5	2/28/2012 15:27	0	1.8	18.4	79.8			0.23	
Probe 6	2/28/2012 15:15	0	5.4	13.5	81.1			0.09	
Probe 7	2/28/2012 15:49	0	2.3	19	78.7			-0.12	
Field Technician and Weather Conditions									
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**			
el	02/28/12	45	29.26	Cloudy	Calm	N			



Hansville LF - Probe Data - 03/01/2012 through 03/31/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Rel Press (H2O inch)	Comments
Probe 1	3/15/2012 12:21	0	1.5	19.3	79.2			-0.25	
Probe 2 Deep	3/15/2012 12:12	0	0.4	20.1	79.5			-0.29	
Probe 2 Middle	3/15/2012 12:09	0	0.9	18.6	80.5			0.45	
Probe 2 Shallow	3/15/2012 12:04	0	0	21	79			-0.27	
Probe 3	3/15/2012 11:54	0	1.1	19.6	79.3			-0.23	
Probe 4	3/15/2012 11:33	0	1.9	19.2	78.9			-0.33	
Probe 5	3/15/2012 11:22	0	1.8	18.8	79.4			-0.3	
Probe 6	3/15/2012 11:12	0	5.3	13.9	80.8			-0.34	
Probe 7	3/15/2012 11:43	0	1.9	19.6	78.5			-0.25	
Field Technician and Weather Conditions									
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**			
BB	03/15/12	50	29.13	Raining	Windy	N			



Hansville LF - Well Data - 01/01/2012 through 01/31/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Adj Temp (deg F)	Init Flow (scfm)	Adj Flow (scfm)	System Press (H2O inch)	Rel Press (H2O inch)	Comments
Extraction Well 001	1/25/2012 10:42	7.5	18.4	0	74.1	-0.2	-0.2	50	50	4	4			No Change
Extraction Well 001	1/25/2012 16:30	0	0.1	20.3	79.6	0	0	45	45	0	0			No Change
Extraction Well 002	1/25/2012 16:17	0	0.4	20.1	79.5	0	0	42	42	1	1			No Change
Extraction Well 003	1/25/2012 16:12	3.1	8	11.7	77.2	-0.1	-0.1	42	42	3	3			No Change
Extraction Well 004	1/25/2012 15:57	0	0.1	20.2	79.7	0	0	42	42	1	1			No Change
Extraction Well 005	1/25/2012 15:52	0	0.1	20.2	79.7	0	0	43	43	2	2			No Change
Extraction Well 006	1/25/2012 15:48	0	0.1	20.2	79.7	0	0	42	42	2	2			No Change
Extraction Well 007	1/25/2012 15:41	0	0.1	20.2	79.7	-0.7	-0.7	43	43	5	5			No Change
Extraction Well 008	1/25/2012 16:41	0	0.1	20.4	79.5	0	0	44	44	0	0			No Change
Extraction Well 009	1/25/2012 16:34	0	0.1	20.4	79.5	0.1	0.1	44	44	0	0			No Change
Extraction Well 010	1/25/2012 16:23	0	0.3	20.3	79.4	0	0	43	44	0	0			No Change
Extraction Well 011	1/25/2012 17:12	0.1	0.2	20.3	79.4	0.1	0.1	44	44	0	0			No Change
Extraction Well 012	1/25/2012 17:05	0	0.3	20.3	79.4	0.1	0.1	45	45	0	0			No Change
Extraction Well 013	1/25/2012 16:45	0	0.1	20.4	79.5	0.1	0.1	44	44	0	0			No Change
Native Soil Extraction We	1/25/2012 15:15	0	0.1	20.2	79.7	-0.3	-0.3	44	44	4	4			No Change
Native Soil Extraction We	1/25/2012 15:12	0	0.1	20.2	79.7	-0.3	-0.3	45	45	2	2			No Change
Native Soil Extraction We	1/25/2012 14:56	0	0.1	20.3	79.6	0	0	44	44	0	0			No Change
Native Soil Extraction We	1/25/2012 14:54	0	0.1	20.3	79.6	-0.1	-0.1	46	46	0	0			No Change
Native Soil Extraction We	1/25/2012 15:05	0	0.1	20.2	79.7	-0.1	-0.1	43	43	0	0			No Change
Native Soil Extraction We	1/25/2012 15:00	0	0.1	20.3	79.6	0	0	45	45	0	0			No Change
Native Soil Extraction We	1/25/2012 15:33	0	0.1	20.3	79.6	-0.1	-0.1	42	42	2	2			No Change
Native Soil Extraction We	1/25/2012 15:30	0	0.1	20.3	79.6	-0.1	-0.1	42	42	1	1			No Change
Native Soil Extraction We	1/25/2012 15:25	0	0.1	20.3	79.6	0	0	42	42	2	2			No Change
Native Soil Extraction We	1/25/2012 15:22	0	0.1	20.2	79.7	-0.1	-0.1	45	45	2	2			No Change
Trench Well TD-1	1/25/2012 10:42	7.5	18.4	0	74.1	-0.2	-0.2	50	50	4	4			No Change
Trench Well TR-1	1/25/2012 16:50	25.3	8.7	5.6	60.4	0.2	0.2	44	44	5	5			No Change
Trench Well TR-2	1/25/2012 16:38	0	0.1	20.4	79.5	0	0	44	44	0	0			No Change
Trench Well TR-3	1/25/2012 16:26	0.3	0.3	20	79.4	0.1	0	45	45	3	3			No Change
Trench Well TR-4	1/25/2012 16:02	0	0.1	20.3	79.6	-0.1	-0.1	44	45	4	4			No Change
Trench Well TR-5	1/25/2012 16:59	7.5	2.5	12.7	77.3	0	0	45	45	1	1			No Change
Trench Well TR-6	1/25/2012 17:02	16.8	7.2	9.1	66.9	0	0	45	45	4	4			No Change
Trench Well TR-7	1/25/2012 16:54	2.9	7.9	11.9	77.3	0	0	45	45	1	1			No Change
Well with minimum temperature during reporting period														
Native Soil Extraction We	1/25/2012 15:25	Init = 42 Adj = 42												
Native Soil Extraction We	1/25/2012 15:30	Init = 42 Adj = 42												
Native Soil Extraction We	1/25/2012 15:33	Init = 42 Adj = 42												
Extraction Well 006	1/25/2012 15:48	Init = 42 Adj = 42												
Extraction Well 004	1/25/2012 15:57	Init = 42 Adj = 42												
Extraction Well 003	1/25/2012 16:12	Init = 42 Adj = 42												
Extraction Well 002	1/25/2012 16:17	Init = 42 Adj = 42												
Well with maximum temperature during reporting period														
Extraction Well 001	1/25/2012 10:42	Init = 50 Adj = 50												
Trench Well TD-1	1/25/2012 10:42	Init = 50 Adj = 50												
Field Technician and Weather Conditions														
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**								
EL	01/25/12	45	29.78	Raining	Breezy Wind	S								

Hansville LF - Well Data - 02/01/2012 through 02/29/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Adj Temp (deg F)	Init Flow (scfm)	Adj Flow (scfm)	System Press (H2O inch)	Rel Press (H2O inch)	Comments
Extraction Well 001	2/29/2012 16:26	7	7.7	3.8	81.5	-1.6	-1.6	55	55	2	2			No Change
Extraction Well 002	2/29/2012 16:15	0	0.4	20.8	78.8	-1.3	-1.2	50	50	1	1			No Change
Extraction Well 003	2/29/2012 16:10	10.4	12.7	2.6	74.3	-1.7	-1.7	52	52	2	2			No Change
Extraction Well 004	2/29/2012 15:55	0	0.1	20.8	79.1	-1.3	-1.3	60	60	1	1			No Change
Extraction Well 005	2/29/2012 15:47	0	0.5	20.8	78.7	-1.4	-1.4	50	50	1	1			No Change
Extraction Well 006	2/29/2012 15:40	0.3	1.7	18.1	79.9	-1.4	-1.4	55	55	2	2			No Change
Extraction Well 007	2/29/2012 15:32	0	0.7	19.7	79.6	-1.5	-1.5	55	55	1	1			No Change
Extraction Well 008	2/29/2012 17:10	11.7	13.4	3.5	71.4	-1.6	-1.6	56	56	1	1			No Change
Extraction Well 009	2/29/2012 16:57	0.3	1.8	16.9	81	-1.3	-1.3	55	55	1	1			No Change
Extraction Well 010	2/29/2012 16:43	18.2	7.2	3.1	71.5	-1.5	-1.5	54	54	2	2			No Change
Extraction Well 011	2/29/2012 16:50	11	8.8	0	80.2	-1.6	-1.6	57	57	1	1			No Change
Extraction Well 012	2/29/2012 17:28	17.9	7	0.8	74.3	-1.8	-1.8	57	57	3	3			No Change
Extraction Well 013	2/29/2012 17:15	0	0.3	20.8	78.9	-1.5	-1.5	50	50	1	1			No Change
Native Soil Extraction We	2/29/2012 14:53	0	3.2	12.4	84.4	-0.9	-0.9	52	52	0	0			No Change
Native Soil Extraction We	2/29/2012 14:48	0	7.2	11.2	81.6	-0.9	-0.9	50	50	0	0			No Change
Native Soil Extraction We	2/29/2012 15:09	0	2.3	18.4	79.3	-0.7	-0.7	53	53	0	0			No Change
Native Soil Extraction We	2/29/2012 15:04	0	1.2	17.4	81.4	-0.9	-0.9	51	51	0	0			No Change
Native Soil Extraction We	2/29/2012 15:19	0	4.1	15.4	80.5	-0.8	-0.8	50	50	0	0			No Change
Native Soil Extraction We	2/29/2012 15:16	0	5.3	13.1	81.6	-1.1	-1	52	52	0	0			No Change
Native Soil Extraction We	2/29/2012 14:40	0	3.8	17.6	78.6	-0.8	-0.7	51	50	0	0			No Change
Native Soil Extraction We	2/29/2012 14:37	0	2.4	16.1	81.5	-0.8	-0.8	50	50	0	0			No Change
Native Soil Extraction We	2/29/2012 14:31	0	2.1	17.5	80.4	-0.8	-0.8	52	52	0	0			No Change
Native Soil Extraction We	2/29/2012 14:27	0	0.8	20.7	78.5	-1	-0.9	50	50	0	0			No Change
Trench Well TD-1	2/29/2012 13:55	6.5	19.4	0	74.1	-0.2	-0.2	55	55	1	1			No Change
Trench Well TR-1	2/29/2012 17:18	6	14.1	0	79.9	-1.6	-1.6	49	49	1	1			No Change
Trench Well TR-2	2/29/2012 17:04	16.5	13.2	0	70.3	-1.5	-1.5	58	58	2	2			No Change
Trench Well TR-3	2/29/2012 16:33	12.7	14.5	0	72.8	-1.7	-1.7	56	55	3	3			No Change
Trench Well TR-4	2/29/2012 15:59	3.4	14.7	0	81.9	-1.5	-1.6	62	62	3	3			No Change
Trench Well TR-5	2/29/2012 17:22	9.8	13.8	0	76.4	-1.6	-1.6	51	51	1	1			No Change
Trench Well TR-6	2/29/2012 17:25	10.8	14.1	0	75.1	-1.7	-1.7	53	53	2	2			No Change
Trench Well TR-7	2/29/2012 16:04	12.6	14.2	0	73.2	-1.6	-1.6	61	61	4	4			No Change
Well with minimum temperature during reporting period														
Trench Well TR-1	2/29/2012 17:18	Init = 49 Adj = 49												
Well with maximum temperature during reporting period														
Trench Well TR-4	2/29/2012 15:59	Init = 62 Adj = 62												
Field Technician and Weather Conditions														
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**								
el	02/29/12	40	29.19	Raining	Calm	N								

Hansville LF - Well Data - 03/01/2012 through 03/31/2012

Name	Date Time	Methane (% by vol)	Carbon Dioxide (% by vol)	O2 (% by vol)	Balance (% by vol)	Init Static Press (H2O inch)	Adj Static Press (H2O inch)	Init Temp (deg F)	Adj Temp (deg F)	Init Flow (scfm)	Adj Flow (scfm)	System Press (H2O inch)	Rel Press (H2O inch)	Comments
Extraction Well 001	3/15/2012 9:18	7.8	9.9	0	82.3	0.1	0.1	55	55	0	0			No Change
Extraction Well 002	3/15/2012 9:14	0.3	12.3	1	86.4	0	0	56	56	0	0			No Change
Extraction Well 003	3/15/2012 9:11	12.9	14.3	0	72.8	-0.1	-0.1	55	55	0	0			No Change
Extraction Well 004	3/15/2012 9:05	0.4	1.3	18.6	79.7	-0.1	-0.1	55	55	0	0			No Change
Extraction Well 005	3/15/2012 10:24	1.4	13.2	3.7	81.7	-1.7	-0.1	53	53	2	2			No Change
Extraction Well 006	3/15/2012 9:50	1.4	10.5	7.7	80.4	-1.7	-1.6	54	54	7	7			No Change
Extraction Well 007	3/15/2012 9:53	6.6	15.2	0.1	78.1	-0.3	-0.3	55	55	2	2			No Change
Extraction Well 008	3/15/2012 9:59	12.9	14.6	2.2	70.3	-1.5	-1.4	55	55	5	5			No Change
Extraction Well 009	3/15/2012 10:07	1.9	8.5	2.1	87.5	-1.2	-1	56	56	3	3			No Change
Extraction Well 010	3/15/2012 9:25	6.8	11.9	0	81.3	0	0	54	54	0	0			No Change
Extraction Well 011	3/15/2012 9:28	6.1	9.4	0	84.5	-0.2	-0.3	55	55	0	0			No Change
Extraction Well 012	3/15/2012 9:33	16.9	6.1	0.8	76.2	-1.4	-1.4	56	56	9	9			No Change
Extraction Well 013	3/15/2012 9:41	0.2	0.4	20.4	79	-0.2	-0.1	55	55	0	0			No Change
Native Soil Extraction We	3/15/2012 10:32	0	5.6	11.5	82.9	-1	-0.9	55	55	0	0			No Change
Native Soil Extraction We	3/15/2012 10:30	0	2.5	14.8	82.7	-0.6	-0.8	55	55	0	0			No Change
Native Soil Extraction We	3/15/2012 10:38	0	2	18	80	-0.8	-0.8	56	56	2	2			No Change
Native Soil Extraction We	3/15/2012 10:36	0	1.9	15.9	82.2	-1	-1	54	54	2	2			No Change
Native Soil Extraction We	3/15/2012 10:50	0	3.9	15.6	80.5	-1	-0.9	54	54	1	1			No Change
Native Soil Extraction We	3/15/2012 10:45	0	5.8	12.5	81.7	-1	-0.9	53	53	1	1			No Change
Native Soil Extraction We	3/15/2012 10:56	0	4	16.5	79.5	-1	-0.9	57	57	2	2			No Change
Native Soil Extraction We	3/15/2012 10:54	0	3.6	15.5	80.9	-1	-0.9	53	53	3	3			No Change
Native Soil Extraction We	3/15/2012 11:03	0	2.6	17	80.4	-1	-1	56	56	2	2			No Change
Native Soil Extraction We	3/15/2012 11:00	0	2.7	15.6	81.7	-1.1	-1	53	53	3	3			No Change
Trench Well TD-1	3/15/2012 8:38	8.2	18.5	0	73.3	-0.1	-0.1	54	54	1	1			No Change
Trench Well TR-1	3/15/2012 9:45	8.4	13.9	0	77.7	-1.6	-0.1	54	54	9	9			No Change
Trench Well TR-2	3/15/2012 10:04	12.5	13.5	0.4	73.6	-1.9	-1.8	53	53	5	5			No Change
Trench Well TR-3	3/15/2012 9:22	16.3	11.6	2.2	69.9	-4	-4	56	56	10	10			No Change
Trench Well TR-4	3/15/2012 9:03	0	1.2	20.9	77.9	-0.9	-0.9	54	54	10	110			No Change
Trench Well TR-5	3/15/2012 9:38	0	0.4	21.1	78.5	-1.4	-1.4	54	54	7	7			No Change
Trench Well TR-6	3/15/2012 9:36	0.1	1.3	20.6	78	-1.3	-0.1	56	56	10	10			No Change
Trench Well TR-7	3/15/2012 9:08	21.7	10.9	0	67.4	-1.2	-1.2	53	53	10	10			No Change
Well with minimum temperature during reporting period														
Trench Well TR-7	3/15/2012 9:08	Init = 53 Adj = 53												
Trench Well TR-2	3/15/2012 10:04	Init = 53 Adj = 53												
Extraction Well 005	3/15/2012 10:24	Init = 53 Adj = 53												
Native Soil Extraction We	3/15/2012 10:45	Init = 53 Adj = 53												
Native Soil Extraction We	3/15/2012 10:54	Init = 53 Adj = 53												
Native Soil Extraction We	3/15/2012 11:00	Init = 53 Adj = 53												
Well with maximum temperature during reporting period														
Native Soil Extraction We	3/15/2012 10:56	Init = 57 Adj = 57												
Field Technician and Weather Conditions														
Technician	**Date**	**Ambient Temp (deg F)**	**Baro Press (in -Hg)**	**General Weather**	**Wind Speed**	**Wind Direction**								
BB	03/15/12	50	29.08	Raining	Windy	N								

Appendix D

2012 Groundwater Statistics and Time Series Plots

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Table D-1: Statistical Evaluations, Hansville Landfill 2012

Arsenic (mg/L)							
	Mean	*LCL*	*UCL*	*Site Cleanup Level*	*Mann-Kendall*	*Sens Slope*	*Trend*
MW-05	0.00174	0.00137	0.002	0.005	—	—	—
MW-06	0.00317	0.0025	0.004	0.005	—	—	—
MW-07	0.00138	0.000665	0.002	0.005	—	—	—
MW-12I	0.00235	0.00188	0.003	0.005	—	—	—
MW-13D	0.00287	0.00238	0.003	0.005	—	—	—
MW-14	0.0201	0.0166	0.024	0.005	-2	-0.61790	↓
Vinyl Chloride (µg/L)							
	Mean	*LCL*	*UCL*	*Site Cleanup Level*	*Mann-Kendall*	*Sens Slope*	*Trend*
MW-05	N/A	0.002	0.002	0.025	—	—	—
MW-06	0.243	0.176	0.31	0.025	6	0.0225	N
MW-07	N/A	0.002	0.002	0.025	—	—	—
MW-12I	0.203	0.159	0.246	0.025	-2	-0.0035	N
MW-13D	0.0097	0.00154	0.008	0.025	—	—	—
MW-14	0.300	0.253	0.35	0.025	-7	-0.0117	N

Footnotes:

N=8

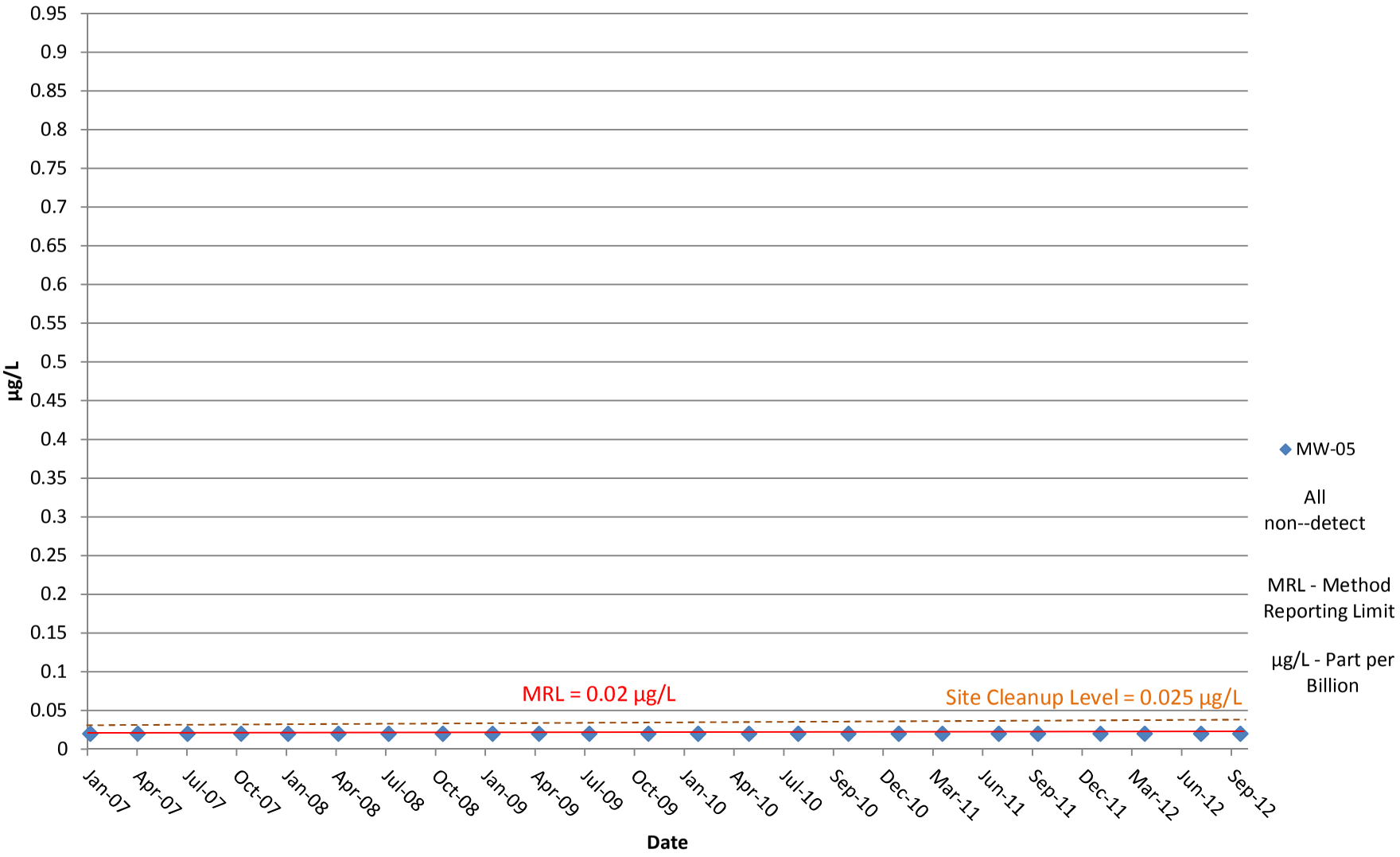
Mean, LCL and UCL at 95%

NDs set at 1/2 the MDL

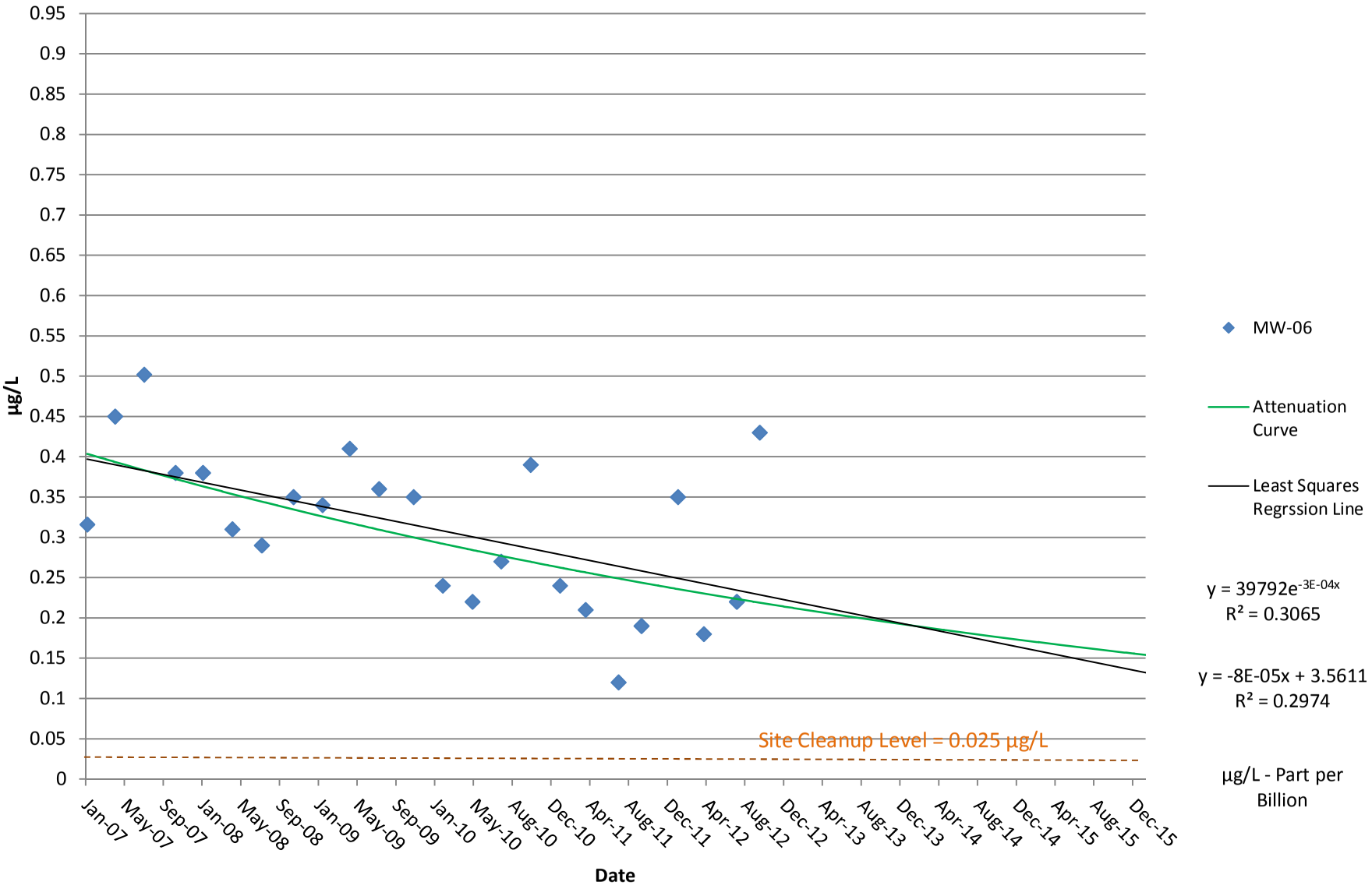
— not applicable

N/A - not applicable, data are all non-detect.

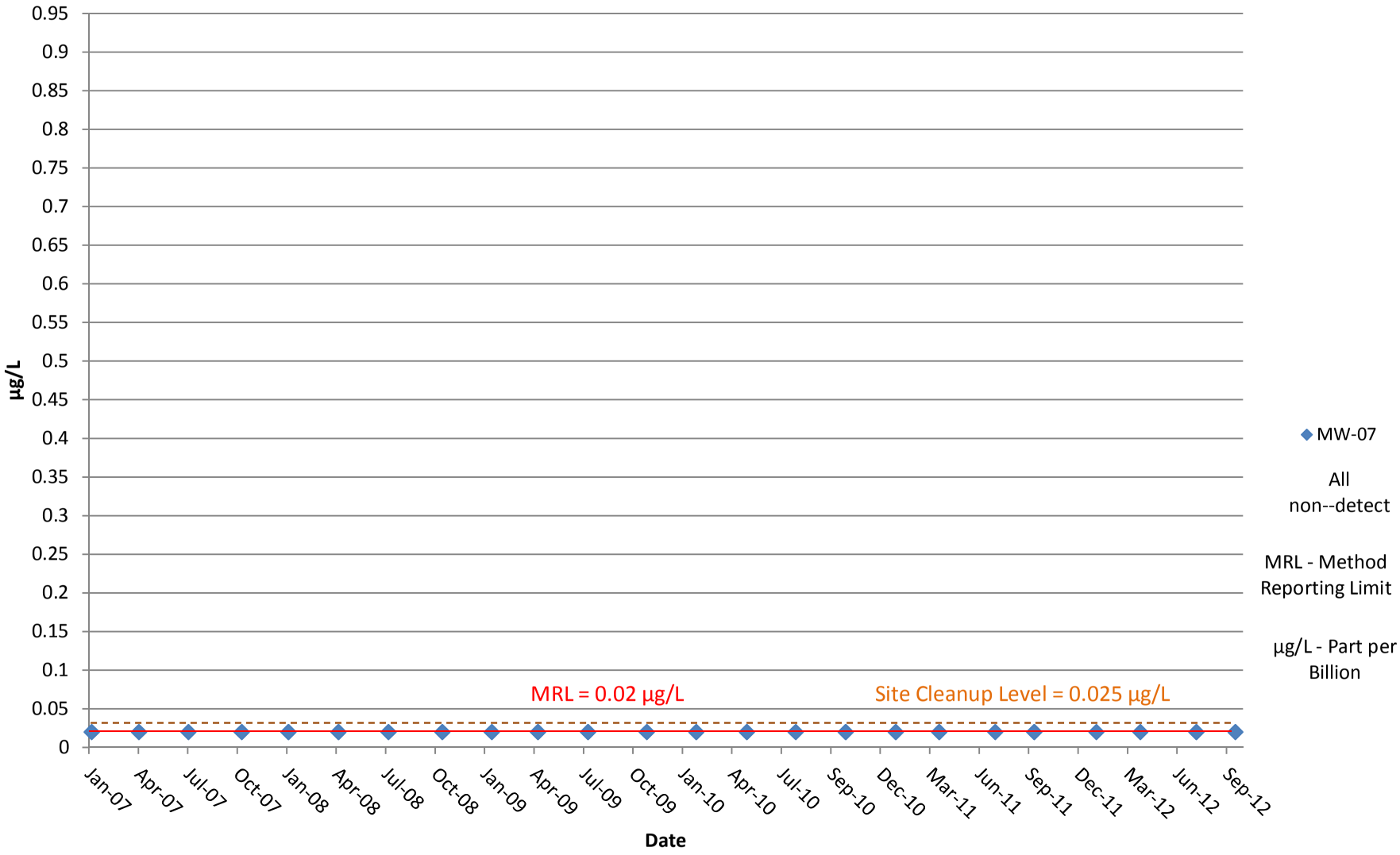
Vinyl Chloride , MW-05
Hansville Landfill



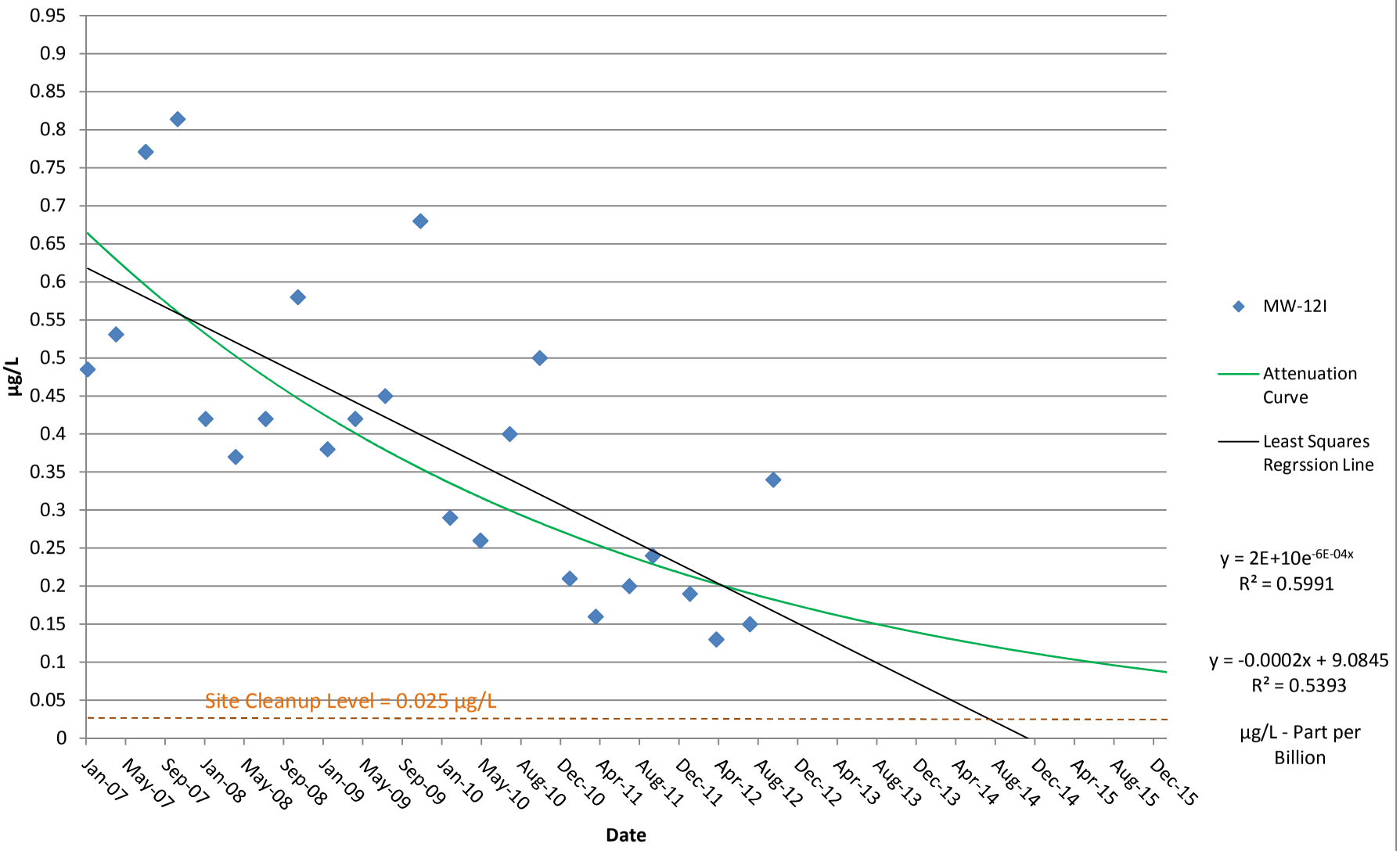
Vinyl Chloride, MW-06
Hansville Landfill



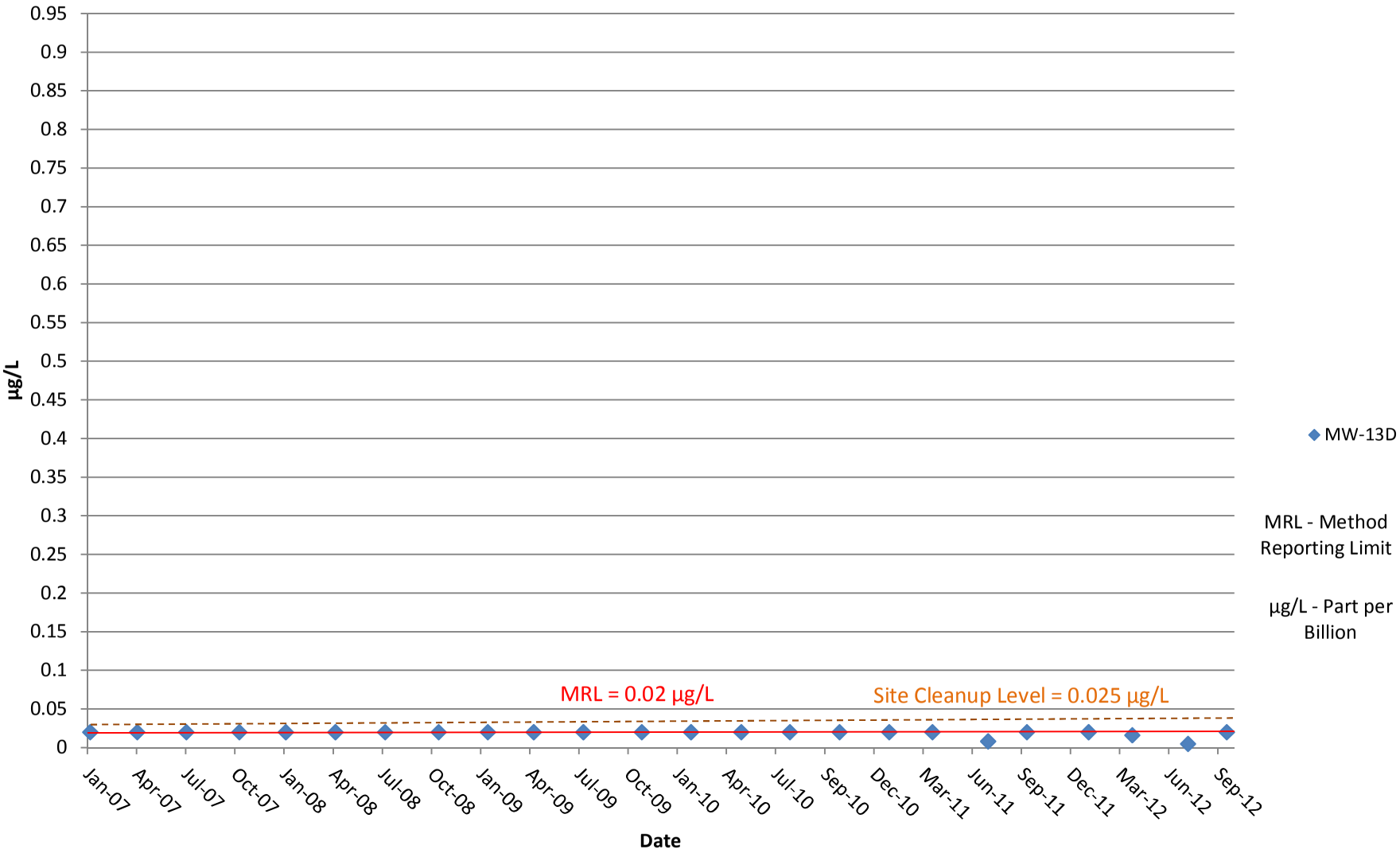
Vinyl Chloride , MW-07
Hansville Landfill



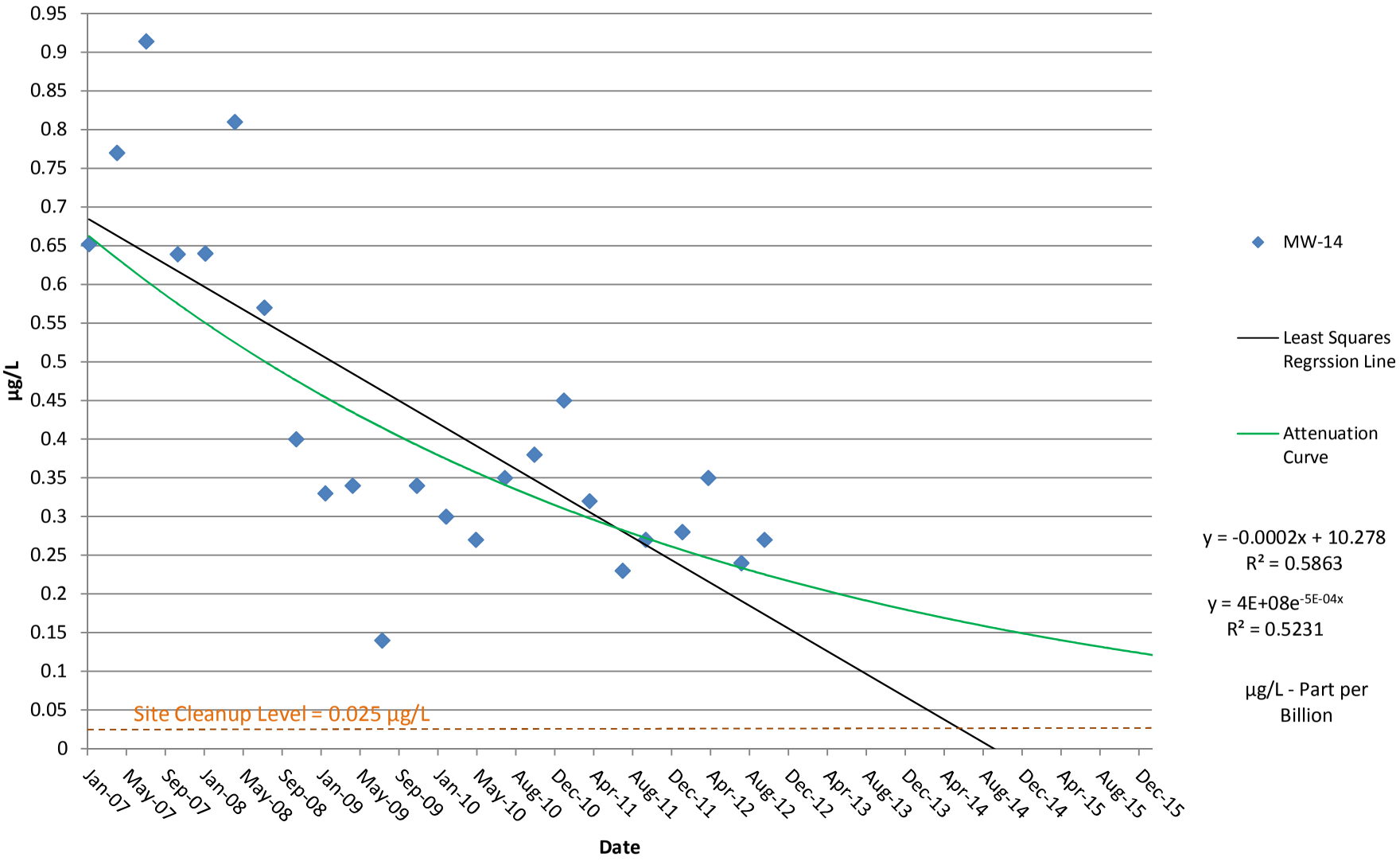
Vinyl Chloride, MW-12I
Hansville Landfill

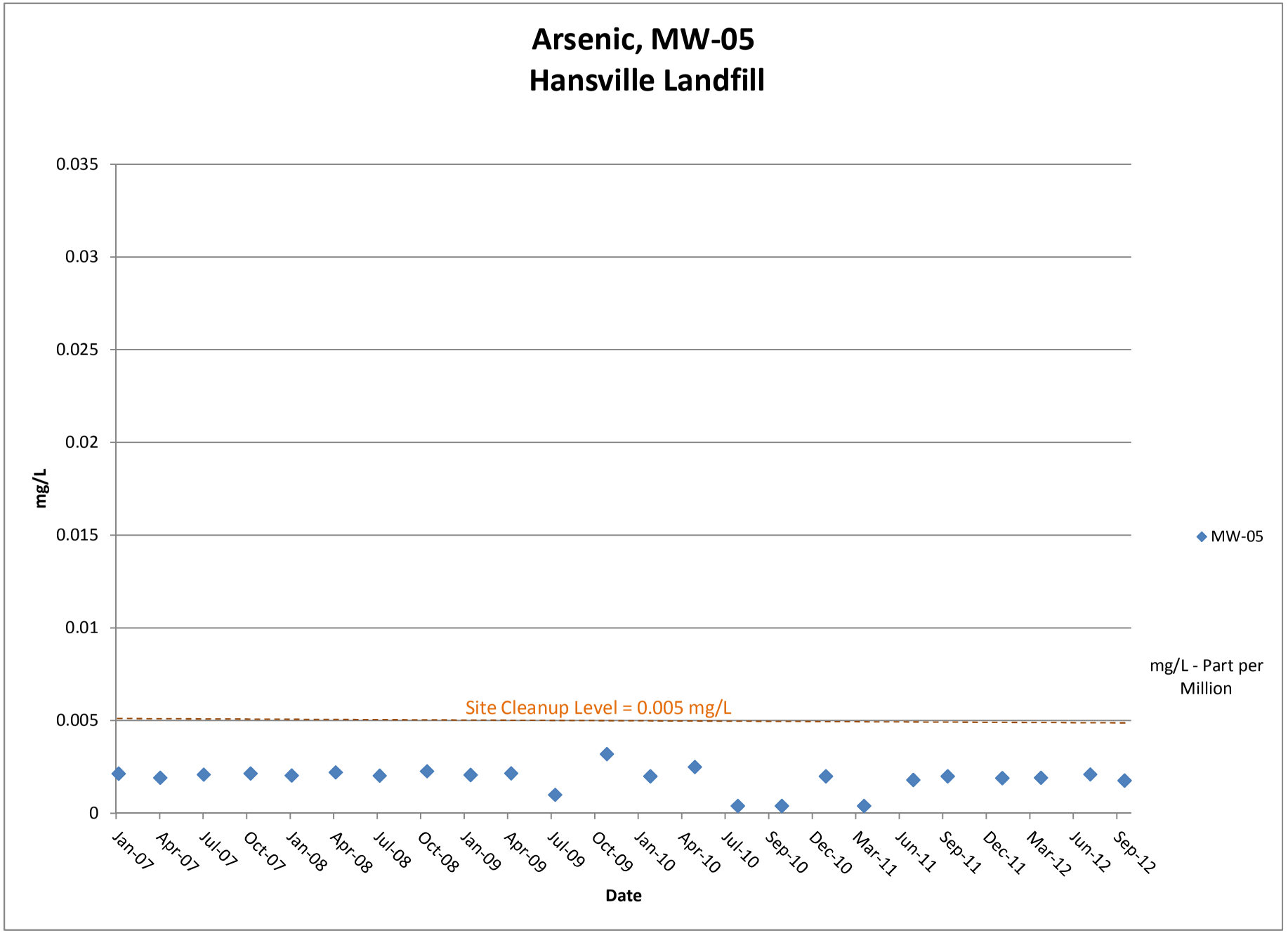


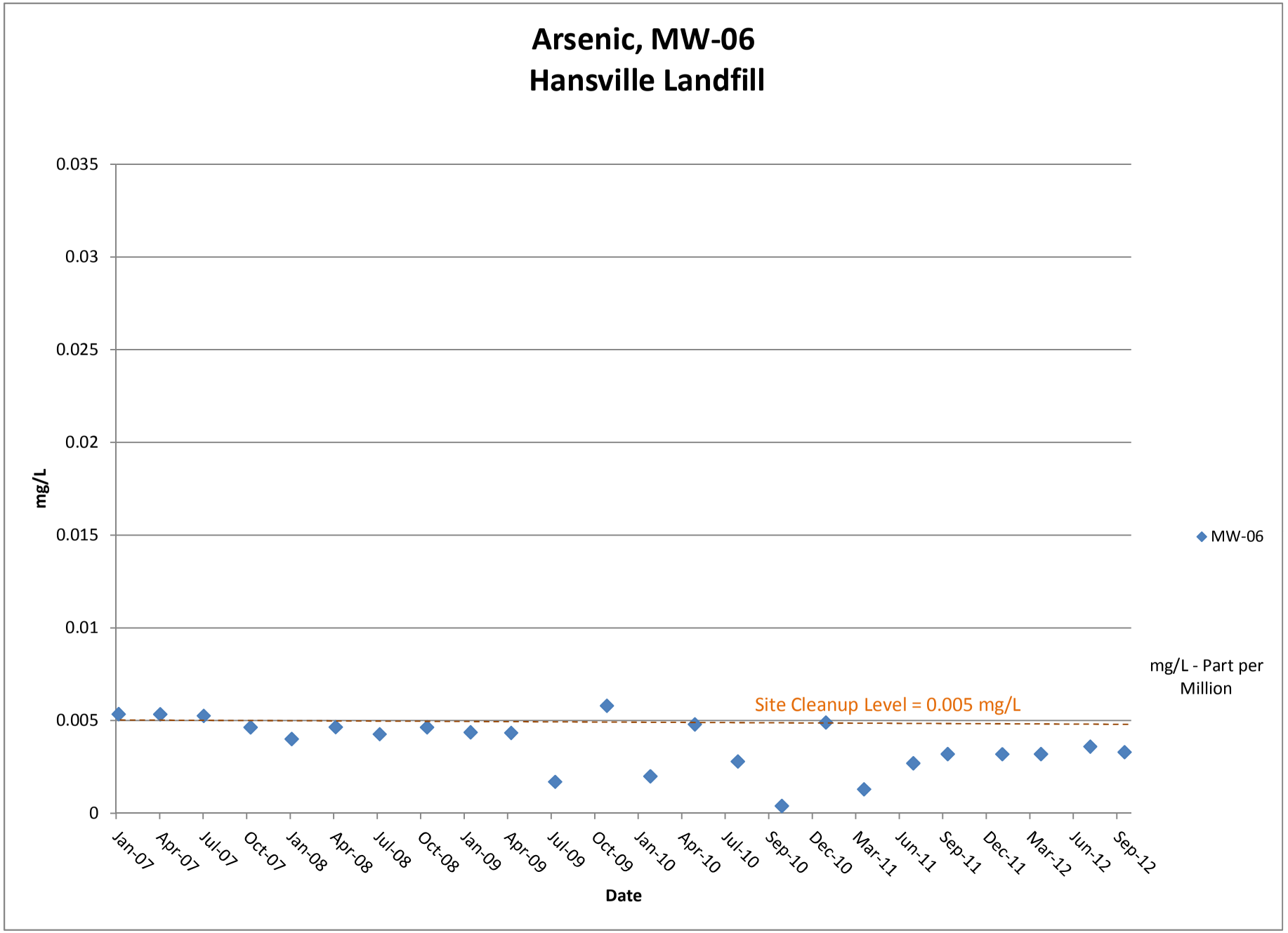
Vinyl Chloride, MW-13D
Hansville Landfill

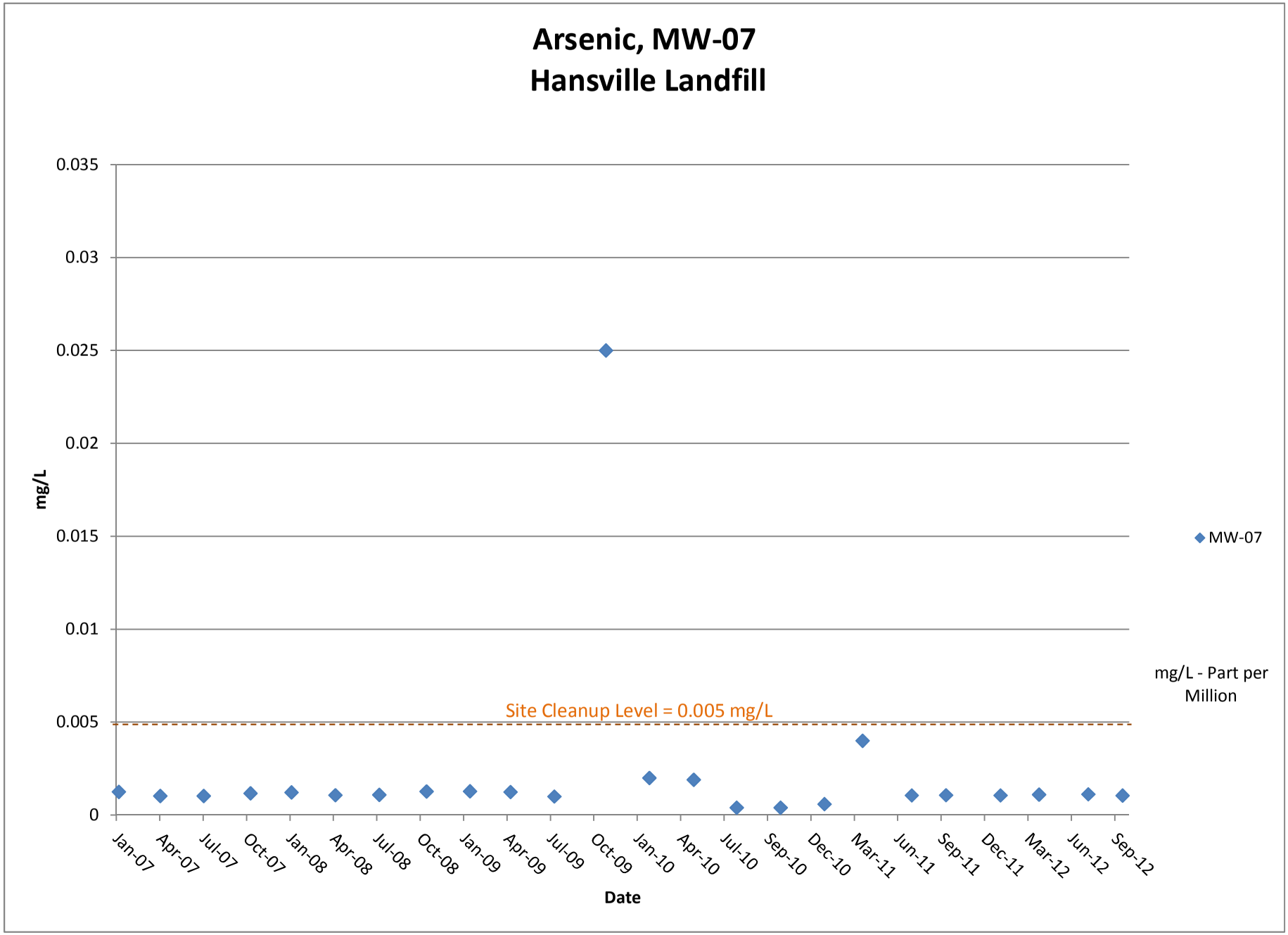


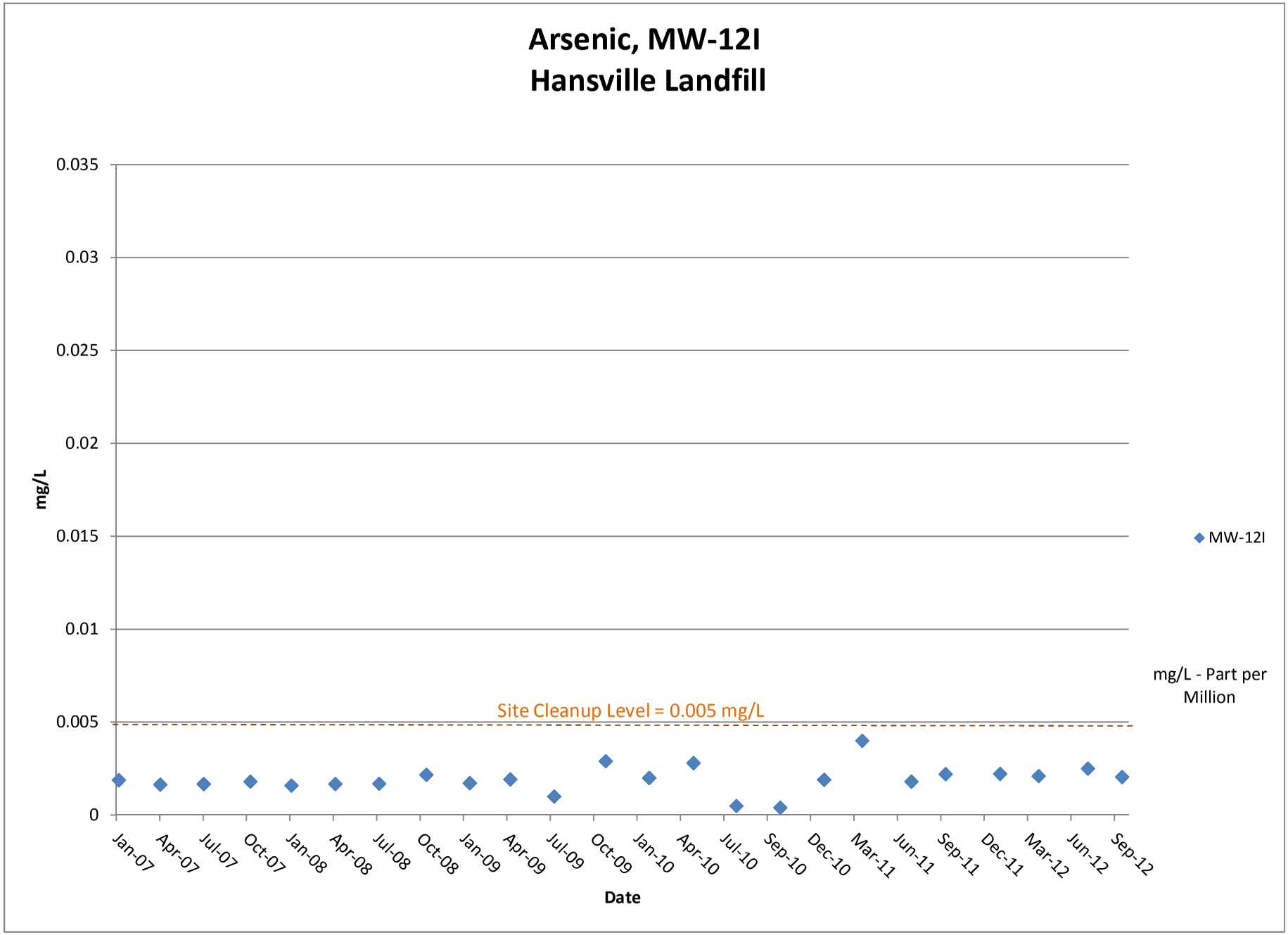
Vinyl Chloride, MW-14
Hansville Landfill

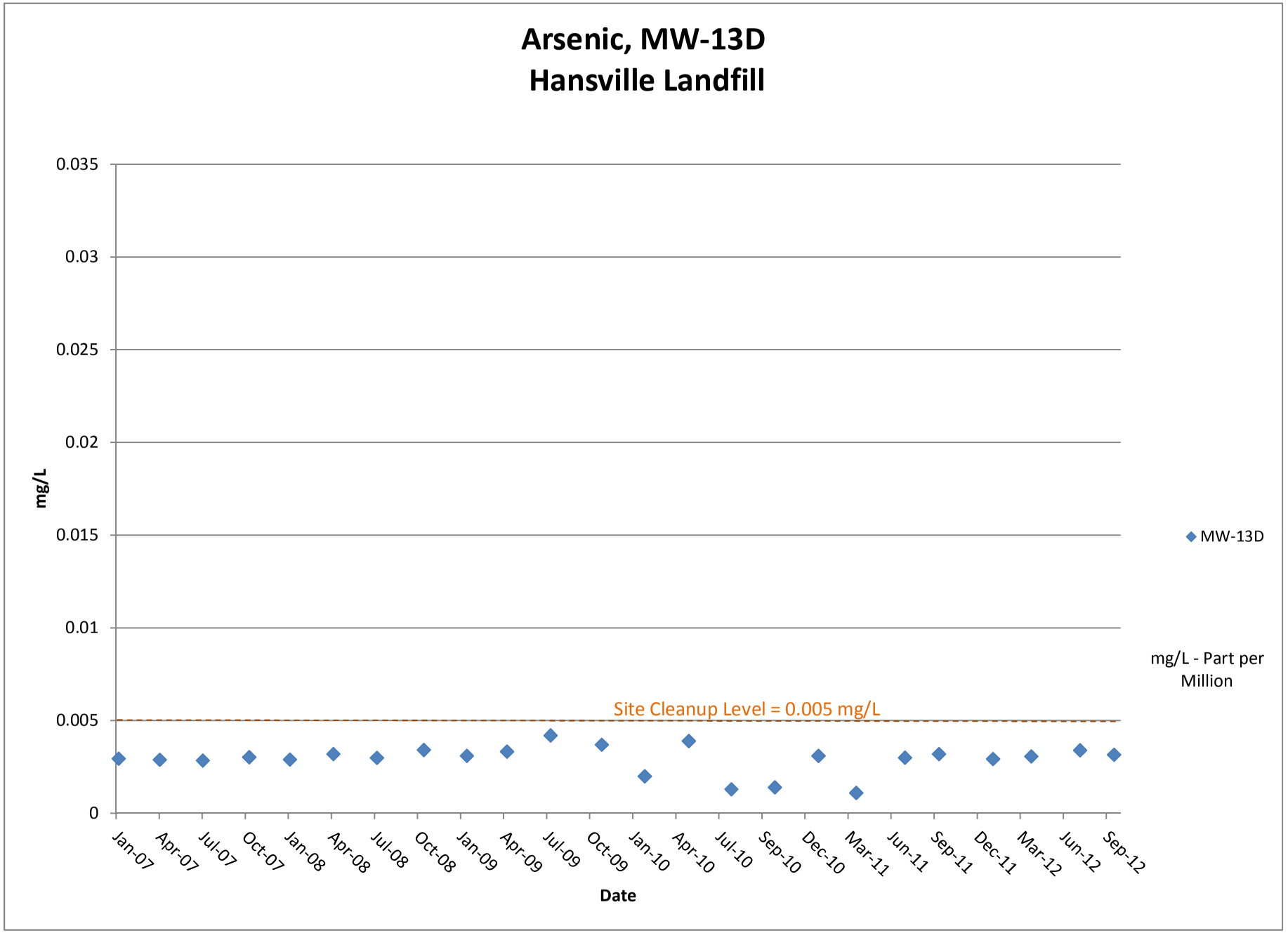


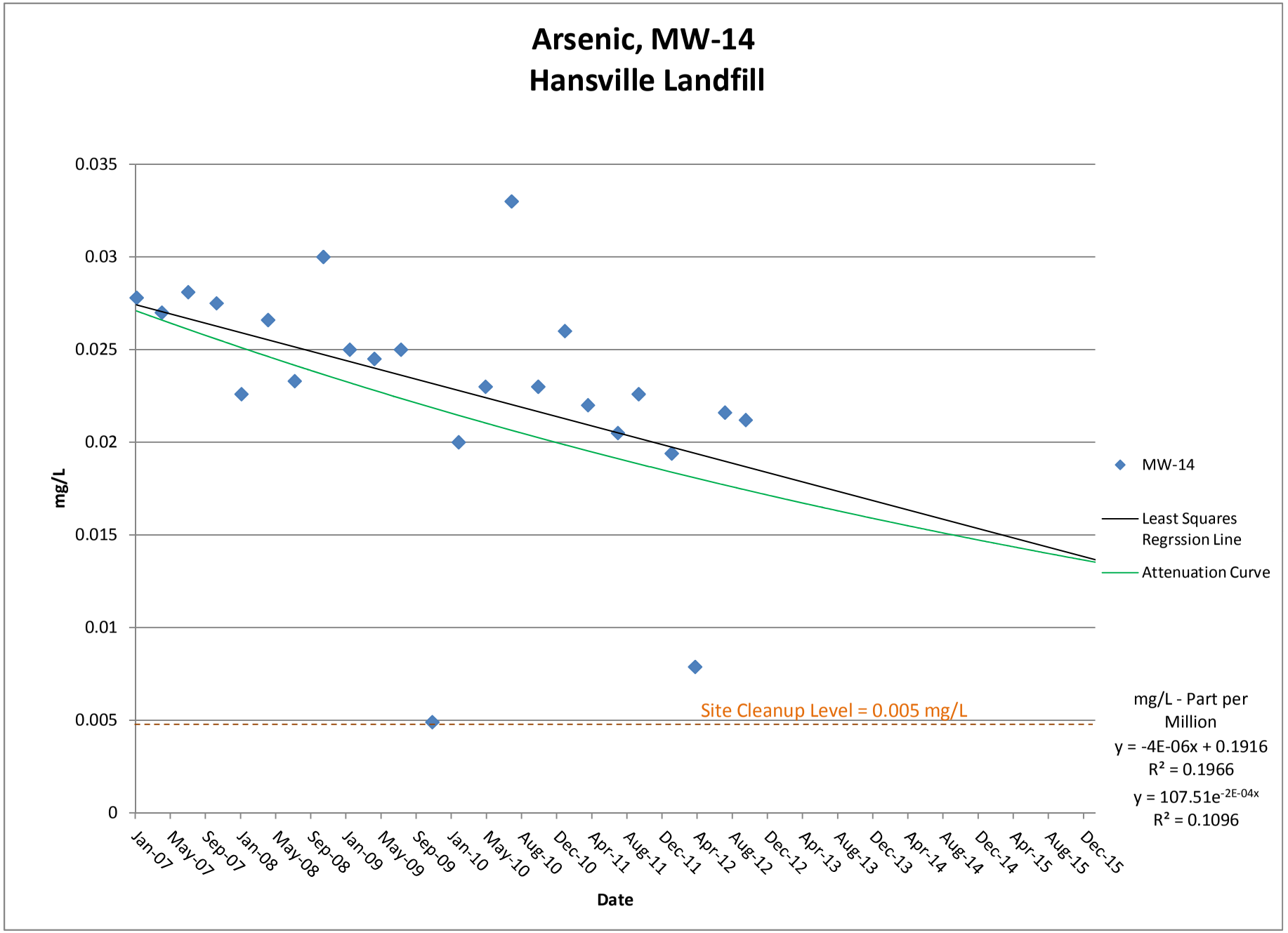

Arsenic, MW-05
Hansville Landfill
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
mg/L
Site Cleanup Level = 0.005 mg/L
MW-05
mg/L - Part per Million
Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
Apr-09
Jul-09
Oct-09
Jan-10
Apr-10
Jul-10
Sep-10
Dec-10
Mar-11
Jun-11
Sep-11
Dec-11
Mar-12
Jun-12
Sep-12
Date


Arsenic, MW-06
Hansville Landfill
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
mg/L
Site Cleanup Level = 0.005 mg/L
MW-06
mg/L - Part per Million
Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
Apr-09
Jul-09
Oct-09
Jan-10
Apr-10
Jul-10
Sep-10
Dec-10
Mar-11
Jun-11
Sep-11
Dec-11
Mar-12
Jun-12
Sep-12
Date


Arsenic, MW-07
Hansville Landfill
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
mg/L
Site Cleanup Level = 0.005 mg/L
MW-07
mg/L - Part per Million
Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
Apr-09
Jul-09
Oct-09
Jan-10
Apr-10
Jul-10
Sep-10
Dec-10
Mar-11
Jun-11
Sep-11
Dec-11
Mar-12
Jun-12
Sep-12
Date


Arsenic, MW-12I
Hansville Landfill
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
mg/L
Site Cleanup Level = 0.005 mg/L
MW-12I
mg/L - Part per Million
Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
Apr-09
Jul-09
Oct-09
Jan-10
Apr-10
Jul-10
Sep-10
Dec-10
Mar-11
Jun-11
Sep-11
Dec-11
Mar-12
Jun-12
Sep-12
Date


Arsenic, MW-13D
Hansville Landfill
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
mg/L
Site Cleanup Level = 0.005 mg/L
MW-13D
mg/L - Part per Million
Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
Apr-09
Jul-09
Oct-09
Jan-10
Apr-10
Jul-10
Sep-10
Dec-10
Mar-11
Jun-11
Sep-11
Dec-11
Mar-12
Jun-12
Sep-12
Date


Arsenic, MW-14
Hansville Landfill
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
mg/L
Jan-07
May-07
Sep-07
Jan-08
May-08
Sep-08
Jan-09
May-09
Sep-09
Jan-10
May-10
Aug-10
Dec-10
Apr-11
Aug-11
Dec-11
Apr-12
Aug-12
Dec-12
Apr-13
Aug-13
Dec-13
Apr-14
Aug-14
Dec-14
Apr-15
Aug-15
Dec-15
Date
Site Cleanup Level = 0.005 mg/L
MW-14
Least Squares Regrssion Line
Attenuation Curve
mg/L - Part per Million
y = -4E-06x + 0.1916
R² = 0.1966
y = 107.51e-2E-04x
R² = 0.1096

Appendix E

Fourth Quarter (October) 2012 Field Sampling Sheets

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SCS ENGINEERS
2405 140th ave NE #107
Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04211017.01
Site: Hansville LF
Well ID: MW5
Sample ID: MW5
Date: 10/2/12
Weather: Sunny

102.31 DTW
____ TOS
____ Intake
____ BOS
____ Total Depth

CONTROL SETTINGS:
Refill ____
Discharge ____
Pressure ____

Sampling Method: Grab Bail
Other: ____ Deploy (Dedicated)

Notes:

Filtered? (Y) N
Locked? (Y) N
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:
(1000 ml Poly) 500 ml Poly 250 ml Poly 125 ml Poly
(500 ml HNO3) x2 (500 ml H2SO4 x2) (40 ml VOA x3) x6 1000 ml Amber
125 ml NaOH

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1210	Begin Purge							
1213	102.31	10.39	116	14.35	7.54	69	1.96	350
1216		10.47	116	8.06	7.51	70	1.05	
1219		10.65	116	8.03	7.49	68	1.32	
1222	102.41	10.93	117	8.01	7.47	65	0.81	350

Observations (color, odor, anomalies, etc)

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: Matt O'Hare
Printed Name

Signature

SCS ENGINEERS
2405 140th ave NE #107
Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04211017.01
Site: Hanford LF
Well ID: MW6
Sample ID: MW6
Date: 10/2/12
Weather: Mostly Cloudy

76.68 DTW
____ TOS
____ Intake
____ BOS
____ Total Depth

CONTROL SETTINGS:
Refill ____
Discharge ____
Pressure ____

Sampling Method: Grab Bail
Other: ____ Deploy (Dedicated)

Notes:

Filtered? (Y) N
Locked? (Y) N
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:
(1000 ml Poly) 500 ml Poly 250 ml Poly 125 ml Poly
(500 ml HNO3 x2) (500 ml H2SO4 x2) (40 ml VOA x3) x6 1000 ml Amber
125 ml NaOH

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
0921	76.68	Begin Purge						
0924	76.68	14.39	270	0.37	7.07	69	2.31	500
0927		14.95	279	0.23	7.07	50	2.11	500
0930		15.76	270	0.27	7.08	40	1.95	
0933	76.33	15.92	283	0.29	7.07	33	0.00	500
Temporary Purge stoppage due to equipment								
1035	Restarted purge							
1038	76.54	14.02	275	0.29	7.18	60	3.10	500
1041		14.85	282	0.27	7.03	58	2.88	
1044	76.49	15.22	282	0.25	7.04	43	2.05	500

Observations (color, odor, anomalies, etc)
Temperature rise due to purge

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: M.A Oliver
Printed Name

Signature

SCS ENGINEERS
2405 140th ave NE #107
Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04211017.01
Site: Hansville LF
Well ID: MW 7
Sample ID: MW 7
Date: 10/2/12
Weather: Cloudy

86.73 DTW
TOS
Intake
BOS
Total Depth

CONTROL SETTINGS:
Refill
Discharge
Pressure

Sampling Method: Grab Bail
Other: Deploy (Dedicated)

Notes:

Filtered? (Y) N
Locked? (Y) N
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:
(1000 ml Poly) 500 ml Poly 250 ml Poly 125 ml Poly
(500 ml HNO3 x2) (500 ml H2SO4 x2) (40 ml VOA x3) x6 1000 ml Amber
125 ml NaOH

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
8:25	Begin Purge							
8:28	86.73	10.44	250	2.41	6.77	146	2.94	480
8:31		11.71	254	2.26	6.80	134	1.05	
8:34	86.75	12.09	253	2.15	6.81	129	0.53	480

Observations (color, odor, anomalies, etc)
Temp rising due to pump

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: Matt O'Hare
Printed Name

Signature

SCS ENGINEERS
2405 140th ave NE #107
Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04211017.01
Site: Hansville LF
Well ID: MW 12I
Sample ID: MW 12I
Date: 10/2/17
Weather: Cloudy

10.90 DTW
____ TOS
____ Intake
____ BOS
____ Total Depth

CONTROL SETTINGS:
Refill ____
Discharge ____
Pressure ____

Sampling Method: Grab Bail
Other: ____ Deploy (Dedicated)

Notes:

Filtered? (Y) N
Locked? Y N
Water in Protector? Y N
Damage? Y N

Sample Containers:
(1000 ml Poly) 500 ml Poly 250 ml Poly 125 ml Poly
(500 ml HNO3 x2) (500 ml H2SO4 x2) (40 ml VOA x3) x6 1000 ml Amber
125 ml NaOH

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1355		Begin	Purge					
1358	10.90	10.09	180	0.40	7.52	58	1.20	
1401		10.36	190	0.17	7.41	58	1.04	400
1404		10.45	191	0.13	7.36	57	1.00	
1407	10.95	10.49	191	0.12	7.34	57	1.13	480
1410		10.49	192	0.12	7.32	56	0.87	

Observations (color, odor, anomalies, etc)

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: Matt Ottmer
Printed Name

Signature

SCS ENGINEERS
2405 140th ave NE #107
Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04211017.01
Site: Hansville LF
Well ID: MW 13D
Sample ID: MW 13D
Date: 10/2/12
Weather: Cloudy

12.97 DTW
TOS
Intake
BOS
Total Depth

CONTROL SETTINGS:
Refill
Discharge
Pressure

Sampling Method: Grab Bail
Other: Deploy (Dedicated)

Notes:
MW-12S : DTW: 13.60

Filtered? (Y) N
Locked? (Y) N
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:
(1000 ml Poly) 500 ml Poly 250 ml Poly 125 ml Poly
(500 ml HNO3 x2) (500 ml H2SO4 x2) (40 ml VOA x3) x6 1000 ml Amber
125 ml NaOH

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1318		Begin Purge						
1321	12.97	10.53	205	0.38	7.43	9	1.80	460
1324		10.67	206	0.23	7.48	-71	1.80	
1327		10.82	208	0.18	7.51	-76	1.68	
1330		10.92	209	0.16	7.53	-71	1.49	
1333	12.97	10.75	209	0.15	7.53	-67	1.38	

Observations (color, odor, anomalies, etc)

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: Matt O'Hara
Printed Name

Signature

SCS ENGINEERS
2405 140th ave NE #107
Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04211017.01
Site: Hanson Hill, LF
Well ID: MW 14
Sample ID: MW 14
Date: 10/2/12
Weather: mostly cloudy

84.48 DTW
TOS
Intake
BOS
Total Depth

CONTROL SETTINGS:
Refill
Discharge
Pressure

Sampling Method: Grab Bail
Other: Deploy (Dedicated)

Notes:

Filtered? (Y) N
Locked? (Y) N
Water in Protector? Y (N)
Damage? Y (N)

Sample Containers:
(1000 ml Poly) 500 ml Poly 250 ml Poly 125 ml Poly
(500 ml HNO3 x2) (500 ml H2SO4 x2) (40 ml VOA x3) x6 1000 ml Amber
125 ml NaOH

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1100	Begin Purge							
1103	84.50	12.26	266	0.38	6.92	-114	3.12	980
1106		13.68	245	0.29	6.99	-113	3.05	
1109		14.15	245	0.30	6.98	-110	2.03	980
1112	84.67	14.62	244	0.30	6.99	-103	1.01	980

Observations (color, odor, anomalies, etc)

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: Matt O'Hara
Printed Name

Signature

SCS ENGINEERS

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	10/2/12					
Time	0736					
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, 0.2	
Pre-Cal Reading	474	3.85	6.95	8.19	538, 57.3	
Post Cal Reading	445	4.01	7.00	↓	↳ 0.54	
Descrepancy	—	—	—			
Calib. Successful?	yes	yes	yes	yes		
Calibration by	MPO					
Instrument Type, ID	MP20	MP20	MP20	MP20	MicoTPW	
Calibration Location	Hamsville LF					

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

86.73

SCS ENGINEERS
2405 140th ave NE #107
Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 0421017.01
Site: Hansville
Well ID: SW-1
Sample ID: SW-1
Date: 10/2/12
Weather: Clear

DTW
TOS
Intake
BOS
Total Depth

CONTROL SETTINGS:
Refill
Discharge
Pressure

Sampling Method: Grab Bail
Other: Deploy Dedicated

Notes:

Filtered? (Y) N
Locked? ~~Y N~~
Water in Protector? ~~Y N~~
Damage? ~~Y N~~

Sample Containers:
(1000 ml Poly) 500 ml Poly 250 ml Poly 125 ml Poly
(500 ml HNO3 x2) (500 ml H2SO4 x2) (40 ml VOA x3) x6 1000 ml Amber
125 ml NaOH

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1410		12.93	221	8.28	7.40	-7.8	9.44	

Observations (color, odor, anomalies, etc)

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: Wayne Chamy
Printed Name

Signature

SCS ENGINEERS
2405 140th ave NE #107
Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 042107.01
Site: Hansville
Well ID: SW-4
Sample ID: SW-4
Date: 10/2/12
Weather: clear

DTW
TOS
Intake
BOS
Total Depth

CONTROL SETTINGS:
Refill
Discharge
Pressure

Sampling Method: (Grab) Bail
Other: Deploy (Dedicated)

Notes:

Filtered? (Y) N
Locked? ~~Y N~~
Water in Protector? ~~Y N~~
Damage? ~~Y N~~

Sample Containers:
(1000 ml Poly) 500 ml Poly 250 ml Poly 125 ml Poly
(500 ml HNO3) x2 (500 ml H2SO4) x2 (40 ml VOA) x3 x6 1000 ml Amber
125 ml NaOH

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1045		11.25	474	8.26	7.50	-3.6	4.14	

Observations (color, odor, anomalies, etc)

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: Wayne Chang
Printed Name

Signature

SCS ENGINEERS
2405 140th ave NE #107
Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: 042A017.01
Site: Hansville
Well ID: SW6
Sample ID: SW-6
Date: 10/2/12
Weather: Clear

DTW
TOS
Intake
BOS
Total Depth

CONTROL SETTINGS:
Refill
Discharge
Pressure

Sampling Method: Grab / Deploy / Bail / Dedicated
Other:

Notes:

Filtered? (Y) N
Locked? ~~Y N~~
Water in Protector? ~~Y N~~
Damage? ~~Y N~~

Sample Containers:
(1000 ml Poly) 500 ml Poly 250 ml Poly 125 ml Poly
(500 ml HNO3 x2) (500 ml H2SO4 x2) (40 ml VOA x3) x6 1000 ml Amber
125 ml NaOH

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1111		11.84	152	7.23	7.90	-6.1	10.13	

Observations (color, odor, anomalies, etc)

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: Wayne Chang
Printed Name

Signature

SCS ENGINEERS
2405 140th ave NE #107
Bellevue, WA 98005 (425) 746-4600

Groundwater Sampling Data Sheet

Project #: Hansville
Site: Hansville
Well ID: SW7
Sample ID: SW7
Date: 10/2/12
Weather: Overcast

DTW
TOS
Intake
BOS
Total Depth

CONTROL SETTINGS:
Refill
Discharge
Pressure

Sampling Method: Grab Bail
Other: Deploy Dedicated

Notes:

Filtered? (Y) N
Locked? ~~Y~~ N
Water in Protector? ~~Y~~ N
Damage? ~~Y~~ N

Sample Containers:
(1000 ml Poly) 500 ml Poly 250 ml Poly 125 ml Poly
(500 ml HNO3 x2) (500 ml H2SO4 x2) (40 ml VOA x3) x6 1000 ml Amber
125 ml NaOH

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
0930		11.15	168	7.26	7.29	4	6.14	

Observations (color, odor, anomalies, etc)

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER: Wayne Chang
Printed Name

Signature

SCS ENGINEERS

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH4	pH 7	DO	Turbidity	Comments/Exceptions
Date	9/2/12					
Time	1000					
Weather (sky or precip, temp)	overcast					
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	455	3.87	7.06	10.45	756.5, 9.27, 0.76	
Post Cal Reading	445	4.01	7.07	8.50		
Descrepancy	—					
Calib. Successful?	yes					
Calibration by	LC					
Instrument Type, ID	MP20	MP20	MP20	MP20	MicoTPW	
Calibration Location	mw-7					

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

Appendix F

Fourth Quarter (October) 2012 Laboratory Data Reports

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-33994-1

Job Description: Hansville Landfill

For:
SCS Engineers
2405 140th Avenue NE
Suite 107
Bellevue, WA 98005-1877

Attention: Mr. Dan Venchiarutti

Approved for release.
Betsy A Sara
Project Manager II
10/17/2012 4:50 PM

Betsy A Sara
Project Manager II
betsy.sara@testamericainc.com
10/17/2012

cc: Mr. Greg Helland
Mr. Charles Luckie

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

Table of Contents

CASE NARRATIVE

Client: SCS Engineers

Project: Hansville Landfill

Report Number: 280-33994-1

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.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

Sample Receiving

The samples were received on 10/03/2012; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 4.2º C, 5.0º C and 5.4º C.

Holding Times

All holding times were within established control limits.

Method Blanks

Total Alkalinity Method 2320B 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.

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 Spikes and Matrix Spike Duplicates performed on samples from other clients exhibited recoveries outside control limits for Ammonia Method 350.1 and Chloride Method 9251. 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.

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

General Comments

The analysis for Method 8260B SIM was performed by TestAmerica Buffalo. Their address and phone number are:
TestAmerica Buffalo
10 Hazelwood Drive, Suite 106
Amherst, NY 14228
716-691-2600

The analysis for 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
206-695-6200 phone

EXECUTIVE SUMMARY - Detections

Client: SCS Engineers Job Number: 280-33994-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-33994-14	**SW7**					
Sulfate		6.7		1.0	mg/L	300.0
Nitrate as N		0.68		0.50	mg/L	300.0
Ammonia as N		0.024	J	0.030	mg/L	350.1
Chloride		3.4		1.0	mg/L	9251
Total Alkalinity		68	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		68		5.0	mg/L	SM 2320B
Total Organic Carbon - Average		6.5		1.0	mg/L	SM 5310B
Dissolved						
Manganese		11		1.0	ug/L	6020
280-33994-15	**SW4**					
Vinyl chloride		0.0089	J	0.020	ug/L	8260B SIM
Sulfate		28		1.0	mg/L	300.0
Nitrate as N		1.2		0.50	mg/L	300.0
Ammonia as N		0.035		0.030	mg/L	350.1
Chloride		28		1.0	mg/L	9251
Total Alkalinity		210	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		210		5.0	mg/L	SM 2320B
Total Organic Carbon - Average		3.2		1.0	mg/L	SM 5310B
Dissolved						
Manganese		56		1.0	ug/L	6020
280-33994-16	**SW6**					
Sulfate		5.6		1.0	mg/L	300.0
Nitrate as N		0.090	J	0.50	mg/L	300.0
Ammonia as N		0.022	J	0.030	mg/L	350.1
Chloride		5.7		1.0	mg/L	9251
Total Alkalinity		68	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		68		5.0	mg/L	SM 2320B
Total Organic Carbon - Average		9.4		1.0	mg/L	SM 5310B
Dissolved						
Manganese		61		1.0	ug/L	6020

EXECUTIVE SUMMARY - Detections

Client: SCS Engineers

Job Number: 280-33994-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-33994-17	**SW1**					
Sulfate		12		1.0	mg/L	300.0
Nitrate as N		1.9		0.50	mg/L	300.0
Ammonia as N		0.036		0.030	mg/L	350.1
Chloride		6.0		1.0	mg/L	9251
Total Alkalinity		93	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		93		5.0	mg/L	SM 2320B
Total Organic Carbon - Average		1.7		1.0	mg/L	SM 5310B
Dissolved						
Manganese		0.37	J	1.0	ug/L	6020
280-33994-18	**MW-7**					
Sulfate		5.2		1.0	mg/L	300.0
Nitrate as N		0.81		0.50	mg/L	300.0
Ammonia as N		0.087		0.030	mg/L	350.1
Chloride		2.0		1.0	mg/L	9251
Total Alkalinity		160	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		160		5.0	mg/L	SM 2320B
Total Organic Carbon - Average		1.5		1.0	mg/L	SM 5310B
280-33994-19	**MW-6**					
Vinyl chloride		0.43		0.020	ug/L	8260B SIM
Sulfate		21		1.0	mg/L	300.0
Nitrate as N		1.9		0.50	mg/L	300.0
Nitrite as N		0.20	J	0.50	mg/L	300.0
Chloride		15		1.0	mg/L	9251
Total Alkalinity		140	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		140		5.0	mg/L	SM 2320B
Total Organic Carbon - Average		0.93	J	1.0	mg/L	SM 5310B
Dissolved						
Manganese		410		1.0	ug/L	6020

EXECUTIVE SUMMARY - Detections

Client: SCS Engineers

Job Number: 280-33994-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-33994-20	**MW-20DD**					
Vinyl chloride		0.43		0.020	ug/L	8260B SIM
Sulfate		21		1.0	mg/L	300.0
Nitrate as N		1.8		0.50	mg/L	300.0
Nitrite as N		0.23	J	0.50	mg/L	300.0
Chloride		14		1.0	mg/L	9251
Total Alkalinity		130	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		130		5.0	mg/L	SM 2320B
Total Organic Carbon - Average		0.86	J	1.0	mg/L	SM 5310B
Dissolved						
Manganese		420		1.0	ug/L	6020
280-33994-21	**MW-14**					
Vinyl chloride		0.27		0.020	ug/L	8260B SIM
Sulfate		16		1.0	mg/L	300.0
Ammonia as N		0.089	B	0.030	mg/L	350.1
Chloride		7.3		1.0	mg/L	9251
Total Alkalinity		130	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		130		5.0	mg/L	SM 2320B
Total Organic Carbon - Average		1.0		1.0	mg/L	SM 5310B
Dissolved						
Manganese		2300		1.0	ug/L	6020
280-33994-22	**MW-13D**					
Sulfate		18		1.0	mg/L	300.0
Ammonia as N		0.093	B	0.030	mg/L	350.1
Chloride		11		1.0	mg/L	9251
Total Alkalinity		100	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		100		5.0	mg/L	SM 2320B
Total Organic Carbon - Average		0.54	J	1.0	mg/L	SM 5310B
Dissolved						
Manganese		41		1.0	ug/L	6020

EXECUTIVE SUMMARY - Detections

Client: SCS Engineers

Job Number: 280-33994-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-33994-23	**MW-12I**					
Vinyl chloride		0.34		0.020	ug/L	8260B SIM
Sulfate		8.3		1.0	mg/L	300.0
Ammonia as N		0.072	B	0.030	mg/L	350.1
Chloride		5.7		1.0	mg/L	9251
Total Alkalinity		110		5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		110		5.0	mg/L	SM 2320B
Total Organic Carbon - Average		2.3		1.0	mg/L	SM 5310B
Dissolved						
Manganese		65		1.0	ug/L	6020
280-33994-25	**MW-5**					
Sulfate		9.0		1.0	mg/L	300.0
Nitrate as N		0.60		0.50	mg/L	300.0
Ammonia as N		0.10	B	0.030	mg/L	350.1
Chloride		3.1		1.0	mg/L	9251
Total Alkalinity		57		5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		57		5.0	mg/L	SM 2320B
Total Organic Carbon - Average		0.40	J	1.0	mg/L	SM 5310B
Dissolved						
Manganese		0.63	J	1.0	ug/L	6020

METHOD SUMMARY

Client: SCS Engineers

Job Number: 280-33994-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
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	
Chloride	TAL DEN	SW846 9251	
Alkalinity	TAL DEN	SM SM 2320B	
Organic Carbon, Total (TOC)	TAL DEN	SM SM 5310B	
Volatile Organic Compounds (GC/MS)	TAL BUF	SW846 8260B SIM	
Purge and Trap	TAL BUF		SW846 5030B
General Sub Contract Method	SC0056	Subcontract	

Lab References:

SC0056 = Analytical Resources, Inc

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: SCS Engineers

Job Number: 280-33994-1

Method	Analyst	Analyst ID
SW846 8260B SIM	Cwiklinski, Charles D	CDC
SW846 6020	Lill, Thomas E	TEL
MCAWW 300.0	Kudla, Ewa	EK
MCAWW 350.1	Scott, Samantha J	SJS
SW846 9251	Allen, Andrew J	AJA
SM SM 2320B	Ayala, Delaina	DA
SM SM 5310B	Bandy, Darlene F	DFB

SAMPLE SUMMARY

Client: SCS Engineers

Job Number: 280-33994-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-33994-14	SW7	Water	10/02/2012 0930	10/03/2012 0900
280-33994-15	SW4	Water	10/02/2012 1045	10/03/2012 0900
280-33994-16	SW6	Water	10/02/2012 1111	10/03/2012 0900
280-33994-17	SW1	Water	10/02/2012 1410	10/03/2012 0900
280-33994-18	MW-7	Water	10/02/2012 0834	10/03/2012 0900
280-33994-19	MW-6	Water	10/02/2012 1044	10/03/2012 0900
280-33994-20	MW-20DD	Water	10/02/2012 1044	10/03/2012 0900
280-33994-21	MW-14	Water	10/02/2012 1112	10/03/2012 0900
280-33994-22	MW-13D	Water	10/02/2012 1333	10/03/2012 0900
280-33994-23	MW-12I	Water	10/02/2012 1410	10/03/2012 0900
280-33994-24TB	TRIP BLANK	Water	10/02/2012 0834	10/03/2012 0900
280-33994-25	MW-5	Water	10/02/2012 1222	10/03/2012 0900

SAMPLE RESULTS

Client: SCS Engineers

Job Number: 280-33994-1

Client Sample ID: **SW7**

Lab Sample ID: 280-33994-14
Client Matrix: Water

Date Sampled: 10/02/2012 0930
Date Received: 10/03/2012 0900

8260B SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B SIM	Analysis Batch:	480-85165	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J8729.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	10/12/2012 1302			Final Weight/Volume:	25 mL
Prep Date:	10/12/2012 1302				

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

Client: SCS Engineers

Job Number: 280-33994-1

Client Sample ID: **SW4**

Lab Sample ID: 280-33994-15
Client Matrix: Water

Date Sampled: 10/02/2012 1045
Date Received: 10/03/2012 0900

8260B SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B SIM	Analysis Batch:	480-85165	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J8730.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	10/12/2012 1325			Final Weight/Volume:	25 mL
Prep Date:	10/12/2012 1325				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.0089	J	0.0040	0.020

Client: SCS Engineers

Job Number: 280-33994-1

Client Sample ID: **SW6**

Lab Sample ID: 280-33994-16
Client Matrix: Water

Date Sampled: 10/02/2012 1111
Date Received: 10/03/2012 0900

8260B SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B SIM	Analysis Batch:	480-85165	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J8731.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	10/12/2012 1349			Final Weight/Volume:	25 mL
Prep Date:	10/12/2012 1349				

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

Client: SCS Engineers

Job Number: 280-33994-1

Client Sample ID: **SW1**

Lab Sample ID: 280-33994-17
Client Matrix: Water

Date Sampled: 10/02/2012 1410
Date Received: 10/03/2012 0900

8260B SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B SIM	Analysis Batch:	480-85165	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J8732.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	10/12/2012 1414			Final Weight/Volume:	25 mL
Prep Date:	10/12/2012 1414				

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

Client: SCS Engineers

Job Number: 280-33994-1

Client Sample ID: **MW-7**

Lab Sample ID: 280-33994-18
Client Matrix: Water

Date Sampled: 10/02/2012 0834
Date Received: 10/03/2012 0900

8260B SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B SIM	Analysis Batch:	480-85165	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J8733.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	10/12/2012 1438			Final Weight/Volume:	25 mL
Prep Date:	10/12/2012 1438				

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

Client: SCS Engineers

Job Number: 280-33994-1

Client Sample ID: **MW-6**

Lab Sample ID: 280-33994-19
Client Matrix: Water

Date Sampled: 10/02/2012 1044
Date Received: 10/03/2012 0900

8260B SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B SIM	Analysis Batch:	480-85165	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J8734.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	10/12/2012 1502			Final Weight/Volume:	25 mL
Prep Date:	10/12/2012 1502				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.43		0.0040	0.020

Client: SCS Engineers

Job Number: 280-33994-1

Client Sample ID: **MW-20DD**

Lab Sample ID: 280-33994-20
Client Matrix: Water

Date Sampled: 10/02/2012 1044
Date Received: 10/03/2012 0900

8260B SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B SIM	Analysis Batch:	480-85165	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J8735.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	10/12/2012 1525			Final Weight/Volume:	25 mL
Prep Date:	10/12/2012 1525				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.43		0.0040	0.020

Client: SCS Engineers

Job Number: 280-33994-1

Client Sample ID: **MW-14**

Lab Sample ID: 280-33994-21
Client Matrix: Water

Date Sampled: 10/02/2012 1112
Date Received: 10/03/2012 0900

8260B SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B SIM	Analysis Batch:	480-85165	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J8736.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	10/12/2012 1549			Final Weight/Volume:	25 mL
Prep Date:	10/12/2012 1549				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.27		0.0040	0.020

Client: SCS Engineers Job Number: 280-33994-1

Client Sample ID: **MW-13D**

Lab Sample ID: 280-33994-22 Date Sampled: 10/02/2012 1333
Client Matrix: Water Date Received: 10/03/2012 0900

8260B SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B SIM	Analysis Batch:	480-85165	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J8737.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	10/12/2012 1613			Final Weight/Volume:	25 mL
Prep Date:	10/12/2012 1613				

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

Client: SCS Engineers Job Number: 280-33994-1

Client Sample ID: **MW-12I**

Lab Sample ID: 280-33994-23 Date Sampled: 10/02/2012 1410
Client Matrix: Water Date Received: 10/03/2012 0900

8260B SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B SIM	Analysis Batch:	480-85165	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J8738.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	10/12/2012 1638			Final Weight/Volume:	25 mL
Prep Date:	10/12/2012 1638				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	0.34		0.0040	0.020

Client: SCS Engineers Job Number: 280-33994-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 280-33994-24TB Date Sampled: 10/02/2012 0834
Client Matrix: Water Date Received: 10/03/2012 0900

8260B SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B SIM	Analysis Batch:	480-85165	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J8739.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	10/12/2012 1702			Final Weight/Volume:	25 mL
Prep Date:	10/12/2012 1702				

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

Client: SCS Engineers Job Number: 280-33994-1

Client Sample ID: **MW-5**

Lab Sample ID: 280-33994-25 Date Sampled: 10/02/2012 1222
Client Matrix: Water Date Received: 10/03/2012 0900

8260B SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B SIM	Analysis Batch:	480-85165	Instrument ID:	HP5973J
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	J8740.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	10/12/2012 1726			Final Weight/Volume:	25 mL
Prep Date:	10/12/2012 1726				

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

Client: SCS Engineers

Job Number: 280-33994-1

Client Sample ID: **SW7**

Lab Sample ID: 280-33994-14
Client Matrix: Water

Date Sampled: 10/02/2012 0930
Date Received: 10/03/2012 0900

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-140957	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-140226	Lab File ID:	021SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/05/2012 1759			Final Weight/Volume:	50 mL
Prep Date:	10/05/2012 0800				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Manganese	11		0.31	1.0

Client: SCS Engineers

Job Number: 280-33994-1

Client Sample ID: **SW4**

Lab Sample ID: 280-33994-15
Client Matrix: Water

Date Sampled: 10/02/2012 1045
Date Received: 10/03/2012 0900

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-140957	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-140226	Lab File ID:	022SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/05/2012 1802			Final Weight/Volume:	50 mL
Prep Date:	10/05/2012 0800				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Manganese	56		0.31	1.0

Client: SCS Engineers

Job Number: 280-33994-1

Client Sample ID: **SW6**

Lab Sample ID: 280-33994-16
Client Matrix: Water

Date Sampled: 10/02/2012 1111
Date Received: 10/03/2012 0900

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-140957	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-140226	Lab File ID:	023SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/05/2012 1805			Final Weight/Volume:	50 mL
Prep Date:	10/05/2012 0800				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Manganese	61		0.31	1.0

Client: SCS Engineers

Job Number: 280-33994-1

Client Sample ID: **SW1**

Lab Sample ID: 280-33994-17
Client Matrix: Water

Date Sampled: 10/02/2012 1410
Date Received: 10/03/2012 0900

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-140957	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-140226	Lab File ID:	024SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/05/2012 1808			Final Weight/Volume:	50 mL
Prep Date:	10/05/2012 0800				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Manganese	0.37	J	0.31	1.0

Client: SCS Engineers

Job Number: 280-33994-1

Client Sample ID: **MW-7**

Lab Sample ID: 280-33994-18
Client Matrix: Water

Date Sampled: 10/02/2012 0834
Date Received: 10/03/2012 0900

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-140957	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-140226	Lab File ID:	025SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/05/2012 1811			Final Weight/Volume:	50 mL
Prep Date:	10/05/2012 0800				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Manganese	ND		0.31	1.0

Client: SCS Engineers

Job Number: 280-33994-1

Client Sample ID: **MW-6**

Lab Sample ID: 280-33994-19
Client Matrix: Water

Date Sampled: 10/02/2012 1044
Date Received: 10/03/2012 0900

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-140957	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-140226	Lab File ID:	028SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/05/2012 1820			Final Weight/Volume:	50 mL
Prep Date:	10/05/2012 0800				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Manganese	410		0.31	1.0

Client: SCS Engineers

Job Number: 280-33994-1

Client Sample ID: **MW-20DD**

Lab Sample ID: 280-33994-20
Client Matrix: Water

Date Sampled: 10/02/2012 1044
Date Received: 10/03/2012 0900

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-140957	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-140226	Lab File ID:	029SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/05/2012 1823			Final Weight/Volume:	50 mL
Prep Date:	10/05/2012 0800				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Manganese	420		0.31	1.0

Client: SCS Engineers

Job Number: 280-33994-1

Client Sample ID: **MW-14**

Lab Sample ID: 280-33994-21
Client Matrix: Water

Date Sampled: 10/02/2012 1112
Date Received: 10/03/2012 0900

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-140957	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-140226	Lab File ID:	030SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/05/2012 1826			Final Weight/Volume:	50 mL
Prep Date:	10/05/2012 0800				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Manganese	2300		0.31	1.0

Client: SCS Engineers

Job Number: 280-33994-1

Client Sample ID: **MW-13D**

Lab Sample ID: 280-33994-22
Client Matrix: Water

Date Sampled: 10/02/2012 1333
Date Received: 10/03/2012 0900

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-140957	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-140226	Lab File ID:	031SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/05/2012 1828			Final Weight/Volume:	50 mL
Prep Date:	10/05/2012 0800				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Manganese	41		0.31	1.0

Client: SCS Engineers

Job Number: 280-33994-1

Client Sample ID: **MW-12I**

Lab Sample ID: 280-33994-23
Client Matrix: Water

Date Sampled: 10/02/2012 1410
Date Received: 10/03/2012 0900

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-140957	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-140226	Lab File ID:	032SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/05/2012 1831			Final Weight/Volume:	50 mL
Prep Date:	10/05/2012 0800				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Manganese	65		0.31	1.0

Client: SCS Engineers

Job Number: 280-33994-1

Client Sample ID: **MW-5**

Lab Sample ID: 280-33994-25
Client Matrix: Water

Date Sampled: 10/02/2012 1222
Date Received: 10/03/2012 0900

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-140957	Instrument ID:	MT_024
Prep Method:	3005A	Prep Batch:	280-140226	Lab File ID:	033SMPL.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/05/2012 1834			Final Weight/Volume:	50 mL
Prep Date:	10/05/2012 0800				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Manganese	0.63	J	0.31	1.0

General Chemistry

Client Sample ID: **SW7**

Lab Sample ID: 280-33994-14 Date Sampled: 10/02/2012 0930
Client Matrix: Water Date Received: 10/03/2012 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as N	0.68		mg/L	0.042	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1407						
Sulfate	6.7		mg/L	0.23	1.0	1.0	300.0
Analysis Batch: 280-140417	Analysis Date: 10/03/2012 1407						
Nitrite as N	ND		mg/L	0.049	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1407						
Orthophosphate as P	ND		mg/L	0.19	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1407						
Ammonia as N	0.024	J	mg/L	0.022	0.030	1.0	350.1
Analysis Batch: 280-141881	Analysis Date: 10/12/2012 1227						
Chloride	3.4		mg/L	1.0	1.0	1.0	9251
Analysis Batch: 280-141218	Analysis Date: 10/09/2012 1306						
Total Alkalinity	68	B	mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2010						
Bicarbonate Alkalinity	68		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2010						
Carbonate Alkalinity	ND		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2010						
Total Organic Carbon - Average	6.5		mg/L	0.16	1.0	1.0	SM 5310B
Analysis Batch: 280-140698	Analysis Date: 10/04/2012 2152						

General Chemistry

Client Sample ID: **SW4**

Lab Sample ID: 280-33994-15 Date Sampled: 10/02/2012 1045
Client Matrix: Water Date Received: 10/03/2012 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as N	1.2		mg/L	0.042	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1517						
Sulfate	28		mg/L	0.23	1.0	1.0	300.0
Analysis Batch: 280-140417	Analysis Date: 10/03/2012 1517						
Nitrite as N	ND		mg/L	0.049	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1517						
Orthophosphate as P	ND		mg/L	0.19	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1517						
Ammonia as N	0.035		mg/L	0.022	0.030	1.0	350.1
Analysis Batch: 280-141881	Analysis Date: 10/12/2012 1229						
Chloride	28		mg/L	1.0	1.0	1.0	9251
Analysis Batch: 280-141177	Analysis Date: 10/09/2012 0928						
Total Alkalinity	210	B	mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2015						
Bicarbonate Alkalinity	210		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2015						
Carbonate Alkalinity	ND		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2015						
Total Organic Carbon - Average	3.2		mg/L	0.16	1.0	1.0	SM 5310B
Analysis Batch: 280-140698	Analysis Date: 10/04/2012 2249						

General Chemistry

Client Sample ID: **SW6**

Lab Sample ID: 280-33994-16 Date Sampled: 10/02/2012 1111
Client Matrix: Water Date Received: 10/03/2012 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as N	0.090	J	mg/L	0.042	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1534						
Sulfate	5.6		mg/L	0.23	1.0	1.0	300.0
Analysis Batch: 280-140417	Analysis Date: 10/03/2012 1534						
Nitrite as N	ND		mg/L	0.049	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1534						
Orthophosphate as P	ND		mg/L	0.19	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1534						
Ammonia as N	0.022	J	mg/L	0.022	0.030	1.0	350.1
Analysis Batch: 280-141881	Analysis Date: 10/12/2012 1230						
Chloride	5.7		mg/L	1.0	1.0	1.0	9251
Analysis Batch: 280-141177	Analysis Date: 10/09/2012 0929						
Total Alkalinity	68	B	mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2019						
Bicarbonate Alkalinity	68		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2019						
Carbonate Alkalinity	ND		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2019						
Total Organic Carbon - Average	9.4		mg/L	0.16	1.0	1.0	SM 5310B
Analysis Batch: 280-140698	Analysis Date: 10/04/2012 2306						

General Chemistry

Client Sample ID: **SW1**

Lab Sample ID: 280-33994-17 Date Sampled: 10/02/2012 1410
Client Matrix: Water Date Received: 10/03/2012 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as N	1.9		mg/L	0.042	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1551						
Sulfate	12		mg/L	0.23	1.0	1.0	300.0
Analysis Batch: 280-140417	Analysis Date: 10/03/2012 1551						
Nitrite as N	ND		mg/L	0.049	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1551						
Orthophosphate as P	ND		mg/L	0.19	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1551						
Ammonia as N	0.036		mg/L	0.022	0.030	1.0	350.1
Analysis Batch: 280-141881	Analysis Date: 10/12/2012 1232						
Chloride	6.0		mg/L	1.0	1.0	1.0	9251
Analysis Batch: 280-141177	Analysis Date: 10/09/2012 0931						
Total Alkalinity	93	B	mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2024						
Bicarbonate Alkalinity	93		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2024						
Carbonate Alkalinity	ND		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2024						
Total Organic Carbon - Average	1.7		mg/L	0.16	1.0	1.0	SM 5310B
Analysis Batch: 280-140698	Analysis Date: 10/04/2012 2324						

General Chemistry

Client Sample ID: **MW-7**

Lab Sample ID: 280-33994-18 Date Sampled: 10/02/2012 0834
Client Matrix: Water Date Received: 10/03/2012 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as N	0.81		mg/L	0.042	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1609						
Sulfate	5.2		mg/L	0.23	1.0	1.0	300.0
Analysis Batch: 280-140417	Analysis Date: 10/03/2012 1609						
Nitrite as N	ND		mg/L	0.049	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1609						
Orthophosphate as P	ND		mg/L	0.19	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1609						
Ammonia as N	0.087		mg/L	0.022	0.030	1.0	350.1
Analysis Batch: 280-141881	Analysis Date: 10/12/2012 1233						
Chloride	2.0		mg/L	1.0	1.0	1.0	9251
Analysis Batch: 280-141177	Analysis Date: 10/09/2012 0932						
Total Alkalinity	160	B	mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2028						
Bicarbonate Alkalinity	160		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2028						
Carbonate Alkalinity	ND		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2028						
Total Organic Carbon - Average	1.5		mg/L	0.16	1.0	1.0	SM 5310B
Analysis Batch: 280-140698	Analysis Date: 10/04/2012 2343						

General Chemistry

Client Sample ID: **MW-6**

Lab Sample ID: 280-33994-19 Date Sampled: 10/02/2012 1044
Client Matrix: Water Date Received: 10/03/2012 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as N	1.9		mg/L	0.042	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1626						
Sulfate	21		mg/L	0.23	1.0	1.0	300.0
Analysis Batch: 280-140417	Analysis Date: 10/03/2012 1626						
Nitrite as N	0.20	J	mg/L	0.049	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1626						
Orthophosphate as P	ND		mg/L	0.19	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1626						
Ammonia as N	ND		mg/L	0.022	0.030	1.0	350.1
Analysis Batch: 280-141881	Analysis Date: 10/12/2012 1235						
Chloride	15		mg/L	1.0	1.0	1.0	9251
Analysis Batch: 280-141177	Analysis Date: 10/09/2012 0933						
Total Alkalinity	140	B	mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2033						
Bicarbonate Alkalinity	140		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2033						
Carbonate Alkalinity	ND		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2033						
Total Organic Carbon - Average	0.93	J	mg/L	0.16	1.0	1.0	SM 5310B
Analysis Batch: 280-140698	Analysis Date: 10/04/2012 2359						

General Chemistry

Client Sample ID: **MW-20DD**

Lab Sample ID: 280-33994-20 Date Sampled: 10/02/2012 1044
Client Matrix: Water Date Received: 10/03/2012 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as N	1.8		mg/L	0.042	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1643						
Sulfate	21		mg/L	0.23	1.0	1.0	300.0
Analysis Batch: 280-140417	Analysis Date: 10/03/2012 1643						
Nitrite as N	0.23	J	mg/L	0.049	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1643						
Orthophosphate as P	ND		mg/L	0.19	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1643						
Ammonia as N	ND		mg/L	0.022	0.030	1.0	350.1
Analysis Batch: 280-141881	Analysis Date: 10/12/2012 1236						
Chloride	14		mg/L	1.0	1.0	1.0	9251
Analysis Batch: 280-141177	Analysis Date: 10/09/2012 0934						
Total Alkalinity	130	B	mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2037						
Bicarbonate Alkalinity	130		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2037						
Carbonate Alkalinity	ND		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2037						
Total Organic Carbon - Average	0.86	J	mg/L	0.16	1.0	1.0	SM 5310B
Analysis Batch: 280-140698	Analysis Date: 10/05/2012 0020						

General Chemistry

Client Sample ID: **MW-14**

Lab Sample ID: 280-33994-21 Date Sampled: 10/02/2012 1112
Client Matrix: Water Date Received: 10/03/2012 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as N	ND		mg/L	0.042	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1735						
Sulfate	16		mg/L	0.23	1.0	1.0	300.0
Analysis Batch: 280-140417	Analysis Date: 10/03/2012 1735						
Nitrite as N	ND		mg/L	0.049	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1735						
Orthophosphate as P	ND		mg/L	0.19	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1735						
Ammonia as N	0.089	B	mg/L	0.022	0.030	1.0	350.1
Analysis Batch: 280-142109	Analysis Date: 10/14/2012 1229						
Chloride	7.3		mg/L	1.0	1.0	1.0	9251
Analysis Batch: 280-141177	Analysis Date: 10/09/2012 0936						
Total Alkalinity	130	B	mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2042						
Bicarbonate Alkalinity	130		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2042						
Carbonate Alkalinity	ND		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2042						
Total Organic Carbon - Average	1.0		mg/L	0.16	1.0	1.0	SM 5310B
Analysis Batch: 280-140698	Analysis Date: 10/05/2012 0039						

General Chemistry

Client Sample ID: **MW-13D**

Lab Sample ID: 280-33994-22 Date Sampled: 10/02/2012 1333
Client Matrix: Water Date Received: 10/03/2012 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as N	ND		mg/L	0.042	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1752						
Sulfate	18		mg/L	0.23	1.0	1.0	300.0
Analysis Batch: 280-140417	Analysis Date: 10/03/2012 1752						
Nitrite as N	ND		mg/L	0.049	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1752						
Orthophosphate as P	ND		mg/L	0.19	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1752						
Ammonia as N	0.093	B	mg/L	0.022	0.030	1.0	350.1
Analysis Batch: 280-142109	Analysis Date: 10/14/2012 1231						
Chloride	11		mg/L	1.0	1.0	1.0	9251
Analysis Batch: 280-141177	Analysis Date: 10/09/2012 0937						
Total Alkalinity	100	B	mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2046						
Bicarbonate Alkalinity	100		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2046						
Carbonate Alkalinity	ND		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2046						
Total Organic Carbon - Average	0.54	J	mg/L	0.16	1.0	1.0	SM 5310B
Analysis Batch: 280-140698	Analysis Date: 10/05/2012 0136						

General Chemistry

Client Sample ID: **MW-12I**

Lab Sample ID: 280-33994-23 Date Sampled: 10/02/2012 1410
Client Matrix: Water Date Received: 10/03/2012 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as N	ND		mg/L	0.042	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1810						
Sulfate	8.3		mg/L	0.23	1.0	1.0	300.0
Analysis Batch: 280-140417	Analysis Date: 10/03/2012 1810						
Nitrite as N	ND		mg/L	0.049	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1810						
Orthophosphate as P	ND		mg/L	0.19	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1810						
Ammonia as N	0.072	B	mg/L	0.022	0.030	1.0	350.1
Analysis Batch: 280-142109	Analysis Date: 10/14/2012 1232						
Chloride	5.7		mg/L	1.0	1.0	1.0	9251
Analysis Batch: 280-141218	Analysis Date: 10/09/2012 1300						
Total Alkalinity	110		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2114						
Bicarbonate Alkalinity	110		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2114						
Carbonate Alkalinity	ND		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2114						
Total Organic Carbon - Average	2.3		mg/L	0.16	1.0	1.0	SM 5310B
Analysis Batch: 280-140698	Analysis Date: 10/05/2012 0153						

General Chemistry

Client Sample ID: **MW-5**

Lab Sample ID: 280-33994-25 Date Sampled: 10/02/2012 1222
Client Matrix: Water Date Received: 10/03/2012 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate as N	0.60		mg/L	0.042	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1827						
Sulfate	9.0		mg/L	0.23	1.0	1.0	300.0
Analysis Batch: 280-140417	Analysis Date: 10/03/2012 1827						
Nitrite as N	ND		mg/L	0.049	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1827						
Orthophosphate as P	ND		mg/L	0.19	0.50	1.0	300.0
Analysis Batch: 280-140418	Analysis Date: 10/03/2012 1827						
Ammonia as N	0.10	B	mg/L	0.022	0.030	1.0	350.1
Analysis Batch: 280-142109	Analysis Date: 10/14/2012 1234						
Chloride	3.1		mg/L	1.0	1.0	1.0	9251
Analysis Batch: 280-141218	Analysis Date: 10/09/2012 1303						
Total Alkalinity	57		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2124						
Bicarbonate Alkalinity	57		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2124						
Carbonate Alkalinity	ND		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-140373	Analysis Date: 10/03/2012 2124						
Total Organic Carbon - Average	0.40	J	mg/L	0.16	1.0	1.0	SM 5310B
Analysis Batch: 280-140698	Analysis Date: 10/05/2012 0210						

DATA REPORTING QUALIFIERS

Client: SCS Engineers Job Number: 280-33994-1

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		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	B	Compound was found in the blank and sample.
	F	MS or MSD exceeds the control limits
	E	Result exceeded calibration range.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: SCS Engineers

Job Number: 280-33994-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:480-85165					
LCS 480-85165/2	Lab Control Sample	T	Water	8260B SIM	
MB 480-85165/3	Method Blank	T	Water	8260B SIM	
280-33994-14	SW7	T	Water	8260B SIM	
280-33994-15	SW4	T	Water	8260B SIM	
280-33994-16	SW6	T	Water	8260B SIM	
280-33994-17	SW1	T	Water	8260B SIM	
280-33994-18	MW-7	T	Water	8260B SIM	
280-33994-19	MW-6	T	Water	8260B SIM	
280-33994-20	MW-20DD	T	Water	8260B SIM	
280-33994-21	MW-14	T	Water	8260B SIM	
280-33994-22	MW-13D	T	Water	8260B SIM	
280-33994-23	MW-12I	T	Water	8260B SIM	
280-33994-24TB	TRIP BLANK	T	Water	8260B SIM	
280-33994-25	MW-5	T	Water	8260B SIM	

Report Basis
T = Total

Client: SCS Engineers Job Number: 280-33994-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-140226					
LCS 280-140226/2-A	Lab Control Sample	R	Water	3005A	
MB 280-140226/1-A	Method Blank	R	Water	3005A	
280-33906-F-1-D MS	Matrix Spike	D	Water	3005A	
280-33906-F-1-E MSD	Matrix Spike Duplicate	D	Water	3005A	
280-33994-14	SW7	D	Water	3005A	
280-33994-15	SW4	D	Water	3005A	
280-33994-16	SW6	D	Water	3005A	
280-33994-17	SW1	D	Water	3005A	
280-33994-18	MW-7	D	Water	3005A	
280-33994-19	MW-6	D	Water	3005A	
280-33994-20	MW-20DD	D	Water	3005A	
280-33994-21	MW-14	D	Water	3005A	
280-33994-22	MW-13D	D	Water	3005A	
280-33994-23	MW-12I	D	Water	3005A	
280-33994-25	MW-5	D	Water	3005A	
Analysis Batch:280-140957					
LCS 280-140226/2-A	Lab Control Sample	R	Water	6020	280-140226
MB 280-140226/1-A	Method Blank	R	Water	6020	280-140226
280-33906-F-1-D MS	Matrix Spike	D	Water	6020	280-140226
280-33906-F-1-E MSD	Matrix Spike Duplicate	D	Water	6020	280-140226
280-33994-14	SW7	D	Water	6020	280-140226
280-33994-15	SW4	D	Water	6020	280-140226
280-33994-16	SW6	D	Water	6020	280-140226
280-33994-17	SW1	D	Water	6020	280-140226
280-33994-18	MW-7	D	Water	6020	280-140226
280-33994-19	MW-6	D	Water	6020	280-140226
280-33994-20	MW-20DD	D	Water	6020	280-140226
280-33994-21	MW-14	D	Water	6020	280-140226
280-33994-22	MW-13D	D	Water	6020	280-140226
280-33994-23	MW-12I	D	Water	6020	280-140226
280-33994-25	MW-5	D	Water	6020	280-140226

Report Basis
D = Dissolved
R = Total Recoverable

Client: SCS Engineers Job Number: 280-33994-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-140373					
LCS 280-140373/31	Lab Control Sample	T	Water	SM 2320B	
LCS 280-140373/4	Lab Control Sample	T	Water	SM 2320B	
LCSD 280-140373/32	Lab Control Sample Duplicate	T	Water	SM 2320B	
LCSD 280-140373/5	Lab Control Sample Duplicate	T	Water	SM 2320B	
MB 280-140373/33	Method Blank	T	Water	SM 2320B	
MB 280-140373/6	Method Blank	T	Water	SM 2320B	
280-33994-14	SW7	T	Water	SM 2320B	
280-33994-15	SW4	T	Water	SM 2320B	
280-33994-16	SW6	T	Water	SM 2320B	
280-33994-17	SW1	T	Water	SM 2320B	
280-33994-18	MW-7	T	Water	SM 2320B	
280-33994-19	MW-6	T	Water	SM 2320B	
280-33994-20	MW-20DD	T	Water	SM 2320B	
280-33994-21	MW-14	T	Water	SM 2320B	
280-33994-22	MW-13D	T	Water	SM 2320B	
280-33994-23	MW-12I	T	Water	SM 2320B	
280-33994-23DU	Duplicate	T	Water	SM 2320B	
280-33994-25	MW-5	T	Water	SM 2320B	
Analysis Batch:280-140417					
LCS 280-140417/13	Lab Control Sample	T	Water	300.0	
LCSD 280-140417/14	Lab Control Sample Duplicate	T	Water	300.0	
MB 280-140417/15	Method Blank	T	Water	300.0	
280-33994-14	SW7	T	Water	300.0	
280-33994-14DU	Duplicate	T	Water	300.0	
280-33994-14MS	Matrix Spike	T	Water	300.0	
280-33994-14MSD	Matrix Spike Duplicate	T	Water	300.0	
280-33994-15	SW4	T	Water	300.0	
280-33994-16	SW6	T	Water	300.0	
280-33994-17	SW1	T	Water	300.0	
280-33994-18	MW-7	T	Water	300.0	
280-33994-19	MW-6	T	Water	300.0	
280-33994-20	MW-20DD	T	Water	300.0	
280-33994-21	MW-14	T	Water	300.0	
280-33994-22	MW-13D	T	Water	300.0	
280-33994-23	MW-12I	T	Water	300.0	
280-33994-25	MW-5	T	Water	300.0	

Client: SCS Engineers

Job Number: 280-33994-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-140418					
LCS 280-140418/13	Lab Control Sample	T	Water	300.0	
LCSD 280-140418/14	Lab Control Sample Duplicate	T	Water	300.0	
MB 280-140418/15	Method Blank	T	Water	300.0	
280-33994-14	SW7	T	Water	300.0	
280-33994-14DU	Duplicate	T	Water	300.0	
280-33994-14MS	Matrix Spike	T	Water	300.0	
280-33994-14MSD	Matrix Spike Duplicate	T	Water	300.0	
280-33994-15	SW4	T	Water	300.0	
280-33994-16	SW6	T	Water	300.0	
280-33994-17	SW1	T	Water	300.0	
280-33994-18	MW-7	T	Water	300.0	
280-33994-19	MW-6	T	Water	300.0	
280-33994-20	MW-20DD	T	Water	300.0	
280-33994-21	MW-14	T	Water	300.0	
280-33994-22	MW-13D	T	Water	300.0	
280-33994-23	MW-12I	T	Water	300.0	
280-33994-25	MW-5	T	Water	300.0	
280-33994-25DU	Duplicate	T	Water	300.0	
280-33994-25MS	Matrix Spike	T	Water	300.0	
280-33994-25MSD	Matrix Spike Duplicate	T	Water	300.0	
Analysis Batch:280-140698					
LCS 280-140698/3	Lab Control Sample	T	Water	SM 5310B	
LCSD 280-140698/4	Lab Control Sample Duplicate	T	Water	SM 5310B	
MB 280-140698/5	Method Blank	T	Water	SM 5310B	
280-33994-14	SW7	T	Water	SM 5310B	
280-33994-14MS	Matrix Spike	T	Water	SM 5310B	
280-33994-14MSD	Matrix Spike Duplicate	T	Water	SM 5310B	
280-33994-15	SW4	T	Water	SM 5310B	
280-33994-16	SW6	T	Water	SM 5310B	
280-33994-17	SW1	T	Water	SM 5310B	
280-33994-18	MW-7	T	Water	SM 5310B	
280-33994-19	MW-6	T	Water	SM 5310B	
280-33994-20	MW-20DD	T	Water	SM 5310B	
280-33994-21	MW-14	T	Water	SM 5310B	
280-33994-22	MW-13D	T	Water	SM 5310B	
280-33994-23	MW-12I	T	Water	SM 5310B	
280-33994-25	MW-5	T	Water	SM 5310B	

Client: SCS Engineers

Job Number: 280-33994-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-141177					
LCS 280-141177/21	Lab Control Sample	T	Water	9251	
LCSD 280-141177/22	Lab Control Sample Duplicate	T	Water	9251	
MB 280-141177/23	Method Blank	T	Water	9251	
280-33847-A-1 MS	Matrix Spike	T	Water	9251	
280-33847-A-1 MSD	Matrix Spike Duplicate	T	Water	9251	
280-33994-15	SW4	T	Water	9251	
280-33994-16	SW6	T	Water	9251	
280-33994-17	SW1	T	Water	9251	
280-33994-18	MW-7	T	Water	9251	
280-33994-19	MW-6	T	Water	9251	
280-33994-20	MW-20DD	T	Water	9251	
280-33994-21	MW-14	T	Water	9251	
280-33994-22	MW-13D	T	Water	9251	
Analysis Batch:280-141218					
LCS 280-141218/21	Lab Control Sample	T	Water	9251	
LCSD 280-141218/22	Lab Control Sample Duplicate	T	Water	9251	
MB 280-141218/23	Method Blank	T	Water	9251	
280-33994-14	SW7	T	Water	9251	
280-33994-23	MW-12I	T	Water	9251	
280-33994-23MS	Matrix Spike	T	Water	9251	
280-33994-23MSD	Matrix Spike Duplicate	T	Water	9251	
280-33994-25	MW-5	T	Water	9251	
Analysis Batch:280-141881					
LCS 280-141881/21	Lab Control Sample	T	Water	350.1	
LCSD 280-141881/22	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-141881/20	Method Blank	T	Water	350.1	
280-33853-C-1 MS	Matrix Spike	T	Water	350.1	
280-33853-C-1 MSD	Matrix Spike Duplicate	T	Water	350.1	
280-33994-14	SW7	T	Water	350.1	
280-33994-15	SW4	T	Water	350.1	
280-33994-16	SW6	T	Water	350.1	
280-33994-17	SW1	T	Water	350.1	
280-33994-18	MW-7	T	Water	350.1	
280-33994-19	MW-6	T	Water	350.1	
280-33994-20	MW-20DD	T	Water	350.1	

Client: SCS Engineers Job Number: 280-33994-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-142109					
LCS 280-142109/72	Lab Control Sample	T	Water	350.1	
LCSD 280-142109/73	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-142109/118	Method Blank	T	Water	350.1	
280-33953-D-4 MS	Matrix Spike	T	Water	350.1	
280-33953-D-4 MSD	Matrix Spike Duplicate	T	Water	350.1	
280-33994-21	MW-14	T	Water	350.1	
280-33994-22	MW-13D	T	Water	350.1	
280-33994-23	MW-12I	T	Water	350.1	
280-33994-25	MW-5	T	Water	350.1	

Report Basis
T = Total

Client: SCS Engineers

Job Number: 280-33994-1

Method Blank - Batch: 480-85165

Method: 8260B SIM
Preparation: 5030B

Lab Sample ID:	MB 480-85165/3	Analysis Batch:	480-85165	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J8728.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	10/12/2012 1237	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	10/12/2012 1237				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Vinyl chloride	ND		0.0040	0.020

Lab Control Sample - Batch: 480-85165

Method: 8260B SIM
Preparation: 5030B

Lab Sample ID:	LCS 480-85165/2	Analysis Batch:	480-85165	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J8727.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	10/12/2012 1213	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	10/12/2012 1213				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Vinyl chloride	0.200	0.253	126	60 - 140	

Method Blank - Batch: 280-140226

Method: 6020
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 280-140226/1-A	Analysis Batch:	280-140957	Instrument ID:	MT_024
Client Matrix:	Water	Prep Batch:	280-140226	Lab File ID:	019_BLK.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	10/05/2012 1754	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	10/05/2012 0800				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Manganese	ND		0.31	1.0

Lab Control Sample - Batch: 280-140226

Method: 6020
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 280-140226/2-A	Analysis Batch:	280-140957	Instrument ID:	MT_024
Client Matrix:	Water	Prep Batch:	280-140226	Lab File ID:	020_LCS.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	10/05/2012 1757	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	10/05/2012 0800				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Manganese	40.0	41.9	105	85 - 117	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-140226

Method: 6020
Preparation: 3005A
Dissolved

MS Lab Sample ID:	280-33906-F-1-D MS	Analysis Batch:	280-140957	Instrument ID:	MT_024
Client Matrix:	Water	Prep Batch:	280-140226	Lab File ID:	039_MS.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	10/05/2012 1852			Final Weight/Volume:	50 mL
Prep Date:	10/05/2012 0800				
Leach Date:	N/A				

MSD Lab Sample ID:	280-33906-F-1-E MSD	Analysis Batch:	280-140957	Instrument ID:	MT_024
Client Matrix:	Water	Prep Batch:	280-140226	Lab File ID:	040_MSD.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	10/05/2012 1855			Final Weight/Volume:	50 mL
Prep Date:	10/05/2012 0800				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Manganese	102	107	85 - 117	3	20		

Client: SCS Engineers

Job Number: 280-33994-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-140226

Method: 6020
Preparation: 3005A
Dissolved

MS Lab Sample ID:	280-33906-F-1-D MS	Units: ug/L	MSD Lab Sample ID:	280-33906-F-1-E MSD	
Client Matrix:	Water		Client Matrix:	Water	
Dilution:	1.0		Dilution:	1.0	
Analysis Date:	10/05/2012 1852		Analysis Date:	10/05/2012 1855	
Prep Date:	10/05/2012 0800		Prep Date:	10/05/2012 0800	
Leach Date:	N/A		Leach Date:	N/A	

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Manganese	39	40.0	40.0	79.6	81.6

Client: SCS Engineers Job Number: 280-33994-1

Method Blank - Batch: 280-140417

Method: 300.0
Preparation: N/A

Lab Sample ID:	MB 280-140417/15	Analysis Batch:	280-140417	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	114.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 1350	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Sulfate	ND		0.23	1.0

Method Reporting Limit Check - Batch: 280-140417

Method: 300.0
Preparation: N/A

Lab Sample ID:	MRL 280-140417/11	Analysis Batch:	280-140417	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	110.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 1241	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sulfate	1.00	0.909	91	50 - 150	J

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-140417

Method: 300.0
Preparation: N/A

LCS Lab Sample ID:	LCS 280-140417/13	Analysis Batch:	280-140417	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	112.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 1316	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-140417/14	Analysis Batch:	280-140417	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	113.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 1333	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Sulfate	99	99	90 - 110	1	10		

Client: SCS Engineers Job Number: 280-33994-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-140417

Method: 300.0
Preparation: N/A

LCS Lab Sample ID:	LCS 280-140417/13	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-140417/14
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/03/2012 1316			Analysis Date:	10/03/2012 1333
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
Sulfate	25.0	25.0	24.8	24.7

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-140417

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	280-33994-14	Analysis Batch:	280-140417	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	117.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 1442			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-33994-14	Analysis Batch:	280-140417	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	118.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 1459			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Sulfate	104	104	80 - 120	0	20		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-140417

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	280-33994-14	Units:	mg/L	MSD Lab Sample ID:	280-33994-14
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/03/2012 1442			Analysis Date:	10/03/2012 1459
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
Sulfate	6.7	25.0	25.0	32.7	32.6

Client: SCS Engineers

Job Number: 280-33994-1

Duplicate - Batch: 280-140417

Method: 300.0
Preparation: N/A

Lab Sample ID:	280-33994-14	Analysis Batch:	280-140417	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	116.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 1425	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Sulfate	6.7	6.62	0.9	15	

Client: SCS Engineers

Job Number: 280-33994-1

Method Blank - Batch: 280-140418

Method: 300.0
Preparation: N/A

Lab Sample ID:	MB 280-140418/15	Analysis Batch:	280-140418	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	114.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 1350	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrate as N	ND		0.042	0.50
Nitrite as N	ND		0.049	0.50
Orthophosphate as P	ND		0.19	0.50

Method Reporting Limit Check - Batch: 280-140418

Method: 300.0
Preparation: N/A

Lab Sample ID:	MRL 280-140418/12	Analysis Batch:	280-140418	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	111.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 1258	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as N	0.500	0.464	93	50 - 150	J
Nitrite as N	0.500	0.480	96	50 - 150	J
Orthophosphate as P	0.500	0.424	85	50 - 150	J

Client: SCS Engineers Job Number: 280-33994-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-140418

Method: 300.0
Preparation: N/A

LCS Lab Sample ID:	LCS 280-140418/13	Analysis Batch:	280-140418	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	112.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 1316	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-140418/14	Analysis Batch:	280-140418	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	113.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 1333	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Nitrate as N	101	100	90 - 110	1	10		
Nitrite as N	98	98	90 - 110	0	10		
Orthophosphate as P	91	93	90 - 110	3	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-140418

Method: 300.0
Preparation: N/A

LCS Lab Sample ID:	LCS 280-140418/13	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-140418/14
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/03/2012 1316			Analysis Date:	10/03/2012 1333
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
Nitrate as N	5.00	5.00	5.04	4.99
Nitrite as N	5.00	5.00	4.92	4.90
Orthophosphate as P	5.00	5.00	4.54	4.66

Client: SCS Engineers Job Number: 280-33994-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-140418

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	280-33994-14	Analysis Batch:	280-140418	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	117.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 1442			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-33994-14	Analysis Batch:	280-140418	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	118.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 1459			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrate as N	105	104	80 - 120	1	20		
Nitrite as N	103	103	80 - 120	1	20		
Orthophosphate as P	110	113	80 - 120	2	20		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-140418

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	280-33994-25	Analysis Batch:	280-140418	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	132.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 1902			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-33994-25	Analysis Batch:	280-140418	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	133.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 1919			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrate as N	104	106	80 - 120	2	20		
Nitrite as N	103	105	80 - 120	2	20		
Orthophosphate as P	105	109	80 - 120	4	20		

Client: SCS Engineers Job Number: 280-33994-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-140418

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	280-33994-14	Units: mg/L		MSD Lab Sample ID:	280-33994-14
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/03/2012 1442			Analysis Date:	10/03/2012 1459
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
Nitrate as N	0.68	5.00	5.00	5.91	5.88
Nitrite as N	ND	5.00	5.00	5.16	5.14
Orthophosphate as P	ND	5.00	5.00	5.52	5.63

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-140418

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	280-33994-25	Units: mg/L		MSD Lab Sample ID:	280-33994-25
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/03/2012 1902			Analysis Date:	10/03/2012 1919
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
Nitrate as N	0.60	5.00	5.00	5.81	5.91
Nitrite as N	ND	5.00	5.00	5.17	5.25
Orthophosphate as P	ND	5.00	5.00	5.27	5.47

Client: SCS Engineers Job Number: 280-33994-1

Duplicate - Batch: 280-140418

Method: 300.0
Preparation: N/A

Lab Sample ID:	280-33994-14	Analysis Batch:	280-140418	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	116.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 1425	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Nitrate as N	0.68	0.676	0	15	
Nitrite as N	ND	ND	NC	15	
Orthophosphate as P	ND	ND	NC	15	

Duplicate - Batch: 280-140418

Method: 300.0
Preparation: N/A

Lab Sample ID:	280-33994-25	Analysis Batch:	280-140418	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	131.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 1844	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Nitrate as N	0.60	0.598	0.2	15	
Nitrite as N	ND	ND	NC	15	
Orthophosphate as P	ND	ND	NC	15	

Client: SCS Engineers Job Number: 280-33994-1

Method Blank - Batch: 280-141881

Method: 350.1
Preparation: N/A

Lab Sample ID:	MB 280-141881/20	Analysis Batch:	280-141881	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1112NXNA
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/12/2012 1141	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Ammonia as N	ND		0.022	0.030

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-141881

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-141881/21	Analysis Batch:	280-141881	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1112NXNA
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/12/2012 1142	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-141881/22	Analysis Batch:	280-141881	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1112NXNA
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/12/2012 1144	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Ammonia as N	100	100	90 - 110	0	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-141881

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-141881/21	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-141881/22
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/12/2012 1142			Analysis Date:	10/12/2012 1144
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	5.00	5.00	5.02	5.02

Client: SCS Engineers

Job Number: 280-33994-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-141881

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-33853-C-1 MS	Analysis Batch:	280-141881	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1112NXNA
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/12/2012 1212			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-33853-C-1 MSD	Analysis Batch:	280-141881	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1112NXNA
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/12/2012 1214			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Ammonia as N	33	36	90 - 110	1	10	F E	F E

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-141881

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-33853-C-1 MS	Units:	mg/L	MSD Lab Sample ID:	280-33853-C-1 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/12/2012 1212			Analysis Date:	10/12/2012 1214
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	12	4.00	4.00	13.7	F E	13.8	F E

Client: SCS Engineers Job Number: 280-33994-1

Method Blank - Batch: 280-142109

Method: 350.1
Preparation: N/A

Lab Sample ID:	MB 280-142109/118	Analysis Batch:	280-142109	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1014NXNF
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/14/2012 1326	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Ammonia as N	ND		0.022	0.030

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-142109

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-142109/72	Analysis Batch:	280-142109	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1014NXNF
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/14/2012 1207	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-142109/73	Analysis Batch:	280-142109	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1014NXNF
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/14/2012 1208	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Ammonia as N	101	102	90 - 110	1	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-142109

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-142109/72	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-142109/73
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/14/2012 1207			Analysis Date:	10/14/2012 1208
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	5.00	5.00	5.05	5.08

Client: SCS Engineers

Job Number: 280-33994-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-142109

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-33953-D-4 MS	Analysis Batch:	280-142109	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1014NXNF
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/14/2012 1223			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-33953-D-4 MSD	Analysis Batch:	280-142109	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1014NXNF
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/14/2012 1225			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Ammonia as N	73	69	90 - 110	4	10	F	F

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-142109

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-33953-D-4 MS	Units:	mg/L	MSD Lab Sample ID:	280-33953-D-4 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/14/2012 1223			Analysis Date:	10/14/2012 1225
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	0.31	4.00	4.00	3.23	F	3.09	F

Client: SCS Engineers Job Number: 280-33994-1

Method Blank - Batch: 280-141177

Method: 9251
Preparation: N/A

Lab Sample ID:	MB 280-141177/23	Analysis Batch:	280-141177	Instrument ID:	WC_Alp 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL100912.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/09/2012 0908	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chloride	ND		1.0	1.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-141177

Method: 9251
Preparation: N/A

LCS Lab Sample ID:	LCS 280-141177/21	Analysis Batch:	280-141177	Instrument ID:	WC_Alp 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL100912.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/09/2012 0906	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-141177/22	Analysis Batch:	280-141177	Instrument ID:	WC_Alp 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL100912.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/09/2012 0907	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Chloride	97	106	90 - 110	9	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-141177

Method: 9251
Preparation: N/A

LCS Lab Sample ID:	LCS 280-141177/21	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-141177/22
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/09/2012 0906			Analysis Date:	10/09/2012 0907
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Chloride	50.0	50.0	48.3	52.9

Client: SCS Engineers

Job Number: 280-33994-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-141177

Method: 9251
Preparation: N/A

MS Lab Sample ID:	280-33847-A-1 MS	Analysis Batch:	280-141177	Instrument ID:	WC_Alp 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL100912.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/09/2012 0911			Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-33847-A-1 MSD	Analysis Batch:	280-141177	Instrument ID:	WC_Alp 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL100912.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/09/2012 0912			Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chloride	140	142	90 - 110	1	10	F	F

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-141177

Method: 9251
Preparation: N/A

MS Lab Sample ID:	280-33847-A-1 MS	Units:	mg/L	MSD Lab Sample ID:	280-33847-A-1 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/09/2012 0911			Analysis Date:	10/09/2012 0912
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Chloride	1.0	50.0	50.0	71.2	F	71.9	F

Client: SCS Engineers Job Number: 280-33994-1

Method Blank - Batch: 280-141218

Method: 9251
Preparation: N/A

Lab Sample ID:	MB 280-141218/23	Analysis Batch:	280-141218	Instrument ID:	WC_Alp 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL1009A.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/09/2012 1258	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chloride	ND		1.0	1.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-141218

Method: 9251
Preparation: N/A

LCS Lab Sample ID:	LCS 280-141218/21	Analysis Batch:	280-141218	Instrument ID:	WC_Alp 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL1009A.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/09/2012 1256	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-141218/22	Analysis Batch:	280-141218	Instrument ID:	WC_Alp 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL1009A.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/09/2012 1257	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Chloride	98	96	90 - 110	3	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-141218

Method: 9251
Preparation: N/A

LCS Lab Sample ID:	LCS 280-141218/21	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-141218/22
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/09/2012 1256			Analysis Date:	10/09/2012 1257
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Chloride	50.0	50.0	49.1	47.8

Client: SCS Engineers

Job Number: 280-33994-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-141218

Method: 9251
Preparation: N/A

MS Lab Sample ID:	280-33994-23	Analysis Batch:	280-141218	Instrument ID:	WC_Alp 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL1009A.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/09/2012 1301			Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-33994-23	Analysis Batch:	280-141218	Instrument ID:	WC_Alp 1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\CL1009A.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/09/2012 1302			Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chloride	97	92	90 - 110	4	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-141218

Method: 9251
Preparation: N/A

MS Lab Sample ID:	280-33994-23	Units:	mg/L	MSD Lab Sample ID:	280-33994-23
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/09/2012 1301			Analysis Date:	10/09/2012 1302
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chloride	5.7	50.0	50.0	54.1	51.7

Client: SCS Engineers Job Number: 280-33994-1

Method Blank - Batch: 280-140373 **Method: SM 2320B**
Preparation: N/A

Lab Sample ID:	MB 280-140373/6	Analysis Batch:	280-140373	Instrument ID:	WC-AT3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	100312.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 1859	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Alkalinity	1.48	J	1.1	5.0
Bicarbonate Alkalinity	ND		1.1	5.0
Carbonate Alkalinity	ND		1.1	5.0

Method Blank - Batch: 280-140373 **Method: SM 2320B**
Preparation: N/A

Lab Sample ID:	MB 280-140373/33	Analysis Batch:	280-140373	Instrument ID:	WC-AT3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	100312.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 2109	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Alkalinity	ND		1.1	5.0
Bicarbonate Alkalinity	ND		1.1	5.0
Carbonate Alkalinity	ND		1.1	5.0

Client: SCS Engineers Job Number: 280-33994-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-140373

Method: SM 2320B
Preparation: N/A

LCS Lab Sample ID:	LCS 280-140373/4	Analysis Batch:	280-140373	Instrument ID:	WC-AT3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	100312.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 1850	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-140373/5	Analysis Batch:	280-140373	Instrument ID:	WC-AT3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	100312.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 1855	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Total Alkalinity	103	103	90 - 110	1	10		

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-140373

Method: SM 2320B
Preparation: N/A

LCS Lab Sample ID:	LCS 280-140373/31	Analysis Batch:	280-140373	Instrument ID:	WC-AT3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	100312.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 2100	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-140373/32	Analysis Batch:	280-140373	Instrument ID:	WC-AT3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	100312.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 2105	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Total Alkalinity	102	103	90 - 110	1	10		

Client: SCS Engineers Job Number: 280-33994-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-140373

Method: SM 2320B
Preparation: N/A

LCS Lab Sample ID:	LCS 280-140373/4	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-140373/5
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/03/2012 1850			Analysis Date:	10/03/2012 1855
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 Alkalinity	200	200	205	206

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-140373

Method: SM 2320B
Preparation: N/A

LCS Lab Sample ID:	LCS 280-140373/31	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-140373/32
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/03/2012 2100			Analysis Date:	10/03/2012 2105
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 Alkalinity	200	200	204	206

Duplicate - Batch: 280-140373

Method: SM 2320B
Preparation: N/A

Lab Sample ID:	280-33994-23	Analysis Batch:	280-140373	Instrument ID:	WC-AT3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	100312.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/03/2012 2119	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Alkalinity	110	117	8	10	

Client: SCS Engineers Job Number: 280-33994-1

Method Blank - Batch: 280-140698

Method: SM 5310B
Preparation: N/A

Lab Sample ID:	MB 280-140698/5	Analysis Batch:	280-140698	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	100412.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/04/2012 1754	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Organic Carbon - Average	ND		0.16	1.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-140698

Method: SM 5310B
Preparation: N/A

LCS Lab Sample ID:	LCS 280-140698/3	Analysis Batch:	280-140698	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	100412.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/04/2012 1716	Units:	mg/L	Final Weight/Volume:	200 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-140698/4	Analysis Batch:	280-140698	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	100412.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/04/2012 1735	Units:	mg/L	Final Weight/Volume:	200 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Total Organic Carbon - Average	101	101	88 - 112	0	15		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-140698

Method: SM 5310B
Preparation: N/A

LCS Lab Sample ID:	LCS 280-140698/3	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-140698/4
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/04/2012 1716			Analysis Date:	10/04/2012 1735
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	25.2	25.2

Client: SCS Engineers

Job Number: 280-33994-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-140698

Method: SM 5310B
Preparation: N/A

MS Lab Sample ID:	280-33994-14	Analysis Batch:	280-140698	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	100412.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/04/2012 2210			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-33994-14	Analysis Batch:	280-140698	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	100412.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	10/04/2012 2230			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Total Organic Carbon - Average	102	102	88 - 112	0	15		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-140698

Method: SM 5310B
Preparation: N/A

MS Lab Sample ID:	280-33994-14	Units:	mg/L	MSD Lab Sample ID:	280-33994-14
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/04/2012 2210			Analysis Date:	10/04/2012 2230
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	6.5	25.0	25.0	32.0	31.9

Client: SCS Engineers Job Number: 280-33994-1

Laboratory Chronicle

Lab ID: 280-33994-14 **Client ID: SW7**

Sample Date/Time: 10/02/2012 09:30 Received Date/Time: 10/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-33994-E-14		480-85165		10/12/2012 13:02	1	TAL BUF	CDC
A:8260B SIM	280-33994-E-14		480-85165		10/12/2012 13:02	1	TAL BUF	CDC
P:3005A	280-33994-D-14-A		280-140957	280-140226	10/05/2012 08:00	1	TAL DEN	JM
A:6020	280-33994-D-14-A		280-140957	280-140226	10/05/2012 17:59	1	TAL DEN	TEL
A:300.0	280-33994-A-14		280-140417		10/03/2012 14:07	1	TAL DEN	EK
A:300.0	280-33994-A-14		280-140418		10/03/2012 14:07	1	TAL DEN	EK
A:350.1	280-33994-C-14		280-141881		10/12/2012 12:27	1	TAL DEN	SJS
A:9251	280-33994-A-14		280-141218		10/09/2012 13:06	1	TAL DEN	AJA
A:SM 2320B	280-33994-A-14		280-140373		10/03/2012 20:10	1	TAL DEN	DA
A:SM 5310B	280-33994-C-14		280-140698		10/04/2012 21:52	1	TAL DEN	DFB

Lab ID: 280-33994-14 MS **Client ID: SW7**

Sample Date/Time: 10/02/2012 09:30 Received Date/Time: 10/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-33994-A-14 MS		280-140417		10/03/2012 14:42	1	TAL DEN	EK
A:300.0	280-33994-A-14 MS		280-140418		10/03/2012 14:42	1	TAL DEN	EK
A:SM 5310B	280-33994-C-14 MS		280-140698		10/04/2012 22:10	1	TAL DEN	DFB

Lab ID: 280-33994-14 MSD **Client ID: SW7**

Sample Date/Time: 10/02/2012 09:30 Received Date/Time: 10/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-33994-A-14 MSD		280-140417		10/03/2012 14:59	1	TAL DEN	EK
A:300.0	280-33994-A-14 MSD		280-140418		10/03/2012 14:59	1	TAL DEN	EK
A:SM 5310B	280-33994-C-14 MSD		280-140698		10/04/2012 22:30	1	TAL DEN	DFB

Lab ID: 280-33994-14 DU **Client ID: SW7**

Sample Date/Time: 10/02/2012 09:30 Received Date/Time: 10/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-33994-A-14 DU		280-140417		10/03/2012 14:25	1	TAL DEN	EK
A:300.0	280-33994-A-14 DU		280-140418		10/03/2012 14:25	1	TAL DEN	EK

Client: SCS Engineers Job Number: 280-33994-1

Laboratory Chronicle

Lab ID: 280-33994-15 **Client ID: SW4**

Sample Date/Time: 10/02/2012 10:45 Received Date/Time: 10/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-33994-E-15		480-85165		10/12/2012 13:25	1	TAL BUF	CDC
A:8260B SIM	280-33994-E-15		480-85165		10/12/2012 13:25	1	TAL BUF	CDC
P:3005A	280-33994-D-15-A		280-140957	280-140226	10/05/2012 08:00	1	TAL DEN	JM
A:6020	280-33994-D-15-A		280-140957	280-140226	10/05/2012 18:02	1	TAL DEN	TEL
A:300.0	280-33994-A-15		280-140417		10/03/2012 15:17	1	TAL DEN	EK
A:300.0	280-33994-A-15		280-140418		10/03/2012 15:17	1	TAL DEN	EK
A:350.1	280-33994-C-15		280-141881		10/12/2012 12:29	1	TAL DEN	SJS
A:9251	280-33994-A-15		280-141177		10/09/2012 09:28	1	TAL DEN	AJA
A:SM 2320B	280-33994-A-15		280-140373		10/03/2012 20:15	1	TAL DEN	DA
A:SM 5310B	280-33994-C-15		280-140698		10/04/2012 22:49	1	TAL DEN	DFB

Lab ID: 280-33994-16 **Client ID: SW6**

Sample Date/Time: 10/02/2012 11:11 Received Date/Time: 10/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-33994-E-16		480-85165		10/12/2012 13:49	1	TAL BUF	CDC
A:8260B SIM	280-33994-E-16		480-85165		10/12/2012 13:49	1	TAL BUF	CDC
P:3005A	280-33994-D-16-A		280-140957	280-140226	10/05/2012 08:00	1	TAL DEN	JM
A:6020	280-33994-D-16-A		280-140957	280-140226	10/05/2012 18:05	1	TAL DEN	TEL
A:300.0	280-33994-A-16		280-140417		10/03/2012 15:34	1	TAL DEN	EK
A:300.0	280-33994-A-16		280-140418		10/03/2012 15:34	1	TAL DEN	EK
A:350.1	280-33994-C-16		280-141881		10/12/2012 12:30	1	TAL DEN	SJS
A:9251	280-33994-A-16		280-141177		10/09/2012 09:29	1	TAL DEN	AJA
A:SM 2320B	280-33994-A-16		280-140373		10/03/2012 20:19	1	TAL DEN	DA
A:SM 5310B	280-33994-C-16		280-140698		10/04/2012 23:06	1	TAL DEN	DFB

Lab ID: 280-33994-17 **Client ID: SW1**

Sample Date/Time: 10/02/2012 14:10 Received Date/Time: 10/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-33994-E-17		480-85165		10/12/2012 14:14	1	TAL BUF	CDC
A:8260B SIM	280-33994-E-17		480-85165		10/12/2012 14:14	1	TAL BUF	CDC
P:3005A	280-33994-D-17-A		280-140957	280-140226	10/05/2012 08:00	1	TAL DEN	JM
A:6020	280-33994-D-17-A		280-140957	280-140226	10/05/2012 18:08	1	TAL DEN	TEL
A:300.0	280-33994-A-17		280-140417		10/03/2012 15:51	1	TAL DEN	EK
A:300.0	280-33994-A-17		280-140418		10/03/2012 15:51	1	TAL DEN	EK
A:350.1	280-33994-C-17		280-141881		10/12/2012 12:32	1	TAL DEN	SJS
A:9251	280-33994-A-17		280-141177		10/09/2012 09:31	1	TAL DEN	AJA
A:SM 2320B	280-33994-A-17		280-140373		10/03/2012 20:24	1	TAL DEN	DA
A:SM 5310B	280-33994-C-17		280-140698		10/04/2012 23:24	1	TAL DEN	DFB

Client: SCS Engineers Job Number: 280-33994-1

Laboratory Chronicle

Lab ID: 280-33994-18 **Client ID: MW-7**

Sample Date/Time: 10/02/2012 08:34 Received Date/Time: 10/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-33994-E-18		480-85165		10/12/2012 14:38	1	TAL BUF	CDC
A:8260B SIM	280-33994-E-18		480-85165		10/12/2012 14:38	1	TAL BUF	CDC
P:3005A	280-33994-D-18-A		280-140957	280-140226	10/05/2012 08:00	1	TAL DEN	JM
A:6020	280-33994-D-18-A		280-140957	280-140226	10/05/2012 18:11	1	TAL DEN	TEL
A:300.0	280-33994-A-18		280-140417		10/03/2012 16:09	1	TAL DEN	EK
A:300.0	280-33994-A-18		280-140418		10/03/2012 16:09	1	TAL DEN	EK
A:350.1	280-33994-C-18		280-141881		10/12/2012 12:33	1	TAL DEN	SJS
A:9251	280-33994-A-18		280-141177		10/09/2012 09:32	1	TAL DEN	AJA
A:SM 2320B	280-33994-A-18		280-140373		10/03/2012 20:28	1	TAL DEN	DA
A:SM 5310B	280-33994-C-18		280-140698		10/04/2012 23:43	1	TAL DEN	DFB

Lab ID: 280-33994-19 **Client ID: MW-6**

Sample Date/Time: 10/02/2012 10:44 Received Date/Time: 10/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-33994-E-19		480-85165		10/12/2012 15:02	1	TAL BUF	CDC
A:8260B SIM	280-33994-E-19		480-85165		10/12/2012 15:02	1	TAL BUF	CDC
P:3005A	280-33994-D-19-A		280-140957	280-140226	10/05/2012 08:00	1	TAL DEN	JM
A:6020	280-33994-D-19-A		280-140957	280-140226	10/05/2012 18:20	1	TAL DEN	TEL
A:300.0	280-33994-A-19		280-140417		10/03/2012 16:26	1	TAL DEN	EK
A:300.0	280-33994-A-19		280-140418		10/03/2012 16:26	1	TAL DEN	EK
A:350.1	280-33994-C-19		280-141881		10/12/2012 12:35	1	TAL DEN	SJS
A:9251	280-33994-A-19		280-141177		10/09/2012 09:33	1	TAL DEN	AJA
A:SM 2320B	280-33994-A-19		280-140373		10/03/2012 20:33	1	TAL DEN	DA
A:SM 5310B	280-33994-C-19		280-140698		10/04/2012 23:59	1	TAL DEN	DFB

Lab ID: 280-33994-20 **Client ID: MW-20DD**

Sample Date/Time: 10/02/2012 10:44 Received Date/Time: 10/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-33994-E-20		480-85165		10/12/2012 15:25	1	TAL BUF	CDC
A:8260B SIM	280-33994-E-20		480-85165		10/12/2012 15:25	1	TAL BUF	CDC
P:3005A	280-33994-D-20-A		280-140957	280-140226	10/05/2012 08:00	1	TAL DEN	JM
A:6020	280-33994-D-20-A		280-140957	280-140226	10/05/2012 18:23	1	TAL DEN	TEL
A:300.0	280-33994-A-20		280-140417		10/03/2012 16:43	1	TAL DEN	EK
A:300.0	280-33994-A-20		280-140418		10/03/2012 16:43	1	TAL DEN	EK
A:350.1	280-33994-C-20		280-141881		10/12/2012 12:36	1	TAL DEN	SJS
A:9251	280-33994-A-20		280-141177		10/09/2012 09:34	1	TAL DEN	AJA
A:SM 2320B	280-33994-A-20		280-140373		10/03/2012 20:37	1	TAL DEN	DA
A:SM 5310B	280-33994-C-20		280-140698		10/05/2012 00:20	1	TAL DEN	DFB

Client: SCS Engineers Job Number: 280-33994-1

Laboratory Chronicle

Lab ID: 280-33994-21 **Client ID: MW-14**

Sample Date/Time: 10/02/2012 11:12 Received Date/Time: 10/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-33994-E-21		480-85165		10/12/2012 15:49	1	TAL BUF	CDC
A:8260B SIM	280-33994-E-21		480-85165		10/12/2012 15:49	1	TAL BUF	CDC
P:3005A	280-33994-D-21-A		280-140957	280-140226	10/05/2012 08:00	1	TAL DEN	JM
A:6020	280-33994-D-21-A		280-140957	280-140226	10/05/2012 18:26	1	TAL DEN	TEL
A:300.0	280-33994-A-21		280-140417		10/03/2012 17:35	1	TAL DEN	EK
A:300.0	280-33994-A-21		280-140418		10/03/2012 17:35	1	TAL DEN	EK
A:350.1	280-33994-C-21		280-142109		10/14/2012 12:29	1	TAL DEN	SJS
A:9251	280-33994-A-21		280-141177		10/09/2012 09:36	1	TAL DEN	AJA
A:SM 2320B	280-33994-A-21		280-140373		10/03/2012 20:42	1	TAL DEN	DA
A:SM 5310B	280-33994-C-21		280-140698		10/05/2012 00:39	1	TAL DEN	DFB

Lab ID: 280-33994-22 **Client ID: MW-13D**

Sample Date/Time: 10/02/2012 13:33 Received Date/Time: 10/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-33994-E-22		480-85165		10/12/2012 16:13	1	TAL BUF	CDC
A:8260B SIM	280-33994-E-22		480-85165		10/12/2012 16:13	1	TAL BUF	CDC
P:3005A	280-33994-D-22-A		280-140957	280-140226	10/05/2012 08:00	1	TAL DEN	JM
A:6020	280-33994-D-22-A		280-140957	280-140226	10/05/2012 18:28	1	TAL DEN	TEL
A:300.0	280-33994-A-22		280-140417		10/03/2012 17:52	1	TAL DEN	EK
A:300.0	280-33994-A-22		280-140418		10/03/2012 17:52	1	TAL DEN	EK
A:350.1	280-33994-C-22		280-142109		10/14/2012 12:31	1	TAL DEN	SJS
A:9251	280-33994-A-22		280-141177		10/09/2012 09:37	1	TAL DEN	AJA
A:SM 2320B	280-33994-A-22		280-140373		10/03/2012 20:46	1	TAL DEN	DA
A:SM 5310B	280-33994-C-22		280-140698		10/05/2012 01:36	1	TAL DEN	DFB

Lab ID: 280-33994-23 **Client ID: MW-12I**

Sample Date/Time: 10/02/2012 14:10 Received Date/Time: 10/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-33994-E-23		480-85165		10/12/2012 16:38	1	TAL BUF	CDC
A:8260B SIM	280-33994-E-23		480-85165		10/12/2012 16:38	1	TAL BUF	CDC
P:3005A	280-33994-D-23-A		280-140957	280-140226	10/05/2012 08:00	1	TAL DEN	JM
A:6020	280-33994-D-23-A		280-140957	280-140226	10/05/2012 18:31	1	TAL DEN	TEL
A:300.0	280-33994-A-23		280-140417		10/03/2012 18:10	1	TAL DEN	EK
A:300.0	280-33994-A-23		280-140418		10/03/2012 18:10	1	TAL DEN	EK
A:350.1	280-33994-C-23		280-142109		10/14/2012 12:32	1	TAL DEN	SJS
A:9251	280-33994-A-23		280-141218		10/09/2012 13:00	1	TAL DEN	AJA
A:SM 2320B	280-33994-A-23		280-140373		10/03/2012 21:14	1	TAL DEN	DA
A:SM 5310B	280-33994-C-23		280-140698		10/05/2012 01:53	1	TAL DEN	DFB

Client: SCS Engineers Job Number: 280-33994-1

Laboratory Chronicle

Lab ID: 280-33994-23 MS **Client ID: MW-12I**

Sample Date/Time: 10/02/2012 14:10 Received Date/Time: 10/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:9251	280-33994-A-23 MS		280-141218		10/09/2012 13:01	1	TAL DEN	AJA

Lab ID: 280-33994-23 MSD **Client ID: MW-12I**

Sample Date/Time: 10/02/2012 14:10 Received Date/Time: 10/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:9251	280-33994-A-23 MSD		280-141218		10/09/2012 13:02	1	TAL DEN	AJA

Lab ID: 280-33994-23 DU **Client ID: MW-12I**

Sample Date/Time: 10/02/2012 14:10 Received Date/Time: 10/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2320B	280-33994-A-23 DU		280-140373		10/03/2012 21:19	1	TAL DEN	DA

Lab ID: 280-33994-24 **Client ID: TRIP BLANK**

Sample Date/Time: 10/02/2012 08:34 Received Date/Time: 10/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-33994-A-24		480-85165		10/12/2012 17:02	1	TAL BUF	CDC
A:8260B SIM	280-33994-A-24		480-85165		10/12/2012 17:02	1	TAL BUF	CDC

Lab ID: 280-33994-25 **Client ID: MW-5**

Sample Date/Time: 10/02/2012 12:22 Received Date/Time: 10/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-33994-E-25		480-85165		10/12/2012 17:26	1	TAL BUF	CDC
A:8260B SIM	280-33994-E-25		480-85165		10/12/2012 17:26	1	TAL BUF	CDC
P:3005A	280-33994-D-25-A		280-140957	280-140226	10/05/2012 08:00	1	TAL DEN	JM
A:6020	280-33994-D-25-A		280-140957	280-140226	10/05/2012 18:34	1	TAL DEN	TEL
A:300.0	280-33994-A-25		280-140417		10/03/2012 18:27	1	TAL DEN	EK
A:300.0	280-33994-A-25		280-140418		10/03/2012 18:27	1	TAL DEN	EK
A:350.1	280-33994-C-25		280-142109		10/14/2012 12:34	1	TAL DEN	SJS
A:9251	280-33994-A-25		280-141218		10/09/2012 13:03	1	TAL DEN	AJA
A:SM 2320B	280-33994-A-25		280-140373		10/03/2012 21:24	1	TAL DEN	DA
A:SM 5310B	280-33994-C-25		280-140698		10/05/2012 02:10	1	TAL DEN	DFB

Client: SCS Engineers Job Number: 280-33994-1

Laboratory Chronicle

Lab ID: 280-33994-25 MS **Client ID:** MW-5

Sample Date/Time: 10/02/2012 12:22 Received Date/Time: 10/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-33994-A-25 MS		280-140418		10/03/2012 19:02	1	TAL DEN	EK

Lab ID: 280-33994-25 MSD **Client ID:** MW-5

Sample Date/Time: 10/02/2012 12:22 Received Date/Time: 10/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-33994-A-25 MSD		280-140418		10/03/2012 19:19	1	TAL DEN	EK

Lab ID: 280-33994-25 DU **Client ID:** MW-5

Sample Date/Time: 10/02/2012 12:22 Received Date/Time: 10/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-33994-A-25 DU		280-140418		10/03/2012 18:44	1	TAL DEN	EK

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 480-85165/3		480-85165		10/12/2012 12:37	1	TAL BUF	CDC
A:8260B SIM	MB 480-85165/3		480-85165		10/12/2012 12:37	1	TAL BUF	CDC
P:3005A	MB 280-140226/1-A		280-140957	280-140226	10/05/2012 08:00	1	TAL DEN	JM
A:6020	MB 280-140226/1-A		280-140957	280-140226	10/05/2012 17:54	1	TAL DEN	TEL
A:300.0	MB 280-140417/15		280-140417		10/03/2012 13:50	1	TAL DEN	EK
A:300.0	MB 280-140418/15		280-140418		10/03/2012 13:50	1	TAL DEN	EK
A:350.1	MB 280-141881/20		280-141881		10/12/2012 11:41	1	TAL DEN	SJS
A:350.1	MB 280-142109/118		280-142109		10/14/2012 13:26	1	TAL DEN	SJS
A:9251	MB 280-141177/23		280-141177		10/09/2012 09:08	1	TAL DEN	AJA
A:9251	MB 280-141218/23		280-141218		10/09/2012 12:58	1	TAL DEN	AJA
A:SM 2320B	MB 280-140373/6		280-140373		10/03/2012 18:59	1	TAL DEN	DA
A:SM 2320B	MB 280-140373/33		280-140373		10/03/2012 21:09	1	TAL DEN	DA
A:SM 5310B	MB 280-140698/5		280-140698		10/04/2012 17:54	1	TAL DEN	DFB

Client: SCS Engineers Job Number: 280-33994-1

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 480-85165/2		480-85165		10/12/2012 12:13	1	TAL BUF	CDC
A:8260B SIM	LCS 480-85165/2		480-85165		10/12/2012 12:13	1	TAL BUF	CDC
P:3005A	LCS 280-140226/2-A		280-140957	280-140226	10/05/2012 08:00	1	TAL DEN	JM
A:6020	LCS 280-140226/2-A		280-140957	280-140226	10/05/2012 17:57	1	TAL DEN	TEL
A:300.0	LCS 280-140417/13		280-140417		10/03/2012 13:16	1	TAL DEN	EK
A:300.0	LCS 280-140418/13		280-140418		10/03/2012 13:16	1	TAL DEN	EK
A:350.1	LCS 280-141881/21		280-141881		10/12/2012 11:42	1	TAL DEN	SJS
A:350.1	LCS 280-142109/72		280-142109		10/14/2012 12:07	1	TAL DEN	SJS
A:9251	LCS 280-141177/21		280-141177		10/09/2012 09:06	1	TAL DEN	AJA
A:9251	LCS 280-141218/21		280-141218		10/09/2012 12:56	1	TAL DEN	AJA
A:SM 2320B	LCS 280-140373/4		280-140373		10/03/2012 18:50	1	TAL DEN	DA
A:SM 2320B	LCS 280-140373/31		280-140373		10/03/2012 21:00	1	TAL DEN	DA
A:SM 5310B	LCS 280-140698/3		280-140698		10/04/2012 17:16	1	TAL DEN	DFB

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 280-140417/14		280-140417		10/03/2012 13:33	1	TAL DEN	EK
A:300.0	LCSD 280-140418/14		280-140418		10/03/2012 13:33	1	TAL DEN	EK
A:350.1	LCSD 280-141881/22		280-141881		10/12/2012 11:44	1	TAL DEN	SJS
A:350.1	LCSD 280-142109/73		280-142109		10/14/2012 12:08	1	TAL DEN	SJS
A:9251	LCSD 280-141177/22		280-141177		10/09/2012 09:07	1	TAL DEN	AJA
A:9251	LCSD 280-141218/22		280-141218		10/09/2012 12:57	1	TAL DEN	AJA
A:SM 2320B	LCSD 280-140373/5		280-140373		10/03/2012 18:55	1	TAL DEN	DA
A:SM 2320B	LCSD 280-140373/32		280-140373		10/03/2012 21:05	1	TAL DEN	DA
A:SM 5310B	LCSD 280-140698/4		280-140698		10/04/2012 17:35	1	TAL DEN	DFB

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 280-140417/11		280-140417		10/03/2012 12:41	1	TAL DEN	EK
A:300.0	MRL 280-140418/12		280-140418		10/03/2012 12:58	1	TAL DEN	EK

Client: SCS Engineers Job Number: 280-33994-1

Laboratory Chronicle

Lab ID: **MS** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-33906-F-1-D MS		280-140957	280-140226	10/05/2012 08:00	1	TAL DEN	JM
A:6020	280-33906-F-1-D MS		280-140957	280-140226	10/05/2012 18:52	1	TAL DEN	TEL
A:350.1	280-33853-C-1 MS		280-141881		10/12/2012 12:12	1	TAL DEN	SJS
A:350.1	280-33953-D-4 MS		280-142109		10/14/2012 12:23	1	TAL DEN	SJS
A:9251	280-33847-A-1 MS		280-141177		10/09/2012 09:11	1	TAL DEN	AJA

Lab ID: **MSD** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-33906-F-1-E MSD		280-140957	280-140226	10/05/2012 08:00	1	TAL DEN	JM
A:6020	280-33906-F-1-E MSD		280-140957	280-140226	10/05/2012 18:55	1	TAL DEN	TEL
A:350.1	280-33853-C-1 MSD		280-141881		10/12/2012 12:14	1	TAL DEN	SJS
A:350.1	280-33953-D-4 MSD		280-142109		10/14/2012 12:25	1	TAL DEN	SJS
A:9251	280-33847-A-1 MSD		280-141177		10/09/2012 09:12	1	TAL DEN	AJA

Lab References:

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver

Analytical Resources, Incorporated
Analytical Chemists and Consultants

11 October 2012

Betsy Sara
Test America-Denver
4955 Yarrow Street
Arvada, CO 80002

RE: Project: Hansville
ARI Job No.: VL85

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 eleven water samples on October 3, 2012. The samples were received in good condition. The samples were analyzed for dissolved arsenic as requested. (Note that a trip blank was not received or required for this anlaysis.)

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

Enclosures

cc: file VL85

MDH/mdh

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: VL85	Turn-around Requested: Standard	Date: 10/2/12	
ARI Client Company: SCS Engineers	Phone: 425 766 7502	Page: 1 of 2	
Client Contact: SCS Engineers Dun ✓		No. of Coolers: 1	Cooler Temps: 1.3
Client Project Name: Hansville (WA)			
Client Project #:	Samplers: Wayne Chang		

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: Low Level Arsenic								Notes/Comments
SW-7	10/2/12	0930			X								
SW-4	10/2/12	1045			X								
SW-6	10/2/12	1111			X								
SW-1	10/2/12	1410			X								
MW-7	10/2/12	0834			X								
MW-6	10/2/12	1044			X								
MW-20DD	10/2/12	1044			X								
MW-14	10/2/12	1112			X								
MW-13D	10/2/12	1333			X								
MW-12I	10/2/12	1410			X								

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Transfer bottles to an "ARI" cooler.	Printed Name: Waynechang	Printed Name: Chris Atwell	Printed Name:	Printed Name:
	Company: SCS	Company: ARI	Company:	Company:
	Date & Time: 10/2/12 15:00	Date & Time: 10/2/12 1350	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision 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.

VL85:00002

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: VL85	Turn-around Requested: Standard	Date: 10/2/12	
ARI Client Company: SCS Engineers	Phone: 425 766 2502	Page: 2 of 2	
Client Contact: SCS engineers Dan V		No. of Coolers: 1	Cooler Temps: 1.3
Client Project Name: Hansville(WA)			
Client Project #:	Samplers: Wayne Chang		

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: Low Level Arsenic	Notes/Comments
Trip Blank	—	—			X	
MW-5	10/2/12	1222			X	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	WC	—		
	Printed Name: Wayne Chang	Printed Name: Chris Atwell	Printed Name:	Printed Name:
	Company: SCS Engineers	Company: ARI	Company:	Company:
	Date & Time: 10/2/12 15:00	Date & Time: 10/3/12 1350	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision 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.

VL85 : 00003

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: SCS Eng / Test America

COC No(s): _____ (NA)

Assigned ARI Job No: VL85

Project Name: Hansville (WA)

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)	1.3	
If cooler temperature is out of compliance fill out form 00070F	Temp Gun ID#:	90877952

Cooler Accepted by: CA Date: 10/3/12 Time: 1350

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: 10/4/12 Time: 1214

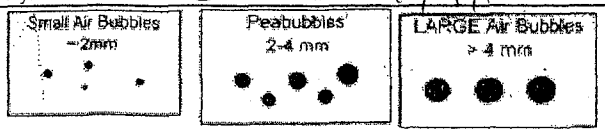
***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

Sample listed on COC (Trip Blank) was NOT received.

By: JM Date: 10/4/12



Small → "sm"	
Peabubbles → "pb"	
Large → "lg"	
Headspace → "hs"	

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VL85
Client: Test America
Project Event: N/A
Project Name: Hansville (WA)

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	SW-7	VL85A	12-19153	Water	10/02/12 09:30	10/03/12 13:50
2.	SW-4	VL85B	12-19154	Water	10/02/12 10:45	10/03/12 13:50
3.	SW-6	VL85C	12-19155	Water	10/02/12 11:11	10/03/12 13:50
4.	SW-1	VL85D	12-19156	Water	10/02/12 14:10	10/03/12 13:50
5.	MW-7	VL85E	12-19157	Water	10/02/12 08:34	10/03/12 13:50
6.	MW-6	VL85F	12-19158	Water	10/02/12 10:44	10/03/12 13:50
7.	MW-20DD	VL85G	12-19159	Water	10/02/12 10:44	10/03/12 13:50
8.	MW-14	VL85H	12-19160	Water	10/02/12 11:12	10/03/12 13:50
9.	MW-13D	VL85I	12-19161	Water	10/02/12 13:33	10/03/12 13:50
10.	MW-12I	VL85J	12-19162	Water	10/02/12 14:10	10/03/12 13:50
11.	MW-5	VL85K	12-19163	Water	10/02/12 12:22	10/03/12 13:50

Printed 10/04/12 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 ≥ 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 ≤5 times the Reporting Limit and the replicate control limit defaults to ±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 ≥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

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
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Sample ID: SW-7
SAMPLE

Lab Sample ID: VL85A
LIMS ID: 12-19153
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VL85-Test America
Project: Hansville (WA)

Date Sampled: 10/02/12
Date Received: 10/03/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	10/05/12	200.8	10/09/12	**7440-38-2**	**Arsenic**	0.00004	**0.00141**	

U-Analyte undetected at given RL
RL-Reporting Limit

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Sample ID: SW-7
DUPLICATE

Lab Sample ID: VL85A
LIMS ID: 12-19153
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VL85-Test America
Project: Hansville (WA)

Date Sampled: 10/02/12
Date Received: 10/03/12

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	200.8	0.00141	0.00143	1.4%	+/- 20%	

Reported in mg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

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Sample ID: SW-7
MATRIX SPIKE

Lab Sample ID: VL85A
LIMS ID: 12-19153
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VL85-Test America
Project: Hansville (WA)

Date Sampled: 10/02/12
Date Received: 10/03/12

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	200.8	0.00141	0.00759	0.005	124%	

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%

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Sample ID: SW-4
SAMPLE

Lab Sample ID: VL85B
LIMS ID: 12-19154
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VL85-Test America
Project: Hansville (WA)

Date Sampled: 10/02/12
Date Received: 10/03/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	10/05/12	200.8	10/09/12	**7440-38-2**	**Arsenic**	0.00004	**0.00176**	

U-Analyte undetected at given RL
RL-Reporting Limit

VL85:00012

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Sample ID: SW-6
SAMPLE

Lab Sample ID: VL85C
LIMS ID: 12-19155
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VL85-Test America
Project: Hansville (WA)

Date Sampled: 10/02/12
Date Received: 10/03/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	10/05/12	200.8	10/09/12	**7440-38-2**	**Arsenic**	0.00004	**0.00216**	

U-Analyte undetected at given RL
RL-Reporting Limit

VL85:00013

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
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Sample ID: SW-1
SAMPLE

Lab Sample ID: VL85D
LIMS ID: 12-19156
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VL85-Test America
Project: Hansville (WA)

Date Sampled: 10/02/12
Date Received: 10/03/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	10/05/12	200.8	10/09/12	**7440-38-2**	**Arsenic**	0.00004	**0.00146**	

U-Analyte undetected at given RL
RL-Reporting Limit

VL85:00014

ANALYTICAL RESOURCES INCORPORATED

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Sample ID: MW-7
SAMPLE

Lab Sample ID: VL85E
LIMS ID: 12-19157
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VL85-Test America
Project: Hansville (WA)

Date Sampled: 10/02/12
Date Received: 10/03/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	10/05/12	200.8	10/09/12	**7440-38-2**	**Arsenic**	0.00004	**0.00105**	

U-Analyte undetected at given RL
RL-Reporting Limit

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Sample ID: MW-6
SAMPLE

Lab Sample ID: VL85F
LIMS ID: 12-19158
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VL85-Test America
Project: Hansville (WA)

Date Sampled: 10/02/12
Date Received: 10/03/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	10/05/12	200.8	10/09/12	**7440-38-2**	**Arsenic**	0.00004	**0.00330**	

U-Analyte undetected at given RL
RL-Reporting Limit

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Sample ID: MW-20DD
SAMPLE

Lab Sample ID: VL85G
LIMS ID: 12-19159
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VL85-Test America
Project: Hansville (WA)

Date Sampled: 10/02/12
Date Received: 10/03/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	10/05/12	200.8	10/09/12	**7440-38-2**	**Arsenic**	0.00004	**0.00311**	

U-Analyte undetected at given RL
RL-Reporting Limit

VL85:00017

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Sample ID: MW-14
SAMPLE

Lab Sample ID: VL85H
LIMS ID: 12-19160
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VL85-Test America
Project: Hansville (WA)

Date Sampled: 10/02/12
Date Received: 10/03/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	10/05/12	200.8	10/09/12	**7440-38-2**	**Arsenic**	0.00004	**0.0212**	

U-Analyte undetected at given RL
RL-Reporting Limit

VL85:00018

ANALYTICAL RESOURCES INCORPORATED

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Sample ID: MW-13D
SAMPLE

Lab Sample ID: VL85I
LIMS ID: 12-19161
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VL85-Test America
Project: Hansville (WA)

Date Sampled: 10/02/12
Date Received: 10/03/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	10/05/12	200.8	10/09/12	**7440-38-2**	**Arsenic**	0.00004	**0.00316**	

U-Analyte undetected at given RL
RL-Reporting Limit

VL85:00019

ANALYTICAL RESOURCES INCORPORATED

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Sample ID: MW-12I
SAMPLE

Lab Sample ID: VL85J
LIMS ID: 12-19162
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VL85-Test America
Project: Hansville (WA)

Date Sampled: 10/02/12
Date Received: 10/03/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	10/05/12	200.8	10/09/12	**7440-38-2**	**Arsenic**	0.00004	**0.00205**	

U-Analyte undetected at given RL
RL-Reporting Limit

VL85:00020

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
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Sample ID: MW-5
SAMPLE

Lab Sample ID: VL85K
LIMS ID: 12-19163
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VL85-Test America
Project: Hansville (WA)

Date Sampled: 10/02/12
Date Received: 10/03/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	10/05/12	200.8	10/09/12	**7440-38-2**	**Arsenic**	0.00004	**0.00177**	

U-Analyte undetected at given RL
RL-Reporting Limit

VL85:00021

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
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Sample ID: LAB CONTROL

Lab Sample ID: VL85LCS
LIMS ID: 12-19154
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VL85-Test America
Project: Hansville (WA)

Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	200.8	0.00517	0.00500	103%	

Reported in mg/L

N-Control limit not met
Control Limits: 80-120%

VL85:00022

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS **Sample ID: METHOD BLANK**

Lab Sample ID: VL85MB
LIMS ID: 12-19154
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VL85-Test America
Project: Hansville (WA)

Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
200.8	10/05/12	200.8	10/09/12	7440-38-2	Arsenic	0.00004	0.00004	U

U-Analyte undetected at given RL
RL-Reporting Limit

Chain of Custody Record

TAL-4124-280 (0508)

Sampler ID ____
Temperature on Receipt 4.2 5.4 5.0
Drinking Water? Yes ☐ No ☐ 10/3/12 FP

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client	SCS Engineers
Address	2405 140th Ave NE 107
City	Bellevue
State	WA
Zip Code	98005
Project Name and Location (State)	Hansville (WA)
Contract/Purchase Order/Quote No.	
Project Manager	Dan V
Telephone Number (Area Code)/Fax Number	425 766 2502
Site Contact	W. Chang
Lab Contact	Betsy Sara
Carrier/Waybill Number	
Date	10/2/12
Lab Number	
Chain of Custody Number	165741
Page ____ of ____	

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: Alk/NO2/NO3	Cl & SO4	O-Phos	Diss Metals	Ammonia	TOC (5310B)	SIM VOAs	Diss Arsenic*	Special Instructions/ Conditions of Receipt
SW-7	10/2/12	0930		X				1	2	1	3			X	X	X	X	X	X	X		*Diss Arsenic Sub to ARI
SW-4	10/2/12	1045		X				1	2	1	3			↓	↓	↓	↓	↓	↓	↓		
SW-6	10/2/12	1111		X				1	2	1	3			↓	↓	↓	↓	↓	↓	↓		
SW-1	10/2/12	1410		X				1	2	1	3			↓	↓	↓	↓	↓	↓	↓		
MW-7	10/2/12	0834		X				1	2	1	3			↓	↓	↓	↓	↓	↓	↓		
MW-6	10/2/12	1044		X				1	2	1	3			↓	↓	↓	↓	↓	↓	↓		
MW-20DD	10/2/12	1044		X				1	2	1	3			↓	↓	↓	↓	↓	↓	↓		
MW-14	10/2/12	1112		X				1	2	1	3			↓	↓	↓	↓	↓	↓	↓		
MW-13D	10/2/12	1333		X				1	2	1	3			↓	↓	↓	↓	↓	↓	↓		
MW-12I	10/2/12	1410		X				1	2	1	3			↓	↓	↓	↓	↓	↓	↓		
Trip Blank	–	–		X							4									X		
MW-5	10/2/12	1222		X				1	2	1	3			X	X	X	X	X	X	X		

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Standard

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Wayne Chang	10/2/12	1500	1. Received By: [signature]	10312	0900
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: CS# 612351, 612352, 612353

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 280-33994-1

Login Number: 33994

List Source: TestAmerica Denver

List Number: 1

Creator: Wheeler, Virginia L

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: SCS Engineers

Job Number: 280-33994-1

Login Number: 33994
List Number: 1
Creator: Robison, Zachary

List Source: TestAmerica Buffalo
List Creation: 10/04/12 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	3.0 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	