

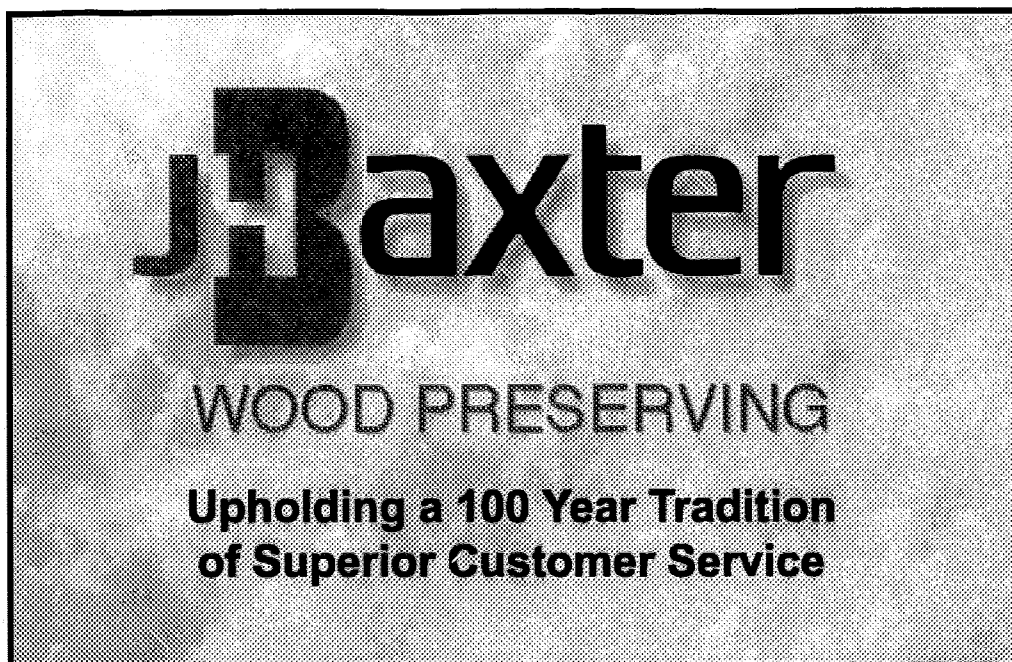
**2007 Groundwater Monitoring Report
South Woodwaste Landfill**

**J.H. Baxter & Company
Arlington, Washington**

RECEIVED

JUN - 22008

Ecology



Prepared for:

**Snohomish Health District
3020 Rucker Avenue, Suite 104
Everett, Washington 98201**

Prepared by:

**J. H. Baxter & Company
P.O. Box 10797
Eugene, Oregon 97440**

May 2008





J. Stephen Barnett, P.G.
333 SW Fifth Avenue
Suite 510
Portland, OR 97204

Phone 503.241.8172 ext 2903
Fax 503.241.8210
Email: jsbarnett@premiercorp-usa.com

May 30, 2008

Mr. Peter Jorgenson, R.S.
Environmental Health Specialist
Snohomish Health District
3020 Rucker Avenue, Suite 104
Everett, Washington 98201

RECEIVED
JUN - 22 2008
Ecology

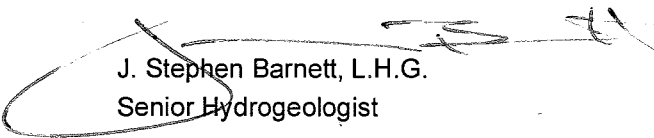
Re: 2007 Groundwater Monitoring Reports, North and South Woodwaste Landfills
J.H. Baxter & Co., Arlington, Washington

Dear Mr. Jorgenson:

On behalf of J.H. Baxter & Co. (Baxter), please find enclosed copies of the *2007 Groundwater Monitoring Report – North Woodwaste Landfill* and the *2006 Groundwater Monitoring Report – South Woodwaste Landfill* for Baxter's two closed woodwaste landfills in Arlington, Washington. These reports are being submitted to you in accordance with Washington Administrative Code (WAC) 173-304-490. A copy has also been sent directly to the Washington Department of Ecology.

If you have any questions or comments regarding these reports, please do not hesitate to contact me at (503) 241-8172 (ext 201).

Sincerely,



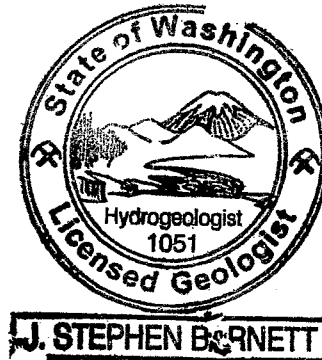
J. Stephen Barnett, L.H.G.
Senior Hydrogeologist

cc: Krystyna Kowalik, Ecology
Georgia Baxter, J.H. Baxter & Co.
RueAnn Thomas, Bluefield Holdings

2007 Groundwater Monitoring Report Arlington, Washington

May 2008

The J. H. Baxter & Co. (Baxter) Project Team (Baxter and Premier Environmental Services, Inc.) is submitting this Groundwater Monitoring Report for Baxter's South Woodwaste Landfill in Arlington, Washington. This report was prepared by or performed under the direction of a State of Washington Licensed Hydrogeologist. If you have any questions or comments concerning the report, please contact the individuals listed below.



Kathy J. Gunderson
Senior Quality Assurance Chemist
Premier Environmental Services, Inc.
333 SW Fifth Avenue, Suite 510
Portland, Oregon 97204

J. Stephen Barnett, LHG
Senior Hydrogeologist
Premier Environmental Services, Inc.
333 SW Fifth Avenue, Suite 510
Portland, Oregon 97204

Table of Contents

Table of Contents	i
List of Figures	ii
List of Tables	iii
List of Appendices	iv
Acronyms and Abbreviations	v
1 Introduction	1-1
2 Hydrogeology	2-1
2.1 Groundwater Elevations	2-1
2.2 Groundwater Velocities	2-2
3 Groundwater Quality	3-1
3.1 Groundwater Sampling	3-1
4 Data Review	4-1
4.1 Field Quality Assurance/Quality Control (QA/QC)	4-1
4.2 Laboratory QA/QC	4-2
4.3 Statistical Analysis of Data	4-3
5 Discussion of Results	5-1
5.1 Statistical Results	5-1
5.2 Concentration Trends over Time	5-2
5.3 Comparison to Standards	5-5
5.3.1 Comparison to MCLs	5-5
5.3.2 Comparison to SMCLs	5-6
6 Summary	6-1
7 Limitations	7-1
8 References	8-1

List of Figures

- Figure 1. Site Location / Topographical Map
- Figure 2. Groundwater Elevation Contour Map (February 2007)
- Figure 3. Groundwater Elevation Contour Map (October 2007)
- Figure 4. Regional Groundwater Flow Directions
- Figure 5. Concentration Trends for Ammonia
- Figure 6. Concentration Trends for Arsenic
- Figure 7. Concentration Trends for Barium
- Figure 8. Concentration Trends for Chemical Oxygen Demand
- Figure 9. Concentration Trends for Chloride
- Figure 10. Concentration Trends for Field Conductivity
- Figure 11. Concentration Trends for Iron
- Figure 12. Concentration Trends for Manganese
- Figure 13. Concentration Trends for Nickel
- Figure 14. Concentration Trends for Sulfate
- Figure 15. Concentration Trends for Tannin and Lignin
- Figure 16. Concentration Trends for Total Organic Carbon
- Figure 17. Concentration Trends for Field pH
- Figure 18. Concentration Trends for Total Dissolved Solids

List of Tables

Table 1.	Summary of Groundwater Elevations in 2007 (South Landfill)
Table 2.	Hydraulic Gradient and Groundwater Velocity Calculations (South Landfill)
Table 3a.	Field Parameters from Groundwater Sampling, April 2000 to October 2007 (South Landfill)
Table 3b.	Conventional Parameters from Groundwater Sampling, April 2000 to October 2007 (South Landfill)
Table 3c.	Metals from Groundwater Sampling, April 2000 to October 2007 (South Landfill)
Table 4.	Parameters Statistically Higher than Background (1988 – 2007) South Landfill

Figures and tables are included at the end of the main text.

List of Appendices

Appendix A. Field Groundwater Sampling Records

Appendix B. Laboratory Results and Chain of Custody Records

Appendix C. Statistical Analysis of Groundwater Quality Results (BXS-1 through BXS-4)

Acronyms and Abbreviations

AVD	absolute value difference
Baxter	J. H. Baxter & Company
COD	chemical oxygen demand
CAS	Columbia Analytical Services, Inc.
EPA	Environmental Protection Agency
MCL	maximum contaminant level
MRL	method reporting limit
PQL	practical quantitation limit
QA	quality assurance
QC	quality control
RPD	relative percent difference
SMCL	secondary maximum contaminant level
TDS	total dissolved solids
TOC	total organic carbon
WAC	Washington Administrative Code

1 Introduction

This report presents quarterly groundwater data collected from February to October 2007 for the J. H. Baxter & Company's (Baxter) closed South Woodwaste Landfill (South Landfill), located at 6520 188th Street NE in the City of Arlington, Snohomish County, Washington (Figure 1). The South Landfill is closed and covered with a vegetated soil cap.

Groundwater sampling was performed on monitoring wells BXS-1, BXS-2, BXS-3, and BXS-4 during quarterly monitoring events conducted in February, April, July, and October 2007. Field measurements were taken for pH, conductivity, temperature, redox potential (Eh), and dissolved oxygen. In addition, methane measurements were collected in July and October 2007. Field measurement data are summarized in Table 3a.

Groundwater samples were submitted for laboratory analysis of pH, conductivity, ammonia as nitrogen, chemical oxygen demand (COD), chloride, nitrite plus nitrate as nitrogen, total dissolved solids (TDS), sulfate, tannin and lignin, total organic carbon (TOC), total Coliform, and dissolved metals (arsenic, barium, cadmium, copper, iron, manganese, nickel, and zinc). Laboratory results are presented in Tables 3b and 3c.

All of the monitoring wells were installed in 1988. Monitoring wells BXS-1, BXS-2, and BXS-3 are located hydraulically downgradient of the South Landfill. Monitoring well BXS-4 is located hydraulically upgradient of the South Landfill (Figure 2). Monitoring well BXS-4 is the source of background groundwater analytical data to which the analytical data from the downgradient wells are compared. Boring logs, groundwater monitoring procedures, and a summary of site conditions encountered during the

installation of the monitoring wells are included in the hydrogeologic report prepared by Sweet-Edwards/EMCON, Inc. (EMCON 1989) in 1989.

2 Hydrogeology

As discussed, quarterly groundwater monitoring events were performed during February, April, July, and October 2007 for the South Landfill. Monitoring activities included well purging, groundwater sampling, laboratory analysis, and water level measurement. Groundwater samples were collected from monitoring well locations BXS-1, BXS-2, BXS-3, and BXS-4 during each quarterly sampling event.

2.1 Groundwater Elevations

Groundwater levels were measured in each well during each of the four monitoring events. The elevation of the groundwater surface was calculated relative to the Baxter plant datum by subtracting the depth to water from the surveyed top of casing elevation. Measured groundwater levels throughout the 2007 monitoring period are summarized in Table 1.

Groundwater elevations were highest during the April event, with the exception of BXS-4, which was highest in February. Groundwater elevations were lowest during the October event. The static groundwater level in wells BXS-1, BXS-2, BXS-3, and BXS-4 fluctuated throughout the year by 4.52 feet, 5.04 feet, 5.70 feet, and 5.93 feet, respectively. Groundwater surface elevations measured in February 2007 (Figure 2) and the October 2007 (Figure 3) are provided for reference.

The groundwater flow direction throughout the year was toward the northwest and is consistent with the regional groundwater flow in the aquifer (Figure 4). The average gradient varied between 0.018 and 0.021 during 2007 (Table 2).

2.2 Groundwater Velocities

Groundwater velocities (v_x) for each monitoring event were estimated using Darcy's Law.

$$v_x = -Ki/n_e$$

Hydraulic conductivity (K) in the fine sand unit beneath the landfill was estimated at 3×10^{-2} to 6×10^{-2} centimeters per second (cm/sec) based on slug tests performed in BXS-2 and BXS-4 (EMCON 1989). Porosity (n_e) was assumed to be 0.300 (i.e., 30%).

The average gradient (i) ranged from 0.018 to 0.021, resulting in velocity estimates of 5.102 to 11.962 ft/day. Table 2 shows the calculated hydraulic gradients and groundwater velocities during the monitoring events in 2007.

3 Groundwater Quality

Groundwater samples were collected on February 1st for the first quarter, April 16th for the second quarter, July 16th for the third quarter, and October 8th for the fourth quarter of 2007 using sampling procedures originally described in Appendix C of EMCON's Hydrogeologic Report (EMCON 1989). Field sampling records are located in Appendix A.

Samples for total Coliform analyses were submitted to Edge Analytical Laboratory in Burlington, Washington. Samples for pH, conductivity, ammonia as nitrogen, chemical oxygen demand (COD), chloride, nitrate + nitrite as nitrogen, total dissolved solids (TDS), sulfate, tannin and lignin, total organic carbon (TOC), and dissolved metals (arsenic, barium, cadmium, copper, iron, manganese, nickel and zinc) were submitted to Columbia Analytical Services, Inc. (CAS) in Kelso, Washington. Groundwater levels were measured in each well prior to purging.

3.1 Groundwater Sampling

Groundwater sampling was performed using dedicated submersible pumps (bladder pumps) in the downgradient wells BXS-1, BXS-2, and BXS-3. Well BXS-4, the upgradient well, was sampled using a portable submersible (bladder) pump during the February and April events. A dedicated submersible pump (bladder pump) was installed in well BXS-4 prior to the July sampling event.

A field duplicate, labeled BXS-6, was collected from well BXS-1 or BXS-4 during each sampling event. Additionally, a field blank of deionized water, labeled BXS-5, was collected during the February and April sampling events.

Prior to sample collection, field measurements were taken for pH, conductivity, temperature, redox potential (Eh), and dissolved oxygen. In addition, the well headspace was tested for methane during the July and October 2007 events. Field measurement data are summarized in Table 3a.

Groundwater samples were submitted for laboratory analysis of pH, conductivity, ammonia as nitrogen, COD, chloride, nitrite plus nitrate as nitrogen, TDS, sulfate, tannin and lignin, TOC, total Coliform, and dissolved metals (arsenic, barium, cadmium, copper, iron, manganese, nickel, and zinc).

The analytical data for the groundwater samples are summarized in Tables 3a, 3b, and 3c. Laboratory analytical reports and chain-of-custody forms for the 2007 groundwater monitoring events are presented in Appendix B.

4 Data Review

This section describes the data review process that was performed to evaluate the adequacy and quality of the analytical data from the 2007 groundwater monitoring events. The objective of the data review was to identify estimated, unreliable, or invalid measurements. Information on the reliability of the data is critical to the interpretation of the results. The review was performed according to guidelines prepared by the United States Environmental Protection Agency (EPA) (EPA 1994).

4.1 Field Quality Assurance/Quality Control (QA/QC)

During the quarterly groundwater sampling events, field duplicates were prepared and containerized by Baxter field personnel in accordance with standard practice. Field blanks of deionized water were prepared during the February and April events. The field duplicate samples were collected from well BXS-1 or BXS-4 and labeled BXS-6. The field blank samples were labeled BXS-5.

Field duplicate results aid in the assessment of sampling and analytical precision. Analytical results for the original and duplicate samples collected from each sampling event were evaluated using the relative percent difference (RPD). RPD is the difference between the two results divided by the mean and expressed as a percent. The RPD between the two results was calculated when both the natural sample and duplicate sample had positive results. If the RPD was greater than 35 percent, the reported values are considered estimated concentrations.

The precision of the field duplicate samples collected in 2007 is acceptable, with the following two exceptions.

- The precision of the February and April 2007 nitrate plus nitrite as nitrogen results for BXS-4 and the field duplicate are poor. The RPD values are 70 and 136, respectively.

Field blank (deionized water blanks) results aid in evaluating the validity of the reported concentrations in the collected samples. All results greater than or equal to the method detection limit (MDL) but less than five times the concentration of the associated field blank are considered nondetected.

The field blanks are free of target analytes above the MDLs with the following exceptions. Chloride, nitrate plus nitrite as nitrogen, sulfate, and tannin and lignin were detected at low levels in one or more field blank. The field blank concentrations are below the maximum contaminant level (MCL) or secondary maximum contaminant level (SMCL) and indicate that field and laboratory contamination was minimal.

4.2 Laboratory QA/QC

Collected groundwater samples were received by the laboratory with the proper chain-of-custody (COC) documentation, were properly preserved, and at the proper temperature. Samples for total Coliform were analyzed by Edge Analytical, located in Burlington Washington. The remaining analyses were performed by Columbia Analytical Services (CAS), located in Kelso, Washington.

With the exception of pH, all analyses were performed within the required holding time for the parameters of interest. The samples were analyzed for pH between one and four days after collection.

The method used for pH analysis, Standard Methods 4500-H+ B (APHA 1998), does not list an analysis holding time. The USEPA method for pH analysis of water samples, Method 150.1 (USEPA 1999), specifies that pH analyses be performed “as soon as possible preferably in the field at the time of sampling”. For that reason, the field analyzed pH results are utilized for trend analysis and statistical evaluation.

The laboratory reports are complete and contain results for all samples and corresponding analyses requested on the COC forms.

4.3 Statistical Analysis of Data

Groundwater sample chemical analysis results were statistically evaluated to assess if there was a significant difference between the downgradient wells and the upgradient background well. The following approach was used for performing the statistical analysis:

- **Non-Detects.** Non-detect results were replaced with a value of half of the laboratory method reporting limit (MRL).
- **Data Distribution.** A key assumption of Student's t-test was that the data are normally distributed.
- **Parametric hypothesis testing.** Parametric hypothesis testing was performed using Student's t-test for all parameters in both the upgradient and downgradient wells. For each comparison the null hypothesis was that there was no difference between the downgradient and upgradient concentrations. The null hypothesis was tested using a two-tailed test at a significance level of 0.025. The t-test statistic (t_{stat}) was calculated from the average and variance of quarterly sampling results in a downgradient well and the upgradient well. Each quarterly sample

was compared to the previous three quarterly samples to provide a four sample running average. The average concentration in the downgradient well was significantly higher than the upgradient well if t_{stat} was greater than the critical test statistic (t_c). The critical test statistic was computed using the percent point function. The percent point function (ppf) is the inverse of the cumulative distribution function.

Statistically significant detections above background well (BXS-4) concentrations are shown in **bold** in the tables presented in Appendix C. Statistically significant detections below background concentrations are shown in ***bold italics*** in the tables presented in Appendix C.

5 Discussion of Results

5.1 Statistical Results

Appendix C presents the results of the statistical analyses for each individual parameter tested in the groundwater samples from wells BXS-1 through BXS-4. These include average concentration, variance, standard deviation, and Student's t-test statistic. The parameters detected at statistically higher concentrations in specific downgradient wells compared to the upgradient well are listed below:

- Field conductivity, COD, chloride, TDS, TOC, and dissolved zinc for wells BXS-1, BXS-2, and BXS-3
- Tannin and lignin, dissolved barium, dissolved iron, and dissolved manganese for wells BXS-2 and BXS-3
- Nitrate plus nitrite as nitrogen and sulfate for well BXS-1
- Dissolved nickel for well BXS-2
- Ammonia and dissolved arsenic for well BXS-3. The dissolved arsenic concentrations in well BXS-3 were greater than background during the April, July, and October sampling events.

5.2 Concentration Trends over Time

Figures 5 through 18 show the concentration trends from 2003 through 2007 for each parameter discussed below.

Ammonia as Nitrogen (Figure 5) – The samples collected from well BXS-3 during 2007 were higher than the concentrations in the background well. Ammonia concentrations in wells BXS-1, BXS-2, and BXS-4 have remained steady since 2003. Ammonia concentrations in well BXS-3 increased in 2007.

Arsenic (Figure 6) – Dissolved arsenic concentrations in well BXS-3 were above background levels during the 2007 sampling events. Concentrations of arsenic in wells BXS-1, BXS-2, and BXS-4 have been relatively stable during the last four years.

Barium (Figure 7) – Concentrations of dissolved barium in downgradient wells BXS-2 and BXS-3 were higher than the concentrations in the background well BXS-4 in all sampling events. The concentrations of barium in the most downgradient well, BXS-1, were below the corresponding concentrations in the background well. Concentrations of barium have been stable in all four wells during the last three years.

Chemical Oxygen Demand (COD) (Figure 8) – The COD concentrations in the downgradient wells were higher than the corresponding COD concentrations in the background well, BXS-4. COD concentrations have been relatively stable in wells BXS-1, BXS-2, and BXS-4 over the last two years.

Chloride (see Figure 9) – The concentrations of chloride in down gradient wells BXS-1, BXS-2, and BXS-3 for all sampling events were greater than the corresponding concentrations in the background well, BXS-4. Concentrations of chloride have been relatively stable over the last three years.

Conductivity (Field) (Figure 10) – Field conductivity measurements of the groundwater samples from all of the downgradient wells were greater than the conductivity of the background well for all four sampling events. Conductivity of the groundwater in wells BXS-2 and BXS-3 appears to be exhibiting a seasonal pattern with low values during winter/spring and high values in summer/fall. Conductivity values have been stable over the last two years.

Iron (Figure 11) – Dissolved iron concentrations in well BXS-3 exhibit a temporal distribution that appears to be seasonal with the lowest concentrations in fall/winter and the highest concentrations in spring/summer. The high concentration in well BXS-3 occurred in February 2007 and was greater than previous high concentrations. Concentrations of iron in groundwater samples collected from wells BXS-1, BXS-2, and BXS-4 have remained stable over the last four years.

Manganese (Figure 12) – The concentrations of dissolved manganese in the downgradient wells BXS-2 and BXS-3 were higher than the corresponding levels in the background well. Concentrations for well BXS-1 were below the background well concentration in February and greater than the corresponding background concentration in April, July, and October. Manganese concentrations have been relatively stable over the last four years.

Nickel (Figure 13) – Dissolved nickel was not detected in upgradient well BXS-4 during 2007 (Figure 13 values are one-half the reporting limit). Dissolved nickel was detected at low concentrations in wells BXS-1 and BXS-2 and at slightly higher concentrations in well BXS-3 during 2007. Dissolved nickel concentrations have been relatively stable for the last two years.

Sulfate (Figure 14) – During all four sampling events the sulfate concentrations in downgradient well BXS-1 were greater than corresponding background well concentrations. The sulfate concentrations in wells BXS-2 and BXS-3 were lower than

the concentrations in the background well. The concentration of sulfate in all the wells has remained relatively stable over the last two years.

Tannin and Lignin (Figure 15) – Concentrations of tannin and lignin detected in wells BXS-2 and BXS-3 for all four sampling events were greater than the corresponding concentrations in the background well. Tannin and lignin concentrations in well BXS-1 were lower than or equal to the corresponding background well concentration during 2007. Tannin and lignin levels in wells BXS-1, BXS-2, and BXS-4 have remained stable for the last three years. The tannin and lignin concentration of well BXS-3 varies, but remains within historical levels.

Total Organic Carbon (TOC) (Figure 16) – Concentrations of TOC in the groundwater samples collected from the downgradient wells were greater than the TOC detected in background well BXS-4. Concentrations of TOC in wells BXS-1, BXS-2, and BXS-4 have remained relatively stable over the last four years. TOC detected in well BXS-3 has been stable over the last two years.

Field pH (Figure 17) – Field pH measurements in all of the downgradient wells were statistically equivalent to or less than the background well with results ranging from 6.02 to 7.12 standard pH units. The pH of well BXS-4 varies widely with a historic high value of 8.6 pH units in February 2007.

Total Dissolved Solids (TDS) (Figure 18) – TDS measured in the downgradient wells were higher than the TDS in the background well for all 2007 sampling events. TDS levels have remained fairly stable for the last four years, with the exception of the low value observed in September 2006 for well BXS-3.

Methane – The headspace of each well was tested for methane during the July and October 2007 sampling events. Methane was not detected in any of the monitoring wells during 2007.

5.3 Comparison to Standards

MCLs for groundwater are established in WAC 173-304-9901 as equal to the primary drinking water standards set forth in WAC 246-290-310. MCLs are the maximum permissible concentration of a contaminant in drinking water supplies, whereas SMCLs are guidelines related to criteria other than adverse health effects. MCLs and SMCLs are listed in Table 3a, 3b, and 3c and are shown on the time series plots on Figures 5 through 18 for reference.

5.3.1 Comparison to MCLs

Of the monitored parameters, MCLs apply to arsenic, barium, cadmium, copper, nickel, and nitrate plus nitrite as nitrogen. The concentrations in all of the groundwater samples were lower than the MCLs for barium, cadmium, copper, nickel, and nitrate plus nitrite as nitrogen during the 2006 monitoring events. The dissolved arsenic concentrations in well BXS-3 during all four 2007 events were greater than the MCL of 10 µg/L. The arsenic concentrations ranged from 67.2 to 145 µg/L.

The MCL for total Coliform is a drinking water criteria used to alert treatment system operators of potential bacterial contamination. This criterion does not apply to groundwater and the MCL is provided for informational purposes only. The high level of total Coliform found in monitoring well BXS-2 during the July 2007 sampling event is assumed to be an isolated instance until further data is collected in 2008.

5.3.2 Comparison to SMCLs

Among the monitored parameters, SMCLs apply to pH, conductivity, chloride, TDS, sulfate, iron, manganese, and zinc. The data from the 2007 monitoring events indicated that the groundwater concentrations from all the monitoring wells were lower than the SMCLs for chloride, sulfate, and zinc. Samples exceeded the SMCLs for conductivity, TDS, dissolved iron, and dissolved manganese, and several samples were above the SMCL for pH, as described below:

Field Conductivity values were higher than the SMCL of 700 $\mu\text{S}/\text{cm}$ for groundwater collected from wells BXS-2 and BXS-3, with values ranging from 730 to 922 $\mu\text{S}/\text{cm}$. Conductivity measurements were below the SMCL in the background well BXS-4 and in the most downgradient well BXS-1.

Laboratory Conductivity values for well BXS-2 were higher than the SMCL of 700 $\mu\text{mhos}/\text{cm}$, with values ranging from 743 to 814 $\mu\text{mhos}/\text{cm}$. Conductivity values for the background well BXS-4 and down gradient wells BXS-1 and BXS-3 were below the SMCL during 2007.

TDS levels were slightly higher than the SMCL of 500 mg/L in well BXS-3 during the February event. The BXS-3 concentration was 522 mg/L. TDS in down gradient wells BXS-1 and BXS-2 and upgradient well BXS-4 were below the SMCL.

Dissolved iron concentrations detected in groundwater samples from wells BXS-2 and BXS-3 were higher than the SMCL of 300 $\mu\text{g}/\text{L}$. Dissolved iron detected in BXS-2 ranged from 656 to 846 $\mu\text{g}/\text{L}$ and ranged from 62,700 to 110,000 $\mu\text{g}/\text{L}$ in BXS-3. The dissolved iron concentrations in the wells BXS-1 and BXS-4 were below the SMCL.

Dissolved manganese concentrations detected in all four wells exceeded the 50 µg/L SMCL during the 2007 monitoring period. Concentrations detected in well BXS-3 were the highest, averaging 13,925 µg/L and concentrations in down gradient well BXS-4 were the lowest, averaging 114 µg/L.

Field pH measurements were outside the SMCL range of 6.5 to 8.5 standard pH units for at least one event for each well during the 2007 monitoring period. Field pH values were below the SMCL for well BXS-1 during the April, July, and October events, well BXS-2 during April and October, and well BXS-3 during the October event. The field pH value was above the SMCL for well BXS-4 during the February event.

Laboratory pH measurements were below the SMCL range of 6.5 to 8.5 standard pH units for wells BXS-1, BXS-2, and BXS-3 during at least one 2007 monitoring event. Laboratory pH values were below the SMCL for wells BXS-1 and BXS-3 during all four events, and BXS-2 during February, April and October. Laboratory pH values were consistently within the SMCL range for upgradient well BXS-4.

6 Summary

Quarterly groundwater monitoring samples were collected from one upgradient well and three downgradient wells during 2007 at the J.H. Baxter South Woodwaste Landfill. The samples were analyzed for eleven groundwater quality parameters, eight dissolved metals, and vapor phase methane.

Groundwater samples collected during the 2007 monitoring events did not exceed the MCLs for any of the monitored parameters, with the exception of arsenic. Dissolved arsenic concentrations in well BXS-3 exceeded the MCL during all four sampling events. The statistical analysis of dissolved arsenic concentrations in well BXS-3 indicates that concentrations in April, July, and October are statistically greater than background.

There were no exceedances of the SMCLs for chloride, sulfate, or dissolved zinc in the groundwater samples collected during the quarterly groundwater monitoring events. The parameters that exceeded the SMCLs in the groundwater samples collected during the 2007 monitoring events include field and laboratory conductivity, field and laboratory pH, TDS, dissolved iron, and dissolved manganese. These exceedances are discussed below.

Field Conductivity – Field conductivity measurements exceeded the SMCL in well BXS-3 during all 2007 monitoring events and in well BXS-2 during events in April, July, and October. The statistical evaluation indicated that all measured conductivity values in the downgradient wells are statistically greater than background. Field conductivity in the farthest downgradient well BXS-1 was below the SMCL during 2007. Field conductivity has remained stable over the last three years.

Laboratory Conductivity – Laboratory conductivity measurements exceeded the SMCL in well BXS-2 during all 2007 events. Laboratory conductivity measurements have remained fairly stable for the last four years.

Field pH – Field pH values were below the lower SMCL for the April, July, and October quarterly measurements in well BXS-1, during the April and October events for well BXS-2, and during the October event for well BXS-3. The field pH value of well BXS-4 exceeded the SMCL during the February event. None of the pH values were found to be statistically greater than background.

Laboratory pH – Laboratory pH values were below the lower SMCL for all three downgradient wells during all four sampling events, with one exception. The pH value measured in well BXS-2 during July 2007 was within the SMCL range. Laboratory pH values have been relatively stable since 2003.

TDS – TDS exceeded the SMCL in well BXS-3 during February 2007. All TDS concentrations in the downgradient wells were determined to be statistically greater than background. TDS concentrations in wells BXS-1 and BXS-4 have remained stable while concentrations in wells BXS-2 and BXS-3 have remained stable or decreased slightly.

Dissolved Iron – The iron SMCL was exceeded in wells BXS-2 and BXS-3 during all quarterly sampling events of 2007. Dissolved iron concentrations in wells BXS-2 and BXS-3 were statistically greater than background. Dissolved iron concentrations in wells BXS-1, BXS-2, and BXS-4 have been stable for the last five years. The dissolved iron concentration in well BXS-3 appears to have increased over the last five years.

Dissolved Manganese – Dissolved manganese concentrations in the upgradient and downgradient wells exceeded the SMCL during quarterly monitoring in 2007. Dissolved manganese levels in wells BXS-2 and BXS-3 during all four events were statistically

greater than background. Dissolved manganese levels have remained stable for the last four years.

For parameters without MCLs or SMCLs, the statistical evaluation of groundwater results for the three downgradient wells indicated that the following parameter concentrations are statistically greater than the background concentrations.

COD – COD levels in the downgradient wells BXS-2 and BXS-3 were statistically greater than background during 2007. COD levels in well BXS-1 were statistically above background during the February and April events. COD levels in well BXS-1 and BXS-2 have remained stable, while COD levels in well BXS-3 appear to be slowly increasing.

Chloride – Chloride concentrations in all three downgradient wells during all of 2007 were statistically greater than background. Chloride levels have been stable for three years.

Nitrate plus nitrite as nitrogen – Nitrate plus nitrite concentrations in well BXS-1 were statistically greater than background during 2007.

Sulfate – Sulfate concentrations in well BXS-1 were statistically greater than background during 2007. All sulfate concentrations were below the SMCL. Sulfate levels in wells BXS-1, BXS-2, and BXS-4 have remained stable for the last two years, while sulfate levels in well BXS-3 are very low or undetected.

TOC – TOC levels were statistically greater than background for the downgradient wells during all 2007 sampling events. TOC levels in wells BXS-1 and BXS-2 have been stable since 2002. TOC levels in well BXS-3 have increased slightly since 2004.

Tannin and Lignin – Tannin and Lignin concentrations in wells BXS-2 and BXS-3 were statistically greater than background during 2007. Tannin and lignin levels in wells BXS-1 and BXS-2 have been stable since 2002.

Dissolved Barium – Dissolved barium concentrations were statistically greater than background in wells BXS-2 and BXS-3 during 2007. Dissolved barium concentrations in all wells are below the MCL and have been stable since 2004.

Dissolved Nickel – Dissolved nickel levels in well BXS-2 for all monitoring events were statistically greater than background. Dissolved nickel was not detected in upgradient well BXS-4. Dissolved nickel concentrations were below the MCL.

Concentrations of two parameters in well BXS-3 were at historically high levels in February 2007. Dissolved arsenic and dissolved iron concentrations were at their highest since monitoring began.

- The high dissolved arsenic concentration observed in well BXS-3 in February was not statistically above background. The arsenic concentration remained above historic levels in April and July. The dissolved arsenic concentration in well BXS-3 appears to be increasing.
- The elevated dissolved iron concentration in well BXS-3 during February is part of a seasonal pattern with high values observed in spring/summer. The concentration of dissolved iron in well BXS-3 appears to be increasing.

The nature of elevated metals concentrations in BXS-3 will be further evaluated in 2008. The well will be redeveloped and data will be carefully reviewed to determine the need for further action, if needed.

7 Limitations

Work for this project was performed, and this report prepared, in accordance with generally accepted professional practices for the nature and conditions of the work completed in the same or similar localities, at the time the work was performed. It is intended for the exclusive use of J. H. Baxter & Co. for specific application to the referenced property. This report is not meant to represent a legal opinion. No other warranty, express or implied, is made.

8 References

APHA 1998. Standard Methods for the Examination of Water and Wastewater, 20 Edition. American Public Health Association.

Baxter 2002. 2001 Groundwater Monitoring Report, South Woodwaste Landfill, J.H. Baxter & Company, Arlington, Washington. August.

Baxter 2003. 2002 Groundwater Monitoring Report, South Woodwaste Landfill, J.H. Baxter & Company, Arlington, Washington. June.

Baxter 2004. 2003 Groundwater Monitoring Report, South Woodwaste Landfill, J.H. Baxter & Company, Arlington, Washington. April.

Baxter 2006. 2005 Groundwater Monitoring Report, South Woodwaste Landfill, J.H. Baxter & Company, Arlington, Washington. June.

Baxter 2007. 2006 Groundwater Monitoring Report, South Woodwaste Landfill, J.H. Baxter & Company, Arlington, Washington. June.

EMCON 1989. Hydrogeologic Report, J. H. Baxter South Woodwaste Landfill, Arlington, Washington. Prepared for J. H. Baxter by EMCON, Bothell, Washington. January.

EPA 1994. USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. EPA-540/R-94-013.

EPA 1999. Methods and Guidance for Analysis of Water, Version 2.0. United States Environmental Protection Agency Office of Science and Technology. EPA 821-C-99-004. CD ROM. June.

WAC-173-304-490, Washington Administrative Code. Ground Water Monitoring Requirements. Olympia, Washington.

WAC 246-290-310, Washington Administrative Code. Maximum contaminant levels (MCLs) and maximum residual disinfectant levels (MRDLs). Olympia, Washington.

Figures

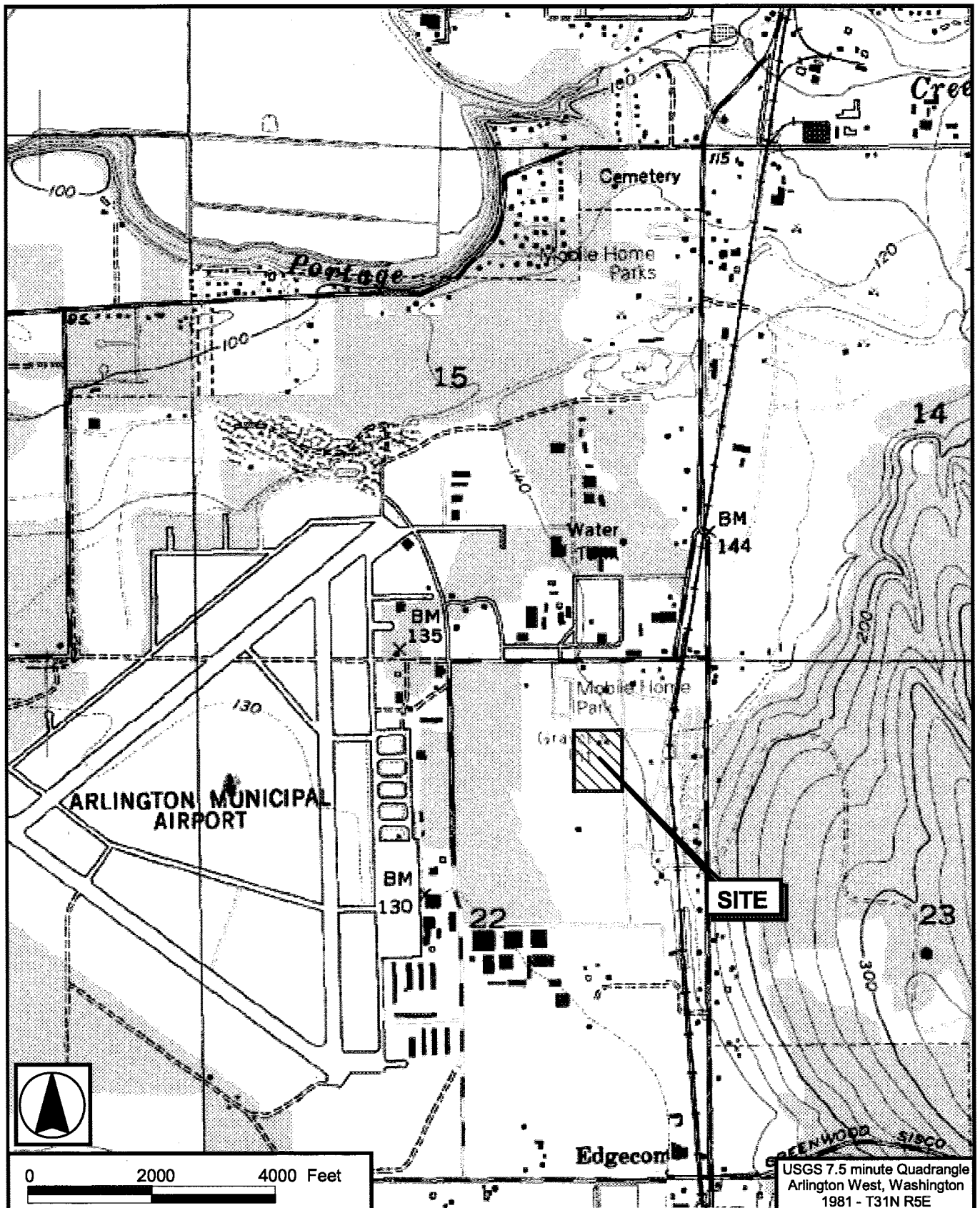


Figure 1. Site Location Map - South Landfill

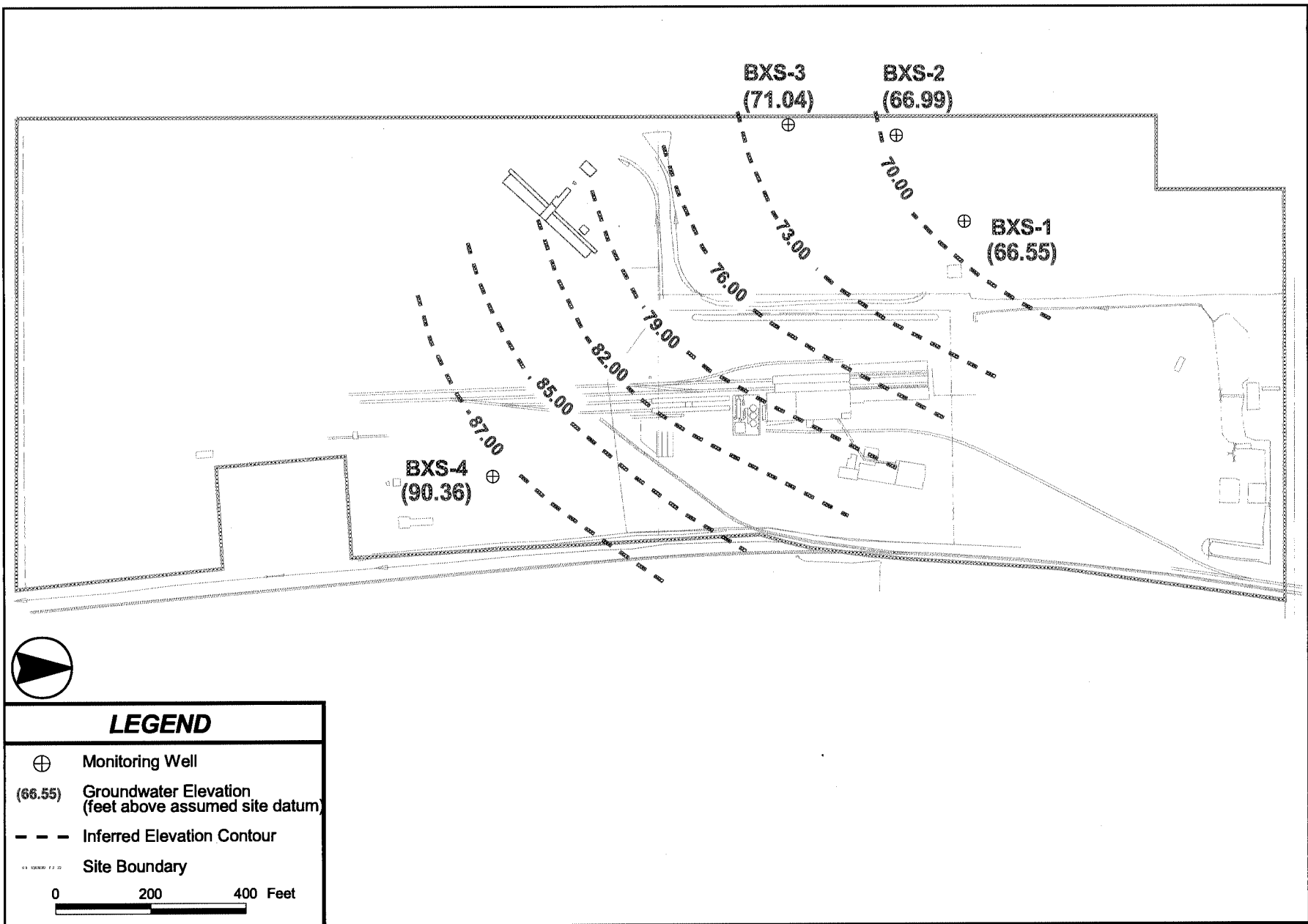


Figure 2. Groundwater Elevation Contour Map - February 2007 - South Landfill

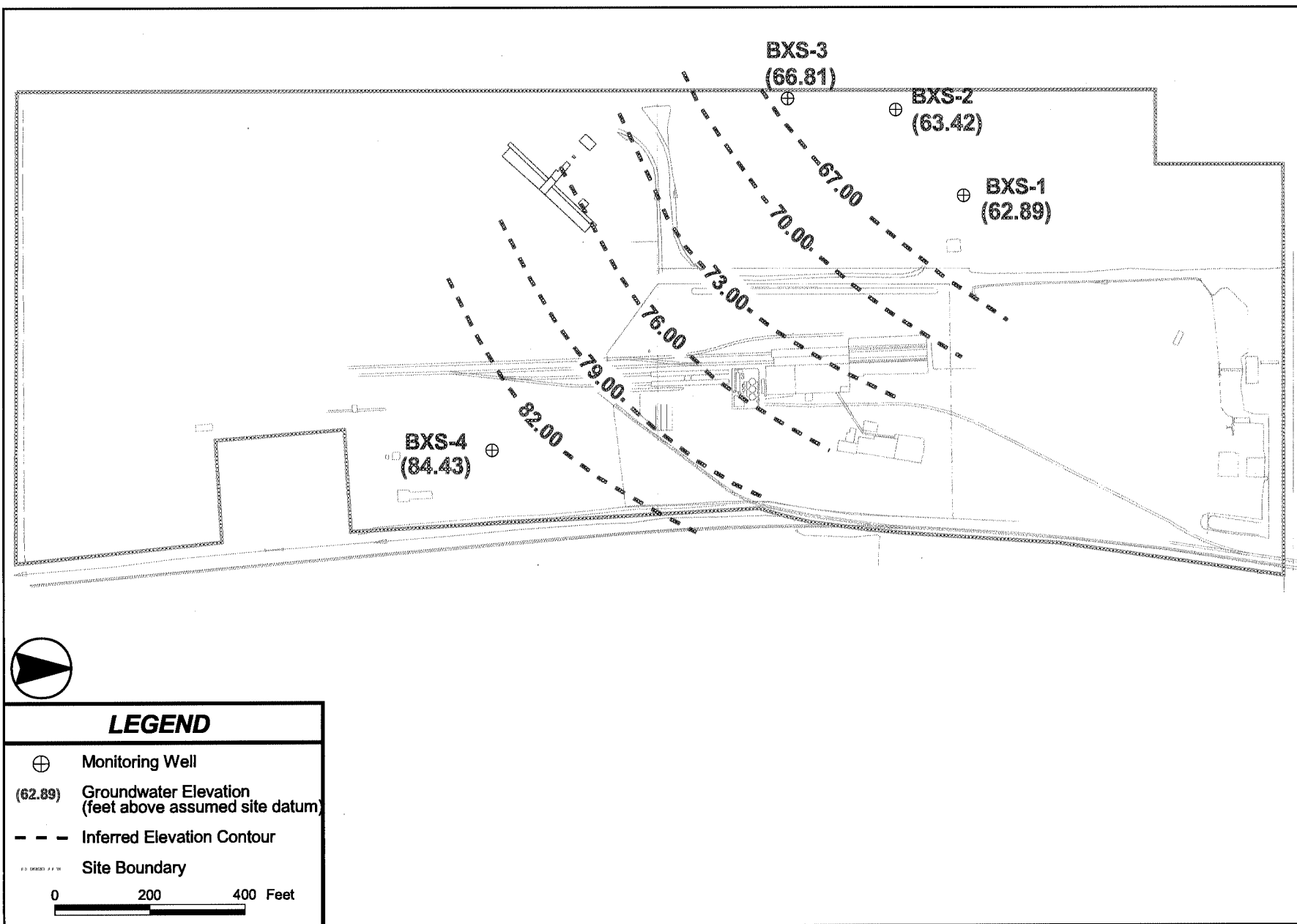
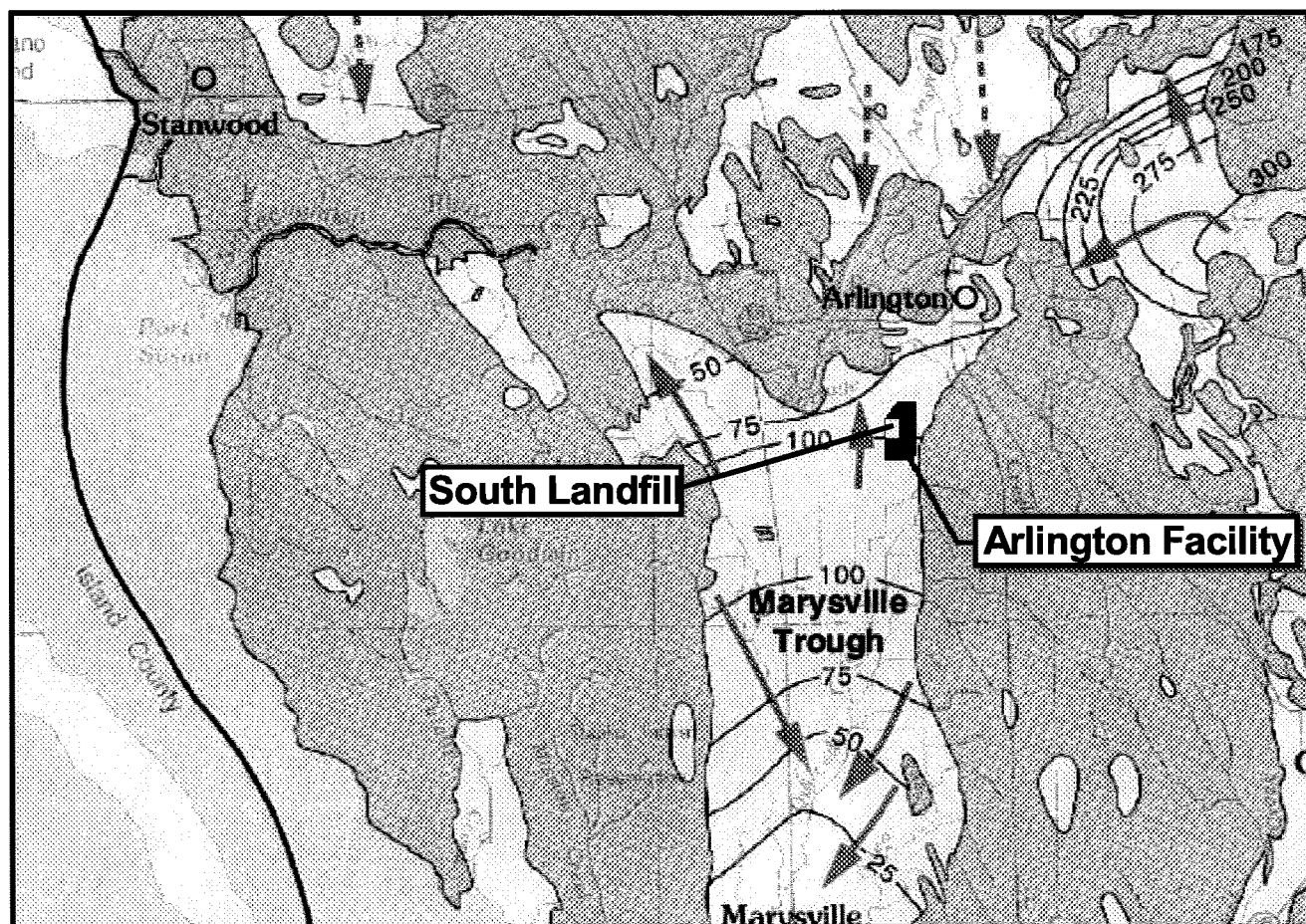


Figure 3. Groundwater Elevation Contour Map - October 2007 - South Landfill



Note:
Map created by base map by B.E. Thomas, J.M. Wilkinson,
and S.S. Embrey, entitled "Plate 6. Areal Recharge From
Precipitation and Potentiometric Surfaces of Principal
Aquifers, Western Snohomish County, Washington,"
dated 1997

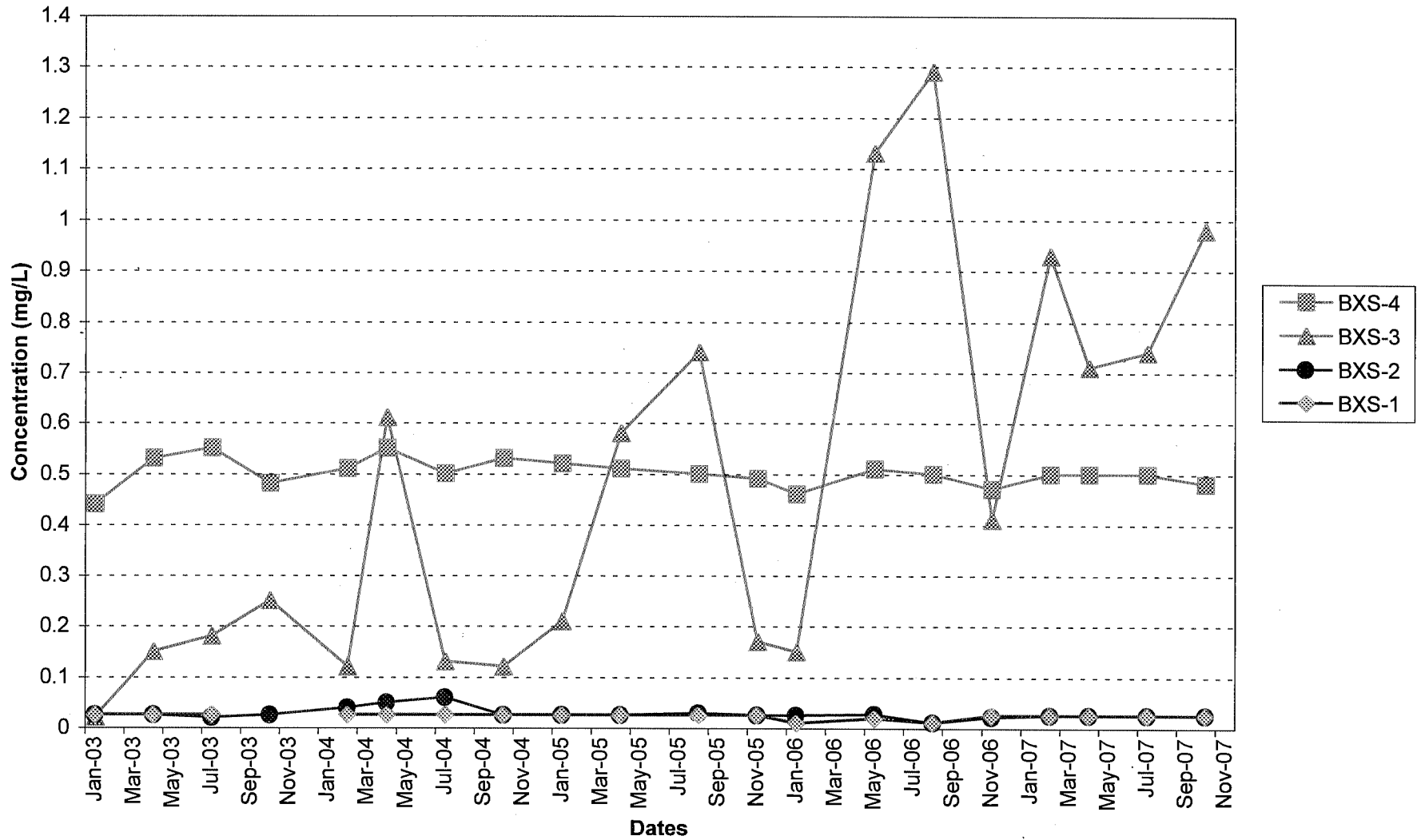
0 4 8 Miles

LEGEND

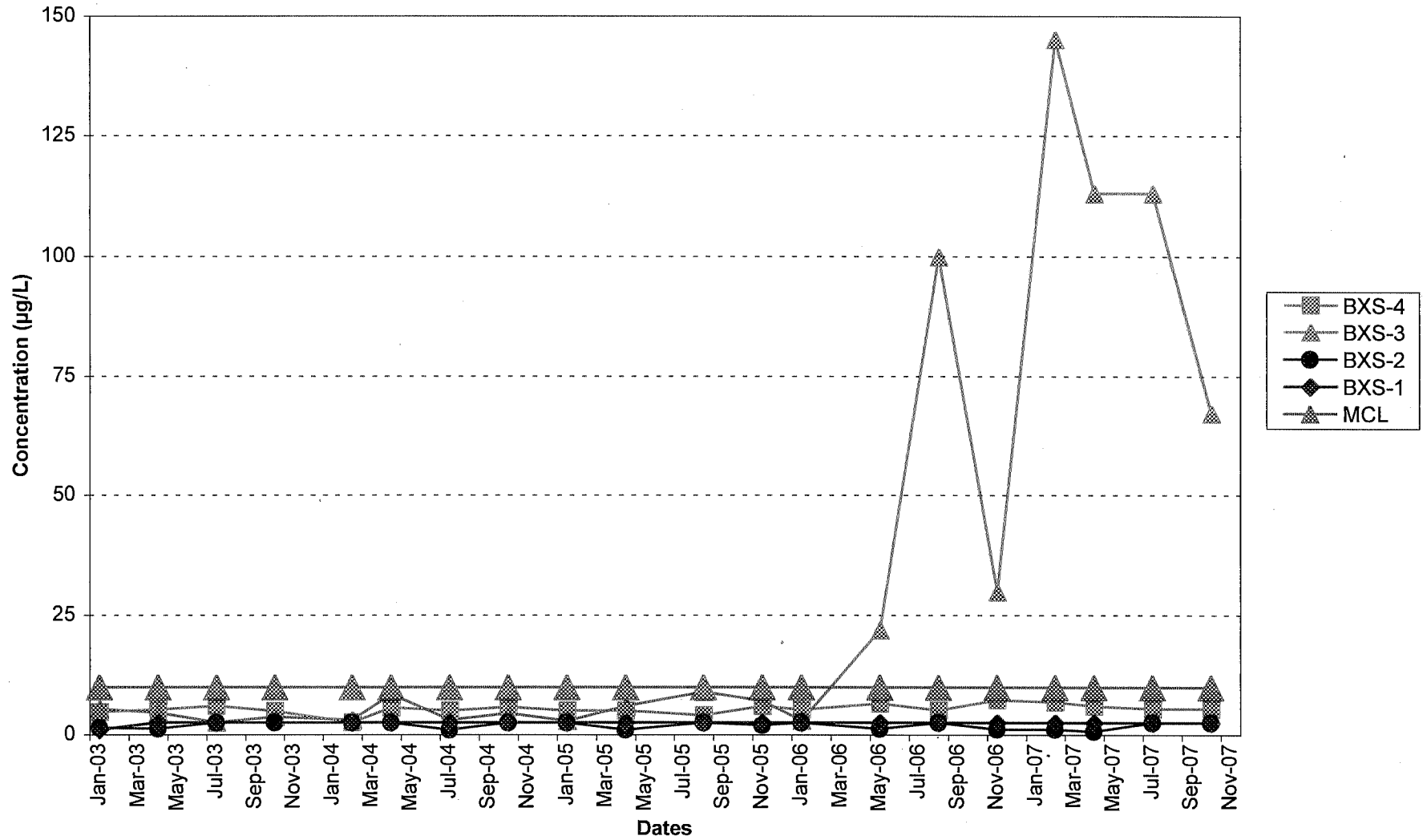
- 50 Groundwater Elevation
- Groundwater Elevation Contour
- Inferred Groundwater Flow Direction

Figure 4. Regional Groundwater Flow Directions

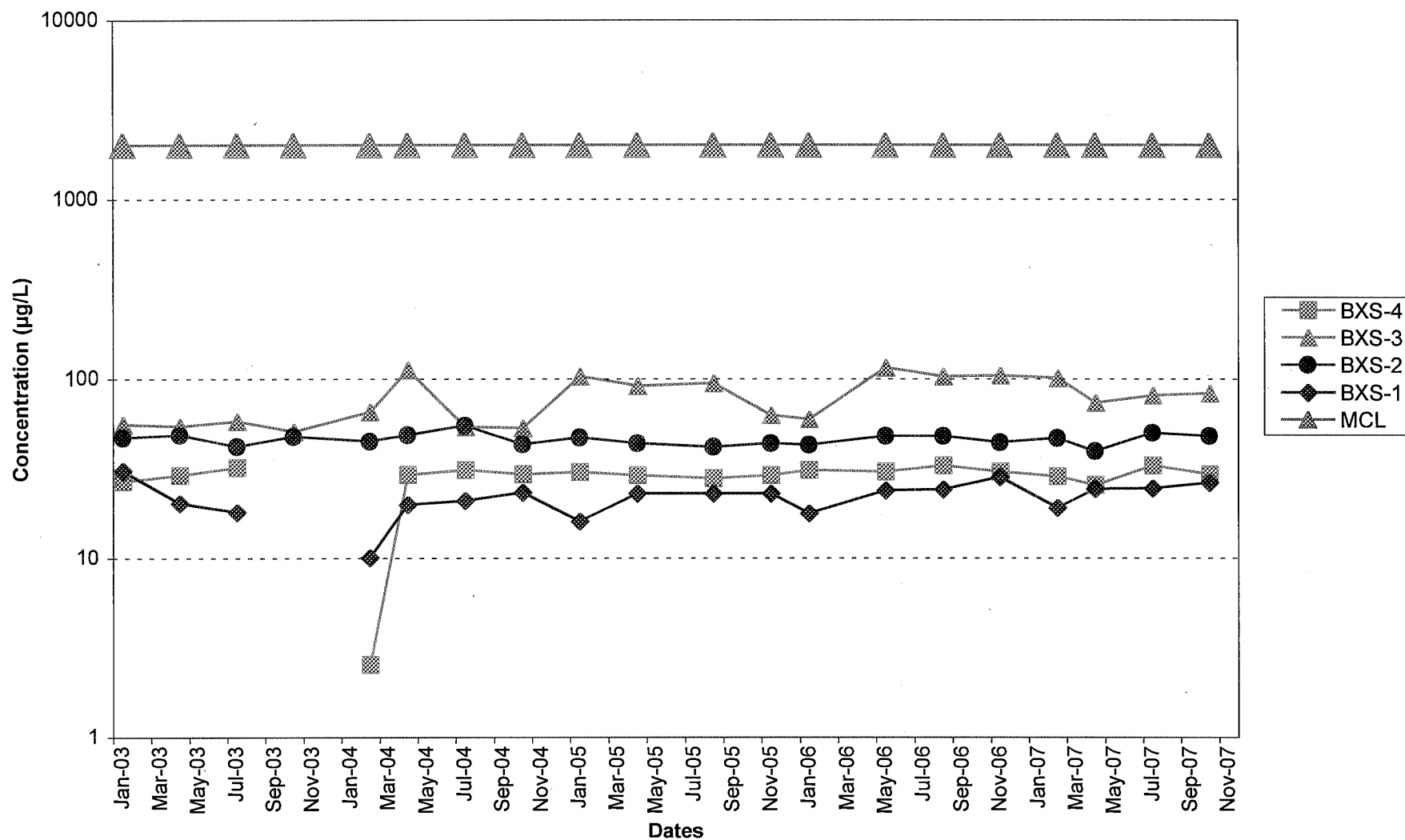
**Figure 5. Concentration Trends for Ammonia
South Woodwaste Landfill Monitoring Well Data**



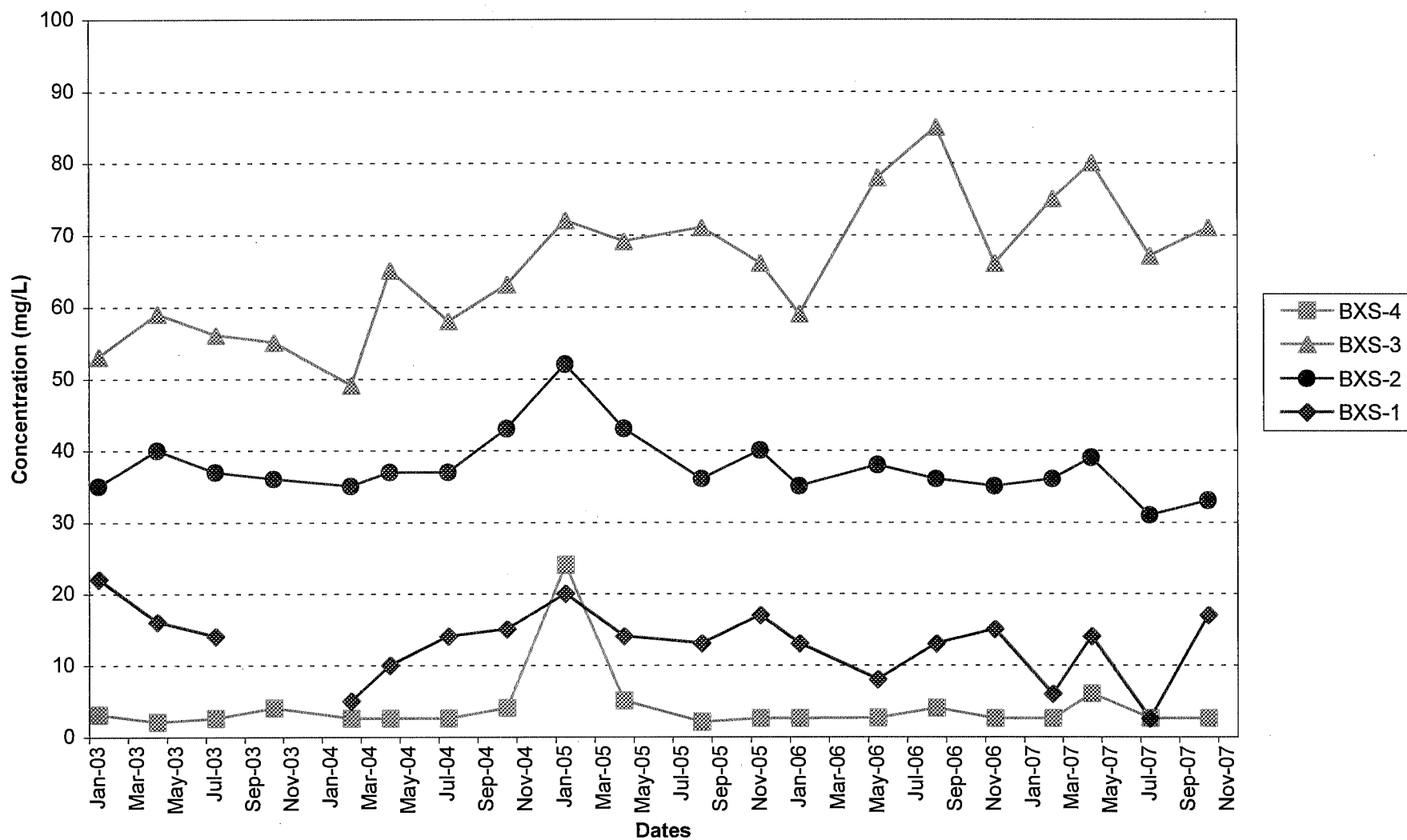
**Figure 6. Concentration Trends for Arsenic
South Woodwaste Landfill Monitoring Well Data**



**Figure 7. Concentration Trends for Barium
South Woodwaste Landfill Monitoring Well Data**



**Figure 8. Concentration Trends for Chemical Oxygen Demand
South Woodwaste Landfill Monitoring Well Data**



**Figure 9. Concentration Trends for Chloride
South Woodwaste Landfill Monitoring Well Data**

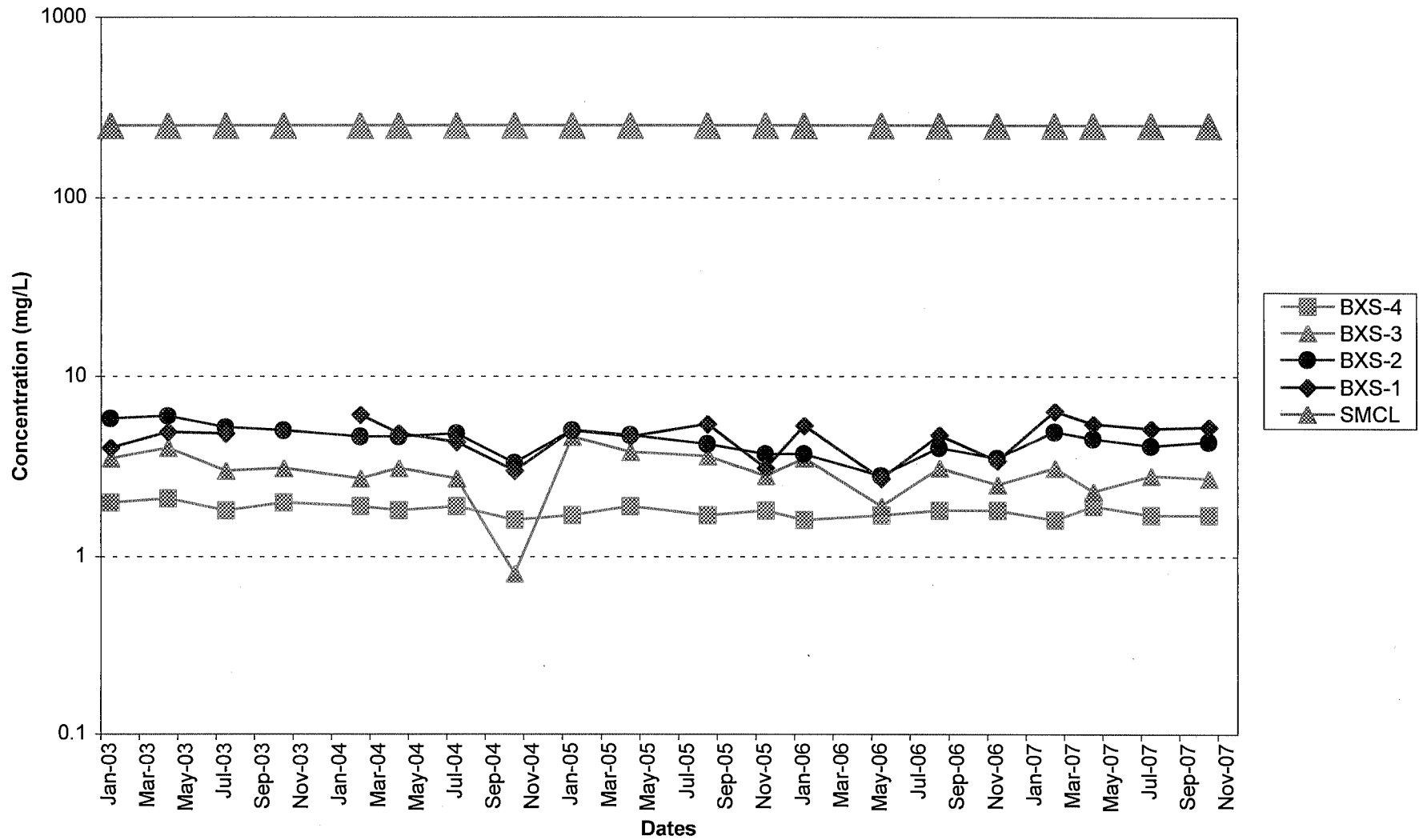


Figure 10. Concentration Trends for Field Conductivity
South Woodwaste Landfill Monitoring Well Data

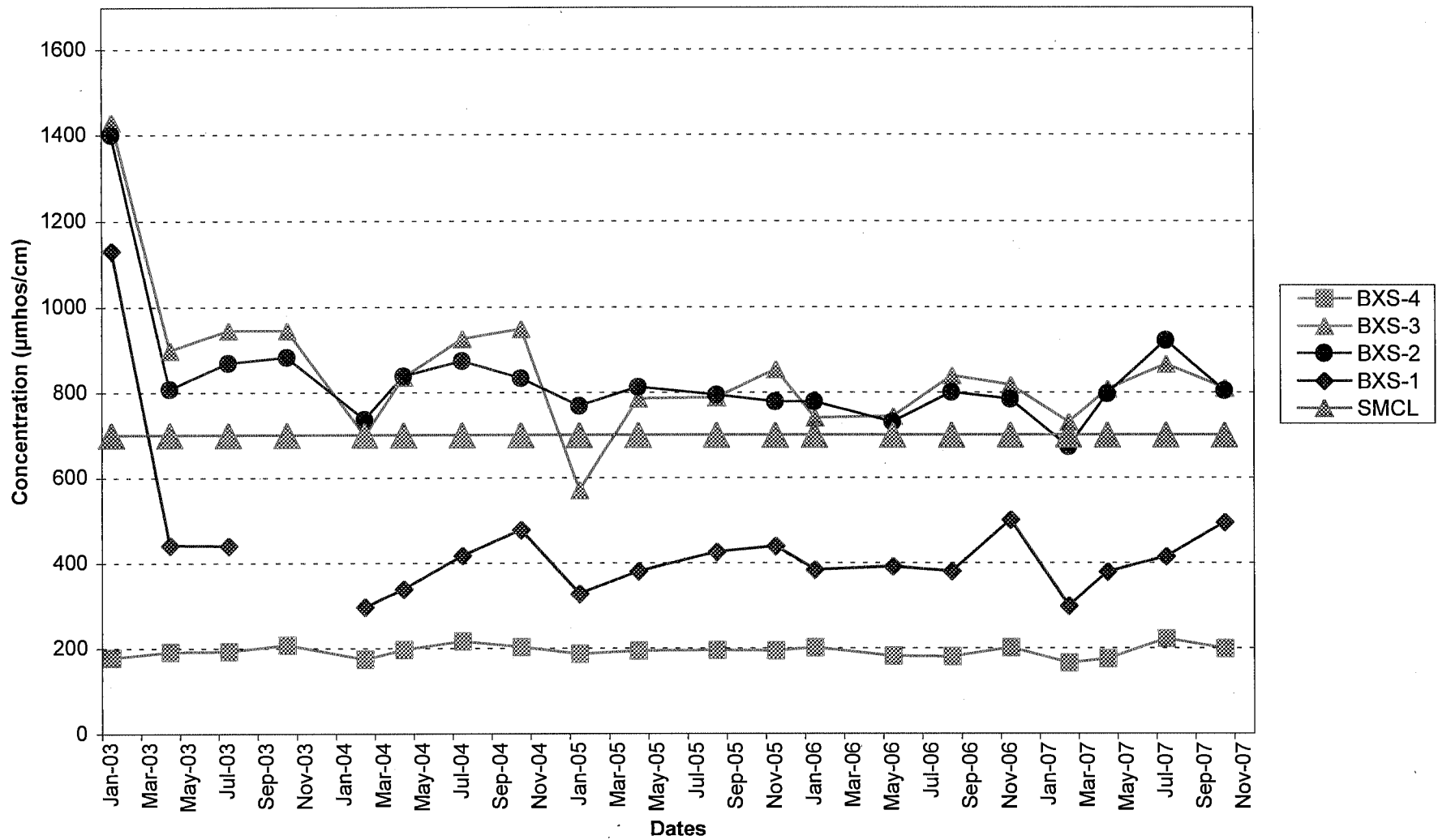
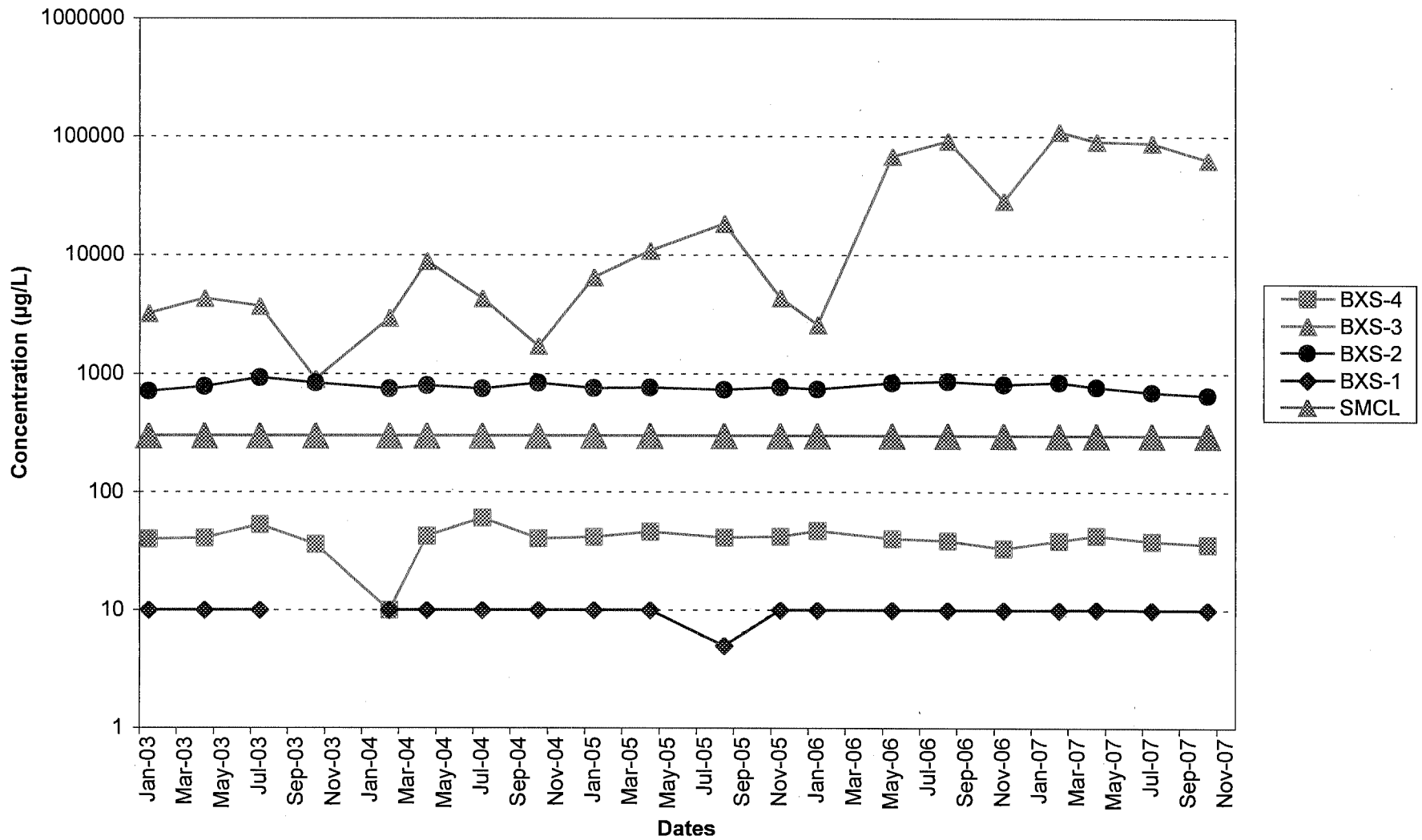


Figure 11. Concentration Trends for Iron
South Woodwaste Landfill Monitoring Well Data



**Figure 12. Concentration Trends for Manganese
South Woodwaste Landfill Monitoring Well Data**

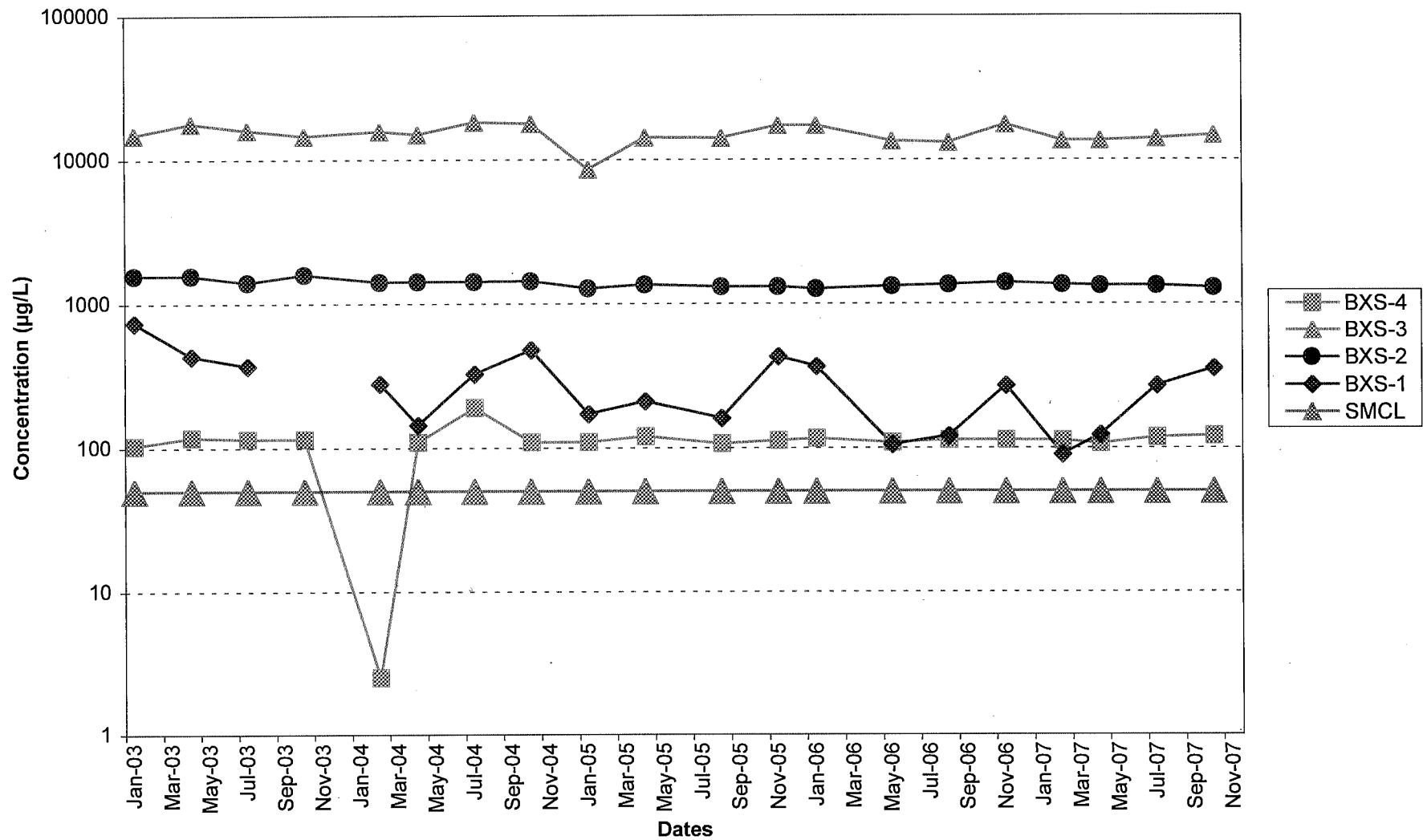
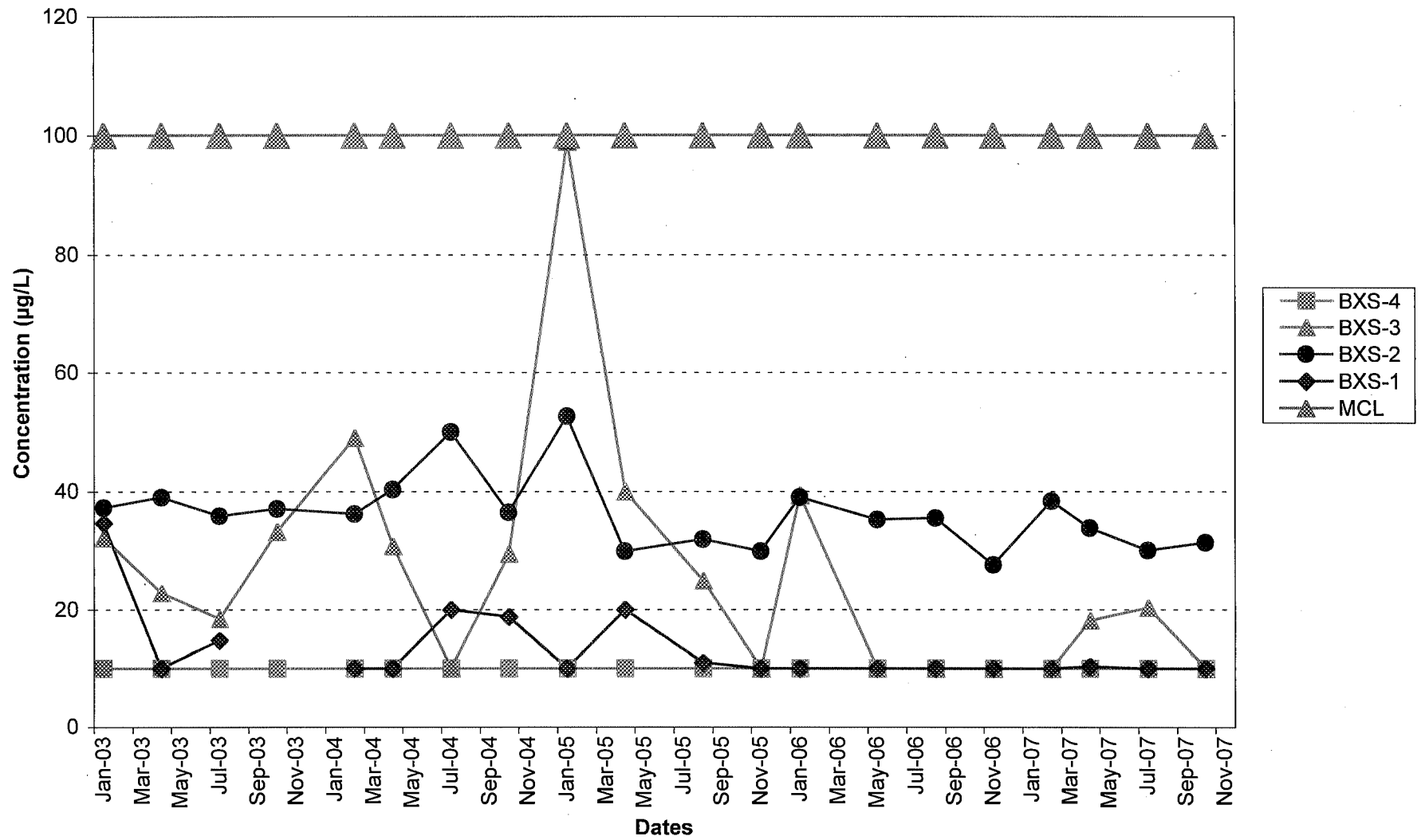
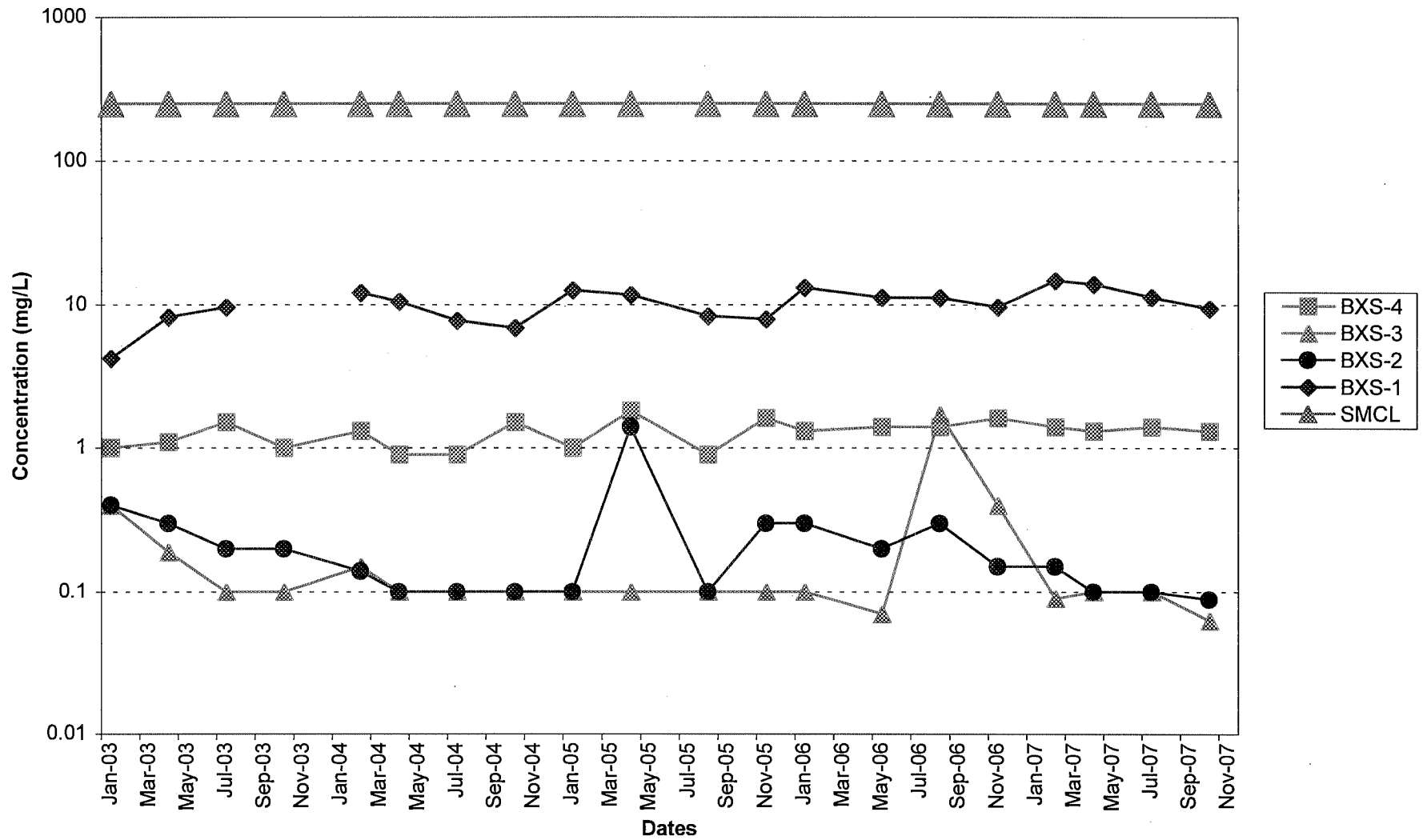


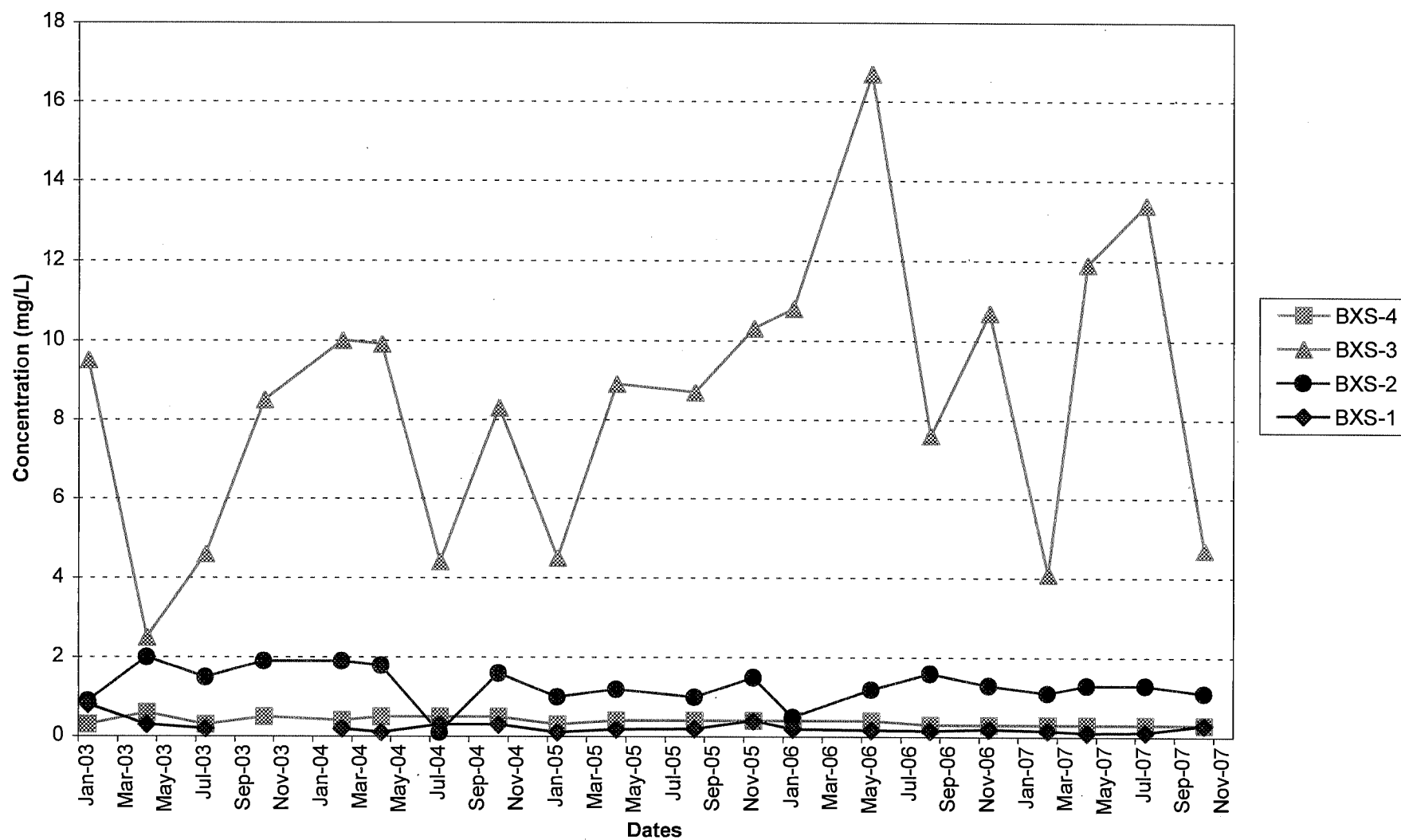
Figure 13. Concentration Trends for Nickel
South Woodwaste Landfill Monitoring Well Data



**Figure 14. Concentration Trends for Sulfate
South Woodwaste Landfill Monitoring Well Data**



**Figure 15. Concentration Trends for Tannin and Lignin
South Woodwaste Landfill Monitoring Well Data**



**Figure 16. Concentration Trends for Total Organic Carbon
South Woodwaste Landfill Monitoring Well Data**

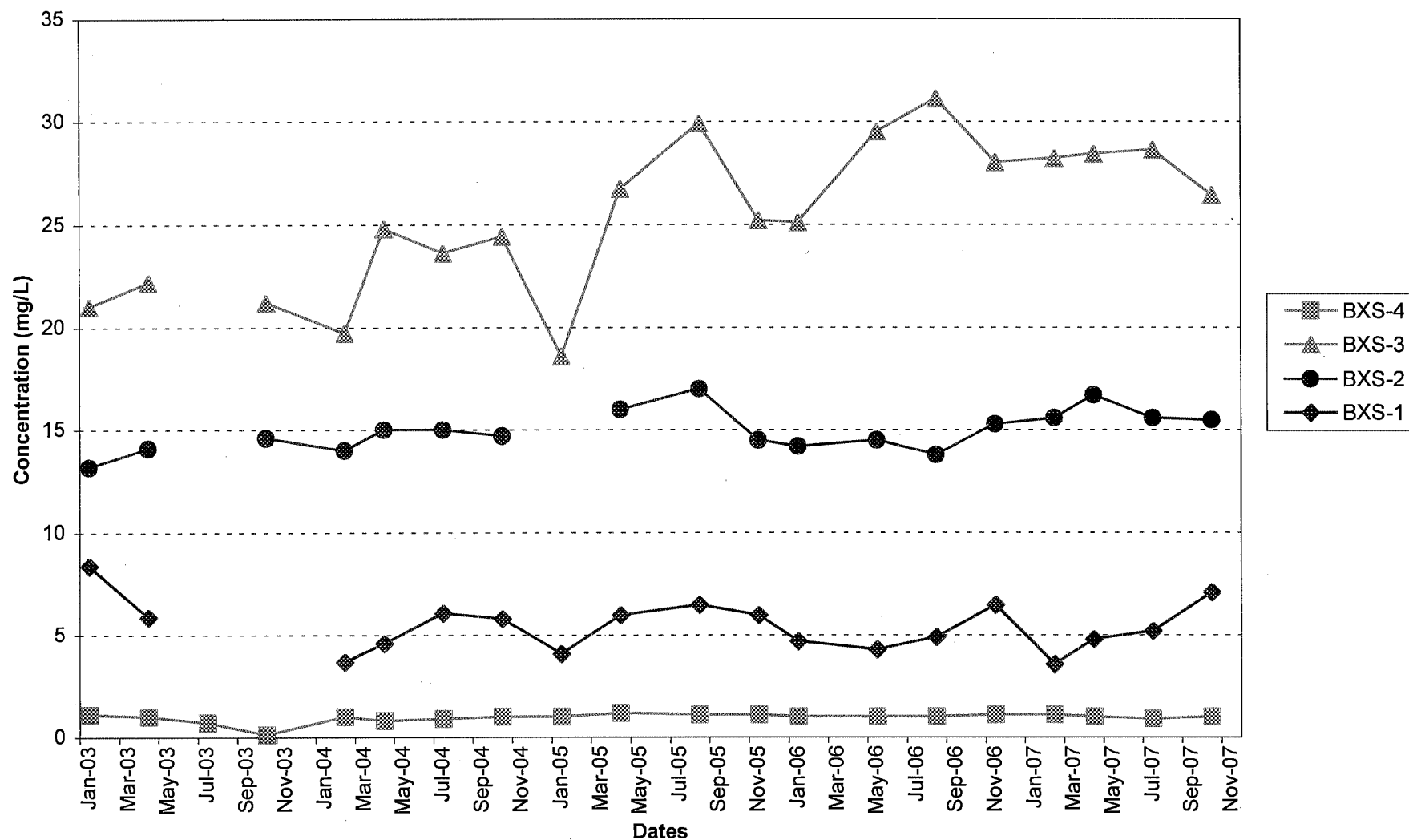
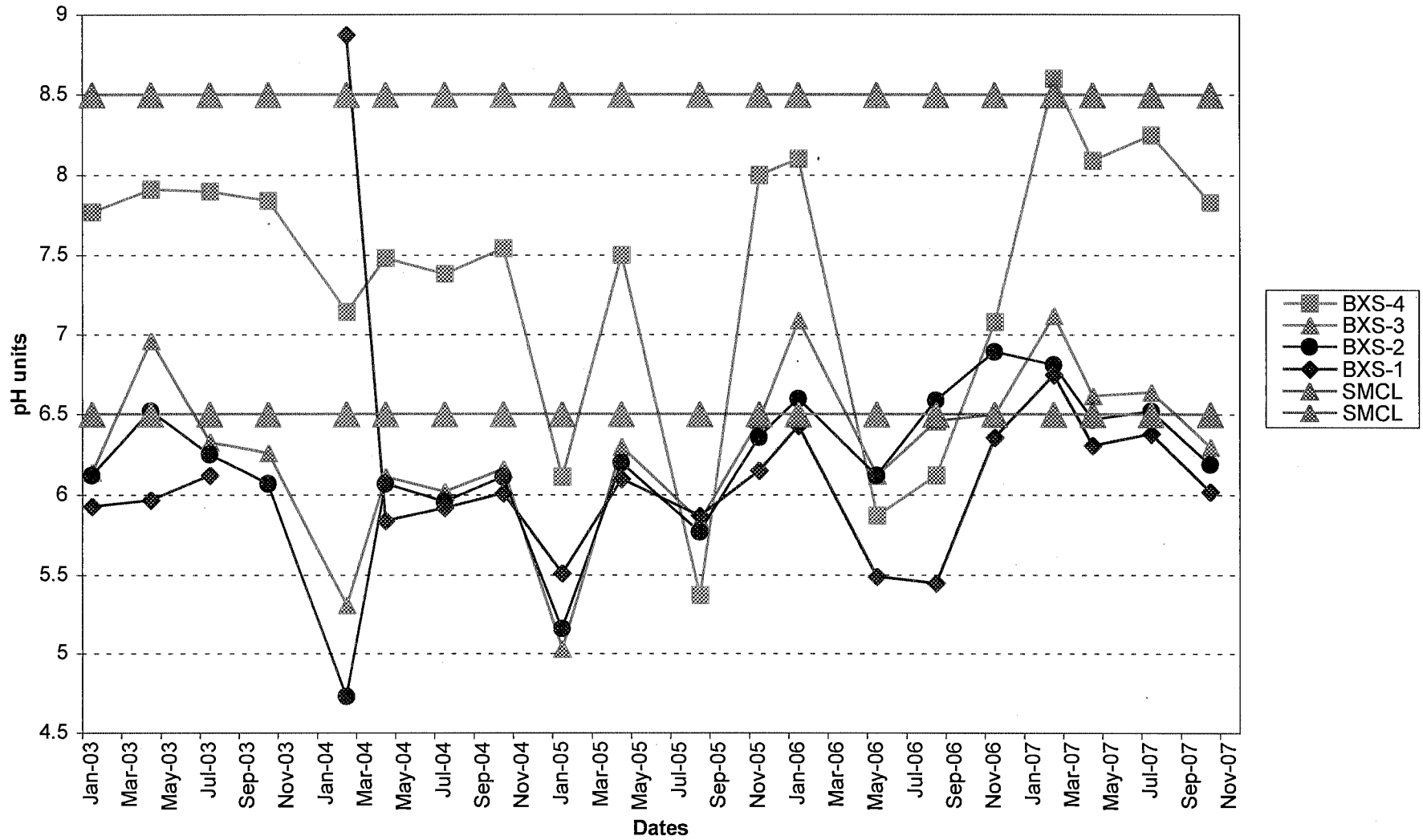
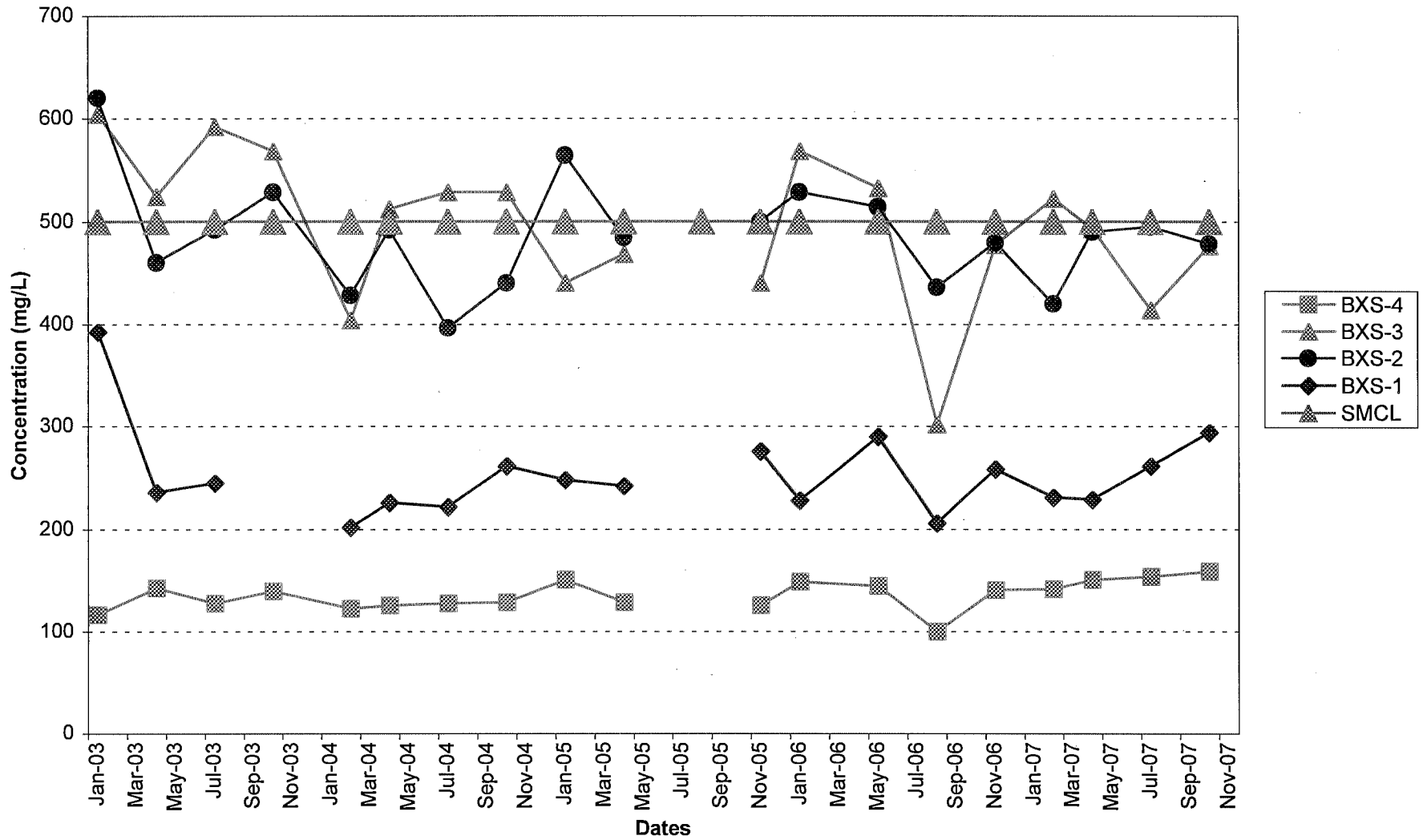


Figure 17. Concentration Trends for Field pH
South Woodwaste Landfill Monitoring Well Data



**Figure 18. Concentration Trends for Total Dissolved Solids
South Woodwaste Landfill Monitoring Well Data**



Tables

Table 1. Summary of Groundwater Elevations in 2007 (South Landfill)

	Inner Casing (inches)	Depth of Well (ft bgs)	Length of Screen (ft)	TOC Elevation (ft asd)	TOC Elevation 10/2002 ^a (ft msl)	Screened Interval (ft bgs)		Date	Depth to GW from TOC (ft)	Groundwater Elevation (ft asd)
BXS-1	2	47.90	10	99.59	142.90	37.90	47.90	2/01/07	33.04	66.55
								4/16/07	32.18	67.41
								7/16/07	34.48	65.11
								10/08/07	36.70	62.89
BXS-2	2	45.40	10	99.77	143.02	35.40	45.40	2/01/07	32.78	66.99
								4/16/07	31.31	68.46
								7/16/07	33.39	66.38
								10/08/07	36.35	63.42
BXS-3	2	44.15	10	98.99	142.07	34.15	44.15	2/01/07	27.95	71.04
								4/16/07	26.48	72.51
								7/16/07	28.77	70.22
								10/08/07	32.18	66.81
BXS-4	2	47.40	10	100.34	143.42	37.40	47.40	2/01/07	9.98	90.36
								4/16/07	10.18	90.16
								7/16/07	14.92	85.42
								10/08/07	15.91	84.43

Notes:

a) Wells were resurveyed in October 2002. Groundwater elevations are based on the earlier survey.

bgs - below ground surface

ft msl - feet above mean sea level.

ft asd - feet above assumed site datum

TOC - top of casing

Table 2. Hydraulic Gradient and Groundwater Velocity Calculations (South Landfill)

Date	Average Gradient (<i>i</i>)	K (cm/sec)	n_e	v (cm/sec)		v (ft/day)	
	(cm/cm)						
2/01/07	0.0211	3.00E-02 to 6.00E-02	0.300	0.002	to 0.004	5.981	to 11.962
4/16/07	0.0201			0.002	to 0.004	5.698	to 11.395
7/16/07	0.0180			0.002	to 0.004	5.102	to 10.205
10/08/07	0.0190			0.002	to 0.004	5.386	to 10.772

Table 3a. Field Parameters from Groundwater Sampling, April 2000 to October 2007 (South Landfill)

	pH (standard units)				Conductivity ($\mu\text{S}/\text{cm}$)				Temperature ($^{\circ}\text{C}$)			
Primary MCL ^(a) Secondary MCL ^(a)	6.5 - 8.5				700							
	BXS-4	BXS-3	BXS-2	BXS-1	BXS-4	BXS-3	BXS-2	BXS-1	BXS-4	BXS-3	BXS-2	BXS-1
Apr-00	7.59	7.51	7.53	7.5	187	831	875	431	10.8	15.30	16.10	15.2
Jul-00	7.74	6.58	6.52	6.18	182	822	905	464	13.5	19.90	15.90	14.4
Oct-00	7.92	6.39	6.5	6.22	185	855	833	502	9.9	16.2	19.40	12.6
Jan-01	8.07	7.11	6.73	6.55	182	925	893	522	8	11.4	10.60	9.6
Apr-01	7.52	6.49	6.47	6.07	184	860	860	476	9.4	14.9	15.30	14
Jul-01	6.89	7.87	8.37	7.26	183	833	850	477	8.6	17.3	14.10	13.8
Oct-01	6.91	6.7	6.05	5.71	203	872	847	495	11.5	15.4	15.50	14
Jan-02	7.3	6.38	6.28	6.14	186	825	844	474	7.1	10.6	10.80	9.3
Apr-02	7.73	6.57	6.35	6.09	181	832	838	441	10.4	14.9	13.40	11.9
Jul-02	7.68	6.26	6.31	6.06	178	827	840	469	11.9	16.4	14.40	13.1
Oct-02	6.95	6.36	6.49		205	930	930		9.8	13.2	13.20	
Jan-03	7.77	6.14	6.12	5.93	178	1430	1400	1130	9.8	13.4	13.3	11.6
Apr-03	7.91	6.96	6.52	5.97	191	899	808	442	9.6	13.6	13.4	11.7
Jul-03	7.9	6.33	6.25	6.12	193	945	869	441	10.91	13.58	13.37	16.19
Oct-03	7.84	6.26	6.07		207	945	883		10.16	13.76	13.92	
Feb-04	7.140	5.310	4.730	8.87	174	699	737	297	9.58	13.13	12.79	12.54
Apr-04	7.48	6.11	6.07	5.84	197	836	838	339	9.69	13.42	12.89	13.71
Jul-04	7.38	6.02	5.96	5.92	216	926	874	417	10.27	13.76	13.51	13.66
Oct-04	7.54	6.16	6.11	6.01	203	949	834	478	10.81	13.82	14.48	13.14
Jan-05	6.110	5.030	5.160	5.51	187	571	768	328	9.88	13.52	12.9	11.92
Apr-05	7.5	6.3	6.20	6.1	194	785	812	380	9.6	13.5	13	11.9
Aug-05	5.37	5.84	5.77	5.87	195	788	794	426	10.51	13.16	12.84	12.61
Dec-05	8	6.47	6.36	6.15	194	854	778	439	9.7	12.2	12.5	11.7
Jan-06	8.100	7.090	6.600	6.43	201	740	778	384	9.6	12.6	12.4	11.7
May-06	5.87	6.12	6.12	5.49	182	744	730	392	10.1	138	13.9	12.6
Aug-06	6.12	6.46	6.59	5.45	181	839	800	380	10.2	13.4	12.9	12.3
Nov-06	7.08	6.5	6.89	6.36	201	817	784	501	10.9	12	12.4	11.7
Feb-07	8.6	7.12	6.81	6.75	166	730	672	299	9.5	13.2	12.1	11.4
Apr-07	8.09	6.62	6.47	6.31	176	808	796	379	9.5	13.1	12.3	11.7
Jul-07	8.25	6.64	6.52	6.38	222	867	922	415	9.8	13.1	12.5	12
Oct-07	7.83	6.3	6.19	6.02	199	810	804	495	9.8	12.8	12.5	12

Table 3a. Field Parameters from Groundwater Sampling, April 2000 to October 2007 (South Landfill)

	Eh (mV)				DO (mg/L)				Methane (Percent)			
Primary MCL ^(a)												
Secondary MCL ^(a)												
	BXS-4	BXS-3	BXS-2	BXS-1	BXS-4	BXS-3	BXS-2	BXS-1	BXS-4	BXS-3	BXS-2	BXS-1
Apr-00	-80	-70	80	120	0	0.8	0.00	0	nt	nt	nt	nt
Jul-00	-70	-45	120	135	2.22	1.62	2.33	0.76	nt	nt	nt	nt
Oct-00	-1	0	0	130	4.99	5.24	5.22	5.89	nt	nt	nt	nt
Jan-01		-20	90	110	4.3	2.54	1.28	6.98	nt	nt	nt	nt
Apr-01	-65	45	105	100	0.75	1.37	1.11	1.22	nt	nt	nt	nt
Jul-01	-1	1	0	120	1.46	0.99	1.32	0.33	nt	nt	nt	nt
Oct-01	180	20	50	115	0.99	0.83	0.93	0.86	nt	nt	nt	nt
Jan-02	-65	-5	80	160	1.37	1.39	1.01	1.96	nt	nt	nt	nt
Apr-02	-45	0.5	135	180	0.87	2.17	0.79	0.49	nt	nt	nt	nt
Jul-02	-55	-5	90	180	1.24	0.84	1.01	0.4	nt	nt	nt	nt
Oct-02	60	57	166		7.97	1.72	1.37		nt	nt	nt	nt
Jan-03	-3	183	217	258	3.92	2.04	2.74	3.4	nt	nt	nt	nt
Apr-03	-31	43	126	366	7.8	5.5	3.64	5.56	nt	nt	nt	nt
Jul-03	-253	-57	-9	202	0.82	2.28	0.44	2.79	nt	nt	nt	nt
Oct-03	-162	35	59		1.53	2.82	3.31		nt	nt	nt	nt
Feb-04	-110	-6	35	143	11.24	4.81	8.84	7.39	nt	nt	nt	nt
Apr-04	-174	-28	51	212	0.35	1.27	1.28	3.18	nt	nt	nt	nt
Jul-04	-92	6	30	182	0.41	0.46	1.52	2.73	nt	nt	nt	nt
Oct-04	-198	-39	11	148	4.57	3.06	10.92	3.36	nt	nt	nt	nt
Jan-05	5	3	3	4	7.10	4.66	3.80	4.46	nt	nt	nt	nt
Apr-05	-171	-1	67	317	1.1	4.4	1.7	6.4	0.0	0.0	0.0	0.0
Aug-05	-86	-1	84	84	4.13	9.66	4.74	3.98	nt	nt	nt	nt
Dec-05	-120	-25	51	177	8	1.9	6.5	0.7	0.0	0.0	0.0	0.0
Jan-06	5	28	76	179	2.70	10.50	3.70	0.9	nt	nt	nt	nt
May-06	-147	-85	59	225	3.6	0.7	1.4	1.6	0.0	0.0	0.0	0.0
Aug-06	-126	-77	48	148	2.9	4.5	2	0.9	nt	nt	nt	nt
Nov-06	-138	3	80	212	1.3	7.4	3	1.7	0.0	0.0	0.0	0.0
Feb-07	-40	-103	0.8	241	9.80	2.40	3	2.3	nt	nt	nt	nt
Apr-07	-136	-113	45	187	1.20	1.80	1.2	0.8	nt	nt	nt	nt
Jul-07	-145	-113	62	219	0.00	0.00	0	0	0.0	0.0	0.0	0.0
Oct-07	-148	-97	40	226	0	0	0	0	0.0	0.0	0.0	0.0

Notes:

(a) Primary and secondary MCLs (maximum contaminant levels) per WAC 246-290-310.

Table 3b. Conventional Parameters from Groundwater Sampling, April 2000 to October 2007 (South Landfill)

	pH (standard units)							Conductivity (umhos/cm)						
Primary MCL ^(a)														
Secondary MCL ^(a)	6.5 - 8.5							700						
	BXS-4	BXS-4 Dup ^(c)	BXS-3	BXS-2	BXS-1	BXS-1 Dup ^(c)	Field blk ^(d)	BXS-4	BXS-4 Dup ^(c)	BXS-3	BXS-2	BXS-1	BXS-1 Dup ^(c)	Field blk ^(d)
Apr-00	7.97		6.47	6.39	6.15	6.08	6.01	150		568	685	342	344	2 U
Jul-00	7.78		6.34	6.31	5.96	5.93	5.16	165		589	767	401	429	2 U
Oct-00	7.99		6.47	6.37	6.15	6.12	5.72	159		614	719	414	436	2 U
Jan-01	8.03		6.83	6.48	6.06	6.1	5.52	189		872	878	473	494	2
Apr-01	7.87		6.9	6.36	6.33	6.01	5.4	193		901	884	506	474	3
Jul-01	7.96		6.64	6.44	6.09	6.12	5.53	193		885	890	489	490	1
Oct-01	7.58		6.36	6.27	6.07	5.96	5.92	195		887	861	504	500	6
Jan-02	8.03		6.45	6.34	6.17	6.14	5.77	192		806	842	471	474	2 U
Apr-02	8.02 J		6.6 J	6.32 J	6 J	6.06 J	5.9 J	192		804	863	443	445	2
Jul-02	8		6.4	6.51	6.21	6.2	5.9	176		710	794	434	425	2 U
Oct-02			6.51	6.57						817	785			
Jan-03														
Apr-03														
Jul-03							5.86							2 U
Oct-03	8.04	7.99	6.56	6.41			7.05	182	182	851	789			2 U
Feb-04	8	8	6.37	6.39	6.22		5.76	182	179	692	736	286		0.6 J
Apr-04	7.91	7.92	6.41	6.38	6.14		5.65	172	175	696	716	295		2 U
Jul-04	8	8.01	6.52	6.5	6.28		5.78	171	168	739	681	347		2 U
Oct-04	7.96	7.97	6.57	6.67	6.26		6.5	179	178	933	819	395		0.2 J
Jan-05	7.95	7.97	6.28	6.55	6.29		5.63	194	195	526	813	334		1.8 J
Apr-05	8.06	8.1	6.82	6.6	6.42		6.06	191	188	749	803	370		1.4 J
Aug-05	7.98	8.02	6.67	6.54	6.28		5.95	190	192	741	799	418		2 U
Nov-05	8	7.91	6.73	6.63	6.33		5.78	194	194	793	778	442		1.4 J
Jan-06	7.87	7.85	6.36	6.36	6.15		5.42	194	194	735	772	368		3
May-06	7.94	7.94	6.36	6.41	6.31		5.45	195	195	682	792	404		1.5 J
Aug-06	7.88	7.9	6.4	6.33	6.39		5.19	226	228	824	935	481		2
Nov-06	7.62	6.08	6.43	6.41	6.09		5.56	188	406	682	719	424		1.8 J
Feb-07	7.81	7.9	6.38	6.36	6.36		5.5	193	192	517	743	338		5
Apr-07	7.61	7.45	6.05	6.1	5.94		5.77	195	199	565	779	377		2 U
Jul-07	7.69		6.34	6.96	6.28	6.23		201		518	798	410	401	
Oct-07	7.82	7.85	6.36	6.35	6.18			200	201	638	814	482		

Table 3b. Conventional Parameters from Groundwater Sampling, April 2000 to October 2007 (South Landfill)

	Ammonia as N (mg/L)							COD (mg/L)						
Primary MCL ^(a)														
Secondary MCL ^(a)														
	BXS-4	BXS-4 Dup ^(c)	BXS-3	BXS-2	BXS-1	BXS-1 Dup ^(c)	Field blk ^(d)	BXS-4	BXS-4 Dup ^(c)	BXS-3	BXS-2	BXS-1	BXS-1 Dup ^(c)	Field blk ^(d)
Apr-00	0.51		0.3	0.05 U	0.05 U	0.05 U	0.05 U	16		91	44	24	21	5 U
Jul-00	0.54		0.31	0.05	0.05 U	0.05	0.05 U	5 U		49	49	29	14	5 U
Oct-00	0.46		0.16	0.05 U	0.05 U	0.05 U	0.05 U	29		77	41	26	27	5 U
Jan-01	0.63		0.12	0.05 U	0.1	0.07	0.06	7		68	40	21	23	5 U
Apr-01	0.48		0.14	0.05 U	0.05 U	0.05 U	0.05 U	14		79	47	27	27	5 U
Jul-01	0.53		0.11	0.05 U	0.05 U	0.05 U	0.05 U	38		71	46	23	24	5 U
Oct-01	0.37		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	10		60	37	18	19	5 U
Jan-02	0.47		0.07	0.05 U	0.05 U	0.05 U	0.05 U	7		54	41	20	17	5 U
Apr-02	0.38		0.19	0.05 U	0.05 UJ	0.05 U	0.05 U	19		59	36	14	16	5 U
Jul-02	0.49		0.3	0.05 UJ	0.05 U	0.05 U	0.05 U	25		57	29		14 J	5 U
Oct-02	0.05 U		0.2	0.05 U				37		49	33			
Jan-03	0.44		0.02 J	0.05 U	0.05 UJ	0.46	0.025	3		53	35	22	3	5 U
Apr-03	0.53		0.15	0.05 U	0.05 U	0.05 U	0.025	2 J		59	40	16	16	5 U
Jul-03	0.55		0.18	0.02 J	0.05 U	0.05 U		5 U		56	37	14	14	
Oct-03	0.48	0.53	0.25	0.05 U			0.05 U	4 J	3 J	55	36			5 U
Feb-04	0.51	0.51	0.12	0.04 J	0.05 U		0.05 U	5 U	5 U	49	35	5		5
Apr-04	0.55	0.55	0.61	0.05	0.05 U		0.05 U	5 U	5 U	65	37	10		5 U
Jul-04	0.5	0.47	0.13	0.06	0.05 U		0.05 U	5 U	5 U	58	37	14		5 U
Oct-04	0.53	0.51	0.12	0.05 U	0.05 U		0.05 U	4 J	3 J	63	43	15		5 U
Jan-05	0.52	0.51	0.21	0.05 U	0.05 U		0.05 U	24	16	72	52	20		2 J
Apr-05	0.51	0.53	0.58	0.05 U	0.05 U		0.05 U	5	6	69	43	14		5
Aug-05	0.5	0.5	0.74	0.03 J	0.05 U		0.05 U	2 J	5 U	71	36	13		5 U
Nov-05	0.49	0.48	0.17	0.05 U	0.05 U		0.05 U	5 U	3 J	66	40	17		5 U
Jan-06	0.46	0.47	0.15	0.05 U	0.01 J		0.05 U	5 U	3 J	59	35	13		5 U
May-06	0.51	0.51	1.13	0.027 J	0.019 J		0.018 J	2.6 J	2.6 J	78	38	8		5 U
Aug-06	0.5	0.51	1.29	0.011 J	0.011 J		0.05 U	4 J	2.5 J	85	36	13		5 U
Nov-06	0.47	0.05 U	0.41	0.022 J	0.05 U		0.05 U	5 U	16	66	35	15		5 U
Feb-07	0.5	0.52	0.93	0.05 U	0.05 U		0.05 U	5 U	5 U	75	36	6		5 U
Apr-07	0.5	0.5	0.71	0.05 U	0.05 U		0.05 U	6	6	80	39	14		5 U
Jul-07	0.5		0.74	0.05 U	0.05 U	0.05 U		5 U		67	31	5 U	6	
Oct-07	0.48	0.49	0.98	0.05 U	0.05 U			5 U	5 U	71	33	17		

Table 3b. Conventional Parameters from Groundwater Sampling, April 2000 to October 2007 (South Landfill)

Primary MCL ^(a) Secondary MCL ^(a)	Chloride (mg/L)							Nitrate + Nitrite as N (mg/L)						
	250							10						
	BXS-4	BXS-4 Dup ^(c)	BXS-3	BXS-2	BXS-1	BXS-1 Dup ^(c)	Field blk ^(d)	BXS-4	BXS-4 Dup ^(c)	BXS-3	BXS-2	BXS-1	BXS-1 Dup ^(c)	Field blk ^(d)
Apr-00	2		3.9	7.4	8.2	8.2	0.2 U	0.2 U		0.2 U	0.2 U	0.4	0.4	0.2 U
Jul-00	2		5.5	8.8	8.3	8.2	0.2 U	0.1		0.2 U	0.2 U	0.5	0.5	
Oct-00	2		5	8.1	6.7	7	0.2 U	0.2 U		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Jan-01	2.2		5.5	8.7	7.7	7.7	0.2 U	0.2 U		0.2 U	0.2 U	0.3	0.3	0.2 U
Apr-01	2		4.8	7.6	5.9	5.8	0.2 U	0.2 U		0.2 U	0.2 U	0.2	0.4	0.2 U
Jul-01	2		4.4	6.7	5.6	5.5	0.2 U	0.2 U		0.2 U	0.2 U	0.4	0.4	0.2 U
Oct-01	2		4.1	6.7	4.3	4.3	0.2 U							
Jan-02	2		3.2	6.1	5	4.9	0.2 U	0.2 U		0.2 U	0.2 U	0.2	0.3	0.2 U
Apr-02	2		2.9	6.3	5.7	5.9	0.2 U	0.2 U		0.2 U	0.2 U	1.1	1.1	0.2 U
Jul-02	2.2		4	6.7	6	6.4	0.2 U	0.2 U		0.2 U	0.2 U	0.7	0.6	0.2 U
Oct-02	1.9		3	5.6				0.9			0.2 U			
Jan-03	2		3.5	5.8	4	2.2	0.2 U							
Apr-03	2.1		4	6	4.9	4.7	0.2 U	0.2 U		0.2 U	0.2 U	0.9	0.8	0.2 U
Jul-03	1.8		3	5.2	4.8	5	0.2 U	0.2 U		0.2 U	0.2 U	1.5	1.5	0.02 J
Oct-03	2	1.8	3.1	5			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U			0.2 U
Feb-04	1.9	1.9	2.7	4.6	6.1		0.2 U	0.06 J	0.06 J	0.08 J	0.1 J	1.1		0.2 U
Apr-04	1.8	1.8	3.1	4.6	4.8		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.4		0.2 U
Jul-04	1.9	1.8	2.7	4.8	4.3		0.2 U	0.05 J	0.05 J	0.2 U	0.2 U	0.6		0.04 J
Oct-04	1.6	1.6	0.8	3.3	3		0.2 U	0.05 U	0.05 U	0.01 J	0.01 J	0.3		0.2 U
Jan-05	1.7	1.7	4.6	5	5		0.2 U	0.01 J	0.02 J	0.03 J	0.01 J	0.75		0.01 J
Apr-05	1.9	1.9	3.8	4.7	4.6		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1		0.2 U
Aug-05	1.7	1.7	3.6	4.2	5.4		0.2 U	0.05 U	0.05 U	0.02 J	0.01 J	0.95		0.05 U
Nov-05	1.8	1.9	2.8	3.7	3.1		0.04 J	0.1 J	0.09 J	0.08 J	0.11 J	0.3		0.1 J
Jan-06	1.6	1.6	3.5	3.7	5.3		0.2 U	0.09 J	0.1 J	0.07 J	0.2 U	0.5		0.1 J
May-06	1.7	1.9	1.9	2.8	2.7		0.4 U	0.05 U	0.05 U	0.16	0.039 J	0.92		0.05 U
Aug-06	1.8	1.8	3.1	4	4.7		0.4 U	0.05 U	0.05 U	0.14	0.01 J	0.96		0.05 U
Nov-06	1.8	3.4	2.5	3.5	3.4		0.2 U	0.05 U	0.46	0.07	0.008 J	0.46		0.05 U
Feb-07	1.6	1.6	3.1	4.9	6.4		0.2 U	0.28	0.58	0.96	0.94	0.75		1.02
Apr-07	1.9	1.9	2.3	4.5	5.4		0.2	0.23	1.21	0.2	0.63	0.85		0.63
Jul-07	1.7		2.8	4.1	5.1	5		0.05 U		0.19	0.08	0.7	0.68	
Oct-07	1.7	1.7	2.7	4.3	5.2			0.05 U	0.05 U	0.17	0.05 U	0.47		

Table 3b. Conventional Parameters from Groundwater Sampling, April 2000 to October 2007 (South Landfill)

[illegible]

Table 3b. Conventional Parameters from Groundwater Sampling, April 2000 to October 2007 (South Landfill)

	Solids, total dissolved (mg/L)							Sulfate (mg/L)						
Primary MCL ^(a)														
Secondary MCL ^(a)	500							250						
	BXS-4	BXS-4 Dup ^(c)	BXS-3	BXS-2	BXS-1	BXS-1 Dup ^(c)	Field blk ^(d)	BXS-4	BXS-4 Dup ^(c)	BXS-3	BXS-2	BXS-1	BXS-1 Dup ^(c)	Field blk ^(d)
Apr-00	180		561	598	330	318	27	1.6		0.3	0.3	7.7	7.6	0.2 U
Jul-00	156		517	532	323	291	5 U	1.7		0.2	0.2	7.8	7.2	0.2 U
Oct-00	94		503	501	281	275	5 U	1.6		0.2 U	0.3	6.1	6.1	0.2 U
Jan-01	131				286	272	5 U	1.2		0.2	0.4	7.7	7.8	0.2 U
Apr-01	134		556	456	284	258	5 U	1.6		0.4	0.4	8.3	8	0.3
Jul-01	134		420	320	212	262	5 U	1.6		0.2	0.3	7.2	7.1	0.2 U
Oct-01	140		408	420	262	274	8	1.2		0.2	0.3	6.7	6.5	0.2 U
Jan-02	136		496	428	275	246	5 U	1.1		0.7	0.3	6.8	7	0.2 U
Apr-02	167		520	584	356	302	5 U	1.6		0.3	0.5	7.9	8.1	0.2 U
Jul-02	174		592	532	384	352	10	1.6		0.3	0.3	7.5	7.6	0.2 U
Oct-02	112		518	564				1.1		0.4	0.3			
Jan-03	117		604	620	392	168	5 U	1		0.4	0.4	4.2	1.1	0.2 U
Apr-03	143		524	460	236	252	5 U	1.1		0.19 J	0.3	8.2	7.6	0.2 U
Jul-03	128		592	492	245	250	5 U	1.5		0.2 U	0.2	9.6	9.7	0.2 U
Oct-03	140	137	568	528			5	1	0.7	0.2 U	0.2			0.2 U
Feb-04	123	113	404	428	202		5 U	1.3	1.3	0.15 J	0.14 J	12.1		0.2 U
Apr-04	126	138	512	492	226		5 U	0.9	1	0.2 U	0.2 U	10.5		0.2 U
Jul-04	128	123	528	396	222		5 U	0.9	0.9	0.2 U	0.2 U	7.7		0.2 U
Oct-04	129	132	528	440	262		5 U	1.5	1.4	0.2 U	0.2 U	6.9		0.2 U
Jan-05	151	150	440	564	248		5 UX	1	0.9	0.2 U	0.2 U	12.6		0.2 U
Apr-05	129	128	468	484	242		5 U	1.8	1.6	0.2 U	1.4	11.7		0.2 U
Aug-05								0.9	1	0.2 U	0.2 U	8.3		0.2 U
Nov-05	126	127	440	500	276		5 U	1.6	1.6	0.2 U	0.3	7.9		0.2 U
Jan-06	149	169	568	528	228		34	1.3	1.4	0.2 U	0.3	13.2		0.2 U
May-06	145	156	532	514	290		27	1.4	1.5	0.07 J	0.4 U	11.2		0.4 U
Aug-06	100	90	302	436	206		5 U	1.4	1.4	1.7	0.3	11.2		0.4 U
Nov-06	141	242	477	479	259		6	1.6	3.4	0.4	0.15 J	9.7		0.2 U
Feb-07	142	146	522	420	231		5 U	1.4	1.4	0.09 J	0.15 J	14.8		0.03 J
Apr-07	151	140	493	490	229		5 U	1.3	1.3	0.2 U	0.2 U	13.9		0.2 U
Jul-07	154		414	495	262	248		1.4		0.2 U	0.2 U	11.3	11.4	
Oct-07	159	151	476	478	294			1.3	1.3	0.063 J	0.088 J	9.4		

Table 3b. Conventional Parameters from Groundwater Sampling, April 2000 to October 2007 (South Landfill)

Primary MCL ^(a) Secondary MCL ^(a)	Tannin & Lignin (mg/L)							Total Organic Carbon (mg/L)						
	BXS-4	BXS-4 Dup ^(c)	BXS-3	BXS-2	BXS-1	BXS-1 Dup ^(c)	Field blk ^(d)	BXS-4	BXS-4 Dup ^(c)	BXS-3	BXS-2	BXS-1	BXS-1 Dup ^(c)	Field blk ^(d)
Apr-00	0.3		9.1	1.1	0.3	0.3	0.2 U	0.7		28.8	13.5	6.6	6.6	0.5 U
Jul-00	0.3		7.1	1.1	0.3	0.4	0.2 U	1.1		29.2	16.8	7.7	7.1	0.5 U
Oct-00	0.4		8.2	1	0.5	0.5	0.2 U	1.3		0.5 U	15.5	9.7	9.7	0.5 U
Jan-01	0.6		12.2	1.7	0.6	0.7	0.2 U	1		27.1	14.8	8.6	8.6	0.5 U
Apr-01	0.2		3.2	0.9	0.4	0.4	0.2 U	1.2		26.1	14.6	7.5	7.5	0.5 U
Jul-01	0.4		6.4	1.4	0.5	0.5	0.2 U	9.3		25.9	15.1	6.8	7.3	0.5 U
Oct-01	0.5		21.6	2.8	0.6	0.8	0.2 U	0.9		21.6	13.7	7.1	7.1	0.5 U
Jan-02	0.5		9.9	1.3	0.3	0.4	0.2 U	1		19.1	13.5	5.9	5.8	0.5 U
Apr-02	0.5		10.9	1.5	0.4	0.6	0.2 U	1		23	14.2	6.4	6.4	0.5 U
Jul-02	0.4		8	1	0.5	0.3	0.2 U	0.8		21.8	11.9	6	5.7	0.5 U
Oct-02	0.3		8.1	1.1						23.1	15			
Jan-03	0.3		9.5	0.9	0.8	0.3	0.2 U	1.1		21	13.2	8.4	0.9	0.4 J
Apr-03	0.6		2.5	2	0.3	0.3	0.2 U	1		22.2	14.1	5.9	6	0.5 U
Jul-03	0.3		4.6	1.5	0.2	0.2	0.2 U	0.7						
Oct-03	0.5	0.5	8.5	1.9			0.2 U	0.25 U	10.4	21.2	14.6			0.4 J
Feb-04	0.4	0.5	10	1.9	0.2		0.08 J	1	0.9	19.7	14	3.7		1
Apr-04	0.5	0.5	9.9	1.8	0.2 U		0.2 U	0.8	0.9	24.8	15	4.6		0.5 U
Jul-04	0.5	0.5	4.4	0.2 U	0.3		0.14 J	0.9	1	23.6	15	6.1		0.17 J
Oct-04	0.5	0.4	8.3	1.6	0.3		0.08 J	1	0.9	24.4	14.7	5.8		0.5 U
Jan-05	0.3	0.3	4.5	1	0.1 J		0.2 U	1	0.9	18.6		4.1		0.5 U
Apr-05	0.4	0.5	8.9	1.2	0.18 J		0.18 J	1.2	1	26.7	16	6		0.6
Aug-05	0.4	0.4	8.7	1	0.2		0.05 J	1.1	1	29.9	17	6.5		0.2 J
Nov-05	0.4	0.4	10.3	1.5	0.4		0.09 J	1.1	0.9	25.2	14.5	6		0.1 J
Jan-06	0.4	0.4	10.8	0.5	0.2		0.2 U	1	1	25.1	14.2	4.7		0.07 J
May-06	0.4	0.4	16.7	1.2	0.17 J		0.5	1	0.9	29.5	14.5	4.3		0.09 J
Aug-06	0.3	0.3	7.6	1.6	0.15 J		0.2 U	1	0.9	31.1	13.8	4.9		0.5 U
Nov-06	0.3	0.2	10.7	1.3	0.2		0.2 U	1.1	6.8	28	15.3	6.5		0.5 U
Feb-07	0.3	0.4	4.1	1.1	0.16 J		0.05 J	1.1	1	28.2	15.6	3.6		0.5 U
Apr-07	0.3	0.3	11.9	1.3	0.2 U		0.2 U	1	1	28.4	16.7	4.8		0.5 U
Jul-07	0.3		13.4	1.3	0.12 J	0.13 J		0.9		28.6	15.6	5.2	5.2	
Oct-07	0.3	0.3	4.7	1.1	0.3			1	0.9	26.4	15.5	7.1		

Table 3b. Conventional Parameters from Groundwater Sampling, April 2000 to October 2007 (South Landfill)

Primary MCL ^(a) Secondary MCL ^(a)	Total Coliforms (MPN/100 ml)						
	<5% ^(b)						
	BXS-4	BXS-4 Dup ^(c)	BXS-3	BXS-2	BXS-1	BXS-1 Dup ^(c)	Field blk ^(d)
Apr-00	2 U		2 U	2 U	11	7	
Jul-00	2 U		110	6	2 U	2 U	2 U
Oct-00	4 J		80 J	11 J	2 UJ	2 J	2 UJ
Jan-01	2 UJ		14 J	4 J	2 UJ	2 UJ	2 UJ
Apr-01	2 UJ		2 UJ	17 J	2 UJ	2 UJ	2 UJ
Jul-01	2 UJ		2 UJ	500 J	2 UJ	2 UJ	2 UJ
Oct-01	2 UJ		900 J	2 UJ	2 U	2 UJ	2 UJ
Jan-02	2 U		2 UJ	2 UJ	2 UJ	2 UJ	2 UJ
Apr-02	2 UJ		2 UJ	2 UJ	2 UJ	2 UJ	2 UJ
Jul-02	2 UX		1600 E	8	2 U	2 UX	2 UX
Oct-02	2 U		2				
Jan-03	2		2 U	2 U	2 U	2	2 U
Apr-03	2 U		2 U	2 U	2 UJ	2 UJ	2 UJ
Jul-03	23 J		2 UJ	1600 J	30 J	300 J	
Oct-03	900 J	300 J	2 UJ	2 UJ			2 UJ
Feb-04	1	1 U	2 UX	2 UX	25 X		1 U
Apr-04	2 UX	2 UX	2 UX	2 UX	2 UX		2 UX
Jul-04	23	23	14	4	2 U		2 U
Oct-04	2 U	2	12	2 U	4		2 U
Jan-05	2 U	2 U	27	2 U	2 U		2 U
Apr-05	2 U	2 U	2 U	220	2 U		2 U
Aug-05	2 U	2 U	2 U	2 U	2 U		2 U
Nov-05	2 U	2 U	170	17	2 U		2 U
Jan-06	2 U	2 U	5.1	2 U	2 U		2 U
May-06	-9 U	2 U	2 U	2 U	2 U		2 U
Aug-06	2 U	2 U	2 U	2 U	36.4		2 U
Nov-06	2 U	8.7	2 U	129.8	5.3		2 U
Feb-07	1 U	1 U	1 U	1 U	1 U		1 U
Apr-07	1 U	1 U	1 U	1 U	1 U		1 U
Jul-07	1		6	2419.6 >	1 U	1	
Oct-07	1 U	1 U	1 U	5.1	1 U		

Table 3b. Conventional Parameters from Groundwater Sampling, April 2000 to October 2007 (South Landfill)

Notes:

- (a) Primary and secondary MCLs (maximum contaminant levels) per WAC 246-290-310.
- (b) <5% criteria indicates less than 5 percent of total coliform samples can be positive in a month.
- (c) Samples collected as BXS-6
- (d) Samples collected as BXS-5
- J Estimated Value
- U Not detected. Reporting limit shown.
- X Analysis performed past method holding time
- > Exceeds maximum detection level of test

Appendix A

Field Groundwater Sampling Records

PHONE (360) 435-2146 FAX (360) 435-3035

Groundwater Sampling Field Form

[illegible]

PHONE (360) 435-2146 FAX (360) 435-3035

Groundwater Sampling Field Form

[illegible]

PHONE (360) 435-2146 FAX (360) 435-3035

Groundwater Sampling Field Form

[illegible]

Revised 12/05/05

PHONE (360) 435-2146 FAX (360) 435-3035

Groundwater Sampling Field Form

[illegible]

PHONE (360) 435-2146 FAX (360) 435-3035

Groundwater Sampling Field Form

[illegible]

Revised 12/05/05

J. H. Baxter & Co.

PO Box 305

Arlington, WA 98223

(360) 435-2146 FAX (360) 435-3035

Groundwater Sampling Field Form

[illegible]

(360) 435-2146 FAX (360) 435-3035

Groundwater Sampling Field Form

[illegible]

JH Baxter & Co.

PO Box 305

Arlington, WA 98223

(360) 435-2146 FAX (360) 435-3035

Groundwater Sampling Field Form

[illegible]

+ BXS-5
+ BXS-6

Arlington, WA 98223

Groundwater Sampling Field Form

[illegible]

Groundwater Sampling Field Form

BXS-4

[illegible]

4. 3, 3, 3, 3

Groundwater Sampling Field Form

BXS-1

[illegible]

PHONE (360) 435-2146 FAX (360) 435-3035

AR ~~BXX~~
2/17/07 BXS-3

AR 7/17/10

PHONE (360) 435-2146 FAX (360) 435-3035

Groundwater Sampling Field Form

[illegible]

6520 188th St. NE / PO Box 305
Arlington, WA 98223

Groundwater Sampling Field Form

Revised 12/05/05

6520 188th St. NE / PO Box 305
Arlington, WA 98223

PHONE (360) 435-2146 FAX (360) 435-3035

Groundwater Sampling Field Form

[illegible]

PHONE (360) 435-2146 FAX (360) 435-3035

Groundwater Sampling Field Form

[illegible]

Appendix B

Chain of Custody Records and Laboratory Reports

March 5, 2007

Analytical Report for Service Request No: K0700844

Mary Larson
JH Baxter & Company
6520 188th Northeast
P.O. Box 305
Arlington, WA 98223

RE: Arlington Landfill Wells/BXS-Wells-Landfill

Dear Mary:

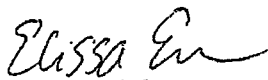
Enclosed are the results of the sample(s) submitted to our laboratory on February 02, 2007. For your reference, these analyses have been assigned our service request number K0700844.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAC standards. Exceptions are noted in the case narrative report where applicable. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3275. You may also contact me via Email at EErickson@kelso.caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.


Elissa Erickson
Project Chemist

EE/lmb

Page 1 of 299

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- B The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.
- * The duplicate analysis not within control limits. See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a chromatographic interference.
- X See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Program	Number
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Colorado DPHE	-
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DHS	WA200001
South Carolina DHEC	61002
Utah DOH	COLU
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-



Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client: JH Baxter
Project: Arlington Landfill Wells
Sample Matrix: Water

Service Request No.: K0700844
Date Received: 2/2/07

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Six water samples were received for analysis at Columbia Analytical Services on 2/2/07. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

General Chemistry Parameters

pH by EPA Method 150.1

Samples were received past the recommended holding time. The analysis was performed as soon as possible after receipt by the laboratory.

No other anomalies associated with the analysis of these samples were observed.

Dissolved Metals

No anomalies associated with the analysis of these samples were observed.

Approved by Elissa E...

Date 3-7-07

Chain of Custody Documentation

Project/Client JH Baxter

Service Request K07 00844

Cooler received on 2.2.07 and opened on 2.2.07 by DW

1. Were custody seals on outside of coolers? 1 Front Y N
If yes, how many and where? _____
2. Were custody seals intact? Y N
3. Were signature and date present on the custody seals? Y N
4. Is the shipper's airbill available and filed? If no, record airbill number: Greyhound enclosed Y N
5. COC# _____
Temperature of cooler(s) upon receipt: (°C) 1.9 3.1 _____
Temperature Blank: (°C) 1.0 2.4 _____
Were samples hand delivered on the same day as collection? Y N
6. Were custody papers properly filled out (ink, signed, etc.)? Y N
7. Type of packing material present foam insert, ice
8. Did all bottles arrive in good condition (unbroken)? Y N
9. Were all bottle labels complete (i.e analysis, preservation, etc.)? Y N
10. Did all bottle labels and tags agree with custody papers? Y N
11. Were the correct types of bottles used for the tests indicated? Y N
12. Were all of the preserved bottles received at the lab with the appropriate pH? Y N
13. Were VOA vials checked for absence of air bubbles, and if present, noted below? Y N
14. Were the 1631 Mercury bottles checked for absence of air bubbles, and if present, noted below? Y N
15. Did the bottles originate from CAS/K or a branch laboratory? Y N
16. Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection? Y N
17. Was C12/Res negative? Y N

Explain any discrepancies: _____

RESOLUTION: _____

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

Summary Package

General Chemistry Parameters

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07

Ammonia as Nitrogen

Analysis Method : 350.1
Test Notes :

Units : mg/L (ppm)
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0700844-001	0.05	0.006	1	02/08/07	ND	
BXS-2	K0700844-002	0.05	0.006	1	02/08/07	ND	
BXS-3	K0700844-003	0.05	0.006	1	02/08/07	0.93	
BXS-4	K0700844-004	0.05	0.006	1	02/08/07	0.50	
BXS-5	K0700844-005	0.05	0.006	1	02/08/07	ND	
BXS-6	K0700844-006	0.05	0.006	1	02/08/07	0.52	
Method Blank	K0700844-MB	0.05	0.006	1	02/08/07	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07
Date Prepared : NA
Date Analyzed : 02/08/07

Duplicate Summary Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0700844-001DUP
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Ammonia as Nitrogen	350.1	0.05	ND	ND	ND	-	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07
Date Prepared : NA
Date Analyzed : 02/08/07

Matrix Spike Summary
Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0700844-001MS
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Ammonia as Nitrogen	350.1	0.05	2.00	ND	1.94	97	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 02/08/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Laboratory Control Sample
Lab Code : K0700844-LCS
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Ammonia as Nitrogen	None	350.1	6.04	5.91	98	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project : Arlington Landfill Wells

Service Request : K0700844
Date Collected : NA
Date Received : NA

Ammonia as Nitrogen
EPA Method 350.1
Units: mg/L (ppm)

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	02/08/07	2.00	1.98	99
CCV2 Result	02/08/07	2.00	1.98	99
CCV3 Result	02/08/07	2.00	1.98	99
CCV4 Result	02/08/07	2.00	1.96	98
CCV5 Result	02/08/07	2.00	1.97	99
CCV6 Result	02/08/07	2.00	1.97	99
CCV7 Result	02/08/07	2.00	1.97	99
CCV8 Result	02/08/07	2.00	1.97	99

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	02/08/07	0.05	ND
CCB2 Result	02/08/07	0.05	ND
CCB3 Result	02/08/07	0.05	ND
CCB4 Result	02/08/07	0.05	ND
CCB5 Result	02/08/07	0.05	ND
CCB6 Result	02/08/07	0.05	ND
CCB7 Result	02/08/07	0.05	ND
CCB8 Result	02/08/07	0.05	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07

Chemical Oxygen Demand

Analysis Method : 410.1

Test Notes :

Units : mg/L (ppm)

Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0700844-001	5	3	1	02/09/07	6	
BXS-2	K0700844-002	5	3	1	02/09/07	36	
BXS-3	K0700844-003	5	3	1	02/09/07	75	
BXS-4	K0700844-004	5	3	1	02/09/07	ND	
BXS-5	K0700844-005	5	3	1	02/09/07	ND	
BXS-6	K0700844-006	5	3	1	02/09/07	ND	
Method Blank	K0700844-MB	5	3	1	02/09/07	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 02/09/07

Duplicate Summary Inorganic Parameters

Sample Name : BatchQC
Lab Code : K0700912-001DUP
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Chemical Oxygen Demand	410.1	5	26	27	27	4	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 02/09/07

Matrix Spike Summary Inorganic Parameters

Sample Name : BatchQC
Lab Code : K0700912-001MS
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery	Result Notes
							Acceptance Limits	
Chemical Oxygen Demand	410.1	5	100	26	131	105	75-125	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 02/09/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0700844-LCS
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Chemical Oxygen Demand	None	410.1	65	66	102	85-115	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07

Conductivity at 25 Degrees Celsius

Analysis Method : 120.1
Test Notes :

Units : uMhos/cm
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0700844-001	2	0.6	1	02/15/07	338	
BXS-2	K0700844-002	2	0.6	1	02/15/07	743	
BXS-3	K0700844-003	2	0.6	1	02/15/07	517	
BXS-4	K0700844-004	2	0.6	1	02/15/07	193	
BXS-5	K0700844-005	2	0.6	1	02/15/07	5	
BXS-6	K0700844-006	2	0.6	1	02/15/07	192	
Method Blank	K0700844-MB	2	0.6	1	02/15/07	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07
Date Prepared : NA
Date Analyzed : 02/15/07

Duplicate Summary Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0700844-001DUP
Test Notes :

Units : uMhos/cm
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Conductivity at 25 Degrees Celsius	120.1	2	338	340	339	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 02/15/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0700844-LCS
Test Notes :

Units : uMhos/cm
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery	Result Notes
						Acceptance Limits	
Conductivity at 25 Degrees Celsius	None	120.1	927	894	96	85-115	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07

Nitrate+Nitrite as Nitrogen

Analysis Method : 353.2

Test Notes :

Units : mg/L (ppm)

Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0700844-001	0.05	0.006	1	02/09/07	0.75	
BXS-2	K0700844-002	0.05	0.006	1	02/09/07	0.94	
BXS-3	K0700844-003	0.05	0.006	1	02/09/07	0.96	
BXS-4	K0700844-004	0.05	0.006	1	02/09/07	0.28	
BXS-5	K0700844-005	0.05	0.006	1	02/09/07	1.02	
BXS-6	K0700844-006	0.05	0.006	1	02/09/07	0.58	
Method Blank	K0700844-MB	0.05	0.006	1	02/09/07	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07
Date Prepared : NA
Date Analyzed : 02/09/07

Duplicate Summary Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0700844-001DUP
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Nitrate+Nitrite as Nitrogen	353.2	0.05	0.75	0.75	0.75	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07
Date Prepared : NA
Date Analyzed : 02/09/07

Matrix Spike Summary Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0700844-001MS
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
							Percent Recovery Acceptance Limits	
Nitrate+Nitrite as Nitrogen	353.2	0.05	2.00	0.75	2.87	106	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 02/09/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0700844-LCS
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Nitrate+Nitrite as Nitrogen	None	353.2	4.45	4.25	96	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project : Arlington Landfill Wells

Service Request : K0700844
Date Collected : NA
Date Received : NA

Nitrate+Nitrite as Nitrogen
EPA Method 353.2
Units: mg/L (ppm)

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	02/09/07	2.00	1.99	100
CCV2 Result	02/09/07	2.00	2.00	100
CCV3 Result	02/09/07	2.00	1.97	99

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	02/09/07	0.05	ND
CCB2 Result	02/09/07	0.05	ND
CCB3 Result	02/09/07	0.05	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07

pH

Analysis Method : 150.1
Test Notes :

Units : pH UNITS
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
BXS-1	K0700844-001	-	-	1	02/02/07 16:41	6.36	
BXS-2	K0700844-002	-	-	1	02/02/07 16:43	6.36	
BXS-3	K0700844-003	-	-	1	02/02/07 16:45	6.38	
BXS-4	K0700844-004	-	-	1	02/02/07 16:21	7.81	
BXS-5	K0700844-005	-	-	1	02/02/07 16:24	5.50	
BXS-6	K0700844-006	-	-	1	02/02/07 16:24	7.90	

COLUMBIA ANALYTICAL SERVICES, INC.**QA/QC Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07
Date Prepared : NA
Date Analyzed : 02/02/07

**Duplicate Summary
Inorganic Parameters**

Sample Name : BXS-1
Lab Code : K0700844-001DUP
Test Notes :

Units : pH UNITS
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
pH	150.1	-	6.36	6.32	6.34	<1	

COLUMBIA ANALYTICAL SERVICES, INC.**QA/QC Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 02/02/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0700844-LCS
Test Notes :

Units : pH UNITS
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
pH	None	150.1	9.22	9.13	99	85-115	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07

Tannin and Lignin

Analysis Method : SM 5550 B

Test Notes :

Units : mg/L (ppm)

Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0700844-001	0.2	0.03	1	02/14/07	0.16	J
BXS-2	K0700844-002	0.2	0.03	1	02/14/07	1.1	
BXS-3	K0700844-003	0.2	0.03	1	02/14/07	4.1	
BXS-4	K0700844-004	0.2	0.03	1	02/14/07	0.3	
BXS-5	K0700844-005	0.2	0.03	1	02/14/07	0.05	J
BXS-6	K0700844-006	0.2	0.03	1	02/14/07	0.4	
Method Blank	K0700844-MB	0.2	0.03	1	02/14/07	ND	

SM Standard Methods for the Examination of Water and Wastewater, 19th Ed., 1995.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07
Date Prepared : NA
Date Analyzed : 02/14/07

Duplicate Summary Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0700844-001DUP
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Tannin and Lignin	SM 5550 B	0.2	0.16	0.16	0.16	<1	J

SM Standard Methods for the Examination of Water and Wastewater, 19th Ed., 1995.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07
Date Prepared : NA
Date Analyzed : 02/14/07

Matrix Spike Summary Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0700844-001MS
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery	Result Notes
							Acceptance Limits	
Tannin and Lignin	SM 5550 B	0.2	1.0	0.16	1.0	84	75-125	

SM Standard Methods for the Examination of Water and Wastewater, 19th Ed., 1995.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 02/14/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0700844-LCS
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Tannin and Lignin	None	SM 5550 B	1.0	1.1	110	85-115	

SM Standard Methods for the Examination of Water and Wastewater, 19th Ed., 1995.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company

Project : Arlington Landfill Wells

Service Request : K0700844

Date Collected : NA

Date Received : NA

Tannin and Lignin

SM 5550 B

Units: mg/L (ppm)

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	02/14/07	2.5	2.5	100
CCV2 Result	02/14/07	2.5	2.6	104
CCV3 Result	02/14/07	2.5	2.6	104

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	02/14/07	0.2	ND
CCB2 Result	02/14/07	0.2	ND
CCB3 Result	02/14/07	0.2	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07

Solids, Total Dissolved (TDS)

Analysis Method : 160.1
Test Notes :

Units : mg/L (ppm)
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0700844-001	5	5	1	02/08/07	231	
BXS-2	K0700844-002	5	5	1	02/08/07	420	
BXS-3	K0700844-003	5	5	1	02/08/07	522	
BXS-4	K0700844-004	5	5	1	02/08/07	142	
BXS-5	K0700844-005	5	5	1	02/08/07	ND	
BXS-6	K0700844-006	5	5	1	02/08/07	146	
Method Blank	K0700844-MB	5	5	1	02/08/07	ND	

COLUMBIA ANALYTICAL SERVICES, INC.**QA/QC Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07
Date Prepared : NA
Date Analyzed : 02/08/07

Duplicate Summary
Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0700844-001DUP
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Solids, Total Dissolved (TDS)	160.1	5	231	227	229	2	

COLUMBIA ANALYTICAL SERVICES, INC.**QA/QC Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number :- BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 02/08/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0700844-LCS
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery	Result Notes
						Acceptance Limits	
Solids, Total Dissolved (TDS)	None	160.1	697	736	106	85-115	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07

Carbon, Total Organic

Analysis Method : 415.1
Test Notes :

Units : mg/L (ppm)
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0700844-001	0.5	0.04	1	02/06/07	3.6	
BXS-2	K0700844-002	5.0	0.4	10	02/06/07	15.6	
BXS-3	K0700844-003	5.0	0.4	10	02/06/07	28.2	
BXS-4	K0700844-004	0.5	0.04	1	02/06/07	1.1	
BXS-5	K0700844-005	0.5	0.04	1	02/06/07	ND	
BXS-6	K0700844-006	0.5	0.04	1	02/06/07	1.0	
Method Blank	K0700844-MB	0.5	0.04	1	02/06/07	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07
Date Prepared : NA
Date Analyzed : 02/06/07

Duplicate Summary Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0700844-001DUP
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Carbon, Total Organic	415.1	0.5	3.6	3.6	3.6	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07
Date Prepared : NA
Date Analyzed : 02/06/07

Matrix Spike Summary
Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0700844-001MS
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery	Result Notes
							Acceptance Limits	
Carbon, Total Organic	415.1	0.5	25.0	3.6	29.4	103	68-132	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 02/06/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0700844-LCS
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Carbon, Total Organic	None	415.1	24.3	23.5	97	90-109	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project : Arlington Landfill Wells

Service Request : K0700844
Date Collected : NA
Date Received : NA

Carbon, Total Organic
EPA Method 415.1
Units: mg/L (ppm)

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	02/06/07	25.0	25.5	102
CCV2 Result	02/06/07	25.0	25.6	102
CCV3 Result	02/06/07	25.0	26.8	107
CCV4 Result	02/06/07	25.0	26.5	106
CCV5 Result	02/06/07	25.0	26.3	105
CCV6 Result	02/06/07	25.0	26.5	106
CCV7 Result	02/06/07	25.0	26.3	105
CCV8 Result	02/06/07	25.0	26.1	104

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	02/06/07	0.5	ND
CCB2 Result	02/06/07	0.5	ND
CCB3 Result	02/06/07	0.5	ND
CCB4 Result	02/06/07	0.5	ND
CCB5 Result	02/06/07	0.5	ND
CCB6 Result	02/06/07	0.5	ND
CCB7 Result	02/06/07	0.5	ND
CCB8 Result	02/06/07	0.5	ND

COLUMBIA ANALYTICAL SERVICES, INC.**Analytical Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07

Chloride

Analysis Method : 300.0
Test Notes :

Units : mg/L (ppm)
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0700844-001	0.2	0.06	2	02/08/07	6.4	
BXS-2	K0700844-002	0.2	0.06	2	02/08/07	4.9	
BXS-3	K0700844-003	0.2	0.06	2	02/08/07	3.1	
BXS-4	K0700844-004	0.2	0.06	2	02/08/07	1.6	
BXS-5	K0700844-005	0.2	0.06	2	02/09/07	ND	
BXS-6	K0700844-006	0.2	0.06	2	02/09/07	1.6	
Method Blank	K0700844-MB	0.2	0.03	1	02/08/07	ND	

COLUMBIA ANALYTICAL SERVICES, INC.**QA/QC Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07
Date Prepared : NA
Date Analyzed : 02/08/07

**Duplicate Summary
Inorganic Parameters**

Sample Name : BXS-1
Lab Code : K0700844-001DUP
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Chloride	300.0	0.2	6.4	6.3	6.4	2	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07
Date Prepared : NA
Date Analyzed : 02/08/07

Matrix Spike Summary Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0700844-001MS
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
							Percent Recovery Acceptance Limits	
Chloride	300.0	0.2	4.0	6.4	10.4	100	80-120	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 02/08/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Laboratory Control Sample
Lab Code : K0700844-LCS
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Chloride	None	300.0	5.0	4.9	98	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project : Arlington Landfill Wells

Service Request : K0700844
Date Collected : NA
Date Received : NA

Chloride
EPA Method 300.0
Units: mg/L (ppm)

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	02/08/07	5.0	5.0	100
CCV2 Result	02/08/07	5.0	5.0	100
CCV3 Result	02/08/07	5.0	4.9	98
CCV4 Result	02/09/07	5.0	4.9	98

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	02/08/07	0.2	ND
CCB2 Result	02/08/07	0.2	ND
CCB3 Result	02/08/07	0.2	ND
CCB4 Result	02/09/07	0.2	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07

Sulfate

Analysis Method : 300.0
Test Notes :

Units : mg/L (ppm)
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0700844-001	0.2	0.06	2	02/08/07	14.8	
BXS-2	K0700844-002	0.2	0.06	2	02/08/07	0.15	J
BXS-3	K0700844-003	0.2	0.06	2	02/08/07	0.09	J
BXS-4	K0700844-004	0.2	0.06	2	02/08/07	1.4	
BXS-5	K0700844-005	0.2	0.06	2	02/09/07	0.03	J
BXS-6	K0700844-006	0.2	0.06	2	02/09/07	1.4	
Method Blank	K0700844-MB	0.2	0.03	1	02/08/07	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : 02/01/07
Date Received : 02/02/07
Date Prepared : NA
Date Analyzed : 02/08/07

Duplicate Summary Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0700844-001DUP
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Sulfate	300.0	0.2	14.8	14.3	4.6	3	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
 Project Name : Arlington Landfill Wells
 Project Number : BXS-Wells-Landfill
 Sample Matrix : WATER

Service Request : K0700844
 Date Collected : 02/01/07
 Date Received : 02/02/07
 Date Prepared : NA
 Date Analyzed : 02/08/07

Matrix Spike Summary Inorganic Parameters

Sample Name : BXS-1
 Lab Code : K0700844-001MS
 Test Notes :

Units : mg/L (ppm)
 Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
							Percent Recovery Acceptance Limits	
Sulfate	300.0	0.2	4.0	14.8	19.1	108	80-120	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0700844
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 02/08/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Laboratory Control Sample
Lab Code : K0700844-LCS
Test Notes :

Units : mg/L (ppm)
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Sulfate	None	300.0	5.0	4.8	96	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project : Arlington Landfill Wells

Service Request : K0700844
Date Collected : NA
Date Received : NA

Sulfate
EPA Method 300.0
Units: mg/L (ppm)

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	02/08/07	5.0	5.0	100
CCV2 Result	02/08/07	5.0	5.0	100
CCV3 Result	02/08/07	5.0	4.7	94
CCV4 Result	02/09/07	5.0	4.8	96

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	02/08/07	0.2	ND
CCB2 Result	02/08/07	0.2	ND
CCB3 Result	02/08/07	0.2	ND
CCB4 Result	02/09/07	0.2	ND

Dissolved Metals

DISSOLVED METALS

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells

Service Request: K0700844

<u>Sample No.</u>	<u>Lab Sample ID.</u>
BXS-1	K0700844-001 DISS
BXS-1D	K0700844-001D DISS
BXS-1S	K0700844-001S DISS
BXS-2	K0700844-002 DISS
BXS-3	K0700844-003 DISS
BXS-4	K0700844-004 DISS
BXS-5	K0700844-005 DISS
BXS-6	K0700844-006 DISS
Method Blank	K0700844-MB

Were ICP interelement corrections applied?

Yes/No YES

Were ICP background corrections applied?

Yes/No YESIf yes-were raw data generated before
application of background corrections?Yes/No NO

Comments:

Signature: JH BaxterDate: 03/05/97

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0700844
Date Collected: 02/01/07
Date Received: 02/02/07
Units: µG/L
Basis: NA

Sample Name: BXS-1

Lab Code: K0700844-001 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	1.0	1	2/14/07	2/16/07	1.0	U	
Barium	6010B	5.0	0.9	1	2/14/07	2/17/07	19.1		
Cadmium	6010B	5.0	3.0	1	2/14/07	2/17/07	3.0	U	
Copper	6010B	10.0	2.0	1	2/14/07	2/17/07	3.0	B	
Iron	6010B	20.0	4.0	1	2/14/07	2/17/07	4.0	U	
Manganese	6010B	5.0	0.4	1	2/14/07	2/17/07	89.5		
Nickel	6010B	20	20	1	2/14/07	2/17/07	20	U	
Zinc	6010B	10.0	2.0	1	2/14/07	2/17/07	4.0	B	

% Solids: 0.0

Comments:

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company

Service Request: K0700844

Project No.: BXS-Wells-Landfill

Date Collected: 02/01/07

Project Name: Arlington Landfill Wells

Date Received: 02/02/07

Matrix: WATER

Units: µg/L

Basis: NA

Sample Name: BXS-2

Lab Code: K0700844-002 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	1.0	1	2/14/07	2/16/07	1.1	B	
Barium	6010B	5.0	0.9	1	2/14/07	2/17/07	47.0		
Cadmium	6010B	5.0	3.0	1	2/14/07	2/17/07	3.0	U	
Copper	6010B	10.0	2.0	1	2/14/07	2/17/07	2.0	U	
Iron	6010B	20.0	4.0	1	2/14/07	2/17/07	846		
Manganese	6010B	5.0	0.4	1	2/14/07	2/17/07	1350		
Nickel	6010B	20	20	1	2/14/07	2/17/07	38.4		
Zinc	6010B	10.0	2.0	1	2/14/07	2/17/07	5.8	B	

% Solids: 0.0

Comments:

DISSOLVED METALS
-1-
INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0700844
Date Collected: 02/01/07
Date Received: 02/02/07
Units: µG/L
Basis: NA

Sample Name: BXS-3

Lab Code: K0700844-003 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	1.0	1	2/14/07	2/16/07	145		
Barium	6010B	5.0	0.9	1	2/14/07	2/17/07	101		
Cadmium	6010B	5.0	3.0	1	2/14/07	2/17/07	3.0	U	
Copper	6010B	10.0	2.0	1	2/14/07	2/17/07	2.0	U	
Iron	6010B	20.0	4.0	1	2/14/07	2/17/07	110000		
Manganese	6010B	50.0	4.0	10	2/14/07	2/17/07	13500		
Nickel	6010B	20	20	1	2/14/07	2/17/07	20	U	
Zinc	6010B	10.0	2.0	1	2/14/07	2/17/07	12.9		

% Solids: 0.0

Comments:

DISSOLVED METALS
-i-
INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company

Service Request: K0700844

Project No.: BXS-Wells-Landfill

Date Collected: 02/01/07

Project Name: Arlington Landfill Wells

Date Received: 02/02/07

Matrix: WATER

Units: µG/L

Basis: NA

Sample Name: BXS-4

Lab Code: K0700844-004 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	1.0	1	2/14/07	2/16/07	6.8		
Barium	6010B	5.0	0.9	1	2/14/07	2/17/07	28.6		
Cadmium	6010B	5.0	3.0	1	2/14/07	2/17/07	3.0	U	
Copper	6010B	10.0	2.0	1	2/14/07	2/17/07	2.0	U	
Iron	6010B	20.0	4.0	1	2/14/07	2/17/07	38.6		
Manganese	6010B	5.0	0.4	1	2/14/07	2/17/07	112		
Nickel	6010B	20	20	1	2/14/07	2/17/07	20	U	
Zinc	6010B	10.0	2.0	1	2/14/07	2/17/07	2.4	B	

% Solids: 0.0

Comments:

DISSOLVED METALS

-I-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0700844
Date Collected: 02/01/07
Date Received: 02/02/07
Units: µG/L
Basis: NA

Sample Name: BXS-5

Lab Code: K0700844-005 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	1.0	1	2/14/07	2/16/07	1.0	U	
Barium	6010B	5.0	0.9	1	2/14/07	2/17/07	0.9	U	
Cadmium	6010B	5.0	3.0	1	2/14/07	2/17/07	3.0	U	
Copper	6010B	10.0	2.0	1	2/14/07	2/17/07	2.0	U	
Iron	6010B	20.0	4.0	1	2/14/07	2/17/07	4.0	U	
Manganese	6010B	5.0	0.4	1	2/14/07	2/17/07	0.4	U	
Nickel	6010B	20	20	1	2/14/07	2/17/07	20	U	
Zinc	6010B	10.0	2.0	1	2/14/07	2/17/07	2.0	U	

% Solids: 0.0

Comments:

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company

Service Request: K0700844

Project No.: BXS-Wells-Landfill

Date Collected: 02/01/07

Project Name: Arlington Landfill Wells

Date Received: 02/02/07

Matrix: WATER

Units: µG/L

Basis: NA

Sample Name: BXS-6

Lab Code: K0700844-006 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	1.0	1	2/14/07	2/16/07	5.8		
Barium	6010B	5.0	0.9	1	2/14/07	2/17/07	28.9		
Cadmium	6010B	5.0	3.0	1	2/14/07	2/17/07	3.0	U	
Copper	6010B	10.0	2.0	1	2/14/07	2/17/07	2.0	U	
Iron	6010B	20.0	4.0	1	2/14/07	2/17/07	36.7		
Manganese	6010B	5.0	0.4	1	2/14/07	2/17/07	114		
Nickel	6010B	20	20	1	2/14/07	2/17/07	20	U	
Zinc	6010B	10.0	2.0	1	2/14/07	2/17/07	2.0	U	

% Solids: 0.0

Comments:

DISSOLVED METALS
-1-
INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0700844
Date Collected:
Date Received:
Units: µG/L
Basis: NA

Sample Name: Method Blank

Lab Code: K0700844-MB

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	1.0	1	2/14/07	2/16/07	1.0	U	
Barium	6010B	5.0	0.9	1	2/14/07	2/17/07	0.9	U	
Cadmium	6010B	5.0	3.0	1	2/14/07	2/17/07	3.0	U	
Copper	6010B	10.0	2.0	1	2/14/07	2/17/07	2.0	U	
Iron	6010B	20.0	4.0	1	2/14/07	2/17/07	4.0	U	
Manganese	6010B	5.0	0.4	1	2/14/07	2/17/07	0.4	U	
Nickel	6010B	20	20	1	2/14/07	2/17/07	20	U	
Zinc	6010B	10.0	2.0	1	2/14/07	2/17/07	2.0	U	

% Solids: 0.0

Comments:

DISSOLVED METALS

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JH Baxter & Company

Service Request: K0700844

Project No.: BXS-Wells-Landfill

Project Name: Arlington Landfill Wells

ICV Source: Inorganic Ventures

CCV Source: Various

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic	25.0	24.4	98	30.0	29.5	98	28.8	96	7060A
Barium	5000	5000	100	500	488	98	488	98	6010B
Cadmium	1250	1280	102	500	498	100	495	99	6010B
Copper	625	629	101	500	487	97	484	97	6010B
Iron	2500	2490	100	5000	4900	98	4920	98	6010B
Manganese	1250	1260	101	500	488	98	488	98	6010B
Nickel	1250	1270	102	5000	4950	99	4990	100	6010B
Zinc	1250	1270	102	2500	2470	99	2480	99	6010B

DISSOLVED METALS

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JH Baxter & Company

Service Request: K0700844

Project No.: BXS-Wells-Landfill

Project Name: Arlington Landfill Wells

ICV Source:

CCV Source: Various

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic				30.0	29.2	97	28.6	95	7060A
Barium				500	492	98			6010B
Cadmium				500	499	100			6010B
Copper				500	486	97			6010B
Iron				5000	4930	99			6010B
Manganese				500	491	98			6010B
Nickel				5000	5010	100			6010B
Zinc				2500	2490	100			6010B

DISSOLVED METALS

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JH Baxter & Company

Service Request: K0700844

Project No.: BXS-Wells-Landfill

Project Name: Arlington Landfill Wells

ICV Source:

CCV Source: Various

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic				30.0	28.1	94			7060A

DISSOLVED METALS
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfil
Project Name: Arlington Landfill Wells

Service Request: K0700844

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	Initial True	Initial Found	Initial %R	Final Found	Final %R
Arsenic	5.0	4.8	97					
Barium				5.0	5.24	105		
Cadmium				5.0	2.83	57		
Copper				10	11.9	119		
Iron				20	20.4	102		
Manganese				5.0	5.31	106		
Nickel				20	17.8	89		
Zinc				10	11.1	112		

DISSOLVED METALS

-3-

BLANKS

Client: JH Baxter & Company

Service Request: K0700844

Project No.: BXS-Wells-Landf

Project Name: Arlington Landfill Wells

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		Method
		C	1	C	2	C	3	C	C		
Arsenic	1.0	U	1.0	U	1.0	U	1.0	U			7060A
Barium	0.9	U	0.9	U	0.9	U	0.9	U			6010B
Cadmium	3.0	U	3.0	U	3.0	U	3.0	U			6010B
Copper	2.0	U	2.0	U	2.0	U	2.0	U			6010B
Iron	4.0	U	4.0	U	4.0	U	4.0	U			6010B
Manganese	0.4	U	0.4	U	0.4	U	0.4	U			6010B
Nickel	20	U	20	U	20	U	20	U			6010B
Zinc	2.0	U	2.0	U	2.0	U	2.0	U			6010B

DISSOLVED METALS

-3-

BLANKS

Client: JH Baxter & Company
Project No.: BXS-Wells-Landf
Project Name: Arlington Landfill Wells

Service Request: K0700844

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		Method
	C		1	C	2	C	3	C	C		
Arsenic			1.0	U	1.0	U					7060A

DISSOLVED METALS

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: JH Baxter & Company

Service Request: K0700844

Project No.: BXS-Wells-Landfill

Project Name: Arlington Landfill Wells

ICP ID Number: TJA ICP-OES 6.2

ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Barium		500	1.2	477	95			
Cadmium		1000	3.2	974	97			
Copper		500	-2.5	476	95			
Iron	200000	200000	170000	174000	87			
Manganese		500	-8.0	446	89			
Nickel		1000	-7	885	89			
Zinc		1000	11.1	968	97			

DISSOLVED METALS
- 5a -
SPIKE SAMPLE RECOVERY

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0700844

Units: µg/L

Basis: NA

% Solids: 0.0

Sample Name: BXS-1S

Lab Code: K0700844-001S DISS

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	62 - 116	37.5		1.0	U	40.0	94		7060A
Barium	87 - 115	1970		19.1		2000	98		6010B
Cadmium	73 - 123	49.1		3.0	U	50.0	98		6010B
Copper	83 - 116	244		3.0	B	250	96		6010B
Iron	43 - 163	964		4.0	U	1000	96		6010B
Manganese	62 - 140	576		89.5		500	97		6010B
Nickel	89 - 115	501		20.0	U	500	100		6010B
Zinc	84 - 115	491		4.0	B	500	97		6010B

An empty field in the Control Limit column indicates the control limit is not applicable

DISSOLVED METALS

- 6 -

DUPLICATES

Client: JH Baxter & Company

Service Request: K0700844

Project No.: BXS-Wells-Landfill

Units: µg/L

Project Name: Arlington Landfill Wells

Basis: NA

Matrix: WATER

% Solids: 0.0

Sample Name: BXS-1D

Lab Code: K0700844-001D DISS

Analyte	Control Limit(%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic		1.0	U	1.0	U			7060A
Barium		19.1		19.0		1		6010B
Cadmium		3.0	U	3.0	U			6010B
Copper		3.0	B	2.0	U	200.0		6010B
Iron		4.0	U	4.0	U			6010B
Manganese	20	89.5		90.1		1		6010B
Nickel		20	U	20	U			6010B
Zinc		4.0	B	3.1	B	28		6010B

An empty field in the Control Limit column indicates the control limit is not applicable

DISSOLVED METALS
- 7 -
LABORATORY CONTROL SAMPLE

Client: JH Baxter & Company

Service Request: K0700844

Project No.: BXS-Wells-Landfill

Project Name: Arlington Landfill Wells

Aqueous LCS Source: Inorganic Ventures

Solid LCS Source:

Analyte	Aqueous ug/L			Solid (mg/kg)					
	True	Found	%R	True	Found	C	Limits	%R	
Arsenic	25.0	24.2	97						
Barium	5000	5120	102						
Cadmium	1250	1290	103						
Copper	625	637	102						
Iron	2500	2500	100						
Manganese	1250	1270	102						
Nickel	1250	1290	103						
Zinc	1250	1290	103						

DISSOLVED METALS

- 9 -

ICP SERIAL DILUTIONS

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells

Service Request: K0700844

Units: ug/L

Sample Name: BXS-3L

Lab Code: K0700844-003L DISS

Analyte	Initial Sample Result (I) C	Serial Dilution Result (S) C	% Differ- ence Q	Method
Barium	101	98.8	1	6010B
Cadmium	3.00 U	15.0 U		6010B
Copper	2.00 U	10.0 U		6010B
Iron	110000	111000	1	6010B
Manganese	1350	1330	1	6010B
Nickel	20.0 U	100 U		6010B
Zinc	12.9	10.9 B	16	6010B

DISSOLVED METALS

-10-

METHOD DETECTION LIMITS

Client: JH Baxter & Company

Service Request: K0700844

Project No.: BXS-Wells-Landfill

Project Name: Arlington Landfill Wells

ICP/ICP-MS ID #: TJA ICP-OES 6.2

GEAA ID #:

AA ID #:

Analyte	Wave-length	Back-ground	MRL (ug/L)	MDL (ug/L)	Method
Barium	493.60		5.0	0.9	6010B
Cadmium	228.80		5.0	3.0	6010B
Copper	324.70		10.0	2.0	6010B
Iron	259.90		20.0	4.0	6010B
Manganese	257.60		5.0	0.4	6010B
Nickel	231.60		20.0	20.0	6010B
Zinc	213.80		10.0	2.0	6010B

Comments:

DISSOLVED METALS

-10-

METHOD DETECTION LIMITS

Client: JH Baxter & Company

Service Request: K0700844

Project No.: BXS-Wells-Landfill

Project Name: Arlington Landfill Wells

ICP/ICP-MS ID #:

GFAA ID #: Varian-7 (GFAA)

AA ID #:

Analyte	Wave-length	Back-ground	MRL (ug/L)	MDL (ug/L)	Method
Arsenic	193.60	BZ	5.0	1.0	7060A

Comments: _____

May 18, 2007

Analytical Report for Service Request No: K0703368

Kathy Gunderson
Premier Environmental Services
981 State Street
Raymond, WA 98577

RE: Arlington Landfill Wells/BXS-Wells-Landfill

Dear Kathy:

Enclosed are the results of the sample(s) submitted to our laboratory on April 23, 2007. For your reference, these analyses have been assigned our service request number K0703368.

All analyses were performed according to our laboratory's quality assurance program. Where applicable, the methods cited conform to the Methods Update Rule (effective 4/11/2007), which relates to the use of analytical methods for the drinking water and waste water programs. The test results meet requirements of the NELAC standards. Exceptions are noted in the case narrative report where applicable. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3275. You may also contact me via Email at EErickson@kelso.caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.



Elissa Erickson
Project Chemist

EE/lmb

Page 1 of 

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- B The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.
- * The duplicate analysis not within control limits. See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a chromatographic interference.
- X See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- B The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.
- * The duplicate analysis not within control limits. See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a chromatographic interference.
- X See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client: JH Baxter & Company
Project: Arlington Landfill Wells
Sample Matrix: Water

Service Request No.: K0703368
Date Received: 4/23/07

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Twelve water samples were received for analysis at Columbia Analytical Services on 4/23/07. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

General Chemistry Parameters

No anomalies associated with the analysis of these samples were observed.

Dissolved Metals

No anomalies associated with the analysis of these samples were observed.

Approved by Elissa Erickson Date 5-22-07

**Chain of Custody
Documentation**



An Employee - Owned Company

CHAIN OF CUSTODY

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (360) 695-7222x07 • FAX (360) 636-1068

PAGE 1 OF 2 COC #

SR#: 4070 3368

PROJECT NAME: H. BAXTER ARUNGTON
 PROJECT NUMBER: LANDFILL
 PROJECT MANAGER: R. THOMAS
 COMPANY/ADDRESS: 85 N. BAXTER ROAD
 CITY/STATE/ZIP: EUGENE OR
 E-MAIL ADDRESS: rthomas@jhbarco.com
 PHONE: 541 689. 3801 FAX: 541 689. 8303
 SAMPLER'S SIGNATURE: [Signature]

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semi-volatile Organics by GC/MS 625 ☐ 8270 ☐ 8270LL ☐	Volatile Organics 624 ☐ 8260 ☐	Hydrocarbons Gas ☐ 8021 ☐ BTEX ☐	Fuel Fingerprint (FIQ) Oil & Grease (TRPH) 1664 HEM ☐ 1664 SGT ☐	Pesticides/Herbicides 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Chlorophenolics Tri ☐ Tetra ☐ PAHS 8310 ☐ SIM ☐	Metals, Total or Dissolved (See list below)	Cyanide ☐	pH, Cond., Cl, SO ₄ , PO ₄ , F, NO ₂ , NO ₃ , BOD, TSS, TDS (circle)	DOC (circle) NO ₂ +NO ₃	TOX-9020 ☐ AOX 1650 ☐ 506 ☐	REMARKS
BXS-1	4.18	1120		W	3							X					
BXS-2	4.18	1055		W	3							X					
BXS-3	4.18	0940		W	3							X					
BXN-4	4.18	1330		W	3							X					
BXN-3	4.18	1500		W	3							X					
BXN-1	4.18	1700		W	3							X					
BXN-2	4.18	1835		W	3							X					
BXN-5	4.18	1510	4.1807	W	3							X					
BXN-6	4.19	0815		W	3							X					
BXS-4	4.19	1325		W	3							X					

REPORT REQUIREMENTS

- ☒ I. Routine Report: Method Blank, Surrogate, as required
- ☐ II. Report Dup., MS, MSD as required
- ☐ III. Data Validation Report (includes all raw data)
- ☐ IV. CLP Deliverable Report
- ☐ V. EDD

INVOICE INFORMATION

P.O. # _____
 Bill To: JH BAXTER

TURNAROUND REQUIREMENTS

____ 24 hr. ____ 48 hr.
 ____ 5 Day
☒ Standard (10-15 working days)
 ____ Provide FAX Results
 ____ Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg
 Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

CONTACT KATHY GUNDERSON AT
 (360) 942-3409 FOR QUESTIONS
 METALS ARE FIELD FILTERED

RELINQUISHED BY:

Signature: [Signature] Date/Time: 4.19.07/1430
 Printed Name: J.S. Barnett Firm: Premier

RECEIVED BY:

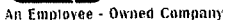
Signature: [Signature] Date/Time: 4/19/07 1300
 Printed Name: [Signature] Firm: CAS

RELINQUISHED BY:

Signature: _____ Date/Time: _____
 Printed Name: _____ Firm: _____

RECEIVED BY:

Signature: _____ Date/Time: _____
 Printed Name: _____ Firm: _____



CHAIN OF CUSTODY

SR#: K0703368

PAGE 2 OF 2 COC #

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

[illegible]

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC EE

Client / Project: J H Boxter Service Request K07 3368
Received: 4-23-07 Opened: 4-23-07 By: aw

1. Samples were received via? US Mail Fed Ex UPS DHL GH GS PDX Courier Hand Delivered
2. Samples were received in: (circle) Cooler Box Envelope Other NA
3. Were custody seals on coolers? NA Y N If yes, how many and where? 1 Front
If present, were custody seals intact? Y N If present, were they signed and dated? Y N
4. Is shipper's air-bill filed? If not, record air-bill number: K 0009429309 NA Y N
1 Cooler tested was shipped in Box K 0009429256
5. Temperature of cooler(s) upon receipt (°C): 5.8 4.9 2.9
Temperature Blank (°C): 4.7 4.3 4.3
6. If applicable, list Chain of Custody Numbers: _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
8. Packing material used. Inserts Bubble Wrap Gel Packs Wet Ice Sleeves Other _____
9. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.*
10. Were all bottle labels complete (i.e analysis, preservation, etc.)?
11. Did all bottle labels and tags agree with custody papers? *Indicate in the table below*
12. Were the correct types of bottles used for the tests indicated?
13. Were all of the preserved bottles received at the lab with the appropriate pH? *Indicate in the table below*
14. Were VOA vials and 1631 Mercury bottles checked for absence of air bubbles? *Indicate in the table below.*
15. Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?
16. Was C12/Res negative?

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
1) NONE	BXN-4		
2) BXS-3	BXS-2		

Sample ID	Bottle Count	Bottle Type	Out of Temp	Head-space	Broken	pH	Reagent	Volume added	Reagent Lot Number	Initials

Additional Notes, Discrepancies, & Resolutions: ① Placed by time 13:30 ② Placed by time 10:05

00010

General Chemistry Parameters

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 04/18,19/07
Date Received : 04/23/07

Ammonia as Nitrogen

Analysis Method : 350.1
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0703368-001	0.05	0.006	1	04/24/07	ND	
BXS-2	K0703368-002	0.05	0.006	1	04/24/07	ND	
BXS-3	K0703368-003	0.05	0.006	1	04/24/07	0.71	
BXN-4	K0703368-004	0.25	0.03	5	04/24/07	10.1	
BXN-3	K0703368-005	0.05	0.006	1	04/24/07	0.08	
BXN-1	K0703368-006	0.05	0.006	1	04/24/07	0.07	
BXN-2	K0703368-007	0.05	0.006	1	04/24/07	ND	
BXN-5	K0703368-008	0.05	0.006	1	04/24/07	0.041	J
BXN-6	K0703368-009	0.05	0.006	1	04/24/07	ND	
BXS-4	K0703368-010	0.05	0.006	1	04/24/07	0.50	
BXS-6	K0703368-011	0.05	0.006	1	04/24/07	0.50	
BXS-5	K0703368-012	0.05	0.006	1	04/24/07	ND	
Method Blank	K0703368-MB	0.05	0.006	1	04/24/07	ND	

00012

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 4/18/2007
Date Received : 4/23/2007
Date Prepared : NA
Date Analyzed : 04/24/07

Duplicate Summary Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0703368-001DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Ammonia as Nitrogen	350.1	0.05	ND	ND	ND	-	

00013

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 4/18/2007
Date Received : 4/23/2007
Date Prepared : NA
Date Analyzed : 04/24/07

Matrix Spike Summary Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0703368-001MS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Ammonia as Nitrogen	350.1	0.05	2.00	ND	1.92	96	90-110	

00014

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 04/24/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0703368-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Ammonia as Nitrogen	NONE	350.1	4.01	3.73	93	90-110	

00015

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: JH Baxter & Company
 Location: Arlington Landfill Wells
 Sample Number: BXS-Wells-Landfill
 Matrix: Water

Service Request: K0703368
 Date Collected: 04/18,19/07
 Date Received: 04/23/07

Chloride

Units: mg/L
 Basis: NA

Analysis Method: 300.0
 Test Notes:

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0703368-001	0.2	0.009	2	05/03/07	5.4	
BXS-2	K0703368-002	0.2	0.009	2	05/03/07	4.5	
BXS-3	K0703368-003	1.0	0.045	5	05/05/07	2.3	
BXS-3	K0703368-004	2.0	0.09	10	05/05/07	75.7	
BXN-4	K0703368-005	0.2	0.009	5	05/03/07	6.5	
BXN-3	K0703368-006	0.2	0.009	2	05/05/07	9.1	
BXN-1	K0703368-007	1.0	0.045	5	05/05/07	13.6	
BXN-2	K0703368-008	0.2	0.009	2	05/05/07	9.0	
BXN-5	K0703368-009	0.2	0.009	2	05/05/07	ND	
BXN-6	K0703368-010	0.2	0.009	2	05/04/07	1.9	
BXS-4	K0703368-011	0.2	0.009	2	05/04/07	1.9	
BXS-6	K0703368-012	0.2	0.009	2	05/04/07	0.2	
BXS-5	K0703368-MB	0.2	0.009	1	05/05/07	ND	
Method Blank	K0703368-MB	0.2	0.009	1	05/03/07	ND	
Method Blank							

00016

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 4/18/2007
Date Received : 4/23/2007
Date Prepared : NA
Date Analyzed : 05/03/07

Duplicate Summary Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0703368-001DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Chloride	300.0	0.2	5.4	5.3	5.4	2	

00017

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 4/18/2007
Date Received : 4/23/2007
Date Prepared : NA
Date Analyzed : 05/03/07

Matrix Spike Summary Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0703368-001MS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery	Result Notes
							Acceptance Limits	
Chloride	300.0	0.2	10.0	5.4	13.8	84	80-120	

00018

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 05/03/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0703368-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Chloride	NONE	300.0	5.0	5.0	100	90-110	

00019

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 05/05/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0703368-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Chloride	NONE	300.0	5.0	4.9	98	90-110	

00020

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 04/18,19/07
Date Received : 04/23/07

Sulfate

Analysis Method : 300.0
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0703368-001	0.2	0.007	2	05/03/07	13.9	
BXS-2	K0703368-002	0.2	0.007	2	05/03/07	ND	
BXS-3	K0703368-003	0.2	0.007	2	05/03/07	ND	
BXN-4	K0703368-004	1.0	0.035	5	05/05/07	38.2	
BXN-3	K0703368-005	1.0	0.035	5	05/03/07	9.7	
BXN-1	K0703368-006	0.2	0.007	2	05/05/07	13.5	
BXN-2	K0703368-007	1.0	0.035	5	05/05/07	17.6	
BXN-5	K0703368-008	0.2	0.007	2	05/05/07	13.1	
BXN-6	K0703368-009	0.2	0.007	2	05/05/07	ND	
BXS-4	K0703368-010	0.2	0.007	2	05/04/07	1.3	
BXS-6	K0703368-011	0.2	0.007	2	05/04/07	1.3	
BXS-5	K0703368-012	0.2	0.007	2	05/04/07	ND	
Method Blank	K0703368-MB	0.2	0.007	1	05/03/07	ND	
Method Blank	K0703368-MB	0.2	0.007	1	05/05/07	ND	

00021

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 4/18/2007
Date Received : 4/23/2007
Date Prepared : NA
Date Analyzed : 05/03/07

Duplicate Summary Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0703368-001DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Sulfate	300.0	0.2	13.9	13.8	13.8	<1	

00022

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 4/18/2007
Date Received : 4/23/2007
Date Prepared : NA
Date Analyzed : 05/03/07

Matrix Spike Summary
Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0703368-001MS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Sulfate	300.0	0.2	10.0	13.9	22.7	88	80-120	

00023

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 05/03/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0703368-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Sulfate	NONE	300.0	5.0	4.8	96	90-110	

00024

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 05/05/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0703368-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery	Result Notes
						Acceptance Limits	
Sulfate	NONE	300.0	5.0	4.8	96	90-110	

00025

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 04/18,19/07
Date Received : 04/23/07

Chemical Oxygen Demand (COD)

Analysis Method : SM 5220C
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0703368-001	5	3	1	04/25/07	14	
BXS-2	K0703368-002	5	3	1	04/25/07	39	
BXS-3	K0703368-003	5	3	1	04/25/07	80	
BXN-4	K0703368-004	5	3	1	04/25/07	35	
BXN-3	K0703368-005	5	3	1	04/25/07	26	
BXN-1	K0703368-006	5	3	1	04/25/07	29	
BXN-2	K0703368-007	5	3	1	04/25/07	12	
BXN-5	K0703368-008	5	3	1	04/25/07	21	
BXN-6	K0703368-009	5	3	1	04/25/07	4	J
BXS-4	K0703368-010	5	3	1	04/25/07	6	
BXS-6	K0703368-011	5	3	1	04/25/07	6	
BXS-5	K0703368-012	5	3	1	04/25/07	ND	
Method Blank	K0703368-MB	5	3	1	04/25/07	ND	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00026

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 4/18/2007
Date Received : 4/23/2007
Date Prepared : NA
Date Analyzed : 04/25/07

Duplicate Summary Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0703368-001DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Chemical Oxygen Demand (COD)	SM 5220C	5	14	14	14	<1	

SM

Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00027

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 4/18/2007
Date Received : 4/23/2007
Date Prepared : NA
Date Analyzed : 04/25/07

Matrix Spike Summary
Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0703368-001MS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
							Percent Recovery Acceptance Limits	
Chemical Oxygen Demand (COD)	SM 5220C	5	100	14	119	105	75-125	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00028

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 04/25/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0703368-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Chemical Oxygen Demand (COD)	NONE	SM 5220C	65	65	100	85-115	

SM

Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00029

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
 Project Name : Arlington Landfill Wells
 Project Number : BXS-Wells-Landfill
 Sample Matrix : Water

Service Request : K0703368
 Date Collected : 04/18,19/07
 Date Received : 04/23/07

Conductivity at 25 Degrees Celsius

Analysis Method : 120.1
 Test Notes :

Units : uMHOS/cm
 Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0703368-001	2	0.6	1	04/30/07	377	
BXS-2	K0703368-002	2	0.6	1	04/30/07	779	
BXS-3	K0703368-003	2	0.6	1	04/30/07	565	
BXN-4	K0703368-004	2	0.6	1	04/30/07	868	
BXN-3	K0703368-005	2	0.6	1	04/30/07	580	
BXN-1	K0703368-006	2	0.6	1	04/30/07	574	
BXN-2	K0703368-007	2	0.6	1	04/30/07	436	
BXN-5	K0703368-008	2	0.6	1	04/30/07	566	
BXN-6	K0703368-009	2	0.6	1	04/30/07	2	
BXS-4	K0703368-010	2	0.6	1	04/30/07	195	
BXS-6	K0703368-011	2	0.6	1	04/30/07	199	
BXS-5	K0703368-012	2	0.6	1	04/30/07	ND	
Method Blank	K0703368-MB	2	0.6	1	04/30/07	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 4/18/2007
Date Received : 4/23/2007
Date Prepared : NA
Date Analyzed : 04/30/07

Duplicate Summary Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0703368-001DUP
Test Notes :

Units : uMHOS/cm
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Conductivity at 25 Degrees Celsius	120.1	2	377	381	379	1	

00031

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 04/30/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0703368-LCS
Test Notes :

Units : uMHOS/cm
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Conductivity at 25 Degrees Celsius	NONE	120.1	1330	1300	98	85-115	

00032

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
 Project Name : Arlington Landfill Wells
 Project Number : BXS-Wells-Landfill
 Sample Matrix : Water

Service Request : K0703368
 Date Collected : 04/18,19/07
 Date Received : 04/23/07

Nitrate+Nitrite as Nitrogen

Analysis Method : 353.2
 Test Notes :

Units : mg/L
 Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0703368-001	0.05	0.006	1	04/25/07	0.85	
BXS-2	K0703368-002	0.05	0.006	1	04/25/07	0.63	
BXS-3	K0703368-003	0.05	0.006	1	04/25/07	0.20	
BXN-4	K0703368-004	0.05	0.006	1	04/25/07	2.51	
BXN-3	K0703368-005	0.05	0.006	1	04/25/07	0.56	
BXN-1	K0703368-006	0.05	0.006	1	04/25/07	0.044	J
BXN-2	K0703368-007	0.05	0.006	1	04/25/07	0.45	
BXN-5	K0703368-008	0.05	0.006	1	04/25/07	0.41	
BXN-6	K0703368-009	0.05	0.006	1	04/25/07	0.010	J
BXS-4	K0703368-010	0.05	0.006	1	04/25/07	0.23	
BXS-6	K0703368-011	0.05	0.006	1	04/25/07	1.21	
BXS-5	K0703368-012	0.05	0.006	1	04/25/07	0.63	
Method Blank	K0703368-MB	0.05	0.006	1	04/25/07	ND	

00033

COLUMBIA ANALYTICAL SERVICES, INC.**QA/QC Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 04/25/07

Duplicate Summary
Inorganic Parameters

Sample Name : Batch QC
Lab Code : K0703382-002DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Nitrate+Nitrite as Nitrogen	353.2	0.05	0.11	0.10	0.11	10	

00034

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 04/25/07

Matrix Spike Summary Inorganic Parameters

Sample Name : Batch QC
Lab Code : K0703382-002MS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Nitrate+Nitrite as Nitrogen	353.2	0.05	2.00	0.11	2.08	99	90-110	

00035

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 04/25/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0703368-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Nitrate+Nitrite as Nitrogen	NONE	353.2	5.13	5.08	99	90-110	

00036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 04/18,19/07
Date Received : 04/23/07

pH

Analysis Method : SM 4500-H+B
Test Notes :

Units : pH Units
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
BXS-1	K0703368-001	-		1	04/23/07 15:03	5.94	
BXS-2	K0703368-002	-		1	04/23/07 15:04	6.10	
BXS-3	K0703368-003	-		1	04/23/07 15:05	6.05	
BXN-4	K0703368-004	-		1	04/23/07 15:05	6.31	
BXN-3	K0703368-005	-		1	04/23/07 15:06	6.31	
BXN-1	K0703368-006	-		1	04/23/07 15:08	6.04	
BXN-2	K0703368-007	-		1	04/23/07 15:08	6.35	
BXN-5	K0703368-008	-		1	04/23/07 15:09	6.07	
BXN-6	K0703368-009	-		1	04/23/07 15:12	5.66	
BXS-4	K0703368-010	-		1	04/23/07 15:14	7.61	
BXS-6	K0703368-011	-		1	04/23/07 15:15	7.45	
BXS-5	K0703368-012	-		1	04/23/07 15:18	5.77	

SM

Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00037

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 4/18/2007
Date Received : 4/23/2007
Date Prepared : NA
Date Analyzed : 04/23/07

Duplicate Summary Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0703368-001DUP
Test Notes :

Units : pH Units
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
pH	SM 4500-H+B	-	5.94	5.92	5.93	<1	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00038

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 04/23/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0703368-LCS
Test Notes :

Units : pH Units
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
pH	NONE	SM 4500-H+B	7.01	7.01	100	85-115	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00039

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 04/18,19/07
Date Received : 04/23/07

Tannin and Lignin

Analysis Method : SM 5550B
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0703368-001	0.2	0.03	1	05/01/07	ND	
BXS-2	K0703368-002	0.2	0.03	1	05/01/07	1.3	
BXS-3	K0703368-003	1.0	0.06	5	05/01/07	11.9	
BXN-4	K0703368-004	0.2	0.03	1	05/01/07	2.3	
BXN-3	K0703368-005	0.2	0.03	1	05/01/07	2.0	
BXN-1	K0703368-006	0.2	0.03	1	05/01/07	2.0	
BXN-2	K0703368-007	0.2	0.03	1	05/01/07	1.6	
BXN-5	K0703368-008	0.2	0.03	1	05/01/07	2.1	
BXN-6	K0703368-009	0.2	0.03	1	05/01/07	ND	
BXS-4	K0703368-010	0.2	0.03	1	05/01/07	0.3	
BXS-6	K0703368-011	0.2	0.03	1	05/01/07	0.3	
BXS-5	K0703368-012	0.2	0.03	1	05/01/07	ND	
Method Blank	K0703368-MB	0.2	0.03	1	05/01/07	ND	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00040

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 4/18/2007
Date Received : 4/23/2007
Date Prepared : NA
Date Analyzed : 05/01/07

**Duplicate Summary
Inorganic Parameters**

Sample Name : BXS-1
Lab Code : K0703368-001DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Tannin and Lignin	SM 5550B	0.2	ND	ND	ND	-	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00041

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 4/18/2007
Date Received : 4/23/2007
Date Prepared : NA
Date Analyzed : 05/01/07

Matrix Spike Summary
Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0703368-001MS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
							Percent Recovery Acceptance Limits	
Tannin and Lignin	SM 5550B	0.2	1.0	ND	1.1	110	80-120	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00042

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 05/01/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0703368-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Tannin and Lignin	NONE	SM 5550B	1.0	1.0	100	85-115	

SM

Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00043

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 04/18,19/07
Date Received : 04/23/07

Solids, Total Dissolved

Analysis Method : SM 2540C
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0703368-001	5	5	1	04/24/07	229	
BXS-2	K0703368-002	5	5	1	04/24/07	490	
BXS-3	K0703368-003	5	5	1	04/24/07	493	
BXN-4	K0703368-004	5	5	1	04/24/07	500	
BXN-3	K0703368-005	5	5	1	04/24/07	358	
BXN-1	K0703368-006	5	5	1	04/24/07	370	
BXN-2	K0703368-007	5	5	1	04/24/07	254	
BXN-5	K0703368-008	5	5	1	04/24/07	384	
BXN-6	K0703368-009	5	5	1	04/24/07	ND	
BXS-4	K0703368-010	5	5	1	04/24/07	151	
BXS-6	K0703368-011	5	5	1	04/24/07	140	
BXS-5	K0703368-012	5	5	1	04/24/07	ND	
Method Blank	K0703368-MB	5	5	1	04/24/07	ND	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00044

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 4/18/2007
Date Received : 4/23/2007
Date Prepared : NA
Date Analyzed : 04/24/07

Duplicate Summary Inorganic Parameters

Sample Name : BXN-1
Lab Code : K0703368-006DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Solids, Total Dissolved	SM.2540C	5	370	354	362	4	

SM

Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00045

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 04/24/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0703368-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Solids, Total Dissolved	NONE	SM 2540C	545	506	93	85-115	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00046

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 04/18,19/07
Date Received : 04/23/07

Carbon, Total Organic

Analysis Method : SM 5310C
Test Notes :

Units : mg/L

Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0703368-001	0.5	0.04	1	04/25/07	4.8	
BXS-2	K0703368-002	0.5	0.04	1	04/25/07	16.7	
BXS-3	K0703368-003	0.5	0.04	2	04/25/07	28.4	
BXN-4	K0703368-004	0.5	0.04	1	04/25/07	12.6	
BXN-3	K0703368-005	0.5	0.04	1	04/25/07	8.3	
BXN-1	K0703368-006	0.5	0.04	1	04/25/07	9.2	
BXN-2	K0703368-007	0.5	0.04	1	04/25/07	3.5	
BXN-5	K0703368-008	0.5	0.04	1	04/25/07	7.4	
BXN-6	K0703368-009	0.5	0.04	1	04/25/07	0.25	J
BXS-4	K0703368-010	0.5	0.04	1	04/25/07	1.0	
BXS-6	K0703368-011	0.5	0.04	1	04/25/07	1.0	
BXS-5	K0703368-012	0.5	0.04	1	04/25/07	ND	
Method Blank	K0703368-MB	0.5	0.04	1	04/25/07	ND	

SM

Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00047

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 4/18/2007
Date Received : 4/23/2007
Date Prepared : NA
Date Analyzed : 04/25/07

Duplicate Summary Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0703368-001DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Carbon, Total Organic	SM 5310C	0.5	4.8	5.0	4.9	4	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00048

COLUMBIA ANALYTICAL SERVICES, INC.**QA/QC Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Water

Service Request : K0703368
Date Collected : 4/18/2007
Date Received : 4/23/2007
Date Prepared : NA
Date Analyzed : 04/25/07

**Matrix Spike Summary
Inorganic Parameters**

Sample Name : BXS-1
Lab Code : K0703368-001MS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Carbon, Total Organic	SM 5310C	0.5	25.0	4.8	30.9	104	49-156	

SM

Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00049

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : Storm Water

Service Request : K0703368
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 04/25/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0703368-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Carbon, Total Organic	NONE	415.1	24.0	25.2	105	69-136	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00050

Dissolved Metals

00051

DISSOLVED METALS

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells

Service Request: K0703368

<u>Sample No.</u>	<u>Lab Sample ID.</u>
BXS-1	K0703368-001 DISS
BXS-1D	K0703368-001D DISS
BXS-1S	K0703368-001S DISS
BXS-2	K0703368-002 DISS
BXS-3	K0703368-003 DISS
BXN-4	K0703368-004 DISS
BXN-3	K0703368-005 DISS
BXN-1	K0703368-006 DISS
BXN-2	K0703368-007 DISS
BXN-5	K0703368-008 DISS
BXN-6	K0703368-009 DISS
BXS-4	K0703368-010 DISS
BXS-6	K0703368-011 DISS
BXS-5	K0703368-012 DISS
Method Blank	K0703368-MB

Were ICP interelement corrections applied?

Yes/No YES

Were ICP background corrections applied?

Yes/No YESIf yes-were raw data generated before
application of background corrections?Yes/No NO

Comments:

Signature: JH BaxterDate: 5/18/97

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0703368

Date Collected: 04/18/07

Date Received: 04/23/07

Units: µG/L

Basis: NA

Sample Name: BXS-1

Lab Code: K0703368-001 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	5/8/07	5/10/07	0.7	U	
Barium	6010B	5.0	0.6	1	5/8/07	5/11/07	24.5		
Cadmium	6010B	5.0	0.6	1	5/8/07	5/11/07	1.9	B	
Copper	6010B	10.0	7.0	1	5/8/07	5/11/07	7.0	U	
Iron	6010B	20.0	3.0	1	5/8/07	5/11/07	10.1	B	
Manganese	6010B	5.0	0.3	1	5/8/07	5/11/07	123		
Nickel	6010B	20.0	2.0	1	5/8/07	5/11/07	10.4	B	
Zinc	6010B	10.0	7.0	1	5/8/07	5/11/07	7.0	U	

% Solids: 0.0

Comments:

00053

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0703368

Date Collected: 04/18/07

Date Received: 04/23/07

Units: µG/L

Basis: NA

Sample Name: BXS-2

Lab Code: K0703368-002 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	5/8/07	5/10/07	0.7	B	
Barium	6010B	5.0	0.6	1	5/8/07	5/11/07	39.8		
Cadmium	6010B	5.0	0.6	1	5/8/07	5/11/07	0.7	B	
Copper	6010B	10.0	7.0	1	5/8/07	5/11/07	7.0	U	
Iron	6010B	20.0	3.0	1	5/8/07	5/11/07	771		
Manganese	6010B	5.0	0.3	1	5/8/07	5/11/07	1330		
Nickel	6010B	20.0	2.0	1	5/8/07	5/11/07	33.9		
Zinc	6010B	10.0	7.0	1	5/8/07	5/11/07	30.2		

% Solids: 0.0

Comments:

DISSOLVED METALS
-1-
INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0703368
Date Collected: 04/18/07
Date Received: 04/23/07
Units: µG/L
Basis: NA

Sample Name: BXS-3

Lab Code: K0703368-003 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	5/8/07	5/10/07	113		
Barium	6010B	5.0	0.6	1	5/8/07	5/11/07	73.8		
Cadmium	6010B	5.0	0.6	1	5/8/07	5/11/07	2.9	B	
Copper	6010B	10.0	7.0	1	5/8/07	5/11/07	7.0	U	
Iron	6010B	20.0	3.0	1	5/8/07	5/11/07	90500		
Manganese	6010B	5.0	0.3	1	5/8/07	5/11/07	13500		
Nickel	6010B	20.0	2.0	1	5/8/07	5/11/07	18.2	B	
Zinc	6010B	10.0	7.0	1	5/8/07	5/11/07	8.5	B	

% Solids: 0.0

Comments:

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0703368

Date Collected: 04/18/07

Date Received: 04/23/07

Units: µg/L

Basis: NA

Sample Name: BXN-4

Lab Code: K0703368-004 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	5/8/07	5/10/07	0.7	U	
Barium	6010B	5.0	0.6	1	5/8/07	5/11/07	178		
Cadmium	6010B	5.0	0.6	1	5/8/07	5/11/07	0.6	U	
Copper	6010B	10.0	7.0	1	5/8/07	5/11/07	19.7		
Iron	6010B	20.0	3.0	1	5/8/07	5/11/07	68.1		
Manganese	6010B	5.0	0.3	1	5/8/07	5/11/07	3070		
Nickel	6010B	20.0	2.0	1	5/8/07	5/11/07	103		
Zinc	6010B	10.0	7.0	1	5/8/07	5/11/07	37.8		

% Solids: 0.0

Comments:

00056

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0703368
Date Collected: 04/18/07
Date Received: 04/23/07
Units: µG/L
Basis: NA

Sample Name: BXN-3

Lab Code: K0703368-005 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	5/8/07	5/10/07	6.4		
Barium	6010B	5.0	0.6	1	5/8/07	5/11/07	38.7		
Cadmium	6010B	5.0	0.6	1	5/8/07	5/11/07	1.0	B	
Copper	6010B	10.0	7.0	1	5/8/07	5/11/07	7.0	U	
Iron	6010B	20.0	3.0	1	5/8/07	5/11/07	8870		
Manganese	6010B	5.0	0.3	1	5/8/07	5/11/07	2970		
Nickel	6010B	20.0	2.0	1	5/8/07	5/11/07	43.0		
Zinc	6010B	10.0	7.0	1	5/8/07	5/11/07	12.6		

% Solids: 0.0

Comments:

00057

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company

Service Request: K0703368

Project No.: BXS-Wells-Landfill

Date Collected: 04/18/07

Project Name: Arlington Landfill Wells

Date Received: 04/23/07

Matrix: WATER

Units: µG/L

Basis: NA

Sample Name: BXN-1

Lab Code: K0703368-006 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	5/8/07	5/10/07	4.2	B	
Barium	6010B	5.0	0.6	1	5/8/07	5/11/07	40.9		
Cadmium	6010B	5.0	0.6	1	5/8/07	5/11/07	0.6	U	
Copper	6010B	10.0	7.0	1	5/8/07	5/11/07	7.0	U	
Iron	6010B	20.0	3.0	1	5/8/07	5/11/07	6070		
Manganese	6010B	5.0	0.3	1	5/8/07	5/11/07	3150		
Nickel	6010B	20.0	2.0	1	5/8/07	5/11/07	42.0		
Zinc	6010B	10.0	7.0	1	5/8/07	5/11/07	44.2		

% Solids: 0.0

Comments:

00058

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company

Service Request: K0703368

Project No.: BXS-Wells-Landfill

Date Collected: 04/18/07

Project Name: Arlington Landfill Wells

Date Received: 04/23/07

Matrix: WATER

Units: µG/L

Basis: NA

Sample Name: BXN-2

Lab Code: K0703368-007 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	5/8/07	5/10/07	0.7	U	
Barium	6010B	5.0	0.6	1	5/8/07	5/11/07	12.0		
Cadmium	6010B	5.0	0.6	1	5/8/07	5/11/07	0.6	U	
Copper	6010B	10.0	7.0	1	5/8/07	5/11/07	7.0	U	
Iron	6010B	20.0	3.0	1	5/8/07	5/11/07	7.6	B	
Manganese	6010B	5.0	0.3	1	5/8/07	5/11/07	5910		
Nickel	6010B	20.0	2.0	1	5/8/07	5/11/07	47.2		
Zinc	6010B	10.0	7.0	1	5/8/07	5/11/07	25.1		

% Solids: 0.0

Comments:

00059

DISSOLVED METALS
-1-
INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0703368
Date Collected: 04/18/07
Date Received: 04/23/07
Units: µg/L
Basis: NA

Sample Name: BXN-5

Lab Code: K0703368-008 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	5/8/07	5/10/07	4.4	B	
Barium	6010B	5.0	0.6	1	5/8/07	5/11/07	41.4		
Cadmium	6010B	5.0	0.6	1	5/8/07	5/11/07	0.7	B	
Copper	6010B	10.0	7.0	1	5/8/07	5/11/07	7.0	U	
Iron	6010B	20.0	3.0	1	5/8/07	5/11/07	6100		
Manganese	6010B	5.0	0.3	1	5/8/07	5/11/07	3180		
Nickel	6010B	20.0	2.0	1	5/8/07	5/11/07	42.0		
Zinc	6010B	10.0	7.0	1	5/8/07	5/11/07	43.4		

% Solids: 0.0

Comments:

00060

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0703368
Date Collected: 04/19/07
Date Received: 04/23/07
Units: µG/L
Basis: NA

Sample Name: BXN-6

Lab Code: K0703368-009 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	5/8/07	5/10/07	1.5	B	
Barium	6010B	5.0	0.6	1	5/8/07	5/11/07	3.0	B	
Cadmium	6010B	5.0	0.6	1	5/8/07	5/11/07	0.6	U	
Copper	6010B	10.0	7.0	1	5/8/07	5/11/07	7.0	U	
Iron	6010B	20.0	3.0	1	5/8/07	5/11/07	4.7	B	
Manganese	6010B	5.0	0.3	1	5/8/07	5/11/07	1.6	B	
Nickel	6010B	20.0	2.0	1	5/8/07	5/11/07	2.0	U	
Zinc	6010B	10.0	7.0	1	5/8/07	5/11/07	7.0	U	

% Solids: 0.0

Comments:

00061

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0703368
Date Collected: 04/19/07
Date Received: 04/23/07
Units: µG/L
Basis: NA

Sample Name: BXS-4

Lab Code: K0703368-010 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	5/8/07	5/10/07	6.0		
Barium	6010B	5.0	0.6	1	5/8/07	5/11/07	25.6		
Cadmium	6010B	5.0	0.6	1	5/8/07	5/11/07	0.6	U	
Copper	6010B	10.0	7.0	1	5/8/07	5/11/07	7.0	U	
Iron	6010B	20.0	3.0	1	5/8/07	5/11/07	42.8		
Manganese	6010B	5.0	0.3	1	5/8/07	5/11/07	107		
Nickel	6010B	20.0	2.0	1	5/8/07	5/11/07	2.0	U	
Zinc	6010B	10.0	7.0	1	5/8/07	5/11/07	7.0	U	

% Solids: 0.0

Comments:

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0703368
Date Collected: 04/19/07
Date Received: 04/23/07
Units: µG/L
Basis: NA

Sample Name: BXS-6

Lab Code: K0703368-011 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	5/8/07	5/10/07	6.0		
Barium	6010B	5.0	0.6	1	5/8/07	5/11/07	25.6		
Cadmium	6010B	5.0	0.6	1	5/8/07	5/11/07	0.6	U	
Copper	6010B	10.0	7.0	1	5/8/07	5/11/07	7.0	U	
Iron	6010B	20.0	3.0	1	5/8/07	5/11/07	36.4		
Manganese	6010B	5.0	0.3	1	5/8/07	5/11/07	106		
Nickel	6010B	20.0	2.0	1	5/8/07	5/11/07	2.0	U	
Zinc	6010B	10.0	7.0	1	5/8/07	5/11/07	7.0	U	

% Solids: 0.0

Comments:

00063

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0703368
Date Collected: 04/19/07
Date Received: 04/23/07
Units: µG/L
Basis: NA

Sample Name: BXS-5

Lab Code: K0703368-012 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	5/8/07	5/10/07	0.7	U	
Barium	6010B	5.0	0.6	1	5/8/07	5/11/07	0.6	U	
Cadmium	6010B	5.0	0.6	1	5/8/07	5/11/07	0.6	U	
Copper	6010B	10.0	7.0	1	5/8/07	5/11/07	7.0	U	
Iron	6010B	20.0	3.0	1	5/8/07	5/11/07	3.0	U	
Manganese	6010B	5.0	0.3	1	5/8/07	5/11/07	0.3	U	
Nickel	6010B	20.0	2.0	1	5/8/07	5/11/07	2.0	U	
Zinc	6010B	10.0	7.0	1	5/8/07	5/11/07	7.0	U	

% Solids: 0.0

Comments:

00064

DISSOLVED METALS
-1-
INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0703368

Date Collected:

Date Received:

Units: µG/L

Basis: NA

Sample Name: Method Blank

Lab Code: K0703368-MB

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	5/8/07	5/10/07	0.7	U	
Barium	6010B	5.0	0.6	1	5/8/07	5/11/07	0.6	U	
Cadmium	6010B	5.0	0.6	1	5/8/07	5/11/07	0.6	U	
Copper	6010B	10.0	7.0	1	5/8/07	5/11/07	7.0	U	
Iron	6010B	20.0	3.0	1	5/8/07	5/11/07	3.0	U	
Manganese	6010B	5.0	0.3	1	5/8/07	5/11/07	0.3	U	
Nickel	6010B	20.0	2.0	1	5/8/07	5/11/07	2.0	U	
Zinc	6010B	10.0	7.0	1	5/8/07	5/11/07	7.0	U	

% Solids: 0.0

Comments:

DISSOLVED METALS
- 5a -
SPIKE SAMPLE RECOVERY

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0703368

Units: µg/L

Basis: NA

% Solids: 0.0

Sample Name: BXS-1S

Lab Code: K0703368-001S DISS

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	55 - 138	38.3		0.7	U	40.0	96		7060A
Barium	76 - 127	2020		24.5		2000	100		6010B
Cadmium	71 - 145	49.6		1.9	B	50.0	95		6010B
Copper	83 - 115	263		7.0	U	250	105		6010B
Iron	58 - 142	953		10.1	B	1000	94		6010B
Manganese	82 - 122	636		123		500	103		6010B
Nickel	82 - 122	494		10.4	B	500	97		6010B
Zinc	83 - 117	478		7.0	U	500	96		6010B

An empty field in the Control Limit column indicates the control limit is not applicable

DISSOLVED METALS

- 6 -
DUPLICATES

Client: JH Baxter & Company

Service Request: K0703368

Project No.: BXS-Wells-Landfill

Units: µg/L

Project Name: Arlington Landfill Wells

Basis: NA

Matrix: WATER

% Solids: 0.0

Sample Name: BXS-1D

Lab Code: K0703368-001D DISS

Analyte	Control Limit (%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic		0.7	U	0.7	B	200.0		7060A
Barium		24.5		18.0		31		6010B
Cadmium		1.9	B	0.6	U	200.0		6010B
Copper		7.0	U	7.0	U			6010B
Iron		10.1	B	6.1	B	50		6010B
Manganese	20	123		120		2		6010B
Nickel		10.4	B	8.9	B	16		6010B
Zinc		7.0	U	7.0	U			6010B

An empty field in the Control Limit column indicates the control limit is not applicable

DISSOLVED METALS
-7-
LABORATORY CONTROL SAMPLE

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells

Service Request: K0703368

Aqueous LCS Source: Inorganic Ventures

Solid LCS Source:

Analyte	Aqueous ug/L			Solid (mg/kg)					
	True	Found	%R	True	Found	C	Limits (%)	%R	
Arsenic	25.0	23.5	94						
Barium	5000	5070	101						
Cadmium	1250	1190	95						
Copper	625	653	104						
Iron	2500	2370	95						
Manganese	1250	1230	98						
Nickel	1250	1200	96						
Zinc	1250	1190	95						

00068

August 15, 2007

Analytical Report for Service Request No: K0706283

Kathy Gunderson
Premier Environmental Services
981 State Street
Raymond, WA 98577

RE: Arlington Landfill Wells/Landfills

Dear Kathy:

Enclosed are the results of the sample(s) submitted to our laboratory on July 19, 2007. For your reference, these analyses have been assigned our service request number K0706283.

All analyses were performed according to our laboratory's quality assurance program. Where applicable, the methods cited conform to the Methods Update Rule (effective 4/11/2007), which relates to the use of analytical methods for the drinking water and waste water programs. The test results meet requirements of the NELAC standards. Exceptions are noted in the case narrative report where applicable. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3275. You may also contact me via Email at EErickson@kelso.caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.


Elissa Erickson
Project Chemist

EE/lb

Page 1 of 66

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- B The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.
- * The duplicate analysis not within control limits. See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a chromatographic interference.
- X See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Program	Number
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Colorado DPHE	-
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DHS	WA200001
South Carolina DHEC	61002
Utah DOH	COLU
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-



00004

Case Narrative

00005

COLUMBIA ANALYTICAL SERVICES, INC.

Client: JH Baxter & Company
Project: Arlington Landfill Wells
Sample Matrix: Water

Service Request No.: K0706283
Date Received: 7/19/07

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix/Duplicate Matrix Spike (MS/DMS), and Laboratory Control Sample (LCS).

Sample Receipt

Eleven water samples were received for analysis at Columbia Analytical Services on 7/19/07. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

General Chemistry Parameters

No anomalies associated with the analysis of these samples were observed.

Total Metals

Matrix Spike Recovery Exceptions:

The control criteria for matrix spike recovery of Manganese for sample BXN-2 is not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

No other anomalies associated with the analysis of these samples were observed.

Approved by Eussalv Date 8-17-07

00006

**Chain of Custody
Documentation**

00007

CHAIN OF CUSTODY

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

PAGE _____ OF _____ COC # _____

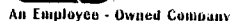
SR#: K070 6283

PROJECT NAME	<u>J.H. Baxter Arlington</u>		
PROJECT NUMBER	<u>Landfills</u>		
PROJECT MANAGER	<u>R. Thomas</u>		
COMPANY/ADDRESS	<u>85 N. Baxter Rd.</u>		
CITY/STATE/ZIP	<u>Eugene OR 97402</u>		
E-MAIL ADDRESS	<u>r.thomas@jh.baxter.com</u>		
PHONE #	<u>541-689-3801</u>	FAX #	<u>541-689-8303</u>
SAMPLER'S SIGNATURE	<u>[Signature]</u>		

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUM		Sem 624	Vol 624	Hydro 624	Gas 624	Oil 624	PCB 624	Aroclor 624	Res 608	Chlor 608	Tri 608	PAH 608	Met (See 608)	Cyan 608	pH 608	NO3 608	NH3 608	DOC 608	TOX 608	COD 608	TDS 608	PH 608		REMARKS
BXS-3	7/17/07	1645		W	3													X							X	X			
BXN-2	7/18/07	0924		W	3													X							X	X			
BXN-3	7/18/07	1210		W	3													X							X	X			
BXN-3	7/18/07	1435		W	3													X							X	X			
BXN-4	7/18/07	1520		W	3													X							X	X			
BXN-5	7/18/07	1520		W	3													X							X	X			
BXS-1	7/18/07	1637		W	3													X							X	X			
BXS-5	7/18/07	1637		W	3													X							X	X			
BXS-4	7/18/07	1755		W	3													X							X	X			
BXN-6	7/19/07	0900		W	3													X							X	X			

REPORT REQUIREMENTS ☒ I. Routine Report: Method Blank, Surrogate, as required ☐ II. Report Dup., MS, MSD as required ☐ III. Data Validation Report (includes all raw data) ☐ IV. CLP Deliverable Report ☐ V. EDD	INVOICE INFORMATION P.O. # _____ Bill To: <u>J.H. Baxter</u>	Circle which metals are to be analyzed: Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg Dissolved Metals: Al <u>(As)</u> Sb <u>(Ba)</u> Be B Ca <u>(Cd)</u> Co Cr <u>(Cu)</u> <u>(Fe)</u> Pb Mg <u>(Mn)</u> Mo <u>(Ni)</u> K Ag Na Se Sr Ti Sn V <u>(Zn)</u> Hg
	TURNAROUND REQUIREMENTS _____ 24 hr. _____ 48 hr. _____ 5 Day ☒ Standard (10-15 working days) _____ Provide FAX Results Requested Report Date _____	*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE) SPECIAL INSTRUCTIONS/COMMENTS: <u>- contact Kathy Gundersen @ (360) 942-3409 for Questions.</u> <u>- Metals are field filtered</u>

RELINQUISHED BY: <u>[Signature]</u> Signature <u>Justin Ragau</u> Printed Name Date/Time: <u>7/19/07 1350</u> Firm: <u>J.H. Baxter</u>	RECEIVED BY: <u>[Signature]</u> Signature <u>Les Kennedy</u> Printed Name Date/Time: <u>7/19/07 13:50</u> Firm: <u>CA</u>	RELINQUISHED BY: Signature _____ Printed Name _____ Date/Time _____ Firm _____	RECEIVED BY: Signature _____ Printed Name _____ Date/Time _____ Firm _____
---	--	---	---



1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

SR#:

~~KF766281~~ - 72

PAGE 1 / OF 1 COC #

[illegible]

RCOC #1 06/03

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC EE

Client / Project: JH Baxter Service Request K07 6283

Received: 7/19/07 Opened: 7/19/07 By: UM

1. Samples were received via? US Mail Fed Ex UPS DHL GH GS PDX Courier Hand Delivered
2. Samples were received in: (circle) Cooler Box Envelope Other NA
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
If present, were custody seals intact? Y N If present, were they signed and dated? Y N
4. Is shipper's air-bill filed? If not, record air-bill number: NA Y N
5. Temperature of cooler(s) upon receipt (°C): 4.4 1.3 -0.7 3.6
Temperature Blank (°C): 3.4 4.5 1.4 4.7
6. If applicable, list Chain of Custody Numbers: _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
8. Packing material used. Inserts Bubble Wrap Gel Packs Wet Ice Sleeves Other _____
9. Did all bottles arrive in good condition (unbroken)? Indicate in the table below. NA Y N
10. Were all sample labels complete (i.e analysis, preservation, etc.)? Y N
11. Did all sample labels and tags agree with custody papers? Indicate in the table below. Y N
12. Were the correct types of bottles used for the tests indicated? NA Y N
13. Were all of the preserved bottles received at the lab with the appropriate pH? Indicate in the table below. NA Y N
14. Were VOA vials and 1631 Mercury bottles checked for absence of air bubbles? Indicate in the table below. NA Y N
15. Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection? NA Y N
16. Was C12/Res negative? NA Y N

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

Sample ID	Bottle Count	Bottle Type	Out of Temp	Head-space	Broken	pH	Reagent	Volume added	Reagent Lot Number	Initials

Additional Notes, Discrepancies, & Resolutions: _____

00010

General Chemistry Parameters

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : 07/17-19/07
Date Received : 07/19/07

Ammonia as Nitrogen

Analysis Method : 350.1
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-3	K0706283-001	0.05	0.006	1	08/04/07	0.74	
BXN-2	K0706283-002	0.05	0.006	1	08/04/07	ND	
BXN-1	K0706283-003	0.05	0.006	1	08/04/07	0.022	J
BXN-3	K0706283-004	0.05	0.006	1	08/04/07	0.047	J
BXN-4	K0706283-005	0.50	0.06	10	08/04/07	9.83	
BXN-5	K0706283-006	0.50	0.06	10	08/04/07	7.25	
BXS-1	K0706283-007	0.05	0.006	1	08/04/07	ND	
BXS-5	K0706283-008	0.05	0.006	1	08/04/07	ND	
BXS-4	K0706283-009	0.05	0.006	1	08/04/07	0.50	
BXN-6	K0706283-010	0.05	0.006	1	08/04/07	ND	
BXS-2	K0706283-011	0.05	0.006	1	08/04/07	ND	
Method Blank	K0706283-MB	0.05	0.006	1	08/04/07	ND	

00012

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 08/04/07

**Duplicate Summary
Inorganic Parameters**

Sample Name : Batch QC
Lab Code : K0706126-027DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Ammonia as Nitrogen	350.1	0.05	0.51	0.51	0.51	<1	

00093

COLUMBIA ANALYTICAL SERVICES, INC.**QA/QC Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 08/04/07

**Matrix Spike Summary
Inorganic Parameters**

Sample Name : Batch QC
Lab Code : K0706126-027MS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Ammonia as Nitrogen	350.1	0.05	2.00	0.51	2.48	99	90-110	

00094

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 08/04/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0706283-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Ammonia as Nitrogen	NONE	350.1	2.45	2.49	102	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : 07/17-19/07
Date Received : 07/19/07

Nitrate+Nitrite as Nitrogen

Analysis Method : 353.2
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-3	K0706283-001	0.05	0.006	1	07/26/07	0.19	
BXN-2	K0706283-002	0.05	0.006	1	07/26/07	0.38	
BXN-1	K0706283-003	0.05	0.006	1	07/26/07	0.038	J
BXN-3	K0706283-004	0.05	0.006	1	07/26/07	0.15	
BXN-4	K0706283-005	0.05	0.006	1	07/26/07	1.37	
BXN-5	K0706283-006	0.05	0.006	1	07/26/07	1.43	
BXS-1	K0706283-007	0.05	0.006	1	07/26/07	0.70	
BXS-5	K0706283-008	0.05	0.006	1	07/26/07	0.68	
BXS-4	K0706283-009	0.05	0.006	1	07/26/07	ND	
BXN-6	K0706283-010	0.05	0.006	1	07/26/07	0.008	J
BXS-2	K0706283-011	0.05	0.006	1	07/26/07	0.08	
Method Blank	K0706283-MB	0.05	0.006	1	07/26/07	ND	

10016

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 07/26/07

Duplicate Summary Inorganic Parameters

Sample Name : Batch QC
Lab Code : K0706168-002DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Nitrate+Nitrite as Nitrogen	353.2	0.05	ND	ND	ND	-	

00017

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
 Project Name : Arlington Landfill Wells
 Project Number : Landfills
 Sample Matrix : WATER

Service Request : K0706283
 Date Collected : NA
 Date Received : NA
 Date Prepared : NA
 Date Analyzed : 07/26/07

Matrix Spike Summary
 Inorganic Parameters

Sample Name : Batch QC
 Lab Code : K0706168-002MS
 Test Notes :

Units : mg/L
 Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
							Percent Recovery Acceptance Limits	
Nitrate+Nitrite as Nitrogen	353.2	0.05	2.00	ND	1.98	99	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 07/26/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0706283-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Nitrate+Nitrite as Nitrogen	NONE	353.2	5.13	5.13	100	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : 07/17-19/07
Date Received : 07/19/07

Tannin and Lignin

Analysis Method : SM 5550 B
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-3	K0706283-001	0.2	0.03	1	07/27/07	13.4	
BXN-2	K0706283-002	0.2	0.03	1	07/27/07	1.9	
BXN-1	K0706283-003	0.2	0.03	1	07/27/07	3.1	
BXN-3	K0706283-004	0.2	0.03	1	07/27/07	1.6	
BXN-4	K0706283-005	0.2	0.03	1	07/27/07	2.5	
BXN-5	K0706283-006	0.2	0.03	1	07/27/07	2.6	
BXS-1	K0706283-007	0.2	0.03	1	07/27/07	0.12	J
BXS-5	K0706283-008	0.2	0.03	1	07/27/07	0.13	J
BXS-4	K0706283-009	0.2	0.03	1	07/27/07	0.3	
BXN-6	K0706283-010	0.2	0.03	1	07/27/07	ND	
BXS-2	K0706283-011	0.2	0.03	1	07/27/07	1.3	
Method Blank	K0706283-MB	0.2	0.03	1	07/27/07	ND	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

0020

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : 7/17/2007
Date Received : 7/19/2007
Date Prepared : NA
Date Analyzed : 07/27/07

**Duplicate Summary
Inorganic Parameters**

Sample Name : BXS-2
Lab Code : K0706283-011DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Tannin and Lignin	SM 5550 B	0.2	1.3	1.3	1.3	<1	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00021

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : 7/17/2007
Date Received : 7/19/2007
Date Prepared : NA
Date Analyzed : 07/27/07

Matrix Spike/Duplicate Matrix Spike Summary

Sample Name : BXS-2
Lab Code : K0706283-011MS K0706283-011DMS
Test Notes :
Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Spike Recovery		CAS Acceptance Limits	Relative Percent Difference	Result Notes
				MS	DMS		MS	DMS	MS	DMS			
Tannin and Lignin	NONE	SM 5550 B	0.2	1.0	2.0	1.3	2.0	2.8	70	75	20	33	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00022

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 07/27/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0706283-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Tannin and Lignin	NONE	SM 5550 B	1.0	1.0	100	85-115	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00023

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : 07/17-19/07
Date Received : 07/19/07

Chloride

Analysis Method : 300.0
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-3	K0706283-001	0.2	0.018	2	07/26/07	2.8	
BXN-2	K0706283-002	1.0	0.05	5	07/26/07	10.9	
BXN-1	K0706283-003	0.2	0.02	2	07/26/07	5.6	
BXN-3	K0706283-004	0.2	0.02	2	07/26/07	4.7	
BXN-4	K0706283-005	4.0	0.2	20	07/26/07	66.8	
BXN-5	K0706283-006	2.0	0.09	10	07/26/07	73.4	
BXS-1	K0706283-007	0.2	0.02	2	07/26/07	5.1	
BXS-5	K0706283-008	0.2	0.02	2	07/26/07	5.0	
BXS-4	K0706283-009	0.2	0.02	2	07/26/07	1.7	
BXN-6	K0706283-010	0.2	0.02	2	07/26/07	ND	
BXS-2	K0706283-011	0.2	0.02	2	07/26/07	4.1	
Method Blank	K0706283-MB	0.2	0.009	1	07/26/07	ND	

00024

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 07/27/07

Duplicate Summary Inorganic Parameters

Sample Name : Batch QC
Lab Code : K0706550-001DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Chloride	300.0	0.2	2.2	2.2	2.2	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 07/26/07

Matrix Spike Summary Inorganic Parameters

Sample Name : Batch QC
Lab Code : K0706550-001MS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery	Result Notes
							Acceptance Limits	
Chloride	300.0	0.2	4.0	2.2	6.2	100	80-120	

00026

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 07/26/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0706283-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Chloride	NONE	300.0	5.0	4.8	96	85-115	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : 07/17-19/07
Date Received : 07/19/07

Sulfate

Analysis Method : 300.0
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-3	K0706283-001	0.2	0.014	2	07/26/07	ND	
BXN-2	K0706283-002	1.0	0.04	5	07/26/07	14.1	
BXN-1	K0706283-003	0.2	0.02	2	07/26/07	9.7	
BXN-3	K0706283-004	1.0	0.04	5	07/26/07	18.7	
BXN-4	K0706283-005	1.0	0.04	5	07/26/07	25.5	
BXN-5	K0706283-006	2.0	0.07	10	07/26/07	25.4	
BXS-1	K0706283-007	0.2	0.02	2	07/26/07	11.3	
BXS-5	K0706283-008	0.2	0.02	2	07/26/07	11.4	
BXS-4	K0706283-009	0.2	0.02	2	07/26/07	1.4	
BXN-6	K0706283-010	0.2	0.02	2	07/26/07	ND	
BXS-2	K0706283-011	0.2	0.02	2	07/26/07	ND	
Method Blank	K0706283-MB	0.2	0.007	1	07/26/07	ND	

00028

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : DRINKING WATER

Service Request : K0706283
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 07/26/07

Duplicate Summary Inorganic Parameters

Sample Name : Batch QC
Lab Code : K0706550-001DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Sulfate	300.0	0.2	0.6	0.6	0.6	<1	

00029

COLUMBIA ANALYTICAL SERVICES, INC.**QA/QC Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : DRINKING WATER

Service Request : K0706283
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 07/26/07

Matrix Spike Summary
Inorganic Parameters

Sample Name : Batch QC
Lab Code : K0706550-001MS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery	Result Notes
							Acceptance Limits	
Sulfate	300.0	0.2	4.0	0.6	4.1	88	80-120	

00030

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 07/26/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0706283-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Sulfate	NONE	300.0	5.0	4.7	94	90-110	

00031

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : 07/17-19/07
Date Received : 07/19/07

Chemical Oxygen Demand (COD)

Analysis Method : SM 5220 C
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-3	K0706283-001	5	3	1	07/27/07	67	
BXN-2	K0706283-002	5	3	1	07/27/07	3	J
BXN-1	K0706283-003	5	3	1	07/27/07	19	
BXN-3	K0706283-004	5	3	1	07/27/07	9	
BXN-4	K0706283-005	5	3	1	07/27/07	24	
BXN-5	K0706283-006	10	6	2	07/27/07	37	
BXS-1	K0706283-007	5	3	1	07/27/07	ND	
BXS-5	K0706283-008	5	3	1	07/27/07	6	
BXS-4	K0706283-009	5	3	1	07/27/07	ND	
BXN-6	K0706283-010	5	3	1	07/27/07	ND	
BXS-2	K0706283-011	5	3	1	07/27/07	31	
Method Blank	K0706283-MB	5	3	1	07/27/07	ND	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00032

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 07/27/07

Duplicate Summary Inorganic Parameters

Sample Name : Batch QC
Lab Code : K0706502-008DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Chemical Oxygen Demand (COD)	SM 5220 C	5	37	42	40	13	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00033

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 07/27/07

Matrix Spike Summary
Inorganic Parameters

Sample Name : Batch QC
Lab Code : K0706502-008MS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
							Percent Recovery Acceptance Limits	
Chemical Oxygen Demand (COD)	SM 5220 C	5	100	37	140	103	75-125	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00034

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 07/27/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0706283-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Chemical Oxygen Demand (COD)	NONE	SM 5220 C	72	72	100	85-115	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00035

COLUMBIA ANALYTICAL SERVICES, INC.**Analytical Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : 07/17-19/07
Date Received : 07/19/07

Carbon, Total Organic

Analysis Method : SM 5310 C
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-3	K0706283-001	0.5	0.04	1	07/26/07	28.6	
BXN-2	K0706283-002	0.5	0.04	1	07/26/07	4.6	
BXN-1	K0706283-003	0.5	0.04	1	07/26/07	11.0	
BXN-3	K0706283-004	0.5	0.04	1	07/26/07	5.5	
BXN-4	K0706283-005	2.5	0.20	5	07/26/07	15.3	
BXN-5	K0706283-006	1.0	0.08	2	07/26/07	16.0	
BXS-1	K0706283-007	0.5	0.04	1	07/26/07	5.2	
BXS-5	K0706283-008	0.5	0.04	1	07/26/07	5.2	
BXS-4	K0706283-009	0.5	0.04	1	07/26/07	0.9	
BXN-6	K0706283-010	0.5	0.04	1	07/26/07	0.07	J
BXS-2	K0706283-011	1.0	0.08	2	07/26/07	15.6	
Method Blank	K0706283-MB	0.5	0.04	1	07/26/07	ND	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

0036

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : 7/18/2007
Date Received : 7/19/2007
Date Prepared : NA
Date Analyzed : 07/26/07

**Duplicate Summary
Inorganic Parameters**

Sample Name : BXN-2
Lab Code : K0706283-002DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Carbon, Total Organic	SM 5310 C	0.5	4.6	4.5	4.6	2	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00037

COLUMBIA ANALYTICAL SERVICES, INC.**QA/QC Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : 7/18/2007
Date Received : 7/19/2007
Date Prepared : NA
Date Analyzed : 07/26/07

**Matrix Spike Summary
Inorganic Parameters**

Sample Name : BXN-2
Lab Code : K0706283-002MS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Carbon, Total Organic	SM 5310 C	0.5	25.0	4.6	29.4	99	68-132	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00038

COLUMBIA ANALYTICAL SERVICES, INC.**QA/QC Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 07/26/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0706283-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Carbon, Total Organic	NONE	SM 5310 C	24.0	23.1	96	90-109	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : 07/17-19/07
Date Received : 07/19/07

pH

Analysis Method : SM 4500-H+ B
Test Notes :

Units : pH Units
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
BXS-3	K0706283-001	-	-	1	07/20/07 15:35	6.34	
BXN-2	K0706283-002	-	-	1	07/20/07 15:38	6.55	
BXN-1	K0706283-003	-	-	1	07/20/07 15:39	6.48	
BXN-3	K0706283-004	-	-	1	07/20/07 15:40	6.67	
BXN-4	K0706283-005	-	-	1	07/20/07 15:41	6.47	
BXN-5	K0706283-006	-	-	1	07/20/07 15:42	6.48	
BXS-1	K0706283-007	-	-	1	07/20/07 15:43	6.28	
BXS-5	K0706283-008	-	-	1	07/20/07 15:44	6.23	
BXS-4	K0706283-009	-	-	1	07/20/07 15:46	7.69	
BXN-6	K0706283-010	-	-	1	07/20/07 15:47	6.04	
BXS-2	K0706283-011	-	-	1	07/26/07 16:35	6.96	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : 7/17/2007
Date Received : 7/19/2007
Date Prepared : NA
Date Analyzed : 07/20/07

Duplicate Summary Inorganic Parameters

Sample Name : BXS-3
Lab Code : K0706283-001DUP
Test Notes :

Units : pH Units
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
pH	SM 4500-H+ B	-	6.34	6.37	6.36	<1	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 07/26/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0706283-LCS
Test Notes :

Units : pH Units
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
pH	NONE	SM 4500-H+ B	8.16	8.02	98	85-115	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 07/20/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Laboratory Control Sample
Lab Code : K0706283-LCS
Test Notes :

Units : pH Units
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
pH	NONE	SM 4500-H+ B	8.16	8.04	99	85-115	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00043

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : 07/17-19/07
Date Received : 07/19/07

Conductivity at 25 Degrees Celsius

Analysis Method : 120.1
Test Notes :

Units : uMHOS/cm
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
BXS-3	K0706283-001	2	0.3	1	08/01/07 12:00	518	
BXN-2	K0706283-002	2	0.3	1	08/01/07 12:00	523	
BXN-1	K0706283-003	2	0.3	1	08/01/07 12:00	679	
BXN-3	K0706283-004	2	0.3	1	08/01/07 12:00	479	
BXN-4	K0706283-005	2	0.3	1	08/01/07 12:00	846	
BXN-5	K0706283-006	2	0.3	1	08/01/07 12:00	850	
BXS-1	K0706283-007	2	0.3	1	08/01/07 12:00	410	
BXS-5	K0706283-008	2	0.3	1	08/01/07 12:00	401	
BXS-4	K0706283-009	2	0.3	1	08/01/07 12:00	201	
BXN-6	K0706283-010	2	0.3	1	08/01/07 12:00	2	
BXS-2	K0706283-011	2	0.3	1	08/01/07 12:00	798	
Method Blank	K0706283-MB	2	0.3	1	08/01/07 12:00	0.7	J

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : 7/17/2007
Date Received : 7/19/2007
Date Prepared : NA
Date Analyzed : 08/01/07

**Duplicate Summary
Inorganic Parameters**

Sample Name : BXS-3
Lab Code : K0706283-001DUP
Test Notes :

Units : uMHOS/cm
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Conductivity at 25 Degrees Celsius	120.1	2	0.7	516	258	199	

COLUMBIA ANALYTICAL SERVICES, INC.**QA/QC Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 08/01/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0706283-LCS
Test Notes :

Units : uMHOS/cm
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Conductivity at 25 Degrees Celsius	NONE	120.1	1320	1290	98	85-115	

70046

COLUMBIA ANALYTICAL SERVICES, INC.**Analytical Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : 07/17-19/07
Date Received : 07/19/07

Solids, Total Dissolved

Analysis Method : SM 2540 C
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-3	K0706283-001	5	5	1	07/24/07	414	
BXN-2	K0706283-002	5	5	1	07/24/07	294	
BXN-1	K0706283-003	5	5	1	07/24/07	400	
BXN-3	K0706283-004	5	5	1	07/24/07	304	
BXN-4	K0706283-005	5	5	1	07/24/07	474	
BXN-5	K0706283-006	5	5	1	07/24/07	481	
BXS-1	K0706283-007	5	5	1	07/24/07	262	
BXS-5	K0706283-008	5	5	1	07/24/07	248	
BXS-4	K0706283-009	5	5	1	07/24/07	154	
BXN-6	K0706283-010	5	5	1	07/24/07	ND	
BXS-2	K0706283-011	5	5	1	07/24/07	495	
Method Blank	K0706283-MB	5	5	1	07/24/07	ND	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

COLUMBIA ANALYTICAL SERVICES, INC.**QA/QC Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : Landfills
Sample Matrix : WATER

Service Request : K0706283
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 07/24/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0706283-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Solids, Total Dissolved	NONE	SM 2540 C	779	812	104	85-115	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

00049

Metals

DISSOLVED METALS

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: JH Baxter & Company
Project No.: Landfills
Project Name: Arlington Landfill Wells

Service Request: K0706283

<u>Sample No.</u>	<u>Lab Sample ID.</u>
BXS-3	K0706283-001 DISS
BXN-2	K0706283-002 DISS
BXN-2D	K0706283-002D DISS
BXN-2S	K0706283-002S DISS
BXN-1	K0706283-003 DISS
BXN-3	K0706283-004 DISS
BXN-4	K0706283-005 DISS
BXN-5	K0706283-006 DISS
BXS-1	K0706283-007 DISS
BXS-5	K0706283-008 DISS
BXS-4	K0706283-009 DISS
BXN-6	K0706283-010 DISS
BXS-2	K0706283-011 DISS
Method Blank	K0706283-MB

Were ICP interelement corrections applied?

Yes/No YES

Were ICP background corrections applied?

Yes/No YES

If yes-were raw data generated before
application of background corrections?

Yes/No NO

Comments:

Signature: JH CarDate: 8/6/07

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: Landfills
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0706283
Date Collected: 07/17/07
Date Received: 07/19/07
Units: µg/L
Basis: NA

Sample Name: BXS-3

Lab Code: K0706283-001 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	7/24/07	7/26/07	113		
Barium	6010B	5.0	0.7	1	7/24/07	7/26/07	80.6		
Cadmium	6010B	5.0	3.0	1	7/24/07	7/26/07	3.0	U	
Copper	6010B	10.0	4.0	1	7/24/07	7/26/07	4.4	B	
Iron	6010B	200	30.0	10	7/24/07	7/26/07	88100		
Manganese	6010B	50.0	6.0	10	7/24/07	7/26/07	14000		
Nickel	6010B	20	20	1	7/24/07	7/26/07	20.4		
Zinc	6010B	10.0	3.0	1	7/24/07	7/26/07	12.4		

* Solids: 0.0

Comments:

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: Landfills
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0706283
Date Collected: 07/18/07
Date Received: 07/19/07
Units: µG/L
Basis: NA

Sample Name: BXN-2

Lab Code: K0706283-002 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	7/24/07	7/26/07	0.7	U	
Barium	6010B	5.0	0.7	1	7/24/07	7/26/07	17.8		
Cadmium	6010B	5.0	3.0	1	7/24/07	7/26/07	3.0	U	
Copper	6010B	10.0	4.0	1	7/24/07	7/26/07	6.0	B	
Iron	6010B	20.0	3.0	1	7/24/07	7/26/07	3.0	U	
Manganese	6010B	50.0	6.0	10	7/24/07	7/26/07	8030		
Nickel	6010B	20	20	1	7/24/07	7/26/07	63.8		
Zinc	6010B	10.0	3.0	1	7/24/07	7/26/07	5.9	B	

% Solids: 0.0

Comments:

DISSOLVED METALS
-1-
INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: Landfills
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0706283
Date Collected: 07/18/07
Date Received: 07/19/07
Units: µg/L
Basis: NA

Sample Name: BXN-1

Lab Code: K0706283-003 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	7/24/07	7/26/07	3.9	B	
Barium	6010B	5.0	0.7	1	7/24/07	7/26/07	47.5		
Cadmium	6010B	5.0	3.0	1	7/24/07	7/26/07	3.0	U	
Copper	6010B	10.0	4.0	1	7/24/07	7/26/07	7.5	B	
Iron	6010B	20.0	3.0	1	7/24/07	7/26/07	8980		
Manganese	6010B	5.0	0.6	1	7/24/07	7/26/07	3960		
Nickel	6010B	20	20	1	7/24/07	7/26/07	36.1		
Zinc	6010B	10.0	3.0	1	7/24/07	7/26/07	9.8	B	

* Solids: 0.0

Comments:

00054

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: Landfills
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0706283
Date Collected: 07/18/07
Date Received: 07/19/07
Units: µG/L
Basis: NA

Sample Name: BXN-3

Lab Code: K0706283-004 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	7/24/07	7/26/07	5.2		
Barium	6010B	5.0	0.7	1	7/24/07	7/26/07	34.3		
Cadmium	6010B	5.0	3.0	1	7/24/07	7/26/07	3.0	U	
Copper	6010B	10.0	4.0	1	7/24/07	7/26/07	4.0	U	
Iron	6010B	20.0	3.0	1	7/24/07	7/26/07	5900		
Manganese	6010B	5.0	0.6	1	7/24/07	7/26/07	1960		
Nickel	6010B	20	20	1	7/24/07	7/26/07	39.7		
Zinc	6010B	10.0	3.0	1	7/24/07	7/26/07	3.7	B	

% Solids: 0.0

Comments:

00055

DISSOLVED METALS
-1-
INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: Landfills
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0706283
Date Collected: 07/18/07
Date Received: 07/19/07
Units: µG/L
Basis: NA

Sample Name: BXN-4

Lab Code: K0706283-005 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	7/24/07	7/26/07	0.7	U	
Barium	6010B	5.0	0.7	1	7/24/07	7/26/07	232		
Cadmium	6010B	5.0	3.0	1	7/24/07	7/26/07	3.0	U	
Copper	6010B	10.0	4.0	1	7/24/07	7/26/07	24.4		
Iron	6010B	20.0	3.0	1	7/24/07	7/26/07	48.1		
Manganese	6010B	5.0	0.6	1	7/24/07	7/26/07	3380		
Nickel	6010B	20	20	1	7/24/07	7/26/07	120		
Zinc	6010B	10.0	3.0	1	7/24/07	7/26/07	7.0	B	

* Solids: 0.0

Comments:

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: Landfills
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0706283
Date Collected: 07/18/07
Date Received: 07/19/07
Units: µG/L
Basis: NA

Sample Name: BXN-5

Lab Code: K0706283-006 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	7/24/07	7/26/07	0.7	U	
Barium	6010B	5.0	0.7	1	7/24/07	7/26/07	232		
Cadmium	6010B	5.0	3.0	1	7/24/07	7/26/07	3.0	U	
Copper	6010B	10.0	4.0	1	7/24/07	7/26/07	27.4		
Iron	6010B	20.0	3.0	1	7/24/07	7/26/07	50.7		
Manganese	6010B	5.0	0.6	1	7/24/07	7/26/07	3340		
Nickel	6010B	20	20	1	7/24/07	7/26/07	125		
Zinc	6010B	10.0	3.0	1	7/24/07	7/26/07	5.6	B	

% Solids: 0.0

Comments:

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: Landfills
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0706283
Date Collected: 07/18/07
Date Received: 07/19/07
Units: µg/L
Basis: NA

Sample Name: BXS-1

Lab Code: K0706283-007 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	7/24/07	7/26/07	0.7	U	
Barium	6010B	5.0	0.7	1	7/24/07	7/26/07	24.6		
Cadmium	6010B	5.0	3.0	1	7/24/07	7/26/07	3.0	U	
Copper	6010B	10.0	4.0	1	7/24/07	7/26/07	4.2	B	
Iron	6010B	20.0	3.0	1	7/24/07	7/26/07	3.0	U	
Manganese	6010B	5.0	0.6	1	7/24/07	7/26/07	268		
Nickel	6010B	20	20	1	7/24/07	7/26/07	20	U	
Zinc	6010B	10.0	3.0	1	7/24/07	7/26/07	8.0	B	

% Solids: 0.0

Comments:

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: Landfills
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0706283
Date Collected: 07/18/07
Date Received: 07/19/07
Units: µG/L
Basis: NA

Sample Name: BXS-5

Lab Code: K0706283-008 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	7/24/07	7/26/07	0.7	U	
Barium	6010B	5.0	0.7	1	7/24/07	7/26/07	23.0		
Cadmium	6010B	5.0	3.0	1	7/24/07	7/26/07	3.0	U	
Copper	6010B	10.0	4.0	1	7/24/07	7/26/07	6.0	B	
Iron	6010B	20.0	3.0	1	7/24/07	7/26/07	3.0	U	
Manganese	6010B	5.0	0.6	1	7/24/07	7/26/07	268		
Nickel	6010B	20	20	1	7/24/07	7/26/07	20	U	
Zinc	6010B	10.0	3.0	1	7/24/07	7/26/07	6.5	B	

% Solids: 0.0

Comments:

00059

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: Landfills
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0706283
Date Collected: 07/18/07
Date Received: 07/19/07
Units: µG/L
Basis: NA

Sample Name: BXS-4

Lab Code: K0706283-009 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	7/24/07	7/26/07	5.4		
Barium	6010B	5.0	0.7	1	7/24/07	7/26/07	33.0		
Cadmium	6010B	5.0	3.0	1	7/24/07	7/26/07	3.0	U	
Copper	6010B	10.0	4.0	1	7/24/07	7/26/07	4.0	U	
Iron	6010B	20.0	3.0	1	7/24/07	7/26/07	38.3		
Manganese	6010B	5.0	0.6	1	7/24/07	7/26/07	118		
Nickel	6010B	20	20	1	7/24/07	7/26/07	20	U	
Zinc	6010B	10.0	3.0	1	7/24/07	7/26/07	3.0	U	

% Solids: 0.0

Comments:

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company

Service Request: K0706283

Project No.: Landfills

Date Collected: 07/19/07

Project Name: Arlington Landfill Wells

Date Received: 07/19/07

Matrix: WATER

Units: µG/L

Basis: NA

Sample Name: BXN-6

Lab Code: K0706283-010 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	7/24/07	7/26/07	0.7	U	
Barium	6010B	5.0	0.7	1	7/24/07	7/26/07	0.7	U	
Cadmium	6010B	5.0	3.0	1	7/24/07	7/26/07	3.0	U	
Copper	6010B	10.0	4.0	1	7/24/07	7/26/07	4.0	U	
Iron	6010B	20.0	3.0	1	7/24/07	7/26/07	3.0	U	
Manganese	6010B	5.0	0.6	1	7/24/07	7/26/07	0.6	U	
Nickel	6010B	20	20	1	7/24/07	7/26/07	20	U	
Zinc	6010B	10.0	3.0	1	7/24/07	7/26/07	3.0	U	

* Solids: 0.0

Comments:

DISSOLVED METALS
-1-
INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: Landfills
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0706283
Date Collected: 07/17/07
Date Received: 07/19/07
Units: µG/L
Basis: NA

Sample Name: BXS-2

Lab Code: K0706283-011 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	7/24/07	7/26/07	0.7	U	
Barium	6010B	5.0	0.7	1	7/24/07	7/26/07	50.1		
Cadmium	6010B	5.0	3.0	1	7/24/07	7/26/07	3.0	U	
Copper	6010B	10.0	4.0	1	7/24/07	7/26/07	5.4	B	
Iron	6010B	20.0	3.0	1	7/24/07	7/26/07	699		
Manganese	6010B	5.0	0.6	1	7/24/07	7/26/07	1330		
Nickel	6010B	20	20	1	7/24/07	7/26/07	30.1		
Zinc	6010B	10.0	3.0	1	7/24/07	7/26/07	11.1		

% Solids: 0.0

Comments:

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company

Service Request: K0706283

Project No.: Landfills

Date Collected:

Project Name: Arlington Landfill Wells

Date Received:

Matrix: WATER

Units: µg/L

Basis: NA

Sample Name: Method Blank

Lab Code: K0706283-MB

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	0.7	1	7/24/07	7/26/07	0.7	U	
Barium	6010B	5.0	0.7	1	7/24/07	7/26/07	0.7	U	
Cadmium	6010B	5.0	3.0	1	7/24/07	7/26/07	3.0	U	
Copper	6010B	10.0	4.0	1	7/24/07	7/26/07	4.2	B	
Iron	6010B	20.0	3.0	1	7/24/07	7/26/07	3.0	U	
Manganese	6010B	5.0	0.6	1	7/24/07	7/26/07	0.6	U	
Nickel	6010B	20	20	1	7/24/07	7/26/07	20	U	
Zinc	6010B	10.0	3.0	1	7/24/07	7/26/07	3.0	U	

% Solids: 0.0

Comments:

DISSOLVED METALS

- 5a -

SPIKE SAMPLE RECOVERY

Client: JH Baxter & Company

Service Request: K0706283

Project No.: Landfills

Units: µg/L

Project Name: Arlington Landfill Wells

Basis: NA

Matrix: WATER

% Solids: 0.0

Sample Name: BXN-2S

Lab Code: K0706283-002S DISS

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	55 - 138	37.1		0.7	U	40.0	93		7060A
Barium	76 - 127	2140		17.8		2000	106		6010B
Cadmium	71 - 145	50.4		3.0	U	50.0	101		6010B
Copper	83 - 115	258		6.0	B	250	101		6010B
Iron	58 - 142	1010		3.0	U	1000	101		6010B
Manganese		8680		8030		500	132		6010B
Nickel	82 - 122	581		63.8		500	103		6010B
Zinc	83 - 117	509		5.9	B	500	101		6010B

An empty field in the Control Limit column indicates the control limit is not applicable

DISSOLVED METALS

- 6 -
DUPLICATES

Client: JH Baxter & Company

Service Request: K0706283

Project No.: Landfills

Units: µg/L

Project Name: Arlington Landfill Wells

Basis: NA

Matrix: WATER

‡ Solids: 0.0

Sample Name: BXN-2D

Lab Code: K0706283-002D DISS

Analyte	Control Limit (%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic		0.7	U	0.7	U			7060A
Barium		17.8		18.1		2		6010B
Cadmium		3.0	U	3.0	U			6010B
Copper		6.0	B	6.0	B	0		6010B
Iron		3.0	U	3.0	U			6010B
Manganese	20	8030		8070		1		6010B
Nickel		63.8		52.9		19		6010B
Zinc		5.9	B	8.1	B	32		6010B

An empty field in the Control Limit column indicates the control limit is not applicable

DISSOLVED METALS
-7-
LABORATORY CONTROL SAMPLE

Client: JH Baxter & Company

Service Request: K0706283

Project No.: Landfills

Project Name: Arlington Landfill Wells

Aqueous LCS Source: Inorganic Ventures

Solid LCS Source:

Analyte	Aqueous ug/L			Solid (mg/kg)					
	True	Found	%R	True	Found	C	Limits (%)	%R	
Arsenic	25.0	23.0	92						
Barium	5000	5290	106						
Cadmium	1250	1330	106						
Copper	625	644	103						
Iron	2500	2520	101						
Manganese	1250	1270	102						
Nickel	1250	1320	106						
Zinc	1250	1280	102						

November 6, 2007

Analytical Report for Service Request No: K0709387

Kathy Gunderson
Premier Environmental Services
981 State Street
Raymond, WA 98577

RE: Arlington Landfill Wells/BXS-Wells-Landfill

Dear Kathy:

Enclosed are the results of the samples submitted to our laboratory on October 11, 2007. For your reference, these analyses have been assigned our service request number K0709387.

All analyses were performed according to our laboratory's quality assurance program. Where applicable, the methods cited conform to the Methods Update Rule (effective 4/11/2007), which relates to the use of analytical methods for the drinking water and waste water programs. The test results meet requirements of the NELAC standards. Exceptions are noted in the case narrative report where applicable. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3275. You may also contact me via Email at JSedlak@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Janice Sedlak
Project Chemist

JS/lb

Page 1 of 67

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- B The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.
- * The duplicate analysis not within control limits. See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a chromatographic interference.
- X See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

0002

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Program	Number
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Colorado DPHE	-
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DHS	WA200001
South Carolina DHEC	61002
Utah DOH	COLU
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	JH Baxter & Company	Service Request No.:	K0709387
Project:	Arlington Landfill Wells / BXS-Wells-Landfill	Date Received:	10/11/2007
Sample Matrix:	Water		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), and Laboratory Control Sample (LCS).

Sample Receipt

Eleven water samples were received for analysis at Columbia Analytical Services on 10/11/2007. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

General Chemistry Parameters

pH by SM 4500-H+ B

Samples were received past the recommended holding time. The analysis was performed as soon as possible after receipt by the laboratory.

No other anomalies associated with the analysis of these samples were observed.

Total and Dissolved Metals

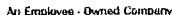
No anomalies associated with the analysis of these samples were observed.

Approved by LN Date 11.7.07

0006

**Chain of Custody
Documentation**

0007



CHAIN OF CUSTODY

SR#: K0709581

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

PAGE _____ OF _____ GPC # _____

PROJECT INFORMATION					NUMBER OF CONTAINERS	ANALYSIS PARAMETERS															REMARKS
PROJECT NAME	PROJECT NUMBER	PROJECT MANAGER	COMPANY/ADDRESS	CITY/STATE/ZIP		Semivolatile Organics by GC/MS 625 ☐ 8270 ☐ 8270LL ☐	Volatile Organics 624 ☐ 8260 ☐ 8021 ☐ BTEX ☐	Hydrocarbons (*see below) Gas ☐ Diesel ☐ Oil ☐	Fuel Fingerprint (FIQ) NW-HCID Screen	Oil & Grease/TRPH 1664 HEM ☐ 1664 SGT ☐	PCB's Aroclors ☐ Congeners ☐	608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Tri ☐ Tetra ☐ PCP ☐	PAHS 8310 ☐ SIM ☐	Metals, Total or Dissolved (See list below)	Cyanide ☐ Hex-Chrom ☐	pH, Cond., Cl, SO ₄ , PO ₄ , F, NO ₂ , NH ₃ -N, COD, TSS, TDS (circle) 2, DOC (circle) NO ₂ +NO ₃	TOX 9020 ☐ AOX 1850 ☐ 506 ☐	COD TOC, Nitrate, Nitrite	TDS, Sulfate, Chloride, Phosphate, Tannins, Silicates	
Tall, Baxter Arlington landfills Anita Ragan 85 N. Baxter Rd Eugene, OR 97402 aragan@jhbxter.com 541-554-3639 Ar R																					
SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX																	
BXS-21	10/9/07	1320		water	3										X			X			
BXS-2	10/9/07	1415		water	3										X			X			
BXS-3	10/9/07	1502		water	3										X			X			
BXS-4	10/9/07	1630		water	3										X			X			
BXS-6	10/9/07	1630		water	3										X			X			
BXN-4	10/10/07	0924		water	3										X			X			
BXN-5	10/10/07	0935		water	3										X			X			
BXN-2	10/10/07	1042		water	3										X			X			
BXN-1	10/10/07	1245		water	3										X			X			
BXN-3	10/10/07	1345		water	3										X			X			

REPORT REQUIREMENTS	INVOICE INFORMATION	CIRCLE WHICH METALS ARE TO BE ANALYZED:
I. Routine Report: Method Blank, Surrogate, as required	P.O. # Bill To: Jc H. Baxter	Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg
II. Report Dup., MS, MSD as required		Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg
X III. Data Validation Report (includes all raw data)		*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: (CIRCLE ONE)
IV. CLP Deliverable Report	TURNAROUND REQUIREMENTS	SPECIAL INSTRUCTIONS/COMMENTS:
V. EDD	24 hr. 48 hr. 5 Day X Standard (10-15 working days) Provide FAX Results Requested Report Date	-please contact Kathy Gunderson@ (360) 942-3409 w/ Questions -metals are field filter

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Anita Ragan Date/Time: 10/11/07 1143 Printed Name: Anita Ragan	Signature: [Signature] Date/Time: 10/11/07 1143 Printed Name: [Name]	Signature: _____ Date/Time: _____ Printed Name: _____	Signature: _____ Date/Time: _____ Printed Name: _____

Cooler Receipt and Preservation Form

Client / Project: BAIRN Service Request K07 09387
 Received: 10/11/07 Opened: 10/11/07 By: AK

Samples were received via? US Mail Fed Ex UPS DHL GH GS PDX Courier Hand Delivered

Samples were received in: (circle) Cooler Box Envelope Other NA

Were custody seals on coolers? NA Y N If yes, how many and where? _____

If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Is shipper's air-bill filed? If not, record air-bill number: NA Y N

Temperature of cooler(s) upon receipt (°C): 0.3 2.4 0.7 0.3

Temperature Blank (°C): N/A 2.1 1.7 0.4

If applicable, list Chain of Custody Numbers: _____

Were custody papers properly filled out (ink, signed, etc.)? NA Y N

Packing material used. Inserts Bubble Wrap Gel Packs Wet Ice Sleeves Other

Did all bottles arrive in good condition (unbroken)? Indicate in the table below. NA Y N

0. Were all sample labels complete (i.e analysis, preservation, etc.)? Y N
1. Did all sample labels and tags agree with custody papers? Indicate in the table below Y N
2. Were the correct types of bottles used for the tests indicated? NA Y N
3. Were all of the preserved bottles received at the lab with the appropriate pH? Indicate in the table below NA Y N
4. Were VOA vials and 1631 Mercury bottles checked for absence of air bubbles? Indicate in the table below. NA Y N
5. Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection? NA Y N
6. Was Cl2/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
BXS - 2	BXS - 3	10/11/07	AK

Sample ID	Bottle Count	Bottle Type	Out of Temp	Head-space	Broken	pH	Reagent	Volume added	Reagent Lot Number	Initials

Additional Notes, Discrepancies, & Resolutions: _____

General Chemistry Parameters

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : 10/09,10/07
Date Received : 10/11/07

Ammonia as Nitrogen

Analysis Method : 350.1
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0709387-001	0.05	0.006	1	10/27/07	ND	
BXS-2	K0709387-002	0.05	0.006	1	10/27/07	ND	
BXS-3	K0709387-003	0.05	0.006	1	10/27/07	0.98	
BXS-4	K0709387-004	0.05	0.006	1	10/27/07	0.48	
BXS-6	K0709387-005	0.05	0.006	1	10/27/07	0.49	
BXN-4	K0709387-006	0.50	0.06	10	10/27/07	12.3	
BXN-5	K0709387-007	0.50	0.06	10	10/27/07	12.4	
BXN-2	K0709387-008	0.05	0.006	1	10/27/07	ND	
BXN-1	K0709387-009	0.05	0.006	1	10/27/07	0.12	
BXN-3	K0709387-010	0.05	0.006	1	10/27/07	0.021	J
BXN-6	K0709387-011	0.05	0.006	1	10/27/07	ND	
Method Blank	K0709387-MB	0.05	0.006	1	10/27/07	ND	

0012

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : 10/9/2007
Date Received : 10/11/2007
Date Prepared : NA
Date Analyzed : 10/27/07

Duplicate Summary
Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0709387-001DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Ammonia as Nitrogen	350.1	0.05	ND	ND	ND	-	

0013

COLUMBIA ANALYTICAL SERVICES, INC.**QA/QC Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : 10/9/2007
Date Received : 10/11/2007
Date Prepared : NA
Date Analyzed : 10/27/07

**Matrix Spike Summary
Inorganic Parameters**

Sample Name : BXS-1
Lab Code : K0709387-001MS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Ammonia as Nitrogen	350.1	0.05	2.00	ND	1.96	98	90-110	

0014

COLUMBIA ANALYTICAL SERVICES, INC.**QA/QC Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/27/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0709387-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Ammonia as Nitrogen	NONE	350.1	8.45	8.09	96	90-110	

0015

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : 10/09,10/07
Date Received : 10/11/07

Chemical Oxygen Demand (COD)

Analysis Method : SM 5220 C
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0709387-001	5	3	1	10/24/07	17	
BXS-2	K0709387-002	5	3	1	10/24/07	33	
BXS-3	K0709387-003	5	3	1	10/24/07	71	
BXS-4	K0709387-004	5	3	1	10/24/07	ND	
BXS-6	K0709387-005	5	3	1	10/24/07	ND	
BXN-4	K0709387-006	5	3	1	10/24/07	34	
BXN-5	K0709387-007	5	3	1	10/24/07	34	
BXN-2	K0709387-008	5	3	1	10/24/07	17	
BXN-1	K0709387-009	5	3	1	10/24/07	32	
BXN-3	K0709387-010	5	3	1	10/24/07	ND	
BXN-6	K0709387-011	5	3	1	10/24/07	ND	
Method Blank	K0709387-MB	5	3	1	10/24/07	ND	
Method Blank	K0709387-MB	5	3	1	10/24/07	ND	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

0016

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/24/07

Duplicate Summary
 Inorganic Parameters

Sample Name : Batch QC
Lab Code : K0709603-001DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Chemical Oxygen Demand (COD)	SM 5220 C	5	ND	ND	ND	-	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

0017

COLUMBIA ANALYTICAL SERVICES, INC.**QA/QC Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/24/07

Matrix Spike Summary
Inorganic Parameters

Sample Name : Batch QC
Lab Code : K0709603-001MS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Chemical Oxygen Demand (COD)	SM 5220 C	13	100	ND	108	108	75-125	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

0018

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/24/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0709387-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Chemical Oxygen Demand (COD)	NONE	SM 5220 C	106	105	99	85-115	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

0019

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : 10/09,10/07
Date Received : 10/11/07

Chloride

Analysis Method : 300.0
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0709387-001	0.2	0.018	2	10/19/07	5.2	
BXS-2	K0709387-002	0.2	0.018	2	10/19/07	4.3	
BXS-3	K0709387-003	0.2	0.018	2	10/19/07	2.7	
BXS-4	K0709387-004	0.2	0.018	2	10/19/07	1.7	
BXS-6	K0709387-005	0.2	0.018	2	10/19/07	1.7	
BXN-4	K0709387-006	1.0	0.045	5	10/19/07	25.8	
BXN-5	K0709387-007	1.0	0.045	5	10/19/07	24.0	
BXN-2	K0709387-008	0.2	0.018	2	10/19/07	10.1	
BXN-1	K0709387-009	1.0	0.045	5	10/19/07	49.6	
BXN-3	K0709387-010	0.2	0.018	2	10/19/07	6.4	
BXN-6	K0709387-011	0.2	0.018	2	10/19/07	0.056	J
Method Blank	K0709387-MB	0.2	0.009	1	10/18/07	ND	
Method Blank	K0709387-MB	0.2	0.009	1	10/19/07	ND	

0020

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/19/07

**Duplicate Summary
Inorganic Parameters**

Sample Name : Batch QC
Lab Code : K0709521-002DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Chloride	300.0	0.2	0.8	0.8	0.8	<1	

0021

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/19/07

Matrix Spike Summary Inorganic Parameters

Sample Name : Batch QC
Lab Code : K0709521-002MS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
							Percent Recovery Acceptance Limits	
Chloride	300.0	0.2	4.0	0.8	4.4	90	80-120	

0022

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/18/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0709387-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Chloride	NONE	300.0	5.0	4.8	96	90-110	

0023

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/19/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0709387-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Chloride	NONE	300.0	5.0	4.8	96	90-110	

0024

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : 10/09,10/07
Date Received : 10/11/07

Sulfate

Analysis Method : 300.0
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0709387-001	0.2	0.014	2	10/19/07	9.4	
BXS-2	K0709387-002	0.2	0.014	2	10/19/07	0.088	J
BXS-3	K0709387-003	0.2	0.014	2	10/19/07	0.063	J
BXS-4	K0709387-004	0.2	0.014	2	10/19/07	1.3	
BXS-6	K0709387-005	0.2	0.014	2	10/19/07	1.3	
BXN-4	K0709387-006	1.0	0.035	5	10/19/07	21.7	
BXN-5	K0709387-007	1.0	0.035	5	10/19/07	21.5	
BXN-2	K0709387-008	1.0	0.035	5	10/19/07	23.2	
BXN-1	K0709387-009	1.0	0.035	5	10/19/07	48.5	
BXN-3	K0709387-010	0.2	0.014	2	10/19/07	13.8	
BXN-6	K0709387-011	0.2	0.014	2	10/19/07	ND	
Method Blank	K0709387-MB	0.2	0.007	1	10/18/07	ND	
Method Blank	K0709387-MB	0.2	0.007	1	10/19/07	ND	

0025

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/18/07

Duplicate Summary Inorganic Parameters

Sample Name : Batch QC
Lab Code : K0709521-002DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Sulfate	300.0	0.2	1.8	1.8	1.8	<1	

0026

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/19/07

**Matrix Spike Summary
Inorganic Parameters**

Sample Name : Batch QC
Lab Code : K0709521-002MS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Sulfate	300.0	0.2	4.0	1.8	5.5	93	80-120	

0027

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/18/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0709387-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery	Result Notes
						Acceptance Limits	
Sulfate	NONE	300.0	5.0	4.8	96	90-110	

0028

COLUMBIA ANALYTICAL SERVICES, INC.**QA/QC Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/19/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0709387-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Sulfate	NONE	300.0	5.0	4.8	96	90-110	

0029

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : 10/09,10/07
Date Received : 10/11/07

Conductivity at 25 Degrees Celsius

Analysis Method : 120.1
Test Notes :

Units : uMHOS/cm
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0709387-001	2	0.3	1	10/25/07	482	
BXS-2	K0709387-002	2	0.3	1	10/25/07	814	
BXS-3	K0709387-003	2	0.3	1	10/25/07	638	
BXS-4	K0709387-004	2	0.3	1	10/25/07	200	
BXS-6	K0709387-005	2	0.3	1	10/25/07	201	
BXN-4	K0709387-006	2	0.3	1	10/25/07	771	
BXN-5	K0709387-007	2	0.3	1	10/25/07	764	
BXN-2	K0709387-008	2	0.3	1	10/25/07	385	
BXN-1	K0709387-009	2	0.3	1	10/25/07	563	
BXN-3	K0709387-010	2	0.3	1	10/25/07	763	
BXN-6	K0709387-011	2	0.3	1	10/25/07	3	
Method Blank	K0709387-MB	2	0.3	1	10/25/07	1.3	J

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : 10/10/2007
Date Received : 10/11/2007
Date Prepared : NA
Date Analyzed : 10/25/07

Duplicate Summary
Inorganic Parameters

Sample Name : BXN-3
Lab Code : K0709387-010DUP
Test Notes :

Units : uMHOS/cm
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Conductivity at 25 Degrees Celsius	120.1	2	763	758	760	<1	

0031

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/25/07

**Laboratory Control Sample Summary
Inorganic Parameters**

Sample Name : Lab Control Sample
Lab Code : K0709387-LCS
Test Notes :

Units : uMHOS/cm
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Conductivity at 25 Degrees Celsius	NONE	120.1	1150	1200	104	85-115	

0032

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : 10/09,10/07
Date Received : 10/11/07

Nitrate+Nitrite as Nitrogen

Analysis Method : 353.2
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0709387-001	0.05	0.006	1	10/26/07	0.47	
BXS-2	K0709387-002	0.05	0.006	1	10/26/07	ND	
BXS-3	K0709387-003	0.05	0.006	1	10/26/07	0.17	
BXS-4	K0709387-004	0.05	0.006	1	10/26/07	ND	
BXS-6	K0709387-005	0.05	0.006	1	10/26/07	ND	
BXN-4	K0709387-006	0.05	0.006	1	10/26/07	0.58	
BXN-5	K0709387-007	0.05	0.006	1	10/26/07	0.48	
BXN-2	K0709387-008	0.05	0.006	1	10/26/07	1.62	
BXN-1	K0709387-009	0.05	0.006	1	10/26/07	0.011	
BXN-3	K0709387-010	0.05	0.006	1	10/26/07	0.016	
BXN-6	K0709387-011	0.05	0.006	1	10/26/07	ND	
Method Blank	K0709387-MB	0.05	0.006	1	10/26/07	ND	

0033

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/26/07

**Duplicate Summary
Inorganic Parameters**

Sample Name : Batch QC
Lab Code : K0709908-001DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Nitrate+Nitrite as Nitrogen	353.2	0.05	0.16	0.16	0.16	<1	

0034

COLUMBIA ANALYTICAL SERVICES, INC.**QA/QC Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/26/07

**Matrix Spike Summary
Inorganic Parameters**

Sample Name : Batch QC
Lab Code : K0709908-001MS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Nitrate+Nitrite as Nitrogen	353.2	0.05	2.00	0.16	2.35	110	90-110	

0035

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/26/07

Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Laboratory Control Sample
Lab Code : K0709387-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Nitrate+Nitrite as Nitrogen	NONE	353.2	37.5	38.0	101	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : 10/09,10/07
Date Received : 10/11/07

Solids, Total Dissolved

Analysis Method : SM 2540 C
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0709387-001	5	5	1	10/16/07	294	
BXS-2	K0709387-002	5	5	1	10/16/07	478	
BXS-3	K0709387-003	5	5	1	10/16/07	476	
BXS-4	K0709387-004	5	5	1	10/16/07	159	
BXS-6	K0709387-005	5	5	1	10/16/07	151	
BXN-4	K0709387-006	5	5	1	10/16/07	415	
BXN-5	K0709387-007	5	5	1	10/16/07	411	
BXN-2	K0709387-008	5	5	1	10/16/07	235	
BXN-1	K0709387-009	5	5	1	10/16/07	362	
BXN-3	K0709387-010	5	5	1	10/16/07	457	
BXN-6	K0709387-011	5	5	1	10/16/07	ND	
Method Blank	K0709387-MB	5	5	1	10/16/07	ND	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

0037

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : 10/9/2007
Date Received : 10/11/2007
Date Prepared : NA
Date Analyzed : 10/16/07

Duplicate Summary Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0709387-001DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Solids, Total Dissolved	SM 2540 C	5	294	310	302	5	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

0038

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/16/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0709387-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Solids, Total Dissolved	NONE	SM 2540 C	864	924	107	85-115	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

0039

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : 10/09,10/07
Date Received : 10/11/07

Carbon, Total Organic

Analysis Method : SM 5310 C
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0709387-001	1.0	0.08	2	10/19/07	7.1	
BXS-2	K0709387-002	1.0	0.08	2	10/19/07	15.5	
BXS-3	K0709387-003	1.0	0.08	2	10/19/07	26.4	
BXS-4	K0709387-004	0.5	0.04	1	10/19/07	1.0	
BXS-6	K0709387-005	0.5	0.04	1	10/19/07	0.9	
BXN-4	K0709387-006	1.0	0.08	2	10/19/07	13.7	
BXN-5	K0709387-007	0.5	0.04	1	10/19/07	13.3	
BXN-2	K0709387-008	0.5	0.04	1	10/19/07	5.1	
BXN-1	K0709387-009	0.5	0.04	1	10/19/07	6.8	
BXN-3	K0709387-010	0.5	0.04	1	10/19/07	5.6	
BXN-6	K0709387-011	0.5	0.04	1	10/19/07	0.08	J
Method Blank	K0709387-MB	0.5	0.04	1	10/19/07	ND	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

0040

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : 10/9/2007
Date Received : 10/11/2007
Date Prepared : NA
Date Analyzed : 10/19/07

**Duplicate Summary
Inorganic Parameters**

Sample Name : BXS-1
Lab Code : K0709387-001DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Carbon, Total Organic	SM 5310 C	1.0	7.1	7.0	7.1	1	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

0041

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : 10/9/2007
Date Received : 10/11/2007
Date Prepared : NA
Date Analyzed : 10/19/07

Matrix Spike Summary Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0709387-001MS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
							Percent Recovery Acceptance Limits	
Carbon, Total Organic	SM 5310 C	1.0	50.0	7.1	56.1	98	49-156	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

0042

COLUMBIA ANALYTICAL SERVICES, INC.**QA/QC Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/19/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0709387-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Carbon, Total Organic	NONE	SM 5310 C	24.0	23.9	100	69-136	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

0043

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : 10/09,10/07
Date Received : 10/11/07

Tannin and Lignin

Analysis Method : SM 5550 B
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BXS-1	K0709387-001	0.2	0.03	1	10/26/07	0.3	
BXS-2	K0709387-002	0.2	0.03	1	10/26/07	1.1	
BXS-3	K0709387-003	0.2	0.03	1	10/26/07	4.7	
BXS-4	K0709387-004	0.2	0.03	1	10/26/07	0.3	
BXS-6	K0709387-005	0.2	0.03	1	10/26/07	0.3	
BXN-4	K0709387-006	0.2	0.03	1	10/26/07	3.7	
BXN-5	K0709387-007	0.2	0.03	1	10/26/07	3.6	
BXN-2	K0709387-008	0.2	0.03	1	10/26/07	1.9	
BXN-1	K0709387-009	0.2	0.03	1	10/26/07	1.3	
BXN-3	K0709387-010	0.2	0.03	1	10/26/07	1.8	
BXN-6	K0709387-011	0.2	0.03	1	10/26/07	ND	
Method Blank	K0709387-MB	0.2	0.03	1	10/26/07	0.04	J

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

0044

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : 10/9/2007
Date Received : 10/11/2007
Date Prepared : NA
Date Analyzed : 10/26/07

**Duplicate Summary
Inorganic Parameters**

Sample Name : BXS-1
Lab Code : K0709387-001DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Tannin and Lignin	SM 5550 B	0.2	0.3	0.3	0.3	<1	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

0045

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : 10/9/2007
Date Received : 10/11/2007
Date Prepared : NA
Date Analyzed : 10/26/07

Matrix Spike Summary Inorganic Parameters

Sample Name : BXS-1
Lab Code : K0709387-001MS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
							Percent Recovery Acceptance Limits	
Tannin and Lignin	SM 5550 B	0.2	1.0	0.3	1.1	80	75-125	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

0046

COLUMBIA ANALYTICAL SERVICES, INC.**QA/QC Report**

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/26/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0709387-LCS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Tannin and Lignin	NONE	SM 5550 B	1.0	1.0	100	85-115	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

0047

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : 10/09,10/07
Date Received : 10/11/07

pH

Analysis Method : SM 4500-H+ B
Test Notes :

Units : pH Units
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
BXS-1	K0709387-001	-	-	1	10/11/07 13:51	6.18	
BXS-2	K0709387-002	-	-	1	10/11/07 13:53	6.35	
BXS-3	K0709387-003	-	-	1	10/11/07 13:54	6.36	
BXS-4	K0709387-004	-	-	1	10/11/07 13:55	7.82	
BXS-6	K0709387-005	-	-	1	10/11/07 13:58	7.85	
BXN-4	K0709387-006	-	-	1	10/11/07 13:59	6.71	
BXN-5	K0709387-007	-	-	1	10/11/07 14:01	6.69	
BXN-2	K0709387-008	-	-	1	10/11/07 14:02	6.56	
BXN-1	K0709387-009	-	-	1	10/11/07 14:03	6.32	
BXN-3	K0709387-010	-	-	1	10/11/07 13:43	6.40	
BXN-6	K0709387-011	-	-	1	10/11/07 14:05	5.72	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

0048

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : 10/10/2007
Date Received : 10/11/2007
Date Prepared : NA
Date Analyzed : 10/11/07

**Duplicate Summary
Inorganic Parameters**

Sample Name : BXN-6
Lab Code : K0709387-011DUP
Test Notes :

Units : pH Units
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
pH	SM 4500-H+ B	-	5.72	5.78	5.75	1	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

0049

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company
Project Name : Arlington Landfill Wells
Project Number : BXS-Wells-Landfill
Sample Matrix : WATER

Service Request : K0709387
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 10/11/07

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name : Lab Control Sample
Lab Code : K0709387-LCS
Test Notes :

Units : pH Units
Basis : NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
pH	NONE	SM 4500-H+ B	8.16	8.06	99	85-115	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

0050

Metals

DISSOLVED METALS

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells

Service Request: K0709387

<u>Sample No.</u>	<u>Lab Sample ID.</u>
BXS-1	K0709387-001 DISS
BXS-1D	K0709387-001D DISS
BXS-1S	K0709387-001S DISS
BXS-2	K0709387-002 DISS
BXS-3	K0709387-003 DISS
BXS-4	K0709387-004 DISS
BXS-6	K0709387-005 DISS
BXN-4	K0709387-006 DISS
BXN-5	K0709387-007 DISS
BXN-2	K0709387-008 DISS
BXN-1	K0709387-009 DISS
BXN-3	K0709387-010 DISS
BXN-6	K0709387-011 DISS
Method Blank	K0709387-MB

Were ICP interelement corrections applied?

Yes/No YES

Were ICP background corrections applied?

Yes/No YESIf yes-were raw data generated before
application of background corrections?Yes/No NO

Comments:

Signature: JH BaxterDate: 11/26/07

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company

Service Request: K0709387

Project No.: BXS-Wells-Landfill

Date Collected: 10/09/07

Project Name: Arlington Landfill Wells

Date Received: 10/11/07

Matrix: WATER

Units: µG/L

Basis: NA

Sample Name: BXS-1

Lab Code: K0709387-001 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	1.0	1	10/30/07	10/31/07	1.0	U	
Barium	6010B	5.0	2.0	1	10/30/07	11/02/07	26.5		
Cadmium	6010B	5.0	3.0	1	10/30/07	11/02/07	3.0	U	
Copper	6010B	10.0	5.0	1	10/30/07	11/02/07	5.0	U	
Iron	6010B	20.0	3.0	1	10/30/07	11/02/07	3.0	U	
Manganese	6010B	5.0	0.8	1	10/30/07	11/02/07	353		
Nickel	6010B	20	20	1	10/30/07	11/02/07	20	U	
Zinc	6010B	10.0	6.0	1	10/30/07	11/02/07	7.9	B	

% Solids: 0.0

Comments:

DISSOLVED METALS
-1-
INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0709387
Date Collected: 10/09/07
Date Received: 10/11/07
Units: µG/L
Basis: NA

Sample Name: BXS-2

Lab Code: K0709387-002 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	1.0	1	10/30/07	10/31/07	1.0	U	
Barium	6010B	5.0	2.0	1	10/30/07	11/02/07	48.3		
Cadmium	6010B	5.0	3.0	1	10/30/07	11/02/07	3.0	U	
Copper	6010B	10.0	5.0	1	10/30/07	11/02/07	5.0	U	
Iron	6010B	20.0	3.0	1	10/30/07	11/02/07	656		
Manganese	6010B	5.0	0.8	1	10/30/07	11/02/07	1280		
Nickel	6010B	20	20	1	10/30/07	11/02/07	31.4		
Zinc	6010B	10.0	6.0	1	10/30/07	11/02/07	22.3		

% Solids: 0.0

Comments:

DISSOLVED METALS

-I-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0709387
Date Collected: 10/09/07
Date Received: 10/11/07
Units: µG/L
Basis: NA

Sample Name: BXS-3

Lab Code: K0709387-003 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	1.0	1	10/30/07	10/31/07	67.2		
Barium	6010B	5.0	2.0	1	10/30/07	11/02/07	83.2		
Cadmium	6010B	5.0	3.0	1	10/30/07	11/02/07	3.0	U	
Copper	6010B	10.0	5.0	1	10/30/07	11/02/07	5.0	U	
Iron	6010B	20.0	3.0	1	10/30/07	11/02/07	62700		
Manganese	6010B	50.0	8.0	10	10/30/07	11/02/07	14700		
Nickel	6010B	20	20	1	10/30/07	11/02/07	20	U	
Zinc	6010B	10.0	6.0	1	10/30/07	11/02/07	15.9		

% Solids: 0.0

Comments:

0055

DISSOLVED METALS
-1-
INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0709387
Date Collected: 10/09/07
Date Received: 10/11/07
Units: µG/L
Basis: NA

Sample Name: BXS-4

Lab Code: K0709387-004 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	1.0	1	10/30/07	10/31/07	5.4		
Barium	6010B	5.0	2.0	1	10/30/07	11/02/07	29.4		
Cadmium	6010B	5.0	3.0	1	10/30/07	11/02/07	3.0	U	
Copper	6010B	10.0	5.0	1	10/30/07	11/02/07	5.0	U	
Iron	6010B	20.0	3.0	1	10/30/07	11/02/07	36.1		
Manganese	6010B	5.0	0.8	1	10/30/07	11/02/07	121		
Nickel	6010B	20	20	1	10/30/07	11/02/07	20	U	
Zinc	6010B	10.0	6.0	1	10/30/07	11/02/07	6.0	U	

% Solids: 0.0

Comments:

0056

DISSOLVED METALS

-I-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company

Service Request: K0709387

Project No.: BXS-Wells-Landfill

Date Collected: 10/09/07

Project Name: Arlington Landfill Wells

Date Received: 10/11/07

Matrix: WATER

Units: µG/L

Basis: NA

Sample Name: BXS-6

Lab Code: K0709387-005 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	1.0	1	10/30/07	10/31/07	4.8	B	
Barium	6010B	5.0	2.0	1	10/30/07	11/02/07	29.3		
Cadmium	6010B	5.0	3.0	1	10/30/07	11/02/07	3.0	U	
Copper	6010B	10.0	5.0	1	10/30/07	11/02/07	5.0	U	
Iron	6010B	20.0	3.0	1	10/30/07	11/02/07	36.0		
Manganese	6010B	5.0	0.8	1	10/30/07	11/02/07	120		
Nickel	6010B	20	20	1	10/30/07	11/02/07	20	U	
Zinc	6010B	10.0	6.0	1	10/30/07	11/02/07	12.9		

% Solids: 0.0

Comments:

0057

DISSOLVED METALS
-1-
INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0709387
Date Collected: 10/10/07
Date Received: 10/11/07
Units: µG/L
Basis: NA

Sample Name: BXN-4

Lab Code: K0709387-006 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	1.0	1	10/30/07	10/31/07	1.0	U	
Barium	6010B	5.0	2.0	1	10/30/07	11/02/07	171		
Cadmium	6010B	5.0	3.0	1	10/30/07	11/02/07	3.0	U	
Copper	6010B	10.0	5.0	1	10/30/07	11/02/07	25.0		
Iron	6010B	20.0	3.0	1	10/30/07	11/02/07	162		
Manganese	6010B	5.0	0.8	1	10/30/07	11/02/07	4480		
Nickel	6010B	20	20	1	10/30/07	11/02/07	139		
Zinc	6010B	10.0	6.0	1	10/30/07	11/02/07	10.4		

% Solids: 0.0

Comments:

0058

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0709387
Date Collected: 10/10/07
Date Received: 10/11/07
Units: µg/L
Basis: NA

Sample Name: BXN-5

Lab Code: K0709387-007 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	1.0	1	10/30/07	10/31/07	1.0	U	
Barium	6010B	5.0	2.0	1	10/30/07	11/02/07	176		
Cadmium	6010B	5.0	3.0	1	10/30/07	11/02/07	3.0	U	
Copper	6010B	10.0	5.0	1	10/30/07	11/02/07	24.4		
Iron	6010B	20.0	3.0	1	10/30/07	11/02/07	163		
Manganese	6010B	5.0	0.8	1	10/30/07	11/02/07	4590		
Nickel	6010B	20	20	1	10/30/07	11/02/07	136		
Zinc	6010B	10.0	6.0	1	10/30/07	11/02/07	11.1		

% Solids: 0.0

Comments:

DISSOLVED METALS
-1-
INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0709387
Date Collected: 10/10/07
Date Received: 10/11/07
Units: µG/L
Basis: NA

Sample Name: BXN-2

Lab Code: K0709387-008 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	1.0	1	10/30/07	10/31/07	1.0	U	
Barium	6010B	5.0	2.0	1	10/30/07	11/02/07	12.6		
Cadmium	6010B	5.0	3.0	1	10/30/07	11/02/07	3.0	U	
Copper	6010B	10.0	5.0	1	10/30/07	11/02/07	5.0	U	
Iron	6010B	20.0	3.0	1	10/30/07	11/02/07	3.0	U	
Manganese	6010B	5.0	0.8	1	10/30/07	11/02/07	5320		
Nickel	6010B	20	20	1	10/30/07	11/02/07	36.4		
Zinc	6010B	10.0	6.0	1	10/30/07	11/02/07	34.0		

% Solids: 0.0

Comments:

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company

Service Request: K0709387

Project No.: BXS-Wells-Landfill

Date Collected: 10/10/07

Project Name: Arlington Landfill Wells

Date Received: 10/11/07

Matrix: WATER

Units: µg/L

Basis: NA

Sample Name: BXN-1

Lab Code: K0709387-009 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	1.0	1	10/30/07	10/31/07	3.0	B	
Barium	6010B	5.0	2.0	1	10/30/07	11/02/07	50.3		
Cadmium	6010B	5.0	3.0	1	10/30/07	11/02/07	3.0	U	
Copper	6010B	10.0	5.0	1	10/30/07	11/02/07	5.0	U	
Iron	6010B	20.0	3.0	1	10/30/07	11/02/07	7810		
Manganese	6010B	5.0	0.8	1	10/30/07	11/02/07	2940		
Nickel	6010B	20	20	1	10/30/07	11/02/07	40.8		
Zinc	6010B	10.0	6.0	1	10/30/07	11/02/07	28.3		

% Solids: 0.0

Comments:

DISSOLVED METALS
-1-
INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0709387
Date Collected: 10/10/07
Date Received: 10/11/07
Units: µG/L
Basis: NA

Sample Name: BXN-3

Lab Code: K0709387-010 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	1.0	1	10/30/07	10/31/07	4.7	B	
Barium	6010B	5.0	2.0	1	10/30/07	11/02/07	51.3		
Cadmium	6010B	5.0	3.0	1	10/30/07	11/02/07	3.0	U	
Copper	6010B	10.0	5.0	1	10/30/07	11/02/07	5.0	U	
Iron	6010B	20.0	3.0	1	10/30/07	11/02/07	7510		
Manganese	6010B	5.0	0.8	1	10/30/07	11/02/07	2990		
Nickel	6010B	20	20	1	10/30/07	11/02/07	104		
Zinc	6010B	10.0	6.0	1	10/30/07	11/02/07	16.6		

% Solids: 0.0

Comments:

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0709387
Date Collected: 10/10/07
Date Received: 10/11/07
Units: µG/L
Basis: NA

Sample Name: BXN-6

Lab Code: K0709387-011 DISS

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	1.0	1	10/30/07	10/31/07	1.0	U	
Barium	6010B	5.0	2.0	1	10/30/07	11/02/07	2.0	U	
Cadmium	6010B	5.0	3.0	1	10/30/07	11/02/07	3.0	U	
Copper	6010B	10.0	5.0	1	10/30/07	11/02/07	5.0	U	
Iron	6010B	20.0	3.0	1	10/30/07	11/02/07	3.0	U	
Manganese	6010B	5.0	0.8	1	10/30/07	11/02/07	2.7	B	
Nickel	6010B	20	20	1	10/30/07	11/02/07	20	U	
Zinc	6010B	10.0	6.0	1	10/30/07	11/02/07	6.0	U	

% Solids: 0.0

Comments:

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company
Project No.: BXS-Wells-Landfill
Project Name: Arlington Landfill Wells
Matrix: WATER

Service Request: K0709387

Date Collected:

Date Received:

Units: µG/L

Basis: NA

Sample Name: Method Blank

Lab Code: K0709387-MB

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	7060A	5.0	1.0	1	10/30/07	10/31/07	1.0	U	
Barium	6010B	5.0	2.0	1	10/30/07	11/02/07	2.0	U	
Cadmium	6010B	5.0	3.0	1	10/30/07	11/02/07	3.0	U	
Copper	6010B	10.0	5.0	1	10/30/07	11/02/07	5.0	U	
Iron	6010B	20.0	3.0	1	10/30/07	11/02/07	3.0	U	
Manganese	6010B	5.0	0.8	1	10/30/07	11/02/07	0.8	U	
Nickel	6010B	20	20	1	10/30/07	11/02/07	20	U	
Zinc	6010B	10.0	6.0	1	10/30/07	11/02/07	6.0	U	

% Solids: 0.0

Comments:

DISSOLVED METALS

- 5a -

SPIKE SAMPLE RECOVERY

Client: JH Baxter & Company

Service Request: K0709387

Project No.: BXS-Wells-Landfill

Units: µg/L

Project Name: Arlington Landfill Wells

Basis: NA

Matrix: WATER

% Solids: 0.0

Sample Name: BXS-1S

Lab Code: K0709387-001S DISS

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	60 - 120	35.4		1.0	U	40.0	89		7060A
Barium	91 - 111	2090		26.5		2000	103		6010B
Cadmium	73 - 123	46.4		3.0	U	50.0	93		6010B
Copper	84 - 117	251		5.0	U	250	100		6010B
Iron	43 - 163	1000		3.0	U	1000	100		6010B
Manganese	55 - 151	945		353		500	98		6010B
Nickel	89 - 115	519		20.0	U	500	104		6010B
Zinc	90 - 111	493		7.9	B	500	97		6010B

An empty field in the Control Limit column indicates the control limit is not applicable

DISSOLVED METALS

- 6 -

DUPLICATES

Client: JH Baxter & Company

Service Request: K0709387

Project No.: BXS-Wells-Landfill

Units: µg/L

Project Name: Arlington Landfill Wells

Basis: NA

Matrix: WATER

% Solids: 0.0

Sample Name: BXS-1D

Lab Code: K0709387-001D DISS

Analyte	Control Limit (%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic		1.0	U	1.0	U			7060A
Barium	20	26.5		26.5		0		6010B
Cadmium		3.0	U	3.0	U			6010B
Copper		5.0	U	5.0	U			6010B
Iron		3.0	U	3.8	B	200.0		6010B
Manganese	20	353		353		0		6010B
Nickel		20	U	20	U			6010B
Zinc		7.9	B	7.9	B	0		6010B

An empty field in the Control Limit column indicates the control limit is not applicable

DISSOLVED METALS

- 7 -

LABORATORY CONTROL SAMPLE

Client: JH Baxter & Company

Service Request: K0709387

Project No.: BXS-Wells-Landfill

Project Name: Arlington Landfill Wells

Aqueous LCS Source: Inorganic Ventures

Solid LCS Source:

Analyte	Aqueous ug/L			Solid (mg/kg)					
	True	Found	%R	True	Found	C	Limits	%R	
Arsenic	25.0	23.0	92						
Barium	5000	5390	108						
Cadmium	1250	1280	102						
Copper	625	649	104						
Iron	2500	2640	106						
Manganese	1250	1330	106						
Nickel	1250	1360	109						
Zinc	1250	1290	103						



Burlington WA 1620 S Walnut St - 98233
 Corporate Office 800.755.9295 • 360.757.1400 • 360.757.1402 fax
 Bellingham WA 805 Orchard Dr Suite 4 - 98225
 360.671.0688 • 360.671.1577 fax

Certificate Of Analysis

Client Name: J.H. Baxter & Company
 P O Box 10797
 Eugene, OR 97440

Report Date: 2/15/2007
 Reference Number: 07-01310
 Project: Landfill Wells

Collected By:

Date Received: 2/2/2007

Supervisor:

Sample Description: BXS-1 Lab Number: 2776						Sample Date: 2/1/2007		
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	2/15/2007	AV	M_070205QT	
TOTAL COLIFORM	<1	1	per 100mL	SM9223 B.2.b	2/15/2007	AV	M_070205QT	

Sample Description: BXS-2 Lab Number: 2777						Sample Date: 2/1/2007		
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	2/15/2007	AV	M_070205QT	
TOTAL COLIFORM	<1	1	per 100mL	SM9223 B.2.b	2/15/2007	AV	M_070205QT	

Sample Description: BXS-3 Lab Number: 2778						Sample Date: 2/1/2007		
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	2/15/2007	AV	M_070205QT	
TOTAL COLIFORM	<1	1	per 100mL	SM9223 B.2.b	2/15/2007	AV	M_070205QT	

Sample Description: BXS-4 Lab Number: 2779						Sample Date: 2/1/2007		
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	2/15/2007	AV	M_070205QT	
TOTAL COLIFORM	<1	1	per 100mL	SM9223 B.2.b	2/15/2007	AV	M_070205QT	

Sample Description: BXS-5 Lab Number: 2780						Sample Date: 2/1/2007		
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	2/15/2007	AV	M_070205QT	
TOTAL COLIFORM	<1	1	per 100mL	SM9223 B.2.b	2/15/2007	AV	M_070205QT	

PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
 ND = Not detected above the listed practical quantitation limit (PQL)



Page 2 of 2
Reference Number: 07-01310
Report Date: 2/15/2007

Certificate Of Analysis

Collected By:

Date Received: 2/2/2007

E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	2/15/2007	AV	M_070205QT
TOTAL COLIFORM	<1	1	per 100mL	SM9223 B.2.b	2/15/2007	AV	M_070205QT

Sample Description: BXS-6
Lab Number: 2781

Sample Date: 2/1/2007

Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	2/15/2007	AV	M_070205QT	
TOTAL COLIFORM	<1	1	per 100mL	SM9223 B.2.b	2/15/2007	AV	M_070205QT	

PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
ND = Not detected above the listed practical quantitation limit (PQL)

CHAIN OF CUSTODY / ANALYSIS REQUEST

IMPORTANT PLEASE COMPLETE ALL APPLICABLE SHADED SECTIONS

07-01310 KAP
07-01419 2-16-07

PAGE 1 OF 1

CLIENT: J.H. Baxter		BILL TO: J.H. Baxter & Co.		FOR LAB USE ONLY	
ADDRESS: 6520 188th St. N.E. PO Box 305		ADDRESS: P.O. Box 10797			
CITY: Arlington STATE: WA Zip: 98223		CITY: Eugene STATE: OR Zip: 97440		REF#	
PHONE: (360)435-2146 FAX: (360)435-3035		PHONE: (541)689-3801 FAX: (541)689-8303		CHECK REGULATORY PROGRAM	
EMAIL: mlarson@jhbaxter.com		P.O.#:		☐ SAFE DRINKING WATER ACT	
PROJECT NAME: Landfill Wells		VISA ☐ MC ☐ AE ☐ EXPIRES /		☐ CLEAN WATER ACT	
CONTACT: Mary Larson		CARD #: Contact: Rue Ann Thomas		☐ RCRA / CERCLA	
SAMPLED BY: Jim Clawson and Mary Larson		CARD HOLDER SIGNATURE:		☒ OTHER SWD CO. Landfill	

EDGE

ANALYTICAL, INC

11525 Knudson Road
Burlington, WA 98233
Phone: 360-757-1400
Fax: 360-757-1402
Toll Free: 800-755-8295
email: info@edgeanalytical.com

INSTRUCTIONS

1. USE ONE LINE PER SAMPLE.
2. BE SPECIFIC IN TEST REQUESTS.
3. CHECK OFF TESTS TO BE PERFORMED FOR EACH SAMPLE.
4. ENTER NUMBER OF CONTAINERS.

TURN AROUND TIME REQUIRED

- ☒ STANDARD 10 WORKING DAYS
☐ 5 WORKING DAYS (50% SURCHARGE)
☐ 1-2 WORKING DAYS (100% SURCHARGE)
☐ OTHER

ANALYSIS REQUESTED

SAMPLE ID	LOCATION	GRAB/COMP.	MATRIX	DATE	TIME	TOTAL COLIFORMS	ANALYSIS REQUESTED						NUMBER OF CONTAINERS	SPECIAL INSTRUCTIONS/CONDITIONS OF RECEIPT
1	BXS-1	Grab	Water	2-10-07	9:10	☒	☐	☐	☐	☐	☐	☐	1	
2	BXS-2	Grab	Water	2-10-07	10:10	☒	☐	☐	☐	☐	☐	☐	1	
3	BXS-3	Grab	Water	2-10-07	11:00	☒	☐	☐	☐	☐	☐	☐	1	
4	BXS-4	Grab	Water	2-10-07	13:30	☒	☐	☐	☐	☐	☐	☐	1	
5	BXS-5	Grab	Water	2-10-07	14:30	☒	☐	☐	☐	☐	☐	☐	1	
6	BXS-6	Grab	Water	2-10-07	12:00	☒	☐	☐	☐	☐	☐	☐	1	
7						☐	☐	☐	☐	☐	☐	☐		
8						☐	☐	☐	☐	☐	☐	☐		
9						☐	☐	☐	☐	☐	☐	☐		
10						☐	☐	☐	☐	☐	☐	☐		

6 TOTAL CONTAINERS

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
1. Mary Larson	2-10-07	11:30	1.		
2.			2.		
3.			3.		
4.			4.		

	YES	NO	N/A
CUSTODY SEALS INTACT	☐	☐	☐
SAMPLE TEMP. SATISFACTORY _____ °C	☐	☐	☐
SAMPLES RECEIVED INTACT	☐	☐	☐
CHAIN OF CUSTODY & LABELS AGREE	☐	☐	☐



Burlington WA 1620 S Walnut St - 98233
 Corporate Office 800.755.9295 • 360.757.1400 • 360.757.1402fax
 Bellingham WA 805 Orchard Dr Suite 4 - 98225
 360.671.0688 • 360.671.1577fax

Page 1 of 1

Certificate Of Analysis

Client Name: J H Baxter Company
 85 Baxter Rd
 Eugene, OR 97402

Report Date: 7/23/2007
 Reference Number: 07-09204
 Project: Landfill Wells

Collected By:

Date Received: 7/18/2007

Supervisor:

Sample Description: BXS-3 - JHB Arlington					Sample Date: 7/17/2007			
Lab Number: 20976								
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments

TOTAL COLIFORM	6.0	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	
E. Coli	<1.0	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	

Sample Description: BXS-2 - JHB Arlington					Sample Date: 7/17/2007			
Lab Number: 20977								
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments

TOTAL COLIFORM	>2419.6	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	
E. Coli	<1.0	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	

Sample Description: BXN-2 - JHB Arlington					Sample Date: 7/17/2007			
Lab Number: 20978								
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments

TOTAL COLIFORM	290.9	1	MPN/100mL	SM9223 B.2.b	7/23/2007	SK	QT_070720	
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	

PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
 ND = Not detected above the listed practical quantitation limit (PQL)

•

Client # J.H. Baxter Company City/State Portland, ME 04105 Attn: Eugene Amodeo Phone: 603-435-3445 Fax: 603-435-3446 E-mail: EAMODEO@PORTLAND.ME.GOV Firm: Hardin, Weir, and Gerson		Firm: J.H. Baxter & Company Address: 1000 10th St City: Portland, ME 04105 Phone: 603-435-3445 Fax: 603-435-3446 E-mail: EAMODEO@PORTLAND.ME.GOV Firm: Hardin, Weir, and Gerson		For Lab Use Only Ref # Client Regulatory Program ☐ Safe Drinking Water Act ☐ Clean Water Act ☐ RCRA/CERCLA ☐ CWA	
--	--	--	--	---	--



1620 S. Walnut St.
Burlington, WA 98233
1.800.755.9295

805 W. Orchard Dr. Suite 4
Bellingham, WA 98225

1. Use one line per sample.
2. Be specific in analysis requests.
3. Check off analyses to be performed for each sample.
4. Enter number of containers.

Turn Around Time Required	
☐	Standard
☐	Half Time (50% surcharge)
☐	Quickest (100% surcharge)
☐	Other _____

Analyses Requested

Field ID	Location	Grab/Comp.	Matrix	Date	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	
----------	----------	------------	--------	------	------	---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--

Receipt Request (Must include FAX or Email)

	Date	Time	Received by	Date	Time
04/11/2011	11/07	0950			

Custody seals intact

Sample temp _____ C satisfactory

Samples received intact

Chain of custody & labels agree

Yes	No	N/A
☐	☐	☐
☐	☐	☐
☐	☐	
☐	☐	

13606711577

Edge Analytical

Aug 29 2007 12:19



Burlington WA 1620 S Walnut St - 98233
 Corporate Office 800.755.9285 • 360.757.1400 • 360.757.1402 fax
 Bellingham WA 805 Orchard Dr Suite 4 - 98225
 360.671.0688 • 360.671.1577 fax

Page 1 of 2

Certificate Of Analysis

Client Name: J H Baxter Company
 P O Box 305
 Eugene, OR 97440

Report Date: 7/23/2007
 Reference Number: 07-09283
 Project: Landfill Wells & Carbon

Collected By: A. Ragan

Date Received: 7/19/2007
 Supervisor:

Sample Description: BXN-1 - Baxter					Sample Date: 7/18/2007			
Lab Number: 21152								
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments
TOTAL COLIFORM	123.9	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	

Sample Description: BXN-4 - Baxter					Sample Date: 7/18/2007			
Lab Number: 21153								
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments
TOTAL COLIFORM	165.0	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	

Sample Description: BXN-5 - Baxter					Sample Date: 7/18/2007			
Lab Number: 21154								
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments
TOTAL COLIFORM	158.5	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	

Sample Description: BXN-3 - Baxter					Sample Date: 7/18/2007			
Lab Number: 21155								
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments
TOTAL COLIFORM	1986.3	1	MPN/100mL	SM9223 B.2.b	7/23/2007	SK	QT_070720	
E. Coli	1203.3	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	

Sample Description: BXS-1 - Baxter					Sample Date: 7/18/2007			
Lab Number: 21156								
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments

PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
 ND = Not detected above the listed practical quantitation limit (PQL)



Page 2 of 2

Reference Number: 07-09283

Report Date: 7/23/2007

Certificate Of Analysis

Collected By: A. Ragan

Date Received: 7/19/2007

TOTAL COLIFORM	<1	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720

Sample Description: BXS-5 - Baxter

Sample Date: 7/18/2007

Lab Number: 21157

Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments
TOTAL COLIFORM	1.0	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	

Sample Description: BXS-4 - Baxter

Sample Date: 7/18/2007

Lab Number: 21158

Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments
TOTAL COLIFORM	1.0	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	

Sample Description: BXN-6 - Baxter

Sample Date: 7/19/2007

Lab Number: 21159

Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments
TOTAL COLIFORM	<1	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	

PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
 ND = Not detected above the listed practical quantitation limit (PQL)

P-3

13606711577

Edge Analytical

Aug 29 2007 12:23

Custody / Analysis Request

(Please complete all applicable shaded sections)

Page _____ of _____

3,067



1620 S. Walnut St.
Burlington, WA 98233
1.800.755.9295

805 W. Orchard Dr. Suite 4
Bellingham, WA 98225

For Lab Use Only

Ref # _____

Check Regulatory Program

☐ Safe Drinking Water Act

☐ Clean Water Act

☐ RCRA CERCLA

☐ Other _____

Analyses Requested

Instructions

1. Use one line per sample.
2. Be specific in analysis requests.
3. Check off analyses to be performed for each sample.
4. Enter number of containers.

Un-Accredited Analyses Requested					
☐	Standard				
☐	Heavy Metals (50 elements)				
☐	Organics (100 elements)				
☐	Other _____				

Field ID	Location	Grab/Comp	Matrix	Date	Time	Analyses Requested	Number of Containers	Special Instructions Conditions on Receipt
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								



CO003067

Sampled by _____ Date _____ Time _____

Sample Receipt Request (Must include FAX or Email) ☐

Relinquished by	Date	Time	Received by	Date	Time
_____	_____	_____	_____	_____	_____

Custody seals intact ☐ Yes ☐ No ☐ N/A

Sample temp _____ C satisfactory ☐ Yes ☐ No ☐ N/A

Samples received intact ☐ Yes ☐ No ☐ N/A

Chain of custody & labels agree ☐ Yes ☐ No ☐ N/A



Burlington WA 1620 S Walnut St - 98233
 Corporate Office 800.755.9295 • 360.757.1400 • 360.757.1402 fax
 Bellingham WA 805 Orchard Dr Suite 4 - 98225
 360.671.0688 • 360.671.1577 fax

Page 1 of 1

Certificate Of Analysis

Client Name: J H Baxter Company
 85 Baxter Rd
 Eugene, OR 97402

Report Date: 7/23/2007
 Reference Number: 07-09204
 Project: Landfill Wells

Collected By:

Date Received: 7/18/2007
 Supervisor:

Sample Description: BXS-3 - JHB Arlington					Sample Date: 7/17/2007			
Lab Number: 20976								
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments

TOTAL COLIFORM	6.0	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	
E. Coli	<1.0	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	

Sample Description: BXS-2 - JHB Arlington					Sample Date: 7/17/2007			
Lab Number: 20977								
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments

TOTAL COLIFORM	>2419.6	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	
E. Coli	<1.0	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	

Sample Description: BXS-2 - JHB Arlington					Sample Date: 7/17/2007			
Lab Number: 20978								
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments

TOTAL COLIFORM	290.9	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	

PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
 ND = Not detected above the listed practical quantitation limit (PQL)

Chain of Custody / Analysis Request (Please complete all applicable shaded sections)

Page _____ of _____

3,067



1620 S. Walnut St.
Burlington, WA 98233
1.800.755.9295

805 W. Orchard Dr. Suite 4
Bellingham, WA 98225

13606711577

Edge Analytical

Aug 29 2007 12:19

P.O. # 13606711577 Client Name: [illegible] Address: [illegible] City: [illegible] State: [illegible] Zip: [illegible] Phone: [illegible] Fax: [illegible] Email: [illegible]	Sample ID: [illegible] Date: [illegible] Time: [illegible] Location: [illegible] Matrix: [illegible] Grab/Comp: [illegible]	For Lab Use Only Ref # _____ Check Regulatory Program: ☐ Safe Drinking Water Act ☐ Clean Water Act ☐ RCRA CERCLA ☐ Other: _____
--	--	--

Instructions

1. Use one line per sample.
2. Be specific in analysis requests.
3. Check off analyses to be performed for each sample.
4. Enter number of containers.

Turn Around Time Required	
☐	Standard
☐	Half Price (10% surcharge)
☐	Quick Start (100% surcharge)
☐	Other: _____

Analyses Requested



CO003067

Field ID	Location	Grab/Comp.	Matrix	Date	Time											Number	Special Instructions Conditions on Receipt
1	...	...	...	...	...	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐		
2	...	...	...	...	...	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐		
3	...	...	...	...	...	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐ </											



Burlington WA 1620 S Walnut St - 98233
 Corporate Office 800.755.9295 • 360.757.1400 • 360.757.1402 fax
 Bellingham WA 805 Orchard Dr Suite 4 - 98225
 360.671.0688 • 360.671.1577 fax

Page 1 of 2

Certificate Of Analysis

Client Name: J H Baxter Company
 P O Box 305
 Eugene, OR 97440

Report Date: 7/23/2007
 Reference Number: 07-09283
 Project: Landfill Wells & Carbon

Collected By: A. Ragan

Date Received: 7/19/2007
 Supervisor:

Sample Description: BXN-1 - Baxter					Sample Date: 7/18/2007			
Lab Number: 21152								
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments

TOTAL COLIFORM	123.9	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	

Sample Description: BXN-4 - Baxter					Sample Date: 7/18/2007			
Lab Number: 21153								
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments

TOTAL COLIFORM	165.0	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	

Sample Description: BXN-5 - Baxter					Sample Date: 7/18/2007			
Lab Number: 21154								
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments

TOTAL COLIFORM	158.5	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	

Sample Description: BXN-3 - Baxter					Sample Date: 7/18/2007			
Lab Number: 21155								
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments

TOTAL COLIFORM	1986.3	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	
E. Coli	1203.3	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	

Sample Description: BXS-1 - Baxter					Sample Date: 7/18/2007			
Lab Number: 21156								
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments

PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
 ND = Not detected above the listed practical quantitation limit (PQL)



Page 2 of 2

Reference Number: 07-09283

Report Date: 7/23/2007

Certificate Of Analysis

Collected By: A. Ragan

Date Received: 7/19/2007

TOTAL COLIFORM	<1	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720

Sample Description: BXS-5 - Baxter

Sample Date: 7/18/2007

Lab Number: 21157

Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments
TOTAL COLIFORM	1.0	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	

Sample Description: BXS-4 - Baxter

Sample Date: 7/18/2007

Lab Number: 21156

Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments
TOTAL COLIFORM	1.0	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	

Sample Description: BXN-6 - Baxter

Sample Date: 7/19/2007

Lab Number: 21159

Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments
TOTAL COLIFORM	<1	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	7/20/2007	SK	QT_070720	

PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
 ND = Not detected above the listed practical quantitation limit (PQL)

Custody / Analysis Request

(Please complete all applicable shaded sections)

Page _____ of _____

3,067

J.H. Baxter Company		Billing: J.H. Baxter & Company		For Lab Use Only	
P.O. Box 309		Address: P.O. Box 10297		Ref #	
Arlington, WA zip 98223		City: Eugene, OR Zip: 97449		Check Regulatory Program	
K. Gunderson		Phone: FAX:		☐ Safe Drinking Water Act	
Phone: 960.435.2140 FAX:		P.O. # Alt:		☐ Clean Water Act	
Email: kgunderson@jhbaxter.com		☐ MSA ☐ MHA ☐ AVE ☐ Other		☐ RCRA / CERCLA	
Project: Landfill Wells And Carbon		Lab:		☐ Other	



1620 S. Walnut St.
Burlington, WA 98233
1.800.755.9295

805 W. Orchard Dr. Suite 4
Bellingham, WA 98225

Analyses Requested

Instructions

1. Use one line per sample.
2. Be specific in analysis requests.
3. Check off analyses to be performed for each sample.
4. Enter number of containers.

Turn Around Time Required	
☐	Standard
☐	Half-time (50% surcharge)
☐	Quickest (100% surcharge)
☐	Other



CO003067

Field ID	Location	Grab/Comp.	Matrix	Date	Time	Standard	Half-time	Quickest	Other	Number of Containers	Special Instructions Conditions on Receipt
1 BXN-1	Baxter	G	G	2/10/07	10:00	☒	☐	☐	☐	1	
2 BXN-2	Baxter	G	G	2/10/07	10:00	☒	☐	☐	☐	1	
3 BXN-3	Baxter	G	G	2/10/07	10:00	☒	☐	☐	☐	1	
4 BXN-4	Baxter	G	G	2/10/07	10:00	☒	☐	☐	☐	1	
5 BXN-5	Baxter	G	G	2/10/07	10:00	☒	☐	☐	☐	1	
6 BXN-6	Baxter	G	G	2/10/07	10:00	☒	☐	☐	☐	1	
7 BXN-7	Baxter	G	G	2/10/07	10:00	☒	☐	☐	☐	1	
8 BXN-8	Baxter	G	G	2/10/07	10:00	☒	☐	☐	☐	1	
9 BXN-9	Baxter	G	G	2/10/07	10:00	☒	☐	☐	☐	1	
10 BXN-10	Baxter	G	G	2/10/07	10:00	☒	☐	☐	☐	1	

Sampled by: J. Ragan Phone: 960.435.2140 Email: jragan@jhbaxter.com

Sample Receipt Request (Must include FAX or Email) ☐

Relinquished by	Date	Time	Received by	Date	Time
Adrian - Analytical	2/10/07	09:30			

Custody seals intact

Yes No N/A
☐ ☐ ☐

Sample temp _____ C satisfactory

☐ ☐ ☐

Samples received intact

☐ ☐

Chain of custody & labels agree

☐ ☐



Burlington WA 1620 S-Walnut St - 98233
Corporate Office 800.755.9295 • 360.757.1400 • 360.757.1402fax
Bellingham WA 805 Orchard Dr Suite 4 - 98225
360.671.0688 • 360.671.1577fax

Page 1 of 2

Certificate Of Analysis

Client Name: J H Baxter Company
P O Box 305
Eugene, OR 97440

Report Date: 10/15/2007
Reference Number: 07-13743
Project: Landfill Wells & Carbon

Collected By: A. Ragan

Date Received: 10/10/2007

Peer Review:

Sample Description: BXS-1 - JH Baxter Arlington					Sample Date: 10/9/2007			
Lab Number: 31252								
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments

TOTAL COLIFORM	<1	1	MPN/100mL	SM9223 B.2.b	10/12/2007	AS	MTF_071012	
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	10/12/2007	AS	MTF_071012	

Sample Description: BXS-2 - JH Baxter Arlington					Sample Date: 10/9/2007			
Lab Number: 31253								
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments

TOTAL COLIFORM	5.1	1	MPN/100mL	SM9223 B.2.b	10/12/2007	AS	MTF_071012	
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	10/12/2007	AS	MTF_071012	

Sample Description: BXS-3 - JH Baxter Arlington					Sample Date: 10/9/2007			
Lab Number: 31254								
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments

TOTAL COLIFORM	<1	1	MPN/100mL	SM9223 B.2.b	10/12/2007	AS	MTF_071012	
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	10/12/2007	AS	MTF_071012	

Sample Description: BXS-4 - JH Baxter Arlington					Sample Date: 10/9/2007			
Lab Number: 31255								
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments

TOTAL COLIFORM	<1	1	MPN/100mL	SM9223 B.2.b	10/12/2007	AS	MTF_071012	
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	10/12/2007	AS	MTF_071012	

Sample Description: BXS-6 - JH Baxter Arlington					Sample Date: 10/9/2007			
Lab Number: 31256								
Analyte	Result	PQL	Units	Method	Analyzed	Analyst	Batch	Comments

PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.



Page 2 of 2
Reference Number: 07-13743
Report Date: 10/15/2007

Certificate Of Analysis

Collected By: A. Ragan

Date Received: 10/10/2007

TOTAL COLIFORM	<1	1	MPN/100mL	SM9223 B.2.b	10/12/2007	AS	MTF_071012
E. Coli	<1	1	MPN/100mL	SM9223 B.2.b	10/12/2007	AS	MTF_071012

PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.

Chain of Custody / Analysis Request (Please complete all applicable shaded sections)

Page _____ of _____

3,661

Report to: J H Baxter Company	Bill to: J.H. Baxter & Company	For Lab Use Only Ref # Check Regulatory Program ☐ Safe Drinking Water Act ☐ Clean Water Act ☐ RCRA / CERCLA ☐ Other
Ship Address: P O Box 305	Address: P O Box 10797	
City: Arlington St. WA Zip: 98223	City: Eugene St. OR Zip: 97440	
Attn: K Gunderson	Phone: 541 689-3801 FAX:	
Phone: 360.435-2146 FAX:	P.O.#: Attn:	
Email: kgunderson@premiercorp-usa.com	☐ Visa ☐ M/C ☐ A/E Expires /	
Project: Landfill Wells And Carbon	Card#:	



1620 S. Walnut St.
Burlington, WA 98233
1.800.755.9295

805 W. Orchard Dr. Suite 4
Bellingham, WA 98225

Instructions

1. Use one line per sample.
2. Be specific in analysis requests.
3. Check off analyses to be performed for each sample.
4. Enter number of containers.

Analyses Requested

Turn Around Time Required

- ☐ Standard
☐ Half-time (50% surcharge)
☐ Quickest (100% surcharge)
☐ Other

Field ID	Location	Grab/Comp.	Matrix	Date	Time	SM9221E	total Colif.	SM 9223 BT											Number of Containers	Special Instructions Conditions on Receipt
1 BXS-2	JH Baxter Arlington	Grab	Water	10/1/07	1320	☐	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐				
2 BXS-2	JH Baxter Arlington	Grab	Water	10/9/07	1415	☐	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐				
3 BXS-3	J.H. Baxter Arlington	Grab	Water	10/9/07	1502	☐	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐				
4 BXS-4	J.H. BAXTER ARLINGTON	GRAB	WATER	10/9/07	1630	☐	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐				
5 BXS-6	JH BAXTER ARLINGTON	GRAB	WATER	10/9/07	1630	☐	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐				
6						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐				
7						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐				
8						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐				
9						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐				
10						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐				

Sampled by: _____ Phone: _____ FAX: _____ Email: _____

Sample Receipt Request (Must include FAX or Email) ☐

Total Containers: _____

Relinquished by	Date	Time	Received by	Date	Time
<i>[Signature]</i>	10/9/07	1630	Kris Hansen	10/9/07	1630
Kris Hansen	10/10/07	0825			

Custody seals intact
 Sample temp _____ C satisfactory
 Samples received intact
 Chain of custody & labels agree

Yes	No	N/A
☐	☐	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐

Appendix C

Statistical Analysis of Groundwater Quality Results (BXS-1 through BXS-4)

Appendix C. Statistical Analysis of Groundwater Quality Results for
Downgradient Well, South Landfill

Field pH

$$t_{\text{stat}} = (X_{\text{bar}} - m_o) / \sqrt{s^1/n + s^2/n}$$

Number of Samples **n** 4

Critical Statistic **t_c** 2.447

BXS-4

(Upgradient well)

May-06	5.87				Average Concentration	
Aug-06	6.12				m_o	s¹
Nov-06	7.08					
Feb-07	8.6	5.87	6.12	7.08	6.92	1.53
Apr-07	8.09	6.12	7.08	8.6	7.47	1.21
Jul-07	8.25	7.08	8.6	8.09	8.01	0.43
Oct-07	7.83	8.6	8.09	8.25	8.19	0.10

BXS-3

(Downgradient well)

May-06	6.12				X_{bar}	s²	s	t_{stat}
Aug-06	6.46							
Nov-06	6.5							
Feb-07	7.12	6.12	6.46	6.5	6.55	0.17	0.42	-0.56
Apr-07	6.62	6.46	6.5	7.12	6.68	0.09	0.30	-1.25
Jul-07	6.64	6.5	7.12	6.62	6.72	0.07	0.27	-2.03
Oct-07	6.3	7.12	6.62	6.64	6.67	0.11	0.34	-2.37

BXS-2

(Downgradient well)

May-06	6.12				X_{bar}	s²	s	t_{stat}
Aug-06	6.59							
Nov-06	6.89							
Feb-07	6.81	6.12	6.59	6.89	6.60	0.12	0.35	-0.49
Apr-07	6.47	6.59	6.89	6.81	6.69	0.04	0.19	-1.25
Jul-07	6.52	6.89	6.81	6.47	6.67	0.04	0.21	-2.12
Oct-07	6.19	6.81	6.47	6.52	6.50	0.06	0.25	-2.68

BXS-1

(Downgradient well)

May-06	5.49				X_{bar}	s²	s	t_{stat}
Aug-06	5.45							
Nov-06	6.36							
Feb-07	6.75	5.49	5.45	6.36	6.01	0.42	0.65	-1.30
Apr-07	6.31	5.45	6.36	6.75	6.22	0.30	0.55	-1.86
Jul-07	6.38	5.45	6.75	6.31	6.22	0.30	0.55	-2.63
Oct-07	6.02	6.75	6.31	6.38	6.37	0.09	0.30	-2.87

Notes:

X_{bar} Average Concentration
s² Sample variance
s¹ Sample variance
s Sample Standard Deviation
t_{stat} Student's T-Test Statistic

Item shown in **bold** or *gray italics* indicate a statistically valid detection (according to the student's T-Test statistic).
Items with no difference at all (zero difference) will indicate #DIV/0!

Appendix C. Statistical Analysis of Groundwater Quality Results for Downgradient Well, South Landfill

Field Conductivity

$$t_{\text{stat}} = (X_{\text{bar}} - m_o) / \sqrt{s^2/n}$$

Number of Samples n 4

Critical Statistic t_c 2.447

BXS-4

(Upgradient well)

May-06	182				Average Concentration	
Aug-06	181				m_o	s^1
Nov-06	201					
Feb-07	166	182	181	201	182.50	205.67
Apr-07	176	181	201	166	181.00	216.67
Jul-07	222	201	166	176	191.25	636.92
Oct-07	199	166	176	222	190.75	624.92

BXS-3

(Downgradient well)

May-06	744				X_{bar}	s^2	s	t_{stat}
Aug-06	839							
Nov-06	817							
Feb-07	730	744	839	817	783	2874	54	21.62
Apr-07	808	839	817	730	799	2255	47	24.90
Jul-07	867	817	730	808	806	3207	57	21.03
Oct-07	810	730	808	867	804	3166	56	21.12

BXS-2

(Downgradient well)

May-06	730				X_{bar}	s^2	s	t_{stat}
Aug-06	800							
Nov-06	784							
Feb-07	672	730	800	784	747	3364	58	18.88
Apr-07	796	800	784	672	763	3727	61	18.56
Jul-07	922	784	672	796	794	10457	102	11.66
Oct-07	804	672	796	922	799	10430	102	11.79

BXS-1

(Downgradient well)

May-06	392				X_{bar}	s^2	s	t_{stat}
Aug-06	380							
Nov-06	501							
Feb-07	299	392	380	501	393	6890	83	5.00
Apr-07	379	380	501	299	390	6941	83	4.94
Jul-07	415	501	299	379	399	7020	84	4.88
Oct-07	495	299	379	415	397	6619	81	4.99

Notes:

X_{bar} Average Concentration
 s^2 Sample variance
 s^1 Sample variance
 s Sample Standard Deviation
 t_{stat} Student's T-Test Statistic

Item shown in **bold** or *gray italics* indicate a statistically valid detection (according to the student's T-Test statistic).
 Items with no difference at all (zero difference) will indicate #DIV/0!

Appendix C. Statistical Analysis of Groundwater Quality Results for Downgradient Well, South Landfill

Ammonia

$$t_{stat} = (X_{bar} - m_o) / \sqrt{(s^1/n + s^2/n)}$$

Number of Samples **n** 4

Critical Statistic **t_c** 2.447

BXS-4

(Upgradient well)

	May-06	0.51				Average Concentration	
	Aug-06	0.5				m_o	s¹
	Nov-06	0.47					
	Feb-07	0.5	0.51	0.5	0.47	0.50	0.00
	Apr-07	0.5	0.5	0.47	0.5	0.49	0.00
	Jul-07	0.5	0.47	0.5	0.5	0.49	0.00
	Oct-07	0.48	0.5	0.5	0.5	0.50	0.00

BXS-3

(Downgradient well)

	May-06	1.13				X_{bar}	s²	s	t_{stat}
	Aug-06	1.29							
	Nov-06	0.41							
	Feb-07	0.93	1.13	1.29	0.41	0.94	0.15	0.38	2.32
	Apr-07	0.71	1.29	0.41	0.93	0.84	0.14	0.37	1.85
	Jul-07	0.74	0.41	0.93	0.71	0.70	0.05	0.22	1.90
	Oct-07	0.98	0.93	0.71	0.74	0.84	0.02	0.13	5.07

BXS-2

(Downgradient well)

	May-06	0.027				X_{bar}	s²	s	t_{stat}
	Aug-06	0.011							
	Nov-06	0.022							
	Feb-07	0.025	0.027	0.011	0.022	0.02	0.00	0.01	-50.58
	Apr-07	0.025	0.011	0.022	0.025	0.02	0.00	0.01	-50.85
	Jul-07	0.025	0.022	0.025	0.025	0.02	0.00	0.00	-53.87
	Oct-07	0.025	0.025	0.025	0.025	0.03	0.00	0.00	-54.27

BXS-1

(Downgradient well)

	May-06	0.019				X_{bar}	s²	s	t_{stat}
	Aug-06	0.011							
	Nov-06	0.025							
	Feb-07	0.025	0.019	0.011	0.025	0.02	0.00	0.01	-51.22
	Apr-07	0.025	0.011	0.025	0.025	0.02	0.00	0.01	-50.42
	Jul-07	0.025	0.025	0.025	0.025	0.03	0.00	0.00	-53.98
	Oct-07	0.025	0.025	0.025	0.025	0.03	0.00	0.00	-54.27

Notes:

X_{bar} Average Concentration
s² Sample variance
s¹ Sample variance
s Sample Standard Deviation
t_{stat} Student's T-Test Statistic

Item shown in **bold** or *gray italics* indicate a statistically valid detection (according to the student's T-Test statistic).
Items with no difference at all (zero difference) will indicate #DIV/0!

Appendix C. Statistical Analysis of Groundwater Quality Results for
Downgradient Well, South Landfill

Chemical Oxygen Demand

$$t_{\text{stat}} = (X_{\text{bar}} - m_o) / \sqrt{(s^1/n + s^2/n)}$$

Number of Samples **n** 4

Critical Statistic **t_c** 2.447

BXS-4

(Upgradient well)

May-06	2.6				Average Concentration	
Aug-06	4				m_o	s¹
Nov-06	2.5					
Feb-07	2.5	2.6	4	2.5	2.90	0.54
Apr-07	6	4	2.5	2.5	3.75	2.75
Jul-07	2.5	2.5	2.5	6	3.38	3.06
Oct-07	2.5	2.5	6	2.5	3.38	3.06

BXS-3

(Downgradient well)

May-06	78				X_{bar}	s²	s	t_{stat}
Aug-06	85							
Nov-06	66							
Feb-07	75	78	85	66	76.00	62.00	7.87	18.49
Apr-07	80	85	66	75	76.50	65.67	8.10	17.88
Jul-07	67	66	75	80	72.00	44.67	6.68	20.41
Oct-07	71	75	80	67	73.25	30.92	5.56	24.92

BXS-2

(Downgradient well)

May-06	38				X_{bar}	s²	s	t_{stat}
Aug-06	36							
Nov-06	35							
Feb-07	36	38	36	35	36.25	1.58	1.26	45.77
Apr-07	39	36	35	36	36.50	3.00	1.73	34.81
Jul-07	31	35	36	39	35.25	10.92	3.30	18.83
Oct-07	33	36	39	31	34.75	12.25	3.50	17.55

BXS-1

(Downgradient well)

May-06	8				X_{bar}	s²	s	t_{stat}
Aug-06	13							
Nov-06	15							
Feb-07	6	8	13	15	10.50	17.67	4.20	3.56
Apr-07	14	13	15	6	12.00	16.67	4.08	3.98
Jul-07	2.5	15	6	14	9.38	37.23	6.10	1.95
Oct-07	17	6	14	2.5	9.88	45.73	6.76	1.91

Notes:

X_{bar} Average Concentration
s² Sample variance
s¹ Sample variance
s Sample Standard Deviation
t_{stat} Student's T-Test Statistic

Item shown in **bold** or *gray italics* indicate a statistically valid detection (according to the student's T-Test statistic).
Items with no difference at all (zero difference) will indicate #DIV/0!

Appendix C. Statistical Analysis of Groundwater Quality Results for
Downgradient Well, South Landfill

Chloride

$$t_{\text{stat}} = (X_{\text{bar}} - m_o) / \sqrt{s^1/n + s^2/n}$$

Number of Samples n 4

Critical Statistic t_c 2.447

BXS-4

(Upgradient well)

May-06	1.7				Average Concentration	
Aug-06	1.8				m_o	s^1
Nov-06	1.8					
Feb-07	1.6	1.7	1.8	1.8	1.73	0.01
Apr-07	1.9	1.8	1.8	1.6	1.78	0.02
Jul-07	1.7	1.8	1.6	1.9	1.75	0.02
Oct-07	1.7	1.6	1.9	1.7	1.73	0.02

BXS-3

(Downgradient well)

May-06	1.9				X_{bar}	s^2	s	t_{stat}
Aug-06	3.1							
Nov-06	2.5							
Feb-07	3.1	1.9	3.1	2.5	2.65	0.33	0.57	3.18
Apr-07	2.3	3.1	2.5	3.1	2.75	0.17	0.41	4.61
Jul-07	2.8	2.5	3.1	2.3	2.68	0.12	0.35	5.10
Oct-07	2.7	3.1	2.3	2.8	2.73	0.11	0.33	5.81

BXS-2

(Downgradient well)

May-06	2.8				X_{bar}	s^2	s	t_{stat}
Aug-06	4							
Nov-06	3.5							
Feb-07	4.9	2.8	4	3.5	3.80	0.78	0.88	4.67
Apr-07	4.5	4	3.5	4.9	4.23	0.37	0.61	7.97
Jul-07	4.1	3.5	4.9	4.5	4.25	0.36	0.60	8.27
Oct-07	4.3	4.9	4.5	4.1	4.45	0.12	0.34	15.36

BXS-1

(Downgradient well)

May-06	2.7				X_{bar}	s^2	s	t_{stat}
Aug-06	4.7							
Nov-06	3.4							
Feb-07	6.4	2.7	4.7	3.4	4.30	2.65	1.63	3.16
Apr-07	5.4	4.7	3.4	6.4	4.98	1.59	1.26	5.06
Jul-07	5.1	3.4	6.4	5.4	5.08	1.56	1.25	5.32
Oct-07	5.2	6.4	5.4	5.1	5.53	0.36	0.60	12.58

Notes:

X_{bar} Average Concentration
 s^2 Sample variance
 s^1 Sample variance
 s Sample Standard Deviation
 t_{stat} Student's T-Test Statistic

Item shown in **bold** or *gray italics* indicate a statistically valid detection (according to the student's T-Test statistic).
 Items with no difference at all (zero difference) will indicate #DIV/0!

Appendix C. Statistical Analysis of Groundwater Quality Results for
Downgradient Well, South Landfill

Nitrate + Nitrite as N

$$t_{stat} = (X_{bar} - m_o) / \sqrt{s^1/n + s^2/n}$$

Number of Samples **n** 4

Critical Statistic **t_c** 2.447

BXS-4

(Upgradient well)

May-06	0.025				Average Concentration	
Aug-06	0.025				m_o	s¹
Nov-06	0.025					
Feb-07	0.28	0.025	0.025	0.025	0.09	0.02
Apr-07	0.23	0.025	0.025	0.28	0.14	0.02
Jul-07	0.025	0.025	0.28	0.23	0.14	0.02
Oct-07	0.025	0.28	0.23	0.025	0.14	0.02

BXS-3

(Downgradient well)

May-06	0.16				X_{bar} s² s t_{stat}			
Aug-06	0.14							
Nov-06	0.07							
Feb-07	0.96	0.16	0.14	0.07	0.33	0.18	0.42	1.11
Apr-07	0.2	0.14	0.07	0.96	0.34	0.17	0.42	0.93
Jul-07	0.19	0.07	0.96	0.2	0.36	0.17	0.41	1.01
Oct-07	0.17	0.96	0.2	0.19	0.38	0.15	0.39	1.18

BXS-2

(Downgradient well)

May-06	0.039				X_{bar} s² s t_{stat}			
Aug-06	0.01							
Nov-06	0.008							
Feb-07	0.94	0.039	0.01	0.008	0.25	0.21	0.46	0.67
Apr-07	0.63	0.01	0.008	0.94	0.40	0.22	0.47	1.06
Jul-07	0.08	0.008	0.94	0.63	0.41	0.20	0.45	1.18
Oct-07	0.025	0.94	0.63	0.08	0.42	0.20	0.44	1.21

BXS-1

(Downgradient well)

May-06	0.92				X_{bar} s² s t_{stat}			
Aug-06	0.96							
Nov-06	0.46							
Feb-07	0.75	0.92	0.96	0.46	0.77	0.05	0.23	5.25
Apr-07	0.85	0.96	0.46	0.75	0.76	0.05	0.21	4.93
Jul-07	0.7	0.46	0.75	0.85	0.69	0.03	0.17	5.26
Oct-07	0.47	0.75	0.85	0.7	0.69	0.03	0.16	5.38

Notes:

X_{bar} Average Concentration
s² Sample variance
s¹ Sample variance
s Sample Standard Deviation
t_{stat} Student's T-Test Statistic

Item shown in **bold** or *gray italics* indicate a statistically valid detection (according to the student's T-Test statistic).

Items with no difference at all (zero difference) will indicate #DIV/0!

Appendix C. Statistical Analysis of Groundwater Quality Results for
Downgradient Well, South Landfill

Total Dissolved Solids

$$t_{\text{stat}} = (X_{\text{bar}} - m_o) / \sqrt{(s^1/n + s^2/n)}$$

Number of Samples **n** 4

Critical Statistic **t_c** 2.447

BXS-4

(Upgradient well)

May-06	145				Average Concentration	
Aug-06	100				m_o	s¹
Nov-06	141					
Feb-07	142	145	100	141	132.00	458.00
Apr-07	151	100	141	142	133.50	519.00
Jul-07	154	141	142	151	147.00	42.00
Oct-07	159	142	151	154	151.50	51.00

BXS-3

(Downgradient well)

May-06	532				X_{bar} s² s t_{stat}			
Aug-06	302							
Nov-06	477							
Feb-07	522	532	302	477	458	11423	107	5.99
Apr-07	493	302	477	522	449	9886	99	6.19
Jul-07	414	477	522	493	477	2083	46	13.07
Oct-07	476	522	493	414	476	2083	46	12.88

BXS-2

(Downgradient well)

May-06	514				X_{bar} s² s t_{stat}			
Aug-06	436							
Nov-06	479							
Feb-07	420	514	436	479	462	1811	43	13.87
Apr-07	490	436	479	420	456	1127	34	16.21
Jul-07	495	479	420	490	471	1201	35	15.91
Oct-07	478	420	490	495	471	1196	35	15.70

BXS-1

(Downgradient well)

May-06	290				X_{bar} s² s t_{stat}			
Aug-06	206							
Nov-06	259							
Feb-07	231	290	206	259	247	1310	36	5.45
Apr-07	229	206	259	231	231	471	22	6.41
Jul-07	262	259	231	229	245	312	18	7.08
Oct-07	294	231	229	262	254	939	31	5.48

Notes:

X_{bar} Average Concentration
s² Sample variance
s¹ Sample variance
s Sample Standard Deviation
t_{stat} Student's T-Test Statistic

Item shown in **bold** or *gray italics* indicate a statistically valid detection (according to the student's T-Test statistic).
 Items with no difference at all (zero difference) will indicate #DIV/0!

Appendix C. Statistical Analysis of Groundwater Quality Results for
Downgradient Well, South Landfill

Sulfate

$$t_{\text{stat}} = (X_{\text{bar}} - m_o) / \sqrt{s^1/n + s^2/n}$$

Number of Samples n 4

Critical Statistic t_c 2.447

BXS-4

(Upgradient well)

May-06	1.4				Average Concentration	
Aug-06	1.4				m_o	s^1
Nov-06	1.6					
Feb-07	1.4	1.4	1.4	1.6	1.45	0.01
Apr-07	1.3	1.4	1.6	1.4	1.43	0.02
Jul-07	1.4	1.6	1.4	1.3	1.43	0.02
Oct-07	1.3	1.4	1.3	1.4	1.35	0.00

BXS-3

(Downgradient well)

May-06	0.07				X_{bar}	s^2	s	t_{stat}
Aug-06	1.7							
Nov-06	0.4							
Feb-07	0.09	0.07	1.7	0.4	0.57	0.60	0.77	-2.27
Apr-07	0.1	1.7	0.4	0.09	0.57	0.59	0.77	-2.21
Jul-07	0.1	0.4	0.09	0.1	0.17	0.02	0.15	-13.78
Oct-07	0.063	0.09	0.1	0.1	0.09	0.00	0.02	-24.86

BXS-2

(Downgradient well)

May-06	0.2				X_{bar}	s^2	s	t_{stat}
Aug-06	0.3							
Nov-06	0.15							
Feb-07	0.15	0.2	0.3	0.15	0.20	0.01	0.07	-20.41
Apr-07	0.1	0.3	0.15	0.15	0.18	0.01	0.09	-18.90
Jul-07	0.1	0.15	0.15	0.1	0.13	0.00	0.03	-24.98
Oct-07	0.088	0.15	0.1	0.1	0.11	0.00	0.03	-23.92

BXS-1

(Downgradient well)

May-06	11.2				X_{bar}	s^2	s	t_{stat}
Aug-06	11.2							
Nov-06	9.7							
Feb-07	14.8	11.2	11.2	9.7	11.73	4.70	2.17	9.47
Apr-07	13.9	11.2	9.7	14.8	12.40	5.58	2.36	9.28
Jul-07	11.3	9.7	14.8	13.9	12.43	5.50	2.35	9.37
Oct-07	9.4	14.8	13.9	11.3	12.35	6.07	2.46	8.92

Notes:

- X_{bar} Average Concentration
- s^2 Sample variance
- s^1 Sample variance
- s Sample Standard Deviation
- t_{stat} Student's T-Test Statistic

Item shown in **bold** or *gray italics* indicate a statistically valid detection (according to the student's T-Test statistic).
Items with no difference at all (zero difference) will indicate #DIV/0!

Appendix C. Statistical Analysis of Groundwater Quality Results for
Downgradient Well, South Landfill

Tannin and Lignin

$$t_{\text{stat}} = (X_{\text{bar}} - m_o) / \sqrt{(s^1/n + s^2/n)}$$

Number of Samples **n** 4

Critical Statistic **t_c** 2.447

BXS-4

(Upgradient well)

May-06	0.4				Average Concentration	
Aug-06	0.3				m_o	s¹
Nov-06	0.3					
Feb-07	0.3	0.4	0.3	0.3	0.33	0.00
Apr-07	0.3	0.3	0.3	0.3	0.30	0.00
Jul-07	0.3	0.3	0.3	0.3	0.30	0.00
Oct-07	0.3	0.3	0.3	0.3	0.30	0.00

BXS-3

(Downgradient well)

May-06	16.7				X_{bar} s² s t_{stat}			
Aug-06	7.6							
Nov-06	10.7							
Feb-07	4.1	16.7	7.6	10.7	9.78	28.58	5.35	3.54
Apr-07	11.9	7.6	10.7	4.1	8.58	12.18	3.49	4.74
Jul-07	13.4	10.7	4.1	11.9	10.03	16.82	4.10	4.74
Oct-07	4.7	4.1	11.9	13.4	8.53	23.12	4.81	3.42

BXS-2

(Downgradient well)

May-06	1.2				X_{bar} s² s t_{stat}			
Aug-06	1.6							
Nov-06	1.3							
Feb-07	1.1	1.2	1.6	1.3	1.30	0.05	0.22	8.79
Apr-07	1.3	1.6	1.3	1.1	1.33	0.04	0.21	9.66
Jul-07	1.3	1.3	1.1	1.3	1.25	0.01	0.10	16.99
Oct-07	1.1	1.1	1.3	1.3	1.20	0.01	0.12	14.30

BXS-1

(Downgradient well)

May-06	0.17				X_{bar} s² s t_{stat}			
Aug-06	0.15							
Nov-06	0.2							
Feb-07	0.16	0.17	0.15	0.2	0.17	0.00	0.02	-5.69
Apr-07	0.1	0.15	0.2	0.16	0.15	0.00	0.04	-4.56
Jul-07	0.12	0.2	0.16	0.1	0.15	0.00	0.04	-4.64
Oct-07	0.3	0.16	0.1	0.12	0.17	0.01	0.09	-2.52

Notes:

X_{bar} Average Concentration
s² Sample variance
s¹ Sample variance
s Sample Standard Deviation
t_{stat} Student's T-Test Statistic

Item shown in **bold** or *gray italics* indicate a statistically valid detection (according to the student's T-Test statistic).
 Items with no difference at all (zero difference) will indicate #DIV/0!

Appendix C. Statistical Analysis of Groundwater Quality Results for
Downgradient Well, South Landfill

Total Organic Carbon

$$t_{\text{stat}} = (X_{\text{bar}} - m_o) / \sqrt{(s^1/n + s^2/n)}$$

Number of Samples n 4

Critical Statistic t_c 2.447

BXS-4

(Upgradient well)

May-06	1				Average Concentration	
Aug-06	1				m_o	s^1
Nov-06	1.1					
Feb-07	1.1	1	1	1.1	1.05	0.00
Apr-07	1	1	1.1	1.1	1.05	0.00
Jul-07	0.9	1.1	1.1	1	1.03	0.01
Oct-07	1	1.1	1	0.9	1.00	0.01

BXS-3

(Downgradient well)

May-06	29.5				X_{bar} s^2 s t_{stat}			
Aug-06	31.1							
Nov-06	28							
Feb-07	28.2	29.5	31.1	28	29.20	2.05	1.43	39.32
Apr-07	28.4	31.1	28	28.2	28.93	2.13	1.46	38.18
Jul-07	28.6	28	28.2	28.4	28.30	0.07	0.26	206.18
Oct-07	26.4	28.2	28.4	28.6	27.90	1.03	1.01	53.01

BXS-2

(Downgradient well)

May-06	14.5				X_{bar} s^2 s t_{stat}			
Aug-06	13.8							
Nov-06	15.3							
Feb-07	15.6	14.5	13.8	15.3	14.80	0.66	0.81	33.77
Apr-07	16.7	13.8	15.3	15.6	15.35	1.43	1.20	23.89
Jul-07	15.6	15.3	15.6	16.7	15.80	0.38	0.62	47.73
Oct-07	15.5	15.6	16.7	15.6	15.85	0.32	0.57	51.96

BXS-1

(Downgradient well)

May-06	4.3				X_{bar} s^2 s t_{stat}			
Aug-06	4.9							
Nov-06	6.5							
Feb-07	3.6	4.3	4.9	6.5	4.83	1.53	1.24	6.10
Apr-07	4.8	4.9	6.5	3.6	4.95	1.42	1.19	6.55
Jul-07	5.2	6.5	3.6	4.8	5.03	1.43	1.20	6.68
Oct-07	7.1	3.6	4.8	5.2	5.18	2.11	1.45	5.74

Notes:

- X_{bar} Average Concentration
- s^2 Sample variance
- s^1 Sample variance
- s Sample Standard Deviation
- t_{stat} Student's T-Test Statistic

Item shown in **bold** or *gray italics* indicate a statistically valid detection (according to the student's T-Test statistic).
Items with no difference at all (zero difference) will indicate #DIV/0!

Appendix C. Statistical Analysis of Groundwater Quality Results for Downgradient Well, South Landfill

Total Coliform

$$t_{\text{stat}} = (X_{\text{bar}} - m_o) / \sqrt{s^1/n + s^2/n}$$

Number of Samples n 4

Critical Statistic t_c 2.447

BXS-4

(Upgradient well)

May-06	-4.5				Average Concentration	
Aug-06	1				m_o	s^1
Nov-06	1					
Feb-07	0.5	-4.5	1	1	-0.50	7.17
Apr-07	0.5	1	1	0.5	0.75	0.08
Jul-07	1	1	0.5	0.5	0.75	0.08
Oct-07	0.5	0.5	0.5	1	0.63	0.06

BXS-3

(Downgradient well)

May-06	1				X_{bar}	s^2	s	t_{stat}
Aug-06	1							
Nov-06	1							
Feb-07	0.5	1	1	1	1	0	0	1.02
Apr-07	0.5	1	1	0.5	1	0	0	0.00
Jul-07	6	1	0.5	0.5	2	7	3	0.66
Oct-07	0.5	0.5	0.5	6	2	8	3	0.65

BXS-2

(Downgradient well)

May-06	1				X_{bar}	s^2	s	t_{stat}
Aug-06	1							
Nov-06	129.8							
Feb-07	0.5	1	1	129.8	33	4158	64	1.04
Apr-07	0.5	1	129.8	0.5	33	4169	65	1.00
Jul-07	2419.6	129.8	0.5	0.5	638	1415059	1190	1.07
Oct-07	5.1	0.5	0.5	2419.6	606	1461162	1209	1.00

BXS-1

(Downgradient well)

May-06	1				X_{bar}	s^2	s	t_{stat}
Aug-06	36.4							
Nov-06	5.3							
Feb-07	0.5	1	36.4	5.3	10.8	295.9	17.2	1.30
Apr-07	0.5	36.4	5.3	0.5	10.7	299.2	17.3	1.13
Jul-07	0.5	5.3	0.5	0.5	1.7	5.8	2.4	0.53
Oct-07	0.5	0.5	0.5	0.5	0.5	0.0	0.0	-0.09

Notes:

X_{bar} Average Concentration
 s^2 Sample variance
 s^1 Sample variance
 s Sample Standard Deviation
 t_{stat} Student's T-Test Statistic

Item shown in **bold** or *gray italics* indicate a statistically valid detection (according to the student's T-Test statistic).
 Items with no difference at all (zero difference) will indicate #DIV/0!

Appendix C. Statistical Analysis of Groundwater Quality Results for Downgradient Well, South Landfill

Arsenic

$$t_{\text{stat}} = (X_{\text{bar}} - m_o) / \sqrt{(s^1/n + s^2/n)}$$

Number of Samples n 4

Critical Statistic t_c 2.447

BXS-4

(Upgradient well)

	May-06	Aug-06	Nov-06	Feb-07	Apr-07	Jul-07	Oct-07	Average Concentration	
	6.5	5.1	7.3	6.8	6	5.4	5.4	m_o	s^1
				6.5	5.1	7.3	6.8	6.43	0.89
					5.1	7.3	6.8	6.30	0.93
						7.3	6.8	6.38	0.71
							6	5.90	0.44

BXS-3

(Downgradient well)

	May-06	Aug-06	Nov-06	Feb-07	Apr-07	Jul-07	Oct-07	X_{bar}	s^2	s	t_{stat}
	21.9	99.8	29.8	145	113	113	67.2				
				21.9	99.8	29.8	145	74.13	3458.21	58.81	2.30
					99.8	29.8	145	96.90	2361.21	48.59	3.73
						29.8	145	100.20	2430.29	49.30	3.81
							113	109.55	1024.68	32.01	6.47

BXS-2

(Downgradient well)

	May-06	Aug-06	Nov-06	Feb-07	Apr-07	Jul-07	Oct-07	X_{bar}	s^2	s	t_{stat}
	1.2	2.5	1.1	1.1	0.7	2.5	2.5				
				1.2	2.5	1.1	1.1	1.48	0.47	0.68	-8.49
					2.5	1.1	1.1	1.35	0.62	0.79	-8.05
						1.1	0.7	1.35	0.62	0.79	-8.17
							2.5	1.70	0.88	0.94	-6.32

BXS-1

(Downgradient well)

	May-06	Aug-06	Nov-06	Feb-07	Apr-07	Jul-07	Oct-07	X_{bar}	s^2	s	t_{stat}
	2.5	2.5	2.5	2.5	2.5	2.5	2.5				
				2.5	2.5	2.5	2.5	2.50	0.00	0.00	-8.32
					2.5	2.5	2.5	2.50	0.00	0.00	-8.06
						2.5	2.5	2.50	0.00	0.00	-8.22
							2.5	2.50	0.00	0.00	-7.21

Notes:

X_{bar} Average Concentration
 s^2 Sample variance
 s^1 Sample variance
 s Sample Standard Deviation
 t_{stat} Student's T-Test Statistic

Item shown in **bold** or *gray italics* indicate a statistically valid detection (according to the student's T-Test statistic).
Items with no difference at all (zero difference) will indicate #DIV/0!

Appendix C. Statistical Analysis of Groundwater Quality Results for Downgradient Well, South Landfill

Barium

$$t_{\text{stat}} = (X_{\text{bar}} - m_o) / \sqrt{(s^1/n + s^2/n)}$$

Number of Samples n 4

Critical Statistic t_c 2.447

BXS-4

(Upgradient well)

May-06	30.4				Average Concentration	
Aug-06	33				m_o	s^1
Nov-06	30.4					
Feb-07	28.6	30.4	33	30.4	30.60	3.28
Apr-07	25.6	33	30.4	28.6	29.40	9.68
Jul-07	33	30.4	28.6	25.6	29.40	9.68
Oct-07	29.4	28.6	25.6	33	29.15	9.26

BXS-3

(Downgradient well)

May-06	115				X_{bar}	s^2	s	t_{stat}
Aug-06	103							
Nov-06	104							
Feb-07	101	115	103	104	105.75	39.58	6.29	22.96
Apr-07	73.8	103	104	101	95.45	209.88	14.49	9.05
Jul-07	80.6	104	101	73.8	89.85	222.57	14.92	8.04
Oct-07	83.2	101	73.8	80.6	84.65	134.52	11.60	9.46

BXS-2

(Downgradient well)

May-06	48.1				X_{bar}	s^2	s	t_{stat}
Aug-06	48							
Nov-06	44.6							
Feb-07	47	48.1	48	44.6	46.93	2.65	1.63	13.41
Apr-07	39.8	48	44.6	47	44.85	13.37	3.66	7.57
Jul-07	50.1	44.6	47	39.8	45.38	18.88	4.35	6.79
Oct-07	48.3	47	39.8	50.1	46.30	20.39	4.52	7.05

BXS-1

(Downgradient well)

May-06	23.9				X_{bar}	s^2	s	t_{stat}
Aug-06	24.3							
Nov-06	28.4							
Feb-07	19.1	23.9	24.3	28.4	23.93	14.48	3.81	-3.17
Apr-07	24.5	24.3	28.4	19.1	24.08	14.56	3.82	-2.52
Jul-07	24.6	28.4	19.1	24.5	24.15	14.63	3.82	-2.48
Oct-07	26.5	19.1	24.5	24.6	23.68	10.15	3.19	-2.99

Notes:

X_{bar} Average Concentration
 s^2 Sample variance
 s^1 Sample variance
 s Sample Standard Deviation
 t_{stat} Student's T-Test Statistic

Item shown in **bold** or *gray italics* indicate a statistically valid detection (according to the student's T-Test statistic).
 Items with no difference at all (zero difference) will indicate #DIV/0!

Appendix C. Statistical Analysis of Groundwater Quality Results for
Downgradient Well, South Landfill

Copper

$$t_{\text{stat}} = (X_{\text{bar}} - m_o) / \sqrt{s^1/n + s^2/n}$$

Number of Samples n 4

Critical Statistic t_c 2.447

BXS-4

(Upgradient well)

May-06	5				Average Concentration	
Aug-06	5				m_o	s^1
Nov-06	5					
Feb-07	5	5	5	5	5.00	0.00
Apr-07	5	5	5	5	5.00	0.00
Jul-07	5	5	5	5	5.00	0.00
Oct-07	5	5	5	5	5.00	0.00

BXS-3

(Downgradient well)

May-06	5				X_{bar} s^2 s t_{stat}			
Aug-06	10							
Nov-06	5							
Feb-07	5	5	10	5	6.25	6.25	2.50	1.00
Apr-07	5	10	5	5	6.25	6.25	2.50	1.00
Jul-07	4.4	5	5	5	4.85	0.09	0.30	-1.00
Oct-07	5	5	5	4.4	4.85	0.09	0.30	-1.00

BXS-2

(Downgradient well)

May-06	5				X_{bar} s^2 s t_{stat}			
Aug-06	2.5							
Nov-06	5							
Feb-07	5	5	2.5	5	4.38	1.56	1.25	-1.00
Apr-07	5	2.5	5	5	4.38	1.56	1.25	-1.00
Jul-07	5.4	5	5	5	5.10	0.04	0.20	1.00
Oct-07	5	5	5	5.4	5.10	0.04	0.20	1.00

BXS-1

(Downgradient well)

May-06	2.6				X_{bar} s^2 s t_{stat}			
Aug-06	3.1							
Nov-06	5							
Feb-07	3	2.6	3.1	5	3.43	1.15	1.07	-2.94
Apr-07	5	3.1	5	3	4.03	1.27	1.13	-1.73
Jul-07	4.2	5	3	5	4.30	0.89	0.95	-1.48
Oct-07	5	3	5	4.2	4.30	0.89	0.95	-1.48

Notes:

X_{bar} Average Concentration
 s^2 Sample variance
 s^1 Sample variance
 s Sample Standard Deviation
 t_{stat} Student's T-Test Statistic

Item shown in **bold** or *gray italics* indicate a statistically valid detection (according to the student's T-Test statistic).
 Items with no difference at all (zero difference) will indicate #DIV/0!

Appendix C. Statistical Analysis of Groundwater Quality Results for
Downgradient Well, South Landfill

Cadmium

$$t_{\text{stat}} = (X_{\text{bar}} - m_o) / \sqrt{(s^1/n + s^2/n)}$$

Number of Samples n 4

Critical Statistic t_c 2.447

BXS-4

(Upgradient well)

May-06	2.5				Average Concentration	
Aug-06	2.5				m_o	s^1
Nov-06	2.5					
Feb-07	2.5	2.5	2.5	2.5	2.50	0.00
Apr-07	2.5	2.5	2.5	2.5	2.50	0.00
Jul-07	2.5	2.5	2.5	2.5	2.50	0.00
Oct-07	2.5	2.5	2.5	2.5	2.50	0.00

BXS-3

(Downgradient well)

May-06	2.5				X_{bar}	s^2	s	t_{stat}
Aug-06	3.2							
Nov-06	2.5							
Feb-07	2.5	2.5	3.2	2.5	2.68	0.12	0.35	1.00
Apr-07	2.9	3.2	2.5	2.5	2.78	0.12	0.34	1.62
Jul-07	2.5	2.5	2.5	2.9	2.60	0.04	0.20	1.00
Oct-07	2.5	2.5	2.9	2.5	2.60	0.04	0.20	1.00

BXS-2

(Downgradient well)

May-06	2.5				X_{bar}	s^2	s	t_{stat}
Aug-06	2.5							
Nov-06	2.5							
Feb-07	2.5	2.5	2.5	2.5	2.50	0.00	0.00	#DIV/0!
Apr-07	0.7	2.5	2.5	2.5	2.05	0.81	0.90	-1.00
Jul-07	2.5	2.5	2.5	0.7	2.05	0.81	0.90	-1.00
Oct-07	2.5	2.5	0.7	2.5	2.05	0.81	0.90	-1.00

BXS-1

(Downgradient well)

May-06	2.5				X_{bar}	s^2	s	t_{stat}
Aug-06	2.5							
Nov-06	2.5							
Feb-07	2.5	2.5	2.5	2.5	2.50	0.00	0.00	#DIV/0!
Apr-07	1.9	2.5	2.5	2.5	2.35	0.09	0.30	-1.00
Jul-07	2.5	2.5	2.5	1.9	2.35	0.09	0.30	-1.00
Oct-07	2.5	2.5	1.9	2.5	2.35	0.09	0.30	-1.00

Notes:

X_{bar} Average Concentration
 s^2 Sample variance
 s^1 Sample variance
 s Sample Standard Deviation
 t_{stat} Student's T-Test Statistic

Item shown in **bold** or *gray italics* indicate a statistically valid detection (according to the student's T-Test statistic).
 Items with no difference at all (zero difference) will indicate #DIV/0!

Appendix C. Statistical Analysis of Groundwater Quality Results for Downgradient Well,
South Landfill

Iron

$$t_{\text{stat}} = (X_{\text{bar}} - m_o) / \sqrt{(s^1/n + s^2/n)}$$

Number of Samples n 4

Critical Statistic t_c 2.447

BXS-4

(Upgradient well)

May-06	40.1				Average Concentration	
Aug-06	38.7				m_o	s^1
Nov-06	33.3					
Feb-07	38.6	40.1	38.7	33.3	37.68	8.98
Apr-07	42.8	38.7	33.3	38.6	38.35	15.16
Jul-07	38.3	33.3	38.6	42.8	38.25	15.11
Oct-07	36.1	38.6	42.8	38.3	38.95	7.83

BXS-3

(Downgradient well)

May-06	67900				X_{bar}	s^2	s	t_{stat}
Aug-06	91400							
Nov-06	28700							
Feb-07	110000	67900	91400	28700	74500	1,229,020,000	35057.38	4.25
Apr-07	90500	91400	28700	110000	80150	1,257,270,000	35458.00	4.52
Jul-07	88100	28700	110000	90500	79325	1,235,242,500	35146.02	4.51
Oct-07	62700	110000	90500	88100	87825	376,742,500	19409.86	9.05

BXS-2

(Downgradient well)

May-06	842				X_{bar}	s^2	s	t_{stat}
Aug-06	860							
Nov-06	811							
Feb-07	846	842	860	811	840	427	20.66	76.83
Apr-07	771	860	811	846	822	1581	39.76	39.31
Jul-07	699	811	846	771	782	3982	63.11	23.54
Oct-07	656	846	771	699	743	6966	83.46	16.86

BXS-1

(Downgradient well)

May-06	10				X_{bar}	s^2	s	t_{stat}
Aug-06	10							
Nov-06	10							
Feb-07	10	10	10	10	10	0	0.00	-18.47
Apr-07	10.1	10	10	10	10	0	0.05	-18.91
Jul-07	10	10	10	10.1	10	0	0.05	-18.84
Oct-07	10	10	10.1	10	10	0	0.05	-19.31

Notes:

- X_{bar} Average Concentration
- s^2 Sample variance
- s^1 Sample variance
- s Sample Standard Deviation
- t_{stat} Student's T-Test Statistic

Item shown in **bold** or *gray italics* indicate a statistically valid detection (according to the student's T-Test statistic).

Items with no difference at all (zero difference) will indicate #DIV/0!

* t_{stat} value invalid, data not normally distributed

Appendix C. Statistical Analysis of Groundwater Quality Results for Downgradient Well, South Landfill

Manganese

$$t_{\text{stat}} = (X_{\text{bar}} - m_o) / \sqrt{(s^1/n + s^2/n)}$$

Number of Samples n 4

Critical Statistic t_c 2.447

BXS-4

(Upgradient well)

May-06	109				Average Concentration	
Aug-06	113				m_o	s^1
Nov-06	113					
Feb-07	112	109	113	113	111.75	3.58
Apr-07	107	113	113	112	111.25	8.25
Jul-07	118	113	112	107	112.50	20.33
Oct-07	121	112	107	118	114.50	39.00

BXS-3

(Downgradient well)

May-06	13400				X_{bar} s^2 s t_{stat}			
Aug-06	13000							
Nov-06	17500							
Feb-07	13500	13400	13000	17500	14350	4456667	2111.08	13.49
Apr-07	13500	13000	17500	13500	14375	4395833	2096.62	13.61
Jul-07	14000	17500	13500	13500	14625	3729167	1931.11	15.03
Oct-07	14700	13500	13500	14000	13925	322500	567.89	48.64

BXS-2

(Downgradient well)

May-06	1320				X_{bar} s^2 s t_{stat}			
Aug-06	1350							
Nov-06	1390							
Feb-07	1350	1320	1350	1390	1353	825	28.72	86.21
Apr-07	1330	1350	1390	1350	1355	633	25.17	98.56
Jul-07	1330	1390	1350	1330	1350	800	28.28	87.31
Oct-07	1280	1350	1330	1330	1323	892	29.86	80.75

BXS-1

(Downgradient well)

May-06	105				X_{bar} s^2 s t_{stat}			
Aug-06	121							
Nov-06	268							
Feb-07	89.5	105	121	268	146	6794	82.43	0.83
Apr-07	123	121	268	89.5	150	6385	79.90	0.98
Jul-07	268	268	89.5	123	187	8908	94.38	1.58
Oct-07	353	89.5	123	268	208	15297	123.68	1.52

Notes:

X_{bar} Average Concentration
 s^2 Sample variance
 s^1 Sample variance
 s Sample Standard Deviation
 t_{stat} Student's T-Test Statistic

Item shown in **bold** or *gray italics* indicate a statistically valid detection (according to the student's T-Test statistic).
 Items with no difference at all (zero difference) will indicate #DIV/0!

Appendix C. Statistical Analysis of Groundwater Quality Results for Downgradient Well, South Landfill

Nickel

$$t_{\text{stat}} = (X_{\text{bar}} - m_o) / \sqrt{s^1/n + s^2/n}$$

Number of Samples n

4

Critical Statistic t_c

2.447

BXS-4

(Upgradient well)

					Average Concentration	
					m_o	s^1
May-06	10					
Aug-06	10					
Nov-06	10					
Feb-07	10	10	10	10	10.00	0.00
Apr-07	10	10	10	10	10.00	0.00
Jul-07	10	10	10	10	10.00	0.00
Oct-07	10	10	10	10	10.00	0.00

BXS-3

(Downgradient well)

					X_{bar}	s^2	s	t_{stat}
May-06	10							
Aug-06	10							
Nov-06	10							
Feb-07	10	10	10	10	10.00	0.00	0.00	#DIV/0!
Apr-07	18.2	10	10	10	12.05	16.81	4.10	1.00
Jul-07	20.4	10	10	18.2	14.65	29.64	5.44	1.71
Oct-07	10	10	18.2	20.4	14.65	29.64	5.44	1.71

BXS-2

(Downgradient well)

					X_{bar}	s^2	s	t_{stat}
May-06	35.3							
Aug-06	35.5							
Nov-06	27.7							
Feb-07	38.4	35.3	35.5	27.7	34.23	20.93	4.57	10.59
Apr-07	33.9	35.5	27.7	38.4	33.88	20.42	4.52	10.57
Jul-07	30.1	27.7	38.4	33.9	32.53	21.86	4.68	9.64
Oct-07	31.4	38.4	33.9	30.1	33.45	13.38	3.66	12.82

BXS-1

(Downgradient well)

					X_{bar}	s^2	s	t_{stat}
May-06	10							
Aug-06	10							
Nov-06	10							
Feb-07	10	10	10	10	10.00	0.00	0.00	#DIV/0!
Apr-07	10.4	10	10	10	10.10	0.04	0.20	1.00
Jul-07	10	10	10	10.4	10.10	0.04	0.20	1.00
Oct-07	10	10	10.4	10	10.10	0.04	0.20	1.00

Notes:

- X_{bar} Average Concentration
- s^2 Sample variance
- s^1 Sample variance
- s Sample Standard Deviation
- t_{stat} Student's T-Test Statistic

Item shown in **bold** or *gray italics* indicate a statistically valid detection (according to the student's T-Test statistic).
Items with no difference at all (zero difference) will indicate #DIV/0!

Appendix C. Statistical Analysis of Groundwater Quality Results for
Downgradient Well, South Landfill

Zinc

$$t_{\text{stat}} = (X_{\text{bar}} - m_o) / \sqrt{(s^1/n + s^2/n)}$$

Number of Samples n 4

Critical Statistic t_c 2.447

BXS-4

(Upgradient well)

May-06	3				Average Concentration	
Aug-06	2.6				m_o	s^1
Nov-06	5					
Feb-07	2.4	3	2.6	5	3.25	1.42
Apr-07	5	2.6	5	2.4	3.75	2.09
Jul-07	5	5	2.4	5	4.35	1.69
Oct-07	5	2.4	5	5	4.35	1.69

BXS-3

(Downgradient well)

May-06	22.1				X_{bar} s^2 s t_{stat}			
Aug-06	13.7							
Nov-06	13.7							
Feb-07	12.9	22.1	13.7	13.7	15.60	18.92	4.35	5.48
Apr-07	8.5	13.7	13.7	12.9	12.20	6.23	2.50	6.11
Jul-07	12.4	13.7	12.9	8.5	11.88	5.35	2.31	5.78
Oct-07	15.9	12.9	8.5	12.4	12.43	9.24	3.04	4.95

BXS-2

(Downgradient well)

May-06	46.7				X_{bar} s^2 s t_{stat}			
Aug-06	21.9							
Nov-06	18.5							
Feb-07	5.8	46.7	21.9	18.5	23.23	292.93	17.12	2.33
Apr-07	30.2	21.9	18.5	5.8	19.10	102.77	10.14	3.01
Jul-07	11.1	18.5	5.8	30.2	16.40	111.77	10.57	2.27
Oct-07	22.3	5.8	30.2	11.1	17.35	120.70	10.99	2.35

BXS-1

(Downgradient well)

May-06	8.5				X_{bar} s^2 s t_{stat}			
Aug-06	8.1							
Nov-06	9.6							
Feb-07	4	8.5	8.1	9.6	7.55	6.00	2.45	3.16
Apr-07	5	8.1	9.6	4	6.68	6.85	2.62	2.03
Jul-07	8	9.6	4	5	6.65	6.76	2.60	1.61
Oct-07	7.9	4	5	8	6.23	4.14	2.03	1.59

Notes:

X_{bar} Average Concentration
 s^2 Sample variance
 s^1 Sample variance
 s Sample Standard Deviation
 t_{stat} Student's T-Test Statistic

Item shown in **bold** or *gray italics* indicate a statistically valid detection (according to the student's T-Test statistic).
 Items with no difference at all (zero difference) will indicate #DIV/0!