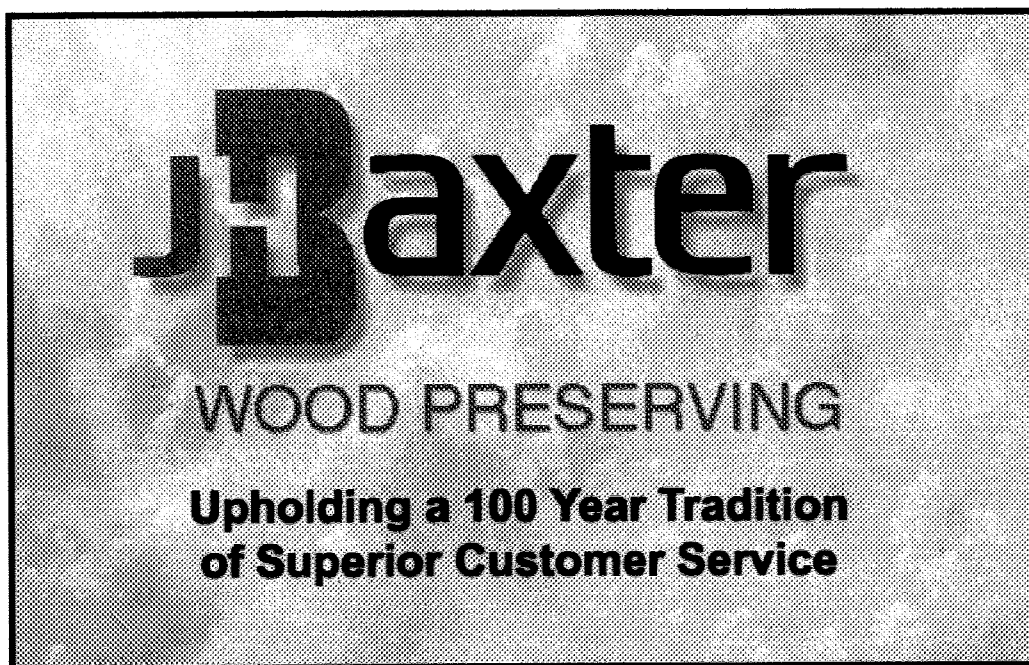


**2006 Groundwater Monitoring Report**  
**South Woodwaste Landfill**

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

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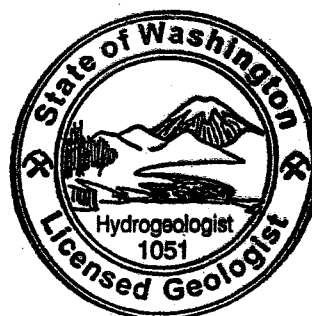
**June 2007**



# 2006 Groundwater Monitoring Report Arlington, Washington

June 2007

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.



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## **Appendices**

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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

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|        |                                     |
|--------|-------------------------------------|
| 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

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This report presents quarterly groundwater data collected from January to November 2006 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 January, May, August, and November 2006.

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

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As discussed, quarterly groundwater monitoring events were performed during January, May, August, and November 2006 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 2006 monitoring period are summarized in Table 1.

Groundwater elevations were highest during the May event, with the exception of BXS-4, which was highest in January. Groundwater elevations were lowest during the November event, with the exception of BXS-1 which was lowest in January and BXS-4 which was lowest in August. The static groundwater level in wells BXS-1, BXS-2, BXS-3, and BXS-4 fluctuated throughout the year by 4.78 feet, 4.13 feet, 4.55 feet, and 5.45 feet, respectively. Groundwater surface elevations measured in January 2006 (Figure 2) and the November 2006 (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 0.0151 and 0.0209 during 2006 (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  $3 \times 10^{-2}$  to  $6 \times 10^{-2}$  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 0.3 (i.e., 30%).

The average gradient ( $i$ ) ranged from 0.0151 to 0.0209, resulting in velocity estimates of 4.280 to 11.849 ft/day. Table 2 shows the calculated hydraulic gradients and groundwater velocities during the monitoring events in 2006.

### **3 Groundwater Quality**

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Groundwater samples were collected on January 17<sup>th</sup> and 18<sup>th</sup> for the first quarter, May 15<sup>th</sup> and 16<sup>th</sup> for the second quarter, August 2<sup>nd</sup>, 3<sup>rd</sup> and 7<sup>th</sup> for the third quarter, and November 8<sup>th</sup> and 9<sup>th</sup> for the fourth quarter of 2006 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 immediately 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. A field duplicate, labeled BXS-6, was collected from well BXS-4 during each sampling event. Additionally, a field blank of deionized water, labeled BXS-5, was collected during each sampling event.

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 2006 groundwater monitoring events are presented in Appendix B.

## **4 Data Review**

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This section describes the data review process that was performed to evaluate the adequacy and quality of the analytical data from the 2006 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, deionized water blanks and field duplicates were prepared and containerized by Baxter field personnel in accordance with standard practice. During each of the quarterly groundwater monitoring events, field duplicate samples were collected from BXS-4 and labeled BXS-6, and field blank samples were collected and 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 2006 is acceptable, with the following exceptions.

- The precision of the November 2006 dissolved manganese, chloride, conductivity, sulfate, tannin and lignin, TDS, and TOC results for BXS-4 and the field duplicate are poor. The RPD values are 79, 62, 73, 72, 40, 53, and 144, respectively.
- The field duplicate precision of the COD results during the August event has an RPD value of 46.

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. Ammonia, nitrate + nitrite, TDS, tannin and lignin, TOC, dissolved barium, dissolved iron, dissolved manganese and dissolved zinc 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. The analyses were performed within the required holding time for the parameters of interest.

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 *gray italics* in the tables presented in Appendix C.

## 5 Discussion of Results

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### 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, and TOC for wells BXS-1, BXS-2, and BXS-3
- Tannin and lignin, dissolved barium, and dissolved manganese for wells BXS-2 and BXS-3
- Nitrate + nitrite as nitrogen and sulfate for well BXS-1
- Dissolved nickel for well BXS-2
- Dissolved arsenic for well BXS-3. The dissolved arsenic concentrations in well BXS-3 are greater than background even though the results of the statistical analysis are inconclusive. The average dissolved arsenic concentration in well BXS-3 is greater than the average background well concentration, but are not normally distributed and therefore the statistical analysis of the well data is invalid.

- Dissolved iron for well BXS-2. The dissolved iron concentrations in well BXS-3 are greater than background even though the results of the statistical analysis are inconclusive. The average dissolved iron concentration in well BXS-3 is greater than the average background well concentration by a factor of 1000. The dissolved iron results for well BXS-3 are not normally distributed and therefore the statistical analysis of the well data is invalid.

## **5.2 Concentration Trends over Time**

Figures 5 through 18 show the concentration trends from 2002 through 2006 for each parameter discussed below.

**Ammonia as Nitrogen** (Figure 5) – The samples collected from well BXS-3 during the May and August events were higher than the concentrations in the background well. However, the concentrations detected in BXS-3 during the other two 2006 events and in BXS-1 and BXS-2, were considerably lower than the concentrations in the background well, BXS-4. Ammonia concentrations in wells BXS-1 and BXS-2 have remained steady since 2002 and concentrations in well BXS-4 have remained steady for the last four years.

**Arsenic** (Figure 6) – Dissolved arsenic concentrations rose above the MCL and above historic levels in well BXS-3 during the May, August, and November sampling events. Dissolved arsenic was not detected above the MCL of 10 µg/L in wells BXS-1 or BXS-2 during the 2006 monitoring 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 relatively 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 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 two 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 values have been relatively 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 concentrations for BXS-3 occurred in May and August 2006 and were 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 three 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 varied near the background well concentrations. Manganese concentrations have been relatively stable over the last three years.

**Nickel** (Figure 13) – Dissolved nickel was not detected in down gradient well BXS-1 or upgradient well BXS-4 during 2006 (Figure 13 values are one half the reporting limit). Dissolved nickel was detected at low concentrations in well BXS-2 for all four sampling events and BXS-3 for the January event.

**Sulfate** (Figure 14) – During all four sampling events the sulfate concentrations in downgradient well BXS-1 were greater than corresponding background well concentrations. With one exception, the sulfate concentrations in wells BXS-2 and BXS-3 were lower than the concentrations in the background well. The sulfate concentration in well BXS-3 during the August event was slightly above the background well concentration. The concentration of sulfate in all the wells has remained relatively stable over the last two years.

**Tannin and Lignin** (Figure 15) – The concentration of tannin and lignin in well BXS-3 reached a historic high in May 2006. Tannin and lignin levels in BXS-3 during January, August, and November were within historic range. Concentrations of tannin and lignin detected in 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 BXS-1 were lower than the corresponding background well concentration for all four events. Tannin and lignin levels in wells BXS-1 and BXS-2 have remained stable for the last three years.

**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 and BXS-2 have remained relatively stable over the last three years. TOC detected in well BXS-3 has been slowly increasing over the last two years.

**Field pH** (Figure 17) – Field pH concentrations in the background well BXS-4 varied widely from acidic to slightly basic (i.e., 5.87 to 8.01 standard pH units). All of the

downgradient wells were statistically equivalent to the background well with results ranging from 5.45 to 7.09. For each sampling event the wells showed similar consistent results but varied from event to event.

**Total Dissolved Solids (TDS)** (Figure 18) – TDS measured in the downgradient wells were higher than the TDS in the background well for all 2006 sampling events. TDS levels have remained fairly stable for the last two years.

### **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 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 + nitrite as nitrogen. The concentrations in all of the groundwater samples were lower than the MCLs for barium, cadmium, copper, nickel, and nitrate + nitrite as nitrogen during the 2006 monitoring events. The dissolved arsenic concentrations in well BXS-3 during the May, August, and November 2006 events were greater than the MCL of 10 µg/L, however, these results were not statistically significant because the data were not normally distributed. The arsenic concentrations ranged from 21.9 to 99.8 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 low levels

of total Coliform found in the monitoring well samples indicates that the potential for bacterial contamination is minimal.

### **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 2006 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 839  $\mu\text{S}/\text{cm}$ . 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 and the January event for well BXS-3 were higher than the SMCL of 700  $\mu\text{mhos}/\text{cm}$ , with values ranging from 719 to 935  $\mu\text{mhos}/\text{cm}$ . Conductivity values for the background well BXS-4 and down gradient well BXS-1 were below the SMCL.
- TDS levels were slightly higher than the SMCL of 500 mg/L in wells BXS-2 and BXS-3 during the January and May events. The BXS-2 concentrations were 568 and 532 mg/L and the BXS-3 concentrations were 528 and 514 mg/L, respectively. TDS in down gradient well BSX-1 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 µg/L. Dissolved iron was detected in BXS-2 ranged from 740 to 860 µg/L and ranged from 2590 to 91,400 µg/L in BXS-3. Dissolved iron was not detected in the most downgradient well, BXS-1 and iron concentrations in the background well BXS-4 were far below the SMCL.
- Dissolved manganese concentrations detected in all four wells exceeded the 50 µg/L SMCL during the 2006 monitoring period. Concentrations detected in well BXS-3 were the highest, averaging 15,275 µg/L and concentrations in down gradient well BXS-4 were the lowest, averaging 113 µg/L.
- Field pH measurements were below the SMCL range of 6.5 to 8.5 standard pH units in at least one event for each well during the 2006 monitoring period. Field pH values were below the SMCL for wells BXS-3 and BXS-4 during May and August, for well BXS-2 in May, and for well BXS-1 for all four events.
- 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 all four 2006 monitoring events. Laboratory pH values were consistently within the SMCL range for upgradient well BXS-4.

## 6 Summary

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Quarterly groundwater monitoring samples were collected from one upgradient well and three downgradient wells during 2006 at the J.H. Baxter South Woodwaste Landfill. The samples were analyzed for eleven groundwater quality parameters and eight dissolved metals.

Groundwater samples collected during the 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 the May, August, and November events. The statistical analysis of dissolved arsenic concentrations in well BXS-3 did not indicate that concentrations are statistically greater than background for any of the monitoring events.

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 2006 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 wells BXS-2 and BXS-3 during all 2006 monitoring events. 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 2006. Field conductivity has remained stable over the last two years.

- Laboratory Conductivity – Laboratory conductivity measurements exceeded the SMCL in well BXS-2 for all 2006 events and in well BXS-3 during the January and August events. Laboratory conductivity measurements have remained fairly stable for the last three years.
- Field pH – Field pH values were below the lower SMCL for all four quarterly measurements in well BXS-1, during May for well BXS-2, and during May and August for wells BXS-3 and BXS-4. 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. Laboratory pH values have been relatively stable since 2003.
- TDS – TDS exceeded the SMCL in wells BXS-2 and BXS-3 during January and May 2006. All TDS concentrations in the downgradient wells were determined to be statistically greater than background. TDS in the farthest downgradient well BXS-1 did not exceed the SMCL. 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 2006. Dissolved iron concentrations in well BXS-2 were statistically greater than background. Dissolved iron concentrations in well BXS-3 were also greater than background; however, the non-normal seasonally distributed data set does not support the statistical evaluation. Dissolved iron was not detected well BXS-1 during 2006.
- Dissolved Manganese – Dissolved manganese concentrations in the upgradient and downgradient wells exceeded the SMCL during quarterly monitoring in

2006. Dissolved manganese levels in wells BXS-2 and BXS-3 during all four events and in well BXS-1 during January were statistically greater than background. Dissolved manganese levels have remained stable for the last three 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-1, BXS-2, and BXS-3 were statistically greater than background. COD levels in well BXS-1 and BXS-2 have remained stable; however, COD in well BXS-3 appears to be slowly increasing with a high concentration measured in August 2006.
- Chloride – Chloride concentrations in all three downgradient wells during all of 2006 were statistically greater than background. Chloride levels have been stable for three years.
- Nitrate + nitrite as nitrogen – Nitrate + nitrite concentrations in well BXS-1 were statistically greater than background during 2006.
- TOC – TOC levels were statistically greater than background for the downgradient wells during all 2006 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 2006. 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 2006. Dissolved barium concentrations in all wells are below the MCL and have been stable since 2004.
- Dissolved Nickel – Dissolved nickel levels in well BXS-3 during January and BXS-2 for all monitoring events were statistically greater than background. Dissolved nickel was not detected in the most downgradient well BXS-1. Dissolved nickel concentrations were below the MCL.

Concentrations of several parameters in well BXS-3 were at historically high levels in August 2006. Ammonia, dissolved arsenic, dissolved iron, and sulfate concentrations were at their highest concentration since monitoring began.

The statistical analysis of ammonia in well BXS-3 did not indicate that concentrations are statistically greater than background during any of the monitoring events. The elevated ammonia level is an anomaly and does not indicate a pattern of increased groundwater leaching from the landfill.

The spike in sulfate in well BXS-3 observed in August does not represent increased landfill leaching. The January and May sulfate levels are statistically below background and the August and November levels are statistically indifferent.

The high dissolved arsenic concentration observed in well BXS-3 in August was not statistically above background. The arsenic concentration remained above historic levels in November. Additional data collected during 2007 will help determine whether this constitutes a pattern or isolated occurrence.

The elevated dissolved iron concentration in well BXS-3 during August is part of a seasonal pattern which peaks in mid to late summer. Collection of additional data is needed to determine if overall iron concentrations are increasing.

## **7 Limitations**

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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

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## **Figures**

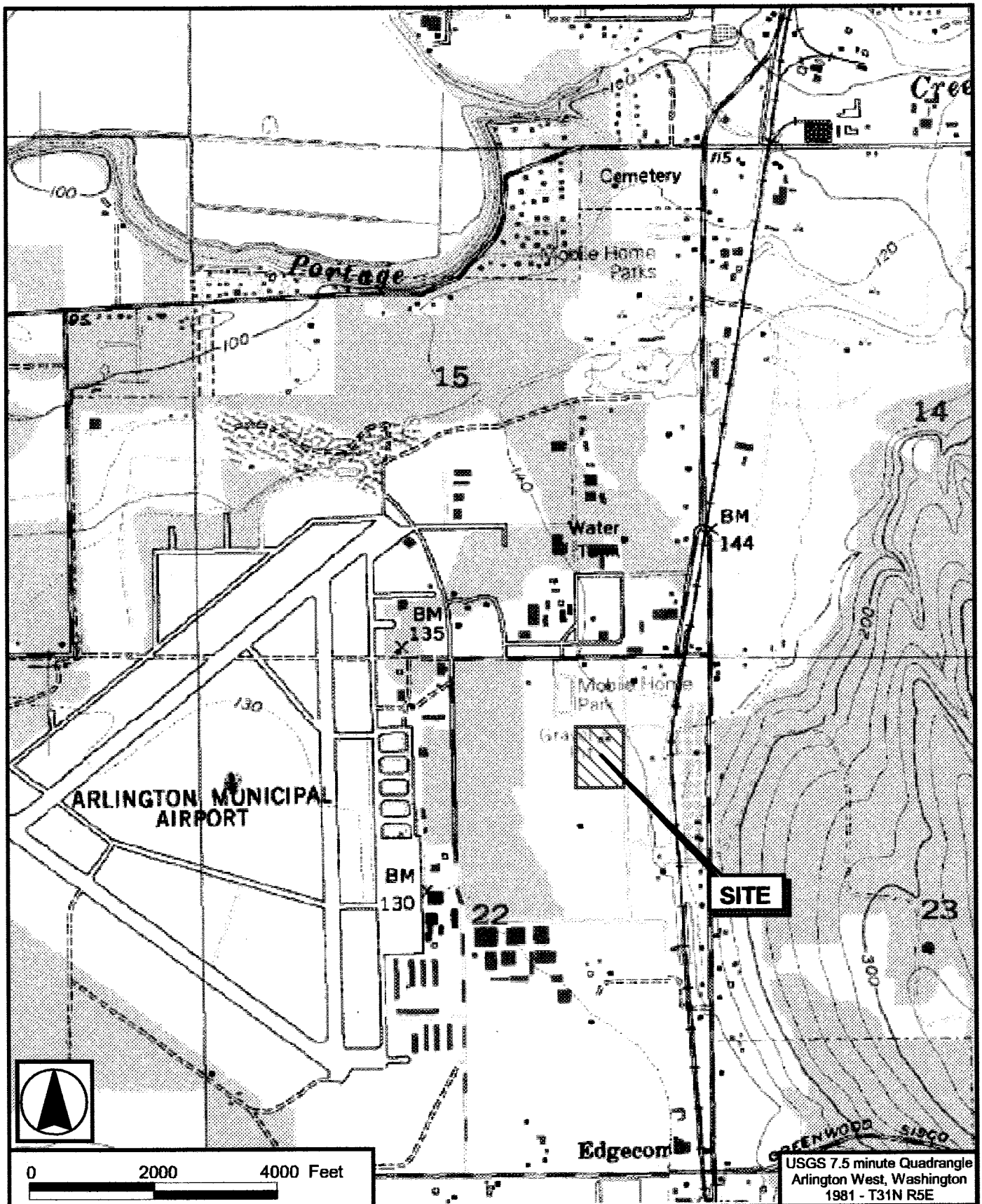
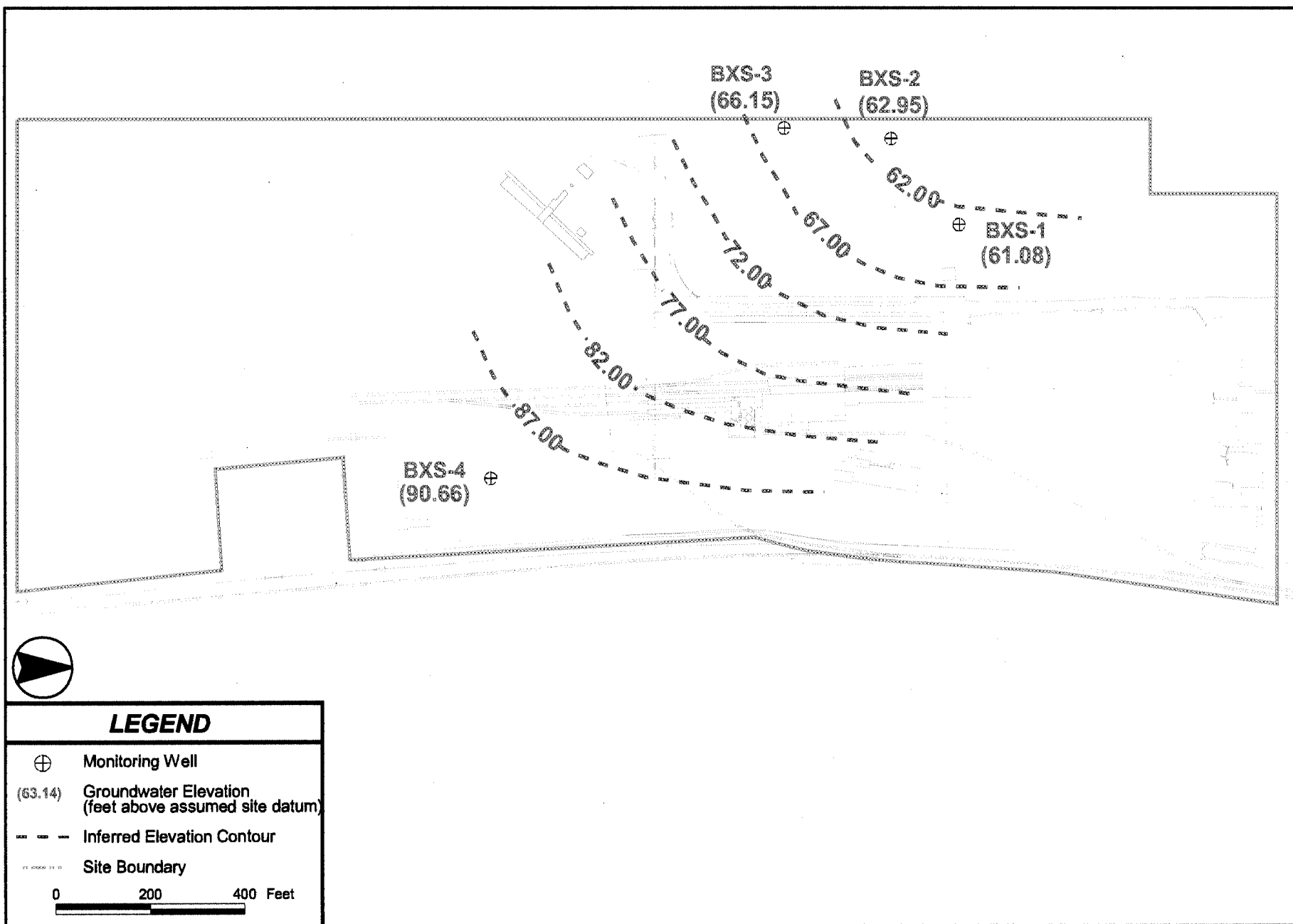
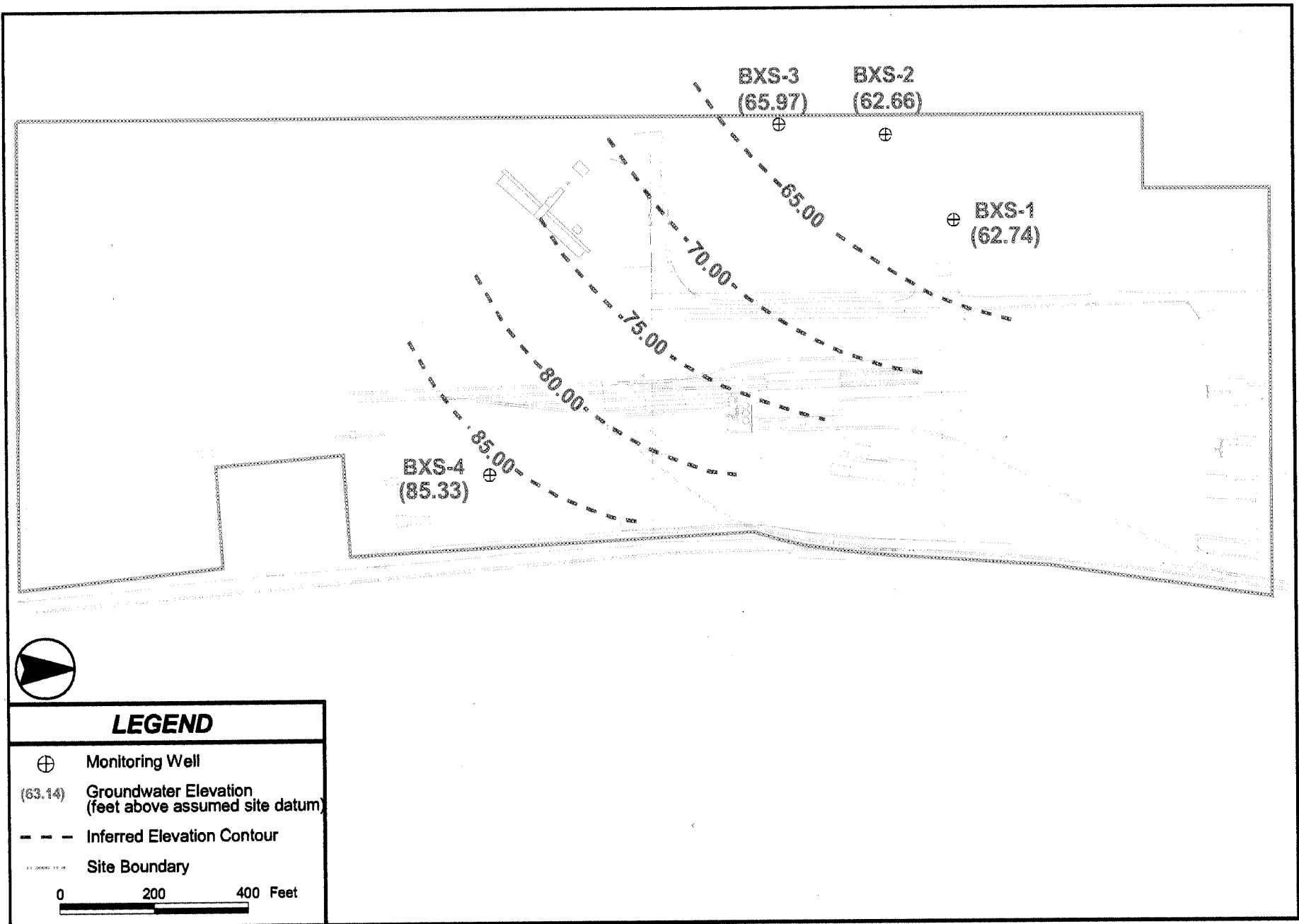


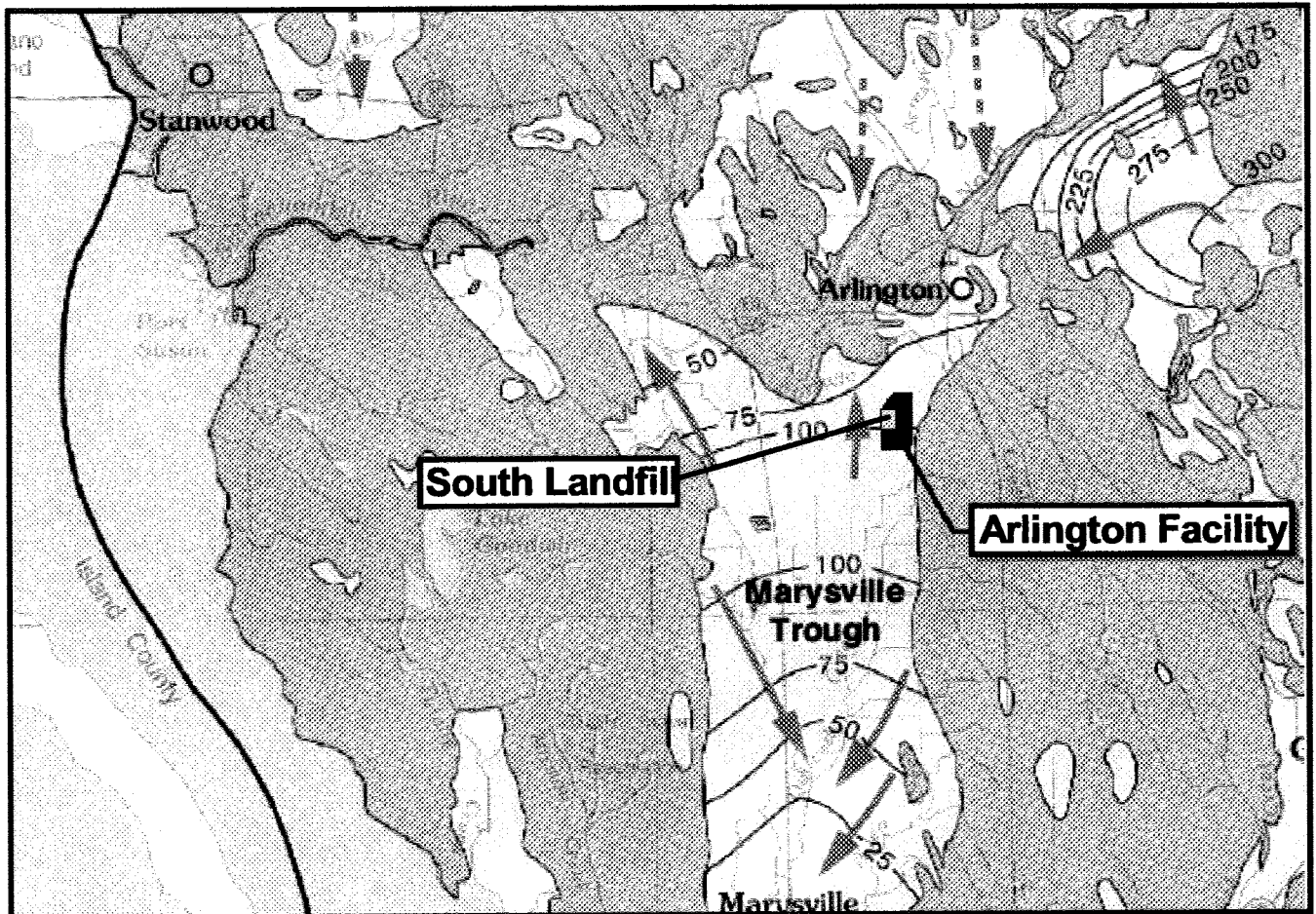
Figure 1. Site Location Map - South Landfill



**Figure 2. Groundwater Elevation Contour Map - January 2006 - South Landfill**



**Figure 3. Groundwater Elevation Contour Map - November 2006 - 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

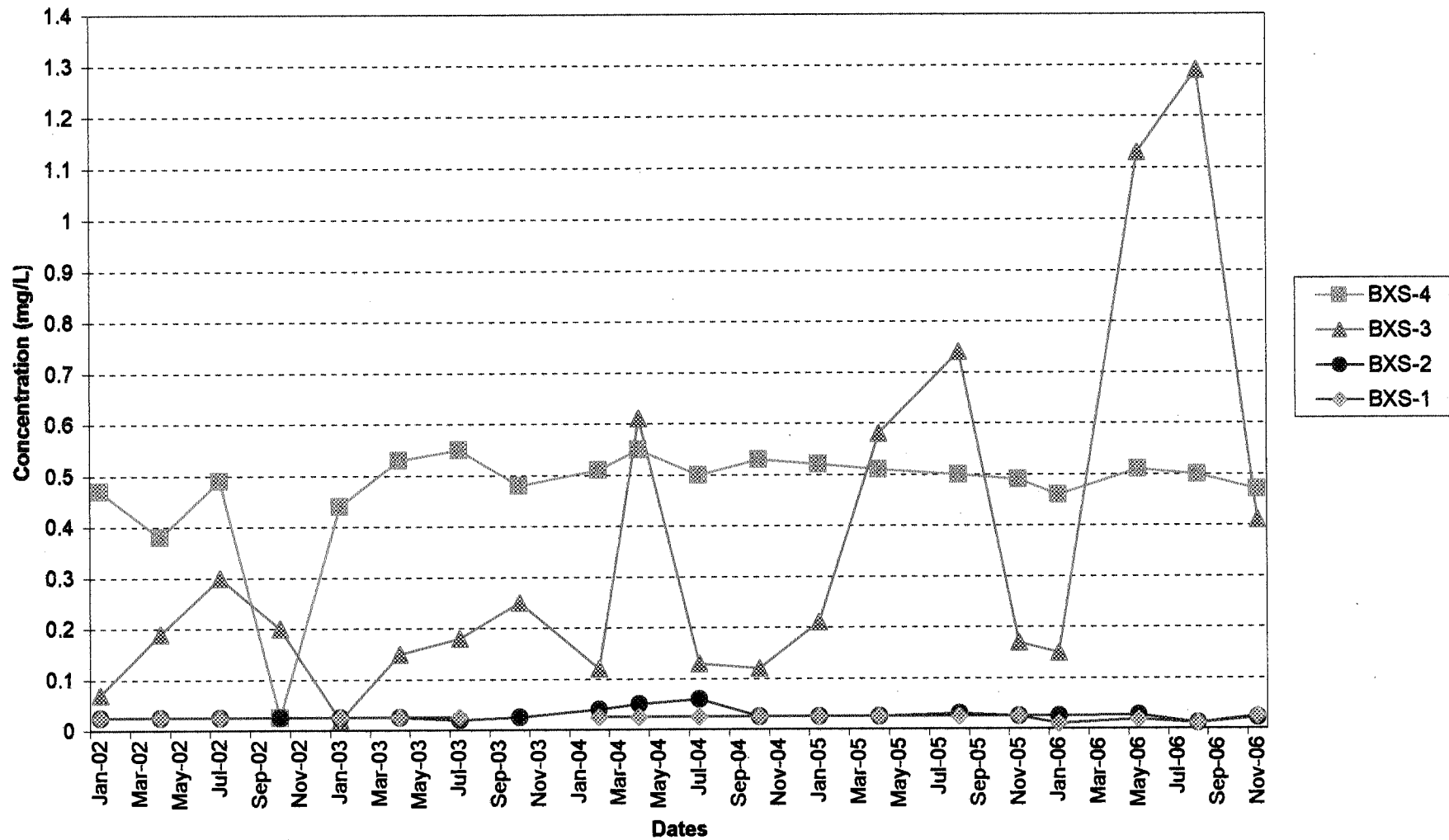
0 4 8 Miles

#### LEGEND

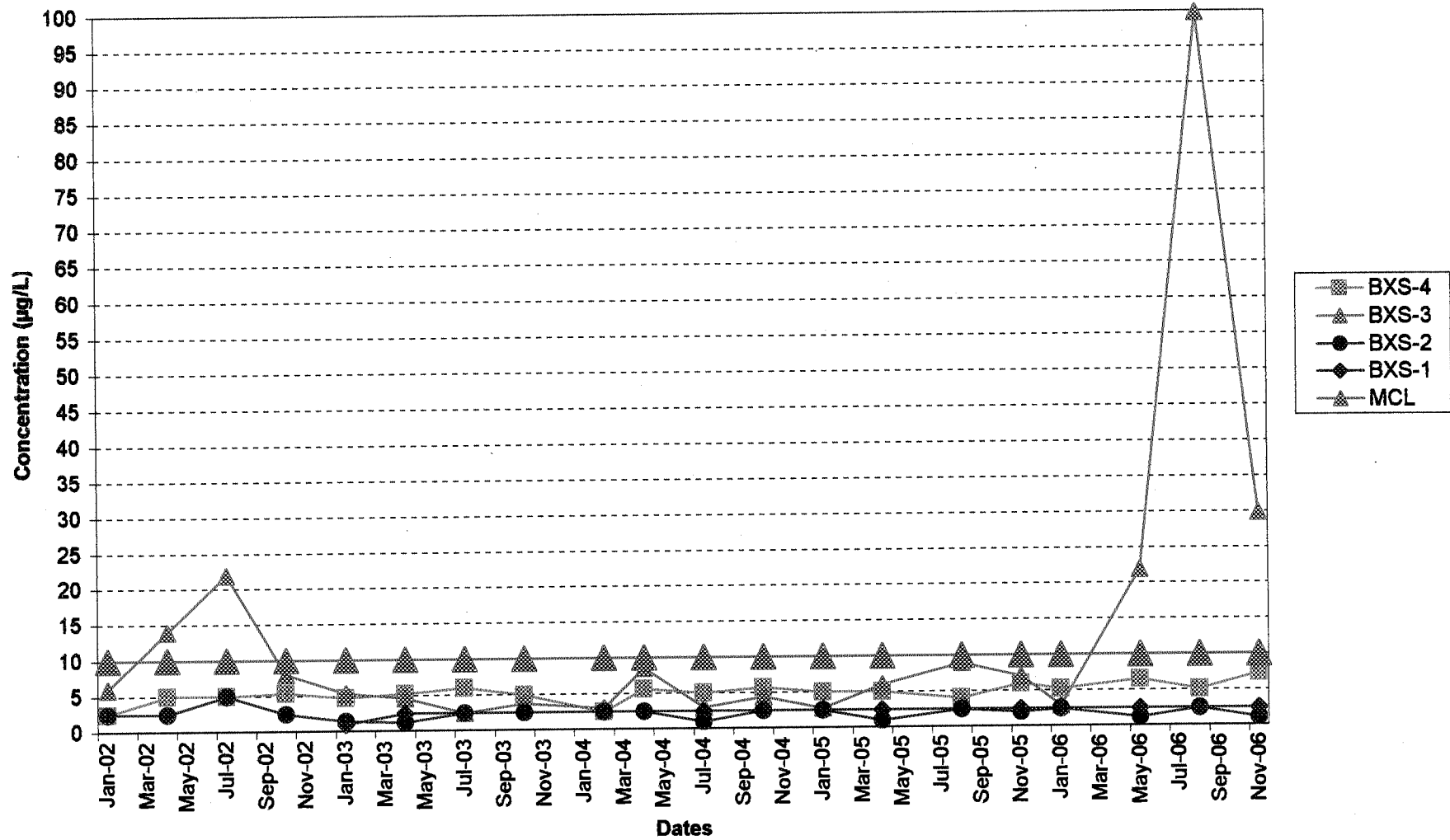
- 50 Groundwater Elevation
- Groundwater Elevation Contour
- Inferred Groundwater Flow Direction

**Figure 4. Regional Groundwater Flow Directions**

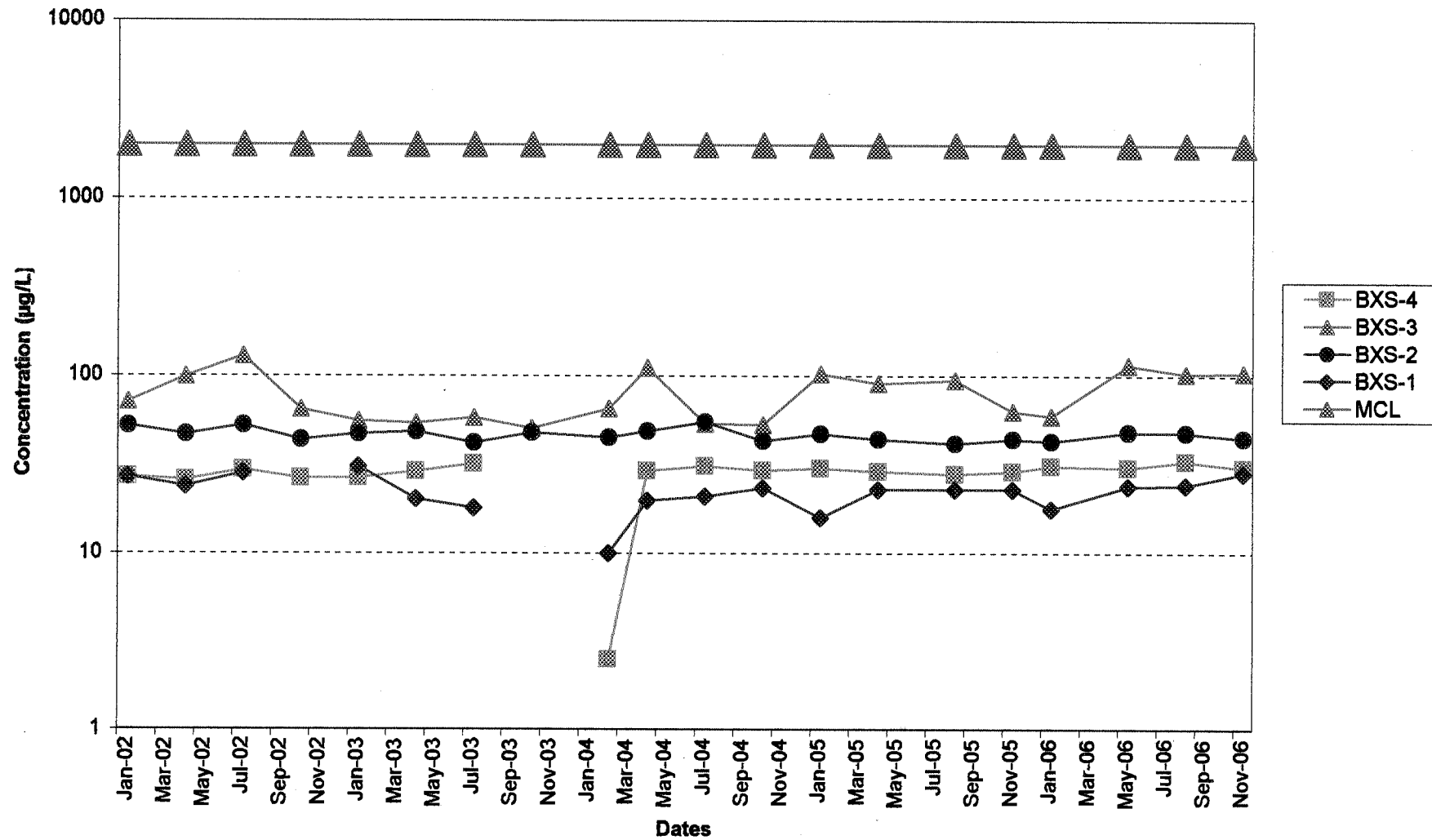
**Figure 5. Concentration Trends for Ammonia  
South Woodwaste Landfill Monitoring Well Data**



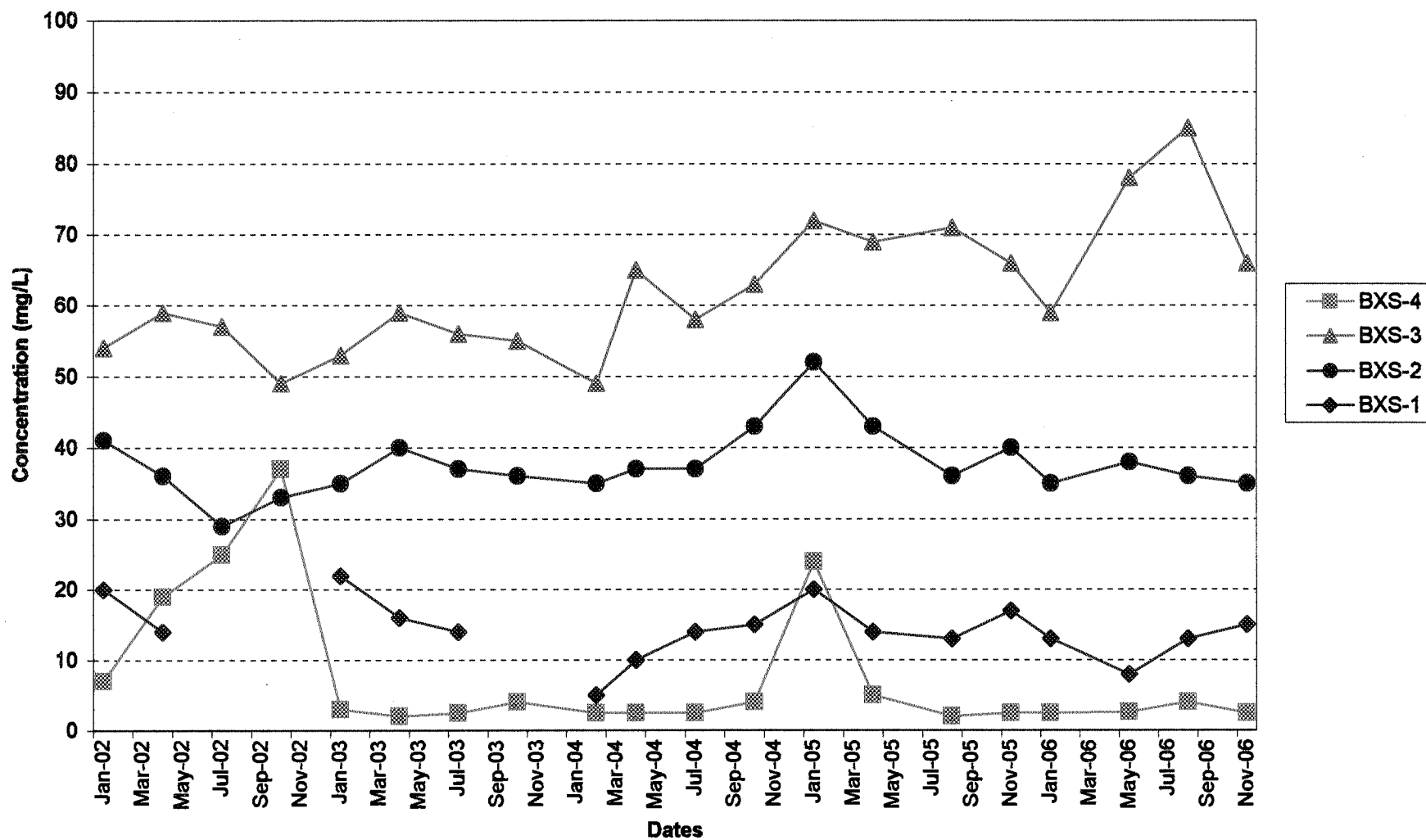
**Figure 6. Concentration Trends for Arsenic  
South Woodwaste Landfill Monitoring Well Data**



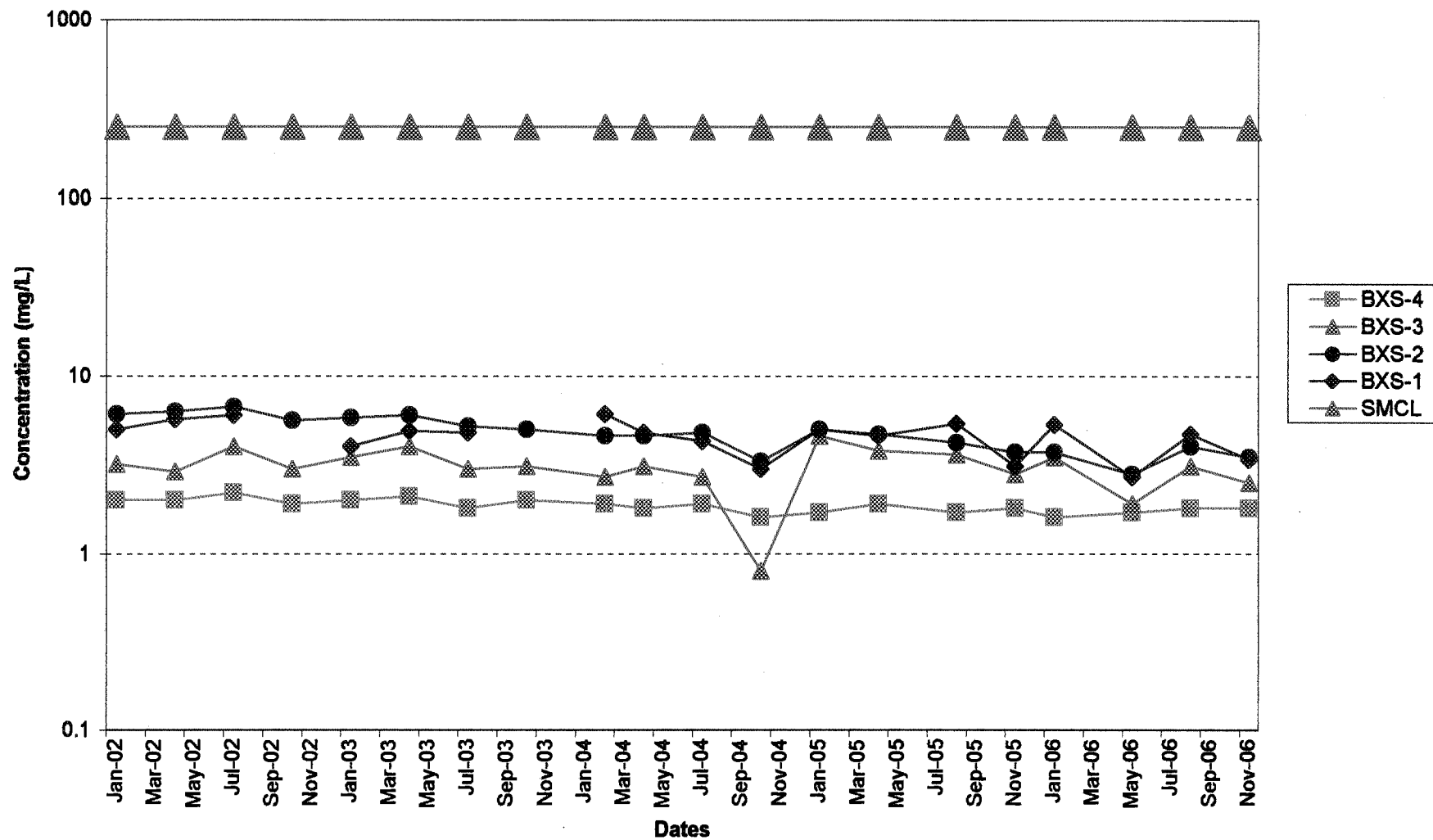
**Figure 7. Concentration Trends for Barium  
South Woodwaste Landfill Monitoring Well Data**



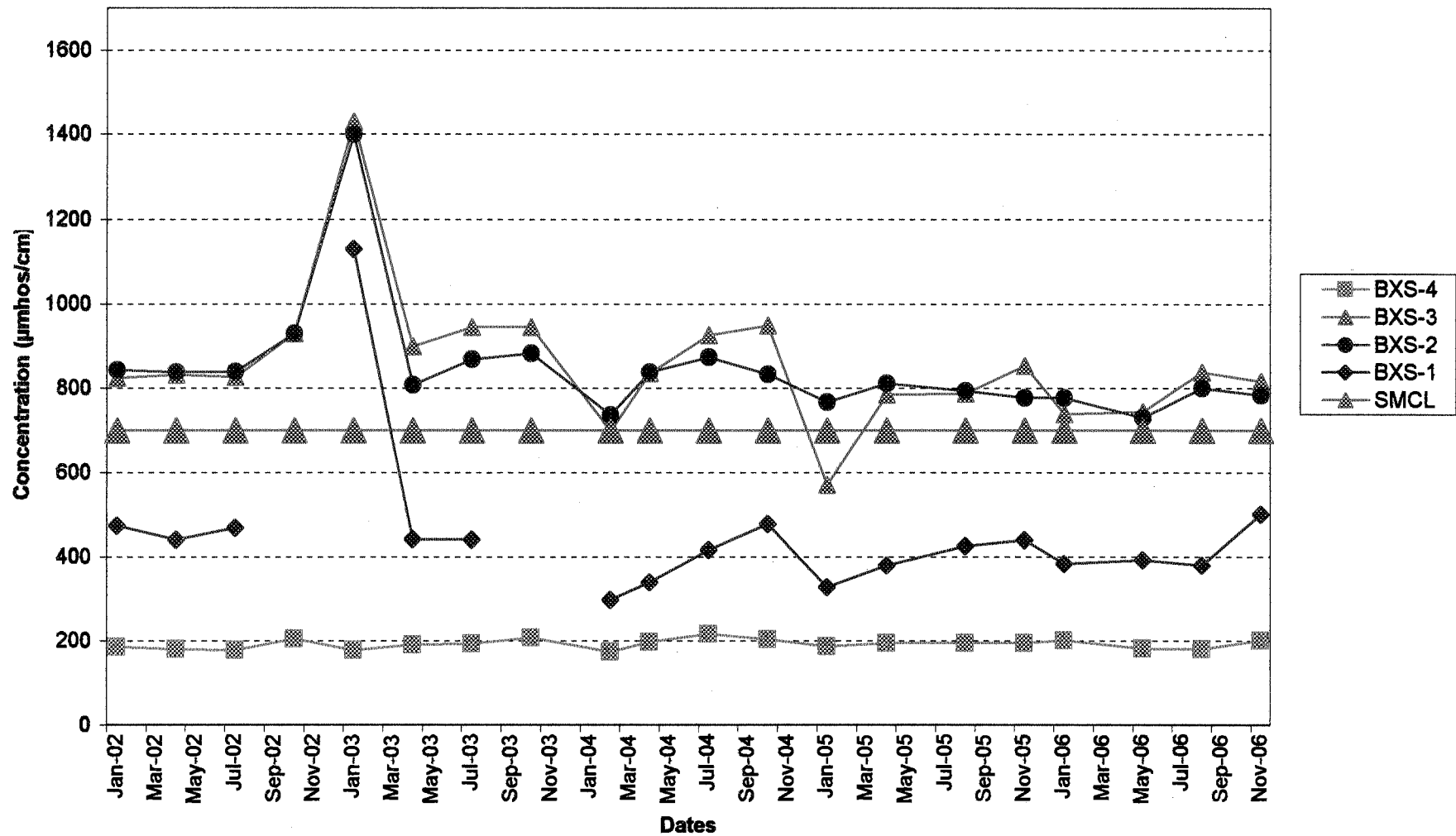
**Figure 8. Concentration Trends for Chemical Oxygen Demand  
South Woodwaste Landfill Monitoring Well Data**



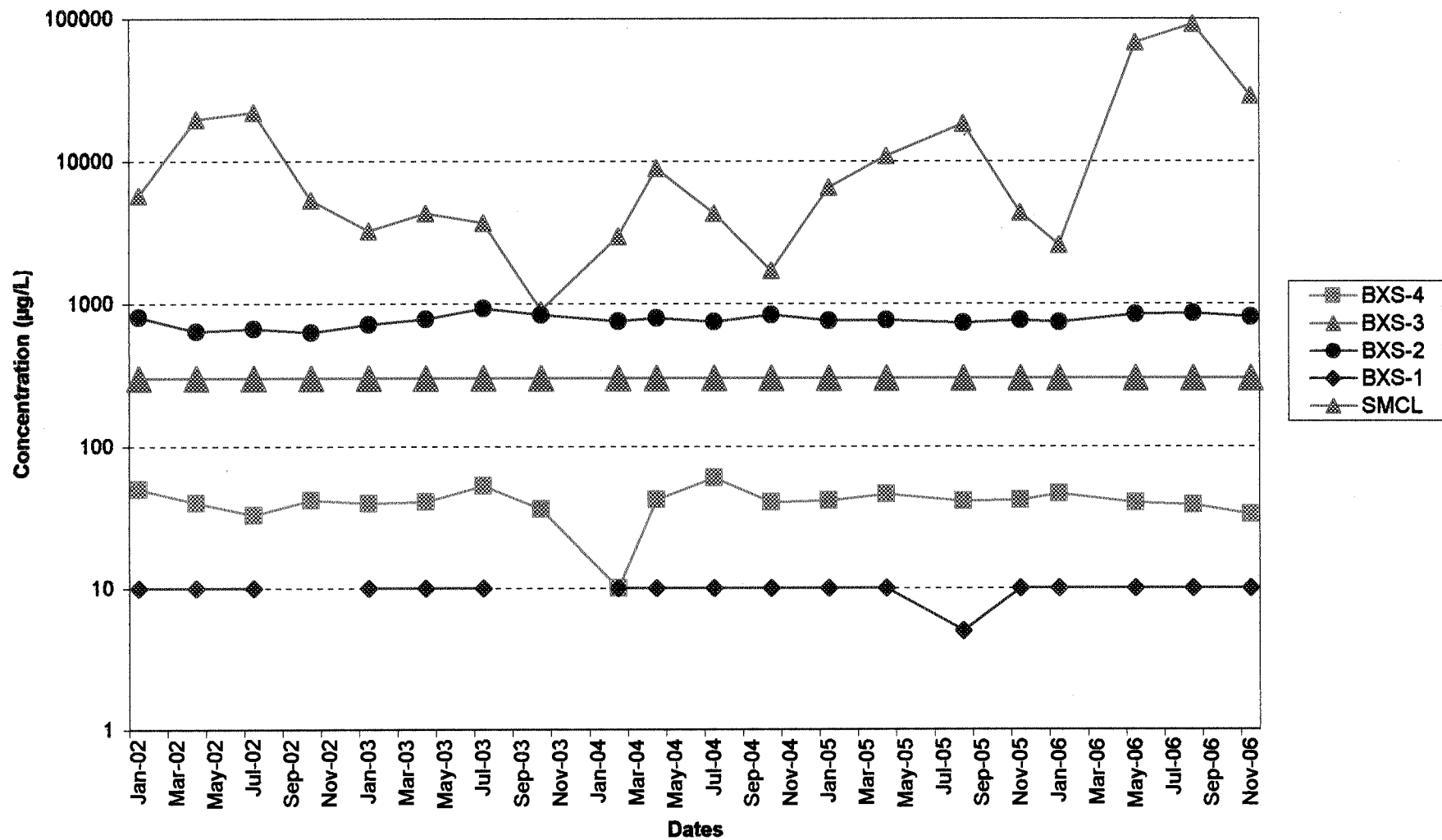
**Figure 9. Concentration Trends for Chloride  
South Woodwaste Landfill Monitoring Well Data**



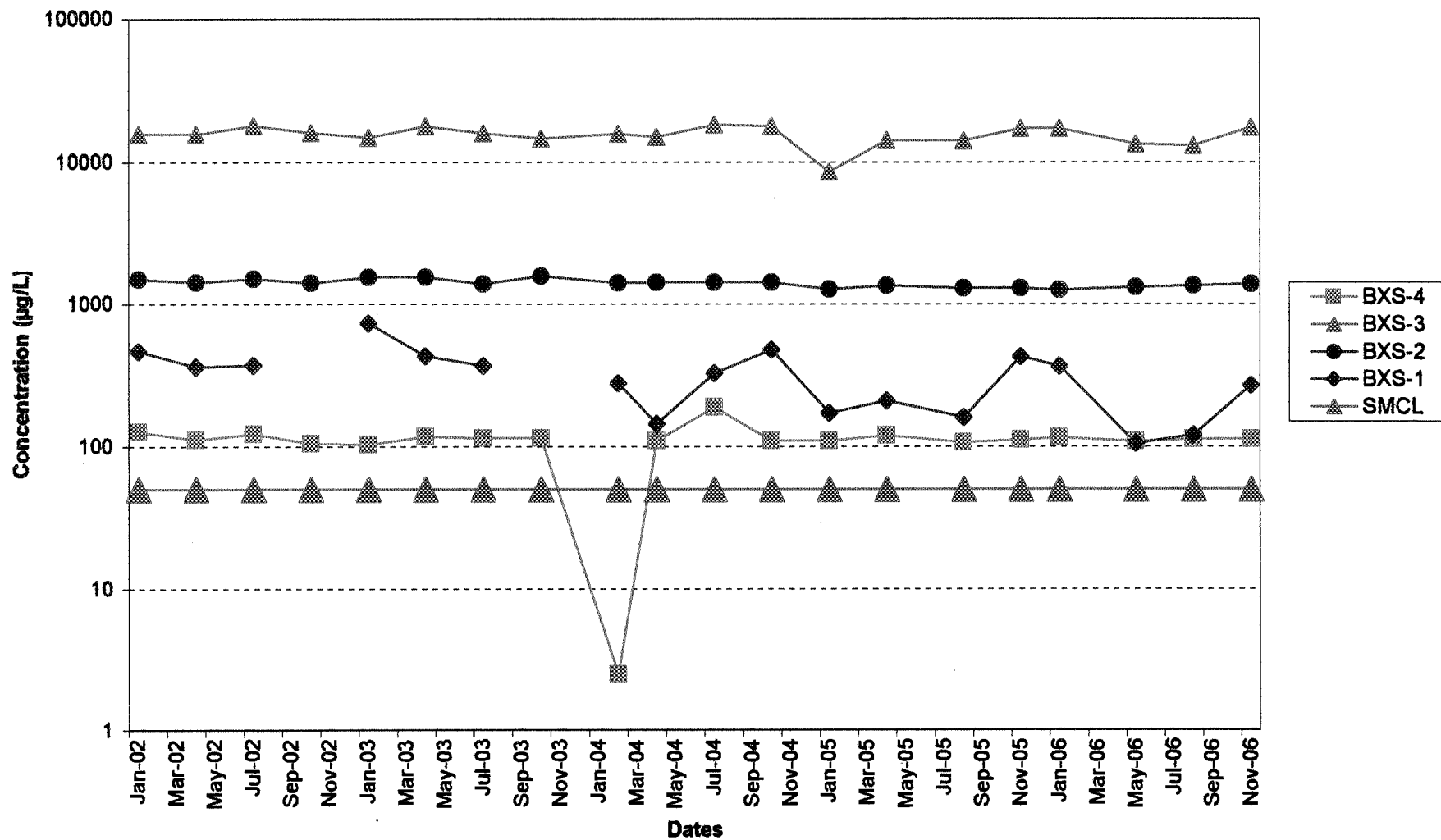
**Figure 10. Concentration Trends for Field Conductivity  
South Woodwaste Landfill Monitoring Well Data**



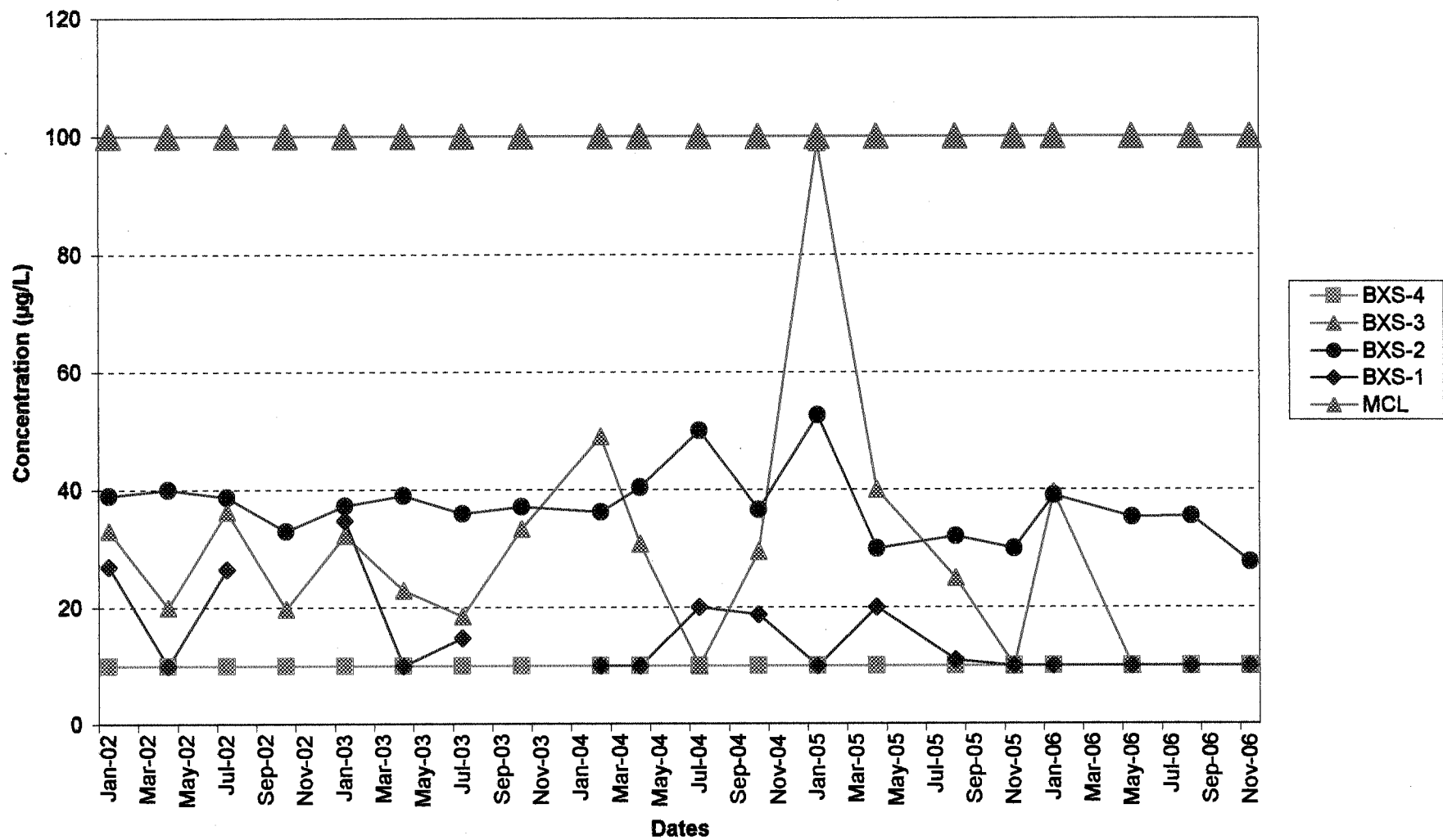
**Figure 11. Concentration Trends for Iron  
South Woodwaste Landfill Monitoring Well Data**



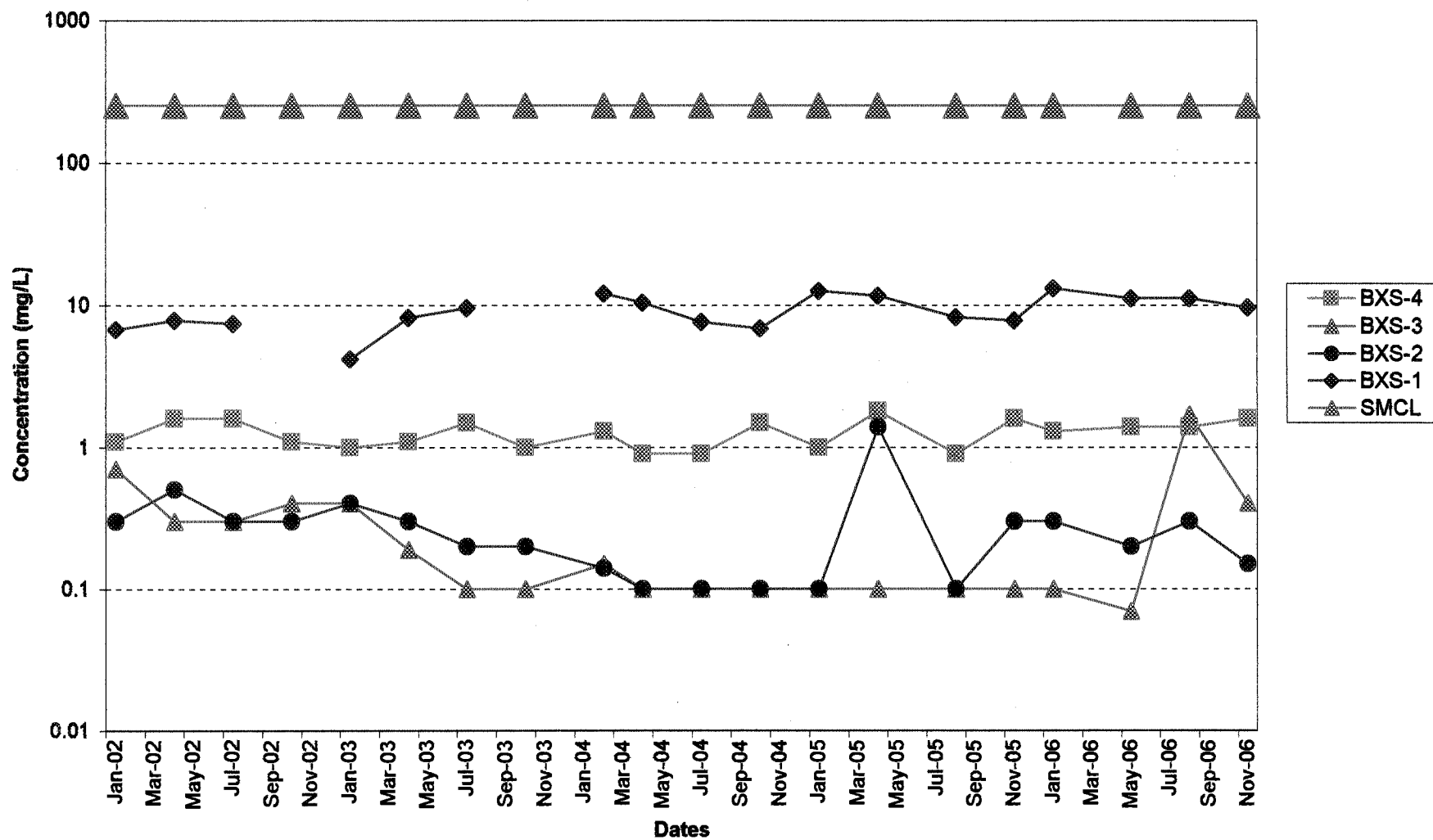
**Figure 12. Concentration Trends for Manganese  
South Woodwaste Landfill Monitoring Well Data**



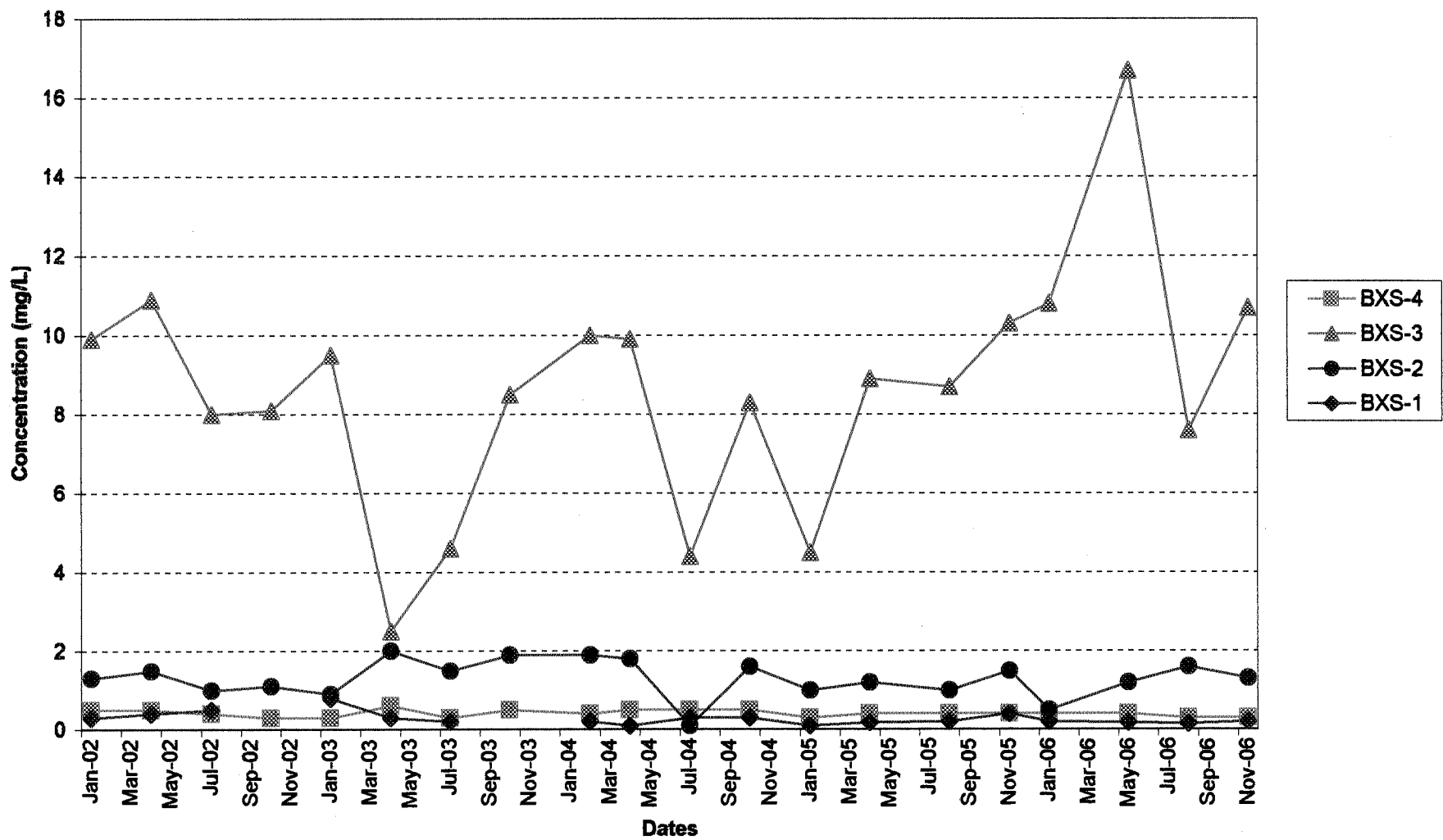
**Figure 13. Concentration Trends for Nickel  
South Woodwaste Landfill Monitoring Well Data**



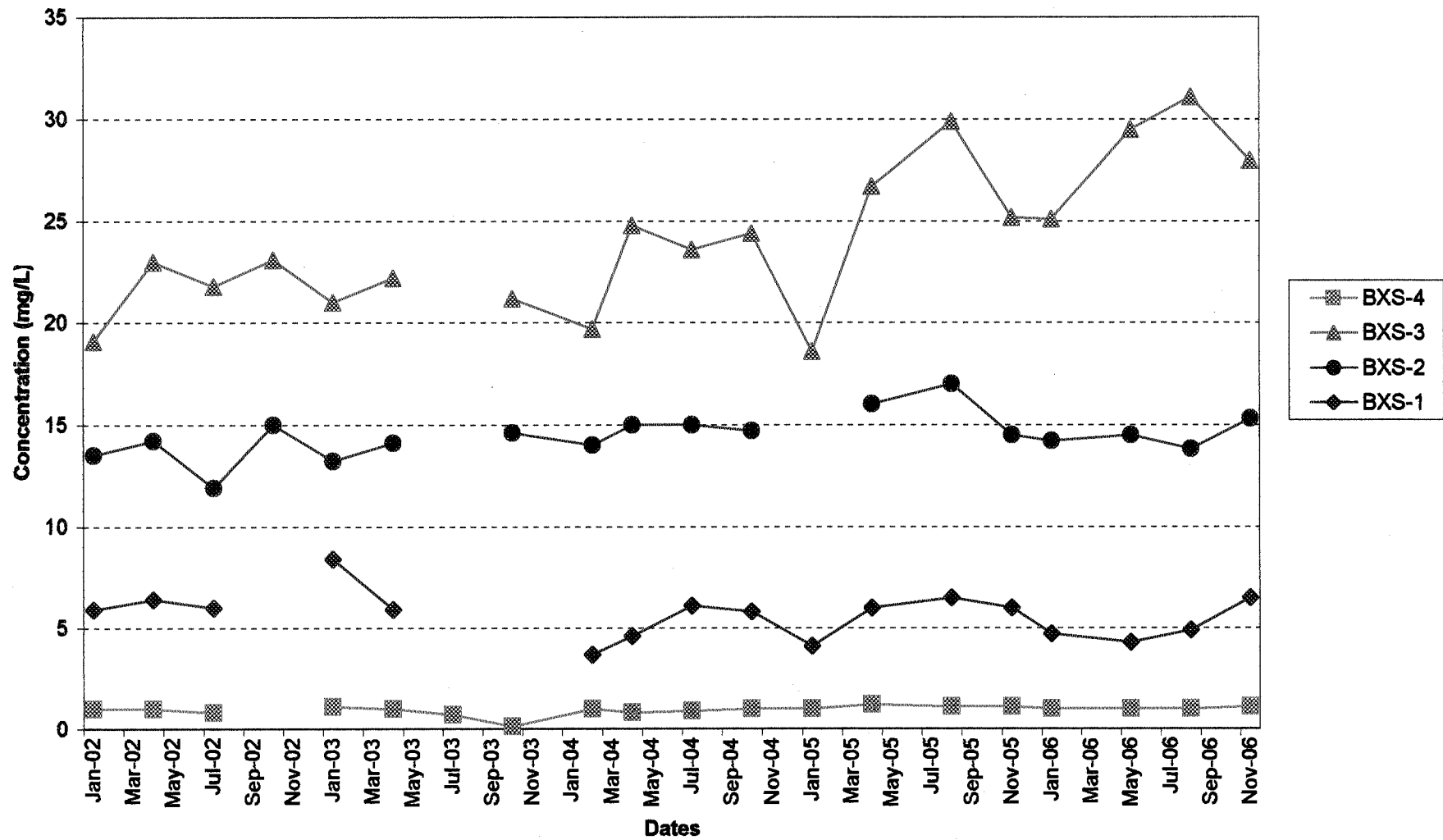
**Figure 14. Concentration Trends for Sulfate  
South Woodwaste Landfill Monitoring Well Data**



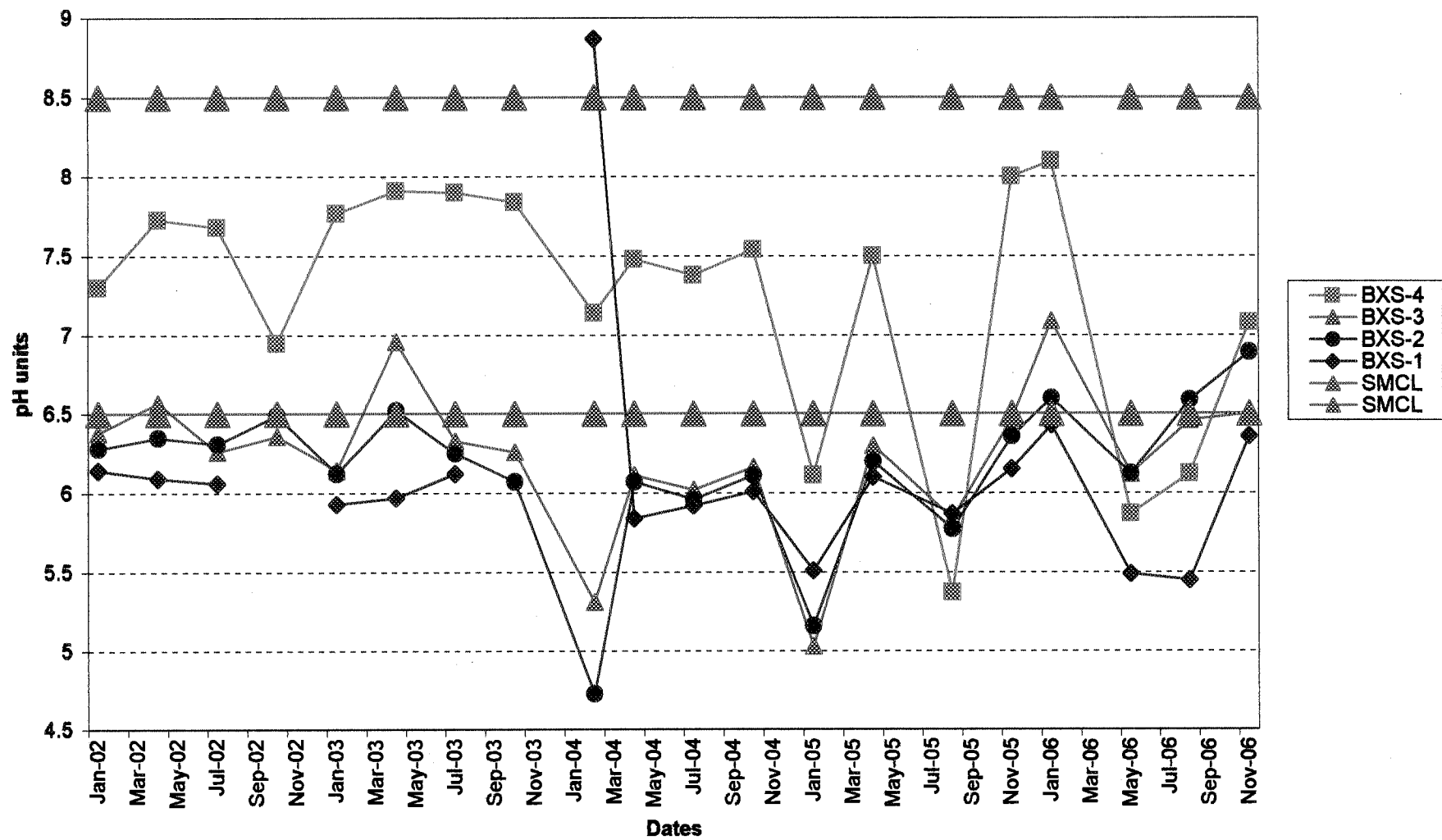
**Figure 15. Concentration Trends for Tannin and Lignin  
South Woodwaste Landfill Monitoring Well Data**



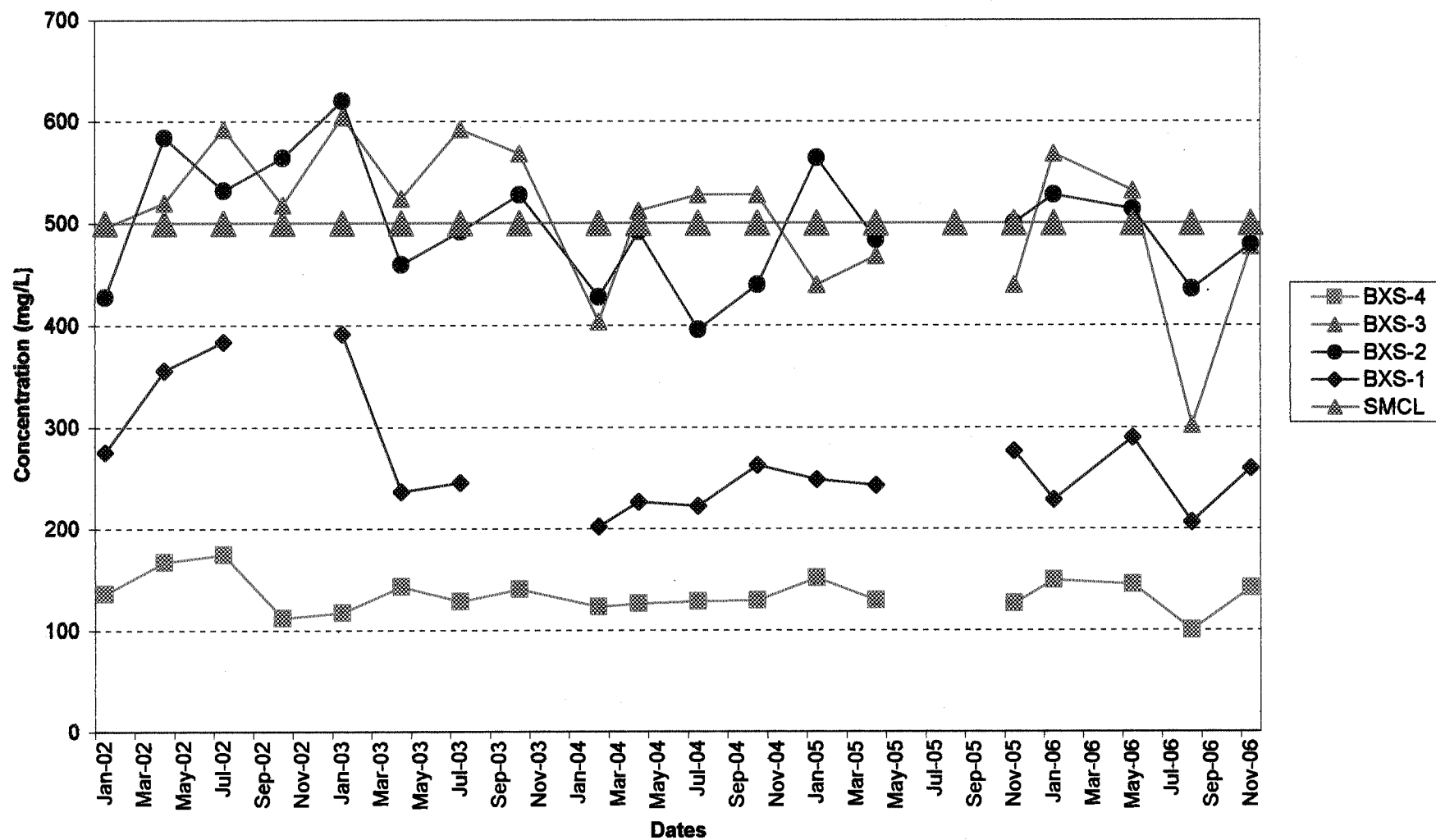
**Figure 16. Concentration Trends for Total Organic Carbon  
South Woodwaste Landfill Monitoring Well Data**



**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**

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**Table 1. Summary of Groundwater Elevations in 2006 (South Landfill)**

|              | Inner Casing<br>(inches) | Depth of Well<br>(ft bgs) | Length of<br>Screen<br>(ft) | TOC<br>Elevation<br>(ft asd) | TOC<br>Elevation<br>10/2002 <sup>a</sup><br>(ft msl) | Screened Interval<br>(ft bgs) |       | Date     | Depth to<br>GW from<br>TOC<br>(ft) | Groundwater<br>Elevation<br>(ft asd) |
|--------------|--------------------------|---------------------------|-----------------------------|------------------------------|------------------------------------------------------|-------------------------------|-------|----------|------------------------------------|--------------------------------------|
| <b>BXS-1</b> | 2                        | 47.90                     | 10                          | 99.59                        | 142.90                                               | 37.90                         | 47.90 | 1/18/06  | 38.51                              | 61.08                                |
|              |                          |                           |                             |                              |                                                      |                               |       | 5/01/06  | 33.73                              | 65.86                                |
|              |                          |                           |                             |                              |                                                      |                               |       | 8/01/06  | 35.50                              | 64.09                                |
|              |                          |                           |                             |                              |                                                      |                               |       | 11/01/06 | 36.85                              | 62.74                                |
| <b>BXS-2</b> | 2                        | 45.40                     | 10                          | 99.77                        | 143.02                                               | 35.40                         | 45.40 | 1/18/06  | 36.82                              | 62.95                                |
|              |                          |                           |                             |                              |                                                      |                               |       | 5/01/06  | 32.98                              | 66.79                                |
|              |                          |                           |                             |                              |                                                      |                               |       | 8/01/06  | 34.57                              | 65.20                                |
|              |                          |                           |                             |                              |                                                      |                               |       | 11/01/06 | 37.11                              | 62.66                                |
| <b>BXS-3</b> | 2                        | 44.15                     | 10                          | 98.99                        | 142.07                                               | 34.15                         | 44.15 | 1/18/06  | 32.84                              | 66.15                                |
|              |                          |                           |                             |                              |                                                      |                               |       | 5/01/06  | 28.47                              | 70.52                                |
|              |                          |                           |                             |                              |                                                      |                               |       | 8/01/06  | 30.15                              | 68.84                                |
|              |                          |                           |                             |                              |                                                      |                               |       | 11/01/06 | 33.02                              | 65.97                                |
| <b>BXS-4</b> | 2                        | 47.40                     | 10                          | 100.34                       | 143.42                                               | 37.40                         | 47.40 | 1/18/06  | 9.68                               | 90.66                                |
|              |                          |                           |                             |                              |                                                      |                               |       | 5/01/06  | 11.94                              | 88.40                                |
|              |                          |                           |                             |                              |                                                      |                               |       | 8/01/06  | 15.19                              | 85.15                                |
|              |                          |                           |                             |                              |                                                      |                               |       | 11/01/06 | 15.01                              | 85.33                                |

**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<br>Gradient ( $i$ )<br>(cm/cm) | $K$<br>(cm/sec)      | $n_e$ | $V$<br>(cm/sec) | $V$<br>(ft/day) |
|----------|----------------------------------------|----------------------|-------|-----------------|-----------------|
| 1/18/06  | 0.0209                                 | 3.00E-02 to 6.00E-02 | 0.300 | 0.002 to 0.004  | 5.924 to 11.849 |
| 5/01/06  | 0.0163                                 |                      |       | 0.002 to 0.003  | 4.620 to 9.241  |
| 8/01/06  | 0.0151                                 |                      |       | 0.002 to 0.003  | 4.280 to 8.561  |
| 11/01/06 | 0.0171                                 |                      |       | 0.002 to 0.003  | 4.847 to 9.694  |

**Table 3a. Field Parameters from Groundwater Sampling, April 2000 to November 2006 (South Landfill)**

|                              | pH<br>(standard units) |       |       |       | Conductivity<br>(µS/cm) |       |       |       | Temperature<br>(°C) |       |       |       |
|------------------------------|------------------------|-------|-------|-------|-------------------------|-------|-------|-------|---------------------|-------|-------|-------|
| Primary MCL <sup>(a)</sup>   | 6.5 - 8.5              |       |       |       | 700                     |       |       |       |                     |       |       |       |
| Secondary MCL <sup>(a)</sup> |                        |       |       |       |                         |       |       |       |                     |       |       |       |
|                              | 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                | 13.8  | 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  |

**Table 3a. Field Parameters from Groundwater Sampling, April 2000 to November 2006 (South Landfill)**

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

Notes:

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

Table 3b. Conventional Parameters from Groundwater Sampling, April 2000 to November 2006 (South Landfill)

|                                                            | pH<br>(standard units) |                          |       |        |       |                          |                          | Conductivity<br>(umhos/cm) |                          |       |       |       |                          |                          |
|------------------------------------------------------------|------------------------|--------------------------|-------|--------|-------|--------------------------|--------------------------|----------------------------|--------------------------|-------|-------|-------|--------------------------|--------------------------|
| Primary MCL <sup>(a)</sup><br>Secondary MCL <sup>(a)</sup> | 6.5 - 8.5              |                          |       |        |       |                          |                          | 700                        |                          |       |       |       |                          |                          |
|                                                            | BXS-4                  | BXS-4 Dup <sup>(c)</sup> | BXS-3 | BXS-2  | BXS-1 | BXS-1 Dup <sup>(c)</sup> | Field blk <sup>(d)</sup> | BXS-4                      | BXS-4 Dup <sup>(c)</sup> | BXS-3 | BXS-2 | BXS-1 | BXS-1 Dup <sup>(c)</sup> | Field blk <sup>(d)</sup> |
| 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                    |

**Table 3b. Conventional Parameters from Groundwater Sampling, April 2000 to November 2006 (South Landfill)**

| Primary MCL <sup>(a)</sup><br>Secondary MCL <sup>(a)</sup> | Ammonia as N<br>(mg/L) |                          |        |         |         |                          |                          | COD<br>(mg/L) |                          |       |       |       |                          |                          |
|------------------------------------------------------------|------------------------|--------------------------|--------|---------|---------|--------------------------|--------------------------|---------------|--------------------------|-------|-------|-------|--------------------------|--------------------------|
|                                                            | BXS-4                  | BXS-4 Dup <sup>(c)</sup> | BXS-3  | BXS-2   | BXS-1   | BXS-1 Dup <sup>(c)</sup> | Field blk <sup>(d)</sup> | BXS-4         | BXS-4 Dup <sup>(c)</sup> | BXS-3 | BXS-2 | BXS-1 | BXS-1 Dup <sup>(c)</sup> | Field blk <sup>(d)</sup> |
| 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                      |

**Table 3b. Conventional Parameters from Groundwater Sampling, April 2000 to November 2006 (South Landfill)**

|                              | Chloride<br>(mg/L) |                          |       |       |       |                          |                          | Nitrate + Nitrite as N<br>(mg/L) |                          |        |         |       |                          |                          |
|------------------------------|--------------------|--------------------------|-------|-------|-------|--------------------------|--------------------------|----------------------------------|--------------------------|--------|---------|-------|--------------------------|--------------------------|
| Primary MCL <sup>(a)</sup>   |                    |                          |       |       |       |                          |                          | 10                               |                          |        |         |       |                          |                          |
| Secondary MCL <sup>(a)</sup> | 250                |                          |       |       |       |                          |                          |                                  |                          |        |         |       |                          |                          |
|                              | BXS-4              | BXS-4 Dup <sup>(c)</sup> | BXS-3 | BXS-2 | BXS-1 | BXS-1 Dup <sup>(c)</sup> | Field blk <sup>(d)</sup> | BXS-4                            | BXS-4 Dup <sup>(c)</sup> | BXS-3  | BXS-2   | BXS-1 | BXS-1 Dup <sup>(c)</sup> | Field blk <sup>(d)</sup> |
| 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                   |

**Table 3b. Conventional Parameters from Groundwater Sampling, April 2000 to November 2006 (South Landfill)**

[illegible]

**Table 3b. Conventional Parameters from Groundwater Sampling, April 2000 to November 2006 (South Landfill)**

|                              | Solids, total dissolved<br>(mg/L) |                          |       |       |       |                          |                          | Sulfate<br>(mg/L) |                          |        |        |       |                          |                          |
|------------------------------|-----------------------------------|--------------------------|-------|-------|-------|--------------------------|--------------------------|-------------------|--------------------------|--------|--------|-------|--------------------------|--------------------------|
| Primary MCL <sup>(a)</sup>   | 500                               |                          |       |       |       |                          |                          | 250               |                          |        |        |       |                          |                          |
| Secondary MCL <sup>(a)</sup> | BXS-4                             | BXS-4 Dup <sup>(c)</sup> | BXS-3 | BXS-2 | BXS-1 | BXS-1 Dup <sup>(c)</sup> | Field blk <sup>(d)</sup> | BXS-4             | BXS-4 Dup <sup>(c)</sup> | BXS-3  | BXS-2  | BXS-1 | BXS-1 Dup <sup>(c)</sup> | Field blk <sup>(d)</sup> |
| 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                    |

Table 3b. Conventional Parameters from Groundwater Sampling, April 2000 to November 2006 (South Landfill)

|                                                            | Tannin & Lignin<br>(mg/L) |                          |       |       |        |                          |                          | Total Organic Carbon<br>(mg/L) |                          |       |       |       |                          |                          |
|------------------------------------------------------------|---------------------------|--------------------------|-------|-------|--------|--------------------------|--------------------------|--------------------------------|--------------------------|-------|-------|-------|--------------------------|--------------------------|
| Primary MCL <sup>(a)</sup><br>Secondary MCL <sup>(a)</sup> |                           |                          |       |       |        |                          |                          |                                |                          |       |       |       |                          |                          |
|                                                            | BXS-4                     | BXS-4 Dup <sup>(c)</sup> | BXS-3 | BXS-2 | BXS-1  | BXS-1 Dup <sup>(c)</sup> | Field blk <sup>(d)</sup> | BXS-4                          | BXS-4 Dup <sup>(c)</sup> | BXS-3 | BXS-2 | BXS-1 | BXS-1 Dup <sup>(c)</sup> | Field blk <sup>(d)</sup> |
| 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                    |

**Table 3b. Conventional Parameters from Groundwater Sampling, April 2000 to November 2006 (South Landfill)**

|                              | Total Coliforms<br>(MPN/100 ml) |                          |        |        |       |                          |                          |
|------------------------------|---------------------------------|--------------------------|--------|--------|-------|--------------------------|--------------------------|
| Primary MCL <sup>(a)</sup>   | <5% <sup>(b)</sup>              |                          |        |        |       |                          |                          |
| Secondary MCL <sup>(a)</sup> |                                 |                          |        |        |       |                          |                          |
|                              | BXS-4                           | BXS-4 Dup <sup>(c)</sup> | BXS-3  | BXS-2  | BXS-1 | BXS-1 Dup <sup>(c)</sup> | Field blk <sup>(d)</sup> |
| 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                     |
| 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                     | 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                      |

- 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-4
  - (d) Samples collected as BXS-5
  - J Estimated Value
  - U Not detected. Reporting limit shown.
  - X Analysis performed past method holding time

**Table 3c. Metals from Groundwater Sampling, April 2000 to November 2006 (South Landfill)**

| Primary MCL <sup>(a)</sup><br>Secondary MCL <sup>(a)</sup> | Arsenic, dissolved<br>(µg/L) |                          |       |       |       |                          |                          | Barium, dissolved<br>(µg/L) |                          |       |       |       |                          |                          |
|------------------------------------------------------------|------------------------------|--------------------------|-------|-------|-------|--------------------------|--------------------------|-----------------------------|--------------------------|-------|-------|-------|--------------------------|--------------------------|
|                                                            | 10                           |                          |       |       |       |                          |                          | 2000                        |                          |       |       |       |                          |                          |
|                                                            | BXS-4                        | BXS-4 Dup <sup>(b)</sup> | BXS-3 | BXS-2 | BXS-1 | BXS-1 Dup <sup>(b)</sup> | Field blk <sup>(c)</sup> | BXS-4                       | BXS-4 Dup <sup>(b)</sup> | BXS-3 | BXS-2 | BXS-1 | BXS-1 Dup <sup>(b)</sup> | Field blk <sup>(c)</sup> |
| Apr-00                                                     | 5                            |                          | 46    | 5 U   | 5 U   | 5 U                      | 5 U                      | 26                          |                          | 83    | 56    | 29    | 27                       | 5 U                      |
| Jul-00                                                     | 6                            |                          | 49    | 5 U   | 5 U   | 5 U                      | 5 U                      | 26                          |                          | 105   | 51    | 28    | 27                       | 5 U                      |
| Oct-00                                                     | 5                            |                          | 6 U   | 5 U   | 5 U   | 5 U                      | 5 U                      | 29                          |                          | 103   | 56    | 34    | 33                       | 5 U                      |
| Jan-01                                                     | 5 U                          |                          | 8     | 5 U   | 5 U   | 5 U                      | 5 U                      | 25                          |                          | 60    | 51    | 30    | 30                       | 5 U                      |
| Apr-01                                                     | 5                            |                          | 16    | 5 U   | 5 U   | 5 U                      | 5 U                      | 26                          |                          | 67    | 50    | 25    | 25                       | 5 U                      |
| Jul-01                                                     | 5                            |                          | 9     | 5 U   | 5 U   | 5 U                      | 5 U                      | 32                          |                          | 64    | 53    | 27    | 27                       | 5 U                      |
| Oct-01                                                     | 5                            |                          | 5     | 5 U   | 5 U   | 5 U                      | 5 U                      | 26                          |                          | 49    | 50    | 31    | 28                       | 5 U                      |
| Jan-02                                                     | 5 U                          |                          | 6     | 5 U   | 5 U   | 5 U                      | 5 U                      | 27.1                        |                          | 71.2  | 52.3  | 27.1  | 27.2                     | 5 U                      |
| Apr-02                                                     | 5                            |                          | 14    | 5 U   | 5 U   | 5 U                      | 5 U                      | 26                          |                          | 99    | 47    | 24    | 23                       | 5 U                      |
| Jul-02                                                     | 10 U                         |                          | 21.9  | 10 U  | 10 U  | 10 U                     | 10 U                     | 29.6                        |                          | 129   | 52.8  | 28.4  | 28.1                     | 5 U                      |
| Oct-02                                                     | 5.4                          |                          | 8     | 5 U   |       |                          |                          | 26.6                        |                          | 64.9  | 43.8  |       |                          |                          |
| Jan-03                                                     | 4.7 B                        |                          | 5.3   | 1.4 B | 1 B   | 4.9 B                    | 5 U                      | 26.8                        |                          | 55.7  | 47.2  | 30.8  | 28                       | 5 U                      |
| Apr-03                                                     | 5.2                          |                          | 4.6 B | 1.2 B | 5 U   | 5 U                      | 5 U                      | 29.1                        |                          | 54.4  | 48.7  | 20.3  | 20.1                     | 5 U                      |
| Jul-03                                                     | 6                            |                          | 5 U   | 5 U   | 5 U   | 5 U                      | 5 U                      | 32                          |                          | 58.1  | 42.1  | 18    | 18.9                     | 5 U                      |
| Oct-03                                                     | 4.9 B                        | 5.3                      | 3.7 B | 5 U   |       |                          | 5 U                      |                             | 28.8                     | 50.7  | 47.8  |       |                          | 5 U                      |
| Feb-04                                                     | 5 U                          | 5 B                      | 3 B   | 5 U   | 5 U   |                          | 4.9 B                    | 5 U                         | 28.3                     | 65.3  | 45    | 10    |                          | 29.1                     |
| Apr-04                                                     | 5.6                          | 5.5                      | 8.5   | 5 U   | 5 U   |                          | 5 U                      | 29.3                        | 29.1                     | 111   | 48.8  | 19.9  |                          | 5 U                      |
| Jul-04                                                     | 5                            | 5                        | 3 B   | 1 B   | 5 U   |                          | 5 U                      | 31                          | 29                       | 54    | 55    | 21    |                          | 5 U                      |
| Oct-04                                                     | 5.7                          | 5.3                      | 4.4 B | 5 U   | 5 U   |                          | 5 U                      | 29.4                        | 28.3                     | 53.3  | 43.3  | 23.4  |                          | 5 U                      |
| Jan-05                                                     | 5                            | 5.1                      | 2.8 B | 5 U   | 5 U   |                          | 5 U                      | 30.2                        | 30.2                     | 103   | 47.2  | 16    |                          | 5 U                      |
| Apr-05                                                     | 5                            | 5 B                      | 6     | 1 B   | 5 U   |                          | 5 U                      | 29                          | 28                       | 91    | 44    | 23    |                          | 5 U                      |
| Aug-05                                                     | 4 B                          | 5 B                      | 9     | 5 U   | 5 U   |                          | 5 U                      | 28                          | 28.4                     | 94.4  | 41.9  | 23    |                          | 5 U                      |
| Nov-05                                                     | 6                            | 5 U                      | 7     | 2 B   | 5 U   |                          | 5 U                      | 29                          | 5 U                      | 63    | 44    | 23    |                          | 5 U                      |
| Jan-06                                                     | 5.2                          | 5.6                      | 2.9 B | 5 U   | 5 U   |                          | 5 U                      | 31                          | 28.3                     | 59.5  | 43    | 17.8  |                          | 5 U                      |
| May-06                                                     | 6.5                          | 5.8                      | 21.9  | 1.2 B | 5 U   |                          | 5 U                      | 30.4                        | 32                       | 115   | 48.1  | 23.9  |                          | 5 U                      |
| Aug-06                                                     | 5.1                          | 5 B                      | 99.8  | 5 U   | 5 U   |                          | 5 U                      | 33                          | 35.3                     | 103   | 48    | 24.3  |                          | 5 U                      |
| Nov-06                                                     | 7.3                          | 5 U                      | 29.8  | 1.1 B | 5 U   |                          | 5 U                      | 30.4                        | 25                       | 104   | 44.6  | 28.4  |                          | 3 B                      |

**Table 3c. Metals from Groundwater Sampling, April 2000 to November 2006 (South Landfill)**

[illegible]

**Table 3c. Metals from Groundwater Sampling, April 2000 to November 2006 (South Landfill)**

|                                                            | Iron, dissolved<br>(µg/L) |                          |        |       |       |                          |                          | Manganese, dissolved<br>(µg/L) |                          |        |       |       |                          |                          |
|------------------------------------------------------------|---------------------------|--------------------------|--------|-------|-------|--------------------------|--------------------------|--------------------------------|--------------------------|--------|-------|-------|--------------------------|--------------------------|
| Primary MCL <sup>(a)</sup><br>Secondary MCL <sup>(a)</sup> | 300                       |                          |        |       |       |                          |                          | 50                             |                          |        |       |       |                          |                          |
|                                                            | BXS-4                     | BXS-4 Dup <sup>(b)</sup> | BXS-3  | BXS-2 | BXS-1 | BXS-1 Dup <sup>(b)</sup> | Field blk <sup>(c)</sup> | BXS-4                          | BXS-4 Dup <sup>(b)</sup> | BXS-3  | BXS-2 | BXS-1 | BXS-1 Dup <sup>(b)</sup> | Field blk <sup>(c)</sup> |
| Apr-00                                                     | 40                        |                          | 56,600 | 690   | 20 U  | 20 U                     | 20 U                     | 123                            |                          | 15,900 | 1450  | 264   | 272                      | 5 U                      |
| Jul-00                                                     | 40                        |                          | 52,600 | 720   | 20 U  | 20 U                     | 20 U                     | 120                            |                          | 13,900 | 1500  | 307   | 308                      | 5 U                      |
| Oct-00                                                     | 60                        |                          | 34,200 | 630   | 20 U  | 20 U                     | 20 U                     | 129                            |                          | 15,800 | 1390  | 346   | 348                      | 5 U                      |
| Jan-01                                                     | 50                        |                          | 7,560  | 620   | 20 U  | 30                       | 20 U                     | 123                            |                          | 14,500 | 1460  | 409   | 397                      | 5 U                      |
| Apr-01                                                     | 50                        |                          | 5,530  | 780   | 20 U  | 20 U                     | 20 U                     | 116                            |                          | 16,200 | 1470  | 341   | 345                      | 5 U                      |
| Jul-01                                                     | 43.8                      |                          | 8,530  | 736   | 20 U  | 20 U                     | 20 U                     | 123                            |                          | 17,100 | 1540  | 396   | 400                      | 5 U                      |
| Oct-01                                                     | 35                        |                          | 4,740  | 789   | 20 U  | 20 U                     | 20 U                     | 114                            |                          | 13,600 | 1580  | 556   | 534                      | 5 U                      |
| Jan-02                                                     | 50                        |                          | 5,760  | 806   | 20 U  | 20 U                     | 20 U                     | 127                            |                          | 15,600 | 1500  | 464   | 470                      | 5 U                      |
| Apr-02                                                     | 40                        |                          | 19,600 | 640   | 20 U  | 20 U                     | 20 U                     | 112                            |                          | 15,600 | 1430  | 362   | 353                      | 5 U                      |
| Jul-02                                                     | 32.9                      |                          | 21,900 | 670   | 20 U  | 20 U                     | 20 U                     | 123                            |                          | 17,900 | 1520  | 373   | 384                      | 5 U                      |
| Oct-02                                                     | 41.8                      |                          | 5,340  | 628   |       |                          |                          | 105                            |                          | 16,000 | 1410  |       |                          |                          |
| Jan-03                                                     | 39.9 J                    |                          | 3,220  | 714   | 20 U  | 126                      | 20 U                     | 103                            |                          | 14,800 | 1560  | 733   | 107                      | 5 U                      |
| Apr-03                                                     | 40.8                      |                          | 4,280  | 780   | 20 U  | 20 U                     | 20 U                     | 118                            |                          | 17,800 | 1560  | 431   | 451                      | 5 U                      |
| Jul-03                                                     | 53                        |                          | 3,680  | 926   | 20 U  | 20 U                     | 20 U                     | 115                            |                          | 15,900 | 1390  | 370   | 377                      | 5 U                      |
| Oct-03                                                     | 36.1                      | 36.9                     | 903    | 836   |       |                          | 20 U                     | 115                            | 110                      | 14,500 | 1580  |       |                          | 5 U                      |
| Feb-04                                                     | 20 U                      | 41.4                     | 2,950  | 753   | 20 U  |                          | 48.1                     | 5 U                            | 113                      | 15,700 | 1410  | 277   |                          | 115                      |
| Apr-04                                                     | 42.4                      | 90.6                     | 8,890  | 796   | 20 U  |                          | 20 U                     | 110                            | 111                      | 14,900 | 1420  | 144   |                          | 5 U                      |
| Jul-04                                                     | 60                        | 50                       | 4,290  | 750   | 20 U  |                          | 20 U                     | 189                            | 114                      | 18,200 | 1420  | 326   |                          | 5 U                      |
| Oct-04                                                     | 40.3                      | 39.3                     | 1,710  | 836   | 20 U  |                          | 20 U                     | 110                            | 107                      | 17,700 | 1430  | 478   |                          | 5 U                      |
| Jan-05                                                     | 41.6                      | 42.4                     | 6,520  | 761   | 20 U  |                          | 20 U                     | 110                            | 112                      | 8,510  | 1270  | 172   |                          | 2.8 B                    |
| Apr-05                                                     | 46                        | 48                       | 10,900 | 769   | 20 U  |                          | 20 U                     | 120                            | 120                      | 14,200 | 1350  | 210   |                          | 5 U                      |
| Aug-05                                                     | 41                        | 40                       | 18,300 | 732   | 5 B   |                          | 20 U                     | 107                            | 107                      | 14,100 | 1300  | 160   |                          | 0.3 B                    |
| Nov-05                                                     | 42                        | 20 U                     | 4,330  | 770   | 20 U  |                          | 4 B                      | 112                            | 5 U                      | 17,200 | 1300  | 429   |                          | 5 U                      |
| Jan-06                                                     | 46.6                      | 43.2                     | 2,590  | 740   | 20 U  |                          | 20 U                     | 116                            | 114                      | 17,200 | 1260  | 367   |                          | 5 U                      |
| May-06                                                     | 40.1                      | 41.9                     | 67,900 | 842   | 20 U  |                          | 20 U                     | 109                            | 114                      | 13,400 | 1320  | 105   |                          | 5 U                      |
| Aug-06                                                     | 38.7                      | 40.5                     | 91,400 | 860   | 20 U  |                          | 5 B                      | 113                            | 112                      | 13,000 | 1350  | 121   |                          | 5 U                      |
| Nov-06                                                     | 33.3                      | 20 U                     | 28,700 | 811   | 20 U  |                          | 20 U                     | 113                            | 261                      | 17,500 | 1390  | 268   |                          | 0.5 B                    |

**Table 3c. Metals from Groundwater Sampling, April 2000 to November 2006 (South Landfill)**

|                                                            | Nickel, dissolved<br>(µg/L) |                          |        |       |        |                          |                          | Zinc, dissolved<br>(µg/L) |                          |       |       |       |                          |                          |
|------------------------------------------------------------|-----------------------------|--------------------------|--------|-------|--------|--------------------------|--------------------------|---------------------------|--------------------------|-------|-------|-------|--------------------------|--------------------------|
| Primary MCL <sup>(a)</sup><br>Secondary MCL <sup>(a)</sup> | 100                         |                          |        |       |        |                          |                          | 5000                      |                          |       |       |       |                          |                          |
|                                                            | BXS-4                       | BXS-4 Dup <sup>(b)</sup> | BXS-3  | BXS-2 | BXS-1  | BXS-1 Dup <sup>(b)</sup> | Field blk <sup>(c)</sup> | BXS-4                     | BXS-4 Dup <sup>(b)</sup> | BXS-3 | BXS-2 | BXS-1 | BXS-1 Dup <sup>(b)</sup> | Field blk <sup>(c)</sup> |
| Apr-00                                                     | 20 U                        |                          | 20 U   | 40    | 20 U   | 20 U                     | 20 U                     | 10 U                      |                          | 10 U  | 10 U  | 10 U  | 10 U                     | 10 U                     |
| Jul-00                                                     | 20 U                        |                          | 20 U   | 38    | 20     | 20                       | 20 U                     | 10 U                      |                          | 15    | 10 U  | 10 U  | 10 U                     | 10 U                     |
| Oct-00                                                     | 20 U                        |                          | 20 U   | 30    | 20 U   | 20 U                     | 20 U                     | 10 U                      |                          | 10 U  | 10 U  | 10    | 10 U                     | 10 U                     |
| Jan-01                                                     | 20 U                        |                          | 20 U   | 40    | 20 U   | 20                       | 20 U                     | 10 U                      |                          | 10 U  | 10 U  | 10 U  | 10                       | 10 U                     |
| Apr-01                                                     | 20 U                        |                          | 20 U   | 30    | 20 U   | 20 U                     | 20 U                     | 10 U                      |                          | 20    | 10    | 10 U  | 10                       | 10 U                     |
| Jul-01                                                     | 20 U                        |                          | 38     | 41    | 27     | 26                       | 20 U                     | 10 U                      |                          | 10 U  | 10 U  | 10 U  | 10 U                     | 10 U                     |
| Oct-01                                                     | 20 U                        |                          | 20 U   | 39    | 24     | 21                       | 20 U                     | 10 U                      |                          | 10 U  | 11    | 13    | 12                       | 10 U                     |
| Jan-02                                                     | 20 U                        |                          | 33     | 39    | 27     | 22                       | 20 U                     | 10 U                      |                          | 10 U  | 11    | 14    | 10 U                     | 10 U                     |
| Apr-02                                                     | 20 U                        |                          | 20     | 40    | 20 U   | 20 U                     | 20 U                     | 10 U                      |                          | 10 U  | 10 U  | 10 U  | 10 U                     | 10 U                     |
| Jul-02                                                     | 20 U                        |                          | 36.3   | 38.7  | 26.5   | 26.6                     | 20 U                     | 10 U                      |                          | 10.2  | 10 U  | 10 U  | 10 U                     | 10 U                     |
| Oct-02                                                     | 20 U                        |                          | 19.8 B | 32.9  |        |                          |                          | 10 U                      |                          | 8.8 B | 6.5 B |       |                          |                          |
| Jan-03                                                     | 20 U                        |                          | 32.2   | 37.3  | 34.7   | 20 U                     | 20 U                     | 10 U                      |                          | 10 U  | 14.7  | 16.8  | 10 U                     | 10 U                     |
| Apr-03                                                     | 20 U                        |                          | 22.9   | 39    | 20 U   | 20 U                     | 20 U                     | 10 U                      |                          | 14.5  | 10 U  | 36.1  | 32.2                     | 10 U                     |
| Jul-03                                                     | 20 U                        |                          | 18.5 B | 35.9  | 14.8 B | 15.3 B                   | 20 U                     | 6 B                       |                          | 5.8 B | 9.9 B | 26.2  | 29.4                     | 10 U                     |
| Oct-03                                                     | 20 U                        | 20 U                     | 33.3   | 37.1  |        |                          | 20 U                     | 10 U                      | 10 U                     | 10 U  | 12.7  |       |                          | 10 U                     |
| Feb-04                                                     | 20 U                        | 20 U                     | 49     | 36.2  | 20 U   |                          | 20 U                     | 10 U                      | 10 U                     | 10.6  | 6.1 B | 10 U  |                          | 10 U                     |
| Apr-04                                                     | 20 U                        | 20 U                     | 30.8   | 40.3  | 20 U   |                          | 20 U                     | 10 U                      | 10 U                     | 10 U  | 10 U  | 33    |                          | 10 U                     |
| Jul-04                                                     | 20 U                        | 20 U                     | 20 U   | 50    | 20     |                          | 20 U                     | 4 B                       | 7 B                      | 21    | 8 B   | 24    |                          | 9 B                      |
| Oct-04                                                     | 20 U                        | 20 U                     | 29.5   | 36.5  | 18.8 B |                          | 20 U                     | 10 U                      | 10 U                     | 8 B   | 12.8  | 9.9 B |                          | 10 U                     |
| Jan-05                                                     | 20 U                        | 20 U                     | 98.9   | 52.6  | 20 U   |                          | 20 U                     | 10 U                      | 10 U                     | 11.2  | 7.9 B | 15.1  |                          | 10 U                     |
| Apr-05                                                     | 20 U                        | 20 U                     | 40     | 30    | 20     |                          | 20 U                     | 10 U                      | 10 U                     | 63    | 10    | 13    |                          | 10 U                     |
| Aug-05                                                     | 20 U                        | 20 U                     | 25     | 32    | 11 B   |                          | 20 U                     | 10 U                      | 10 U                     | 5 B   | 15    | 5 B   |                          | 10 U                     |
| Nov-05                                                     | 20 U                        | 20 U                     | 20 U   | 30    | 20 U   |                          | 20 U                     | 10 U                      | 10 U                     | 7 B   | 51    | 7 B   |                          | 10 U                     |
| Jan-06                                                     | 20 U                        | 20 U                     | 39.4   | 39    | 20 U   |                          | 20 U                     | 6.2 B                     | 10 U                     | 18.9  | 19.4  | 25.5  |                          | 10 U                     |
| May-06                                                     | 20 U                        | 20 U                     | 20 U   | 35.3  | 20 U   |                          | 20 U                     | 3 B                       | 3.9 B                    | 22.1  | 46.7  | 8.5 B |                          | 2.7 B                    |
| Aug-06                                                     | 20 U                        | 20 U                     | 20 U   | 35.5  | 20 U   |                          | 20 U                     | 2.6 B                     | 10 U                     | 13.7  | 21.9  | 8.1 B |                          | 10 U                     |
| Nov-06                                                     | 20 U                        | 20 U                     | 20 U   | 27.7  | 20 U   |                          | 20 U                     | 10 U                      | 9.2 B                    | 13.7  | 18.5  | 9.6 B |                          | 2.1 B                    |

**Notes:**

- (a) Primary and secondary MCLs (maximum contaminant levels) per WAC 246-290-310.
- (b) Samples collected as BXS-6
- (c) Samples collected as BXS-5
- B Estimated. Result is below reporting limit
- J Estimated Value
- R Rejected Sample
- U Not detected. Reporting limit shown.

**Table 4. Parameters Statistically Higher than Background (1988-2006), South Landfill**

| Test Type    | Parameter              | Monitoring Period | Mean Value Downgradient |       |       | Mean Value Upgradient |
|--------------|------------------------|-------------------|-------------------------|-------|-------|-----------------------|
|              |                        |                   | BXS-1                   | BXS-2 | BXS-3 | BXS-4                 |
| Conventional | Ammonia as Nitrogen    | 2001              |                         |       | 0.10  | 0.50                  |
| Conventional | Carbon, Total Organic  | 1992              | 3.6                     | 5.0   | 18.7  | 1.5                   |
| Conventional | Carbon, Total Organic  | 1993              |                         | 7.3   | 20.0  | 2.0                   |
| Conventional | Carbon, Total Organic  | 1994              |                         | 8.6   | 21.9  | 2.3                   |
| Conventional | Carbon, Total Organic  | 1995              |                         | 10.7  | 30.6  | 3.4                   |
| Conventional | Carbon, Total Organic  | 1996              | 4.9                     | 12.7  | 38.5  | 2.3                   |
| Conventional | Carbon, Total Organic  | 1997              |                         | 15.0  |       | 3.8                   |
| Conventional | Carbon, Total Organic  | 1998              |                         |       | 32.1  | 10.8                  |
| Conventional | Carbon, Total Organic  | 1999              |                         | 15.8  | 31.8  | 6.6                   |
| Conventional | Carbon, Total Organic  | 2000              | 8.1                     | 15.2  |       | 1.0                   |
| Conventional | Carbon, Total Organic  | 2001              | 7.5                     | 14.6  | 25.2  | 3.1                   |
| Conventional | Carbon, Total Organic  | 2002              | 6.4                     | 13.8  | 22.2  | 2.0                   |
| Conventional | Carbon, Total Organic  | 2003              |                         | 14.0  | 21.5  | 0.7                   |
| Conventional | Carbon, Total Organic  | 2004              | 5.1                     | 14.7  | 23.1  | 0.9                   |
| Conventional | Carbon, Total Organic  | 2005              | 5.7                     | 15.8  | 25.1  | 1.1                   |
| Conventional | Carbon, Total Organic  | 2006              | 5.1                     | 14.5  | 28.4  | 1.0                   |
| Conventional | Chemical Oxygen Demand | 1990              | 27.9                    | 41.2  | 97.8  | 2.2                   |
| Conventional | Chemical Oxygen Demand | 1993              |                         |       | 106.0 | 30.5                  |
| Conventional | Chemical Oxygen Demand | 1994              |                         | 30.0  | 83.0  | 22.0                  |
| Conventional | Chemical Oxygen Demand | 1995              |                         |       | 90.0  | 32.0                  |
| Conventional | Chemical Oxygen Demand | 1996              |                         | 41.0  | 98.0  | 16.0                  |
| Conventional | Chemical Oxygen Demand | 1997              |                         | 43.0  | 87.0  | 19.0                  |
| Conventional | Chemical Oxygen Demand | 1998              |                         | 51.0  | 98.0  | 20.1                  |
| Conventional | Chemical Oxygen Demand | 1999              |                         |       | 92.0  | 40.5                  |
| Conventional | Chemical Oxygen Demand | 2000              |                         | 43.5  | 71.3  | 13.6                  |
| Conventional | Chemical Oxygen Demand | 2001              | 22.3                    | 42.5  | 69.5  | 17.3                  |
| Conventional | Chemical Oxygen Demand | 2002              | 19.0                    | 38.0  | 60.0  | 18.0                  |
| Conventional | Chemical Oxygen Demand | 2003              |                         | 37.0  | 55.8  | 2.9                   |
| Conventional | Chemical Oxygen Demand | 2004              |                         | 38.0  | 58.8  | 2.9                   |
| Conventional | Chemical Oxygen Demand | 2005              |                         | 42.8  | 69.5  | 8.4                   |
| Conventional | Chemical Oxygen Demand | 2006              | 12.5                    | 36.0  | 72.0  | 2.9                   |
| Conventional | Chloride               | 1989              | 45.0                    | 61.0  | 17.0  | 6.6                   |
| Conventional | Chloride               | 1990              | 22.5                    | 14.5  | 6.8   | 2.2                   |

**Table 4. Parameters Statistically Higher than Background (1988-2006), South Landfill**

| Test Type    | Parameter                     | Monitoring Period | Mean Value Downgradient |       |       | Mean Value Upgradient |
|--------------|-------------------------------|-------------------|-------------------------|-------|-------|-----------------------|
|              |                               |                   | BXS-1                   | BXS-2 | BXS-3 | BXS-4                 |
| Conventional | Chloride                      | 1992              | 16.7                    | 6.7   | 7.7   | 2.2                   |
| Conventional | Chloride                      | 1993              | 12.1                    | 6.6   | 12.8  | 2.3                   |
| Conventional | Chloride                      | 1994              | 13.0                    | 7.4   | 7.4   | 2.1                   |
| Conventional | Chloride                      | 1995              | 14.0                    | 10.0  | 9.6   | 1.9                   |
| Conventional | Chloride                      | 1996              | 14.6                    | 17.3  | 9.1   | 2.0                   |
| Conventional | Chloride                      | 1997              | 12.6                    | 14.8  | 35.0  | 2.0                   |
| Conventional | Chloride                      | 1998              | 11.6                    | 11.0  | 6.3   | 2.1                   |
| Conventional | Chloride                      | 1999              | 10.0                    |       | 6.1   | 2.2                   |
| Conventional | Chloride                      | 2000              | 7.8                     | 8.3   | 5.0   | 2.1                   |
| Conventional | Chloride                      | 2001              | 5.9                     | 7.4   | 4.7   | 2.1                   |
| Conventional | Chloride                      | 2002              | 5.3                     | 6.5   | 3.8   | 2.0                   |
| Conventional | Chloride                      | 2003              | 4.6                     | 5.5   |       | 2.0                   |
| Conventional | Chloride                      | 2004              |                         | 4.3   | 2.3   | 1.8                   |
| Conventional | Chloride                      | 2005              | 4.5                     | 4.4   | 3.7   | 1.8                   |
| Conventional | Chloride                      | 2006              | 4.0                     | 3.5   | 2.8   | 1.7                   |
| Conventional | Conductivity (umhos/cm)       | 1989              | 351                     | 607   | 514   | 180                   |
| Conventional | Conductivity (umhos/cm)       | 1990              | 366                     | 624   | 500   | 214                   |
| Conventional | Conductivity (umhos/cm)       | 1992              | 292                     | 586   | 533   | 189                   |
| Conventional | Conductivity (umhos/cm)       | 1993              |                         | 487   | 526   | 173                   |
| Conventional | Conductivity (umhos/cm)       | 1994              | 214                     | 479   | 602   | 169                   |
| Conventional | Conductivity (umhos/cm)       | 1995              | 333                     | 623   |       | 149                   |
| Conventional | Conductivity (umhos/cm)       | 1996              | 290                     | 602   | 787   | 161                   |
| Conventional | Conductivity (umhos/cm)       | 1997              | 326                     |       | 765   | 169                   |
| Conventional | Conductivity (umhos/cm)       | 1998              | 393                     | 678   | 738   | 177                   |
| Conventional | Conductivity (umhos/cm)       | 1999              | 406                     | 786   | 748   | 177                   |
| Conventional | Conductivity (umhos/cm)       | 2000              | 417                     | 762   | 651   | 166                   |
| Conventional | Conductivity (umhos/cm)       | 2001              | 493                     | 878   | 886   | 193                   |
| Conventional | Conductivity (umhos/cm)       | 2002              | 470                     | 849   | 825   | 187                   |
| Conventional | Conductivity (umhos/cm)       | 2004              |                         | 821   | 853   | 198                   |
| Conventional | Conductivity (umhos/cm)       | 2005              | 393                     | 788   | 750   | 192                   |
| Conventional | Conductivity (umhos/cm)       | 2006              | 414                     | 773   | 785   | 191                   |
| Conventional | Nitrate + Nitrite as Nitrogen | 1990              | 0.72                    |       |       | 0.10                  |
| Conventional | Nitrate + Nitrite as Nitrogen | 1993              | 0.79                    |       |       | 0.18                  |

**Table 4. Parameters Statistically Higher than Background (1988-2006), South Landfill**

| Test Type     | Parameter                     | Monitoring Period | Mean Value Downgradient |       |       | Mean Value Upgradient |
|---------------|-------------------------------|-------------------|-------------------------|-------|-------|-----------------------|
|               |                               |                   | BXS-1                   | BXS-2 | BXS-3 | BXS-4                 |
| Conventionals | Nitrate + Nitrite as Nitrogen | 1994              | 0.50                    |       |       | ND                    |
| Conventionals | Nitrate + Nitrite as Nitrogen | 1996              | 1.65                    |       |       | ND                    |
| Conventionals | Nitrate + Nitrite as Nitrogen | 1997              | 0.75                    |       |       | ND                    |
| Conventionals | Nitrate + Nitrite as Nitrogen | 1999              | 0.43                    |       |       | ND                    |
| Conventionals | Nitrate + Nitrite as Nitrogen | 2000              | 0.33                    |       |       | 0.10                  |
| Conventionals | Nitrate + Nitrite as Nitrogen | 2002              | 0.50                    |       |       | 0.20                  |
| Conventionals | Nitrate + Nitrite as Nitrogen | 2004              | 0.85                    |       |       | 0.06                  |
| Conventionals | Nitrate + Nitrite as Nitrogen | 2005              | 0.75                    |       |       | 0.06                  |
| Conventionals | Nitrate + Nitrite as Nitrogen | 2006              | 0.71                    |       |       | 0.04                  |
| Conventionals | pH                            | 1992              | 6.1                     | 6.3   | 6.4   | 7.9                   |
| Conventionals | pH                            | 2000              | 6.1                     | 6.4   | 6.5   | 7.9                   |
| Conventionals | pH                            | 2001              | 6.1                     | 6.4   | 6.7   | 7.9                   |
| Conventionals | Solids, Total Dissolved       | 1990              |                         | 397   | 436   | 228                   |
| Conventionals | Solids, Total Dissolved       | 1992              |                         | 352   | 351   | 147                   |
| Conventionals | Solids, Total Dissolved       | 1993              |                         | 330   |       | 141                   |
| Conventionals | Solids, Total Dissolved       | 1994              | 161                     | 330   | 418   | 134                   |
| Conventionals | Solids, Total Dissolved       | 1995              | 188                     | 361   | 492   | 141                   |
| Conventionals | Solids, Total Dissolved       | 1996              | 224                     | 423   | 604   | 153                   |
| Conventionals | Solids, Total Dissolved       | 1997              | 236                     | 456   | 613   | 150                   |
| Conventionals | Solids, Total Dissolved       | 1998              | 273                     | 473   | 562   | 137                   |
| Conventionals | Solids, Total Dissolved       | 1999              | 256                     | 524   | 517   | 156                   |
| Conventionals | Solids, Total Dissolved       | 2000              | 297                     | 544   | 527   | 140                   |
| Conventionals | Solids, Total Dissolved       | 2001              | 261                     | 299   | 346   | 135                   |
| Conventionals | Solids, Total Dissolved       | 2002              | 298                     | 466   | 518   | 145                   |
| Conventionals | Solids, Total Dissolved       | 2003              | 291                     | 525   | 572   | 132                   |
| Conventionals | Solids, Total Dissolved       | 2004              | 228                     | 439   | 493   | 127                   |
| Conventionals | Solids, Total Dissolved       | 2005              | 255                     | 516   | 449   | 135                   |
| Conventionals | Solids, Total Dissolved       | 2006              | 259                     | 507   | 526   | 145                   |
| Conventionals | Sulfate                       | 1989              | 5.9                     |       |       | 2.3                   |
| Conventionals | Sulfate                       | 1990              | 6.6                     |       |       | 1.9                   |
| Conventionals | Sulfate                       | 1992              | 9.1                     |       |       | 2.0                   |
| Conventionals | Sulfate                       | 1993              | 10.0                    |       |       | 2.0                   |
| Conventionals | Sulfate                       | 1994              | 11.8                    |       |       | 1.9                   |

**Table 4. Parameters Statistically Higher than Background (1988-2006), South Landfill**

| Test Type     | Parameter         | Monitoring Period | Mean Value Downgradient |       |       | Mean Value Upgradient |
|---------------|-------------------|-------------------|-------------------------|-------|-------|-----------------------|
|               |                   |                   | BXS-1                   | BXS-2 | BXS-3 | BXS-4                 |
| Conventionals | Sulfate           | 1995              | 12.0                    |       |       | 1.8                   |
| Conventionals | Sulfate           | 1996              | 10.7                    |       |       | 1.7                   |
| Conventionals | Sulfate           | 1997              | 11.8                    |       |       | 1.6                   |
| Conventionals | Sulfate           | 1998              | 9.5                     |       |       | 1.3                   |
| Conventionals | Sulfate           | 1999              | 7.8                     |       |       | 1.4                   |
| Conventionals | Sulfate           | 2001              | 7.5                     |       |       | 1.4                   |
| Conventionals | Sulfate           | 2002              | 7.3                     |       |       | 1.4                   |
| Conventionals | Sulfate           | 2005              | 10.1                    |       |       | 1.3                   |
| Conventionals | Sulfate           | 2006              | 11.3                    |       |       | 1.4                   |
| Conventionals | Tannin and Lignin | 1990              |                         |       | 3.1   | 1.4                   |
| Conventionals | Tannin and Lignin | 1993              |                         | 0.5   |       | 0.3                   |
| Conventionals | Tannin and Lignin | 1994              |                         | 0.5   | 1.0   | 0.2                   |
| Conventionals | Tannin and Lignin | 1995              |                         |       | 3.1   | 0.6                   |
| Conventionals | Tannin and Lignin | 1996              |                         | 0.7   | 5.6   | 0.3                   |
| Conventionals | Tannin and Lignin | 1998              |                         |       | 8.1   | 0.7                   |
| Conventionals | Tannin and Lignin | 1999              |                         |       | 12.2  | 0.5                   |
| Conventionals | Tannin and Lignin | 2000              |                         | 9.1   | 9.2   | 0.4                   |
| Conventionals | Tannin and Lignin | 2002              |                         | 1.6   | 11.1  | 0.4                   |
| Conventionals | Tannin and Lignin | 2003              |                         |       | 6.3   | 0.4                   |
| Conventionals | Tannin and Lignin | 2004              |                         | 1.4   |       | 0.5                   |
| Conventionals | Tannin and Lignin | 2005              |                         |       | 8.1   | 0.4                   |
| Conventionals | Tannin and Lignin | 2006              |                         |       | 11.5  | 0.4                   |
| Metals        | Arsenic           | 1996              |                         |       | 9.0   | 4.0                   |
| Metals        | Arsenic           | 1997              |                         |       | 15.0  | 5.0                   |
| Metals        | Arsenic           | 1998              |                         |       | 20.0  | 4.6                   |
| Metals        | Arsenic           | 1999              |                         |       | 34.0  | 5.8                   |
| Metals        | Arsenic           | 2002              |                         |       | 10.4  | 3.8                   |
| Metals        | Barium            | 1993              |                         | 36.0  | 38.0  | 28.0                  |
| Metals        | Barium            | 1994              |                         | 38.0  | 51.0  | 25.0                  |
| Metals        | Barium            | 1995              |                         | 45.0  | 58.0  | 27.0                  |
| Metals        | Barium            | 1996              |                         | 48.0  | 74.0  | 26.0                  |
| Metals        | Barium            | 1997              |                         | 50.0  | 58.0  | 21.0                  |
| Metals        | Barium            | 1998              |                         | 51.0  | 65.0  | 26.0                  |

**Table 4. Parameters Statistically Higher than Background (1988-2006), South Landfill**

| Test Type | Parameter | Monitoring Period | Mean Value Downgradient |       |        | Mean Value Upgradient |
|-----------|-----------|-------------------|-------------------------|-------|--------|-----------------------|
|           |           |                   | BXS-1                   | BXS-2 | BXS-3  | BXS-4                 |
| Metals    | Barium    | 1999              |                         | 51.0  | 58.0   | 27.0                  |
| Metals    | Barium    | 2000              |                         |       | 87.8   | 26.5                  |
| Metals    | Barium    | 2001              | 28.3                    | 51.0  | 60.0   | 27.3                  |
| Metals    | Barium    | 2002              |                         | 50.0  | 78.0   | 28.0                  |
| Metals    | Barium    | 2003              |                         | 46.5  | 54.7   | 29.2                  |
| Metals    | Barium    | 2004              |                         | 48.0  | 70.9   | 23.1                  |
| Metals    | Barium    | 2005              |                         | 44.3  | 87.8   | 29.1                  |
| Metals    | Barium    | 2006              |                         | 45.9  | 95.4   | 31.2                  |
| Metals    | Cadmium   | 2002              |                         | 1.1   | 1.1    | <1.1                  |
| Metals    | Copper    | 1993              |                         |       | 8      | 5                     |
| Metals    | Iron      | 1990              |                         | 140   | 1,950  | 48                    |
| Metals    | Iron      | 1994              |                         | 748   | 1,950  | 45                    |
| Metals    | Iron      | 1995              |                         | 1,120 | 341    | 50                    |
| Metals    | Iron      | 1996              |                         | 1,520 | 9,490  | 46                    |
| Metals    | Iron      | 1997              |                         | 1,220 | 17,800 | 50                    |
| Metals    | Iron      | 1998              |                         | 1,130 | 20,700 | 56                    |
| Metals    | Iron      | 1999              |                         | 950   | 34,500 | 30                    |
| Metals    | Iron      | 2000              |                         | 665   | 37,740 | 47.5                  |
| Metals    | Iron      | 2001              | 10                      | 715   | 6,538  | 42.5                  |
| Metals    | Iron      | 2002              |                         | 729   | 10,474 | 42                    |
| Metals    | Iron      | 2003              |                         | 814   |        | 42.45                 |
| Metals    | Iron      | 2004              |                         | 784   |        | 38.18                 |
| Metals    | Iron      | 2005              |                         | 758   | 10,013 | 42.6                  |
| Metals    | Iron      | 2006              |                         | 813   | 47,648 | 39.7                  |
| Metals    | Lead      | 1993              |                         |       | 2      | 1                     |
| Metals    | Manganese | 1989              | 210                     | 580   | 1,100  | 120                   |
| Metals    | Manganese | 1990              |                         | 650   | 1,820  | 99                    |
| Metals    | Manganese | 1993              |                         | 570   |        | 110                   |
| Metals    | Manganese | 1994              |                         | 670   | 1,110  | 120                   |
| Metals    | Manganese | 1995              |                         | 834   | 3,780  | 122                   |
| Metals    | Manganese | 1996              |                         | 1,120 | 10,800 | 121                   |
| Metals    | Manganese | 1997              |                         | 1,510 | 13,000 | 90                    |
| Metals    | Manganese | 1998              | 175                     | 1,650 | 13,800 | 126                   |

**Table 4. Parameters Statistically Higher than Background (1988-2006), South Landfill**

| Test Type | Parameter | Monitoring Period | Mean Value Downgradient |       |        | Mean Value Upgradient |
|-----------|-----------|-------------------|-------------------------|-------|--------|-----------------------|
|           |           |                   | BXS-1                   | BXS-2 | BXS-3  | BXS-4                 |
| Metals    | Manganese | 1999              | 200                     | 1,420 | 14,800 | 116                   |
| Metals    | Manganese | 2000              | 331                     | 1,450 | 15,025 | 124                   |
| Metals    | Manganese | 2001              | 426                     | 1,513 | 15,350 | 119                   |
| Metals    | Manganese | 2002              | 430                     | 1,502 | 15,763 | 119                   |
| Metals    | Manganese | 2003              |                         | 1,523 | 15,750 | 113                   |
| Metals    | Manganese | 2004              |                         | 1,420 | 16,625 | 103                   |
| Metals    | Manganese | 2005              |                         | 1,305 | 13,503 | 112                   |
| Metals    | Manganese | 2006              |                         | 1,330 | 15,275 | 113                   |
| Metals    | Nickel    | 1993              |                         | 18.0  |        | 1.0                   |
| Metals    | Nickel    | 1994              |                         | 18.0  |        | ND                    |
| Metals    | Nickel    | 1995              |                         | 21.0  | 30.0   | ND                    |
| Metals    | Nickel    | 1996              |                         |       | 25.0   | ND                    |
| Metals    | Nickel    | 1997              |                         | 34.0  | 20.0   | ND                    |
| Metals    | Nickel    | 1998              |                         | 43.0  | 29.0   | ND                    |
| Metals    | Nickel    | 1999              |                         | 36.0  | 22.0   | ND                    |
| Metals    | Nickel    | 2000              |                         | 37.0  |        | ND                    |
| Metals    | Nickel    | 2001              | 20.3                    | 37.5  | 17.5   | 10.0                  |
| Metals    | Nickel    | 2002              | 21.3                    | 38.5  | 24.0   | 5.5                   |
| Metals    | Nickel    | 2003              |                         | 37.0  |        | 10.0                  |
| Metals    | Nickel    | 2004              |                         | 40.8  |        | 10.0                  |
| Metals    | Nickel    | 2005              |                         | 36.2  |        | 10.0                  |
| Metals    | Nickel    | 2006              |                         | 34.4  |        | 10.0                  |
| Metals    | Zinc      | 2002              | 8.0                     | 6.8   |        | <2.4                  |
| Metals    | Zinc      | 2005              | 10.0                    |       |        | 5.0                   |

Mean values are yearly averages

ND = not detected

< = not detected above listed reporting limit

## **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]

PO Box 305  
Arlington, WA 98223

# Groundwater Sampling Field Form

[illegible]

PO Box 305  
**Arlington, WA 98223**  
(360) 435-2146 FAX (360) 435-3035

|                                                                                    |                                                                      |                    |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------|--------------------|
| Well No. <b>BXS-5</b>                                                              | Location <b>Arlington</b>                                            | Date <b>4-8-06</b> |
| Sample No.                                                                         | Field Personnel/Company <b>Jim Clawson / Mary Larson J.H. Baxter</b> |                    |
| Sample Time (2400 hours) <b>10:00</b>                                              | Instrument Calibration Date                                          |                    |
| Well Condition <b>Poor</b> Satisfactory New (If poor, explain)                     |                                                                      |                    |
| Field Conditions/Weather                                                           |                                                                      |                    |
| Equipment Decontamination <b>Liquinox, Hexane, Methanol, and D.I. Water Rinse.</b> |                                                                      |                    |

|                                                                                                       |                                                                                                                                                        |
|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Casing Diameter:<br>(Circle One)<br>2"                      4"<br>6"                      Other _____ | Casing Volume (gallons/ft) for: 2"=0.163; 4"=0.653; 6"=1.47<br>Multiply Water Column Height by appropriate number above to<br>get proper purge volume. |
|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                    |       |                                      |
|------------------------------------|-------|--------------------------------------|
| Depth of Well (feet):              | _____ | Sheen / LNAPL / DNAPL present: _____ |
| Depth to Water (feet):             | _____ |                                      |
| Water Column (feet):               | _____ | Other remarks: _____                 |
| Casing Volume (gallons):           | _____ | <i>Field Blank</i>                   |
| Calculated Purge Volume (gallons): | _____ |                                      |
| Actual Purge Volume (gallons):     | _____ |                                      |

[illegible]

Remarks: \_\_\_\_\_

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]

| <u>Case</u> | <u>Well Number</u> | <u>Water Level</u> | <u>Bottom</u> | <u>Comments</u>                  | <u>Pump</u> |
|-------------|--------------------|--------------------|---------------|----------------------------------|-------------|
| 2"          | BXN-1              | 48.26              | 58.18'        |                                  |             |
| 2"          | BXN-2              | 44.43              | 57.24'        |                                  |             |
| 2"          | BXN-3              | 45.68              | 58.66'        |                                  |             |
| 2"          | BXN-4              | 43.00              | 51.74'        |                                  |             |
|             | BXN-5              |                    | Dup BXN-1     | Landfill Requirements            |             |
|             | BXN-6              |                    | Blank         |                                  |             |
| 2"          | BXS-1              | 33.73              | 47.90'        |                                  | X           |
| 2"          | BXS-2              | 32.98              | 45.40'        | Pump raised out of ground 1 1/2' | X           |
| 2"          | BXS-3              | 38.47              | 44.15'        |                                  | X           |
| 2"          | BXS-4              | 11.94              | 47.40'        |                                  |             |
|             | BXS-5              |                    | Blank         |                                  |             |
|             | BXS-6              |                    | Dup BXS-4     | Landfill Requirements            |             |
| 4"          | MW-1               | 23.95              | 41.02'        |                                  |             |
| 4"          | MW-2               | 38.91              | 51.23'        |                                  | X           |
| 4"          | MW-3               | 36.37              | 51.96'        |                                  | X           |
| 2"          | MW-4               | 11.05              | 41.92'        |                                  |             |
| 2"          | HCMW-5             | 23.99              | 35.43'        |                                  | X           |
| 2"          | HCMW-6             | 36.43              | 51.10'        |                                  | X           |
| 2"          | HCMW-7             | 38.83              | 55.08'        |                                  |             |
| 2"          | MW-10              | 29.62              | 45.58'        |                                  |             |
| 2"          | MW-11              | 21.37              | 38'           |                                  |             |
| 4"          | MW-12              |                    | 39.85'        | NAPL                             |             |
| 4"          | MW-13              |                    | 37.19'        | NAPL                             |             |
| 2"          | MW-14              | 20.00              | 38'           |                                  |             |
| 2"          | MW-15              | 34.37              | 50.30'        |                                  |             |
| 2"          | MW-16              | 35.84              | 52.65'        |                                  |             |
| 2"          | MW-17              | 37.55              | 55.00'        |                                  |             |
| 2"          | MW-18              | 37.26              | 53.83'        |                                  |             |

Depths Taken

5-1-06

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

## Groundwater Sampling Field Form

[illegible]

PHONE (360) 435-2148 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]

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

[illegible]

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

[illegible]

**6520 188th St. NE / PO Box 305**  
**Arlington, WA 98223**  
**PHONE (360) 435-2146 FAX (360) 435-3035**

[illegible]

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

# Groundwater Sampling Field Form

[illegible]

**PHONE (360) 435-2148      FAX (360) 435-3035**

# Groundwater Sampling Field Form

[illegible]

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

# Groundwater Sampling Field Form

[illegible]

**Case   Well Number   Water Level   Bottom   Comments   Pump**

|    |        |        |           |                                  |   |
|----|--------|--------|-----------|----------------------------------|---|
| 2" | BXN-1  | 48.97' | 58.18'    |                                  |   |
| 2" | BXN-2  | 45.18' | 57.24'    |                                  |   |
| 2" | BXN-3  | 46.45' | 58.66'    |                                  |   |
| 2" | BXN-4  | 43.95' | 51.74'    |                                  |   |
|    | BXN-5  |        | Dup BXN-1 | Landfill Requirements            |   |
|    | BXN-6  |        | Blank     |                                  |   |
| 2" | BXS-1  | 35.50  | 47.90'    |                                  | X |
| 2" | BXS-2  | 34.57' | 45.40'    | Pump raised out of ground 1 1/2' | X |
| 2" | BXS-3  | 30.15' | 44.15'    | 44.56 8-3-06                     | X |
| 2" | BXS-4  | 15.19' | 47.40'    |                                  |   |
|    | BXS-5  |        | Blank     |                                  |   |
|    | BXS-6  |        | Dup BXS-4 | Landfill Requirements            |   |
| 4" | MW-1   | 28.25' | 41.02'    |                                  |   |
| 4" | MW-2   | 40.85' | 51.23'    |                                  | X |
| 4" | MW-3   | 38.33' | 51.96'    |                                  | X |
| 2" | MW-4   | 13.87' | 41.92'    |                                  |   |
| 2" | HCMW-5 | 27.90' | 35.43'    |                                  | X |
| 2" | HCMW-6 | 38.73' | 51.10'    |                                  | X |
| 2" | HCMW-7 | 40.51' | 55.08'    |                                  |   |
| 2" | MW-10  | 32.81' | 45.58'    |                                  |   |
| 2" | MW-11  | 24.43' | 38'       |                                  |   |
| 4" | MW-12  |        | 39.85'    | NAPL                             |   |
| 4" | MW-13  |        | 37.19'    | NAPL                             |   |
| 2" | MW-14  | 24.97' | 38'       |                                  |   |
| 2" | MW-15  | 36.02' | 50.30'    |                                  |   |
| 2" | MW-16  | 37.46' | 52.65'    |                                  |   |
| 2" | MW-17  | 38.79' | 55.00'    |                                  |   |
| 2" | MW-18  | 38.70' | 53.83'    |                                  |   |

Depths Taken 8-1-06

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## Groundwater Sampling Field Form

[illegible]

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## Groundwater Sampling Field Form

[illegible]

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

# Groundwater Sampling Field Form

[illegible]

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# Groundwater Sampling Field Form

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# Groundwater Sampling Field Form

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## Groundwater Sampling Field Form

| <u>Case</u> | <u>Well Number</u> | <u>Water Level</u> | <u>Bottom</u> | <u>Comments</u>                  | <u>Pump</u> |
|-------------|--------------------|--------------------|---------------|----------------------------------|-------------|
| 2"          | BXN-1              | 50.47'             | 58.18'        |                                  |             |
| 2"          | BXN-2              | 46.76'             | 57.24'        |                                  |             |
| 2"          | BXN-3              |                    | 58.66'        |                                  |             |
| 2"          | BXN-4              | 46.00'             | 51.74'        |                                  |             |
|             | BXN-5              |                    | Dup BXN-1     | Landfill Requiirements           |             |
|             | BXN-6              |                    | Blank         |                                  |             |
| 2"          | BXS-1              | 36.85'             | 47.90'        | Top of Pump                      | X           |
| 2"          | BXS-2              | 37.11'             | 45.40'        | Pump raised out of ground 1 1/2' | X           |
| 2"          | BXS-3              | 33.02'             | 44.56'        |                                  | X           |
| 2"          | BXS-4              | 15.01'             | 47.40'        |                                  |             |
|             | BXS-5              |                    | Blank         |                                  |             |
|             | BXS-6              |                    | Dup BXS-4     | Landfill Requirements            |             |
| 4"          | MW-1               | 27.30'             | 41.02'        |                                  |             |
| 4"          | MW-2               | 43.50'             | 51.23'        |                                  | X           |
| 4"          | MW-3               | 41.00'             | 51.96'        |                                  | X           |
| 2"          | MW-4               | 13.27'             | 41.92'        |                                  |             |
| 2"          | HCMW-5             | 29.30'             | 35.43'        | Top of Pump                      | X           |
| 2"          | HCMW-6             | 41.55'             | 51.10'        |                                  | X           |
| 2"          | HCMW-7             | 43.00'             | 55.08'        |                                  |             |
| 2"          | MW-10              | 35.55'             | 45.58'        |                                  |             |
| 2"          | MW-11              | 22.65'             | 38'           |                                  |             |
| 4"          | MW-12              |                    | 39.85'        | NAPL                             |             |
| 4"          | MW-13              |                    | 37.19'        | NAPL                             |             |
| 2"          | MW-14              | 28.44'             | 38'           |                                  |             |
| 2"          | MW-15              | 38.67'             | 50.30'        |                                  |             |
| 2"          | MW-16              | 40.04'             | 52.65'        |                                  |             |
| 2"          | MW-17              | 41.45'             | 55.00'        |                                  |             |
| 2"          | MW-18              | 41.22'             | 53.83'        |                                  |             |

Depths Taken: 11-1-06

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# Groundwater Sampling Field Form

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# Groundwater Sampling Field Form

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# Groundwater Sampling Field Form

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# Groundwater Sampling Field Form

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# Groundwater Sampling Field Form

[illegible]

## **Appendix B**

### **Chain of Custody Records and Laboratory Reports**

## **Appendix C**

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

February 15, 2006

Service Request No: K0600530

Mary Larson  
JH Baxter & Company  
6520 188th Northeast  
P.O. Box 305  
Arlington, WA 98233

**RE: Arlington Landfill Wells/BXS-Wells-Landfill**

Dear Mary:

Enclosed are the results of the sample(s) submitted to our laboratory on January 19, 2006. For your reference, these analyses have been assigned our service request number K0600530.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAC standards except as noted in the case narrative report. 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 3291.

Respectfully submitted,

**Columbia Analytical Services, Inc.**



Ed Wallace  
Project Chemist

EW/jm

Page 1 of 409

## 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.

## **Case Narrative**

**COLUMBIA ANALYTICAL SERVICES, INC.**

**Client:** J.H. Baxter & Company  
**Project:** Arlington Landfill Wells  
**Sample Matrix:** Water

**Service Request No.:** K0600530  
**Date Received:** 1/19/06

**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 1/19/06. 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**

**Ammonia as Nitrogen by EPA Method 350.1:**

The Relative Percent Difference (RPD) criterion for the replicate analysis of Ammonia as Nitrogen in sample BXS-1 is not applicable because the analyte concentration was not significantly greater than the Method Reporting Limit (MRL). Analytical values derived from measurements close to the detection limit are not subject to the same accuracy and precision criteria as results derived from measurements higher on the calibration range for the method.

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 \_\_\_\_\_

*Emw* Date 2/22/06

## **Chain of Custody Documentation**



## CHAIN OF CUSTODY

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

PAGE 2

OF 

COC #

SR#: 140600530

**Columbia Analytical Services Inc.  
Cooler Receipt and Preservation Form**

PC Ed W

Project/Client JH Baxter

Service Request K06 00530  
**SHORT HOLD TIME**

Cooler received on 1/19/06 and opened on 1/19/06 by BW

1. Were custody seals on outside of coolers?  
If yes, how many and where? 1 Front Y N
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) 2.8 \_\_\_\_\_  
 Temperature Blank: (°C) 47 \_\_\_\_\_  
 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 ICE, baggies
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 :** K0600530  
**Date Collected :** 01/17,18/06  
**Date Received :** 01/19/06

### Ammonia as Nitrogen

**Analysis Method** 350.1  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Sample Name  | Lab Code     | MRL  | MDL   | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|------|-------|--------------------|------------------|--------|-----------------|
| BXS-1        | K0600530-001 | 0.05 | 0.006 | 1                  | 01/26/06         | 0.010  | J               |
| BXS-2        | K0600530-002 | 0.05 | 0.006 | 1                  | 01/26/06         | ND     |                 |
| BXS-3        | K0600530-003 | 0.05 | 0.006 | 1                  | 01/26/06         | 0.15   |                 |
| BXS-4        | K0600530-004 | 0.05 | 0.006 | 1                  | 01/26/06         | 0.46   |                 |
| BXS-5        | K0600530-005 | 0.05 | 0.006 | 1                  | 01/26/06         | ND     |                 |
| BXS-6        | K0600530-006 | 0.05 | 0.006 | 1                  | 01/26/06         | 0.47   |                 |
| Method Blank | K0600530-MB  | 0.05 | 0.006 | 1                  | 01/26/06         | 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 : K0600530  
Date Collected : 01/18/06  
Date Received : 01/19/06  
Date Prepared : NA  
Date Analyzed : 01/26/06

Duplicate Summary  
Inorganic Parameters

Sample Name : BXS-1  
Lab Code : K0600530-001DUP  
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 | 0.010         | 0.013                   | 0.012   | 25                          | 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 :** K0600530  
**Date Collected :** 01/18/06  
**Date Received :** 01/19/06  
**Date Prepared :** NA  
**Date Analyzed :** 01/26/06

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** BXS-1  
**Lab Code :** K0600530-001MS  
**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 |              |
| Ammonia as Nitrogen | 350.1           | 0.05 | 2.50        | 0.010         | 2.34                 | 93               | 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 :** K0600530  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 01/26/06

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0600530-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte             | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS                                | Result Notes |
|---------------------|-------------|-----------------|------------|--------|------------------|------------------------------------|--------------|
|                     |             |                 |            |        |                  | Percent Recovery Acceptance Limits |              |
| Ammonia as Nitrogen | None        | 350.1           | 1.95       | 1.77   | 91               | 90-110                             |              |

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** JH Baxter & Company  
**Project :** Arlington Landfill Wells

**Service Request :** K0600530  
**Date Collected :** NA  
**Date Received :** NA

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

### CONTINUING CALIBRATION VERIFICATION (CCV)

|             | Date<br>Analyzed | True<br>Value | Measured<br>Value | Percent<br>Recovery |
|-------------|------------------|---------------|-------------------|---------------------|
| CCV1 Result | 01/26/06         | 2.00          | 2.00              | 100                 |
| CCV2 Result | 01/26/06         | 2.00          | 1.99              | 100                 |
| CCV3 Result | 01/26/06         | 2.00          | 1.99              | 100                 |
| CCV4 Result | 01/26/06         | 2.00          | 1.98              | 99                  |
| CCV5 Result | 01/26/06         | 2.00          | 2.01              | 101                 |
| CCV6 Result | 01/26/06         | 2.00          | 2.03              | 102                 |
| CCV7 Result | 01/26/06         | 2.00          | 2.00              | 100                 |

### CONTINUING CALIBRATION BLANK (CCB)

|             | Date<br>Analyzed | MRL  | Blank<br>Value |
|-------------|------------------|------|----------------|
| CCB1 Result | 01/26/06         | 0.05 | ND             |
| CCB2 Result | 01/26/06         | 0.05 | ND             |
| CCB3 Result | 01/26/06         | 0.05 | ND             |
| CCB4 Result | 01/26/06         | 0.05 | ND             |
| CCB5 Result | 01/26/06         | 0.05 | 0.007 J        |
| CCB6 Result | 01/26/06         | 0.05 | 0.013 J        |
| CCB7 Result | 01/26/06         | 0.05 | 0.014 J        |

# 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 :** K0600530  
**Date Collected :** 01/17,18/06  
**Date Received :** 01/19/06

### Chloride

**Analysis Method** 300.0  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Sample Name  | Lab Code     | MRL | MDL  | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|-----|------|--------------------|------------------|--------|-----------------|
| BXS-1        | K0600530-001 | 0.4 | 0.4  | 2                  | 01/27/06         | 5.3    |                 |
| BXS-2        | K0600530-002 | 0.4 | 0.4  | 2                  | 01/28/06         | 3.7    |                 |
| BXS-3        | K0600530-003 | 0.4 | 0.4  | 2                  | 01/28/06         | 3.5    |                 |
| BXS-4        | K0600530-004 | 0.4 | 0.4  | 2                  | 01/28/06         | 1.6    |                 |
| BXS-5        | K0600530-005 | 0.2 | 0.02 | 1                  | 02/01/06         | ND     |                 |
| BXS-6        | K0600530-006 | 0.4 | 0.4  | 2                  | 01/28/06         | 1.6    |                 |
| Method Blank | K0600530-MB  | 0.2 | 0.02 | 1                  | 01/31/06         | ND     |                 |
| Method Blank | K0600530-MB  | 0.2 | 0.2  | 1                  | 01/27/06         | 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 :** K0600530  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 01/27/06

Duplicate Summary  
Inorganic Parameters

**Sample Name :** Batch QC  
**Lab Code :** K0600720-001DUP  
**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           | 0.4 | 3.7           | 3.8                     | 3.8     | 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 :** K0600530  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 01/27/06

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** Batch QC  
**Lab Code :** K0600720-001MS  
**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           | 0.4 | 4.0         | 3.7           | 7.6                  | 98               | 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 :** K0600530  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 01/27/06

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0600530-LCS1  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte  | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS                                | Result Notes |
|----------|-------------|-----------------|------------|--------|------------------|------------------------------------|--------------|
|          |             |                 |            |        |                  | Percent Recovery Acceptance Limits |              |
| Chloride | None        | 300.0           | 5.0        | 4.6    | 92               | 85-115                             |              |

**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 :** K0600530  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 01/31/06

**Laboratory Control Sample Summary  
 Inorganic Parameters**

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0600530-LCS2  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte  | Prep<br>Method | Analysis<br>Method | True Value | Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|----------|----------------|--------------------|------------|--------|---------------------|----------------------------|-----------------|
|          |                |                    |            |        |                     | Acceptance<br>Limits       |                 |
| Chloride | 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 :** K0600530  
**Date Collected :** NA  
**Date Received :** NA

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

### CONTINUING CALIBRATION VERIFICATION (CCV)

|             | Date<br>Analyzed | True<br>Value | Measured<br>Value | Percent<br>Recovery |
|-------------|------------------|---------------|-------------------|---------------------|
| CCV2 Result | 01/27/06         | 5.0           | 4.7               | 94                  |
| CCV3 Result | 01/27/06         | 5.0           | 5.1               | 102                 |
| CCV4 Result | 01/27/06         | 5.0           | 4.7               | 94                  |
| CCV5 Result | 01/27/06         | 5.0           | 4.6               | 92                  |
| CCV6 Result | 01/27/06         | 5.0           | 4.6               | 92                  |
| CCV7 Result | 01/27/06         | 5.0           | 4.6               | 92                  |
| CCV8 Result | 01/28/06         | 5.0           | 4.7               | 94                  |
| CCV9 Result | 01/28/06         | 5.0           | 4.7               | 94                  |

### CONTINUING CALIBRATION BLANK (CCB)

|             | Date<br>Analyzed | MRL | Blank<br>Value |
|-------------|------------------|-----|----------------|
| CCB2 Result | 01/27/06         | 0.2 | ND             |
| CCB3 Result | 01/27/06         | 0.2 | ND             |
| CCB4 Result | 01/27/06         | 0.2 | ND             |
| CCB5 Result | 01/27/06         | 0.2 | ND             |
| CCB6 Result | 01/27/06         | 0.2 | ND             |
| CCB7 Result | 01/27/06         | 0.2 | ND             |
| CCB8 Result | 01/28/06         | 0.2 | 0.03 J         |
| CCB9 Result | 01/28/06         | 0.2 | ND             |

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** JH Baxter & Company  
**Project :** Arlington Landfill Wells

**Service Request :** K0600530  
**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 |
|--------------|---------------|------------|----------------|------------------|
| CCV2 Result  | 01/31/06      | 5.0        | 4.9            | 98               |
| CCV3 Result  | 01/31/06      | 5.0        | 4.8            | 96               |
| CCV4 Result  | 01/31/06      | 5.0        | 4.8            | 96               |
| CCV5 Result  | 01/31/06      | 5.0        | 4.8            | 96               |
| CCV6 Result  | 01/31/06      | 5.0        | 4.8            | 96               |
| CCV7 Result  | 02/01/06      | 5.0        | 4.8            | 96               |
| CCV8 Result  | 02/01/06      | 5.0        | 4.8            | 96               |
| CCV9 Result  | 02/01/06      | 5.0        | 4.8            | 96               |
| CCV10 Result | 02/01/06      | 5.0        | 4.8            | 96               |

### CONTINUING CALIBRATION BLANK (CCB)

|              | Date Analyzed | MRL | Blank Value |
|--------------|---------------|-----|-------------|
| CCB2 Result  | 01/31/06      | 0.2 | ND          |
| CCB3 Result  | 01/31/06      | 0.2 | ND          |
| CCB4 Result  | 01/31/06      | 0.2 | ND          |
| CCB5 Result  | 01/31/06      | 0.2 | ND          |
| CCB6 Result  | 01/31/06      | 0.2 | ND          |
| CCB7 Result  | 02/01/06      | 0.2 | ND          |
| CCB8 Result  | 02/01/06      | 0.2 | ND          |
| CCB9 Result  | 02/01/06      | 0.2 | ND          |
| CCB10 Result | 02/01/06      | 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 :** K0600530  
**Date Collected :** 01/17,18/06  
**Date Received :** 01/19/06

### Sulfate

**Analysis Method** 300.0  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Sample Name                    | Lab Code     | MRL | MDL  | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------------------------|--------------|-----|------|--------------------|------------------|--------|-----------------|
| BXS-1                          | K0600530-001 | 0.4 | 0.1  | 2                  | 01/27/06         | 13.2   |                 |
| BXS- <del>1</del> <sup>2</sup> | K0600530-002 | 0.2 | 0.06 | 1                  | 01/31/06         | 0.3    |                 |
| BXS- <del>2</del> <sup>3</sup> | K0600530-003 | 0.2 | 0.06 | 1                  | 01/31/06         | ND     |                 |
| BXS-4                          | K0600530-004 | 0.4 | 0.1  | 2                  | 01/28/06         | 1.3    |                 |
| BXS-5                          | K0600530-005 | 0.2 | 0.06 | 1                  | 02/01/06         | ND     |                 |
| BXS-6                          | K0600530-006 | 0.4 | 0.1  | 2                  | 01/28/06         | 1.4    |                 |
| Method Blank                   | K0600530-MB  | 0.2 | 0.06 | 1                  | 01/27/06         | ND     |                 |
| Method Blank                   | K0600530-MB  | 0.2 | 0.06 | 1                  | 01/31/06         | 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 :** K0600530  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 01/27/06

### Duplicate Summary Inorganic Parameters

**Sample Name :** Batch QC  
**Lab Code :** K0600720-001DUP  
**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           | 0.4 | 7.3           | 7.2                     | 7.3     | 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 :** K0600530  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 01/27/06

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** Batch QC  
**Lab Code :** K0600720-001MS  
**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           | 0.4 | 4.0         | 7.3           | 11.2                 | 98               | 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 :** K0600530  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 01/27/06

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0600530-LCS1  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS                                | Result Notes |
|---------|-------------|-----------------|------------|--------|------------------|------------------------------------|--------------|
|         |             |                 |            |        |                  | Percent Recovery Acceptance Limits |              |
| Sulfate | None        | 300.0           | 5.0        | 4.7    | 94               | 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 :** K0600530  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 01/31/06

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0600530-LCS2  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

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

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** JH Baxter & Company  
**Project :** Arlington Landfill Wells

**Service Request :** K0600530  
**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 |
|-------------|---------------|------------|----------------|------------------|
| CCV2 Result | 01/27/06      | 5.0        | 4.9            | 98               |
| CCV3 Result | 01/27/06      | 5.0        | 5.4            | 108              |
| CCV4 Result | 01/27/06      | 5.0        | 4.8            | 96               |
| CCV5 Result | 01/27/06      | 5.0        | 4.7            | 94               |
| CCV6 Result | 01/27/06      | 5.0        | 4.8            | 96               |
| CCV7 Result | 01/27/06      | 5.0        | 4.8            | 96               |
| CCV8 Result | 01/28/06      | 5.0        | 4.8            | 96               |
| CCV9 Result | 01/28/06      | 5.0        | 4.8            | 96               |

### CONTINUING CALIBRATION BLANK (CCB)

|             | Date Analyzed | MRL | Blank Value |
|-------------|---------------|-----|-------------|
| CCB2 Result | 01/27/06      | 0.2 | ND          |
| CCB3 Result | 01/27/06      | 0.2 | ND          |
| CCB4 Result | 01/27/06      | 0.2 | ND          |
| CCB5 Result | 01/27/06      | 0.2 | ND          |
| CCB6 Result | 01/27/06      | 0.2 | ND          |
| CCB7 Result | 01/27/06      | 0.2 | ND          |
| CCB8 Result | 01/28/06      | 0.2 | ND          |
| CCB9 Result | 01/28/06      | 0.2 | ND          |

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** JH Baxter & Company  
**Project :** Arlington Landfill Wells

**Service Request :** K0600530  
**Date Collected :** NA  
**Date Received :** NA

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

### CONTINUING CALIBRATION VERIFICATION (CCV)

|              | Date<br>Analyzed | True<br>Value | Measured<br>Value | Percent<br>Recovery |
|--------------|------------------|---------------|-------------------|---------------------|
| CCV2 Result  | 01/31/06         | 5.0           | 5.2               | 104                 |
| CCV3 Result  | 01/31/06         | 5.0           | 5.0               | 100                 |
| CCV4 Result  | 01/31/06         | 5.0           | 4.9               | 98                  |
| CCV5 Result  | 01/31/06         | 5.0           | 4.9               | 98                  |
| CCV6 Result  | 01/31/06         | 5.0           | 5.0               | 100                 |
| CCV7 Result  | 02/01/06         | 5.0           | 4.9               | 98                  |
| CCV8 Result  | 02/01/06         | 5.0           | 4.9               | 98                  |
| CCV9 Result  | 02/01/06         | 5.0           | 4.9               | 98                  |
| CCV10 Result | 02/01/06         | 5.0           | 5.0               | 100                 |

### CONTINUING CALIBRATION BLANK (CCB)

|              | Date<br>Analyzed | MRL | Blank<br>Value |
|--------------|------------------|-----|----------------|
| CCB2 Result  | 01/31/06         | 0.2 | ND             |
| CCB3 Result  | 01/31/06         | 0.2 | ND             |
| CCB4 Result  | 01/31/06         | 0.2 | ND             |
| CCB5 Result  | 01/31/06         | 0.2 | ND             |
| CCB6 Result  | 01/31/06         | 0.2 | ND             |
| CCB7 Result  | 02/01/06         | 0.2 | ND             |
| CCB8 Result  | 02/01/06         | 0.2 | ND             |
| CCB9 Result  | 02/01/06         | 0.2 | ND             |
| CCB10 Result | 02/01/06         | 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 :** K0600530  
**Date Collected :** 01/17,18/06  
**Date Received :** 01/19/06

## Chemical Oxygen Demand

**Analysis Method** 410.2  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Sample Name  | Lab Code     | MRL | MDL | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|-----|-----|--------------------|------------------|--------|-----------------|
| BXS-1        | K0600530-001 | 5   | 2.5 | 1                  | 01/25/06         | 13     |                 |
| BXS-2        | K0600530-002 | 5   | 2.5 | 1                  | 01/25/06         | 35     |                 |
| BXS-3        | K0600530-003 | 5   | 2.5 | 1                  | 01/25/06         | 59     |                 |
| BXS-4        | K0600530-004 | 5   | 2.5 | 1                  | 01/25/06         | ND     |                 |
| BXS-5        | K0600530-005 | 5   | 2.5 | 1                  | 01/25/06         | ND     |                 |
| BXS-6        | K0600530-006 | 5   | 2.5 | 1                  | 01/25/06         | 3.0    | J               |
| Method Blank | K0600530-MB  | 5   | 2.5 | 1                  | 01/25/06         | 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 :** K0600530  
**Date Collected :** 01/18/06  
**Date Received :** 01/19/06  
**Date Prepared :** 01/25/06  
**Date Analyzed :** 01/25/06

**Duplicate Summary  
Inorganic Parameters**

**Sample Name :** BXS-1  
**Lab Code :** K0600530-001DUP  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Analyte</b>         | <b>Analysis<br/>Method</b> | <b>MRL</b> | <b>Sample<br/>Result</b> | <b>Duplicate<br/>Sample<br/>Result</b> | <b>Average</b> | <b>Relative<br/>Percent<br/>Difference</b> | <b>Result<br/>Notes</b> |
|------------------------|----------------------------|------------|--------------------------|----------------------------------------|----------------|--------------------------------------------|-------------------------|
| Chemical Oxygen Demand | 410.2                      | 5          | 13                       | 12                                     | 13             | 8                                          |                         |

# 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 :** K0600530  
**Date Collected :** 01/18/06  
**Date Received :** 01/19/06  
**Date Prepared :** 01/25/06  
**Date Analyzed :** 01/25/06

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** BXS-1  
**Lab Code :** K0600530-001MS  
**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 |              |
| Chemical Oxygen Demand | 410.2           | 13  | 100         | 13            | 111                  | 98               | 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 :** K0600530  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** 01/25/06  
**Date Analyzed :** 01/25/06

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0600530-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte                | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS                                | Result Notes |
|------------------------|-------------|-----------------|------------|--------|------------------|------------------------------------|--------------|
|                        |             |                 |            |        |                  | Percent Recovery Acceptance Limits |              |
| Chemical Oxygen Demand | None        | 410.2           | 121        | 118    | 98               | 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 :** K0600530  
**Date Collected :** 01/17,18/06  
**Date Received :** 01/19/06

### Conductivity

**Analysis Method** 120.1  
**Test Notes :**

**Units :** uMhos/cm  
**Basis :** NA

| Sample Name  | Lab Code     | MRL | MDL  | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|-----|------|--------------------|------------------|--------|-----------------|
| BXS-1        | K0600530-001 | 2   | 0.04 | 1                  | 01/20/06         | 368    |                 |
| BXS-2        | K0600530-002 | 2   | 0.04 | 1                  | 01/20/06         | 772    |                 |
| BXS-3        | K0600530-003 | 2   | 0.04 | 1                  | 01/20/06         | 735    |                 |
| BXS-4        | K0600530-004 | 2   | 0.04 | 1                  | 01/20/06         | 194    |                 |
| BXS-5        | K0600530-005 | 2   | 0.04 | 1                  | 01/20/06         | 3      |                 |
| BXS-6        | K0600530-006 | 2   | 0.04 | 1                  | 01/20/06         | 194    |                 |
| Method Blank | K0600530-MB  | 2   | 0.04 | 1                  | 01/20/06         | 1.0    | 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 :** K0600530  
**Date Collected :** 01/18/06  
**Date Received :** 01/19/06  
**Date Prepared :** NA  
**Date Analyzed :** 01/20/06

### Duplicate Summary Inorganic Parameters

**Sample Name :** BXS-1  
**Lab Code :** K0600530-001DUP  
**Test Notes :**

**Units :** uMhos/cm  
**Basis :** NA

| Analyte      | Analysis Method | MRL | Sample Result | Duplicate Sample Result | Average | Relative Percent Difference | Result Notes |
|--------------|-----------------|-----|---------------|-------------------------|---------|-----------------------------|--------------|
| Conductivity | 120.1           | 2   | 368           | 369                     | 369     | <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 :** K0600530  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 01/20/06

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0600530-LCS  
**Test Notes :**

**Units :** uMhos/cm  
**Basis :** NA

| Analyte      | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS                                | Result Notes |
|--------------|-------------|-----------------|------------|--------|------------------|------------------------------------|--------------|
|              |             |                 |            |        |                  | Percent Recovery Acceptance Limits |              |
| Conductivity | None        | 120.1           | 927        | 928    | 100              | 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 :** K0600530  
**Date Collected :** 01/17,18/06  
**Date Received :** 01/19/06

**Nitrate+Nitrite as Nitrogen**

**Analysis Method** 353.2  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Sample Name</b> | <b>Lab Code</b> | <b>MRL</b> | <b>MDL</b> | <b>Dilution<br/>Factor</b> | <b>Date<br/>Analyzed</b> | <b>Result</b> | <b>Result<br/>Notes</b> |
|--------------------|-----------------|------------|------------|----------------------------|--------------------------|---------------|-------------------------|
| BXS-1              | K0600530-001    | 0.2        | 0.03       | 1                          | 01/20/06                 | 0.5           |                         |
| BXS-2              | K0600530-002    | 0.2        | 0.03       | 1                          | 01/20/06                 | ND            |                         |
| BXS-3              | K0600530-003    | 0.2        | 0.03       | 1                          | 01/20/06                 | 0.07          | J                       |
| BXS-4              | K0600530-004    | 0.2        | 0.03       | 1                          | 01/20/06                 | 0.09          | J                       |
| BXS-5              | K0600530-005    | 0.2        | 0.03       | 1                          | 01/20/06                 | 0.10          | J                       |
| BXS-6              | K0600530-006    | 0.2        | 0.03       | 1                          | 01/20/06                 | 0.10          | J                       |
| Method Blank       | K0600530-MB     | 0.2        | 0.03       | 1                          | 01/20/06                 | 0.09          | 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 :** K0600530  
**Date Collected :** 01/18/06  
**Date Received :** 01/19/06  
**Date Prepared :** NA  
**Date Analyzed :** 01/20/06

### Duplicate Summary Inorganic Parameters

**Sample Name :** BXS-1  
**Lab Code :** K0600530-001DUP  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte                     | Analysis Method | MRL | Sample Result | Duplicate     |         | Relative Percent Difference | Result Notes |
|-----------------------------|-----------------|-----|---------------|---------------|---------|-----------------------------|--------------|
|                             |                 |     |               | Sample Result | Average |                             |              |
| Nitrate+Nitrite as Nitrogen | 353.2           | 0.2 | 0.5           | 0.5           | 0.5     | <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 :** K0600530  
**Date Collected :** 01/18/06  
**Date Received :** 01/19/06  
**Date Prepared :** NA  
**Date Analyzed :** 01/20/06

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** BXS-1  
**Lab Code :** K0600530-001MS  
**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           | 0.2 | 2.0         | 0.5           | 2.5                  | 100              | 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 :** K0600530  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 01/20/06

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0600530-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte                     | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS                                | Result Notes |
|-----------------------------|-------------|-----------------|------------|--------|------------------|------------------------------------|--------------|
|                             |             |                 |            |        |                  | Percent Recovery Acceptance Limits |              |
| Nitrate+Nitrite as Nitrogen | None        | 353.2           | 4.2        | 4.1    | 98               | 90-110                             |              |

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** JH Baxter & Company  
**Project :** Arlington Landfill Wells

**Service Request :** K0600530  
**Date Collected :** NA  
**Date Received :** NA

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

### CONTINUING CALIBRATION VERIFICATION (CCV)

|             | Date<br>Analyzed | True<br>Value | Measured<br>Value | Percent<br>Recovery |
|-------------|------------------|---------------|-------------------|---------------------|
| CCV1 Result | 01/20/06         | 3.0           | 2.9               | 97                  |
| CCV2 Result | 01/20/06         | 3.0           | 2.9               | 97                  |
| CCV3 Result | 01/20/06         | 3.0           | 2.9               | 97                  |
| CCV4 Result | 01/20/06         | 3.0           | 2.9               | 97                  |
| CCV5 Result | 01/20/06         | 3.0           | 2.9               | 97                  |
| CCV6 Result | 01/20/06         | 3.0           | 3.0               | 100                 |
| CCV7 Result | 01/20/06         | 3.0           | 3.0               | 100                 |

### CONTINUING CALIBRATION BLANK (CCB)

|             | Date<br>Analyzed | MRL | Blank<br>Value |
|-------------|------------------|-----|----------------|
| CCB1 Result | 01/20/06         | 0.2 | ND             |
| CCB2 Result | 01/20/06         | 0.2 | ND             |
| CCB3 Result | 01/20/06         | 0.2 | ND             |
| CCB4 Result | 01/20/06         | 0.2 | ND             |
| CCB5 Result | 01/20/06         | 0.2 | ND             |
| CCB6 Result | 01/20/06         | 0.2 | ND             |
| CCB7 Result | 01/20/06         | 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 :** K0600530  
**Date Collected :** 01/17,18/06  
**Date Received :** 01/19/06

pH

**Analysis Method** 150.1  
**Test Notes :**

**Units :** pH UNITS  
**Basis :** NA

| Sample Name | Lab Code     | MRL | MDL | Dilution<br>Factor | Date/Time<br>Analyzed | Result | Result<br>Notes |
|-------------|--------------|-----|-----|--------------------|-----------------------|--------|-----------------|
| BXS-1       | K0600530-001 | -   | -   | 1                  | 01/19/06 18:56        | 6.15   |                 |
| BXS-2       | K0600530-002 | -   | -   | 1                  | 01/19/06 18:59        | 6.36   |                 |
| BXS-3       | K0600530-003 | -   | -   | 1                  | 01/19/06 19:01        | 6.36   |                 |
| BXS-4       | K0600530-004 | -   | -   | 1                  | 01/19/06 19:03        | 7.87   |                 |
| BXS-5       | K0600530-005 | -   | -   | 1                  | 01/19/06 19:08        | 5.42   |                 |
| BXS-6       | K0600530-006 | -   | -   | 1                  | 01/19/06 19:11        | 7.85   |                 |

**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 :** K0600530  
**Date Collected :** 01/18/06  
**Date Received :** 01/19/06  
**Date Prepared :** NA  
**Date Analyzed :** 01/19/06

**Duplicate Summary**  
**Inorganic Parameters**

**Sample Name :** BXS-1  
**Lab Code :** K0600530-001DUP  
**Test Notes :**

**Units :** pH UNITS  
**Basis :** NA

| <b>Analyte</b> | <b>Analysis Method</b> | <b>MRL</b> | <b>Sample Result</b> | <b>Duplicate Sample Result</b> | <b>Average</b> | <b>Relative Percent Difference</b> | <b>Result Notes</b> |
|----------------|------------------------|------------|----------------------|--------------------------------|----------------|------------------------------------|---------------------|
| pH             | 150.1                  | -          | 6.15                 | 6.18                           | 6.17           | <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 :** K0600530  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 01/19/06

**Laboratory Control Sample Summary**  
**Inorganic Parameters**

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0600530-LCS  
**Test Notes :**

**Units :** pH UNITS  
**Basis :** NA

| Analyte | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS                                | Result Notes |
|---------|-------------|-----------------|------------|--------|------------------|------------------------------------|--------------|
|         |             |                 |            |        |                  | Percent Recovery Acceptance Limits |              |
| pH      | None        | 150.1           | 7.78       | 7.75   | 100              | 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 :** K0600530  
**Date Collected :** 01/17,18/06  
**Date Received :** 01/19/06

## Tannin and Lignin

**Analysis Method** SM 5550 B  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Sample Name  | Lab Code     | MRL | MDL  | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|-----|------|--------------------|------------------|--------|-----------------|
| BXS-1        | K0600530-001 | 0.2 | 0.05 | 1                  | 01/24/06         | 0.2    |                 |
| BXS-2        | K0600530-002 | 0.2 | 0.05 | 1                  | 01/24/06         | 0.5    |                 |
| BXS-3        | K0600530-003 | 1.0 | 0.3  | 5                  | 01/24/06         | 10.8   |                 |
| BXS-4        | K0600530-004 | 0.2 | 0.05 | 1                  | 01/24/06         | 0.4    |                 |
| BXS-5        | K0600530-005 | 0.2 | 0.05 | 1                  | 01/24/06         | ND     |                 |
| BXS-6        | K0600530-006 | 0.2 | 0.05 | 1                  | 01/24/06         | 0.4    |                 |
| Method Blank | K0600530-MB  | 0.2 | 0.05 | 1                  | 01/24/06         | 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 : BXS-Wells-Landfill  
Sample Matrix : WATER

Service Request : K0600530  
Date Collected : 01/18/06  
Date Received : 01/19/06  
Date Prepared : NA  
Date Analyzed : 01/24/06

Duplicate Summary  
Inorganic Parameters

Sample Name : BXS-1  
Lab Code : K0600530-001DUP  
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 | 0.2           | 0.2                     | 0.2     | <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 :** BXS-Wells-Landfill  
**Sample Matrix :** WATER

**Service Request :** K0600530  
**Date Collected :** 01/18/06  
**Date Received :** 01/19/06  
**Date Prepared :** NA  
**Date Analyzed :** 01/24/06

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** BXS-1  
**Lab Code :** K0600530-001MS  
**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 |              |
| Tannin and Lignin | SM 5550 B       | 0.2 | 1.0         | 0.2           | 1.2                  | 100              | 75-125                             |              |

**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 :** BXS-Wells-Landfill  
**Sample Matrix :** WATER

**Service Request :** K0600530  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 01/24/06

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0600530-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte           | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS                                | Result Notes |
|-------------------|-------------|-----------------|------------|--------|------------------|------------------------------------|--------------|
|                   |             |                 |            |        |                  | Percent Recovery Acceptance Limits |              |
| Tannin and Lignin | None        | SM 5550 B       | 1.0        | 1.1    | 110              | 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 :** Arlington Landfill Wells

**Service Request :** K0600530  
**Date Collected :** NA  
**Date Received :** NA

Tannin and Lignin  
SM 5550 B  
Units: mg/L (ppm)

### CONTINUING CALIBRATION VERIFICATION (CCV)

|             | Date<br>Analyzed | True<br>Value | Measured<br>Value | Percent<br>Recovery |
|-------------|------------------|---------------|-------------------|---------------------|
| CCV1 Result | 01/24/06         | 2.5           | 2.5               | 100                 |
| CCV2 Result | 01/24/06         | 2.5           | 2.5               | 100                 |
| CCV3 Result | 01/24/06         | 2.5           | 2.5               | 100                 |
| CCV4 Result | 01/24/06         | 2.5           | 2.5               | 100                 |
| CCV5 Result | 01/24/06         | 2.5           | 2.5               | 100                 |

### CONTINUING CALIBRATION BLANK (CCB)

|             | Date<br>Analyzed | MRL | Blank<br>Value |
|-------------|------------------|-----|----------------|
| CCB1 Result | 01/24/06         | 0.2 | ND             |
| CCB2 Result | 01/24/06         | 0.2 | ND             |
| CCB3 Result | 01/24/06         | 0.2 | ND             |
| CCB4 Result | 01/24/06         | 0.2 | ND             |
| CCB5 Result | 01/24/06         | 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 :** K0600530  
**Date Collected :** 01/17,18/06  
**Date Received :** 01/19/06

### Solids, Total Dissolved (TDS)

**Analysis Method** 160.1  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Sample Name  | Lab Code     | MRL | MDL | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|-----|-----|--------------------|------------------|--------|-----------------|
| BXS-1        | K0600530-001 | 5   | 5   | 1                  | 01/23/06         | 228    |                 |
| BXS-2        | K0600530-002 | 5   | 5   | 1                  | 01/23/06         | 528    |                 |
| BXS-3        | K0600530-003 | 5   | 5   | 1                  | 01/23/06         | 568    |                 |
| BXS-4        | K0600530-004 | 5   | 5   | 1                  | 01/23/06         | 149    |                 |
| BXS-5        | K0600530-005 | 5   | 5   | 1                  | 01/23/06         | 34     |                 |
| BXS-6        | K0600530-006 | 5   | 5   | 1                  | 01/23/06         | 169    |                 |
| Method Blank | K0600530-MB  | 5   | 5   | 1                  | 01/23/06         | 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 :** K0600530  
**Date Collected :** 01/18/06  
**Date Received :** 01/19/06  
**Date Prepared :** NA  
**Date Analyzed :** 01/23/06

### Duplicate Summary Inorganic Parameters

**Sample Name :** BXS-1  
**Lab Code :** K0600530-001DUP  
**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   | 228           | 230                     | 229     | <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 :** K0600530  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 01/23/06

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0600530-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte                       | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS                                | Result Notes |
|-------------------------------|-------------|-----------------|------------|--------|------------------|------------------------------------|--------------|
|                               |             |                 |            |        |                  | Percent Recovery Acceptance Limits |              |
| Solids, Total Dissolved (TDS) | None        | 160.1           | 797        | 856    | 107              | 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 :** K0600530  
**Date Collected :** 01/17,18/06  
**Date Received :** 01/19/06

## Carbon, Total Organic

**Analysis Method** 415.1  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Sample Name  | Lab Code     | MRL | MDL  | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|-----|------|--------------------|------------------|--------|-----------------|
| BXS-1        | K0600530-001 | 0.5 | 0.07 | 1                  | 01/26/06         | 4.7    |                 |
| BXS-2        | K0600530-002 | 0.5 | 0.07 | 1                  | 01/26/06         | 14.2   |                 |
| BXS-3        | K0600530-003 | 0.5 | 0.07 | 1                  | 01/26/06         | 25.1   |                 |
| BXS-4        | K0600530-004 | 0.5 | 0.07 | 1                  | 01/26/06         | 1.0    |                 |
| BXS-5        | K0600530-005 | 0.5 | 0.07 | 1                  | 01/26/06         | 0.07   | J               |
| BXS-6        | K0600530-006 | 0.5 | 0.07 | 1                  | 02/09/06         | 1.0    |                 |
| Method Blank | K0600530-MB  | 0.5 | 0.07 | 1                  | 01/26/06         | ND     |                 |
| Method Blank | K0600530-MB  | 0.5 | 0.07 | 1                  | 02/09/06         | 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 :** K0600530  
**Date Collected :** 01/18/06  
**Date Received :** 01/19/06  
**Date Prepared :** NA  
**Date Analyzed :** 01/26/06

### Duplicate Summary Inorganic Parameters

**Sample Name :** BXS-1  
**Lab Code :** K0600530-001DUP  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte               | Analysis Method | MRL | Sample Result | Duplicate     |         | Relative Percent Difference | Result Notes |
|-----------------------|-----------------|-----|---------------|---------------|---------|-----------------------------|--------------|
|                       |                 |     |               | Sample Result | Average |                             |              |
| Carbon, Total Organic | 415.1           | 0.5 | 4.7           | 4.7           | 4.7     | <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 :** K0600530  
**Date Collected :** 01/18/06  
**Date Received :** 01/19/06  
**Date Prepared :** NA  
**Date Analyzed :** 01/26/06

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** BXS-1  
**Lab Code :** K0600530-001MS  
**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 |              |
| Carbon, Total Organic | 415.1           | 0.5 | 25.0        | 4.7           | 29.0                 | 97               | 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 :** K0600530  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 01/26/06

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0600530-LCS1  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte               | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS                                | Result Notes |
|-----------------------|-------------|-----------------|------------|--------|------------------|------------------------------------|--------------|
|                       |             |                 |            |        |                  | Percent Recovery Acceptance Limits |              |
| Carbon, Total Organic | None        | 415.1           | 26.9       | 26.5   | 99               | 90-109                             |              |

# 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 :** K0600530  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 02/09/06

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0600530-LCS2  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte               | Prep<br>Method | Analysis<br>Method | True Value | Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|-----------------------|----------------|--------------------|------------|--------|---------------------|----------------------------|-----------------|
|                       |                |                    |            |        |                     | Acceptance<br>Limits       |                 |
| Carbon, Total Organic | None           | 415.1              | 35.3       | 35.3   | 100                 | 90-109                     |                 |

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** JH Baxter & Company  
**Project :** Arlington Landfill Wells

**Service Request :** K0600530  
**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 | 01/26/06      | 25.0       | 24.6           | 98               |
| CCV2 Result | 01/26/06      | 25.0       | 24.6           | 98               |
| CCV3 Result | 01/26/06      | 25.0       | 24.3           | 97               |
| CCV4 Result | 01/26/06      | 25.0       | 25.0           | 100              |
| CCV5 Result | 01/26/06      | 25.0       | 24.4           | 98               |
| CCV6 Result | 01/26/06      | 25.0       | 24.8           | 99               |
| CCV7 Result | 01/26/06      | 25.0       | 25.1           | 100              |
| CCV8 Result | 01/26/06      | 25.0       | 24.7           | 99               |
| CCV1 Result | 02/09/06      | 25.0       | 25.2           | 101              |
| CCV2 Result | 02/09/06      | 25.0       | 25.0           | 100              |
| CCV3 Result | 02/09/06      | 25.0       | 25.2           | 101              |
| CCV4 Result | 02/09/06      | 25.0       | 25.4           | 102              |
| CCV5 Result | 02/09/06      | 25.0       | 25.6           | 102              |
| CCV6 Result | 02/09/06      | 25.0       | 25.2           | 101              |
| CCV7 Result | 02/09/06      | 25.0       | 25.4           | 102              |
| CCV8 Result | 02/09/06      | 25.0       | 25.1           | 100              |

### CONTINUING CALIBRATION BLANK (CCB)

|             | Date Analyzed | MRL | Blank Value |
|-------------|---------------|-----|-------------|
| CCB1 Result | 01/26/06      | 0.5 | ND          |
| CCB2 Result | 01/26/06      | 0.5 | ND          |
| CCB3 Result | 01/26/06      | 0.5 | ND          |
| CCB4 Result | 01/26/06      | 0.5 | ND          |
| CCB5 Result | 01/26/06      | 0.5 | ND          |
| CCB6 Result | 01/26/06      | 0.5 | ND          |
| CCB7 Result | 01/26/06      | 0.5 | ND          |
| CCB8 Result | 01/26/06      | 0.5 | ND          |
| CCB1 Result | 02/09/06      | 0.5 | ND          |
| CCB2 Result | 02/09/06      | 0.5 | ND          |
| CCB3 Result | 02/09/06      | 0.5 | ND          |
| CCB4 Result | 02/09/06      | 0.5 | ND          |
| CCB5 Result | 02/09/06      | 0.5 | ND          |
| CCB6 Result | 02/09/06      | 0.5 | ND          |
| CCB7 Result | 02/09/06      | 0.5 | ND          |
| CCB8 Result | 02/09/06      | 0.5 | ND          |

## **Dissolved Metals**

## DISSOLVED METALS

- Cover Page -  
INORGANIC ANALYSIS DATA PACKAGE

Client: JH Baxter &amp; Company

Service Request: K0600530

Project No.: BXS-Wells-Landfill

Project Name: Arlington Landfill Wells

| <u>Sample No.</u> | <u>Lab Sample ID.</u> |
|-------------------|-----------------------|
| Batch QCD         | K0600405-001D         |
| Batch QCS         | K0600405-001S         |
| BXS-1             | K0600530-001 DISS     |
| BXS-2             | K0600530-002 DISS     |
| BXS-3             | K0600530-003 DISS     |
| BXS-4             | K0600530-004 DISS     |
| BXS-5             | K0600530-005 DISS     |
| BXS-6             | K0600530-006 DISS     |
| Method Blank      | K0600530-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 NOComments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_Signature: Date: 02/07/06

## DISSOLVED METALS

-1-

## INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter &amp; Company

Service Request: K0600530

Project No.: BXS-Wells-Landfill

Date Collected: 01/18/06

Project Name: Arlington Landfill Wells

Date Received: 01/19/06

Matrix: WATER

Units: µg/L

Basis: NA

Sample Name: BXS-1

Lab Code: K0600530-001 DISS

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 1/25/06        | 2/3/06        | 1.0    | U |   |
| Barium    | 6010B           | 5.0  | 2.0 | 1    | 1/25/06        | 1/30/06       | 17.8   |   |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 1/25/06        | 1/30/06       | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 5.0 | 1    | 1/25/06        | 1/30/06       | 5.0    | U |   |
| Iron      | 6010B           | 20.0 | 3.0 | 1    | 1/25/06        | 1/30/06       | 3.0    | U |   |
| Manganese | 6010B           | 5.0  | 0.8 | 1    | 1/25/06        | 1/30/06       | 367    |   |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 1/25/06        | 1/30/06       | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 6.0 | 1    | 1/25/06        | 1/30/06       | 25.5   |   |   |

% Solids: 0.0

Comments: Dissolved Metals

## DISSOLVED METALS

-1-

## INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter &amp; Company

Service Request: K0600530

Project No.: BXS-Wells-Landfill

Date Collected: 01/18/06

Project Name: Arlington Landfill Wells

Date Received: 01/19/06

Matrix: WATER

Units: µG/L

Basis: NA

Sample Name: BXS-2

Lab Code: K0600530-002 DISS

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 1/25/06        | 2/3/06        | 1.0    | U |   |
| Barium    | 6010B           | 5.0  | 2.0 | 1    | 1/25/06        | 1/30/06       | 43.0   |   |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 1/25/06        | 1/30/06       | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 5.0 | 1    | 1/25/06        | 1/30/06       | 5.0    | U |   |
| Iron      | 6010B           | 20.0 | 3.0 | 1    | 1/25/06        | 1/30/06       | 740    |   |   |
| Manganese | 6010B           | 5.0  | 0.8 | 1    | 1/25/06        | 1/30/06       | 1260   |   |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 1/25/06        | 1/30/06       | 39.0   |   |   |
| Zinc      | 6010B           | 10.0 | 6.0 | 1    | 1/25/06        | 1/30/06       | 19.4   |   |   |

\* Solids: 0.0

Comments: Dissolved Metals

DISSOLVED METALS  
-1-  
INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter &amp; Company

Service Request: K0600530

Project No.: BXS-Wells-Landfill

Date Collected: 01/18/06

Project Name: Arlington Landfill Wells

Date Received: 01/19/06

Matrix: WATER

Units: µg/L

Basis: NA

Sample Name: BXS-3

Lab Code: K0600530-003 DISS

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 1/25/06        | 2/3/06        | 2.9    | B |   |
| Barium    | 6010B           | 5.0  | 2.0 | 1    | 1/25/06        | 1/30/06       | 59.5   |   |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 1/25/06        | 1/30/06       | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 5.0 | 1    | 1/25/06        | 1/30/06       | 5.0    | U |   |
| Iron      | 6010B           | 20.0 | 3.0 | 1    | 1/25/06        | 1/30/06       | 2590   |   |   |
| Manganese | 6010B           | 50.0 | 8.0 | 10   | 1/25/06        | 1/30/06       | 17200  |   |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 1/25/06        | 1/30/06       | 39.4   |   |   |
| Zinc      | 6010B           | 10.0 | 6.0 | 1    | 1/25/06        | 1/30/06       | 18.9   |   |   |

% Solids: 0.0

Comments: Dissolved Metals

## DISSOLVED METALS

-1-

## INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter &amp; Company

Service Request: K0600530

Project No.: BXS-Wells-Landfill

Date Collected: 01/17/06

Project Name: Arlington Landfill Wells

Date Received: 01/19/06

Matrix: WATER

Units: µG/L

Basis: NA

Sample Name: BXS-4

Lab Code: K0600530-004 DISS

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 1/25/06        | 2/3/06        | 5.2    |   |   |
| Barium    | 6010B           | 5.0  | 2.0 | 1    | 1/25/06        | 1/30/06       | 31.0   |   |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 1/25/06        | 1/30/06       | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 5.0 | 1    | 1/25/06        | 1/30/06       | 5.0    | U |   |
| Iron      | 6010B           | 20.0 | 3.0 | 1    | 1/25/06        | 1/30/06       | 46.6   |   |   |
| Manganese | 6010B           | 5.0  | 0.8 | 1    | 1/25/06        | 1/30/06       | 116    |   |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 1/25/06        | 1/30/06       | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 6.0 | 1    | 1/25/06        | 1/30/06       | 6.2    | B |   |

\* Solids: 0.0

Comments: Dissolved Metals

## DISSOLVED METALS

-1-

## INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter &amp; Company

Service Request: K0600530

Project No.: BXS-Wells-Landfill

Date Collected: 01/18/06

Project Name: Arlington Landfill Wells

Date Received: 01/19/06

Matrix: WATER

Units: µG/L

Basis: NA

Sample Name: BXS-5

Lab Code: K0600530-005 DISS

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 1/25/06        | 2/3/06        | 1.0    | U |   |
| Barium    | 6010B           | 5.0  | 2.0 | 1    | 1/25/06        | 1/30/06       | 2.0    | U |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 1/25/06        | 1/30/06       | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 5.0 | 1    | 1/25/06        | 1/30/06       | 5.0    | U |   |
| Iron      | 6010B           | 20.0 | 3.0 | 1    | 1/25/06        | 1/30/06       | 3.0    | U |   |
| Manganese | 6010B           | 5.0  | 0.8 | 1    | 1/25/06        | 1/30/06       | 0.8    | U |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 1/25/06        | 1/30/06       | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 6.0 | 1    | 1/25/06        | 1/30/06       | 6.0    | U |   |

% Solids: 0.0

Comments: Dissolved Metals

## DISSOLVED METALS

-1-

## INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter &amp; Company

Service Request: K0600530

Project No.: BXS-Wells-Landfill

Date Collected: 01/17/06

Project Name: Arlington Landfill Wells

Date Received: 01/19/06

Matrix: WATER

Units: µg/L

Basis: NA

Sample Name: BXS-6

Lab Code: K0600530-006 DISS

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 1/25/06        | 2/3/06        | 5.6    |   |   |
| Barium    | 6010B           | 5.0  | 2.0 | 1    | 1/25/06        | 1/30/06       | 28.3   |   |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 1/25/06        | 1/30/06       | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 5.0 | 1    | 1/25/06        | 1/30/06       | 5.0    | U |   |
| Iron      | 6010B           | 20.0 | 3.0 | 1    | 1/25/06        | 1/30/06       | 43.2   |   |   |
| Manganese | 6010B           | 5.0  | 0.8 | 1    | 1/25/06        | 1/30/06       | 114    |   |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 1/25/06        | 1/30/06       | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 6.0 | 1    | 1/25/06        | 1/30/06       | 6.0    | U |   |

% Solids: 0.0

Comments: Dissolved Metals

**DISSOLVED METALS**  
-1-  
**INORGANIC ANALYSIS DATA SHEET**

Client: JH Baxter &amp; Company

Service Request: K0600530

Project No.: BXS-Wells-Landfill

Date Collected:

Project Name: Arlington Landfill Wells

Date Received:

Matrix: WATER

Units: µG/L

Basis: NA

Sample Name: Method Blank

Lab Code: K0600530-MB

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 1/25/06        | 2/3/06        | 1.0    | U |   |
| Barium    | 6010B           | 5.0  | 2.0 | 1    | 1/25/06        | 1/30/06       | 2.0    | U |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 1/25/06        | 1/30/06       | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 5.0 | 1    | 1/25/06        | 1/30/06       | 5.0    | U |   |
| Iron      | 6010B           | 20.0 | 3.0 | 1    | 1/25/06        | 1/30/06       | 3.0    | U |   |
| Manganese | 6010B           | 5.0  | 0.8 | 1    | 1/25/06        | 1/30/06       | 0.8    | U |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 1/25/06        | 1/30/06       | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 6.0 | 1    | 1/25/06        | 1/30/06       | 6.0    | U |   |

\* Solids: 0.0

Comments:

## DISSOLVED METALS

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JH Baxter &amp; Company

Service Request: K0600530

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                | 26.1  | 104   | 30.0                   | 31.0  | 103   | 29.1  | 97    | 7060A  |
| Barium    | 5000                | 5040  | 101   | 500                    | 496   | 99    | 494   | 99    | 6010B  |
| Cadmium   | 1250                | 1290  | 103   | 500                    | 513   | 103   | 509   | 102   | 6010B  |
| Copper    | 625                 | 642   | 103   | 500                    | 499   | 100   | 499   | 100   | 6010B  |
| Iron      | 2500                | 2530  | 101   | 5000                   | 5040  | 101   | 5060  | 101   | 6010B  |
| Manganese | 1250                | 1270  | 102   | 500                    | 500   | 100   | 503   | 101   | 6010B  |
| Nickel    | 1250                | 1270  | 102   | 5000                   | 4950  | 99    | 4990  | 100   | 6010B  |
| Zinc      | 1250                | 1270  | 102   | 2500                   | 2540  | 102   | 2550  | 102   | 6010B  |

## DISSOLVED METALS

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JH Baxter &amp; Company

Service Request: K0600530

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                   | 28.3  | 94    | 29.2  | 97    | 7060A  |
| Barium    |                     |       |       | 500                    | 483   | 97    | 485   | 97    | 6010B  |
| Cadmium   |                     |       |       | 500                    | 514   | 103   | 511   | 102   | 6010B  |
| Copper    |                     |       |       | 500                    | 488   | 98    | 492   | 98    | 6010B  |
| Iron      |                     |       |       | 5000                   | 5080  | 102   | 5120  | 102   | 6010B  |
| Manganese |                     |       |       | 500                    | 505   | 101   | 507   | 101   | 6010B  |
| Nickel    |                     |       |       | 5000                   | 5020  | 100   | 4980  | 100   | 6010B  |
| Zinc      |                     |       |       | 2500                   | 2550  | 102   | 2560  | 102   | 6010B  |

## DISSOLVED METALS

- 2b -

## CRDL STANDARD FOR AA AND ICP

Client: JH Baxter &amp; Company

Service Request: K0600530

Project No.: BXS-Wells-Landfil

Project Name: Arlington Landfill Wells

Concentration Units: ug/l

| Analyte   | CRDL Standard for AA |       |     | CRDL Standard for ICP |                  |               |                |             |
|-----------|----------------------|-------|-----|-----------------------|------------------|---------------|----------------|-------------|
|           | True                 | Found | %R  | Initial<br>True       | Initial<br>Found | Initial<br>%R | Final<br>Found | Final<br>%R |
| Arsenic   | 5.0                  | 6.1   | 123 |                       |                  |               |                |             |
| Barium    |                      |       |     | 5.0                   | 4.68             | 94            |                |             |
| Cadmium   |                      |       |     | 5.0                   | 4.14             | 83            |                |             |
| Copper    |                      |       |     | 10                    | 9.90             | 99            |                |             |
| Iron      |                      |       |     | 20                    | 21.6             | 108           |                |             |
| Manganese |                      |       |     | 5.0                   | 5.37             | 107           |                |             |
| Nickel    |                      |       |     | 20                    | 17.8             | 89            |                |             |
| Zinc      |                      |       |     | 10                    | 10.1             | 101           |                |             |

## DISSOLVED METALS

- 3 -

## BLANKS

Client: JH Baxter &amp; Company

Service Request: K0600530

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                                 | B | 1.0 | U | 1.0 | U |                   |  | 7060A  |
| Barium    | 2.0                         | U | 2.0                                 | U | 2.0 | U | 2.0 | U |                   |  | 6010B  |
| Cadmium   | 3.0                         | U | 3.0                                 | U | 3.0 | U | 3.0 | U |                   |  | 6010B  |
| Copper    | 5.0                         | U | 5.0                                 | U | 5.0 | U | 5.0 | U |                   |  | 6010B  |
| Iron      | 3.0                         | U | 3.0                                 | U | 3.0 | U | 3.0 | U |                   |  | 6010B  |
| Manganese | 0.8                         | U | 0.8                                 | U | 0.8 | U | 0.8 | U |                   |  | 6010B  |
| Nickel    | 20                          | U | 20                                  | U | 20  | U | 20  | U |                   |  | 6010B  |
| Zinc      | 6.0                         | U | 6.0                                 | U | 6.0 | U | 6.0 | U |                   |  | 6010B  |

## DISSOLVED METALS

-3-

## BLANKS

Client: JH Baxter &amp; Company

Service Request: K0600530

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 |   |   |   |   |                   |  | 7060A  |
| Barium    |                             |  | 2.0                                 | U |   |   |   |   |                   |  | 6010B  |
| Cadmium   |                             |  | 3.0                                 | U |   |   |   |   |                   |  | 6010B  |
| Copper    |                             |  | 5.0                                 | U |   |   |   |   |                   |  | 6010B  |
| Iron      |                             |  | 3.0                                 | U |   |   |   |   |                   |  | 6010B  |
| Manganese |                             |  | 0.8                                 | U |   |   |   |   |                   |  | 6010B  |
| Nickel    |                             |  | 20                                  | U |   |   |   |   |                   |  | 6010B  |
| Zinc      |                             |  | 6.0                                 | U |   |   |   |   |                   |  | 6010B  |

## DISSOLVED METALS

- 4 -

## ICP INTERFERENCE CHECK SAMPLE

Client: JH Baxter &amp; Company

Service Request: K0600530

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    | -0.1          | 451    | 90 |             |        |    |
| Cadmium   |        | 1000   | 1.6           | 944    | 94 |             |        |    |
| Copper    |        | 500    | -10.7         | 454    | 91 |             |        |    |
| Iron      | 200000 | 200000 | 171000        | 173000 | 86 |             |        |    |
| Manganese |        | 500    | -8.0          | 430    | 86 |             |        |    |
| Nickel    |        | 1000   | -6            | 862    | 86 |             |        |    |
| Zinc      |        | 1000   | 21.0          | 943    | 94 |             |        |    |

## DISSOLVED METALS

- 5a -

## SPIKE SAMPLE RECOVERY

Client: JH Baxter &amp; Company

Service Request: K0600530

Project No.: BXS-Wells-Landfill

Units: µg/L

Project Name: Arlington Landfill Wells

Basis: NA

Matrix: WATER

% Solids: 0.0

Sample Name: Batch QCS

Lab Code: K0600405-001S

| Analyte   | Control<br>Limit %R | Spike<br>Result | C | Sample<br>Result | C | Spike<br>Added | %R  | Q | Method |
|-----------|---------------------|-----------------|---|------------------|---|----------------|-----|---|--------|
| Arsenic   | 60 - 120            | 42.1            |   | 2.6              | B | 40.0           | 99  |   | 7060A  |
| Barium    | 91 - 111            | 2100            |   | 15.6             |   | 2000           | 104 |   | 6010B  |
| Cadmium   | 73 - 123            | 56.5            |   | 3.0              | U | 50.0           | 113 |   | 6010B  |
| Copper    | 84 - 117            | 269             |   | 8.5              | B | 250            | 104 |   | 6010B  |
| Iron      | 43 - 163            | 1070            |   | 23.3             |   | 1000           | 105 |   | 6010B  |
| Manganese | 55 - 151            | 571             |   | 41.8             |   | 500            | 106 |   | 6010B  |
| Nickel    | 89 - 115            | 545             |   | 20.0             | U | 500            | 109 |   | 6010B  |
| Zinc      | 90 - 111            | 674             |   | 122              |   | 500            | 110 |   | 6010B  |

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

## DISSOLVED METALS

-6-

## DUPLICATES

Client: JH Baxter &amp; Company

Service Request: K0600530

Project No.: BXS-Wells-Landfill

Units: µg/L

Project Name: Arlington Landfill Wells

Basis: NA

Matrix: WATER

% Solids: 0.0

Sample Name:Batch QCD

Lab Code: K0600405-001D

| Analyte   | Control Limit(%) | Sample (S) | C | Duplicate (D) | C | RPD   | Q | Method |
|-----------|------------------|------------|---|---------------|---|-------|---|--------|
| Arsenic   |                  | 2.6        | B | 2.2           | B | 18    |   | 7060A  |
| Barium    |                  | 15.6       |   | 15.0          |   | 4     |   | 6010B  |
| Cadmium   |                  | 3.0        | U | 3.0           | U |       |   | 6010B  |
| Copper    |                  | 8.5        | B | 5.0           | U | 200.0 |   | 6010B  |
| Iron      |                  | 23.3       |   | 21.7          |   | 7     |   | 6010B  |
| Manganese | 20               | 41.8       |   | 42.3          |   | 1     |   | 6010B  |
| Nickel    |                  | 20         | U | 20            | U |       |   | 6010B  |
| Zinc      | 20               | 122        |   | 123           |   | 1     |   | 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 &amp; Company

Service Request: K0600530

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         | 26.2  | 105 |               |       |   |        |    |  |
| Barium    | 5000         | 5050  | 101 |               |       |   |        |    |  |
| Cadmium   | 1250         | 1290  | 103 |               |       |   |        |    |  |
| Copper    | 625          | 637   | 102 |               |       |   |        |    |  |
| Iron      | 2500         | 2530  | 101 |               |       |   |        |    |  |
| Manganese | 1250         | 1280  | 102 |               |       |   |        |    |  |
| Nickel    | 1250         | 1280  | 102 |               |       |   |        |    |  |
| Zinc      | 1250         | 1280  | 102 |               |       |   |        |    |  |

June 15, 2006

Service Request No: K0603986

Mary Larson  
JH Baxter & Company  
6520 188th Northeast  
P.O. Box 305  
Arlington, WA 98233

**RE: Arlington Landfill Wells/BXS-Wells-Landfill**

Dear Mary:

Enclosed are the results of the sample(s) submitted to our laboratory on May 17, 2006. For your reference, these analyses have been assigned our service request number K0603986.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAC standards except as noted in the case narrative report. 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 3291.

Respectfully submitted,

Columbia Analytical Services, Inc.



Ed Wallace  
Project Chemist

EW/dj

Page 1 of 718

## 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.                           |

## **Case Narrative**

### **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.**

**Client:** J.H. Baxter & Company  
**Project:** Arlington Landfill Wells  
**Sample Matrix:** Water

**Service Request No.:** K0603986  
**Date Received:** 5/17/06

**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 5/17/06. 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 150.1:**

All samples were received past the recommended 24 hour holding time. The analysis was performed as soon as possible after receipt by the laboratory. The data is flagged to indicate the holding time violation.

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

**Dissolved Metals**

**Matrix Spike Recovery Exceptions:**

The control criteria for matrix spike recoveries of Iron and Manganese for the Batch QC sample are not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

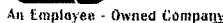
No other anomalies associated with the analysis of these samples were observed

Approved by \_\_\_\_\_

*EWW* Date *6/16/06*

---

## **Chain of Custody Documentation**



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

SR#:

COC #

PAGE 2 OF

[illegible]

W H Baxter

03986

5-17-06

5-7-06

to

- Front

Y N

- Y N

- Greyhound

Y N

- Y N

- Temperature of cooler(s) upon receipt: (°C)

3.6

Temperature Blank: (°C)

49

Were samples hand delivered on the same day as collection?

- 

- ICE

- Q. N

- Y

- 8

- 5

- 8

- Y  
V

- 

- 

- Y N

- 

Explain any discrepancies:

RESOLUTION:

Samples that required preservation or received out of temperature:

[illegible]

## **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 :** K0603986  
**Date Collected :** 05/15,16/06  
**Date Received :** 05/17/06

**Ammonia as Nitrogen**

**Analysis Method :** 350.1  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Sample Name</b> | <b>Lab Code</b> | <b>MRL</b> | <b>MDL</b> | <b>Dilution<br/>Factor</b> | <b>Date<br/>Analyzed</b> | <b>Result</b> | <b>Result<br/>Notes</b> |
|--------------------|-----------------|------------|------------|----------------------------|--------------------------|---------------|-------------------------|
| BXS-4              | K0603986-001    | 0.05       | 0.006      | 1                          | 05/18/06                 | 0.51          |                         |
| BXS-6              | K0603986-002    | 0.05       | 0.006      | 1                          | 05/18/06                 | 0.51          |                         |
| BXS-1              | K0603986-003    | 0.05       | 0.006      | 1                          | 05/18/06                 | 0.019         | J                       |
| BXS-5              | K0603986-004    | 0.05       | 0.006      | 1                          | 05/18/06                 | 0.018         | J                       |
| BXS-2              | K0603986-005    | 0.05       | 0.006      | 1                          | 05/18/06                 | 0.027         | J                       |
| BXS-3              | K0603986-006    | 0.05       | 0.006      | 1                          | 05/18/06                 | 1.13          |                         |
| Method Blank       | K0603986-MB     | 0.05       | 0.006      | 1                          | 05/18/06                 | 0.019         | U                       |

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COLUMBIA ANALYTICAL SERVICES, INC.

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QA/QC Report

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

Service Request : K0603986  
Date Collected : 05/15/06  
Date Received : 05/17/06  
Date Prepared : NA  
Date Analyzed : 05/18/06

Duplicate Summary  
Inorganic Parameters

Sample Name : BXS-4  
Lab Code : K0603986-001DUP  
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 | 0.51          | 0.51                    | 0.51    | <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 :** K0603986  
**Date Collected :** 05/15/06  
**Date Received :** 05/17/06  
**Date Prepared :** NA  
**Date Analyzed :** 05/18/06

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** BXS-4  
**Lab Code :** K0603986-001MS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte             | Analysis<br>Method | MRL  | Spike<br>Level | Sample<br>Result | Spiked<br>Sample<br>Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|---------------------|--------------------|------|----------------|------------------|----------------------------|---------------------|----------------------------|-----------------|
|                     |                    |      |                |                  |                            |                     | Acceptance<br>Limits       |                 |
| Ammonia as Nitrogen | 350.1              | 0.05 | 2.00           | 0.51             | 2.48                       | 99                  | 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 :** K0603986  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 05/18/06

**Laboratory Control Sample Summary**  
**Inorganic Parameters**

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0603986-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Analyte</b>      | <b>Prep Method</b> | <b>Analysis Method</b> | <b>True Value</b> | <b>Result</b> | <b>Percent Recovery</b> | <b>CAS Percent Recovery Acceptance Limits</b> | <b>Result Notes</b> |
|---------------------|--------------------|------------------------|-------------------|---------------|-------------------------|-----------------------------------------------|---------------------|
| Ammonia as Nitrogen | None               | 350.1                  | 5.2               | 5.1           | 98                      | 90-110                                        |                     |

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** JH Baxter & Company  
**Project :** Arlington Landfill Wells

**Service Request :** K0603986  
**Date Collected :** NA  
**Date Received :** NA

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

### CONTINUING CALIBRATION VERIFICATION (CCV)

|             | Date<br>Analyzed | True<br>Value | Measured<br>Value | Percent<br>Recovery |
|-------------|------------------|---------------|-------------------|---------------------|
| CCV1 Result | 05/18/06         | 2.00          | 1.98              | 99                  |
| CCV2 Result | 05/18/06         | 2.00          | 1.99              | 100                 |
| CCV3 Result | 05/18/06         | 2.00          | 2.00              | 100                 |
| CCV4 Result | 05/18/06         | 2.00          | 2.01              | 101                 |
| CCV5 Result | 05/18/06         | 2.00          | 2.00              | 100                 |
| CCV6 Result | 05/18/06         | 2.00          | 1.99              | 100                 |
| CCV7 Result | 05/18/06         | 2.00          | 2.00              | 100                 |

### CONTINUING CALIBRATION BLANK (CCB)

|             | Date<br>Analyzed | MRL  | Blank<br>Value |
|-------------|------------------|------|----------------|
| CCB1 Result | 05/18/06         | 0.05 | 0.042 J        |
| CCB2 Result | 05/18/06         | 0.05 | 0.019 J        |
| CCB3 Result | 05/18/06         | 0.05 | 0.021 J        |
| CCB4 Result | 05/18/06         | 0.05 | 0.036 J        |
| CCB5 Result | 05/18/06         | 0.05 | 0.027 J        |
| CCB6 Result | 05/18/06         | 0.05 | 0.022 J        |
| CCB7 Result | 05/18/06         | 0.05 | 0.020 J        |

---

**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 :** K0603986  
**Date Collected :** 05/15,16/06  
**Date Received :** 05/17/06

**Chloride**

**Analysis Method :** 300.0  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Sample Name  | Lab Code     | MRL | MDL  | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|-----|------|--------------------|------------------|--------|-----------------|
| BXS-4        | K0603986-001 | 0.4 | 0.06 | 2                  | 05/23/06         | 1.7    |                 |
| BXS-6        | K0603986-002 | 0.4 | 0.06 | 2                  | 05/23/06         | 1.9    |                 |
| BXS-1        | K0603986-003 | 0.4 | 0.06 | 2                  | 05/23/06         | 2.7    |                 |
| BXS-5        | K0603986-004 | 0.4 | 0.06 | 2                  | 05/24/06         | ND     |                 |
| BXS-2        | K0603986-005 | 0.4 | 0.06 | 2                  | 05/24/06         | 2.8    |                 |
| BXS-3        | K0603986-006 | 0.4 | 0.06 | 2                  | 05/24/06         | 1.9    |                 |
| Method Blank | K0603986-MB  | 0.2 | 0.03 | 1                  | 05/23/06         | 0.03   | 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 :** K0603986  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 05/23/06

### Duplicate Summary Inorganic Parameters

**Sample Name :** Batch QC  
**Lab Code :** K0604085-001DUP  
**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           | 10  | 232           | 231                     | 232     | <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 : K0603986  
 Date Collected : NA  
 Date Received : NA  
 Date Prepared : NA  
 Date Analyzed : 05/23/06

Matrix Spike Summary  
 Inorganic Parameters

Sample Name : Batch QC  
 Lab Code : K0604085-001MS  
 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           | 10  | 100         | 232           | 333                  | 101              | 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 :** K0603986  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 05/23/06

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0603986-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte  | Prep<br>Method | Analysis<br>Method | True Value | Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery<br>Acceptance<br>Limits | Result<br>Notes |
|----------|----------------|--------------------|------------|--------|---------------------|----------------------------------------------------|-----------------|
|          |                |                    |            |        |                     |                                                    |                 |
| Chloride | None           | 300.0              | 5.0        | 4.7    | 94                  | 90-110                                             |                 |

## COLUMBIA ANALYTICAL SERVICES, INC.

### QA/QC Report

Client : JH Baxter & Company  
Project : Arlington Landfill Wells

Service Request : K0603986  
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 | 05/23/06      | 5.0        | 4.7            | 94               |
| CCV2 Result | 05/23/06      | 5.0        | 4.5            | 90               |
| CCV4 Result | 05/23/06      | 5.0        | 4.7            | 94               |
| CCV5 Result | 05/23/06      | 5.0        | 4.7            | 94               |
| CCV6 Result | 05/23/06      | 5.0        | 4.8            | 96               |
| CCV7 Result | 05/23/06      | 5.0        | 4.8            | 96               |
| CCV8 Result | 05/24/06      | 5.0        | 4.8            | 96               |
| CCV9 Result | 05/24/06      | 5.0        | 4.8            | 96               |

### CONTINUING CALIBRATION BLANK (CCB)

|             | Date Analyzed | MRL | Blank Value |
|-------------|---------------|-----|-------------|
| CCB1 Result | 05/23/06      | 0.2 | 0.04 J      |
| CCB2 Result | 05/23/06      | 0.2 | 0.04 J      |
| CCB4 Result | 05/23/06      | 0.2 | 0.03 J      |
| CCB5 Result | 05/23/06      | 0.2 | 0.04 J      |
| CCB6 Result | 05/23/06      | 0.2 | 0.03 J      |
| CCB7 Result | 05/23/06      | 0.2 | 0.04 J      |
| CCB8 Result | 05/24/06      | 0.2 | 0.03 J      |
| CCB9 Result | 05/24/06      | 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 :** K0603986  
**Date Collected :** 05/15,16/06  
**Date Received :** 05/17/06

**Sulfate**

**Analysis Method :** 300.0

**Test Notes :**

**Units :** mg/L (ppm)

**Basis :** NA

| <b>Sample Name</b> | <b>Lab Code</b> | <b>MRL</b> | <b>MDL</b> | <b>Dilution<br/>Factor</b> | <b>Date<br/>Analyzed</b> | <b>Result</b> | <b>Result<br/>Notes</b> |
|--------------------|-----------------|------------|------------|----------------------------|--------------------------|---------------|-------------------------|
| BXS-4              | K0603986-001    | 0.4        | 0.06       | 2                          | 05/23/06                 | 1.4           |                         |
| BXS-6              | K0603986-002    | 0.4        | 0.06       | 2                          | 05/23/06                 | 1.5           |                         |
| BXS-1              | K0603986-003    | 0.4        | 0.06       | 2                          | 05/23/06                 | 11.2          |                         |
| BXS-5              | K0603986-004    | 0.4        | 0.06       | 2                          | 05/24/06                 | ND            |                         |
| BXS-2              | K0603986-005    | 0.4        | 0.06       | 2                          | 05/24/06                 | ND            |                         |
| BXS-3              | K0603986-006    | 0.4        | 0.06       | 2                          | 05/24/06                 | 0.07          | J                       |
| Method Blank       | K0603986-MB     | 0.2        | 0.03       | 1                          | 05/23/06                 | 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 : K0603986  
Date Collected : NA  
Date Received : NA  
Date Prepared : NA  
Date Analyzed : 05/23/06

Duplicate Summary  
Inorganic Parameters

Sample Name : Batch QC  
Lab Code : K0604085-001DUP  
Test Notes :

Units : mg/L (ppm)  
Basis : NA

| Analyte | Analysis<br>Method | MRL | Sample<br>Result | Duplicate<br>Sample<br>Result | Average | Relative<br>Percent<br>Difference | Result<br>Notes |
|---------|--------------------|-----|------------------|-------------------------------|---------|-----------------------------------|-----------------|
| Sulfate | 300.0              | 2.0 | 19.4             | 19.3                          | 19.4    | <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 :** K0603986  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 05/23/06

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** Batch QC  
**Lab Code :** K0604085-001MS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte | Analysis<br>Method | MRL | Spike<br>Level | Sample<br>Result | Spiked<br>Sample<br>Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery<br>Acceptance | Result<br>Notes |
|---------|--------------------|-----|----------------|------------------|----------------------------|---------------------|------------------------------------------|-----------------|
|         |                    |     |                |                  |                            |                     | Limits                                   |                 |
| Sulfate | 300.0              | 2.0 | 20.0           | 19.4             | 40.0                       | 103                 | 80-120                                   |                 |

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**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 :** K0603986  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 05/23/06

**Laboratory Control Sample Summary**  
**Inorganic Parameters**

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0603986-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Analyte</b> | <b>Prep<br/>Method</b> | <b>Analysis<br/>Method</b> | <b>True Value</b> | <b>Result</b> | <b>Percent<br/>Recovery</b> | <b>CAS<br/>Percent<br/>Recovery<br/>Acceptance<br/>Limits</b> | <b>Result<br/>Notes</b> |
|----------------|------------------------|----------------------------|-------------------|---------------|-----------------------------|---------------------------------------------------------------|-------------------------|
| 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 :** K0603986  
**Date Collected :** NA  
**Date Received :** NA

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

### CONTINUING CALIBRATION VERIFICATION (CCV)

|             | Date<br>Analyzed | True<br>Value | Measured<br>Value | Percent<br>Recovery |
|-------------|------------------|---------------|-------------------|---------------------|
| CCV1 Result | 05/23/06         | 5.0           | 4.9               | 98                  |
| CCV2 Result | 05/23/06         | 5.0           | 4.9               | 98                  |
| CCV4 Result | 05/23/06         | 5.0           | 4.9               | 98                  |
| CCV5 Result | 05/23/06         | 5.0           | 5.0               | 100                 |
| CCV6 Result | 05/23/06         | 5.0           | 5.0               | 100                 |
| CCV7 Result | 05/23/06         | 5.0           | 5.0               | 100                 |
| CCV8 Result | 05/23/06         | 5.0           | 5.1               | 102                 |
| CCV9 Result | 05/24/06         | 5.0           | 5.0               | 100                 |

### CONTINUING CALIBRATION BLANK (CCB)

|             | Date<br>Analyzed | MRL | Blank<br>Value |
|-------------|------------------|-----|----------------|
| CCB1 Result | 05/23/06         | 0.2 | ND             |
| CCB2 Result | 05/23/06         | 0.2 | ND             |
| CCB4 Result | 05/23/06         | 0.2 | ND             |
| CCB5 Result | 05/23/06         | 0.2 | ND             |
| CCB6 Result | 05/23/06         | 0.2 | ND             |
| CCB7 Result | 05/23/06         | 0.2 | ND             |
| CCB8 Result | 05/24/06         | 0.2 | ND             |
| CCB9 Result | 05/24/06         | 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 : K0603986  
Date Collected : 05/15,16/06  
Date Received : 05/17/06

### Chemical Oxygen Demand

Analysis Method : 410.2  
Test Notes :

Units : mg/L (ppm)  
Basis : NA

| Sample Name  | Lab Code     | MRL | MDL | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|-----|-----|--------------------|------------------|--------|-----------------|
| BXS-4        | K0603986-001 | 5   | 2.5 | 1                  | 05/19/06         | 2.6    | J               |
| BXS-6        | K0603986-002 | 5   | 2.5 | 1                  | 05/19/06         | 2.6    | J               |
| BXS-1        | K0603986-003 | 5   | 2.5 | 1                  | 05/19/06         | 8      |                 |
| BXS-5        | K0603986-004 | 5   | 2.5 | 1                  | 05/19/06         | ND     |                 |
| BXS-2        | K0603986-005 | 5   | 2.5 | 1                  | 05/19/06         | 38     |                 |
| BXS-3        | K0603986-006 | 5   | 2.5 | 1                  | 05/19/06         | 78     |                 |
| Method Blank | K0603986-MB  | 5   | 2.5 | 1                  | 05/19/06         | 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 :** K0603986  
**Date Collected :** 05/15/06  
**Date Received :** 05/17/06  
**Date Prepared :** NA  
**Date Analyzed :** 05/19/06

### Duplicate Summary Inorganic Parameters

**Sample Name :** BXS-4  
**Lab Code :** K0603986-001DUP  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte                | Analysis<br>Method | MRL | Sample<br>Result | Duplicate<br>Sample<br>Result | Average | Relative<br>Percent<br>Difference | Result<br>Notes |
|------------------------|--------------------|-----|------------------|-------------------------------|---------|-----------------------------------|-----------------|
| Chemical Oxygen Demand | 410.2              | 5   | 2.6              | 2.6                           | 2.6     | <1                                | 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 :** K0603986  
**Date Collected :** 05/15/06  
**Date Received :** 05/17/06  
**Date Prepared :** NA  
**Date Analyzed :** 05/19/06

**Matrix Spike Summary**  
**Inorganic Parameters**

**Sample Name :** BXS-4  
**Lab Code :** K0603986-001MS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte                | Analysis<br>Method | MRL | Spike<br>Level | Sample<br>Result | Spiked<br>Sample<br>Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|------------------------|--------------------|-----|----------------|------------------|----------------------------|---------------------|----------------------------|-----------------|
|                        |                    |     |                |                  |                            |                     | Acceptance<br>Limits       |                 |
| Chemical Oxygen Demand | 410.2              | 13  | 100            | 2.6              | 108                        | 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 :** K0603986  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 05/19/06

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0603986-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte                | Prep<br>Method | Analysis<br>Method | True Value | Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|------------------------|----------------|--------------------|------------|--------|---------------------|----------------------------|-----------------|
|                        |                |                    |            |        |                     | Acceptance<br>Limits       |                 |
| Chemical Oxygen Demand | None           | 410.2              | 121        | 124    | 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 : K0603986  
Date Collected : 05/15,16/06  
Date Received : 05/17/06

### Conductivity

Analysis Method : 120.1  
Test Notes :

Units : uMhos/cm  
Basis : NA

| Sample Name  | Lab Code     | MRL | MDL  | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|-----|------|--------------------|------------------|--------|-----------------|
| BXS-4        | K0603986-001 | 2   | 0.04 | 1                  | 05/19/06         | 195    |                 |
| BXS-6        | K0603986-002 | 2   | 0.04 | 1                  | 05/19/06         | 195    |                 |
| BXS-1        | K0603986-003 | 2   | 0.04 | 1                  | 05/19/06         | 404    |                 |
| BXS-5        | K0603986-004 | 2   | 0.04 | 1                  | 05/19/06         | 1.5    | J               |
| BXS-2        | K0603986-005 | 2   | 0.04 | 1                  | 05/19/06         | 792    |                 |
| BXS-3        | K0603986-006 | 2   | 0.04 | 1                  | 05/19/06         | 682    |                 |
| Method Blank | K0603986-MB  | 2   | 0.04 | 1                  | 05/19/06         | 0.94   | 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 :** K0603986  
**Date Collected :** 05/15/06  
**Date Received :** 05/17/06  
**Date Prepared :** NA  
**Date Analyzed :** 05/19/06

**Duplicate Summary  
Inorganic Parameters**

**Sample Name :** BXS-4  
**Lab Code :** K0603986-001DUP  
**Test Notes :**

**Units :** uMhos/cm  
**Basis :** NA

| <b>Analyte</b> | <b>Analysis Method</b> | <b>MRL</b> | <b>Sample Result</b> | <b>Duplicate Sample Result</b> | <b>Average</b> | <b>Relative Percent Difference</b> | <b>Result Notes</b> |
|----------------|------------------------|------------|----------------------|--------------------------------|----------------|------------------------------------|---------------------|
| Conductivity   | 120.1                  | 2          | 195                  | 196                            | 196            | <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 : K0603986  
 Date Collected : NA  
 Date Received : NA  
 Date Prepared : NA  
 Date Analyzed : 05/19/06

## Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Laboratory Control Sample  
 Lab Code : K0603986-LCS  
 Test Notes :

Units : uMhos/cm  
 Basis : NA

| Analyte      | Prep<br>Method | Analysis<br>Method | True Value | Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|--------------|----------------|--------------------|------------|--------|---------------------|----------------------------|-----------------|
|              |                |                    |            |        |                     | Acceptance<br>Limits       |                 |
| Conductivity | None           | 120.1              | 927        | 926    | 100                 | 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 : K0603986  
Date Collected : 05/15,16/06  
Date Received : 05/17/06

### Nitrate+Nitrite as Nitrogen

Analysis Method : 353.2  
Test Notes :

Units : mg/L (ppm)  
Basis : NA

| Sample Name  | Lab Code     | MRL  | MDL   | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|------|-------|--------------------|------------------|--------|-----------------|
| BXS-4        | K0603986-001 | 0.05 | 0.006 | 1                  | 05/22/06         | ND     |                 |
| BXS-6        | K0603986-002 | 0.05 | 0.006 | 1                  | 05/22/06         | ND     |                 |
| BXS-1        | K0603986-003 | 0.05 | 0.006 | 1                  | 05/22/06         | 0.92   |                 |
| BXS-5        | K0603986-004 | 0.05 | 0.006 | 1                  | 05/22/06         | ND     |                 |
| BXS-2        | K0603986-005 | 0.05 | 0.006 | 1                  | 05/22/06         | 0.039  | J               |
| BXS-3        | K0603986-006 | 0.05 | 0.006 | 1                  | 05/22/06         | 0.16   |                 |
| Method Blank | K0603986-MB  | 0.05 | 0.006 | 1                  | 05/22/06         | 0.009  | J               |

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**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 :** K0603986  
**Date Collected :** 05/15/06  
**Date Received :** 05/17/06  
**Date Prepared :** NA  
**Date Analyzed :** 05/22/06

**Duplicate Summary**  
**Inorganic Parameters**

**Sample Name :** BXS-4  
**Lab Code :** K0603986-001DUP  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Analyte</b>              | <b>Analysis Method</b> | <b>MRL</b> | <b>Sample Result</b> | <b>Duplicate Sample Result</b> | <b>Average</b> | <b>Relative Percent Difference</b> | <b>Result Notes</b> |
|-----------------------------|------------------------|------------|----------------------|--------------------------------|----------------|------------------------------------|---------------------|
| Nitrate+Nitrite as Nitrogen | 353.2                  | 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 :** K0603986  
**Date Collected :** 05/15/06  
**Date Received :** 05/17/06  
**Date Prepared :** NA  
**Date Analyzed :** 05/22/06

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** BXS-4  
**Lab Code :** K0603986-001MS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte                     | Analysis<br>Method | MRL  | Spike<br>Level | Sample<br>Result | Spiked<br>Sample<br>Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery<br>Acceptance | Result<br>Notes |
|-----------------------------|--------------------|------|----------------|------------------|----------------------------|---------------------|------------------------------------------|-----------------|
|                             |                    |      |                |                  |                            |                     | Limits                                   |                 |
| Nitrate+Nitrite as Nitrogen | 353.2              | 0.05 | 2.00           | ND               | 1.96                       | 98                  | 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 :** K0603986  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 05/22/06

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0603986-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte                     | Prep<br>Method | Analysis<br>Method | True Value | Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery<br>Acceptance<br>Limits | Result<br>Notes |
|-----------------------------|----------------|--------------------|------------|--------|---------------------|----------------------------------------------------|-----------------|
|                             |                |                    |            |        |                     |                                                    |                 |
| Nitrate+Nitrite as Nitrogen | None           | 353.2              | 4.1        | 4.1    | 100                 | 90-110                                             |                 |

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

Client : JH Baxter & Company  
Project : Arlington Landfill Wells

Service Request : K0603986  
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 | 05/22/06      | 2.00       | 1.96           | 98               |
| CCV2 Result | 05/22/06      | 2.00       | 1.98           | 99               |
| CCV3 Result | 05/22/06      | 2.00       | 1.96           | 98               |
| CCV4 Result | 05/22/06      | 2.00       | 1.93           | 97               |
| CCV5 Result | 05/22/06      | 2.00       | 1.95           | 98               |
| CCV6 Result | 05/22/06      | 2.00       | 1.94           | 97               |
| CCV7 Result | 05/22/06      | 2.00       | 1.95           | 98               |
| CCV8 Result | 05/22/06      | 2.00       | 1.94           | 97               |

### CONTINUING CALIBRATION BLANK (CCB)

|             | Date Analyzed | MRL  | Blank Value |
|-------------|---------------|------|-------------|
| CCB1 Result | 05/22/06      | 0.05 | 0.011 J     |
| CCB2 Result | 05/22/06      | 0.05 | ND          |
| CCB3 Result | 05/22/06      | 0.05 | ND          |
| CCB4 Result | 05/22/06      | 0.05 | ND          |
| CCB5 Result | 05/22/06      | 0.05 | ND          |
| CCB6 Result | 05/22/06      | 0.05 | ND          |
| CCB7 Result | 05/22/06      | 0.05 | ND          |
| CCB8 Result | 05/22/06      | 0.05 | 0.009 J     |

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**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 :** K0603986  
**Date Collected :** 05/15,16/06  
**Date Received :** 05/17/06

pH

**Analysis Method :** 150.1  
**Test Notes :**

**Units :** pH UNITS  
**Basis :** NA

| Sample Name | Lab Code     | MRL | MDL | Dilution<br>Factor | Date/Time<br>Analyzed | Result | Result<br>Notes |
|-------------|--------------|-----|-----|--------------------|-----------------------|--------|-----------------|
| BXS-4       | K0603986-001 | -   | -   | 1                  | 05/17/06 20:40        | 7.94   |                 |
| BXS-6       | K0603986-002 | -   | -   | 1                  | 05/17/06 20:41        | 7.94   |                 |
| BXS-1       | K0603986-003 | -   | -   | 1                  | 05/17/06 20:43        | 6.31   |                 |
| BXS-5       | K0603986-004 | -   | -   | 1                  | 05/17/06 20:45        | 5.45   |                 |
| BXS-2       | K0603986-005 | -   | -   | 1                  | 05/17/06 20:49        | 6.41   |                 |
| BXS-3       | K0603986-006 | -   | -   | 1                  | 05/17/06 20:53        | 6.36   |                 |

# 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 :** K0603986  
**Date Collected :** 05/15/06  
**Date Received :** 05/17/06  
**Date Prepared :** NA  
**Date Analyzed :** 05/17/06

### Duplicate Summary Inorganic Parameters

**Sample Name :** BXS-4  
**Lab Code :** K0603986-001DUP  
**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           | -   | 7.94          | 7.94                    | 7.94    | <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 : K0603986  
Date Collected : NA  
Date Received : NA  
Date Prepared : NA  
Date Analyzed : 05/17/06

Laboratory Control Sample Summary  
Inorganic Parameters

Sample Name : Laboratory Control Sample  
Lab Code : K0603986-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       | 9.10   | 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 :** K0603986  
**Date Collected :** 05/15,16/06  
**Date Received :** 05/17/06

### Tannin and Lignin

**Analysis Method :** SM 5550 B  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Sample Name  | Lab Code     | MRL | MDL  | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|-----|------|--------------------|------------------|--------|-----------------|
| BXS-4        | K0603986-001 | 0.2 | 0.03 | 1                  | 05/25/06         | 0.4    |                 |
| BXS-6        | K0603986-002 | 0.2 | 0.03 | 1                  | 05/25/06         | 0.4    |                 |
| BXS-1        | K0603986-003 | 0.2 | 0.03 | 1                  | 05/25/06         | 0.17   | J               |
| BXS-5        | K0603986-004 | 0.2 | 0.03 | 1                  | 05/25/06         | 0.5    |                 |
| BXS-2        | K0603986-005 | 0.2 | 0.03 | 1                  | 05/25/06         | 1.2    |                 |
| BXS-3        | K0603986-006 | 1.0 | 0.15 | 5                  | 05/25/06         | 16.7   |                 |
| Method Blank | K0603986-MB  | 0.2 | 0.03 | 1                  | 05/25/06         | ND     |                 |

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

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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**QA/QC Report**

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

**Service Request :** K0603986  
**Date Collected :** 05/15/06  
**Date Received :** 05/17/06  
**Date Prepared :** NA  
**Date Analyzed :** 05/25/06

**Duplicate Summary  
Inorganic Parameters**

**Sample Name :** BXS-4  
**Lab Code :** K0603986-001DUP  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Analyte</b>    | <b>Analysis Method</b> | <b>MRL</b> | <b>Sample Result</b> | <b>Duplicate Sample Result</b> | <b>Average</b> | <b>Relative Percent Difference</b> | <b>Result Notes</b> |
|-------------------|------------------------|------------|----------------------|--------------------------------|----------------|------------------------------------|---------------------|
| Tannin and Lignin | SM 5550 B              | 0.2        | 0.4                  | 0.4                            | 0.4            | <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 :** BXS-Wells-Landfill  
**Sample Matrix :** WATER

**Service Request :** K0603986  
**Date Collected :** 05/15/06  
**Date Received :** 05/17/06  
**Date Prepared :** NA  
**Date Analyzed :** 05/25/06

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** BXS-4  
**Lab Code :** K0603986-001MS  
**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 |              |
| Tannin and Lignin | SM 5550 B       | 0.2 | 1.0         | 0.4           | 1.4                  | 100              | 75-125                             |              |

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

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**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 :** K0603986  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 05/25/06

**Laboratory Control Sample Summary**  
**Inorganic Parameters**

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0603986-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Analyte</b>    | <b>Prep<br/>Method</b> | <b>Analysis<br/>Method</b> | <b>True Value</b> | <b>Result</b> | <b>Percent<br/>Recovery</b> | <b>CAS<br/>Percent<br/>Recovery<br/>Acceptance<br/>Limits</b> | <b>Result<br/>Notes</b> |
|-------------------|------------------------|----------------------------|-------------------|---------------|-----------------------------|---------------------------------------------------------------|-------------------------|
| 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.

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** JH Baxter & Company  
**Project :** Arlington Landfill Wells

**Service Request :** K0603986  
**Date Collected :** NA  
**Date Received :** NA

Tannin and Lignin  
SM 5550 B  
Units: mg/L (ppm)

### CONTINUING CALIBRATION VERIFICATION (CCV)

|             | Date<br>Analyzed | True<br>Value | Measured<br>Value | Percent<br>Recovery |
|-------------|------------------|---------------|-------------------|---------------------|
| CCV1 Result | 05/25/06         | 2.5           | 2.6               | 104                 |
| CCV2 Result | 05/25/06         | 2.5           | 2.6               | 104                 |
| CCV3 Result | 05/25/06         | 2.5           | 2.6               | 104                 |

### CONTINUING CALIBRATION BLANK (CCB)

|             | Date<br>Analyzed | MRL | Blank<br>Value |
|-------------|------------------|-----|----------------|
| CCB1 Result | 05/25/06         | 0.2 | ND             |
| CCB2 Result | 05/25/06         | 0.2 | ND             |
| CCB3 Result | 05/25/06         | 0.2 | ND             |

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**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 :** K0603986  
**Date Collected :** 05/15,16/06  
**Date Received :** 05/17/06

**Solids, Total Dissolved (TDS)**

**Analysis Method :** 160.1  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Sample Name</b> | <b>Lab Code</b> | <b>MRL</b> | <b>MDL</b> | <b>Dilution<br/>Factor</b> | <b>Date<br/>Analyzed</b> | <b>Result</b> | <b>Result<br/>Notes</b> |
|--------------------|-----------------|------------|------------|----------------------------|--------------------------|---------------|-------------------------|
| BXS-4              | K0603986-001    | 5          | 5          | 1                          | 05/19/06                 | 145           |                         |
| BXS-6              | K0603986-002    | 5          | 5          | 1                          | 05/19/06                 | 156           |                         |
| BXS-1              | K0603986-003    | 5          | 5          | 1                          | 05/19/06                 | 290           |                         |
| BXS-5              | K0603986-004    | 5          | 5          | 1                          | 05/19/06                 | 27            |                         |
| BXS-2              | K0603986-005    | 5          | 5          | 1                          | 05/19/06                 | 514           |                         |
| BXS-3              | K0603986-006    | 5          | 5          | 1                          | 05/19/06                 | 532           |                         |
| Method Blank       | K0603986-MB     | 5          | 5          | 1                          | 05/19/06                 | 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 :** K0603986  
**Date Collected :** 05/15/06  
**Date Received :** 05/17/06  
**Date Prepared :** NA  
**Date Analyzed :** 05/19/06

### Duplicate Summary Inorganic Parameters

**Sample Name :** BXS-4  
**Lab Code :** K0603986-001DUP  
**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   | 145           | 149                     | 147     | 3                           |              |

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**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 :** K0603986  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 05/19/06

**Laboratory Control Sample Summary**  
**Inorganic Parameters**

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0603986-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Analyte</b>                | <b>Prep<br/>Method</b> | <b>Analysis<br/>Method</b> | <b>True Value</b> | <b>Result</b> | <b>Percent<br/>Recovery</b> | <b>CAS<br/>Percent<br/>Recovery<br/>Acceptance<br/>Limits</b> | <b>Result<br/>Notes</b> |
|-------------------------------|------------------------|----------------------------|-------------------|---------------|-----------------------------|---------------------------------------------------------------|-------------------------|
| Solids, Total Dissolved (TDS) | None                   | 160.1                      | 976               | 1040          | 107                         | 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 :** K0603986  
**Date Collected :** 05/15,16/06  
**Date Received :** 05/17/06

**Carbon, Total Organic**

**Analysis Method :** 415.1

**Test Notes :**

**Units :** mg/L (ppm)

**Basis :** NA

| <b>Sample Name</b> | <b>Lab Code</b> | <b>MRL</b> | <b>MDL</b> | <b>Dilution<br/>Factor</b> | <b>Date<br/>Analyzed</b> | <b>Result</b> | <b>Result<br/>Notes</b> |
|--------------------|-----------------|------------|------------|----------------------------|--------------------------|---------------|-------------------------|
| BXS-4              | K0603986-001    | 0.5        | 0.07       | 1                          | 05/19/06                 | 1.0           |                         |
| BXS-6              | K0603986-002    | 0.5        | 0.07       | 1                          | 05/19/06                 | 0.9           |                         |
| BXS-1              | K0603986-003    | 0.5        | 0.07       | 1                          | 05/19/06                 | 4.3           |                         |
| BXS-5              | K0603986-004    | 0.5        | 0.07       | 1                          | 05/19/06                 | 0.09          | J                       |
| BXS-2              | K0603986-005    | 1.0        | 0.14       | 2                          | 05/19/06                 | 14.5          |                         |
| BXS-3              | K0603986-006    | 5.0        | 0.7        | 10                         | 05/19/06                 | 29.5          |                         |
| Method Blank       | K0603986-MB     | 0.5        | 0.07       | 1                          | 05/19/06                 | 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 : K0603986  
 Date Collected : 05/15/06  
 Date Received : 05/17/06  
 Date Prepared : NA  
 Date Analyzed : 05/19/06

Duplicate Summary  
 Inorganic Parameters

Sample Name : BXS-4  
 Lab Code : K0603986-001DUP  
 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 | 1.0           | 0.9                     | 1.0     | 10                          |              |

# 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 :** K0603986  
**Date Collected :** 05/15/06  
**Date Received :** 05/17/06  
**Date Prepared :** NA  
**Date Analyzed :** 05/19/06

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** BXS-4  
**Lab Code :** K0603986-001MS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte               | Analysis<br>Method | MRL | Spike<br>Level | Sample<br>Result | Spiked<br>Sample<br>Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|-----------------------|--------------------|-----|----------------|------------------|----------------------------|---------------------|----------------------------|-----------------|
|                       |                    |     |                |                  |                            |                     | Acceptance<br>Limits       |                 |
| Carbon, Total Organic | 415.1              | 0.5 | 25.0           | 1.0              | 25.5                       | 98                  | 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 :** K0603986  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 05/19/06

Laboratory Control Sample Summary  
Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0603986-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       | 24.8   | 102              | 90-109                                 |              |

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** JH Baxter & Company  
**Project :** Arlington Landfill Wells

**Service Request :** K0603986  
**Date Collected :** NA  
**Date Received :** NA

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

### CONTINUING CALIBRATION VERIFICATION (CCV)

|             | Date<br>Analyzed | True<br>Value | Measured<br>Value | Percent<br>Recovery |
|-------------|------------------|---------------|-------------------|---------------------|
| CCV1 Result | 05/19/06         | 25.0          | 25.2              | 101                 |
| CCV2 Result | 05/19/06         | 25.0          | 24.3              | 97                  |
| CCV3 Result | 05/19/06         | 25.0          | 24.6              | 98                  |
| CCV4 Result | 05/19/06         | 25.0          | 24.2              | 97                  |
| CCV5 Result | 05/19/06         | 25.0          | 24.8              | 99                  |
| CCV6 Result | 05/19/06         | 25.0          | 24.7              | 99                  |
| CCV7 Result | 05/19/06         | 25.0          | 23.7              | 95                  |
| CCV8 Result | 05/19/06         | 25.0          | 24.5              | 98                  |

### CONTINUING CALIBRATION BLANK (CCB)

|             | Date<br>Analyzed | MRL | Blank<br>Value |
|-------------|------------------|-----|----------------|
| CCB1 Result | 05/19/06         | 0.5 | ND             |
| CCB2 Result | 05/19/06         | 0.5 | ND             |
| CCB3 Result | 05/19/06         | 0.5 | ND             |
| CCB4 Result | 05/19/06         | 0.5 | ND             |
| CCB5 Result | 05/19/06         | 0.5 | ND             |
| CCB6 Result | 05/19/06         | 0.5 | ND             |
| CCB7 Result | 05/19/06         | 0.5 | ND             |
| CCB8 Result | 05/19/06         | 0.5 | ND             |

## Metals

## DISSOLVED METALS

- Cover Page -  
INORGANIC ANALYSIS DATA PACKAGE

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

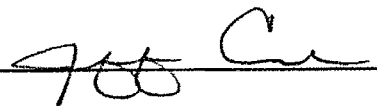
Service Request: K0603986

| <u>Sample No.</u> | <u>Lab Sample ID.</u> |
|-------------------|-----------------------|
| BXS-4             | K0603986-001 DISS     |
| BXS-6             | K0603986-002 DISS     |
| BXS-1             | K0603986-003 DISS     |
| BXS-5             | K0603986-004 DISS     |
| BXS-2             | K0603986-005 DISS     |
| BXS-3             | K0603986-006 DISS     |
| Method Blank      | K0603986-MB           |
| Batch QCD         | K0604029-001D DISS    |
| Batch QCS         | K0604029-001S DISS    |

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 NOComments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_Signature: Date: 6/14/06

## 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: K0603986  
Date Collected: 05/15/06  
Date Received: 05/17/06  
Units: µG/L  
Basis: NA

Sample Name: BXS-4

Lab Code: K0603986-001 DISS

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 5/25/06        | 6/8/06        | 6.5    |   |   |
| Barium    | 6010B           | 5.0  | 0.9 | 1    | 5/25/06        | 5/30/06       | 30.4   |   |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 5/25/06        | 5/30/06       | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 2.0 | 1    | 5/25/06        | 5/30/06       | 2.0    | U |   |
| Iron      | 6010B           | 20.0 | 4.0 | 1    | 5/25/06        | 5/30/06       | 40.1   |   |   |
| Manganese | 6010B           | 5.0  | 0.4 | 1    | 5/25/06        | 5/30/06       | 109    |   |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 5/25/06        | 5/30/06       | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 2.0 | 1    | 5/25/06        | 5/30/06       | 3.0    | B |   |

% Solids: 0.0

Comments:

DISSOLVED METALS  
-1-  
INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter &amp; Company

Service Request: K0603986

Project No.: BXS-Wells-Landfill

Date Collected: 05/15/06

Project Name: Arlington Landfill Wells

Date Received: 05/17/06

Matrix: WATER

Units: µG/L

Basis: NA

Sample Name: BXS-6

Lab Code: K0603986-002 DISS

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 5/25/06        | 6/8/06        | 5.8    |   |   |
| Barium    | 6010B           | 5.0  | 0.9 | 1    | 5/25/06        | 5/30/06       | 32.0   |   |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 5/25/06        | 5/30/06       | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 2.0 | 1    | 5/25/06        | 5/30/06       | 2.0    | U |   |
| Iron      | 6010B           | 20.0 | 4.0 | 1    | 5/25/06        | 5/30/06       | 41.9   |   |   |
| Manganese | 6010B           | 5.0  | 0.4 | 1    | 5/25/06        | 5/30/06       | 114    |   |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 5/25/06        | 5/30/06       | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 2.0 | 1    | 5/25/06        | 5/30/06       | 3.9    | B |   |

% Solids: 0.0

Comments:

## DISSOLVED METALS

-1-

## INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter &amp; Company

Service Request: K0603986

Project No.: BXS-Wells-Landfill

Date Collected: 05/15/06

Project Name: Arlington Landfill Wells

Date Received: 05/17/06

Matrix: WATER

Units: µg/L

Basis: NA

Sample Name: BXS-1

Lab Code: K0603986-003 DISS

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 5/25/06        | 6/8/06        | 1.0    | U |   |
| Barium    | 6010B           | 5.0  | 0.9 | 1    | 5/25/06        | 5/30/06       | 23.9   |   |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 5/25/06        | 5/30/06       | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 2.0 | 1    | 5/25/06        | 5/30/06       | 2.6    | B |   |
| Iron      | 6010B           | 20.0 | 4.0 | 1    | 5/25/06        | 5/30/06       | 4.0    | U |   |
| Manganese | 6010B           | 5.0  | 0.4 | 1    | 5/25/06        | 5/30/06       | 105    |   |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 5/25/06        | 5/30/06       | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 2.0 | 1    | 5/25/06        | 5/30/06       | 8.5    | B |   |

% Solids: 0.0

Comments:

DISSOLVED METALS  
-1-  
INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter &amp; Company

Service Request: K0603986

Project No.: BXS-Wells-Landfill

Date Collected: 05/15/06

Project Name: Arlington Landfill Wells

Date Received: 05/17/06

Matrix: WATER

Units: µg/L

Basis: NA

Sample Name: BXS-5

Lab Code: K0603986-004 DISS

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 5/25/06        | 6/8/06        | 1.0    | U |   |
| Barium    | 6010B           | 5.0  | 0.9 | 1    | 5/25/06        | 5/30/06       | 0.9    | U |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 5/25/06        | 5/30/06       | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 2.0 | 1    | 5/25/06        | 5/30/06       | 2.0    | U |   |
| Iron      | 6010B           | 20.0 | 4.0 | 1    | 5/25/06        | 5/30/06       | 4.0    | U |   |
| Manganese | 6010B           | 5.0  | 0.4 | 1    | 5/25/06        | 5/30/06       | 0.4    | U |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 5/25/06        | 5/30/06       | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 2.0 | 1    | 5/25/06        | 5/30/06       | 2.7    | B |   |

% Solids: 0.0

Comments:

## DISSOLVED METALS

-1-

## INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter &amp; Company

Service Request: K0603986

Project No.: BXS-Wells-Landfill

Date Collected: 05/16/06

Project Name: Arlington Landfill Wells

Date Received: 05/17/06

Matrix: WATER

Units: µg/L

Basis: NA

Sample Name: BXS-2

Lab Code: K0603986-005 DISS

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 5/25/06        | 6/8/06        | 1.2    | B |   |
| Barium    | 6010B           | 5.0  | 0.9 | 1    | 5/25/06        | 5/30/06       | 48.1   |   |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 5/25/06        | 5/30/06       | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 2.0 | 1    | 5/25/06        | 5/30/06       | 2.0    | U |   |
| Iron      | 6010B           | 20.0 | 4.0 | 1    | 5/25/06        | 5/30/06       | 842    |   |   |
| Manganese | 6010B           | 5.0  | 0.4 | 1    | 5/25/06        | 5/30/06       | 1320   |   |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 5/25/06        | 5/30/06       | 35.3   |   |   |
| Zinc      | 6010B           | 10.0 | 2.0 | 1    | 5/25/06        | 5/30/06       | 46.7   |   |   |

% Solids: 0.0

Comments:

DISSOLVED METALS  
-1-  
INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter &amp; Company

Service Request: K0603986

Project No.: BXS-Wells-Landfill

Date Collected: 05/16/06

Project Name: Arlington Landfill Wells

Date Received: 05/17/06

Matrix: WATER

Units: µG/L

Basis: NA

Sample Name: BXS-3

Lab Code: K0603986-006 DISS

| Analyte   | Analysis Method | MRL  | MDL  | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|------|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0  | 1    | 5/25/06        | 6/8/06        | 21.9   |   |   |
| Barium    | 6010B           | 5.0  | 0.9  | 1    | 5/25/06        | 5/30/06       | 115    |   |   |
| Cadmium   | 6010B           | 5.0  | 3.0  | 1    | 5/25/06        | 5/30/06       | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 2.0  | 1    | 5/25/06        | 5/30/06       | 2.0    | U |   |
| Iron      | 6010B           | 200  | 40.0 | 10   | 5/25/06        | 5/30/06       | 67900  |   |   |
| Manganese | 6010B           | 50.0 | 4.0  | 10   | 5/25/06        | 5/30/06       | 13400  |   |   |
| Nickel    | 6010B           | 20   | 20   | 1    | 5/25/06        | 5/30/06       | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 2.0  | 1    | 5/25/06        | 5/30/06       | 22.1   |   |   |

% Solids: 0.0

Comments:

## DISSOLVED METALS

-1-

## INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter &amp; Company

Service Request: K0603986

Project No.: BXS-Wells-Landfill

Date Collected:

Project Name: Arlington Landfill Wells

Date Received:

Matrix: WATER

Units: µg/L

Basis: NA

Sample Name: Method Blank

Lab Code: K0603986-MB

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 5/25/06        | 6/8/06        | 1.0    | U |   |
| Barium    | 6010B           | 5.0  | 0.9 | 1    | 5/25/06        | 5/30/06       | 0.9    | U |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 5/25/06        | 5/30/06       | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 2.0 | 1    | 5/25/06        | 5/30/06       | 2.4    | B |   |
| Iron      | 6010B           | 20.0 | 4.0 | 1    | 5/25/06        | 5/30/06       | 4.0    | U |   |
| Manganese | 6010B           | 5.0  | 0.4 | 1    | 5/25/06        | 5/30/06       | 0.4    | U |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 5/25/06        | 5/30/06       | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 2.0 | 1    | 5/25/06        | 5/30/06       | 2.1    | B |   |

% Solids: 0.0

Comments:

## DISSOLVED METALS

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JH Baxter &amp; Company

Service Request: K0603986

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                | 25.8  | 103   | 30.0                   | 32.5  | 108   | 31.2  | 104   | 7060A  |
| Barium    | 5000                | 5090  | 102   | 500                    | 491   | 98    | 504   | 101   | 6010B  |
| Cadmium   | 1250                | 1280  | 102   | 500                    | 503   | 101   | 517   | 103   | 6010B  |
| Copper    | 625                 | 626   | 100   | 500                    | 483   | 97    | 501   | 100   | 6010B  |
| Iron      | 2500                | 2520  | 101   | 5000                   | 4900  | 98    | 5090  | 102   | 6010B  |
| Manganese | 1250                | 1260  | 101   | 500                    | 489   | 98    | 508   | 102   | 6010B  |
| Nickel    | 1250                | 1260  | 101   | 5000                   | 5020  | 100   | 5190  | 104   | 6010B  |
| Zinc      | 1250                | 1250  | 100   | 2500                   | 2450  | 98    | 2550  | 102   | 6010B  |

## DISSOLVED METALS

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JH Baxter &amp; Company

Service Request: K0603986

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                   | 31.5  | 105   |       |       | 7060A  |
| Barium    |                     |       |       | 500                    | 496   | 99    | 497   | 99    | 6010B  |
| Cadmium   |                     |       |       | 500                    | 516   | 103   | 516   | 103   | 6010B  |
| Copper    |                     |       |       | 500                    | 494   | 99    | 496   | 99    | 6010B  |
| Iron      |                     |       |       | 5000                   | 5140  | 103   | 5180  | 104   | 6010B  |
| Manganese |                     |       |       | 500                    | 512   | 102   | 515   | 103   | 6010B  |
| Nickel    |                     |       |       | 5000                   | 5180  | 104   | 5250  | 105   | 6010B  |
| Zinc      |                     |       |       | 2500                   | 2560  | 102   | 2560  | 102   | 6010B  |

## DISSOLVED METALS

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JH Baxter &amp; Company

Service Request: K0603986

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) |        |
| Barium    |                     |       |       | 500                    | 501   | 100   | 495   | 99    | 6010B  |
| Cadmium   |                     |       |       | 500                    | 518   | 104   | 513   | 103   | 6010B  |
| Copper    |                     |       |       | 500                    | 495   | 99    | 487   | 97    | 6010B  |
| Iron      |                     |       |       | 5000                   | 5220  | 104   | 5190  | 104   | 6010B  |
| Manganese |                     |       |       | 500                    | 517   | 103   | 512   | 102   | 6010B  |
| Nickel    |                     |       |       | 5000                   | 5310  | 106   | 5290  | 106   | 6010B  |
| Zinc      |                     |       |       | 2500                   | 2550  | 102   | 2520  | 101   | 6010B  |

## DISSOLVED METALS

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JH Baxter &amp; Company

Service Request: K0603986

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) |        |
| Barium    |                     |       |       | 500                    | 488   | 98    | 493   | 99    | 6010B  |
| Cadmium   |                     |       |       | 500                    | 514   | 103   | 517   | 103   | 6010B  |
| Copper    |                     |       |       | 500                    | 480   | 96    | 481   | 96    | 6010B  |
| Iron      |                     |       |       | 5000                   | 5180  | 104   | 5210  | 104   | 6010B  |
| Manganese |                     |       |       | 500                    | 512   | 102   | 515   | 103   | 6010B  |
| Nickel    |                     |       |       | 5000                   | 5300  | 106   | 5370  | 107   | 6010B  |
| Zinc      |                     |       |       | 2500                   | 2500  | 100   | 2510  | 100   | 6010B  |

## DISSOLVED METALS

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JH Baxter &amp; Company

Service Request: K0603986

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) |        |
| Barium    |                     |       |       | 500                    | 498   | 100   | 491   | 98    | 6010B  |
| Cadmium   |                     |       |       | 500                    | 507   | 101   | 505   | 101   | 6010B  |
| Copper    |                     |       |       | 500                    | 488   | 98    | 482   | 96    | 6010B  |
| Iron      |                     |       |       | 5000                   | 4900  | 98    | 4870  | 97    | 6010B  |
| Manganese |                     |       |       | 500                    | 493   | 99    | 490   | 98    | 6010B  |
| Nickel    |                     |       |       | 5000                   | 5040  | 101   | 5100  | 102   | 6010B  |
| Zinc      |                     |       |       | 2500                   | 2490  | 100   | 2480  | 99    | 6010B  |

## DISSOLVED METALS

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JH Baxter &amp; Company

Service Request: K0603986

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) |        |
| Barium    |                     |       |       | 500                    | 493   | 99    | 496   | 99    | 6010B  |
| Cadmium   |                     |       |       | 500                    | 506   | 101   | 512   | 102   | 6010B  |
| Copper    |                     |       |       | 500                    | 482   | 96    | 486   | 97    | 6010B  |
| Iron      |                     |       |       | 5000                   | 4890  | 98    | 4930  | 99    | 6010B  |
| Manganese |                     |       |       | 500                    | 491   | 98    | 496   | 99    | 6010B  |
| Nickel    |                     |       |       | 5000                   | 5110  | 102   | 5160  | 103   | 6010B  |
| Zinc      |                     |       |       | 2500                   | 2490  | 99    | 2500  | 100   | 6010B  |

## DISSOLVED METALS

- 2b -

## CRDL STANDARD FOR AA AND ICP

Client: JH Baxter &amp; Company

Service Request: K0603986

Project No.: BXS-Wells-Landfil

Project Name: Arlington Landfill Wells

Concentration Units: ug/l

| Analyte   | CRDL Standard for AA |       |     | CRDL Standard for ICP |                  |               |                |             |
|-----------|----------------------|-------|-----|-----------------------|------------------|---------------|----------------|-------------|
|           | True                 | Found | %R  | Initial<br>True       | Initial<br>Found | Initial<br>%R | Final<br>Found | Final<br>%R |
| Arsenic   | 5.0                  | 7.4   | 147 |                       |                  |               |                |             |
| Barium    |                      |       |     | 5.0                   | 6.67             | 133           |                |             |
| Cadmium   |                      |       |     | 5.0                   | 4.44             | 89            |                |             |
| Copper    |                      |       |     | 10                    | 12.6             | 126           |                |             |
| Iron      |                      |       |     | 20                    | 26.9             | 135           |                |             |
| Manganese |                      |       |     | 5.0                   | 5.14             | 103           |                |             |
| Nickel    |                      |       |     | 20                    | 19.6             | 98            |                |             |
| Zinc      |                      |       |     | 10                    | 10.5             | 105           |                |             |

## DISSOLVED METALS

-3-

## BLANKS

Client: JH Baxter &amp; Company

Service Request: K0603986

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   | 1.6                         | B | 1.6                                 | B | 1.8 | B | 1.2 | B |                   |  | 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 | 0.5                         | B | 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 &amp; Company

Service Request: K0603986

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<br>Calib.<br>Blank<br>(ug/L) | C | Continuing Calibration<br>Blank (ug/L) |   |     |   |     |   | Preparation<br>Blank<br>C | Method |
|-----------|--------------------------------------|---|----------------------------------------|---|-----|---|-----|---|---------------------------|--------|
|           |                                      |   | 1                                      | C | 2   | C | 3   | C |                           |        |
| Barium    |                                      |   | 0.9                                    | U | 0.9 | U | 0.9 | U |                           | 6010B  |
| Cadmium   |                                      |   | 3.0                                    | U | 3.0 | U | 3.0 | U |                           | 6010B  |
| Copper    |                                      |   | 2.0                                    | U | 2.0 | U | 2.2 | B |                           | 6010B  |
| Iron      |                                      |   | 4.0                                    | U | 4.0 | U | 4.0 | U |                           | 6010B  |
| Manganese |                                      |   | 0.4                                    | U | 0.4 | U | 0.4 | U |                           | 6010B  |
| Nickel    |                                      |   | 20                                     | U | 20  | U | 20  | U |                           | 6010B  |
| Zinc      |                                      |   | 2.0                                    | U | 2.0 | U | 2.0 | U |                           | 6010B  |

## DISSOLVED METALS

- 3 -

## BLANKS

Client: JH Baxter &amp; Company

Service Request: K0603986

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                 |  |        |
| Barium    |                             |   | 0.9                                 | U | 0.9 | U | 0.9 | U |                   |  | 6010B  |
| Cadmium   |                             |   | 3.0                                 | U | 3.0 | U | 3.0 | U |                   |  | 6010B  |
| Copper    |                             |   | 2.0                                 | U | 2.0 | U | 2.0 | U |                   |  | 6010B  |
| Iron      |                             |   | 4.0                                 | U | 4.0 | U | 4.0 | U |                   |  | 6010B  |
| Manganese |                             |   | 0.4                                 | U | 0.4 | U | 0.4 | U |                   |  | 6010B  |
| Nickel    |                             |   | 20                                  | U | 20  | U | 20  | U |                   |  | 6010B  |
| Zinc      |                             |   | 2.0                                 | U | 2.0 | U | 2.0 | U |                   |  | 6010B  |

## DISSOLVED METALS

-3-

## BLANKS

Client: JH Baxter &amp; Company

Service Request: K0603986

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<br>Calib.<br>Blank<br>(ug/L) | C | Continuing Calibration<br>Blank (ug/L) |   |     |   |     |   | Preparation<br>Blank<br>C | Method |
|-----------|--------------------------------------|---|----------------------------------------|---|-----|---|-----|---|---------------------------|--------|
|           |                                      |   | 1                                      | C | 2   | C | 3   | C |                           |        |
| Barium    |                                      |   | 0.9                                    | U | 0.9 | U | 0.9 | U |                           | 6010B  |
| Cadmium   |                                      |   | 3.0                                    | U | 3.0 | U | 3.0 | U |                           | 6010B  |
| Copper    |                                      |   | 2.0                                    | U | 2.0 | U | 2.0 | U |                           | 6010B  |
| Iron      |                                      |   | 4.0                                    | U | 4.0 | U | 4.0 | U |                           | 6010B  |
| Manganese |                                      |   | 0.4                                    | U | 0.4 | U | 0.4 | U |                           | 6010B  |
| Nickel    |                                      |   | 20                                     | U | 20  | U | 20  | U |                           | 6010B  |
| Zinc      |                                      |   | 2.0                                    | U | 2.0 | U | 2.0 | U |                           | 6010B  |

## DISSOLVED METALS

- 4 -

## ICP INTERFERENCE CHECK SAMPLE

Client: JH Baxter &amp; Company

Service Request: K0603986

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    | 2.5           | 471    | 94 |             |        |    |
| Cadmium   |        | 1000   | 6.8           | 960    | 96 |             |        |    |
| Copper    |        | 500    | 2.8           | 465    | 93 |             |        |    |
| Iron      | 200000 | 200000 | 173000        | 173000 | 87 |             |        |    |
| Manganese |        | 500    | -6.0          | 442    | 88 |             |        |    |
| Nickel    |        | 1000   | -6            | 873    | 87 |             |        |    |
| Zinc      |        | 1000   | 22.4          | 948    | 95 |             |        |    |

DISSOLVED METALS  
- 5a -  
SPIKE SAMPLE RECOVERY

Client: JH Baxter &amp; Company

Service Request: K0603986

Project No.: BXS-Wells-Landfill

Units: µg/L

Project Name: Arlington Landfill Wells

Basis: NA

Matrix: WATER

% Solids: 0.0

Sample Name: Batch QCS

Lab Code: K0604029-001S DISS

| Analyte   | Control<br>Limit %R | Spike<br>Result | C | Sample<br>Result | C | Spike<br>Added | %R  | Q | Method |
|-----------|---------------------|-----------------|---|------------------|---|----------------|-----|---|--------|
| Arsenic   | 62 - 116            | 41.0            |   | 4.3              | B | 40.0           | 92  |   | 7060A  |
| Barium    | 87 - 115            | 2030            |   | 51.9             |   | 2000           | 99  |   | 6010B  |
| Cadmium   | 73 - 123            | 53.1            |   | 3.0              | U | 50.0           | 106 |   | 6010B  |
| Copper    | 83 - 116            | 242             |   | 2.2              | B | 250            | 96  |   | 6010B  |
| Iron      |                     | 7300            |   | 6560             |   | 1000           | 74  |   | 6010B  |
| Manganese |                     | 3570            |   | 3180             |   | 500            | 78  |   | 6010B  |
| Nickel    | 89 - 115            | 541             |   | 36.8             |   | 500            | 101 |   | 6010B  |
| Zinc      | 84 - 115            | 495             |   | 5.1              | B | 500            | 98  |   | 6010B  |

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

## DISSOLVED METALS

- 6 -

## DUPLICATES

Client: JH Baxter &amp; Company

Service Request: K0603986

Project No.: BXS-Wells-Landfill

Units: µg/L

Project Name: Arlington Landfill Wells

Basis: NA

Matrix: WATER

% Solids: 0.0

Sample Name: Batch QCD

Lab Code: K0604029-001D DISS

| Analyte   | Control<br>Limit(%) | Sample (S) | C | Duplicate (D) | C | RPD | Q | Method |
|-----------|---------------------|------------|---|---------------|---|-----|---|--------|
| Arsenic   |                     | 4.3        | B | 3.8           | B | 12  |   | 7060A  |
| Barium    | 20                  | 51.9       |   | 51.5          |   | 1   |   | 6010B  |
| Cadmium   |                     | 3.0        | U | 3.0           | U |     |   | 6010B  |
| Copper    |                     | 2.2        | B | 4.6           | B | 70  |   | 6010B  |
| Iron      | 20                  | 6560       |   | 6530          |   | 0   |   | 6010B  |
| Manganese | 20                  | 3180       |   | 3160          |   | 1   |   | 6010B  |
| Nickel    |                     | 36.8       |   | 38.3          |   | 4   |   | 6010B  |
| Zinc      |                     | 5.1        | B | 4.3           | B | 19  |   | 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 &amp; Company

Service Request: K0603986

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         | 25.3  | 101 |               |       |   |        |    |  |
| Barium    | 5000         | 5110  | 102 |               |       |   |        |    |  |
| Cadmium   | 1250         | 1300  | 104 |               |       |   |        |    |  |
| Copper    | 625          | 624   | 100 |               |       |   |        |    |  |
| Iron      | 2500         | 2500  | 100 |               |       |   |        |    |  |
| Manganese | 1250         | 1270  | 102 |               |       |   |        |    |  |
| Nickel    | 1250         | 1300  | 104 |               |       |   |        |    |  |
| Zinc      | 1250         | 1270  | 102 |               |       |   |        |    |  |

August 25, 2006

Service Request No: K0606498

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 August 04, 2006. For your reference, these analyses have been assigned our service request number K0606498.

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](mailto:EErickson@kelso.caslab.com).

Respectfully submitted,

Columbia Analytical Services, Inc.



Elissa Erickson  
Project Chemist

EE/lmb

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### 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.

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

Service Request No.: K0606498  
Date Received: 8/4/06

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

Five water samples were received for analysis at Columbia Analytical Services on 8/4/06. 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 150.1:**

Samples 1-4 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.

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Approved by ELISSA Date 9-13-06

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## **Chain of Custody Documentation**

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# CHAIN OF CUSTODY

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

PAGE 1 OF 2 SR#: 1060 6448 COC # \_\_\_\_\_

|                                                     |         |       |          |        |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------|---------|-------|----------|--------|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PROJECT NAME: <u>JH Baxter &amp; Co</u>             |         |       |          |        | NUMBER OF CONTAINERS | Semi-volatile Organics by GC/MS<br>625 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/><br>Volatile Organics<br>624 <input type="checkbox"/> 8260 <input type="checkbox"/> 8021 <input type="checkbox"/> BTEX <input type="checkbox"/><br>Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Oil <input type="checkbox"/><br>Fuel Fingerprints (FIQ) <input type="checkbox"/><br>Oil & Grease/TPRH <input type="checkbox"/> 1664 HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/><br>PCB's <input type="checkbox"/> Congeners <input type="checkbox"/><br>Pesticides/Herbicides <input type="checkbox"/> 8081A <input type="checkbox"/> 8141A <input type="checkbox"/> 8151A <input type="checkbox"/><br>Chlorophenolics - 8151M <input type="checkbox"/> PCP <input type="checkbox"/><br>Tri <input type="checkbox"/> Tetra <input type="checkbox"/> PAHS 8310 <input type="checkbox"/> SIM <input type="checkbox"/><br>Metals: Total or (See list below) <input type="checkbox"/><br>Cyanide <input type="checkbox"/> Hex-Chrom <input type="checkbox"/><br>Copper <input type="checkbox"/> Lead <input type="checkbox"/> Cadmium <input type="checkbox"/> BOD, TSS, (DS) circle <input type="checkbox"/><br>NH <sub>4</sub> -N <input type="checkbox"/> DOC (circle) <input type="checkbox"/> Total-P; TKN <input type="checkbox"/><br>TOX 9020 <input type="checkbox"/> AOX 1650 <input type="checkbox"/> 506 <input type="checkbox"/><br>Tannin/Lignin |
| PROJECT NUMBER: <u>Landfill Wells</u>               |         |       |          |        |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| PROJECT MANAGER: <u>Mani Leelarson</u>              |         |       |          |        |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| COMPANY/ADDRESS: <u>6520 188th St NE PO Box 305</u> |         |       |          |        |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| CITY/STATE/ZIP: <u>Arlington WA 98223</u>           |         |       |          |        |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| E-MAIL ADDRESS: <u>mlarson@jhbaxter.com</u>         |         |       |          |        |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| PHONE: <u>360 435 2446</u> FAX: <u>360 435 3035</u> |         |       |          |        |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| SAMPLER'S SIGNATURE: <u>Mani Leelarson</u>          |         |       |          |        |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| SAMPLE #                                            | DATE    | TIME  | LAB I.D. | MATRIX | REMARKS              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| BXS-4                                               | 8-20-06 | 10:10 | 1        | Water  | 3                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| BXS-6                                               | 8-20-06 | 10:30 | 2        | Water  | 3                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| BXS-1                                               | 8-20-06 | 11:45 | 3        | Water  | 3                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| BXS-5                                               | 8-20-06 | 12:15 | 4        | Water  | 3                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| BXS-2                                               | 8-30-06 | 14:00 | 5        | Water  | 3                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

|                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>REPORT REQUIREMENTS</b><br><input checked="" type="checkbox"/> I. Routine Report: Method Blank, Surrogate, as required<br><input type="checkbox"/> II. Report Dup., MS, MSD as required<br><input type="checkbox"/> III. Data Validation Report (includes all raw data)<br><input type="checkbox"/> IV. CLP Deliverable Report<br><input type="checkbox"/> V. EDD | <b>INVOICE INFORMATION</b><br>P.O. # _____<br>Bill To: <u>JH Baxter &amp; Co</u><br><u>PO Box 10777</u><br><u>Everett, WA 98240</u>                                                                         | Circle which metals are to be analyzed:<br>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<br>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 |
|                                                                                                                                                                                                                                                                                                                                                                      | <b>TURNAROUND REQUIREMENTS</b><br>_____ 24 hr. _____ 48 hr.<br>_____ 5 Day<br><input checked="" type="checkbox"/> Standard (10-15 working days)<br>_____ Provide FAX Results<br>Requested Report Date _____ | <b>SPECIAL INSTRUCTIONS/COMMENTS:</b><br><u>ATTN: RieAnn Thomas</u><br><u>Mani Leelarson</u>                                                                                                                                                                                                      |

|                                                                                                                                        |                                                                                                                                   |                                                                                                 |                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <b>RELINQUISHED BY:</b><br><u>Mani Leelarson</u> 8-30-06 16:00<br>Signature: _____ Date/Time: _____<br>Printed Name: _____ Firm: _____ | <b>RECEIVED BY:</b><br><u>Mani Leelarson</u> 8/30/06 1000<br>Signature: _____ Date/Time: _____<br>Printed Name: _____ Firm: _____ | <b>RELINQUISHED BY:</b><br>Signature: _____ Date/Time: _____<br>Printed Name: _____ Firm: _____ | <b>RECEIVED BY:</b><br>Signature: _____ Date/Time: _____<br>Printed Name: _____ Firm: _____ |
|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|

**Columbia Analytical Services Inc.  
Cooler Receipt and Preservation Form**

ru CL

Project/Client JH Baxter Service Request K06 06498  
Cooler received on 8/4/06 and opened on 8/4/06 by F. Bak

1. Were custody seals on outside of coolers? ☒ Y ☐ N  
If yes, how many and where? 1 front, 1 side
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: \_\_\_\_\_ ☒ Y ☐ N
5. COC# \_\_\_\_\_  
Temperature of cooler(s) upon receipt: (°C) 4.6 \_\_\_\_\_  
Temperature Blank: (°C) 3.2 \_\_\_\_\_
- 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 cell packs
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**

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## **General Chemistry Parameters**

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# 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 : K0606498  
Date Collected : 08/02,03/06  
Date Received : 08/04/06

### Ammonia as Nitrogen

Analysis Method : 350.1  
Test Notes :

Units : mg/L (ppm)  
Basis : NA

| Sample Name  | Lab Code     | MRL  | MDL   | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|------|-------|--------------------|------------------|--------|-----------------|
| BXS-4        | K0606498-001 | 0.05 | 0.006 | 1                  | 08/14/06         | 0.50   |                 |
| BXS-6        | K0606498-002 | 0.05 | 0.006 | 1                  | 08/14/06         | 0.51   |                 |
| BXS-1        | K0606498-003 | 0.05 | 0.006 | 1                  | 08/14/06         | 0.011  | J               |
| BXS-5        | K0606498-004 | 0.05 | 0.006 | 1                  | 08/14/06         | ND     |                 |
| BXS-2        | K0606498-005 | 0.05 | 0.006 | 1                  | 08/14/06         | 0.011  | J               |
| Method Blank | K0606498-MB  | 0.05 | 0.006 | 1                  | 08/14/06         | 0.006  | J               |

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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**QA/QC Report**

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

**Service Request :** K0606498  
**Date Collected :** 08/02/06  
**Date Received :** 08/04/06  
**Date Prepared :** NA  
**Date Analyzed :** 08/14/06

**Duplicate Summary**  
**Inorganic Parameters**

**Sample Name :** BXS-4  
**Lab Code :** K0606498-001DUP  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Analyte</b>      | <b>Analysis Method</b> | <b>MRL</b> | <b>Sample Result</b> | <b>Duplicate Sample Result</b> | <b>Average</b> | <b>Relative Percent Difference</b> | <b>Result Notes</b> |
|---------------------|------------------------|------------|----------------------|--------------------------------|----------------|------------------------------------|---------------------|
| Ammonia as Nitrogen | 350.1                  | 0.05       | 0.50                 | 0.50                           | 0.50           | <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 : K0606498  
Date Collected : 08/02/06  
Date Received : 08/04/06  
Date Prepared : NA  
Date Analyzed : 08/14/06

Matrix Spike Summary  
Inorganic Parameters

Sample Name : BXS-4  
Lab Code : K0606498-001MS  
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        | 0.50          | 2.53                 | 102              | 90-110                                 |              |

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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 : K0606498  
Date Collected : NA  
Date Received : NA  
Date Prepared : NA  
Date Analyzed : 08/14/06

Laboratory Control Sample Summary  
Inorganic Parameters

Sample Name : Laboratory Control Sample  
Lab Code : K0606498-LCS  
Test Notes :

Units : mg/L (ppm)  
Basis : NA

| Analyte             | Prep<br>Method | Analysis<br>Method | True Value | Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery<br>Acceptance<br>Limits | Result<br>Notes |
|---------------------|----------------|--------------------|------------|--------|---------------------|----------------------------------------------------|-----------------|
| Ammonia as Nitrogen | None           | 350.1              | 4.0        | 4.0    | 100                 | 90-110                                             |                 |

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

Client : JH Baxter & Company  
Project : Arlington Landfill Wells

Service Request : K0606498  
Date Collected : NA  
Date Received : NA

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

### CONTINUING CALIBRATION VERIFICATION (CCV)

|             | Date<br>Analyzed | True<br>Value | Measured<br>Value | Percent<br>Recovery |
|-------------|------------------|---------------|-------------------|---------------------|
| CCV1 Result | 08/14/06         | 2.00          | 1.98              | 99                  |
| CCV2 Result | 08/14/06         | 2.00          | 2.00              | 100                 |
| CCV3 Result | 08/14/06         | 2.00          | 1.99              | 100                 |
| CCV4 Result | 08/14/06         | 2.00          | 2.01              | 101                 |
| CCV5 Result | 08/14/06         | 2.00          | 2.01              | 101                 |
| CCV6 Result | 08/14/06         | 2.00          | 2.00              | 100                 |
| CCV7 Result | 08/14/06         | 2.00          | 2.00              | 100                 |
| CCV8 Result | 08/14/06         | 2.00          | 2.01              | 101                 |

### CONTINUING CALIBRATION BLANK (CCB)

|             | Date<br>Analyzed | MRL  | Blank<br>Value |
|-------------|------------------|------|----------------|
| CCB1 Result | 08/14/06         | 0.05 | ND             |
| CCB2 Result | 08/14/06         | 0.05 | ND             |
| CCB3 Result | 08/14/06         | 0.05 | ND             |
| CCB4 Result | 08/14/06         | 0.05 | 0.026 J        |
| CCB5 Result | 08/14/06         | 0.05 | ND             |
| CCB6 Result | 08/14/06         | 0.05 | ND             |
| CCB7 Result | 08/14/06         | 0.05 | 0.007 J        |
| CCB8 Result | 08/14/06         | 0.05 | ND             |

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**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 :** K0606498  
**Date Collected :** 08/02,03/06  
**Date Received :** 08/04/06

**Chloride**

**Analysis Method :** 300.0  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Sample Name</b> | <b>Lab Code</b> | <b>MRL</b> | <b>MDL</b> | <b>Dilution<br/>Factor</b> | <b>Date<br/>Analyzed</b> | <b>Result</b> | <b>Result<br/>Notes</b> |
|--------------------|-----------------|------------|------------|----------------------------|--------------------------|---------------|-------------------------|
| BXS-4              | K0606498-001    | 0.4        | 0.06       | 2                          | 08/14/06                 | 1.8           |                         |
| BXS-6              | K0606498-002    | 0.4        | 0.06       | 2                          | 08/14/06                 | 1.8           |                         |
| BXS-1              | K0606498-003    | 0.4        | 0.06       | 2                          | 08/15/06                 | 4.7           |                         |
| BXS-5              | K0606498-004    | 0.4        | 0.06       | 2                          | 08/14/06                 | ND            |                         |
| BXS-2              | K0606498-005    | 1.0        | 0.15       | 5                          | 08/15/06                 | 4.0           |                         |
| Method Blank       | K0606498-MB     | 0.2        | 0.03       | 1                          | 08/14/06                 | 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 :** K0606498  
**Date Collected :** 08/02/06  
**Date Received :** 08/04/06  
**Date Prepared :** NA  
**Date Analyzed :** 08/15/06

**Duplicate Summary  
Inorganic Parameters**

**Sample Name :** BXS-1  
**Lab Code :** K0606498-003DUP  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Analyte</b> | <b>Analysis Method</b> | <b>MRL</b> | <b>Sample Result</b> | <b>Duplicate Sample Result</b> | <b>Average</b> | <b>Relative Percent Difference</b> | <b>Result Notes</b> |
|----------------|------------------------|------------|----------------------|--------------------------------|----------------|------------------------------------|---------------------|
| Chloride       | 300.0                  | 0.4        | 4.7                  | 4.8                            | 4.8            | 2                                  |                     |

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**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 :** K0606498  
**Date Collected :** 08/02/06  
**Date Received :** 08/04/06  
**Date Prepared :** NA  
**Date Analyzed :** 08/15/06

**Matrix Spike Summary  
Inorganic Parameters**

**Sample Name :** BXS-1  
**Lab Code :** K0606498-003MS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte  | Analysis<br>Method | MRL | Spike<br>Level | Sample<br>Result | Spiked<br>Sample<br>Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|----------|--------------------|-----|----------------|------------------|----------------------------|---------------------|----------------------------|-----------------|
|          |                    |     |                |                  |                            |                     | Acceptance<br>Limits       |                 |
| Chloride | 300.0              | 0.4 | 4.0            | 4.7              | 8.3                        | 90                  | 80-120                     |                 |

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**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 :** K0606498  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 08/14/06

**Laboratory Control Sample Summary  
Inorganic Parameters**

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0606498-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte  | Prep<br>Method | Analysis<br>Method | True Value | Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|----------|----------------|--------------------|------------|--------|---------------------|----------------------------|-----------------|
|          |                |                    |            |        |                     | Acceptance<br>Limits       |                 |
| Chloride | None           | 300.0              | 5.0        | 4.7    | 94                  | 90-110                     |                 |

## COLUMBIA ANALYTICAL SERVICES, INC.

### QA/QC Report

Client : JH Baxter & Company  
Project : Arlington Landfill Wells

Service Request : K0606498  
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  | 08/14/06      | 5.0        | 4.8            | 96               |
| CCV2 Result  | 08/14/06      | 5.0        | 4.7            | 94               |
| CCV3 Result  | 08/14/06      | 5.0        | 4.7            | 94               |
| CCV4 Result  | 08/14/06      | 5.0        | 4.8            | 96               |
| CCV5 Result  | 08/14/06      | 5.0        | 4.8            | 96               |
| CCV6 Result  | 08/14/06      | 5.0        | 4.8            | 96               |
| CCV7 Result  | 08/14/05      | 5.0        | 4.8            | 96               |
| CCV8 Result  | 08/15/06      | 5.0        | 4.8            | 96               |
| CCV9 Result  | 08/15/06      | 5.0        | 4.7            | 94               |
| CCV10 Result | 08/15/06      | 5.0        | 4.8            | 96               |
| CCV11 Result | 08/15/06      | 5.0        | 4.8            | 96               |

### CONTINUING CALIBRATION BLANK (CCB)

|              | Date Analyzed | MRL | Blank Value |
|--------------|---------------|-----|-------------|
| CCB1 Result  | 08/14/06      | 0.2 | ND          |
| CCB2 Result  | 08/14/06      | 0.2 | ND          |
| CCB3 Result  | 08/14/06      | 0.2 | ND          |
| CCB4 Result  | 08/14/06      | 0.2 | ND          |
| CCB5 Result  | 08/14/06      | 0.2 | ND          |
| CCB6 Result  | 08/14/06      | 0.2 | ND          |
| CCB7 Result  | 08/14/06      | 0.2 | ND          |
| CCB8 Result  | 08/15/06      | 0.2 | ND          |
| CCB9 Result  | 08/15/06      | 0.2 | ND          |
| CCB10 Result | 08/15/06      | 0.2 | ND          |
| CCB11 Result | 08/15/06      | 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 :** K0606498  
**Date Collected :** 08/02,03/06  
**Date Received :** 08/04/06

### Sulfate

**Analysis Method :** 300.0  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Sample Name  | Lab Code     | MRL | MDL  | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|-----|------|--------------------|------------------|--------|-----------------|
| BXS-4        | K0606498-001 | 0.4 | 0.06 | 2                  | 08/14/06         | 1.4    |                 |
| BXS-6        | K0606498-002 | 0.4 | 0.06 | 2                  | 08/14/06         | 1.4    |                 |
| BXS-1        | K0606498-003 | 0.4 | 0.06 | 2                  | 08/15/06         | 11.2   |                 |
| BXS-5        | K0606498-004 | 0.4 | 0.06 | 2                  | 08/14/06         | ND     |                 |
| BXS-2        | K0606498-005 | 0.4 | 0.06 | 2                  | 08/15/06         | 0.3    |                 |
| Method Blank | K0606498-MB  | 0.2 | 0.03 | 1                  | 08/14/06         | 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 :** K0606498  
**Date Collected :** 08/02/06  
**Date Received :** 08/04/06  
**Date Prepared :** NA  
**Date Analyzed :** 08/15/06

### Duplicate Summary Inorganic Parameters

**Sample Name :** BXS-1  
**Lab Code :** K0606498-003DUP  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte | Analysis<br>Method | MRL | Sample<br>Result | Duplicate<br>Sample<br>Result | Average | Relative<br>Percent<br>Difference | Result<br>Notes |
|---------|--------------------|-----|------------------|-------------------------------|---------|-----------------------------------|-----------------|
| Sulfate | 300.0              | 0.4 | 11.2             | 11.2                          | 11.2    | <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 :** K0606498  
**Date Collected :** 08/02/06  
**Date Received :** 08/04/06  
**Date Prepared :** NA  
**Date Analyzed :** 08/15/06

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** BXS-1  
**Lab Code :** K0606498-003MS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte | Analysis<br>Method | MRL | Spike<br>Level | Sample<br>Result | Spiked<br>Sample<br>Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|---------|--------------------|-----|----------------|------------------|----------------------------|---------------------|----------------------------|-----------------|
|         |                    |     |                |                  |                            |                     | Acceptance<br>Limits       |                 |
| Sulfate | 300.0              | 0.4 | 4.0            | 11.2             | 15.9                       | 118                 | 80-120                     |                 |

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**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 :** K0606498  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 08/14/06

**Laboratory Control Sample Summary**  
**Inorganic Parameters**

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0606498-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Analyte</b> | <b>Prep<br/>Method</b> | <b>Analysis<br/>Method</b> | <b>True Value</b> | <b>Result</b> | <b>Percent<br/>Recovery</b> | <b>CAS<br/>Percent<br/>Recovery<br/>Acceptance<br/>Limits</b> | <b>Result<br/>Notes</b> |
|----------------|------------------------|----------------------------|-------------------|---------------|-----------------------------|---------------------------------------------------------------|-------------------------|
| Sulfate        | None                   | 300.0                      | 5.0               | 5.2           | 104                         | 90-110                                                        |                         |

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# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

Client : JH Baxter & Company  
Project : Arlington Landfill Wells

Service Request : K0606498  
Date Collected : NA  
Date Received : NA

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

### CONTINUING CALIBRATION VERIFICATION (CCV)

|              | Date<br>Analyzed | True<br>Value | Measured<br>Value | Percent<br>Recovery |
|--------------|------------------|---------------|-------------------|---------------------|
| CCV1 Result  | 08/14/06         | 5.0           | 5.2               | 104                 |
| CCV2 Result  | 08/14/06         | 5.0           | 5.2               | 104                 |
| CCV3 Result  | 08/14/06         | 5.0           | 5.1               | 102                 |
| CCV4 Result  | 08/14/06         | 5.0           | 5.2               | 104                 |
| CCV5 Result  | 08/14/06         | 5.0           | 5.2               | 104                 |
| CCV6 Result  | 08/14/06         | 5.0           | 5.3               | 106                 |
| CCV7 Result  | 08/14/06         | 5.0           | 5.2               | 104                 |
| CCV8 Result  | 08/15/06         | 5.0           | 5.2               | 104                 |
| CCV9 Result  | 08/15/06         | 5.0           | 5.2               | 104                 |
| CCV10 Result | 08/15/06         | 5.0           | 5.2               | 104                 |
| CCV11 Result | 08/15/06         | 5.0           | 5.2               | 104                 |

### CONTINUING CALIBRATION BLANK (CCB)

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|              | Date<br>Analyzed | MRL | Blank<br>Value |
|--------------|------------------|-----|----------------|
| CCB1 Result  | 08/14/06         | 0.2 | ND             |
| CCB2 Result  | 08/14/06         | 0.2 | ND             |
| CCB3 Result  | 08/14/06         | 0.2 | ND             |
| CCB4 Result  | 08/14/06         | 0.2 | ND             |
| CCB5 Result  | 08/14/06         | 0.2 | ND             |
| CCB6 Result  | 08/14/06         | 0.2 | ND             |
| CCB7 Result  | 08/14/06         | 0.2 | ND             |
| CCB8 Result  | 08/15/06         | 0.2 | ND             |
| CCB9 Result  | 08/15/06         | 0.2 | ND             |
| CCB10 Result | 08/15/06         | 0.2 | ND             |
| CCB11 Result | 08/15/06         | 0.2 | ND             |

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**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 :** K0606498  
**Date Collected :** 08/02,03/06  
**Date Received :** 08/04/06

**Chemical Oxygen Demand**

**Analysis Method :** 410.2  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Sample Name</b> | <b>Lab Code</b> | <b>MRL</b> | <b>MDL</b> | <b>Dilution<br/>Factor</b> | <b>Date<br/>Analyzed</b> | <b>Result</b> | <b>Result<br/>Notes</b> |
|--------------------|-----------------|------------|------------|----------------------------|--------------------------|---------------|-------------------------|
| BXS-4              | K0606498-001    | 5          | 2.5        | 1                          | 08/16/06                 | 4             | J                       |
| BXS-6              | K0606498-002    | 5          | 2.5        | 1                          | 08/16/06                 | 2.5           | J                       |
| BXS-1              | K0606498-003    | 5          | 2.5        | 1                          | 08/16/06                 | 13            |                         |
| BXS-5              | K0606498-004    | 5          | 2.5        | 1                          | 08/16/06                 | ND            |                         |
| BXS-2              | K0606498-005    | 5          | 2.5        | 1                          | 08/16/06                 | 36            |                         |
| Method Blank       | K0606498-MB     | 5          | 2.5        | 1                          | 08/16/06                 | 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 :** K0606498  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 08/16/06

### Duplicate Summary Inorganic Parameters

**Sample Name :** Batch QC  
**Lab Code :** K0606476-001DUP  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte                | Analysis<br>Method | MRL | Sample<br>Result | Duplicate<br>Sample<br>Result | Average | Relative<br>Percent<br>Difference | Result<br>Notes |
|------------------------|--------------------|-----|------------------|-------------------------------|---------|-----------------------------------|-----------------|
| Chemical Oxygen Demand | 410.2              | 5   | 9                | 10                            | 10      | 10                                |                 |

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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**QA/QC Report**

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

**Service Request :** K0606498  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 08/16/06

**Matrix Spike Summary  
Inorganic Parameters**

**Sample Name :** Batch QC  
**Lab Code :** K0606476-001MS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Analyte</b>         | <b>Analysis<br/>Method</b> | <b>MRL</b> | <b>Spike<br/>Level</b> | <b>Sample<br/>Result</b> | <b>Spiked<br/>Sample<br/>Result</b> | <b>Percent<br/>Recovery</b> | <b>CAS<br/>Percent<br/>Recovery<br/>Acceptance<br/>Limits</b> | <b>Result<br/>Notes</b> |
|------------------------|----------------------------|------------|------------------------|--------------------------|-------------------------------------|-----------------------------|---------------------------------------------------------------|-------------------------|
| Chemical Oxygen Demand | 410.2                      | 13         | 100                    | 9                        | 102                                 | 93                          | 75-125                                                        |                         |

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# 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 :** K0606498  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 08/16/06

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0606498-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte                | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS                                | Result Notes |
|------------------------|-------------|-----------------|------------|--------|------------------|------------------------------------|--------------|
|                        |             |                 |            |        |                  | Percent Recovery Acceptance Limits |              |
| Chemical Oxygen Demand | None        | 410.2           | 121        | 115    | 95               | 85-115                             |              |

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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**Analytical Report**

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

**Service Request :** K0606498  
**Date Collected :** 08/02,03/06  
**Date Received :** 08/04/06

**Conductivity**

**Analysis Method :** 120.1  
**Test Notes :**

**Units :** uMhos/cm  
**Basis :** NA

| <b>Sample Name</b> | <b>Lab Code</b> | <b>MRL</b> | <b>MDL</b> | <b>Dilution<br/>Factor</b> | <b>Date<br/>Analyzed</b> | <b>Result</b> | <b>Result<br/>Notes</b> |
|--------------------|-----------------|------------|------------|----------------------------|--------------------------|---------------|-------------------------|
| BXS-4              | K0606498-001    | 2          | 0.6        | 1                          | 08/09/06                 | 226           |                         |
| BXS-6              | K0606498-002    | 2          | 0.6        | 1                          | 08/09/06                 | 228           |                         |
| BXS-1              | K0606498-003    | 2          | 0.6        | 1                          | 08/09/06                 | 481           |                         |
| BXS-5              | K0606498-004    | 2          | 0.6        | 1                          | 08/09/06                 | 2             |                         |
| BXS-2              | K0606498-005    | 2          | 0.6        | 1                          | 08/09/06                 | 935           |                         |
| Method Blank       | K0606498-MB     | 2          | 0.6        | 1                          | 08/09/06                 | ND            |                         |

# QA/QC Report

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

Service Request : K0606498  
 Date Collected : 08/02/06  
 Date Received : 08/04/06  
 Date Prepared : NA  
 Date Analyzed : 08/09/06

## Duplicate Summary Inorganic Parameters

Sample Name : BXS-4  
 Lab Code : K0606498-001DUP  
 Test Notes :

Units : uMhos/cm  
 Basis : NA

| Analyte      | Analysis Method | MRL | Sample Result | Duplicate Sample Result | Average | Relative Percent Difference | Result Notes |
|--------------|-----------------|-----|---------------|-------------------------|---------|-----------------------------|--------------|
| Conductivity | 120.1           | 2   | 226           | 228                     | 227     | <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 : K0606498  
Date Collected : NA  
Date Received : NA  
Date Prepared : NA  
Date Analyzed : 08/09/06

### Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Laboratory Control Sample  
Lab Code : K0606498-LCS  
Test Notes :

Units : uMhos/cm  
Basis : NA

| Analyte      | Prep<br>Method | Analysis<br>Method | True Value | Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery<br>Acceptance<br>Limits | Result<br>Notes |
|--------------|----------------|--------------------|------------|--------|---------------------|----------------------------------------------------|-----------------|
|              |                |                    |            |        |                     |                                                    |                 |
| Conductivity | None           | 120.1              | 927        | 1040   | 112                 | 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 :** K0606498  
**Date Collected :** 08/02,03/06  
**Date Received :** 08/04/06

Nitrate+Nitrite as Nitrogen

**Analysis Method :** 353.2  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Sample Name  | Lab Code     | MRL  | MDL   | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|------|-------|--------------------|------------------|--------|-----------------|
| BXS-4        | K0606498-001 | 0.05 | 0.006 | 1                  | 08/16/06         | ND     |                 |
| BXS-6        | K0606498-002 | 0.05 | 0.006 | 1                  | 08/16/06         | ND     |                 |
| 3XS-1        | K0606498-003 | 0.05 | 0.006 | 1                  | 08/16/06         | 0.96   |                 |
| BXS-5        | K0606498-004 | 0.05 | 0.006 | 1                  | 08/16/06         | ND     |                 |
| 3XS-2        | K0606498-005 | 0.05 | 0.006 | 1                  | 08/16/06         | 0.010  | J               |
| Method Blank | K0606498-MB  | 0.05 | 0.006 | 1                  | 08/16/06         | 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 : K0606498  
Date Collected : 08/03/06  
Date Received : 08/04/06  
Date Prepared : NA  
Date Analyzed : 08/16/06

Duplicate Summary  
Inorganic Parameters

Sample Name : BXS-2  
Lab Code : K0606498-005DUP  
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 | 0.010         | 0.013                   | 0.012   | 25                          | 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 :** K0606498  
**Date Collected :** 08/03/06  
**Date Received :** 08/04/06  
**Date Prepared :** NA  
**Date Analyzed :** 08/16/06

**Matrix Spike Summary**  
**Inorganic Parameters**

**Sample Name :** BXS-2  
**Lab Code :** K0606498-005MS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte                     | Analysis<br>Method | MRL  | Spike<br>Level | Sample<br>Result | Spiked<br>Sample<br>Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|-----------------------------|--------------------|------|----------------|------------------|----------------------------|---------------------|----------------------------|-----------------|
|                             |                    |      |                |                  |                            |                     | Acceptance<br>Limits       |                 |
| Nitrate+Nitrite as Nitrogen | 353.2              | 0.05 | 2.00           | 0.010            | 2.03                       | 101                 | 90-110                     |                 |

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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**QA/QC Report**

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

**Service Request :** K0606498  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 08/16/06

**Laboratory Control Sample Summary**  
**Inorganic Parameters**

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0606498-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Analyte</b>              | <b>Prep<br/>Method</b> | <b>Analysis<br/>Method</b> | <b>True Value</b> | <b>Result</b> | <b>Percent<br/>Recovery</b> | <b>CAS<br/>Percent<br/>Recovery<br/>Acceptance<br/>Limits</b> | <b>Result<br/>Notes</b> |
|-----------------------------|------------------------|----------------------------|-------------------|---------------|-----------------------------|---------------------------------------------------------------|-------------------------|
| Nitrate+Nitrite as Nitrogen | None                   | 353.2                      | 4.3               | 4.3           | 100                         | 90-110                                                        |                         |

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** JH Baxter & Company  
**Project :** Arlington Landfill Wells

**Service Request :** K0606498  
**Date Collected :** NA  
**Date Received :** NA

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

### CONTINUING CALIBRATION VERIFICATION (CCV)

|             | Date<br>Analyzed | True<br>Value | Measured<br>Value | Percent<br>Recovery |
|-------------|------------------|---------------|-------------------|---------------------|
| CCV1 Result | 08/16/06         | 2.00          | 2.06              | 103                 |
| CCV2 Result | 08/16/06         | 2.00          | 2.03              | 102                 |
| CCV3 Result | 08/16/06         | 2.00          | 2.04              | 102                 |
| CCV4 Result | 08/16/06         | 2.00          | 2.03              | 102                 |
| CCV5 Result | 08/16/06         | 2.00          | 2.05              | 103                 |
| CCV6 Result | 08/16/06         | 2.00          | 2.04              | 102                 |
| CCV7 Result | 08/16/06         | 2.00          | 2.05              | 103                 |
| CCV8 Result | 08/16/06         | 2.00          | 2.05              | 103                 |
| CCV9 Result | 08/16/06         | 2.00          | 2.06              | 103                 |

### CONTINUING CALIBRATION BLANK (CCB)

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|             | Date<br>Analyzed | MRL  | Blank<br>Value |
|-------------|------------------|------|----------------|
| CCB1 Result | 08/16/06         | 0.05 | ND             |
| CCB2 Result | 08/16/06         | 0.05 | ND             |
| CCB3 Result | 08/16/06         | 0.05 | ND             |
| CCB4 Result | 08/16/06         | 0.05 | ND             |
| CCB5 Result | 08/16/06         | 0.05 | ND             |
| CCB6 Result | 08/16/06         | 0.05 | ND             |
| CCB7 Result | 08/16/06         | 0.05 | ND             |
| CCB8 Result | 08/16/06         | 0.05 | ND             |
| CCB9 Result | 08/16/06         | 0.05 | ND             |

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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**Analytical Report**

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

**Service Request :** K0606498  
**Date Collected :** 08/02,03/06  
**Date Received :** 08/04/06

pH

**Analysis Method :** 150.1  
**Test Notes :**

**Units :** pH UNITS  
**Basis :** NA

| Sample Name | Lab Code     | MRL | MDL | Dilution<br>Factor | Date/Time<br>Analyzed | Result | Result<br>Notes |
|-------------|--------------|-----|-----|--------------------|-----------------------|--------|-----------------|
| BXS-4       | K0606498-001 | -   | -   | 1                  | 08/04/06 13:56        | 7.88   |                 |
| BXS-6       | K0606498-002 | -   | -   | 1                  | 08/04/06 13:58        | 7.90   |                 |
| BXS-1       | K0606498-003 | -   | -   | 1                  | 08/04/06 13:59        | 6.39   |                 |
| BXS-5       | K0606498-004 | -   | -   | 1                  | 08/04/06 14:02        | 5.19   |                 |
| BXS-2       | K0606498-005 | -   | -   | 1                  | 08/04/06 13:54        | 6.33   |                 |

**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 :** K0606498  
**Date Collected :** 08/02/06  
**Date Received :** 08/04/06  
**Date Prepared :** NA  
**Date Analyzed :** 08/04/06

**Duplicate Summary  
Inorganic Parameters**

**Sample Name :** BXS-4  
**Lab Code :** K0606498-001DUP  
**Test Notes :**

**Units :** pH UNITS  
**Basis :** NA

| <b>Analyte</b> | <b>Analysis<br/>Method</b> | <b>MRL</b> | <b>Sample<br/>Result</b> | <b>Duplicate<br/>Sample<br/>Result</b> | <b>Average</b> | <b>Relative<br/>Percent<br/>Difference</b> | <b>Result<br/>Notes</b> |
|----------------|----------------------------|------------|--------------------------|----------------------------------------|----------------|--------------------------------------------|-------------------------|
| pH             | 150.1                      | -          | 7.88                     | 7.91                                   | 7.90           | <1                                         |                         |

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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**QA/QC Report**

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

**Service Request :** K0606498  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 08/04/06

**Laboratory Control Sample Summary**  
**Inorganic Parameters**

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0606498-LCS  
**Test Notes :**

**Units :** pH UNITS  
**Basis :** NA

| Analyte | Prep<br>Method | Analysis<br>Method | True Value | Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|---------|----------------|--------------------|------------|--------|---------------------|----------------------------|-----------------|
|         |                |                    |            |        |                     | Acceptance<br>Limits       |                 |
| pH      | None           | 150.1              | 9.22       | 9.10   | 99                  | 85-115                     |                 |

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# 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 :** K0606498  
**Date Collected :** 08/02,03/06  
**Date Received :** 08/04/06

### Tannin and Lignin

**Analysis Method :** SM 5550 B  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Sample Name  | Lab Code     | MRL | MDL  | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|-----|------|--------------------|------------------|--------|-----------------|
| BXS-4        | K0606498-001 | 0.2 | 0.05 | 1                  | 08/16/06         | 0.3    |                 |
| BXS-6        | K0606498-002 | 0.2 | 0.05 | 1                  | 08/16/06         | 0.3    |                 |
| BXS-1        | K0606498-003 | 0.2 | 0.05 | 1                  | 08/16/06         | 0.15   | J               |
| BXS-5        | K0606498-004 | 0.2 | 0.05 | 1                  | 08/16/06         | ND     |                 |
| BXS-2        | K0606498-005 | 0.2 | 0.05 | 1                  | 08/16/06         | 1.6    |                 |
| Method Blank | K0606498-MB  | 0.2 | 0.05 | 1                  | 08/16/06         | ND     |                 |

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

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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**QA/QC Report**

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

**Service Request :** K0606498  
**Date Collected :** 08/02/06  
**Date Received :** 08/04/06  
**Date Prepared :** NA  
**Date Analyzed :** 08/16/06

**Duplicate Summary**  
**Inorganic Parameters**

**Sample Name :** BXS-4  
**Lab Code :** K0606498-001DUP  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Analyte</b>    | <b>Analysis Method</b> | <b>MRL</b> | <b>Sample Result</b> | <b>Duplicate Sample Result</b> | <b>Average</b> | <b>Relative Percent Difference</b> | <b>Result Notes</b> |
|-------------------|------------------------|------------|----------------------|--------------------------------|----------------|------------------------------------|---------------------|
| Tannin and Lignin | SM 5550 B              | 0.2        | 0.3                  | 0.3                            | 0.3            | <1                                 |                     |

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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 :** BXS-Wells-Landfill  
**Sample Matrix :** WATER

**Service Request :** K0606498  
**Date Collected :** 08/02/06  
**Date Received :** 08/04/06  
**Date Prepared :** NA  
**Date Analyzed :** 08/16/06

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** BXS-4  
**Lab Code :** K0606498-001MS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte           | Analysis<br>Method | MRL | Spike<br>Level | Sample<br>Result | Spiked<br>Sample<br>Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery<br>Acceptance | Result<br>Notes |
|-------------------|--------------------|-----|----------------|------------------|----------------------------|---------------------|------------------------------------------|-----------------|
|                   |                    |     |                |                  |                            |                     | Limits                                   |                 |
| Tannin and Lignin | SM 5550 B          | 0.2 | 1.0            | 0.3              | 1.4                        | 110                 | 75-125                                   |                 |

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**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 :** K0606498  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 08/16/06

**Laboratory Control Sample Summary**  
**Inorganic Parameters**

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0606498-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Analyte</b>    | <b>Prep<br/>Method</b> | <b>Analysis<br/>Method</b> | <b>True Value</b> | <b>Result</b> | <b>Percent<br/>Recovery</b> | <b>CAS<br/>Percent<br/>Recovery<br/>Acceptance<br/>Limits</b> | <b>Result<br/>Notes</b> |
|-------------------|------------------------|----------------------------|-------------------|---------------|-----------------------------|---------------------------------------------------------------|-------------------------|
| Tannin and Lignin | None                   | SM 5550 B                  | 1.0               | 0.9           | 90                          | 85-115                                                        |                         |

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# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : JH Baxter & Company  
Project : Arlington Landfill Wells

Service Request : K0606498  
Date Collected : NA  
Date Received : NA

Tannin and Lignin  
SM 5550 B  
Units: mg/L (ppm)

## CONTINUING CALIBRATION VERIFICATION (CCV)

|             | Date<br>Analyzed | True<br>Value | Measured<br>Value | Percent<br>Recovery |
|-------------|------------------|---------------|-------------------|---------------------|
| CCV1 Result | 08/16/06         | 2.5           | 2.6               | 104                 |
| CCV2 Result | 08/16/06         | 2.5           | 2.6               | 104                 |
| CCV3 Result | 08/16/06         | 2.5           | 2.7               | 108                 |

## CONTINUING CALIBRATION BLANK (CCB)

|             | Date<br>Analyzed | MRL | Blank<br>Value |
|-------------|------------------|-----|----------------|
| CCB1 Result | 08/16/06         | 0.2 | ND             |
| CCB2 Result | 08/16/06         | 0.2 | ND             |
| CCB3 Result | 08/16/06         | 0.2 | ND             |

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**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 :** K0606498  
**Date Collected :** 08/02,03/06  
**Date Received :** 08/04/06

**Solids, Total Dissolved (TDS)**

**Analysis Method :** 160.1  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Sample Name</b> | <b>Lab Code</b> | <b>MRL</b> | <b>MDL</b> | <b>Dilution<br/>Factor</b> | <b>Date<br/>Analyzed</b> | <b>Result</b> | <b>Result<br/>Notes</b> |
|--------------------|-----------------|------------|------------|----------------------------|--------------------------|---------------|-------------------------|
| BXS-4              | K0606498-001    | 5          | 5          | 1                          | 08/08/06                 | 100           |                         |
| BXS-6              | K0606498-002    | 5          | 5          | 1                          | 08/08/06                 | 90            |                         |
| BXS-1              | K0606498-003    | 5          | 5          | 1                          | 08/08/06                 | 206           |                         |
| BXS-5              | K0606498-004    | 5          | 5          | 1                          | 08/08/06                 | ND            |                         |
| BXS-2              | K0606498-005    | 5          | 5          | 1                          | 08/08/06                 | 436           |                         |
| Method Blank       | K0606498-MB     | 5          | 5          | 1                          | 08/08/06                 | 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 :** K0606498  
**Date Collected :** 08/02/06  
**Date Received :** 08/04/06  
**Date Prepared :** NA  
**Date Analyzed :** 08/08/06

### Duplicate Summary Inorganic Parameters

**Sample Name :** BXS-4  
**Lab Code :** K0606498-001DUP  
**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   | 100           | 98                      | 99      | 2                           |              |

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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**QA/QC Report**

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

**Service Request :** K0606498  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 08/08/06

**Laboratory Control Sample Summary**  
**Inorganic Parameters**

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0606498-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Analyte</b>                | <b>Prep<br/>Method</b> | <b>Analysis<br/>Method</b> | <b>True Value</b> | <b>Result</b> | <b>Percent<br/>Recovery</b> | <b>CAS<br/>Percent<br/>Recovery<br/>Acceptance<br/>Limits</b> | <b>Result<br/>Notes</b> |
|-------------------------------|------------------------|----------------------------|-------------------|---------------|-----------------------------|---------------------------------------------------------------|-------------------------|
| Solids, Total Dissolved (TDS) | None                   | 160.1                      | 939               | 932           | 99                          | 85-115                                                        |                         |

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# 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 : K0606498  
Date Collected : 08/02,03/06  
Date Received : 08/04/06

### Carbon, Total Organic

Analysis Method : 415.1  
Test Notes :

Units : mg/L (ppm)  
Basis : NA

| Sample Name  | Lab Code     | MRL | MDL  | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|-----|------|--------------------|------------------|--------|-----------------|
| BXS-4        | K0606498-001 | 0.5 | 0.07 | 1                  | 08/07/06         | 1.0    |                 |
| BXS-6        | K0606498-002 | 0.5 | 0.07 | 1                  | 08/07/06         | 0.9    |                 |
| BXS-1        | K0606498-003 | 0.5 | 0.07 | 1                  | 08/07/06         | 4.9    |                 |
| BXS-5        | K0606498-004 | 0.5 | 0.07 | 1                  | 08/07/06         | ND     |                 |
| BXS-2        | K0606498-005 | 0.5 | 0.07 | 1                  | 08/07/06         | 13.8   |                 |
| Method Blank | K0606498-MB  | 0.5 | 0.07 | 1                  | 08/07/06         | 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 : K0606498  
Date Collected : 08/02/06  
Date Received : 08/04/06  
Date Prepared : NA  
Date Analyzed : 08/07/06

Duplicate Summary  
Inorganic Parameters

Sample Name : BXS-4  
Lab Code : K0606498-001DUP  
Test Notes :

Units : mg/L (ppm)  
Basis : NA

| Analyte               | Analysis<br>Method | MRL | Sample<br>Result | Duplicate<br>Sample<br>Result | Average | Relative<br>Percent<br>Difference | Result<br>Notes |
|-----------------------|--------------------|-----|------------------|-------------------------------|---------|-----------------------------------|-----------------|
| Carbon, Total Organic | 415.1              | 0.5 | 1.0              | 0.9                           | 1.0     | 1.0                               |                 |

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 : K0606498  
Date Collected : 08/02/06  
Date Received : 08/04/06  
Date Prepared : NA  
Date Analyzed : 08/07/06

Matrix Spike Summary  
Inorganic Parameters

Sample Name : BXS-4  
Lab Code : K0606498-001MS  
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 |
|-----------------------|-----------------|-----|-------------|---------------|----------------------|------------------|----------------------------------------|--------------|
| Carbon, Total Organic | 415.1           | 0.5 | 25.0        | 1.0           | 25.9                 | 100              | 68-132                                 |              |

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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**QA/QC Report**

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

**Service Request :** K0606498  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 08/07/06

**Laboratory Control Sample Summary**  
**Inorganic Parameters**

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0606498-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Analyte</b>        | <b>Prep<br/>Method</b> | <b>Analysis<br/>Method</b> | <b>True Value</b> | <b>Result</b> | <b>Percent<br/>Recovery</b> | <b>CAS<br/>Percent<br/>Recovery<br/>Acceptance<br/>Limits</b> | <b>Result<br/>Notes</b> |
|-----------------------|------------------------|----------------------------|-------------------|---------------|-----------------------------|---------------------------------------------------------------|-------------------------|
| Carbon, Total Organic | None                   | 415.1                      | 24.3              | 23.9          | 98                          | 90-109                                                        |                         |

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# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

Client : JH Baxter & Company  
Project : Arlington Landfill Wells

Service Request : K0606498  
Date Collected : NA  
Date Received : NA

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

### CONTINUING CALIBRATION VERIFICATION (CCV)

|             | Date<br>Analyzed | True<br>Value | Measured<br>Value | Percent<br>Recovery |
|-------------|------------------|---------------|-------------------|---------------------|
| CCV1 Result | 08/07/06         | 25.0          | 26.4              | 106                 |
| CCV2 Result | 08/07/06         | 25.0          | 26.8              | 107                 |
| CCV3 Result | 08/07/06         | 25.0          | 26.0              | 104                 |
| CCV4 Result | 08/07/06         | 25.0          | 25.5              | 102                 |
| CCV5 Result | 08/07/06         | 25.0          | 25.7              | 103                 |
| CCV6 Result | 08/07/06         | 25.0          | 25.0              | 100                 |
| CCV7 Result | 08/07/05         | 25.0          | 25.6              | 102                 |
| CCV8 Result | 08/07/06         | 25.0          | 26.6              | 106                 |

### CONTINUING CALIBRATION BLANK (CCB)

|             | Date<br>Analyzed | MRL | Blank<br>Value |
|-------------|------------------|-----|----------------|
| CCB1 Result | 08/07/06         | 0.5 | ND             |
| CCB2 Result | 08/07/06         | 0.5 | 0.15 J         |
| CCB3 Result | 08/07/06         | 0.5 | ND             |
| CCB4 Result | 08/07/06         | 0.5 | ND             |
| CCB5 Result | 08/07/06         | 0.5 | ND             |
| CCB6 Result | 08/07/06         | 0.5 | ND             |
| CCB7 Result | 08/07/06         | 0.5 | ND             |
| CCB8 Result | 08/07/06         | 0.5 | ND             |

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## Metals

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DISSOLVED METALS

- Cover Page -  
INORGANIC ANALYSIS DATA PACKAGE

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

Service Request: K0606498

| <u>Sample No.</u> | <u>Lab Sample ID.</u> |
|-------------------|-----------------------|
| BXS-4             | K0606498-001 DISS     |
| BXS-4D            | K0606498-001D DISS    |
| BXS-4S            | K0606498-001S DISS    |
| BXS-6             | K0606498-002 DISS     |
| BXS-1             | K0606498-003 DISS     |
| BXS-5             | K0606498-004 DISS     |
| BXS-2             | K0606498-005 DISS     |
| Method Blank      | K0606498-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: JHB

Date: 8/2/06

## DISSOLVED METALS

-1-

## INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter &amp; Company

Service Request: K0606498

Project No.: BXS-Wells-Landfill

Date Collected: 08/02/06

Project Name: Arlington Landfill Wells

Date Received: 08/04/06

Matrix: WATER

Units: µG/L

Basis: NA

Sample Name: BXS-4

Lab Code: K0606498-001 DISS

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 8/15/06        | 8/16/06       | 5.1    |   |   |
| Barium    | 6010B           | 5.0  | 0.9 | 1    | 8/15/06        | 8/17/06       | 33.0   |   |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 8/15/06        | 8/17/06       | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 2.0 | 1    | 8/15/06        | 8/17/06       | 2.0    | U |   |
| Iron      | 6010B           | 20.0 | 4.0 | 1    | 8/15/06        | 8/17/06       | 38.7   |   |   |
| Manganese | 6010B           | 5.0  | 0.4 | 1    | 8/15/06        | 8/17/06       | 113    |   |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 8/15/06        | 8/17/06       | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 2.0 | 1    | 8/15/06        | 8/17/06       | 2.6    | B |   |

% Solids: 0.0

Comments:

## DISSOLVED METALS

-1-

## INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter &amp; Company

Service Request: K0606498

Project No.: BXS-Wells-Landfill

Date Collected: 08/02/06

Project Name: Arlington Landfill Wells

Date Received: 08/04/06

Matrix: WATER

Units: µG/L

Basis: NA

Sample Name: BXS-6

Lab Code: K0606498-002 DISS

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 8/15/06        | 8/16/06       | 5.0    | B |   |
| Barium    | 6010B           | 5.0  | 0.9 | 1    | 8/15/06        | 8/17/06       | 35.3   |   |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 8/15/06        | 8/17/06       | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 2.0 | 1    | 8/15/06        | 8/17/06       | 2.0    | U |   |
| Iron      | 6010B           | 20.0 | 4.0 | 1    | 8/15/06        | 8/17/06       | 40.5   |   |   |
| Manganese | 6010B           | 5.0  | 0.4 | 1    | 8/15/06        | 8/17/06       | 112    |   |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 8/15/06        | 8/17/06       | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 2.0 | 1    | 8/15/06        | 8/17/06       | 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: K0606498  
Date Collected: 08/02/06  
Date Received: 08/04/06  
Units: µg/L  
Basis: NA

Sample Name: BXS-1

Lab Code: K0606498-003 DISS

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 8/15/06        | 8/16/06       | 1.0    | U |   |
| Barium    | 6010B           | 5.0  | 0.9 | 1    | 8/15/06        | 8/17/06       | 24.3   |   |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 8/15/06        | 8/17/06       | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 2.0 | 1    | 8/15/06        | 8/17/06       | 3.1    | B |   |
| Iron      | 6010B           | 20.0 | 4.0 | 1    | 8/15/06        | 8/17/06       | 4.0    | U |   |
| Manganese | 6010B           | 5.0  | 0.4 | 1    | 8/15/06        | 8/17/06       | 121    |   |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 8/15/06        | 8/17/06       | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 2.0 | 1    | 8/15/06        | 8/17/06       | 8.1    | 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: K0606498  
Date Collected: 08/02/06  
Date Received: 08/04/06  
Units: µG/L  
Basis: NA

Sample Name: BXS-5

Lab Code: K0606498-004 DISS

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 8/15/06        | 8/16/06       | 1.0    | U |   |
| Barium    | 6010B           | 5.0  | 0.9 | 1    | 8/15/06        | 8/17/06       | 0.9    | U |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 8/15/06        | 8/17/06       | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 2.0 | 1    | 8/15/06        | 8/17/06       | 2.0    | U |   |
| Iron      | 6010B           | 20.0 | 4.0 | 1    | 8/15/06        | 8/17/06       | 5.0    | B |   |
| Manganese | 6010B           | 5.0  | 0.4 | 1    | 8/15/06        | 8/17/06       | 0.4    | U |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 8/15/06        | 8/17/06       | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 2.0 | 1    | 8/15/06        | 8/17/06       | 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: K0606498  
Date Collected: 08/03/06  
Date Received: 08/04/06  
Units: µG/L  
Basis: NA

Sample Name: BXS-2

Lab Code: K0606498-005 DISS

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 8/15/06        | 8/16/06       | 1.0    | U |   |
| Barium    | 6010B           | 5.0  | 0.9 | 1    | 8/15/06        | 8/17/06       | 48.0   |   |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 8/15/06        | 8/17/06       | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 2.0 | 1    | 8/15/06        | 8/17/06       | 2.5    | B |   |
| Iron      | 6010B           | 20.0 | 4.0 | 1    | 8/15/06        | 8/17/06       | 860    |   |   |
| Manganese | 6010B           | 5.0  | 0.4 | 1    | 8/15/06        | 8/17/06       | 1350   |   |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 8/15/06        | 8/17/06       | 35.5   |   |   |
| Zinc      | 6010B           | 10.0 | 2.0 | 1    | 8/15/06        | 8/17/06       | 21.9   |   |   |

% Solids: 0.0

Comments:

DISSOLVED METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter & Company

Service Request: K0606498

Project No.: BXS-Wells-Landfill

Date Collected:

Project Name: Arlington Landfill Wells

Date Received:

Matrix: WATER

Units: µG/L

Basis: NA

Sample Name: Method Blank

Lab Code: K0606498-MB

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 8/15/06        | 8/16/06       | 1.0    | U |   |
| Barium    | 6010B           | 5.0  | 0.9 | 1    | 8/15/06        | 8/17/06       | 0.9    | U |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 8/15/06        | 8/17/06       | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 2.0 | 1    | 8/15/06        | 8/17/06       | 2.0    | U |   |
| Iron      | 6010B           | 20.0 | 4.0 | 1    | 8/15/06        | 8/17/06       | 6.7    | B |   |
| Manganese | 6010B           | 5.0  | 0.4 | 1    | 8/15/06        | 8/17/06       | 0.4    | U |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 8/15/06        | 8/17/06       | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 2.0 | 1    | 8/15/06        | 8/17/06       | 2.0    | U |   |

% Solids: 0.0

Comments:

## DISSOLVED METALS

- 5a -

## SPIKE SAMPLE RECOVERY

Client: JH Baxter &amp; Company

Service Request: K0606498

Project No.: BXS-Wells-Landfill

Units: µg/L

Project Name: Arlington Landfill Wells

Basis: NA

Matrix: WATER

Sample Name: BXS-4S

Lab Code: K0606498-001S DISS

| Analyte   | Control<br>Limit %R | Spike<br>Result | C | Sample<br>Result | C | Spike<br>Added | %R  | Q | Method |
|-----------|---------------------|-----------------|---|------------------|---|----------------|-----|---|--------|
| Arsenic   | 62 - 116            | 45.3            |   | 5.1              |   | 40.0           | 100 |   | 7060A  |
| Barium    | 87 - 115            | 2130            |   | 33.0             |   | 2000           | 105 |   | 6010B  |
| Cadmium   | 73 - 123            | 54.8            |   | 3.0              | U | 50.0           | 110 |   | 6010B  |
| Copper    | 83 - 116            | 258             |   | 2.0              | U | 250            | 103 |   | 6010B  |
| Iron      | 43 - 163            | 1060            |   | 38.7             |   | 1000           | 102 |   | 6010B  |
| Manganese | 62 - 140            | 620             |   | 113              |   | 500            | 102 |   | 6010B  |
| Nickel    | 89 - 115            | 533             |   | 20.0             | U | 500            | 107 |   | 6010B  |
| Zinc      | 84 - 115            | 513             |   | 2.6              | B | 500            | 102 |   | 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: K0606498

Project No.: BXS-Wells-Landfill

Units: µg/L

Project Name: Arlington Landfill Wells

Basis: NA

Matrix: WATER

% Solids: 0.0

Sample Name: BXS-4D

Lab Code: K0606498-001D DISS

| Analyte   | Control Limit(%) | Sample (S) | C | Duplicate (D) | C | RPD | Q | Method |
|-----------|------------------|------------|---|---------------|---|-----|---|--------|
| Arsenic   |                  | 5.1        |   | 5.2           |   | 1   |   | 7060A  |
| Barium    | 20               | 33.0       |   | 32.3          |   | 2   |   | 6010B  |
| Cadmium   |                  | 3.0        | U | 3.0           | U |     |   | 6010B  |
| Copper    |                  | 2.0        | U | 2.0           | U |     |   | 6010B  |
| Iron      |                  | 38.7       |   | 39.2          |   | 2   |   | 6010B  |
| Manganese | 20               | 113        |   | 111           |   | 1   |   | 6010B  |
| Nickel    |                  | 20         | U | 20            | U |     |   | 6010B  |
| Zinc      |                  | 2.6        | B | 2.3           | B | 14  |   | 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: K0606498

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         | 22.9  | 92  |               |       |   |        |    |  |
| Barium    | 5000         | 5140  | 103 |               |       |   |        |    |  |
| Cadmium   | 1250         | 1320  | 106 |               |       |   |        |    |  |
| Copper    | 625          | 635   | 102 |               |       |   |        |    |  |
| Iron      | 2500         | 2550  | 102 |               |       |   |        |    |  |
| Manganese | 1250         | 1270  | 102 |               |       |   |        |    |  |
| Nickel    | 1250         | 1280  | 102 |               |       |   |        |    |  |
| Zinc      | 1250         | 1270  | 102 |               |       |   |        |    |  |

December 26, 2006

Service Request No: K0609928

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 November 10, 2006. For your reference, these analyses have been assigned our service request number K0609928.

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](mailto:EErickson@kelso.caslab.com).

Respectfully submitted,

**Columbia Analytical Services, Inc.**

  
Elissa Erickson  
Project Chemist

EE/lmb

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## 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**

| <b>Program</b>         | <b>Number</b> |
|------------------------|---------------|
| 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  
Project: Arlington Landfill Wells  
Sample Matrix: Water

Service Request No.: K0609928  
Date Received: 11/10/06

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 11/10/06. 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. The data is flagged to indicate the holding time violation.

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 Enelsen Date 12-26-06

## **Chain of Custody Documentation**

|                                                       |         |       |          |        |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |  |  |  |  |
|-------------------------------------------------------|---------|-------|----------|--------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|--|--|--|--|
| PROJECT NAME: <u>JH Baxter &amp; Co</u>               |         |       |          |        | NUMBER OF CONTAINERS | Semi-volatile Organics by GC/MS<br>625 <input type="checkbox"/> 8270 <input type="checkbox"/> 8270LL <input type="checkbox"/><br>Volatile Organics<br>624 <input type="checkbox"/> 8260 <input type="checkbox"/><br>Hydrocarbons (*see below)<br>Gas <input type="checkbox"/> 8021 <input type="checkbox"/> BTEX <input type="checkbox"/><br>Fuel Fingerprint (FIC)<br>Oil & Grease/TSPH<br>1664 HEM <input type="checkbox"/> 1664 SGT <input type="checkbox"/><br>PCB's<br>Aroclors <input type="checkbox"/> Congeners <input type="checkbox"/><br>608 <input type="checkbox"/> 8081A <input type="checkbox"/><br>Chlorophenolics - 8141A <input type="checkbox"/> 8151A <input type="checkbox"/><br>Tri <input type="checkbox"/> Tetra <input type="checkbox"/> PCP <input type="checkbox"/><br>PAHS 8310 <input type="checkbox"/> SIM <input type="checkbox"/><br>Metals (Total or Dissolved)<br>(See list below)<br>Cyanide <input type="checkbox"/> Hex-Chrom <input type="checkbox"/><br>DOX Cont. (CDS) <input type="checkbox"/><br>NO <sub>3</sub> BOD, TSS (CDS) <input type="checkbox"/><br>NH <sub>3</sub> COD, Total P, TKN, TOC<br>DOC (circle)<br>TOX 9020 <input type="checkbox"/> AOX 1650 <input type="checkbox"/> 506 <input type="checkbox"/><br><u>Levin 11/10/06</u> | PROJECT NUMBER: <u>Landfill Wells</u> |  |  |  |  |
| PROJECT MANAGER: <u>Marylee Larson</u>                |         |       |          |        |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |  |  |  |  |
| COMPANY ADDRESS: <u>6520 188th St NE / PO Box 305</u> |         |       |          |        |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |  |  |  |  |
| CITY/STATE/ZIP: <u>Arlington, WA 98003</u>            |         |       |          |        |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |  |  |  |  |
| E-MAIL ADDRESS:                                       |         |       |          |        |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |  |  |  |  |
| PHONE: <u>360-435-2446</u> FAX: <u>360-435-3085</u>   |         |       |          |        |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |  |  |  |  |
| SAMPLER'S SIGNATURE: <u>Marylee Larson</u>            |         |       |          |        |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |  |  |  |  |
| SAMPLE I.D.                                           | DATE    | TIME  | LAB I.D. | MATRIX | REMARKS              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |  |  |  |  |
| BAS-4                                                 | 11-8-06 | 10:30 | 1        | Bas    | 3                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |  |  |  |  |
| BXS-1                                                 | 11-8-06 | 12:00 | 2        | Bas    | 3                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |  |  |  |  |
| BXS-6                                                 | 11-8-06 | 13:30 | 3        | Bas    | 3                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |  |  |  |  |
| BXS-2                                                 | 11-8-06 | 14:30 | 4        | Bas    | 3                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |  |  |  |  |
| BXS-5                                                 | 11-9-06 | 8:15  | 5        | Bas    | 3                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |  |  |  |  |
| BXS-3                                                 | 11-9-06 | 9:30  | 6        | Bas    | 3                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |  |  |  |  |

|                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                                                                                                                                                                                                                                                                             |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>REPORT REQUIREMENTS</b><br><input checked="" type="checkbox"/> I. Routine Report: Method Blank, Surrogate, as required<br><input type="checkbox"/> II. Report Dup., MS, MSD as required<br><input type="checkbox"/> III. Data Validation Report (includes all raw data)<br><input type="checkbox"/> IV. CLP Deliverable Report<br><input type="checkbox"/> V. EDD |  | <b>INVOICE INFORMATION</b><br>P.O. # <u>JH Baxter &amp; Co</u><br>Bill To: <u>PO Box 1077</u><br><u>Edmonds, WA 98040</u><br><b>TURNAROUND REQUIREMENTS</b><br>___ 24 hr. ___ 48 hr.<br>___ 5 Day<br><input checked="" type="checkbox"/> Standard (10-15 working days)<br>___ Provide FAX Results<br>Requested Report Date: |  | Circle which metals are to be analyzed:<br>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<br>Dissolved Metals: Al <u>As</u> Sb <u>Ba</u> Be B Ca <u>Cd</u> Co Cr <u>Cu</u> Fe Pb Mg <u>Mn</u> Mo <u>Ni</u> K Ag Na Se Sr Ti Sn <u>V</u> Zn Hg<br>*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: (CIRCLE ONE)<br><b>SPECIAL INSTRUCTIONS/COMMENTS:</b><br><u>Samples in 2 coolers</u><br><u>Attn: Ruth Ann Thomas</u><br><u>Marylee Larson</u> |  |
| RELINQUISHED BY:<br><u>Marylee Larson</u> 11-9-06 11:00<br>Signature Date/Time<br>Printed Name Firm                                                                                                                                                                                                                                                                  |  | RECEIVED BY:<br><u>[Signature]</u> 11/10/06 12:30<br>Signature Date/Time<br>Printed Name Firm                                                                                                                                                                                                                               |  | RELINQUISHED BY:<br>Signature Date/Time<br>Printed Name Firm                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |
| RECEIVED BY:<br>Signature Date/Time<br>Printed Name Firm                                                                                                                                                                                                                                                                                                             |  | RECEIVED BY:<br>Signature Date/Time<br>Printed Name Firm                                                                                                                                                                                                                                                                    |  | RECEIVED BY:<br>Signature Date/Time<br>Printed Name Firm                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |

Columbia Analytical Services Inc.  
Cooler Receipt and Presentation Form

PC

EE

Project/Client JH Baxter

Service Request K06

0 9928

Cooler received on 11-10-06 and opened on 11-10-06 by BW

1. Were custody seals on outside of coolers? (Y) N  
If yes, how many and where? 1 Front
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: Grayhound (Y) N
5. COC# \_\_\_\_\_  
Temperature of cooler(s) upon receipt: (°C) 1.0 2.3 \_\_\_\_\_  
Temperature Blank: (°C) N.P. N.P. \_\_\_\_\_
- 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 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? (X) 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 |
|-----------|---------|--------|------------|-------------|--------------------------|----------|
|           |         |        |            |             |                          |          |
|           |         |        |            |             |                          |          |
|           |         |        |            |             |                          |          |
|           |         |        |            |             |                          |          |
|           |         |        |            |             |                          |          |
|           |         |        |            |             |                          |          |
|           |         |        |            |             |                          |          |
|           |         |        |            |             |                          |          |

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## **Summary Package**

## **General Chemistry Parameters**

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**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 :** K0609928  
**Date Collected :** 11/08,09/06  
**Date Received :** 11/10/06

**Ammonia as Nitrogen**

**Analysis Method :** 350.1  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Sample Name  | Lab Code     | MRL  | MDL   | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|------|-------|--------------------|------------------|--------|-----------------|
| BXS-4        | K0609928-001 | 0.05 | 0.006 | 1                  | 11/13/06         | 0.47   |                 |
| BXS-1        | K0609928-002 | 0.05 | 0.006 | 1                  | 11/13/06         | ND     |                 |
| BXS-6        | K0609928-003 | 0.05 | 0.006 | 1                  | 11/13/06         | ND     |                 |
| BXS-2        | K0609928-004 | 0.05 | 0.006 | 1                  | 11/13/06         | 0.022  | J               |
| BXS-5        | K0609928-005 | 0.05 | 0.006 | 1                  | 11/13/06         | ND     |                 |
| BXS-3        | K0609928-006 | 0.05 | 0.006 | 1                  | 11/13/06         | 0.41   |                 |
| Method Blank | K0609928-MB  | 0.05 | 0.006 | 1                  | 11/13/06         | 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 :** K0609928  
**Date Collected :** 11/08/06  
**Date Received :** 11/10/06  
**Date Prepared :** NA  
**Date Analyzed :** 11/13/06

**Duplicate Summary  
Inorganic Parameters**

**Sample Name :** BXS-4  
**Lab Code :** K0609928-001DUP  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Analyte</b>      | <b>Analysis Method</b> | <b>MRL</b> | <b>Sample Result</b> | <b>Duplicate Sample Result</b> | <b>Average</b> | <b>Relative Percent Difference</b> | <b>Result Notes</b> |
|---------------------|------------------------|------------|----------------------|--------------------------------|----------------|------------------------------------|---------------------|
| Ammonia as Nitrogen | 350.1                  | 0.05       | 0.47                 | 0.47                           | 0.47           | <1                                 |                     |

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**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 :** K0609928  
**Date Collected :** 11/08/06  
**Date Received :** 11/10/06  
**Date Prepared :** NA  
**Date Analyzed :** 11/13/06

**Matrix Spike Summary  
Inorganic Parameters**

**Sample Name :** BXS-4  
**Lab Code :** K0609928-001MS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte             | Analysis<br>Method | MRL  | Spike<br>Level | Sample<br>Result | Spiked<br>Sample<br>Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|---------------------|--------------------|------|----------------|------------------|----------------------------|---------------------|----------------------------|-----------------|
|                     |                    |      |                |                  |                            |                     | Acceptance<br>Limits       |                 |
| Ammonia as Nitrogen | 350.1              | 0.05 | 2.00           | 0.47             | 2.41                       | 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 :** K0609928  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 11/13/06

Laboratory Control Sample Summary  
Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0609928-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           | 6.0        | 5.64   | 94               | 90-110                                 |              |

## COLUMBIA ANALYTICAL SERVICES, INC.

### QA/QC Report

Client : JH Baxter & Company  
Project : Arlington Landfill Wells

Service Request : K0609928  
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 | 11/13/06      | 2.00       | 2.08           | 104              |
| CCV2 Result | 11/13/06      | 2.00       | 2.07           | 104              |
| CCV3 Result | 11/13/06      | 2.00       | 2.08           | 104              |
| CCV4 Result | 11/13/06      | 2.00       | 2.07           | 104              |
| CCV5 Result | 11/13/06      | 2.00       | 2.07           | 104              |
| CCV6 Result | 11/13/06      | 2.00       | 2.06           | 103              |
| CCV7 Result | 11/13/06      | 2.00       | 2.07           | 104              |

### CONTINUING CALIBRATION BLANK (CCB)

|             | Date Analyzed | MRL  | Blank Value |
|-------------|---------------|------|-------------|
| CCB1 Result | 11/13/06      | 0.05 | ND          |
| CCB2 Result | 11/13/06      | 0.05 | ND          |
| CCB3 Result | 11/13/06      | 0.05 | ND          |
| CCB4 Result | 11/13/06      | 0.05 | ND          |
| CCB5 Result | 11/13/06      | 0.05 | ND          |
| CCB6 Result | 11/13/06      | 0.05 | ND          |
| CCB7 Result | 11/13/06      | 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 :** K0609928  
**Date Collected :** 11/08,09/06  
**Date Received :** 11/10/06

### Chemical Oxygen Demand

**Analysis Method :** 410.2  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Sample Name  | Lab Code     | MRL | MDL | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|-----|-----|--------------------|------------------|--------|-----------------|
| BXS-4        | K0609928-001 | 5   | 2.5 | 1                  | 11/17/06         | ND     |                 |
| BXS-1        | K0609928-002 | 5   | 2.5 | 1                  | 11/17/06         | 15     |                 |
| BXS-6        | K0609928-003 | 5   | 2.5 | 1                  | 11/17/06         | 16     |                 |
| BXS-2        | K0609928-004 | 5   | 2.5 | 1                  | 11/17/06         | 35     |                 |
| BXS-5        | K0609928-005 | 5   | 2.5 | 1                  | 11/17/06         | ND     |                 |
| BXS-3        | K0609928-006 | 5   | 2.5 | 1                  | 11/17/06         | 66     |                 |
| Method Blank | K0609928-MB  | 5   | 2.5 | 1                  | 11/17/06         | 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 :** K0609928

**Date Collected :** 11/08/06

**Date Received :** 11/10/06

**Date Prepared :** 11/17/06

**Date Analyzed :** 11/17/06

**Duplicate Summary  
Inorganic Parameters**

**Sample Name :** BXS-4  
**Lab Code :** K0609928-001DUP  
**Test Notes :**

**Units :** mg/L (ppm)

**Basis :** NA

| <b>Analyte</b>         | <b>Analysis Method</b> | <b>MRL</b> | <b>Sample Result</b> | <b>Duplicate Sample Result</b> | <b>Average</b> | <b>Relative Percent Difference</b> | <b>Result Notes</b> |
|------------------------|------------------------|------------|----------------------|--------------------------------|----------------|------------------------------------|---------------------|
| Chemical Oxygen Demand | 410.2                  | 5          | 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 :** K0609928  
**Date Collected :** 11/08/06  
**Date Received :** 11/10/06  
**Date Prepared :** 11/17/06  
**Date Analyzed :** 11/17/06

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** BXS-4  
**Lab Code :** K0609928-001MS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte                | Analysis<br>Method | MRL | Spike<br>Level | Sample<br>Result | Spiked<br>Sample<br>Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|------------------------|--------------------|-----|----------------|------------------|----------------------------|---------------------|----------------------------|-----------------|
|                        |                    |     |                |                  |                            |                     | Acceptance<br>Limits       |                 |
| Chemical Oxygen Demand | 410.2              | 13  | 100            | ND               | 103                        | 103                 | 75-125                     |                 |

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**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 :** K0609928  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** 11/17/06  
**Date Analyzed :** 11/17/06

**Laboratory Control Sample Summary**  
**Inorganic Parameters**

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0609928-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Analyte</b>         | <b>Prep<br/>Method</b> | <b>Analysis<br/>Method</b> | <b>True Value</b> | <b>Result</b> | <b>Percent<br/>Recovery</b> | <b>CAS<br/>Percent<br/>Recovery<br/>Acceptance<br/>Limits</b> | <b>Result<br/>Notes</b> |
|------------------------|------------------------|----------------------------|-------------------|---------------|-----------------------------|---------------------------------------------------------------|-------------------------|
| Chemical Oxygen Demand | None                   | 410.2                      | 121               | 121           | 100                         | 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 : K0609928  
Date Collected : 11/08,09/06  
Date Received : 11/10/06

### Conductivity at 25 Degrees Celsius

Analysis Method : 120.1  
Test Notes :

Units : uMhos/cm  
Basis : NA

| Sample Name  | Lab Code     | MRL | MDL | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|-----|-----|--------------------|------------------|--------|-----------------|
| BXS-4        | K0609928-001 | 2   | 0.6 | 1                  | 11/16/06         | 188    |                 |
| BXS-1        | K0609928-002 | 2   | 0.6 | 1                  | 11/16/06         | 424    |                 |
| BXS-6        | K0609928-003 | 2   | 0.6 | 1                  | 11/16/06         | 406    |                 |
| BXS-2        | K0609928-004 | 2   | 0.6 | 1                  | 11/16/06         | 719    |                 |
| BXS-5        | K0609928-005 | 2   | 0.6 | 1                  | 11/22/06         | 1.8    | J               |
| BXS-3        | K0609928-006 | 2   | 0.6 | 1                  | 11/22/06         | 682    |                 |
| Method Blank | K0609928-MB  | 2   | 0.6 | 1                  | 11/22/06         | 1.0    | J               |
| Method Blank | K0609928-MB  | 2   | 0.6 | 1                  | 11/16/06         | 0.8    | 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 : K0609928  
 Date Collected : 11/09/06  
 Date Received : 11/10/06  
 Date Prepared : NA  
 Date Analyzed : 11/22/06

Duplicate Summary  
 Inorganic Parameters

Sample Name : BXS-5  
 Lab Code : K0609928-005DUP  
 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   | 1.8           | 1.6                     | 1.7     | 12                          | 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 :** K0609928  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 11/16/06

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0609928-LCS1  
**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           | 927        | 858    | 93               | 85-115                                 |              |

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**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 :** K0609928  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 11/22/06

**Laboratory Control Sample Summary**  
**Inorganic Parameters**

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0609928-LCS2  
**Test Notes :**

**Units :** uMhos/cm  
**Basis :** NA

| <b>Analyte</b>                     | <b>Prep<br/>Method</b> | <b>Analysis<br/>Method</b> | <b>True Value</b> | <b>Result</b> | <b>Percent<br/>Recovery</b> | <b>CAS<br/>Percent<br/>Recovery<br/>Acceptance<br/>Limits</b> | <b>Result<br/>Notes</b> |
|------------------------------------|------------------------|----------------------------|-------------------|---------------|-----------------------------|---------------------------------------------------------------|-------------------------|
| Conductivity at 25 Degrees Celsius | None                   | 120.1                      | 927               | 903           | 97                          | 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 :** K0609928  
**Date Collected :** 11/08,09/06  
**Date Received :** 11/10/06

Nitrate+Nitrite as Nitrogen

**Analysis Method :** 353.2  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Sample Name</b> | <b>Lab Code</b> | <b>MRL</b> | <b>MDL</b> | <b>Dilution<br/>Factor</b> | <b>Date<br/>Analyzed</b> | <b>Result</b> | <b>Result<br/>Notes</b> |
|--------------------|-----------------|------------|------------|----------------------------|--------------------------|---------------|-------------------------|
| BXS-4              | K0609928-001    | 0.05       | 0.006      | 1                          | 11/15/06                 | ND            |                         |
| BXS-1              | K0609928-002    | 0.05       | 0.006      | 1                          | 11/15/06                 | 0.46          |                         |
| BXS-6              | K0609928-003    | 0.05       | 0.006      | 1                          | 11/15/06                 | 0.46          |                         |
| BXS-2              | K0609928-004    | 0.05       | 0.006      | 1                          | 11/15/06                 | 0.008         | J                       |
| BXS-5              | K0609928-005    | 0.05       | 0.006      | 1                          | 11/15/06                 | ND            |                         |
| BXS-3              | K0609928-006    | 0.05       | 0.006      | 1                          | 11/15/06                 | 0.07          |                         |
| Method Blank       | K0609928-MB     | 0.05       | 0.006      | 1                          | 11/15/06                 | 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 : K0609928  
 Date Collected : 11/08/06  
 Date Received : 11/10/06  
 Date Prepared : NA  
 Date Analyzed : 11/15/06

Duplicate Summary  
 Inorganic Parameters

Sample Name : BXS-4  
 Lab Code : K0609928-001DUP  
 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 | 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 :** K0609928  
**Date Collected :** 11/08/06  
**Date Received :** 11/10/06  
**Date Prepared :** NA  
**Date Analyzed :** 11/15/06

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** BXS-4  
**Lab Code :** K0609928-001MS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte                     | Analysis<br>Method | MRL  | Spike<br>Level | Sample<br>Result | Spiked<br>Sample<br>Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|-----------------------------|--------------------|------|----------------|------------------|----------------------------|---------------------|----------------------------|-----------------|
|                             |                    |      |                |                  |                            |                     | Acceptance<br>Limits       |                 |
| Nitrate+Nitrite as Nitrogen | 353.2              | 0.05 | 2.00           | ND               | 2.03                       | 102                 | 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 :** K0609928  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 11/15/06

**Laboratory Control Sample Summary  
 Inorganic Parameters**

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0609928-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte                     | Prep<br>Method | Analysis<br>Method | True Value | Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|-----------------------------|----------------|--------------------|------------|--------|---------------------|----------------------------|-----------------|
|                             |                |                    |            |        |                     | Acceptance<br>Limits       |                 |
| Nitrate+Nitrite as Nitrogen | None           | 353.2              | 7.69       | 7.41   | 96                  | 90-110                     |                 |

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** JH Baxter & Company  
**Project :** Arlington Landfill Wells

**Service Request :** K0609928  
**Date Collected :** NA  
**Date Received :** NA

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

### CONTINUING CALIBRATION VERIFICATION (CCV)

|             | Date<br>Analyzed | True<br>Value | Measured<br>Value | Percent<br>Recovery |
|-------------|------------------|---------------|-------------------|---------------------|
| CCV1 Result | 11/15/06         | 2.00          | 2.01              | 101                 |
| CCV2 Result | 11/15/06         | 2.00          | 2.01              | 101                 |
| CCV3 Result | 11/15/06         | 2.00          | 2.01              | 101                 |
| CCV4 Result | 11/15/06         | 2.00          | 2.00              | 100                 |
| CCV5 Result | 11/15/06         | 2.00          | 2.00              | 100                 |
| CCV6 Result | 11/15/06         | 2.00          | 2.00              | 100                 |

### CONTINUING CALIBRATION BLANK (CCB)

|             | Date<br>Analyzed | MRL  | Blank<br>Value |
|-------------|------------------|------|----------------|
| CCB1 Result | 11/15/06         | 0.05 | ND             |
| CCB2 Result | 11/15/06         | 0.05 | ND             |
| CCB3 Result | 11/15/06         | 0.05 | ND             |
| CCB4 Result | 11/15/06         | 0.05 | ND             |
| CCB5 Result | 11/15/06         | 0.05 | ND             |
| CCB6 Result | 11/15/06         | 0.05 | ND             |

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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**Analytical Report**

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

**Service Request :** K0609928  
**Date Collected :** 11/08,09/06  
**Date Received :** 11/10/06

pH

**Analysis Method :** 150.1  
**Test Notes :**

**Units :** pH UNITS  
**Basis :** NA

| <b>Sample Name</b> | <b>Lab Code</b> | <b>MRL</b> | <b>MDL</b> | <b>Dilution<br/>Factor</b> | <b>Date/Time<br/>Analyzed</b> | <b>Result</b> | <b>Result<br/>Notes</b> |
|--------------------|-----------------|------------|------------|----------------------------|-------------------------------|---------------|-------------------------|
| BXS-4              | K0609928-001    | -          | -          | 1                          | 11/10/06 16:22                | 7.62          |                         |
| BXS-1              | K0609928-002    | -          | -          | 1                          | 11/10/06 16:23                | 6.09          |                         |
| BXS-6              | K0609928-003    | -          | -          | 1                          | 11/10/06 16:24                | 6.08          |                         |
| BXS-2              | K0609928-004    | -          | -          | 1                          | 11/10/06 16:27                | 6.41          |                         |
| BXS-5              | K0609928-005    | -          | -          | 1                          | 11/10/06 16:27                | 5.56          |                         |
| BXS-3              | K0609928-006    | -          | -          | 1                          | 11/10/06 16:30                | 6.43          |                         |

# 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 :** K0609928  
**Date Collected :** 11/08/06  
**Date Received :** 11/10/06  
**Date Prepared :** NA  
**Date Analyzed :** 11/10/06

### Duplicate Summary Inorganic Parameters

**Sample Name :** BXS-4  
**Lab Code :** K0609928-001DUP  
**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           | -   | 7.62          | 7.65                    | 7.64    | <1                          |              |

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**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 :** K0609928  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 11/10/06

**Laboratory Control Sample Summary**  
**Inorganic Parameters**

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0609928-LCS  
**Test Notes :**

**Units :** pH UNITS  
**Basis :** NA

| Analyte | Prep<br>Method | Analysis<br>Method | True Value | Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|---------|----------------|--------------------|------------|--------|---------------------|----------------------------|-----------------|
|         |                |                    |            |        |                     | Acceptance<br>Limits       |                 |
| pH      | None           | 150.1              | 9.22       | 9.11   | 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 : K0609928  
Date Collected : 11/08,09/06  
Date Received : 11/10/06

### Tannin and Lignin

Analysis Method : SM 5550 B  
Test Notes :

Units : mg/L (ppm)  
Basis : NA

| Sample Name  | Lab Code     | MRL | MDL  | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|-----|------|--------------------|------------------|--------|-----------------|
| BXS-4        | K0609928-001 | 0.2 | 0.05 | 1                  | 11/15/06         | 0.3    |                 |
| BXS-1        | K0609928-002 | 0.2 | 0.05 | 1                  | 11/15/06         | 0.2    |                 |
| BXS-6        | K0609928-003 | 0.2 | 0.05 | 1                  | 11/15/06         | 0.2    |                 |
| BXS-2        | K0609928-004 | 0.2 | 0.05 | 1                  | 11/15/06         | 1.3    |                 |
| BXS-5        | K0609928-005 | 0.2 | 0.05 | 1                  | 11/15/06         | ND     |                 |
| BXS-3        | K0609928-006 | 1.0 | 0.25 | 5                  | 11/15/06         | 10.7   |                 |
| Method Blank | K0609928-MB  | 0.2 | 0.05 | 1                  | 11/15/06         | 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 : K0609928  
 Date Collected : 11/08/06  
 Date Received : 11/10/06  
 Date Prepared : NA  
 Date Analyzed : 11/15/06

Duplicate Summary  
 Inorganic Parameters

Sample Name : BXS-4  
 Lab Code : K0609928-001DUP  
 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 | 0.3           | 0.3                     | 0.3     | <1                          |              |

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 :** K0609928  
**Date Collected :** 11/08/06  
**Date Received :** 11/10/06  
**Date Prepared :** NA  
**Date Analyzed :** 11/15/06

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** BXS-4  
**Lab Code :** K0609928-001MS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte           | Analysis<br>Method | MRL | Spike<br>Level | Sample<br>Result | Spiked<br>Sample<br>Result | Percent<br>Recovery | CAS                                         | Result<br>Notes |
|-------------------|--------------------|-----|----------------|------------------|----------------------------|---------------------|---------------------------------------------|-----------------|
|                   |                    |     |                |                  |                            |                     | Percent<br>Recovery<br>Acceptance<br>Limits |                 |
| Tannin and Lignin | SM 5550 B          | 0.2 | 1.0            | 0.3              | 1.3                        | 100                 | 75-125                                      |                 |

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

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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**QA/QC Report**

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

**Service Request :** K0609928  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 11/15/06

**Laboratory Control Sample Summary**  
**Inorganic Parameters**

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0609928-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte           | Prep<br>Method | Analysis<br>Method | True Value | Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|-------------------|----------------|--------------------|------------|--------|---------------------|----------------------------|-----------------|
|                   |                |                    |            |        |                     | Acceptance<br>Limits       |                 |
| Tannin and Lignin | None           | SM 5550 B          | 1.0        | 0.9    | 90                  | 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 :** K0609928  
**Date Collected :** NA  
**Date Received :** NA

Tannin and Lignin  
SM 5550 B  
Units: mg/L (ppm)

### CONTINUING CALIBRATION VERIFICATION (CCV)

|             | Date<br>Analyzed | True<br>Value | Measured<br>Value | Percent<br>Recovery |
|-------------|------------------|---------------|-------------------|---------------------|
| CCV1 Result | 11/15/06         | 2.5           | 2.6               | 104                 |
| CCV2 Result | 11/15/06         | 2.5           | 2.4               | 96                  |
| CCV3 Result | 11/15/06         | 2.5           | 2.6               | 104                 |

### CONTINUING CALIBRATION BLANK (CCB)

|             | Date<br>Analyzed | MRL | Blank<br>Value |
|-------------|------------------|-----|----------------|
| CCB1 Result | 11/15/06         | 0.2 | ND             |
| CCB2 Result | 11/15/06         | 0.2 | ND             |
| CCB3 Result | 11/15/06         | 0.2 | ND             |

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**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 :** K0609928  
**Date Collected :** 11/08,09/06  
**Date Received :** 11/10/06

**Solids, Total Dissolved (TDS)**

**Analysis Method :** 160.1  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Sample Name</b> | <b>Lab Code</b> | <b>MRL</b> | <b>MDL</b> | <b>Dilution<br/>Factor</b> | <b>Date<br/>Analyzed</b> | <b>Result</b> | <b>Result<br/>Notes</b> |
|--------------------|-----------------|------------|------------|----------------------------|--------------------------|---------------|-------------------------|
| BXS-4              | K0609928-001    | 5          | 5          | 1                          | 11/14/06                 | 141           |                         |
| BXS-1              | K0609928-002    | 5          | 5          | 1                          | 11/14/06                 | 259           |                         |
| BXS-6              | K0609928-003    | 5          | 5          | 1                          | 11/14/06                 | 242           |                         |
| BXS-2              | K0609928-004    | 5          | 5          | 1                          | 11/14/06                 | 479           |                         |
| BXS-5              | K0609928-005    | 5          | 5          | 1                          | 11/14/06                 | 6             |                         |
| BXS-3              | K0609928-006    | 5          | 5          | 1                          | 11/14/06                 | 477           |                         |
| Method Blank       | K0609928-MB     | 5          | 5          | 1                          | 11/14/06                 | ND            |                         |

**COLUMBIA ANALYTICAL SERVICES, INC.**

**QA/QC Report**

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

**Service Request :** K0609928  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 11/14/06

**Duplicate Summary  
Inorganic Parameters**

**Sample Name :** Batch QC  
**Lab Code :** K0609863-005DUP  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Analyte</b>                | <b>Analysis Method</b> | <b>MRL</b> | <b>Sample Result</b> | <b>Duplicate Sample Result</b> | <b>Average</b> | <b>Relative Percent Difference</b> | <b>Result Notes</b> |
|-------------------------------|------------------------|------------|----------------------|--------------------------------|----------------|------------------------------------|---------------------|
| Solids, Total Dissolved (TDS) | 160.1                  | 5          | 4890                 | 4710                           | 4800           | 4                                  |                     |

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

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

Service Request : K0609928  
 Date Collected : NA  
 Date Received : NA  
 Date Prepared : NA  
 Date Analyzed : 11/14/06

### Laboratory Control Sample Summary Inorganic Parameters

Sample Name : Laboratory Control Sample  
 Lab Code : K0609928-LCS  
 Test Notes :

Units : mg/L (ppm)  
 Basis : NA

| Analyte                       | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS                                | Result Notes |
|-------------------------------|-------------|-----------------|------------|--------|------------------|------------------------------------|--------------|
|                               |             |                 |            |        |                  | Percent Recovery Acceptance Limits |              |
| Solids, Total Dissolved (TDS) | None        | 160.1           | 545        | 616    | 113              | 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 :** K0609928  
**Date Collected :** 11/08,09/06  
**Date Received :** 11/10/06

### Carbon, Total Organic

**Analysis Method :** 415.1  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Sample Name  | Lab Code     | MRL | MDL  | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|-----|------|--------------------|------------------|--------|-----------------|
| BXS-4        | K0609928-001 | 0.5 | 0.07 | 1                  | 11/17/06         | 1.1    |                 |
| BXS-1        | K0609928-002 | 0.5 | 0.07 | 1                  | 11/17/06         | 6.5    |                 |
| BXS-6        | K0609928-003 | 0.5 | 0.07 | 1                  | 11/17/06         | 6.8    |                 |
| BXS-2        | K0609928-004 | 3.0 | 0.35 | 5                  | 11/17/06         | 15.3   |                 |
| BXS-5        | K0609928-005 | 0.5 | 0.07 | 1                  | 11/17/06         | ND     |                 |
| BXS-3        | K0609928-006 | 13  | 1.75 | 25                 | 11/17/06         | 28     |                 |
| Method Blank | K0609928-MB  | 0.5 | 0.07 | 1                  | 11/17/06         | 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 : K0609928  
 Date Collected : 11/08/06  
 Date Received : 11/10/06  
 Date Prepared : NA  
 Date Analyzed : 11/17/06

Duplicate Summary  
 Inorganic Parameters

Sample Name : BXS-4  
 Lab Code : K0609928-001DUP  
 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 | 1.1           | 1.0                     | 1.1     | 9                           |              |

**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 :** K0609928  
**Date Collected :** 11/08/06  
**Date Received :** 11/10/06  
**Date Prepared :** NA  
**Date Analyzed :** 11/17/06

**Matrix Spike Summary  
Inorganic Parameters**

**Sample Name :** BXS-4  
**Lab Code :** K0609928-001MS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte               | Analysis<br>Method | MRL | Spike<br>Level | Sample<br>Result | Spiked<br>Sample<br>Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|-----------------------|--------------------|-----|----------------|------------------|----------------------------|---------------------|----------------------------|-----------------|
|                       |                    |     |                |                  |                            |                     | Acceptance<br>Limits       |                 |
| Carbon, Total Organic | 415.1              | 0.5 | 25.0           | 1.1              | 26.2                       | 100                 | 68-132                     |                 |

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**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 :** K0609928  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 11/17/06

**Laboratory Control Sample Summary**  
**Inorganic Parameters**

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0609928-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Analyte</b>        | <b>Prep<br/>Method</b> | <b>Analysis<br/>Method</b> | <b>True Value</b> | <b>Result</b> | <b>Percent<br/>Recovery</b> | <b>CAS<br/>Percent<br/>Recovery<br/>Acceptance<br/>Limits</b> | <b>Result<br/>Notes</b> |
|-----------------------|------------------------|----------------------------|-------------------|---------------|-----------------------------|---------------------------------------------------------------|-------------------------|
| Carbon, Total Organic | None                   | 415.1                      | 24.3              | 24.7          | 102                         | 90-109                                                        |                         |

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

Client : JH Baxter & Company

Project : Arlington Landfill Wells

Service Request : K0609928

Date Collected : NA

Date Received : NA

Carbon, Total Organic

EPA Method 415.1

Units: mg/L (ppm)

### CONTINUING CALIBRATION VERIFICATION (CCV)

|             | Date<br>Analyzed | True<br>Value | Measured<br>Value | Percent<br>Recovery |
|-------------|------------------|---------------|-------------------|---------------------|
| CCV1 Result | 11/17/06         | 25.0          | 26.3              | 105                 |
| CCV2 Result | 11/17/06         | 25.0          | 26.2              | 105                 |
| CCV3 Result | 11/17/06         | 25.0          | 25.7              | 103                 |
| CCV4 Result | 11/17/06         | 25.0          | 25.3              | 101                 |
| CCV5 Result | 11/17/06         | 25.0          | 28.1              | 112                 |
| CCV6 Result | 11/17/06         | 25.0          | 25.3              | 101                 |
| CCV7 Result | 11/17/06         | 25.0          | 26.6              | 106                 |
| CCV8 Result | 11/17/06         | 25.0          | 26.3              | 105                 |

### CONTINUING CALIBRATION BLANK (CCB)

|             | Date<br>Analyzed | MRL | Blank<br>Value |
|-------------|------------------|-----|----------------|
| CCB1 Result | 11/17/06         | 0.5 | ND             |
| CCB2 Result | 11/17/06         | 0.5 | ND             |
| CCB3 Result | 11/17/06         | 0.5 | ND             |
| CCB4 Result | 11/17/06         | 0.5 | ND             |
| CCB5 Result | 11/17/06         | 0.5 | ND             |
| CCB6 Result | 11/17/06         | 0.5 | ND             |
| CCB7 Result | 11/17/06         | 0.5 | ND             |
| CCB8 Result | 11/17/06         | 0.5 | ND             |

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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**Analytical Report**

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

**Service Request :** K0609928  
**Date Collected :** 11/08,09/06  
**Date Received :** 11/10/06

**Chloride**

**Analysis Method :** 300.0

**Test Notes :**

**Units :** mg/L (ppm)

**Basis :** NA

| <b>Sample Name</b> | <b>Lab Code</b> | <b>MRL</b> | <b>MDL</b> | <b>Dilution<br/>Factor</b> | <b>Date<br/>Analyzed</b> | <b>Result</b> | <b>Result<br/>Notes</b> |
|--------------------|-----------------|------------|------------|----------------------------|--------------------------|---------------|-------------------------|
| BXS-4              | K0609928-001    | 0.2        | 0.06       | 2                          | 11/21/06                 | 1.8           |                         |
| BXS-1              | K0609928-002    | 0.2        | 0.06       | 2                          | 11/21/06                 | 3.4           |                         |
| BXS-6              | K0609928-003    | 0.2        | 0.06       | 2                          | 11/21/06                 | 3.4           |                         |
| BXS-2              | K0609928-004    | 0.2        | 0.06       | 2                          | 11/22/06                 | 3.5           |                         |
| BXS-5              | K0609928-005    | 0.2        | 0.06       | 2                          | 11/22/06                 | ND            |                         |
| BXS-3              | K0609928-006    | 0.2        | 0.06       | 2                          | 11/22/06                 | 2.5           |                         |
| Method Blank       | K0609928-MB     | 0.2        | 0.03       | 1                          | 11/21/06                 | 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 :** K0609928  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 11/22/06

**Duplicate Summary  
Inorganic Parameters**

**Sample Name :** Batch QC  
**Lab Code :** K0610241-001DUP  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| <b>Analyte</b> | <b>Analysis Method</b> | <b>MRL</b> | <b>Sample Result</b> | <b>Duplicate Sample Result</b> | <b>Average</b> | <b>Relative Percent Difference</b> | <b>Result Notes</b> |
|----------------|------------------------|------------|----------------------|--------------------------------|----------------|------------------------------------|---------------------|
| Chloride       | 300.0                  | 0.2        | 1.9                  | 1.9                            | 1.9            | <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 : K0609928  
 Date Collected : NA  
 Date Received : NA  
 Date Prepared : NA  
 Date Analyzed : 11/22/06

Matrix Spike Summary  
 Inorganic Parameters

Sample Name : Batch QC  
 Lab Code : K0610241-001MS  
 Test Notes :

Units : mg/L (ppm)  
 Basis : NA

| Analyte  | Analysis<br>Method | MRL | Spike<br>Level | Sample<br>Result | Spiked<br>Sample<br>Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|----------|--------------------|-----|----------------|------------------|----------------------------|---------------------|----------------------------|-----------------|
|          |                    |     |                |                  |                            |                     | Acceptance<br>Limits       |                 |
| Chloride | 300.0              | 0.2 | 4.0            | 1.9              | 5.6                        | 93                  | 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 :** K0609928  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 11/21/06

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0609928-LCS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte  | Prep<br>Method | Analysis<br>Method | True Value | Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|----------|----------------|--------------------|------------|--------|---------------------|----------------------------|-----------------|
|          |                |                    |            |        |                     | Acceptance<br>Limits       |                 |
| Chloride | None           | 300.0              | 5.0        | 5.1    | 102                 | 90-110                     |                 |

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

Client : JH Baxter & Company  
Project : Arlington Landfill Wells

Service Request : K0609928  
Date Collected : NA  
Date Received : NA

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

### CONTINUING CALIBRATION VERIFICATION (CCV)

|              | Date<br>Analyzed | True<br>Value | Measured<br>Value | Percent<br>Recovery |
|--------------|------------------|---------------|-------------------|---------------------|
| CCV1 Result  | 11/21/06         | 5.0           | 5.1               | 102                 |
| CCV2 Result  | 11/21/06         | 5.0           | 5.2               | 104                 |
| CCV3 Result  | 11/21/06         | 5.0           | 5.2               | 104                 |
| CCV4 Result  | 11/21/06         | 5.0           | 5.1               | 102                 |
| CCV5 Result  | 11/21/06         | 5.0           | 5.1               | 102                 |
| CCV6 Result  | 11/21/06         | 5.0           | 5.1               | 102                 |
| CCV7 Result  | 11/21/06         | 5.0           | 5.1               | 102                 |
| CCV8 Result  | 11/22/06         | 5.0           | 5.1               | 102                 |
| CCV8 Result  | 11/22/06         | 5.0           | 5.1               | 102                 |
| CCV9 Result  | 11/22/06         | 5.0           | 5.1               | 102                 |
| CCV10 Result | 11/22/06         | 5.0           | 5.1               | 102                 |
| CCV11 Result | 11/22/06         | 5.0           | 5.1               | 102                 |

### CONTINUING CALIBRATION BLANK (CCB)

|              | Date<br>Analyzed | MRL | Blank<br>Value |
|--------------|------------------|-----|----------------|
| CCB1 Result  | 11/21/06         | 0.2 | ND             |
| CCB2 Result  | 11/21/06         | 0.2 | ND             |
| CCB3 Result  | 11/21/06         | 0.2 | ND             |
| CCB4 Result  | 11/21/06         | 0.2 | ND             |
| CCB5 Result  | 11/21/06         | 0.2 | ND             |
| CCB6 Result  | 11/21/06         | 0.2 | ND             |
| CCB7 Result  | 11/21/06         | 0.2 | ND             |
| CCB8 Result  | 11/22/06         | 0.2 | ND             |
| CCB8 Result  | 11/22/06         | 0.2 | ND             |
| CCB9 Result  | 11/22/06         | 0.2 | ND             |
| CCB10 Result | 11/22/06         | 0.2 | ND             |
| CCB11 Result | 11/22/06         | 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 :** K0609928  
**Date Collected :** 11/08,09/06  
**Date Received :** 11/10/06

### Sulfate

**Analysis Method :** 300.0  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Sample Name  | Lab Code     | MRL | MDL  | Dilution<br>Factor | Date<br>Analyzed | Result | Result<br>Notes |
|--------------|--------------|-----|------|--------------------|------------------|--------|-----------------|
| BXS-4        | K0609928-001 | 0.2 | 0.06 | 2                  | 11/21/06         | 1.6    |                 |
| BXS-1        | K0609928-002 | 0.2 | 0.06 | 2                  | 11/21/06         | 9.7    |                 |
| BXS-6        | K0609928-003 | 0.2 | 0.06 | 2                  | 11/21/06         | 3.4    |                 |
| BXS-2        | K0609928-004 | 0.2 | 0.06 | 2                  | 11/22/06         | 0.15   | J               |
| BXS-5        | K0609928-005 | 0.2 | 0.06 | 2                  | 11/22/06         | ND     |                 |
| BXS-3        | K0609928-006 | 0.2 | 0.06 | 2                  | 11/22/06         | 0.4    |                 |
| Method Blank | K0609928-MB  | 0.2 | 0.03 | 1                  | 11/22/06         | 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 :** K0609928  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 11/22/06

Duplicate Summary  
Inorganic Parameters

**Sample Name :** Batch QC  
**Lab Code :** K0610241-001DUP  
**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 | 2.9           | 2.7                     | 2.8     | 7                           |              |

# 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 :** K0609928  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 11/22/06

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** Batch QC  
**Lab Code :** K0610241-001MS  
**Test Notes :**

**Units :** mg/L (ppm)  
**Basis :** NA

| Analyte | Analysis<br>Method | MRL | Spike<br>Level | Sample<br>Result | Spiked<br>Sample<br>Result | Percent<br>Recovery | CAS<br>Percent<br>Recovery | Result<br>Notes |
|---------|--------------------|-----|----------------|------------------|----------------------------|---------------------|----------------------------|-----------------|
|         |                    |     |                |                  |                            |                     | Acceptance<br>Limits       |                 |
| Sulfate | 300.0              | 0.2 | 4.0            | 2.9              | 6.7                        | 95                  | 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 :** K0609928  
**Date Collected :** NA  
**Date Received :** NA  
**Date Prepared :** NA  
**Date Analyzed :** 11/21/06

Laboratory Control Sample Summary  
 Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** K0609928-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    |              |
| Sulfate | None        | 300.0           | 5.0        | 5.0    | 100              | 90-110               |              |

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

Client : JH Baxter & Company  
Project : Arlington Landfill Wells

Service Request : K0609928  
Date Collected : NA  
Date Received : NA

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

### CONTINUING CALIBRATION VERIFICATION (CCV)

|              | Date<br>Analyzed | True<br>Value | Measured<br>Value | Percent<br>Recovery |
|--------------|------------------|---------------|-------------------|---------------------|
| CCV1 Result  | 11/21/06         | 5.0           | 5.2               | 104                 |
| CCV2 Result  | 11/21/06         | 5.0           | 5.2               | 104                 |
| CCV3 Result  | 11/21/06         | 5.0           | 5.1               | 102                 |
| CCV4 Result  | 11/21/06         | 5.0           | 5.0               | 100                 |
| CCV5 Result  | 11/21/06         | 5.0           | 5.0               | 100                 |
| CCV6 Result  | 11/21/06         | 5.0           | 5.0               | 100                 |
| CCV7 Result  | 11/21/06         | 5.0           | 5.0               | 100                 |
| CCV8 Result  | 11/22/06         | 5.0           | 5.0               | 100                 |
| CCV8 Result  | 11/22/06         | 5.0           | 5.0               | 100                 |
| CCV9 Result  | 11/22/06         | 5.0           | 5.0               | 100                 |
| CCV10 Result | 11/22/06         | 5.0           | 5.0               | 100                 |
| CCV11 Result | 11/22/06         | 5.0           | 5.0               | 100                 |

### CONTINUING CALIBRATION BLANK (CCB)

|              | Date<br>Analyzed | MRL | Blank<br>Value |
|--------------|------------------|-----|----------------|
| CCB1 Result  | 11/21/06         | 0.2 | ND             |
| CCB2 Result  | 11/21/06         | 0.2 | ND             |
| CCB3 Result  | 11/21/06         | 0.2 | ND             |
| CCB4 Result  | 11/21/06         | 0.2 | ND             |
| CCB5 Result  | 11/21/06         | 0.2 | ND             |
| CCB6 Result  | 11/21/06         | 0.2 | ND             |
| CCB7 Result  | 11/21/06         | 0.2 | ND             |
| CCB8 Result  | 11/22/06         | 0.2 | ND             |
| CCB8 Result  | 11/22/06         | 0.2 | ND             |
| CCB9 Result  | 11/22/06         | 0.2 | ND             |
| CCB10 Result | 11/22/06         | 0.2 | ND             |
| CCB11 Result | 11/22/06         | 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: K0609928

| <u>Sample No.</u> | <u>Lab Sample ID.</u> |
|-------------------|-----------------------|
| BXS-4             | K0609928-001 DISS     |
| BXS-4D            | K0609928-001D DISS    |
| BXS-4S            | K0609928-001S DISS    |
| BXS-1             | K0609928-002 DISS     |
| BXS-6             | K0609928-003 DISS     |
| BXS-2             | K0609928-004 DISS     |
| BXS-5             | K0609928-005 DISS     |
| BXS-3             | K0609928-006 DISS     |
| Method Blank      | K0609928-MB           |

Were ICP interelement corrections applied?

Yes/No YES

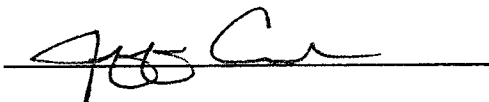
Were ICP background corrections applied?

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

Comments:

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

Signature:



Date:

12/19/00

## 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: K0609928  
Date Collected: 11/08/06  
Date Received: 11/10/06  
Units: µG/L  
Basis: NA

Sample Name: BXS-4

Lab Code: K0609928-001 DISS

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 11/22/06       | 11/27/06      | 7.3    |   |   |
| Barium    | 6010B           | 5.0  | 0.9 | 1    | 11/22/06       | 11/28/06      | 30.4   |   |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 11/22/06       | 11/28/06      | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 2.0 | 1    | 11/22/06       | 11/28/06      | 2.0    | U |   |
| Iron      | 6010B           | 20.0 | 4.0 | 1    | 11/22/06       | 11/28/06      | 33.3   |   |   |
| Manganese | 6010B           | 5.0  | 0.4 | 1    | 11/22/06       | 11/28/06      | 113    |   |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 11/22/06       | 11/28/06      | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 2.0 | 1    | 11/22/06       | 11/28/06      | 2.0    | U |   |

% Solids: 0.0

Comments:

DISSOLVED METALS  
-1-  
INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter &amp; Company

Service Request: K0609928

Project No.: BXS-Wells-Landfill

Date Collected: 11/08/06

Project Name: Arlington Landfill Wells

Date Received: 11/10/06

Matrix: WATER

Units: µG/L

Basis: NA

Sample Name: BXS-1

Lab Code: K0609928-002 DISS

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 11/22/06       | 11/27/06      | 1.0    | U |   |
| Barium    | 6010B           | 5.0  | 0.9 | 1    | 11/22/06       | 11/28/06      | 28.4   |   |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 11/22/06       | 11/28/06      | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 2.0 | 1    | 11/22/06       | 11/28/06      | 2.0    | U |   |
| Iron      | 6010B           | 20.0 | 4.0 | 1    | 11/22/06       | 11/28/06      | 4.0    | U |   |
| Manganese | 6010B           | 5.0  | 0.4 | 1    | 11/22/06       | 11/28/06      | 268    |   |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 11/22/06       | 11/28/06      | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 2.0 | 1    | 11/22/06       | 11/28/06      | 9.6    | B |   |

% Solids: 0.0

Comments:

## DISSOLVED METALS

-1-

## INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter &amp; Company

Service Request: K0609928

Project No.: BXS-Wells-Landfill

Date Collected: 11/08/06

Project Name: Arlington Landfill Wells

Date Received: 11/10/06

Matrix: WATER

Units: µG/L

Basis: NA

Sample Name: BXS-6

Lab Code: K0609928-003 DISS

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 11/22/06       | 11/27/06      | 1.0    | U |   |
| Barium    | 6010B           | 5.0  | 0.9 | 1    | 11/22/06       | 11/28/06      | 25.0   |   |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 11/22/06       | 11/28/06      | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 2.0 | 1    | 11/22/06       | 11/28/06      | 2.0    | U |   |
| Iron      | 6010B           | 20.0 | 4.0 | 1    | 11/22/06       | 11/28/06      | 4.0    | U |   |
| Manganese | 6010B           | 5.0  | 0.4 | 1    | 11/22/06       | 11/28/06      | 261    |   |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 11/22/06       | 11/28/06      | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 2.0 | 1    | 11/22/06       | 11/28/06      | 9.2    | 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: K0609928  
Date Collected: 11/08/06  
Date Received: 11/10/06  
Units: µG/L  
Basis: NA

Sample Name: BXS-2

Lab Code: K0609928-004 DISS

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 11/22/06       | 11/27/06      | 1.1    | B |   |
| Barium    | 6010B           | 5.0  | 0.9 | 1    | 11/22/06       | 11/28/06      | 44.6   |   |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 11/22/06       | 11/28/06      | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 2.0 | 1    | 11/22/06       | 11/28/06      | 2.0    | U |   |
| Iron      | 6010B           | 20.0 | 4.0 | 1    | 11/22/06       | 11/28/06      | 811    |   |   |
| Manganese | 6010B           | 5.0  | 0.4 | 1    | 11/22/06       | 11/28/06      | 1390   |   |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 11/22/06       | 11/28/06      | 27.7   |   |   |
| Zinc      | 6010B           | 10.0 | 2.0 | 1    | 11/22/06       | 11/28/06      | 18.5   |   |   |

% Solids: 0.0

Comments:

## DISSOLVED METALS

-1-

## INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter &amp; Company

Service Request: K0609928

Project No.: BXS-Wells-Landfill

Date Collected: 11/09/06

Project Name: Arlington Landfill Wells

Date Received: 11/10/06

Matrix: WATER

Units: µg/L

Basis: NA

Sample Name: BXS-5

Lab Code: K0609928-005 DISS

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 11/22/06       | 11/27/06      | 1.0    | U |   |
| Barium    | 6010B           | 5.0  | 0.9 | 1    | 11/22/06       | 11/28/06      | 3.0    | B |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 11/22/06       | 11/28/06      | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 2.0 | 1    | 11/22/06       | 11/28/06      | 2.0    | U |   |
| Iron      | 6010B           | 20.0 | 4.0 | 1    | 11/22/06       | 11/28/06      | 4.0    | U |   |
| Manganese | 6010B           | 5.0  | 0.4 | 1    | 11/22/06       | 11/28/06      | 0.5    | B |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 11/22/06       | 11/28/06      | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 2.0 | 1    | 11/22/06       | 11/28/06      | 2.1    | B |   |

% Solids: 0.0

Comments:

DISSOLVED METALS  
-1-  
INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter &amp; Company

Service Request: K0609928

Project No.: BXS-Wells-Landfill

Date Collected: 11/09/06

Project Name: Arlington Landfill Wells

Date Received: 11/10/06

Matrix: WATER

Units: µG/L

Basis: NA

Sample Name: BXS-3

Lab Code: K0609928-006 DISS

| Analyte   | Analysis Method | MRL  | MDL  | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|------|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0  | 1    | 11/22/06       | 11/27/06      | 29.8   |   |   |
| Barium    | 6010B           | 5.0  | 0.9  | 1    | 11/22/06       | 11/28/06      | 104    |   |   |
| Cadmium   | 6010B           | 5.0  | 3.0  | 1    | 11/22/06       | 11/28/06      | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 2.0  | 1    | 11/22/06       | 11/28/06      | 2.0    | U |   |
| Iron      | 6010B           | 100  | 20.0 | 5    | 11/22/06       | 11/28/06      | 28700  |   |   |
| Manganese | 6010B           | 25.0 | 2.0  | 5    | 11/22/06       | 11/28/06      | 17500  |   |   |
| Nickel    | 6010B           | 20   | 20   | 1    | 11/22/06       | 11/28/06      | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 2.0  | 1    | 11/22/06       | 11/28/06      | 13.7   |   |   |

% Solids: 0.0

Comments:

## DISSOLVED METALS

-1-

## INORGANIC ANALYSIS DATA SHEET

Client: JH Baxter &amp; Company

Service Request: K0609928

Project No.: EXS-Wells-Landfill

Date Collected:

Project Name: Arlington Landfill Wells

Date Received:

Matrix: WATER

Units: µg/L

Basis: NA

Sample Name: Method Blank

Lab Code: K0609928-MB

| Analyte   | Analysis Method | MRL  | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|-----------|-----------------|------|-----|------|----------------|---------------|--------|---|---|
| Arsenic   | 7060A           | 5.0  | 1.0 | 1    | 11/22/06       | 11/27/06      | 1.0    | U |   |
| Barium    | 6010B           | 5.0  | 0.9 | 1    | 11/22/06       | 11/28/06      | 0.9    | U |   |
| Cadmium   | 6010B           | 5.0  | 3.0 | 1    | 11/22/06       | 11/28/06      | 3.0    | U |   |
| Copper    | 6010B           | 10.0 | 2.0 | 1    | 11/22/06       | 11/28/06      | 2.0    | U |   |
| Iron      | 6010B           | 20.0 | 4.0 | 1    | 11/22/06       | 11/28/06      | 4.0    | U |   |
| Manganese | 6010B           | 5.0  | 0.4 | 1    | 11/22/06       | 11/28/06      | 0.4    | U |   |
| Nickel    | 6010B           | 20   | 20  | 1    | 11/22/06       | 11/28/06      | 20     | U |   |
| Zinc      | 6010B           | 10.0 | 2.0 | 1    | 11/22/06       | 11/28/06      | 2.0    | U |   |

% Solids: 0.0

Comments:

## DISSOLVED METALS

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JH Baxter &amp; Company

Service Request: K0609928

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                | 25.2  | 101   | 30.0                   | 30.5  | 102   | 28.9  | 96    | 7060A  |
| Barium    | 5000                | 5070  | 101   | 500                    | 501   | 100   | 497   | 99    | 6010B  |
| Cadmium   | 1250                | 1280  | 102   | 500                    | 512   | 102   | 512   | 102   | 6010B  |
| Copper    | 625                 | 629   | 101   | 500                    | 494   | 99    | 491   | 98    | 6010B  |
| Iron      | 2500                | 2540  | 102   | 5000                   | 4980  | 100   | 4960  | 99    | 6010B  |
| Manganese | 1250                | 1260  | 101   | 500                    | 495   | 99    | 492   | 98    | 6010B  |
| Nickel    | 1250                | 1230  | 98    | 5000                   | 5000  | 100   | 5010  | 100   | 6010B  |
| Zinc      | 1250                | 1260  | 101   | 2500                   | 2500  | 100   | 2490  | 100   | 6010B  |

## DISSOLVED METALS

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JH Baxter &amp; Company

Service Request: K0609928

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                   | 29.7  | 99    |       |       | 7060A  |
| Barium    |                     |       |       | 500                    | 496   | 99    | 505   | 101   | 6010B  |
| Cadmium   |                     |       |       | 500                    | 510   | 102   | 521   | 104   | 6010B  |
| Copper    |                     |       |       | 500                    | 490   | 98    | 497   | 99    | 6010B  |
| Iron      |                     |       |       | 5000                   | 4940  | 99    | 5020  | 100   | 6010B  |
| Manganese |                     |       |       | 500                    | 490   | 98    | 497   | 99    | 6010B  |
| Nickel    |                     |       |       | 5000                   | 4990  | 100   | 5070  | 101   | 6010B  |
| Zinc      |                     |       |       | 2500                   | 2480  | 99    | 2520  | 101   | 6010B  |

## DISSOLVED METALS

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JH Baxter &amp; Company

Service Request: K0609928

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) |        |
| Barium    |                     |       |       | 500                    | 493   | 99    | 505   | 101   | 6010B  |
| Cadmium   |                     |       |       | 500                    | 514   | 103   | 525   | 105   | 6010B  |
| Copper    |                     |       |       | 500                    | 488   | 98    | 503   | 101   | 6010B  |
| Iron      |                     |       |       | 5000                   | 4990  | 100   | 5100  | 102   | 6010B  |
| Manganese |                     |       |       | 500                    | 497   | 99    | 508   | 102   | 6010B  |
| Nickel    |                     |       |       | 5000                   | 5000  | 100   | 5130  | 103   | 6010B  |
| Zinc      |                     |       |       | 2500                   | 2520  | 101   | 2560  | 102   | 6010B  |

## DISSOLVED METALS

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JH Baxter &amp; Company

Service Request: K0609928

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) |        |
| Barium    |                     |       |       | 500                    | 498   | 100   |       |       | 6010B  |
| Cadmium   |                     |       |       | 500                    | 527   | 105   |       |       | 6010B  |
| Copper    |                     |       |       | 500                    | 497   | 99    |       |       | 6010B  |
| Iron      |                     |       |       | 5000                   | 5070  | 101   |       |       | 6010B  |
| Manganese |                     |       |       | 500                    | 503   | 101   |       |       | 6010B  |
| Nickel    |                     |       |       | 5000                   | 5120  | 102   |       |       | 6010B  |
| Zinc      |                     |       |       | 2500                   | 2550  | 102   |       |       | 6010B  |

## DISSOLVED METALS

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JH Baxter &amp; Company

Service Request: K0609928

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                | 26.3  | 105   | 30.0                   | 30.4  | 101   | 31.5  | 105   | 7060A  |

## DISSOLVED METALS

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JH Baxter &amp; Company

Service Request: K0609928

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                   | 31.5  | 105   |       |       | 7060A  |

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

Client: JH Baxter &amp; Company

Service Request: K0609928

Project No.: BXS-Wells-Landfil

Project Name: Arlington Landfill Wells

Concentration Units: ug/L

| Analyte   | CRDL Standard for AA |       |     | CRDL Standard for ICP |                  |               |                |             |
|-----------|----------------------|-------|-----|-----------------------|------------------|---------------|----------------|-------------|
|           | True                 | Found | %R  | Initial<br>True       | Initial<br>Found | Initial<br>%R | Final<br>Found | Final<br>%R |
| Arsenic   | 5.0                  | 5.4   | 108 |                       |                  |               |                |             |
| Barium    |                      |       |     | 5.0                   | 4.38             | 88            |                |             |
| Cadmium   |                      |       |     | 5.0                   | 3.16             | 63            |                |             |
| Copper    |                      |       |     | 10                    | 11.6             | 116           |                |             |
| Iron      |                      |       |     | 20                    | 25.9             | 130           |                |             |
| Manganese |                      |       |     | 5.0                   | 5.41             | 108           |                |             |
| Nickel    |                      |       |     | 20                    | 10.2             | 51            |                |             |
| Zinc      |                      |       |     | 10                    | 11.0             | 110           |                |             |

## DISSOLVED METALS

- 2b -

## CRDL STANDARD FOR AA AND ICP

Client: JH Baxter &amp; Company

Service Request: K0609928

Project No.: BXS-Wells-Landfil

Project Name: Arlington Landfill Wells

Concentration Units: ug/L

| Analyte | CRDL Standard for AA |       |     | CRDL Standard for ICP |       |  |  |  |
|---------|----------------------|-------|-----|-----------------------|-------|--|--|--|
|         | True                 | Found | %R  | Initial               | Final |  |  |  |
| Arsenic | 5.0                  | 5.6   | 112 |                       |       |  |  |  |

## DISSOLVED METALS

-3-

## BLANKS

Client: JH Baxter &amp; Company

Service Request: K0609928

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   | -5.0                        | B | 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 &amp; Company

Service Request: K0609928

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<br>Calib.<br>Blank<br>(ug/L) | Continuing Calibration<br>Blank (ug/L) |   |     |   |      |   | Preparation<br>Blank | C | Method |
|-----------|--------------------------------------|----------------------------------------|---|-----|---|------|---|----------------------|---|--------|
|           |                                      | 1                                      | C | 2   | C | 3    | C |                      |   |        |
| Barium    |                                      | 0.9                                    | U | 0.9 | U | 0.9  | U |                      |   | 6010B  |
| Cadmium   |                                      | 3.0                                    | U | 3.0 | U | -3.1 | B |                      |   | 6010B  |
| Copper    |                                      | -2.3                                   | B | 2.0 | U | 2.0  | U |                      |   | 6010B  |
| Iron      |                                      | 4.0                                    | U | 4.0 | U | 4.0  | U |                      |   | 6010B  |
| Manganese |                                      | 0.4                                    | U | 0.4 | U | 0.4  | U |                      |   | 6010B  |
| Nickel    |                                      | 20                                     | U | 20  | U | 20   | U |                      |   | 6010B  |
| Zinc      |                                      | 2.0                                    | U | 2.0 | U | 2.0  | U |                      |   | 6010B  |

## DISSOLVED METALS

-3-

## BLANKS

Client: JH Baxter &amp; Company

Service Request: K0609928

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<br>Calib.<br>Blank<br>(ug/L) | Continuing Calibration<br>Blank (ug/L) |   |   |   |   |   | Preparation<br>Blank | Method |
|-----------|--------------------------------------|----------------------------------------|---|---|---|---|---|----------------------|--------|
|           |                                      | 1                                      | C | 2 | C | 3 | C | C                    |        |
| Barium    |                                      | 0.9                                    | U |   |   |   |   |                      | 6010B  |
| Cadmium   |                                      | 3.0                                    | U |   |   |   |   |                      | 6010B  |
| Copper    |                                      | 2.0                                    | U |   |   |   |   |                      | 6010B  |
| Iron      |                                      | 4.0                                    | U |   |   |   |   |                      | 6010B  |
| Manganese |                                      | 0.9                                    | B |   |   |   |   |                      | 6010B  |
| Nickel    |                                      | 20                                     | U |   |   |   |   |                      | 6010B  |
| Zinc      |                                      | 2.0                                    | U |   |   |   |   |                      | 6010B  |

## DISSOLVED METALS

-3-

## BLANKS

Client: JH Baxter &amp; Company

Service Request: K0609928

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  |

## DISSOLVED METALS

- 4 -

## ICP INTERFERENCE CHECK SAMPLE

Client: JH Baxter &amp; Company

Service Request: K0609928

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    | 1.5           | 488    | 98 |             |        |    |
| Cadmium   |        | 1000   | 1.6           | 975    | 98 |             |        |    |
| Copper    |        | 500    | -29.8         | 455    | 91 |             |        |    |
| Iron      | 200000 | 200000 | 172000        | 177000 | 89 |             |        |    |
| Manganese |        | 500    | -13.7         | 446    | 89 |             |        |    |
| Nickel    |        | 1000   | -20           | 860    | 86 |             |        |    |
| Zinc      |        | 1000   | 24.5          | 969    | 97 |             |        |    |

## DISSOLVED METALS

- 5a -

## SPIKE SAMPLE RECOVERY

Client: JH Baxter &amp; Company

Service Request: K0609928

Project No.: BXS-Wells-Landfill

Units: µg/L

Project Name: Arlington Landfill Wells

Basis: NA

Matrix: WATER

% Solids: 0.0

Sample Name: BXS-4S

Lab Code: K0609928-001S DISS

| Analyte   | Control<br>Limit %R | Spike<br>Result | C | Sample<br>Result | C | Spike<br>Added | %R  | Q | Method |
|-----------|---------------------|-----------------|---|------------------|---|----------------|-----|---|--------|
| Arsenic   | 62 - 116            | 45.2            |   | 7.3              |   | 40.0           | 95  |   | 7060A  |
| Barium    | 87 - 115            | 2140            |   | 30.4             |   | 2000           | 105 |   | 6010B  |
| Cadmium   | 73 - 123            | 57.6            |   | 3.0              | U | 50.0           | 115 |   | 6010B  |
| Copper    | 83 - 116            | 261             |   | 2.0              | U | 250            | 104 |   | 6010B  |
| Iron      | 43 - 163            | 1090            |   | 33.3             |   | 1000           | 106 |   | 6010B  |
| Manganese | 62 - 140            | 647             |   | 113              |   | 500            | 107 |   | 6010B  |
| Nickel    | 89 - 115            | 515             |   | 20.0             | U | 500            | 103 |   | 6010B  |
| Zinc      | 84 - 115            | 527             |   | 2.0              | U | 500            | 105 |   | 6010B  |

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

## DISSOLVED METALS

- 6 -

## DUPLICATES

Client: JH Baxter &amp; Company

Service Request: K0609928

Project No.: BXS-Wells-Landfill

Units: µg/L

Project Name: Arlington Landfill Wells

Basis: NA

Matrix: WATER

% Solids: 0.0

Sample Name: BXS-4D

Lab Code: K0609928-001D DISS

| Analyte   | Control Limit (%) | Sample (S) | C | Duplicate (D) | C | RPD | Q | Method |
|-----------|-------------------|------------|---|---------------|---|-----|---|--------|
| Arsenic   |                   | 7.3        |   | 7.6           |   | 4   |   | 7060A  |
| Barium    | 20                | 30.4       |   | 31.2          |   | 3   |   | 6010B  |
| Cadmium   |                   | 3.0        | U | 3.0           | U |     |   | 6010B  |
| Copper    |                   | 2.0        | U | 2.0           | U |     |   | 6010B  |
| Iron      |                   | 33.3       |   | 32.5          |   | 2   |   | 6010B  |
| Manganese | 20                | 113        |   | 114           |   | 1   |   | 6010B  |
| Nickel    |                   | 20         | U | 20            | U |     |   | 6010B  |
| Zinc      |                   | 2.0        | U | 2.0           | 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 &amp; Company

Service Request: K0609928

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         | 28.1  | 112 |               |       |   |        |    |  |
| Barium    | 5000         | 5240  | 105 |               |       |   |        |    |  |
| Cadmium   | 1250         | 1340  | 107 |               |       |   |        |    |  |
| Copper    | 625          | 655   | 105 |               |       |   |        |    |  |
| Iron      | 2500         | 2640  | 106 |               |       |   |        |    |  |
| Manganese | 1250         | 1320  | 106 |               |       |   |        |    |  |
| Nickel    | 1250         | 1290  | 103 |               |       |   |        |    |  |
| Zinc      | 1250         | 1320  | 106 |               |       |   |        |    |  |

## DISSOLVED METALS

- 9 -

## ICP SERIAL DILUTIONS

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

Service Request: K0609928

Units: ug/L

Sample Name: BXS-3L

Lab Code: K0609928-006L DISS

| Analyte   | Initial Sample<br>Result (I)<br>C | Serial Dilution<br>Result (S)<br>C | % Differ-<br>ence | Q | Method |
|-----------|-----------------------------------|------------------------------------|-------------------|---|--------|
| Barium    | 104                               | 106                                | 2                 |   | 6010B  |
| Cadmium   | 3.00 U                            | 15.0 U                             |                   |   | 6010B  |
| Copper    | 2.00 U                            | 10.0 U                             |                   |   | 6010B  |
| Iron      | 5730                              | 5640                               | 2                 |   | 6010B  |
| Manganese | 3500                              | 3400                               | 3                 |   | 6010B  |
| Nickel    | 20.0 U                            | 100 U                              |                   |   | 6010B  |
| Zinc      | 13.7                              | 13.8 B                             | 1                 |   | 6010B  |

## DISSOLVED METALS

-10-

## METHOD DETECTION LIMITS

Client: JH Baxter &amp; Company

Service Request: K0609928

Project No.: BXS-Wells-Landfill

Project Name: Arlington Landfill Wells

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

GFAA ID #:

AA ID #:

| Analyte   | Wave-length | Back-ground | MRL<br>(ug/L) | MDL<br>(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: K0609928

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<br>(ug/L) | MDL<br>(ug/L) | Method |
|---------|-------------|-------------|---------------|---------------|--------|
| Arsenic | 193.60      | BZ          | 5.0           | 1.0           | 7060A  |

Comments:



11525 Knudson Rd.  
Burlington, WA 98233  
(800) 755-9295  
(360) 757-1400 - FAX (360) 757-1402

Page 1 of 1

## Data Report

Client Name: J H Baxter Company  
P O Box 305  
Arlington, WA 98223

Report Date: 1/20/2006  
Reference Number: 06-00695  
Project: Landfill Wells

Collected By: Jim Clawson

Date Received: 1/18/2006  
Supervisor:

| Lab Number: 1404 |                | Sample Description: BXS-4 |     |     |          |     | Sample Date: 1/17/2006 |           |         |             |          |
|------------------|----------------|---------------------------|-----|-----|----------|-----|------------------------|-----------|---------|-------------|----------|
| CAS ID#          | Analyte        | Result                    | PQL | MDL | Units    | DF  | Method                 | Analyzed  | Analyst | Batch       | Comments |
|                  | TOTAL COLIFORM | <1.1                      | 2   |     | per 100n | 1.0 | SM9221 B/MTF           | 1/20/2006 | SS      | M_060120MTF |          |

| Lab Number: 1405 |                | Sample Description: BXS-6 |     |     |          |     | Sample Date: 1/17/2006 |           |         |             |          |
|------------------|----------------|---------------------------|-----|-----|----------|-----|------------------------|-----------|---------|-------------|----------|
| CAS ID#          | Analyte        | Result                    | PQL | MDL | Units    | DF  | Method                 | Analyzed  | Analyst | Batch       | Comments |
|                  | TOTAL COLIFORM | <1.1                      | 2   |     | per 100n | 1.0 | SM9221 B/MTF           | 1/20/2006 | SS      | M_060120MTF |          |

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)  
D.F. - Dilution Factor

WSDOE Lab C1251  
WSDOH Lab 046



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## Certificate Of Analysis

Client Name: J H Baxter Company  
 P O Box 305  
 Eugene, OR 97440

Report Date: 1/27/2006  
 Reference Number: 06-00761  
 Project: Landfill Wells

Collected By:

Date Received: 1/19/2006

Supervisor:

| Sample Description: BXS-1 |        |     |       |        | Sample Date: 1/18/2006 |         |       |          |
|---------------------------|--------|-----|-------|--------|------------------------|---------|-------|----------|
| Lab Number: 1564          |        |     |       |        |                        |         |       |          |
| Analyte                   | Result | PQL | Units | Method | Analyzed               | Analyst | Batch | Comments |

|                |      |   |           |              |           |    |             |  |
|----------------|------|---|-----------|--------------|-----------|----|-------------|--|
| TOTAL COLIFORM | <1.1 | 2 | per 100mL | SM9221 B/MTF | 1/27/2006 | SS | M_060127MTF |  |
| FECAL COLIFORM | <1.1 | 2 | per 100mL | SM9221 E/MTF | 1/27/2006 | SS | M_060127MTF |  |

| Sample Description: BXS-2 |        |     |       |        | Sample Date: 1/18/2006 |         |       |          |
|---------------------------|--------|-----|-------|--------|------------------------|---------|-------|----------|
| Lab Number: 1565          |        |     |       |        |                        |         |       |          |
| Analyte                   | Result | PQL | Units | Method | Analyzed               | Analyst | Batch | Comments |

|                |      |   |           |              |           |    |             |  |
|----------------|------|---|-----------|--------------|-----------|----|-------------|--|
| TOTAL COLIFORM | <1.1 | 2 | per 100mL | SM9221 B/MTF | 1/27/2006 | SS | M_060127MTF |  |
| FECAL COLIFORM | <1.1 | 2 | per 100mL | SM9221 E/MTF | 1/27/2006 | SS | M_060127MTF |  |

| Sample Description: BXS-3 |        |     |       |        | Sample Date: 1/18/2006 |         |       |          |
|---------------------------|--------|-----|-------|--------|------------------------|---------|-------|----------|
| Lab Number: 1566          |        |     |       |        |                        |         |       |          |
| Analyte                   | Result | PQL | Units | Method | Analyzed               | Analyst | Batch | Comments |

|                |      |   |           |              |           |    |             |  |
|----------------|------|---|-----------|--------------|-----------|----|-------------|--|
| TOTAL COLIFORM | 5.1  | 2 | per 100mL | SM9221 B/MTF | 1/27/2006 | SS | M_060127MTF |  |
| FECAL COLIFORM | <1.1 | 2 | per 100mL | SM9221 E/MTF | 1/27/2006 | SS | M_060127MTF |  |

| Sample Description: BXS-5 |        |     |       |        | Sample Date: 1/18/2006 |         |       |          |
|---------------------------|--------|-----|-------|--------|------------------------|---------|-------|----------|
| Lab Number: 1567          |        |     |       |        |                        |         |       |          |
| Analyte                   | Result | PQL | Units | Method | Analyzed               | Analyst | Batch | Comments |

|                |      |   |           |              |           |    |             |  |
|----------------|------|---|-----------|--------------|-----------|----|-------------|--|
| TOTAL COLIFORM | <1.1 | 2 | per 100mL | SM9221 B/MTF | 1/27/2006 | SS | M_060127MTF |  |
| FECAL COLIFORM | <1.1 | 2 | per 100mL | SM9221 E/MTF | 1/27/2006 | SS | M_060127MTF |  |

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)



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## Certificate Of Analysis

Client Name: J H Baxter Company  
PO BOX 305  
Arlington, WA 98223

Report Date: 5/18/2006  
Reference Number: 06-06218  
Project: Landfill Wells

Collected By:

Date Received: 5/17/2006

Supervisor:

| Sample Description: - BXS-2 |        |     |           |          |           | Sample Date: 5/17/2006 |             |          |  |
|-----------------------------|--------|-----|-----------|----------|-----------|------------------------|-------------|----------|--|
| Lab Number: 12790           |        |     |           |          |           |                        |             |          |  |
| Analyte                     | Result | PQL | Units     | Method   | Analyzed  | Analyst                | Batch       | Comments |  |
| TOTAL COLIFORM              | <2     | 2   | per 100mL | SM9221 B | 5/18/2006 | SS                     | M_060518MTF |          |  |
| FECAL COLIFORM              | <2     | 2   | per 100mL | SM9221 E | 5/18/2006 | SS                     | M_060518MTF |          |  |

| Sample Description: - BXS-3 |        |     |           |          |           | Sample Date: 5/17/2006 |             |          |  |
|-----------------------------|--------|-----|-----------|----------|-----------|------------------------|-------------|----------|--|
| Lab Number: 12791           |        |     |           |          |           |                        |             |          |  |
| Analyte                     | Result | PQL | Units     | Method   | Analyzed  | Analyst                | Batch       | Comments |  |
| TOTAL COLIFORM              | <2     | 2   | per 100mL | SM9221 B | 5/18/2006 | SS                     | M_060518MTF |          |  |
| FECAL COLIFORM              | <2     | 2   | per 100mL | SM9221 E | 5/18/2006 | SS                     | M_060518MTF |          |  |

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)



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## Certificate Of Analysis

Client Name: J.H. Baxter & Company  
P O Box 305  
Arlington, WA 98223

Report Date: 5/18/2006  
Reference Number: 06-06110  
Project: Landfill Wells

Collected By: Jim Clawson/Mary Larson

Date Received: 5/16/2006

Supervisor:

|                             |        |     |       |        |                        |         |       |          |
|-----------------------------|--------|-----|-------|--------|------------------------|---------|-------|----------|
| Sample Description: - BXS-1 |        |     |       |        | Sample Date: 5/15/2006 |         |       |          |
| Lab Number: 12521           |        |     |       |        |                        |         |       |          |
| Analyte                     | Result | PQL | Units | Method | Analyzed               | Analyst | Batch | Comments |

|                |    |    |           |          |           |    |             |  |
|----------------|----|----|-----------|----------|-----------|----|-------------|--|
| FECAL COLIFORM | <1 | 2  | per 100mL | SM9221 E | 5/18/2006 | SS | M_060518MTF |  |
| E. Coli        | NA | <2 | per 100mL | SM9221 E | 5/16/2006 |    |             |  |
| TOTAL COLIFORM | <1 |    | per 100mL | SM9221 E | 5/16/2006 | SS | M_060518MTF |  |

|                             |        |     |       |        |                        |         |       |          |
|-----------------------------|--------|-----|-------|--------|------------------------|---------|-------|----------|
| Sample Description: - BXS-4 |        |     |       |        | Sample Date: 5/15/2006 |         |       |          |
| Lab Number: 12522           |        |     |       |        |                        |         |       |          |
| Analyte                     | Result | PQL | Units | Method | Analyzed               | Analyst | Batch | Comments |

|                |    |    |           |          |           |    |             |  |
|----------------|----|----|-----------|----------|-----------|----|-------------|--|
| FECAL COLIFORM | <1 | 2  | per 100mL | SM9221 E | 5/18/2006 | SS | M_060518MTF |  |
| E. Coli        | NA | <2 | per 100mL | SM9221 E | 5/16/2006 |    |             |  |
| TOTAL COLIFORM | <1 |    | per 100mL | SM9221 E | 5/16/2006 | SS | M_060518MTF |  |

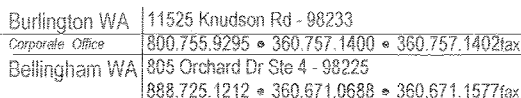
|                             |        |     |       |        |                        |         |       |          |
|-----------------------------|--------|-----|-------|--------|------------------------|---------|-------|----------|
| Sample Description: - BXS-5 |        |     |       |        | Sample Date: 5/15/2006 |         |       |          |
| Lab Number: 12523           |        |     |       |        |                        |         |       |          |
| Analyte                     | Result | PQL | Units | Method | Analyzed               | Analyst | Batch | Comments |

|                |    |    |           |          |           |    |             |  |
|----------------|----|----|-----------|----------|-----------|----|-------------|--|
| FECAL COLIFORM | <1 | 2  | per 100mL | SM9221 E | 5/18/2006 | SS | M_060518MTF |  |
| E. Coli        | NA | <2 | per 100mL | SM9221 E | 5/16/2006 |    |             |  |
| TOTAL COLIFORM | <1 |    | per 100mL | SM9221 E | 5/16/2006 | SS | M_060518MTF |  |

|                             |        |     |       |        |                        |         |       |          |
|-----------------------------|--------|-----|-------|--------|------------------------|---------|-------|----------|
| Sample Description: - BXS-6 |        |     |       |        | Sample Date: 5/15/2006 |         |       |          |
| Lab Number: 12524           |        |     |       |        |                        |         |       |          |
| Analyte                     | Result | PQL | Units | Method | Analyzed               | Analyst | Batch | Comments |

|                |    |    |           |          |           |    |             |  |
|----------------|----|----|-----------|----------|-----------|----|-------------|--|
| FECAL COLIFORM | <1 | 2  | per 100mL | SM9221 E | 5/18/2006 | SS | M_060518MTF |  |
| E. Coli        | NA | <2 | per 100mL | SM9221 E | 5/16/2006 |    |             |  |
| TOTAL COLIFORM | <1 |    | per 100mL | SM9221 E | 5/16/2006 | SS | M_060518MTF |  |

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 Name: J H Baxter Company  
P O Box 305  
Eugene, OR 97440

Reference Number: 06-10035  
Project: Landfill Wells

Repeat Sample Number:  
 Lab Number: 04620754  
 Collect Date: 8/3/2006  
 Date Received: 8/4/2006  
 Report Date: 8/14/2006  
 Field ID: BXS-2  
 Comment:  
 Supervisor:

System Name:  
System ID Number:  
DOH Source Number:  
Sample Type:  
Sample Purpose: Investigative or Other  
Sample Location: BXS-2  
County:  
Sampled By:  
Sampler Phone:

NOTES:

If the result is Unsatisfactory a repeat sample is required for Public Water Systems. Private individuals should investigate the cause of the unsatisfactory result and resample.

If E. Coli or Fecal Coliform are present in sample do not drink the water until it is properly treated.

Comments:



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## Data Report

Client Name: J H Baxter Company  
 P O Box 305  
 Eugene, OR 97440

Report Date: 11/10/2006  
 Reference Number: 06-14752  
 Project: Landfill Wells

Collected By:

Date Received: 11/9/2006  
 Supervisor:

| Lab Number: 31255 |                |        | Sample Description: BXS-1 |     |          |     |          | Sample Date: 11/8/2006 |         |             |          |  |
|-------------------|----------------|--------|---------------------------|-----|----------|-----|----------|------------------------|---------|-------------|----------|--|
| CAS ID#           | Analyte        | Result | PQL                       | MDL | Units    | DF  | Method   | Analyzed               | Analyst | Batch       | Comments |  |
|                   | TOTAL COLIFORM | 5.3    | 2                         |     | per 100n | 1.0 | SM9221 B | 11/10/2006             | AA      | M_061110MTF |          |  |
| E-14551           | FECAL COLIFORM | <1     | 2                         |     | per 100n | 1.0 | SM9221 E | 11/10/2006             | AA      | M_061110mtf |          |  |

| Lab Number: 31256 |                |        | Sample Description: BXS-2 |     |          |     |          | Sample Date: 11/8/2006 |         |             |          |  |
|-------------------|----------------|--------|---------------------------|-----|----------|-----|----------|------------------------|---------|-------------|----------|--|
| CAS ID#           | Analyte        | Result | PQL                       | MDL | Units    | DF  | Method   | Analyzed               | Analyst | Batch       | Comments |  |
|                   | TOTAL COLIFORM | 129.8  | 2                         |     | per 100n | 1.0 | SM9221 B | 11/10/2006             | AA      | M_061110MTF |          |  |
| E-14551           | FECAL COLIFORM | <1     | 2                         |     | per 100n | 1.0 | SM9221 E | 11/10/2006             | AA      | M_061110mtf |          |  |

| Lab Number: 31257 |                |        | Sample Description: BXS-4 |     |          |     |          | Sample Date: 11/8/2006 |         |             |          |  |
|-------------------|----------------|--------|---------------------------|-----|----------|-----|----------|------------------------|---------|-------------|----------|--|
| CAS ID#           | Analyte        | Result | PQL                       | MDL | Units    | DF  | Method   | Analyzed               | Analyst | Batch       | Comments |  |
|                   | TOTAL COLIFORM | <1     | 2                         |     | per 100n | 1.0 | SM9221 B | 11/10/2006             | AA      | M_061110MTF |          |  |
| E-14551           | FECAL COLIFORM | <1     | 2                         |     | per 100n | 1.0 | SM9221 E | 11/10/2006             | AA      | M_061110mtf |          |  |

| Lab Number: 31258 |                |        | Sample Description: BXS-6 |     |          |     |          | Sample Date: 11/8/2006 |         |             |          |  |
|-------------------|----------------|--------|---------------------------|-----|----------|-----|----------|------------------------|---------|-------------|----------|--|
| CAS ID#           | Analyte        | Result | PQL                       | MDL | Units    | DF  | Method   | Analyzed               | Analyst | Batch       | Comments |  |
|                   | TOTAL COLIFORM | 8.7    | 2                         |     | per 100n | 1.0 | SM9221 B | 11/10/2006             | AA      | M_061110MTF |          |  |
| E-14551           | FECAL COLIFORM | <1     | 2                         |     | per 100n | 1.0 | SM9221 E | 11/10/2006             | AA      | M_061110mtf |          |  |

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)

D.F. - Dilution Factor

WSDOE Lab C1251  
 WSDOH Lab 046



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## Certificate Of Analysis

Client Name: J H Baxter Company  
P O Box 305  
Eugene, OR 97440

Report Date: 11/13/2006  
Reference Number: 06-14802  
Project: Landfill Wells

Collected By:

Date Received: 11/10/2006  
Supervisor:

| Sample Description: BXS-3 |        |     |           |          | Sample Date: 11/9/2006 |         |             |          |
|---------------------------|--------|-----|-----------|----------|------------------------|---------|-------------|----------|
| Lab Number: 31338         |        |     |           |          |                        |         |             |          |
| Analyte                   | Result | PQL | Units     | Method   | Analyzed               | Analyst | Batch       | Comments |
| TOTAL COLIFORM            | <1     | 2   | per 100mL | SM9221 B | 11/13/2006             | AV      | M_061113MTF |          |
| FECAL COLIFORM            | <1     | 2   | per 100mL | SM9221 E | 11/13/2006             | AV      | M_061113MTF |          |

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)



## Certificate Of Analysis

Collected By:

Date Received: 11/10/2006

| Sample Description: BXS-5 |        |     |           |          | Sample Date: 11/9/2006 |         |             |          |
|---------------------------|--------|-----|-----------|----------|------------------------|---------|-------------|----------|
| Lab Number: 31339         |        |     |           |          |                        |         |             |          |
| Analyte                   | Result | PQL | Units     | Method   | Analyzed               | Analyst | Batch       | Comments |
| TOTAL COLIFORM            | <1     | 2   | per 100mL | SM9221 B | 11/13/2006             | AV      | M_061113MTF |          |
| FECAL COLIFORM            | <1     | 2   | per 100mL | SM9221 E | 11/13/2006             | AV      | M_061113MTF |          |

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)

## **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

$$t_{stat} = (X_{bar} - m_o) / \sqrt{(s^2/n + s'^2/n)}$$

Number of Samples **n** 4

Critical Statistic **t<sub>c</sub>** 2.447

**BXS-4**

(Upgradient well)

|  | Apr-05 | 7.5  |      |      |      | Average Concentration |           |
|--|--------|------|------|------|------|-----------------------|-----------|
|  | Aug-05 | 5.37 |      |      |      | <b>m<sub>o</sub></b>  | <b>s'</b> |
|  | Dec-05 | 8    |      |      |      |                       |           |
|  | Jan-06 | 8.1  | 7.5  | 5.37 | 8    | 7.24                  | 1.63      |
|  | May-06 | 5.87 | 5.37 | 8    | 8.1  | 6.84                  | 2.01      |
|  | Aug-06 | 6.12 | 8    | 8.1  | 5.87 | 7.02                  | 1.42      |
|  | Nov-06 | 7.08 | 8.1  | 5.87 | 6.12 | 6.79                  | 1.03      |

**BXS-3**

(Downgradient well)

|  | Apr-05 | 6.3  |      |      |      | <b>X<sub>bar</sub></b> | <b>s'</b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--|--------|------|------|------|------|------------------------|-----------|----------|-------------------------|
|  | Aug-05 | 5.84 |      |      |      |                        |           |          |                         |
|  | Dec-05 | 6.47 |      |      |      |                        |           |          |                         |
|  | Jan-06 | 7.09 | 6.3  | 5.84 | 6.47 | 6.43                   | 0.27      | 0.52     | -1.19                   |
|  | May-06 | 6.12 | 5.84 | 6.47 | 7.09 | 6.38                   | 0.29      | 0.54     | -0.66                   |
|  | Aug-06 | 6.46 | 6.47 | 7.09 | 6.12 | 6.54                   | 0.16      | 0.40     | -0.73                   |
|  | Nov-06 | 6.5  | 7.09 | 6.12 | 6.46 | 6.54                   | 0.16      | 0.40     | -0.37                   |

**BXS-2**

(Downgradient well)

|  | Apr-05 | 6.20 |      |      |      | <b>X<sub>bar</sub></b> | <b>s'</b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--|--------|------|------|------|------|------------------------|-----------|----------|-------------------------|
|  | Aug-05 | 5.77 |      |      |      |                        |           |          |                         |
|  | Dec-05 | 6.36 |      |      |      |                        |           |          |                         |
|  | Jan-06 | 6.60 | 6.2  | 5.77 | 6.36 | 6.23                   | 0.12      | 0.35     | -1.53                   |
|  | May-06 | 6.12 | 5.77 | 6.36 | 6.60 | 6.21                   | 0.13      | 0.35     | -0.94                   |
|  | Aug-06 | 6.59 | 6.36 | 6.60 | 6.12 | 6.42                   | 0.05      | 0.23     | -0.93                   |
|  | Nov-06 | 6.89 | 6.60 | 6.12 | 6.59 | 6.55                   | 0.10      | 0.32     | -0.37                   |

**BXS-1**

(Downgradient well)

|  | Apr-05 | 6.1  |      |      |      | <b>X<sub>bar</sub></b> | <b>s'</b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--|--------|------|------|------|------|------------------------|-----------|----------|-------------------------|
|  | Aug-05 | 5.87 |      |      |      |                        |           |          |                         |
|  | Dec-05 | 6.15 |      |      |      |                        |           |          |                         |
|  | Jan-06 | 6.43 | 6.1  | 5.87 | 6.15 | 6.14                   | 0.05      | 0.23     | -1.70                   |
|  | May-06 | 5.49 | 5.87 | 6.15 | 6.43 | 5.99                   | 0.16      | 0.40     | -1.27                   |
|  | Aug-06 | 5.45 | 5.87 | 6.43 | 5.49 | 5.81                   | 0.21      | 0.45     | -1.79                   |
|  | Nov-06 | 6.36 | 6.43 | 5.49 | 5.45 | 5.93                   | 0.29      | 0.54     | -1.24                   |

**Notes:**

**X<sub>bar</sub>** Average Concentration  
**s<sup>2</sup>** Sample variance  
**s'** Sample variance  
**s** Sample Standard Deviation  
**t<sub>stat</sub>** 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

$$t_{\text{stat}} = (X_{\text{bar}} - m_o) / \sqrt{(s^1/n + s^2/n)}$$

Number of Samples **n** 4

Critical Statistic **t<sub>c</sub>** 2.447

### BXS-4

(Upgradient well)

| Apr-05 | 194 |     |     |     | Average Concentration |           |
|--------|-----|-----|-----|-----|-----------------------|-----------|
| Aug-05 | 195 |     |     |     | <b>m<sub>o</sub></b>  | <b>s'</b> |
| Dec-05 | 194 |     |     |     |                       |           |
| Jan-06 | 201 | 194 | 195 | 194 | 196.00                | 11.33     |
| May-06 | 182 | 195 | 194 | 201 | 193.00                | 63.33     |
| Aug-06 | 181 | 194 | 201 | 182 | 189.50                | 93.67     |
| Nov-06 | 201 | 201 | 182 | 181 | 191.25                | 126.92    |

### BXS-3

(Downgradient well)

| Apr-05 | 785 |     |     |     | <b>X<sub>bar</sub></b> <b>s'</b> <b>s</b> <b>t<sub>stat</sub></b> |      |    |              |
|--------|-----|-----|-----|-----|-------------------------------------------------------------------|------|----|--------------|
| Aug-05 | 788 |     |     |     |                                                                   |      |    |              |
| Dec-05 | 854 |     |     |     |                                                                   |      |    |              |
| Jan-06 | 740 | 785 | 788 | 854 | 792                                                               | 2204 | 47 | <b>25.31</b> |
| May-06 | 744 | 788 | 854 | 740 | 782                                                               | 2809 | 53 | <b>22.16</b> |
| Aug-06 | 839 | 854 | 740 | 744 | 794                                                               | 3680 | 61 | <b>19.91</b> |
| Nov-06 | 817 | 740 | 744 | 839 | 785                                                               | 2549 | 50 | <b>23.47</b> |

### BXS-2

(Downgradient well)

| Apr-05 | 812 |     |     |     | <b>X<sub>bar</sub></b> <b>s'</b> <b>s</b> <b>t<sub>stat</sub></b> |     |    |              |
|--------|-----|-----|-----|-----|-------------------------------------------------------------------|-----|----|--------------|
| Aug-05 | 794 |     |     |     |                                                                   |     |    |              |
| Dec-05 | 778 |     |     |     |                                                                   |     |    |              |
| Jan-06 | 778 | 812 | 794 | 778 | 791                                                               | 262 | 16 | <b>71.87</b> |
| May-06 | 730 | 794 | 778 | 778 | 770                                                               | 768 | 28 | <b>41.34</b> |
| Aug-06 | 800 | 778 | 778 | 730 | 772                                                               | 873 | 30 | <b>39.14</b> |
| Nov-06 | 784 | 778 | 730 | 800 | 773                                                               | 908 | 30 | <b>38.37</b> |

### BXS-1

(Downgradient well)

| Apr-05 | 380 |     |     |     | <b>X<sub>bar</sub></b> <b>s'</b> <b>s</b> <b>t<sub>stat</sub></b> |      |    |              |
|--------|-----|-----|-----|-----|-------------------------------------------------------------------|------|----|--------------|
| Aug-05 | 426 |     |     |     |                                                                   |      |    |              |
| Dec-05 | 439 |     |     |     |                                                                   |      |    |              |
| Jan-06 | 384 | 380 | 426 | 439 | 407                                                               | 881  | 30 | <b>14.14</b> |
| May-06 | 392 | 426 | 439 | 384 | 410                                                               | 699  | 26 | <b>16.30</b> |
| Aug-06 | 380 | 439 | 384 | 392 | 399                                                               | 745  | 27 | <b>15.22</b> |
| Nov-06 | 501 | 384 | 392 | 380 | 414                                                               | 3370 | 58 | <b>7.67</b>  |

#### Notes:

**X<sub>bar</sub>** Average Concentration  
**s<sup>2</sup>** Sample variance  
**s<sup>1</sup>** Sample variance  
**s** Sample Standard Deviation  
**t<sub>stat</sub>** 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

$$t_{\text{stat}} = (X_{\text{bar}} - m_o) / \sqrt{s^1/n + s^2/n}$$

Number of Samples **n** 4

Critical Statistic **t<sub>c</sub>** 2.447

**BXS-4**

(Upgradient well)

|        |      |                                     |      |      |      |      |
|--------|------|-------------------------------------|------|------|------|------|
| Apr-05 | 0.51 | Average Concentration<br>$m_o$ $s'$ |      |      |      |      |
| Aug-05 | 0.5  |                                     |      |      |      |      |
| Nov-05 | 0.49 |                                     |      |      |      |      |
| Jan-06 | 0.46 | 0.51                                | 0.5  | 0.49 | 0.49 | 0.00 |
| May-06 | 0.51 | 0.5                                 | 0.49 | 0.46 | 0.49 | 0.00 |
| Aug-06 | 0.5  | 0.49                                | 0.46 | 0.51 | 0.49 | 0.00 |
| Nov-06 | 0.47 | 0.46                                | 0.51 | 0.5  | 0.49 | 0.00 |

**BXS-3**

(Downgradient well)

|        |      |      |      |      |           |      |      |            |
|--------|------|------|------|------|-----------|------|------|------------|
| Apr-05 | 0.58 |      |      |      | $\bar{X}$ | $s'$ | $s$  | $t_{stat}$ |
| Aug-05 | 0.74 |      |      |      |           |      |      |            |
| Nov-05 | 0.17 |      |      |      |           |      |      |            |
| Jan-06 | 0.15 | 0.58 | 0.74 | 0.17 | 0.41      | 0.09 | 0.30 | -0.54      |
| May-06 | 1.13 | 0.74 | 0.17 | 0.15 | 0.55      | 0.23 | 0.48 | 0.24       |
| Aug-06 | 1.29 | 0.17 | 0.15 | 1.13 | 0.69      | 0.37 | 0.61 | 0.64       |
| Nov-06 | 0.41 | 0.15 | 1.13 | 1.29 | 0.75      | 0.30 | 0.55 | 0.94       |

**BXS-2**

(Downgradient well)

|        |       |       |       |       |                  |      |      |                   |  |
|--------|-------|-------|-------|-------|------------------|------|------|-------------------|--|
| Apr-05 | 0.025 |       |       |       | $X_{\text{bar}}$ | $s'$ | $s$  | $t_{\text{stat}}$ |  |
| Aug-05 | 0.03  |       |       |       |                  |      |      |                   |  |
| Nov-05 | 0.025 |       |       |       |                  |      |      |                   |  |
| Jan-06 | 0.025 | 0.025 | 0.03  | 0.025 | 0.03             | 0.00 | 0.00 | -42.65            |  |
| May-06 | 0.027 | 0.03  | 0.025 | 0.025 | 0.03             | 0.00 | 0.00 | -42.63            |  |
| Aug-06 | 0.011 | 0.025 | 0.025 | 0.027 | 0.02             | 0.00 | 0.01 | -40.99            |  |
| Nov-06 | 0.022 | 0.025 | 0.027 | 0.011 | 0.02             | 0.00 | 0.01 | -40.77            |  |

**BXS-1**

(Downgradient well)

|        |       |       |       |       |                  |      |      |                   |  |
|--------|-------|-------|-------|-------|------------------|------|------|-------------------|--|
| Apr-05 | 0.025 |       |       |       | $X_{\text{bar}}$ | $s'$ | $s$  | $t_{\text{stat}}$ |  |
| Aug-05 | 0.025 |       |       |       |                  |      |      |                   |  |
| Nov-05 | 0.025 |       |       |       |                  |      |      |                   |  |
| Jan-06 | 0.01  | 0.025 | 0.025 | 0.025 | 0.02             | 0.00 | 0.01 | -41.00            |  |
| May-06 | 0.019 | 0.025 | 0.025 | 0.01  | 0.02             | 0.00 | 0.01 | -41.37            |  |
| Aug-06 | 0.011 | 0.025 | 0.01  | 0.019 | 0.02             | 0.00 | 0.01 | -41.67            |  |
| Nov-06 | 0.025 | 0.01  | 0.019 | 0.011 | 0.02             | 0.00 | 0.01 | -41.23            |  |

**Notes:**

X<sub>bar</sub> Average Concentration  
s<sup>2</sup> Sample variance  
s<sup>1</sup> Sample variance  
s Sample Standard Deviation  
t<sub>stat</sub> 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

$$t_{\text{stat}} = (X_{\text{bar}} - m_o) / \sqrt{(s^2/n + s'^2/n)}$$

Number of Samples **n** 4

Critical Statistic **t<sub>c</sub>** 2.447

### BXS-4

(Upgradient well)

|        |     |     |     |     | Average Concentration |           |
|--------|-----|-----|-----|-----|-----------------------|-----------|
|        |     |     |     |     | <b>m<sub>o</sub></b>  | <b>s'</b> |
| Apr-05 | 5   |     |     |     |                       |           |
| Aug-05 | 2   |     |     |     |                       |           |
| Nov-05 | 2.5 |     |     |     |                       |           |
| Jan-06 | 2.5 | 5   | 2   | 2.5 | 3.00                  | 1.83      |
| May-06 | 2.6 | 2   | 2.5 | 2.5 | 2.40                  | 0.07      |
| Aug-06 | 4   | 2.5 | 2.5 | 2.6 | 2.90                  | 0.54      |
| Nov-06 | 2.5 | 2.5 | 2.6 | 4   | 2.90                  | 0.54      |

### BXS-3

(Downgradient well)

|        |    |    |    |    | <b>X<sub>bar</sub></b> | <b>s'</b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--------|----|----|----|----|------------------------|-----------|----------|-------------------------|
| Apr-05 | 69 |    |    |    |                        |           |          |                         |
| Aug-05 | 71 |    |    |    |                        |           |          |                         |
| Nov-05 | 66 |    |    |    |                        |           |          |                         |
| Jan-06 | 59 | 69 | 71 | 66 | 66.25                  | 27.58     | 5.25     | <b>23.32</b>            |
| May-06 | 78 | 71 | 66 | 59 | 68.50                  | 64.33     | 8.02     | <b>16.25</b>            |
| Aug-06 | 85 | 66 | 59 | 78 | 72.00                  | 136.67    | 11.69    | <b>11.74</b>            |
| Nov-06 | 66 | 59 | 78 | 85 | 72.00                  | 136.67    | 11.69    | <b>11.74</b>            |

### BXS-2

(Downgradient well)

|        |    |    |    |    | <b>X<sub>bar</sub></b> | <b>s'</b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--------|----|----|----|----|------------------------|-----------|----------|-------------------------|
| Apr-05 | 43 |    |    |    |                        |           |          |                         |
| Aug-05 | 36 |    |    |    |                        |           |          |                         |
| Nov-05 | 40 |    |    |    |                        |           |          |                         |
| Jan-06 | 35 | 43 | 36 | 40 | 38.50                  | 13.67     | 3.70     | <b>18.03</b>            |
| May-06 | 38 | 36 | 40 | 35 | 37.25                  | 4.92      | 2.22     | <b>26.83</b>            |
| Aug-06 | 36 | 40 | 35 | 38 | 37.25                  | 4.92      | 2.22     | <b>26.44</b>            |
| Nov-06 | 35 | 35 | 38 | 36 | 36.00                  | 2.00      | 1.41     | <b>33.81</b>            |

### BXS-1

(Downgradient well)

|        |    |    |    |    | <b>X<sub>bar</sub></b> | <b>s'</b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--------|----|----|----|----|------------------------|-----------|----------|-------------------------|
| Apr-05 | 14 |    |    |    |                        |           |          |                         |
| Aug-05 | 13 |    |    |    |                        |           |          |                         |
| Nov-05 | 17 |    |    |    |                        |           |          |                         |
| Jan-06 | 13 | 14 | 13 | 17 | 14.25                  | 3.58      | 1.89     | <b>9.67</b>             |
| May-06 | 8  | 13 | 17 | 13 | 12.75                  | 13.58     | 3.69     | <b>5.27</b>             |
| Aug-06 | 13 | 17 | 13 | 8  | 12.75                  | 13.58     | 3.69     | <b>5.02</b>             |
| Nov-06 | 15 | 13 | 8  | 13 | 12.25                  | 8.92      | 2.99     | <b>5.70</b>             |

#### Notes:

- X<sub>bar</sub>** Average Concentration
- s<sup>2</sup>** Sample variance
- s'** Sample variance
- s** Sample Standard Deviation
- t<sub>stat</sub>** 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<sub>c</sub>** 2.447

**BXS-4**

(Upgradient well)

|        |     |     |     |     | Average Concentration |                      |
|--------|-----|-----|-----|-----|-----------------------|----------------------|
|        |     |     |     |     | <b>m<sub>o</sub></b>  | <b>s<sup>1</sup></b> |
| Apr-05 | 1.9 |     |     |     |                       |                      |
| Aug-05 | 1.7 |     |     |     |                       |                      |
| Nov-05 | 1.8 |     |     |     |                       |                      |
| Jan-06 | 1.6 | 1.9 | 1.7 | 1.8 | 1.75                  | 0.02                 |
| May-06 | 1.7 | 1.7 | 1.8 | 1.6 | 1.70                  | 0.01                 |
| Aug-06 | 1.8 | 1.8 | 1.6 | 1.7 | 1.73                  | 0.01                 |
| Nov-06 | 1.8 | 1.6 | 1.7 | 1.8 | 1.73                  | 0.01                 |

**BXS-3**

(Downgradient well)

|        |     |     |     |     | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--------|-----|-----|-----|-----|------------------------|----------------------|----------|-------------------------|
| Apr-05 | 3.8 |     |     |     |                        |                      |          |                         |
| Aug-05 | 3.6 |     |     |     |                        |                      |          |                         |
| Nov-05 | 2.8 |     |     |     |                        |                      |          |                         |
| Jan-06 | 3.5 | 3.8 | 3.6 | 2.8 | 3.43                   | 0.19                 | 0.43     | <b>7.38</b>             |
| May-06 | 1.9 | 3.6 | 2.8 | 3.5 | 2.95                   | 0.62                 | 0.79     | <b>3.14</b>             |
| Aug-06 | 3.1 | 2.8 | 3.5 | 1.9 | 2.83                   | 0.46                 | 0.68     | <b>3.18</b>             |
| Nov-06 | 2.5 | 3.5 | 1.9 | 3.1 | 2.75                   | 0.49                 | 0.70     | <b>2.88</b>             |

**BXS-2**

(Downgradient well)

|        |     |     |     |     | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--------|-----|-----|-----|-----|------------------------|----------------------|----------|-------------------------|
| Apr-05 | 4.7 |     |     |     |                        |                      |          |                         |
| Aug-05 | 4.2 |     |     |     |                        |                      |          |                         |
| Nov-05 | 3.7 |     |     |     |                        |                      |          |                         |
| Jan-06 | 3.7 | 4.7 | 4.2 | 3.7 | 4.08                   | 0.23                 | 0.48     | <b>9.38</b>             |
| May-06 | 2.8 | 4.2 | 3.7 | 3.7 | 3.60                   | 0.34                 | 0.58     | <b>6.36</b>             |
| Aug-06 | 4   | 3.7 | 3.7 | 2.8 | 3.55                   | 0.27                 | 0.52     | <b>6.82</b>             |
| Nov-06 | 3.5 | 3.7 | 2.8 | 4   | 3.50                   | 0.26                 | 0.51     | <b>6.75</b>             |

**BXS-1**

(Downgradient well)

|        |     |     |     |     | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--------|-----|-----|-----|-----|------------------------|----------------------|----------|-------------------------|
| Apr-05 | 4.6 |     |     |     |                        |                      |          |                         |
| Aug-05 | 5.4 |     |     |     |                        |                      |          |                         |
| Nov-05 | 3.1 |     |     |     |                        |                      |          |                         |
| Jan-06 | 5.3 | 4.6 | 5.4 | 3.1 | 4.60                   | 1.13                 | 1.06     | <b>5.33</b>             |
| May-06 | 2.7 | 5.4 | 3.1 | 5.3 | 4.13                   | 2.03                 | 1.42     | <b>3.39</b>             |
| Aug-06 | 4.7 | 3.1 | 5.3 | 2.7 | 3.95                   | 1.56                 | 1.25     | <b>3.55</b>             |
| Nov-06 | 3.4 | 5.3 | 2.7 | 4.7 | 4.03                   | 1.41                 | 1.19     | <b>3.85</b>             |

**Notes:**

X<sub>bar</sub> Average Concentration  
s<sup>2</sup> Sample variance  
s<sup>1</sup> Sample variance  
s Sample Standard Deviation  
t<sub>stat</sub> 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

$$t_{\text{stat}} = (X_{\text{bar}} - m_o) / \sqrt{(s^1/n + s^2/n)}$$

Number of Samples **n** 4

Critical Statistic **t<sub>c</sub>** 2.447

BXS-4

(Upgradient well)

|  | Apr-05 | 0.1   |       |       |       | Average Concentration |                |
|--|--------|-------|-------|-------|-------|-----------------------|----------------|
|  | Aug-05 | 0.025 |       |       |       | m <sub>o</sub>        | s <sup>1</sup> |
|  | Nov-05 | 0.1   |       |       |       |                       |                |
|  | Jan-06 | 0.09  | 0.1   | 0.025 | 0.1   | 0.08                  | 0.00           |
|  | May-06 | 0.025 | 0.025 | 0.1   | 0.09  | 0.06                  | 0.00           |
|  | Aug-06 | 0.025 | 0.1   | 0.09  | 0.025 | 0.06                  | 0.00           |
|  | Nov-06 | 0.025 | 0.09  | 0.025 | 0.025 | 0.04                  | 0.00           |

BXS-3

(Downgradient well)

|  | Apr-05 | 0.1  |      |      |      | X <sub>bar</sub> s <sup>1</sup> s |      |      | t <sub>stat</sub> |
|--|--------|------|------|------|------|-----------------------------------|------|------|-------------------|
|  | Aug-05 | 0.02 |      |      |      |                                   |      |      |                   |
|  | Nov-05 | 0.08 |      |      |      |                                   |      |      |                   |
|  | Jan-06 | 0.07 | 0.1  | 0.02 | 0.08 | 0.07                              | 0.00 | 0.03 | -0.45             |
|  | May-06 | 0.16 | 0.02 | 0.08 | 0.07 | 0.08                              | 0.00 | 0.06 | 0.66              |
|  | Aug-06 | 0.14 | 0.08 | 0.07 | 0.16 | 0.11                              | 0.00 | 0.04 | 1.84              |
|  | Nov-06 | 0.07 | 0.07 | 0.16 | 0.14 | 0.11                              | 0.00 | 0.05 | 2.32              |

BXS-2

(Downgradient well)

|  | Apr-05 | 0.1   |      |       |       | X <sub>bar</sub> s <sup>1</sup> s |      |      | t <sub>stat</sub> |
|--|--------|-------|------|-------|-------|-----------------------------------|------|------|-------------------|
|  | Aug-05 | 0.01  |      |       |       |                                   |      |      |                   |
|  | Nov-05 | 0.11  |      |       |       |                                   |      |      |                   |
|  | Jan-06 | 0.1   | 0.1  | 0.01  | 0.11  | 0.08                              | 0.00 | 0.05 | 0.04              |
|  | May-06 | 0.039 | 0.01 | 0.11  | 0.1   | 0.06                              | 0.00 | 0.05 | 0.16              |
|  | Aug-06 | 0.01  | 0.11 | 0.1   | 0.039 | 0.06                              | 0.00 | 0.05 | 0.16              |
|  | Nov-06 | 0.008 | 0.1  | 0.039 | 0.01  | 0.04                              | 0.00 | 0.04 | -0.07             |

BXS-1

(Downgradient well)

|  | Apr-05 | 1    |      |      |      | X <sub>bar</sub> s <sup>1</sup> s |      |      | t <sub>stat</sub> |
|--|--------|------|------|------|------|-----------------------------------|------|------|-------------------|
|  | Aug-05 | 0.95 |      |      |      |                                   |      |      |                   |
|  | Nov-05 | 0.3  |      |      |      |                                   |      |      |                   |
|  | Jan-06 | 0.5  | 1    | 0.95 | 0.3  | 0.69                              | 0.12 | 0.34 | <b>3.54</b>       |
|  | May-06 | 0.92 | 0.95 | 0.3  | 0.5  | 0.67                              | 0.10 | 0.32 | <b>3.78</b>       |
|  | Aug-06 | 0.96 | 0.3  | 0.5  | 0.92 | 0.67                              | 0.10 | 0.32 | <b>3.76</b>       |
|  | Nov-06 | 0.46 | 0.5  | 0.92 | 0.96 | 0.71                              | 0.07 | 0.27 | <b>4.97</b>       |

Notes:

- X<sub>bar</sub> Average Concentration
- s<sup>2</sup> Sample variance
- s<sup>1</sup> Sample variance
- s Sample Standard Deviation
- t<sub>stat</sub> 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<sub>c</sub>** 2.447

### BXS-4

(Upgradient well)

|  | Apr-05 |     |     |     | Average Concentration |                      |
|--|--------|-----|-----|-----|-----------------------|----------------------|
|  |        |     |     |     | <b>m<sub>o</sub></b>  | <b>s<sup>1</sup></b> |
|  | Apr-05 | 129 |     |     |                       |                      |
|  | Aug-05 |     |     |     |                       |                      |
|  | Nov-05 | 126 |     |     |                       |                      |
|  | Jan-06 | 149 | 129 | 126 | 134.67                | 156.33               |
|  | May-06 | 145 |     | 149 | 140.00                | 151.00               |
|  | Aug-06 | 100 | 126 | 149 | 130.00                | 500.67               |
|  | Nov-06 | 141 | 149 | 145 | 145.00                | 16.00                |

### BXS-3

(Downgradient well)

|  | Apr-05 |     |     |     | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--|--------|-----|-----|-----|------------------------|----------------------|----------|-------------------------|
|  | Apr-05 | 468 |     |     |                        |                      |          |                         |
|  | Aug-05 |     |     |     |                        |                      |          |                         |
|  | Nov-05 | 440 |     |     |                        |                      |          |                         |
|  | Jan-06 | 568 | 468 | 440 | 492                    | 4528                 | 67       | <b>10.44</b>            |
|  | May-06 | 532 |     | 440 | 513                    | 4357                 | 66       | <b>11.11</b>            |
|  | Aug-06 | 302 | 440 | 568 | 461                    | 14070                | 119      | <b>5.54</b>             |
|  | Nov-06 | 477 | 568 | 532 | 526                    | 2100                 | 46       | <b>16.03</b>            |

### BXS-2

(Downgradient well)

|  | Apr-05 |     |     |     | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--|--------|-----|-----|-----|------------------------|----------------------|----------|-------------------------|
|  | Apr-05 | 484 |     |     |                        |                      |          |                         |
|  | Aug-05 |     |     |     |                        |                      |          |                         |
|  | Nov-05 | 500 |     |     |                        |                      |          |                         |
|  | Jan-06 | 528 | 484 | 500 | 504                    | 496                  | 22       | <b>28.92</b>            |
|  | May-06 | 514 |     | 500 | 514                    | 196                  | 14       | <b>39.85</b>            |
|  | Aug-06 | 436 | 500 | 528 | 495                    | 1652                 | 41       | <b>17.14</b>            |
|  | Nov-06 | 479 | 528 | 514 | 507                    | 637                  | 25       | <b>25.70</b>            |

### BXS-1

(Downgradient well)

|  | Apr-05 |     |     |     | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--|--------|-----|-----|-----|------------------------|----------------------|----------|-------------------------|
|  | Apr-05 | 242 |     |     |                        |                      |          |                         |
|  | Aug-05 |     |     |     |                        |                      |          |                         |
|  | Nov-05 | 276 |     |     |                        |                      |          |                         |
|  | Jan-06 | 228 | 242 | 276 | 249                    | 609                  | 25       | <b>8.24</b>             |
|  | May-06 | 290 |     | 276 | 265                    | 1057                 | 33       | <b>7.16</b>             |
|  | Aug-06 | 206 | 276 | 228 | 250                    | 1565                 | 40       | <b>5.78</b>             |
|  | Nov-06 | 259 | 228 | 290 | 259                    | 961                  | 31       | <b>6.82</b>             |

### Notes:

- X<sub>bar</sub> Average Concentration
- s<sup>2</sup> Sample variance
- s<sup>1</sup> Sample variance
- s Sample Standard Deviation
- t<sub>stat</sub> 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)

|        |     |     |     |     | Average Concentration |       |
|--------|-----|-----|-----|-----|-----------------------|-------|
|        |     |     |     |     | $m_o$                 | $s^1$ |
| Apr-05 | 1.8 |     |     |     |                       |       |
| Aug-05 | 0.9 |     |     |     |                       |       |
| Nov-05 | 1.6 |     |     |     |                       |       |
| Jan-06 | 1.3 | 1.8 | 0.9 | 1.6 | 1.40                  | 0.15  |
| May-06 | 1.4 | 0.9 | 1.6 | 1.3 | 1.30                  | 0.09  |
| Aug-06 | 1.4 | 1.6 | 1.3 | 1.4 | 1.43                  | 0.02  |
| Nov-06 | 1.6 | 1.3 | 1.4 | 1.4 | 1.43                  | 0.02  |

BXS-3

(Downgradient well)

|        |      |     |      |      | $X_{\text{bar}}$ | $s^1$ | $s$  | $t_{\text{stat}}$ |
|--------|------|-----|------|------|------------------|-------|------|-------------------|
| Apr-05 | 0.1  |     |      |      |                  |       |      |                   |
| Aug-05 | 0.1  |     |      |      |                  |       |      |                   |
| Nov-05 | 0.1  |     |      |      |                  |       |      |                   |
| Jan-06 | 0.1  | 0.1 | 0.1  | 0.1  | 0.10             | 0.00  | 0.00 | -6.64             |
| May-06 | 0.07 | 0.1 | 0.1  | 0.1  | 0.09             | 0.00  | 0.02 | -6.16             |
| Aug-06 | 1.7  | 0.1 | 0.1  | 0.07 | 0.49             | 0.65  | 0.81 | -2.08             |
| Nov-06 | 0.4  | 0.1 | 0.07 | 1.7  | 0.57             | 0.59  | 0.77 | -1.99             |

BXS-2

(Downgradient well)

|        |      |     |     |     | $X_{\text{bar}}$ | $s^1$ | $s$  | $t_{\text{stat}}$ |
|--------|------|-----|-----|-----|------------------|-------|------|-------------------|
| Apr-05 | 1.4  |     |     |     |                  |       |      |                   |
| Aug-05 | 0.1  |     |     |     |                  |       |      |                   |
| Nov-05 | 0.3  |     |     |     |                  |       |      |                   |
| Jan-06 | 0.3  | 1.4 | 0.1 | 0.3 | 0.53             | 0.35  | 0.59 | -2.47             |
| May-06 | 0.2  | 0.1 | 0.3 | 0.3 | 0.23             | 0.01  | 0.10 | -5.33             |
| Aug-06 | 0.3  | 0.3 | 0.3 | 0.2 | 0.28             | 0.00  | 0.05 | -5.83             |
| Nov-06 | 0.15 | 0.3 | 0.2 | 0.3 | 0.24             | 0.01  | 0.08 | -5.96             |

BXS-1

(Downgradient well)

|        |      |      |      |      | $X_{\text{bar}}$ | $s^1$ | $s$  | $t_{\text{stat}}$ |
|--------|------|------|------|------|------------------|-------|------|-------------------|
| Apr-05 | 11.7 |      |      |      |                  |       |      |                   |
| Aug-05 | 8.3  |      |      |      |                  |       |      |                   |
| Nov-05 | 7.9  |      |      |      |                  |       |      |                   |
| Jan-06 | 13.2 | 11.7 | 8.3  | 7.9  | 10.28            | 6.71  | 2.59 | 6.78              |
| May-06 | 11.2 | 8.3  | 7.9  | 13.2 | 10.15            | 6.30  | 2.51 | 6.97              |
| Aug-06 | 11.2 | 7.9  | 13.2 | 11.2 | 10.88            | 4.82  | 2.20 | 8.47              |
| Nov-06 | 9.7  | 13.2 | 11.2 | 11.2 | 11.33            | 2.06  | 1.44 | 13.30             |

Notes:

$X_{\text{bar}}$  Average Concentration  
 $s^2$  Sample variance  
 $s^1$  Sample variance  
 $s$  Sample Standard Deviation  
 $t_{\text{stat}}$  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<sub>c</sub>** 2.447

### BXS-4

(Upgradient well)

|  | Apr-05 | Aug-05 | Nov-05 | Jan-06 | May-06 | Aug-06 | Nov-06 | Average Concentration<br><b>m<sub>o</sub></b> <b>s<sup>1</sup></b> |      |
|--|--------|--------|--------|--------|--------|--------|--------|--------------------------------------------------------------------|------|
|  | 0.4    | 0.4    | 0.4    | 0.4    | 0.4    | 0.3    | 0.3    | 0.40                                                               | 0.00 |
|  | 0.4    | 0.4    | 0.4    | 0.4    | 0.4    | 0.3    | 0.3    | 0.40                                                               | 0.00 |
|  | 0.4    | 0.4    | 0.4    | 0.4    | 0.4    | 0.3    | 0.3    | 0.38                                                               | 0.00 |
|  | 0.4    | 0.4    | 0.4    | 0.4    | 0.4    | 0.3    | 0.3    | 0.35                                                               | 0.00 |

### BXS-3

(Downgradient well)

|  | Apr-05 | Aug-05 | Nov-05 | Jan-06 | May-06 | Aug-06 | Nov-06 | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--|--------|--------|--------|--------|--------|--------|--------|------------------------|----------------------|----------|-------------------------|
|  | 8.9    | 8.7    | 10.3   | 10.8   | 16.7   | 7.6    | 10.7   | 9.68                   | 1.07                 | 1.03     | 17.94                   |
|  | 8.9    | 8.7    | 10.3   | 10.8   | 16.7   | 7.6    | 10.7   | 11.63                  | 12.25                | 3.50     | 6.41                    |
|  | 8.9    | 8.7    | 10.3   | 10.8   | 16.7   | 7.6    | 10.7   | 11.35                  | 14.70                | 3.83     | 5.73                    |
|  | 8.9    | 8.7    | 10.3   | 10.8   | 16.7   | 7.6    | 10.7   | 11.45                  | 14.46                | 3.80     | 5.84                    |

### BXS-2

(Downgradient well)

|  | Apr-05 | Aug-05 | Nov-05 | Jan-06 | May-06 | Aug-06 | Nov-06 | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--|--------|--------|--------|--------|--------|--------|--------|------------------------|----------------------|----------|-------------------------|
|  | 1.2    | 1      | 1.5    | 0.5    | 1.2    | 1.6    | 1.3    | 1.05                   | 0.18                 | 0.42     | 3.09                    |
|  | 1.2    | 1      | 1.5    | 0.5    | 1.2    | 1.6    | 1.3    | 1.05                   | 0.18                 | 0.42     | 3.09                    |
|  | 1.2    | 1      | 1.5    | 0.5    | 1.2    | 1.6    | 1.3    | 1.20                   | 0.25                 | 0.50     | 3.32                    |
|  | 1.2    | 1      | 1.5    | 0.5    | 1.2    | 1.6    | 1.3    | 1.15                   | 0.22                 | 0.47     | 3.44                    |

### BXS-1

(Downgradient well)

|  | Apr-05 | Aug-05 | Nov-05 | Jan-06 | May-06 | Aug-06 | Nov-06 | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--|--------|--------|--------|--------|--------|--------|--------|------------------------|----------------------|----------|-------------------------|
|  | 0.18   | 0.2    | 0.4    | 0.2    | 0.17   | 0.15   | 0.2    | 0.25                   | 0.01                 | 0.10     | -2.99                   |
|  | 0.18   | 0.2    | 0.4    | 0.2    | 0.17   | 0.15   | 0.2    | 0.24                   | 0.01                 | 0.11     | -2.97                   |
|  | 0.18   | 0.2    | 0.4    | 0.2    | 0.17   | 0.15   | 0.2    | 0.23                   | 0.01                 | 0.12     | -2.52                   |
|  | 0.18   | 0.2    | 0.4    | 0.2    | 0.17   | 0.15   | 0.2    | 0.18                   | 0.00                 | 0.02     | -13.88                  |

#### Notes:

- X<sub>bar</sub>** Average Concentration
- s<sup>2</sup>** Sample variance
- s<sup>1</sup>** Sample variance
- s** Sample Standard Deviation
- t<sub>stat</sub>** 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<sub>c</sub>** 2.447

### BXS-4

(Upgradient well)

|  | Apr-05 | Aug-05 | Nov-05 | Jan-06 | May-06 | Aug-06 | Nov-06 | Average Concentration<br><b>m<sub>o</sub></b> | <b>s<sup>1</sup></b> |
|--|--------|--------|--------|--------|--------|--------|--------|-----------------------------------------------|----------------------|
|  | 1.2    | 1.1    | 1.1    | 1      | 1      | 1      | 1      |                                               |                      |
|  |        |        |        | 1.2    | 1.1    | 1.1    | 1      | 1.10                                          | 0.01                 |
|  |        |        |        |        | 1.1    | 1.1    | 1      | 1.05                                          | 0.00                 |
|  |        |        |        |        | 1      | 1.1    | 1      | 1.03                                          | 0.00                 |
|  |        |        |        |        |        | 1      | 1      | 1.03                                          | 0.00                 |

### BXS-3

(Downgradient well)

|  | Apr-05 | Aug-05 | Nov-05 | Jan-06 | May-06 | Aug-06 | Nov-06 | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--|--------|--------|--------|--------|--------|--------|--------|------------------------|----------------------|----------|-------------------------|
|  | 26.7   | 29.9   | 25.2   | 25.1   | 29.5   | 31.1   | 28     |                        |                      |          |                         |
|  |        |        |        | 26.7   | 29.9   | 25.2   | 25.1   | 26.73                  | 5.02                 | 2.24     | <b>22.87</b>            |
|  |        |        |        |        | 29.5   | 29.9   | 25.2   | 27.43                  | 6.93                 | 2.63     | <b>20.03</b>            |
|  |        |        |        |        |        | 25.2   | 25.1   | 27.73                  | 9.27                 | 3.04     | <b>17.53</b>            |
|  |        |        |        |        |        |        | 28     | 28.43                  | 6.52                 | 2.55     | <b>21.46</b>            |

### BXS-2

(Downgradient well)

|  | Apr-05 | Aug-05 | Nov-05 | Jan-06 | May-06 | Aug-06 | Nov-06 | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--|--------|--------|--------|--------|--------|--------|--------|------------------------|----------------------|----------|-------------------------|
|  | 16     | 17     | 14.5   | 14.2   | 14.5   | 13.8   | 15.3   |                        |                      |          |                         |
|  |        |        |        | 16     | 17     | 14.5   | 14.2   | 15.43                  | 1.72                 | 1.31     | <b>21.79</b>            |
|  |        |        |        |        | 17     | 14.5   | 14.2   | 15.05                  | 1.71                 | 1.31     | <b>21.37</b>            |
|  |        |        |        |        |        | 14.5   | 14.2   | 14.25                  | 0.11                 | 0.33     | <b>77.44</b>            |
|  |        |        |        |        |        |        | 15.3   | 14.45                  | 0.40                 | 0.64     | <b>41.93</b>            |

### BXS-1

(Downgradient well)

|  | Apr-05 | Aug-05 | Nov-05 | Jan-06 | May-06 | Aug-06 | Nov-06 | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--|--------|--------|--------|--------|--------|--------|--------|------------------------|----------------------|----------|-------------------------|
|  | 6      | 6.5    | 6      | 4.7    | 4.3    | 4.9    | 6.5    |                        |                      |          |                         |
|  |        |        |        | 6      | 6.5    | 6      | 4.7    | 5.80                   | 0.59                 | 0.77     | <b>12.14</b>            |
|  |        |        |        |        | 6.5    | 6      | 4.7    | 5.38                   | 1.09                 | 1.04     | <b>8.26</b>             |
|  |        |        |        |        |        | 6      | 4.7    | 4.98                   | 0.53                 | 0.73     | <b>10.79</b>            |
|  |        |        |        |        |        |        | 6.5    | 5.10                   | 0.93                 | 0.97     | <b>8.41</b>             |

### Notes:

- X<sub>bar</sub>** Average Concentration
- s<sup>2</sup>** Sample variance
- s<sup>1</sup>** Sample variance
- s** Sample Standard Deviation
- t<sub>stat</sub>** 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<sub>c</sub>** 2.447

**BXS-4**

(Upgradient well)

|        |   |   |   |   | Average Concentration |                      |
|--------|---|---|---|---|-----------------------|----------------------|
|        |   |   |   |   | <b>m<sub>o</sub></b>  | <b>s<sup>1</sup></b> |
| Apr-05 | 1 |   |   |   |                       |                      |
| Aug-05 | 1 |   |   |   |                       |                      |
| Nov-05 | 2 |   |   |   |                       |                      |
| Jan-06 | 3 | 1 | 1 | 2 | 1.75                  | 0.92                 |
| May-06 | 4 | 1 | 2 | 3 | 2.50                  | 1.67                 |
| Aug-06 | 5 | 2 | 3 | 4 | 3.50                  | 1.67                 |
| Nov-06 | 6 | 3 | 4 | 5 | 4.50                  | 1.67                 |

**BXS-3**

(Downgradient well)

|        |     |     |     |     | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--------|-----|-----|-----|-----|------------------------|----------------------|----------|-------------------------|
| Apr-05 | 1   |     |     |     |                        |                      |          |                         |
| Aug-05 | 1   |     |     |     |                        |                      |          |                         |
| Nov-05 | 170 |     |     |     |                        |                      |          |                         |
| Jan-06 | 170 | 1   | 1   | 170 | 86                     | 9520                 | 98       | 1.72                    |
| May-06 | 170 | 1   | 170 | 170 | 128                    | 7140                 | 85       | 2.96                    |
| Aug-06 | 170 | 170 | 170 | 170 | 170                    | 0                    | 0        | 347.81                  |
| Nov-06 | 170 | 170 | 170 | 170 | 170                    | 0                    | 0        | 345.72                  |

**BXS-2**

(Downgradient well)

|        |     |     |    |    | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--------|-----|-----|----|----|------------------------|----------------------|----------|-------------------------|
| Apr-05 | 220 |     |    |    |                        |                      |          |                         |
| Aug-05 | 1   |     |    |    |                        |                      |          |                         |
| Nov-05 | 17  |     |    |    |                        |                      |          |                         |
| Jan-06 | 17  | 220 | 1  | 17 | 64                     | 10908                | 104      | 1.19                    |
| May-06 | 17  | 1   | 17 | 17 | 13                     | 64                   | 8        | 2.61                    |
| Aug-06 | 17  | 17  | 17 | 17 | 17                     | 0                    | 0        | 28.20                   |
| Nov-06 | 17  | 17  | 17 | 17 | 17                     | 0                    | 0        | 26.11                   |

**BXS-1**

(Downgradient well)

|        |   |   |   |   | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--------|---|---|---|---|------------------------|----------------------|----------|-------------------------|
| Apr-05 | 1 |   |   |   |                        |                      |          |                         |
| Aug-05 | 1 |   |   |   |                        |                      |          |                         |
| Nov-05 | 2 |   |   |   |                        |                      |          |                         |
| Jan-06 | 2 | 1 | 1 | 2 | 1.5                    | 0.3                  | 0.6      | -0.45                   |
| May-06 | 2 | 1 | 2 | 2 | 1.8                    | 0.3                  | 0.5      | -1.39                   |
| Aug-06 | 2 | 2 | 2 | 2 | 2.0                    | 0.0                  | 0.0      | -3.13                   |
| Nov-06 | 2 | 2 | 2 | 2 | 2.0                    | 0.0                  | 0.0      | -5.22                   |

**Notes:**

**X<sub>bar</sub>** Average Concentration  
**s<sup>2</sup>** Sample variance  
**s<sup>1</sup>** Sample variance  
**s** Sample Standard Deviation  
**t<sub>stat</sub>** 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<sub>c</sub>** 2.447

## BXS-4

(Upgradient well)

|  | Apr-05 | Aug-05 | Nov-05 | Jan-06 | May-06 | Aug-06 | Nov-06 | Average Concentration<br><b>m<sub>o</sub></b> | <b>s<sup>1</sup></b> |
|--|--------|--------|--------|--------|--------|--------|--------|-----------------------------------------------|----------------------|
|  | 5      | 4      | 6      | 5.2    | 6.5    | 5.1    | 7.3    |                                               |                      |
|  |        |        |        | 5      | 4      | 6      | 5.2    | 5.05                                          | 0.68                 |
|  |        |        |        |        |        |        |        | 5.43                                          | 1.19                 |
|  |        |        |        |        |        |        |        | 5.70                                          | 0.45                 |
|  |        |        |        |        |        |        |        | 6.03                                          | 1.13                 |

## BXS-3

(Downgradient well)

|  | Apr-05 | Aug-05 | Nov-05 | Jan-06 | May-06 | Aug-06 | Nov-06 | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--|--------|--------|--------|--------|--------|--------|--------|------------------------|----------------------|----------|-------------------------|
|  | 6      | 9      | 7      | 2.9    | 21.9   | 99.8   | 29.8   |                        |                      |          |                         |
|  |        |        |        | 6      | 9      | 7      | 2.9    | 6.23                   | 6.47                 | 2.54     | 0.88                    |
|  |        |        |        |        |        |        |        | 10.20                  | 67.29                | 8.20     | 1.16                    |
|  |        |        |        |        |        |        |        | 32.90                  | 2055.81              | 45.34    | 1.20                    |
|  |        |        |        |        |        |        |        | 38.60                  | 1792.09              | 42.33    | 1.54                    |

## BXS-2

(Downgradient well)

|  | Apr-05 | Aug-05 | Nov-05 | Jan-06 | May-06 | Aug-06 | Nov-06 | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--|--------|--------|--------|--------|--------|--------|--------|------------------------|----------------------|----------|-------------------------|
|  | 1      | 2.5    | 2      | 2.5    | 1.2    | 2.5    | 1.1    |                        |                      |          |                         |
|  |        |        |        | 1      | 2.5    | 2      | 2.5    | 2.00                   | 0.50                 | 0.71     | -5.62                   |
|  |        |        |        |        |        |        |        | 2.05                   | 0.38                 | 0.61     | -6.58                   |
|  |        |        |        |        |        |        |        | 2.05                   | 0.38                 | 0.61     | -7.11                   |
|  |        |        |        |        |        |        |        | 1.83                   | 0.61                 | 0.78     | -7.41                   |

## BXS-1

(Downgradient well)

|  | Apr-05 | Aug-05 | Nov-05 | Jan-06 | May-06 | Aug-06 | Nov-06 | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--|--------|--------|--------|--------|--------|--------|--------|------------------------|----------------------|----------|-------------------------|
|  | 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     | -6.20                   |
|  |        |        |        |        |        |        |        | 2.50                   | 0.00                 | 0.00     | -7.11                   |
|  |        |        |        |        |        |        |        | 2.50                   | 0.00                 | 0.00     | -7.78                   |
|  |        |        |        |        |        |        |        | 2.50                   | 0.00                 | 0.00     | -8.57                   |

### Notes:

- X<sub>bar</sub>** Average Concentration
- s<sup>2</sup>** Sample variance
- s<sup>1</sup>** Sample variance
- s** Sample Standard Deviation
- t<sub>stat</sub>** 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<sub>c</sub>** 2.447

**BXS-4**

(Upgradient well)

|  | Apr-05 | Aug-05 | Nov-05 | Jan-06 | May-06 | Aug-06 | Nov-06 | Average Concentration<br><b>m<sub>o</sub></b> | <b>s<sup>1</sup></b> |
|--|--------|--------|--------|--------|--------|--------|--------|-----------------------------------------------|----------------------|
|  | 29     | 28     | 29     | 31     | 30.4   | 33     | 30.4   |                                               |                      |
|  |        |        |        | 29     | 28     | 29     | 31     | 29.25                                         | 1.58                 |
|  |        |        |        |        |        |        |        | 29.60                                         | 1.84                 |
|  |        |        |        |        |        |        |        | 30.85                                         | 2.76                 |
|  |        |        |        |        |        |        |        | 31.20                                         | 1.52                 |

**BXS-3**

(Downgradient well)

|  | Apr-05 | Aug-05 | Nov-05 | Jan-06 | May-06 | Aug-06 | Nov-06 | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--|--------|--------|--------|--------|--------|--------|--------|------------------------|----------------------|----------|-------------------------|
|  | 91     | 94.4   | 63     | 59.5   | 115    | 103    | 104    |                        |                      |          |                         |
|  |        |        |        | 91     | 94.4   | 63     | 59.5   | 76.98                  | 333.67               | 18.27    | <b>5.21</b>             |
|  |        |        |        |        |        |        |        | 82.98                  | 702.07               | 26.50    | <b>4.02</b>             |
|  |        |        |        |        |        |        |        | 85.13                  | 786.06               | 28.04    | <b>3.87</b>             |
|  |        |        |        |        |        |        |        | 95.38                  | 601.56               | 24.53    | <b>5.23</b>             |

**BXS-2**

(Downgradient well)

|  | Apr-05 | Aug-05 | Nov-05 | Jan-06 | May-06 | Aug-06 | Nov-06 | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--|--------|--------|--------|--------|--------|--------|--------|------------------------|----------------------|----------|-------------------------|
|  | 44     | 41.9   | 44     | 43     | 48.1   | 48     | 44.6   |                        |                      |          |                         |
|  |        |        |        | 44     | 41.9   | 44     | 43     | 43.23                  | 1.00                 | 1.00     | <b>17.38</b>            |
|  |        |        |        |        |        |        |        | 44.25                  | 7.32                 | 2.71     | <b>9.82</b>             |
|  |        |        |        |        |        |        |        | 45.78                  | 7.07                 | 2.66     | <b>10.15</b>            |
|  |        |        |        |        |        |        |        | 45.93                  | 6.45                 | 2.54     | <b>10.39</b>            |

**BXS-1**

(Downgradient well)

|  | Apr-05 | Aug-05 | Nov-05 | Jan-06 | May-06 | Aug-06 | Nov-06 | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--|--------|--------|--------|--------|--------|--------|--------|------------------------|----------------------|----------|-------------------------|
|  | 23     | 23     | 23     | 17.8   | 23.9   | 24.3   | 28.4   |                        |                      |          |                         |
|  |        |        |        | 23     | 23     | 23     | 17.8   | 21.70                  | 6.76                 | 2.60     | -5.23                   |
|  |        |        |        |        |        |        |        | 21.93                  | 7.74                 | 2.78     | -5.03                   |
|  |        |        |        |        |        |        |        | 22.25                  | 9.10                 | 3.02     | -5.26                   |
|  |        |        |        |        |        |        |        | 23.60                  | 19.09                | 4.37     | -3.34                   |

**Notes:**

- X<sub>bar</sub>** Average Concentration
- s<sup>2</sup>** Sample variance
- s<sup>1</sup>** Sample variance
- s** Sample Standard Deviation
- t<sub>stat</sub>** 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<sub>c</sub>** 2.447

**BXS-4**

(Upgradient well)

|        |   |   |   |   | Average Concentration |                      |
|--------|---|---|---|---|-----------------------|----------------------|
|        |   |   |   |   | <b>m<sub>o</sub></b>  | <b>s<sup>1</sup></b> |
| Apr-05 | 5 |   |   |   |                       |                      |
| Aug-05 | 5 |   |   |   |                       |                      |
| Nov-05 | 5 |   |   |   |                       |                      |
| Jan-06 | 5 | 5 | 5 | 5 | 5.00                  | 0.00                 |
| May-06 | 5 | 5 | 5 | 5 | 5.00                  | 0.00                 |
| Aug-06 | 5 | 5 | 5 | 5 | 5.00                  | 0.00                 |
| Nov-06 | 5 | 5 | 5 | 5 | 5.00                  | 0.00                 |

**BXS-3**

(Downgradient well)

|        |    |   |   |    | <b>X<sub>bar</sub></b> | <b>s<sup>2</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--------|----|---|---|----|------------------------|----------------------|----------|-------------------------|
| Apr-05 | 5  |   |   |    |                        |                      |          |                         |
| Aug-05 | 5  |   |   |    |                        |                      |          |                         |
| Nov-05 | 5  |   |   |    |                        |                      |          |                         |
| Jan-06 | 5  | 5 | 5 | 5  | 5.00                   | 0.00                 | 0.00     | #DIV/0!                 |
| May-06 | 5  | 5 | 5 | 5  | 5.00                   | 0.00                 | 0.00     | #DIV/0!                 |
| Aug-06 | 10 | 5 | 5 | 5  | 6.25                   | 6.25                 | 2.50     | 1.00                    |
| Nov-06 | 5  | 5 | 5 | 10 | 6.25                   | 6.25                 | 2.50     | 1.00                    |

**BXS-2**

(Downgradient well)

|        |     |   |   |     | <b>X<sub>bar</sub></b> | <b>s<sup>2</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--------|-----|---|---|-----|------------------------|----------------------|----------|-------------------------|
| Apr-05 | 8   |   |   |     |                        |                      |          |                         |
| Aug-05 | 5   |   |   |     |                        |                      |          |                         |
| Nov-05 | 5   |   |   |     |                        |                      |          |                         |
| Jan-06 | 5   | 8 | 5 | 5   | 5.75                   | 2.25                 | 1.50     | 1.00                    |
| May-06 | 5   | 5 | 5 | 5   | 5.00                   | 0.00                 | 0.00     | #DIV/0!                 |
| Aug-06 | 2.5 | 5 | 5 | 5   | 4.38                   | 1.56                 | 1.25     | -1.00                   |
| Nov-06 | 5   | 5 | 5 | 2.5 | 4.38                   | 1.56                 | 1.25     | -1.00                   |

**BXS-1**

(Downgradient well)

|        |     |   |     |     | <b>X<sub>bar</sub></b> | <b>s<sup>2</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--------|-----|---|-----|-----|------------------------|----------------------|----------|-------------------------|
| Apr-05 | 9   |   |     |     |                        |                      |          |                         |
| Aug-05 | 5   |   |     |     |                        |                      |          |                         |
| Nov-05 | 5   |   |     |     |                        |                      |          |                         |
| Jan-06 | 5   | 9 | 5   | 5   | 6.00                   | 4.00                 | 2.00     | 1.00                    |
| May-06 | 2.6 | 5 | 5   | 5   | 4.40                   | 1.44                 | 1.20     | -1.00                   |
| Aug-06 | 3.1 | 5 | 5   | 2.6 | 3.93                   | 1.58                 | 1.26     | -1.71                   |
| Nov-06 | 5   | 5 | 2.6 | 3.1 | 3.93                   | 1.58                 | 1.26     | -1.71                   |

**Notes:**

X<sub>bar</sub> Average Concentration  
s<sup>2</sup> Sample variance  
s<sup>1</sup> Sample variance  
s Sample Standard Deviation  
t<sub>stat</sub> 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<sub>c</sub>** 2.447

**BXS-4**

(Upgradient well)

|        |     |     |     |     | Average Concentration |                      |
|--------|-----|-----|-----|-----|-----------------------|----------------------|
|        |     |     |     |     | <b>m<sub>o</sub></b>  | <b>s<sup>1</sup></b> |
| Apr-05 | 2.5 |     |     |     |                       |                      |
| Aug-05 | 0.8 |     |     |     |                       |                      |
| Nov-05 | 2.5 |     |     |     |                       |                      |
| Jan-06 | 2.5 | 2.5 | 0.8 | 2.5 | 2.08                  | 0.72                 |
| May-06 | 2.5 | 0.8 | 2.5 | 2.5 | 2.08                  | 0.72                 |
| Aug-06 | 2.5 | 2.5 | 2.5 | 2.5 | 2.50                  | 0.00                 |
| Nov-06 | 2.5 | 2.5 | 2.5 | 2.5 | 2.50                  | 0.00                 |

**BXS-3**

(Downgradient well)

|        |     |     |     |     |                  |                |      |                   |  |
|--------|-----|-----|-----|-----|------------------|----------------|------|-------------------|--|
| Apr-05 | 2.5 |     |     |     | X <sub>bar</sub> | s <sup>2</sup> | s    | t <sub>stat</sub> |  |
| Aug-05 | 1.4 |     |     |     |                  |                |      |                   |  |
| Nov-05 | 2.5 |     |     |     |                  |                |      |                   |  |
| Jan-06 | 2.5 | 2.5 | 1.4 | 2.5 | 2.23             | 0.30           | 0.55 | 0.30              |  |
| May-06 | 2.5 | 1.4 | 2.5 | 2.5 | 2.23             | 0.30           | 0.55 | 0.30              |  |
| Aug-06 | 3.2 | 2.5 | 2.5 | 2.5 | 2.68             | 0.12           | 0.35 | 0.38              |  |
| Nov-06 | 2.5 | 2.5 | 2.5 | 3.2 | 2.68             | 0.12           | 0.35 | 0.38              |  |

**BXS-2**

(Downgradient well)

|        |     |     |     |     |                        |       |      |                   |      |
|--------|-----|-----|-----|-----|------------------------|-------|------|-------------------|------|
| Apr-05 | 2.5 |     |     |     | $\bar{X}_{\text{bar}}$ | $s^2$ | $s$  | $t_{\text{stat}}$ |      |
| Aug-05 | 0.3 |     |     |     |                        |       |      |                   |      |
| Nov-05 | 2.5 |     |     |     |                        |       |      |                   |      |
| Jan-06 | 2.5 | 2.5 | 0.3 | 2.5 |                        |       |      |                   | 1.95 |
| May-06 | 2.5 | 0.3 | 2.5 | 2.5 | 1.95                   | 1.21  | 1.10 | -0.18             |      |
| Aug-06 | 2.5 | 2.5 | 2.5 | 2.5 | 2.50                   | 0.00  | 0.00 | 0.00              |      |
| Nov-06 | 2.5 | 2.5 | 2.5 | 2.5 | 2.50                   | 0.00  | 0.00 | 0.00              |      |

**BXS-1**

(Downgradient well)

|        |     |     |     |     |           |       |      |            |
|--------|-----|-----|-----|-----|-----------|-------|------|------------|
|        |     |     |     |     | $\bar{X}$ | $s^2$ | $s$  | $t_{stat}$ |
| Apr-05 | 2.5 |     |     |     |           |       |      |            |
| Aug-05 | 2.5 |     |     |     |           |       |      |            |
| Nov-05 | 2.5 |     |     |     |           |       |      |            |
| Jan-06 | 2.5 | 2.5 | 2.5 | 2.5 | 2.50      | 0.00  | 0.00 | 1.00       |
| May-06 | 2.5 | 2.5 | 2.5 | 2.5 | 2.50      | 0.00  | 0.00 | 1.00       |
| Aug-06 | 2.5 | 2.5 | 2.5 | 2.5 | 2.50      | 0.00  | 0.00 | 0.00       |
| Nov-06 | 2.5 | 2.5 | 2.5 | 2.5 | 2.50      | 0.00  | 0.00 | 0.00       |

**Notes:**

**X<sub>bar</sub>** Average Concentration  
**s<sup>2</sup>** Sample variance  
**s<sup>1</sup>** Sample variance  
**s** Sample Standard Deviation  
**t<sub>stat</sub>** 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!

## Iron

**Critical Statistic  $t_c$**       **2.447**

|        |      |      |      |      |                       |       |
|--------|------|------|------|------|-----------------------|-------|
| Apr-05 | 46   |      |      |      | Average Concentration |       |
| Aug-05 | 41   |      |      |      | $m_o$                 | $s'$  |
| Nov-05 | 42   |      |      |      |                       |       |
| Jan-06 | 46.6 | 46   | 41   | 42   | 43.90                 | 7.91  |
| May-06 | 40.1 | 41   | 42   | 46.6 | 42.43                 | 8.35  |
| Aug-06 | 38.7 | 42   | 46.6 | 40.1 | 41.85                 | 11.86 |
| Nov-06 | 33.3 | 46.6 | 40.1 | 38.7 | 39.68                 | 29.91 |

|        |       |       |       |       |                               |       |               |          |        |  |
|--------|-------|-------|-------|-------|-------------------------------|-------|---------------|----------|--------|--|
| Apr-05 | 10900 |       |       |       | $\bar{X}$ $s'$ $s$ $t_{stat}$ |       |               |          |        |  |
| Aug-05 | 18300 |       |       |       |                               |       |               |          |        |  |
| Nov-05 | 4330  |       |       |       |                               |       |               |          |        |  |
|        |       |       |       |       |                               |       |               |          |        |  |
| Jan-06 | 2590  | 10900 | 18300 | 4330  |                               | 9030  | 50,997,800    | 7141.27  | 2.52 * |  |
| May-06 | 67900 | 18300 | 4330  | 2590  |                               | 23280 | 934,307,800   | 30566.45 | 1.52 * |  |
| Aug-06 | 91400 | 4330  | 2590  | 67900 |                               | 41555 | 2,027,518,300 | 45027.97 | 1.84 * |  |
| Nov-06 | 28700 | 2590  | 67900 | 91400 |                               | 47648 | 1,571,210,358 | 39638.50 | 2.40 * |  |

|        |     |     |     |     |           |       |       |            |
|--------|-----|-----|-----|-----|-----------|-------|-------|------------|
| Apr-05 | 769 |     |     |     | $\bar{X}$ | $s^2$ | $s$   | $t_{stat}$ |
| Aug-05 | 732 |     |     |     |           |       |       |            |
| Nov-05 | 770 |     |     |     |           |       |       |            |
| Jan-06 | 740 | 769 | 732 | 770 | 753       | 385   | 19.62 | 71.53      |
| May-06 | 842 | 732 | 770 | 740 | 771       | 2508  | 50.08 | 29.05      |
| Aug-06 | 860 | 770 | 740 | 842 | 803       | 3276  | 57.24 | 26.56      |
| Nov-06 | 811 | 740 | 842 | 860 | 813       | 2794  | 52.86 | 29.23      |

|        |    |    |    |    |                        |       |      |                   |
|--------|----|----|----|----|------------------------|-------|------|-------------------|
| Apr-05 | 10 |    |    |    | $\bar{X}_{\text{bar}}$ | $s^2$ | $s$  | $t_{\text{stat}}$ |
| Aug-05 | 5  |    |    |    |                        |       |      |                   |
| Nov-05 | 10 |    |    |    |                        |       |      |                   |
|        |    |    |    |    |                        |       |      |                   |
| Jan-06 | 10 | 10 | 5  | 10 | 9                      | 6     | 2.50 | -18.68            |
| May-06 | 10 | 5  | 10 | 10 | 9                      | 6     | 2.50 | -17.90            |
| Aug-06 | 10 | 10 | 10 | 10 | 10                     | 0     | 0.00 | -22.65            |
| Nov-06 | 10 | 10 | 10 | 10 | 10                     | 0     | 0.00 | -21.11            |

\*  $t_{stat}$  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<sub>c</sub>** 2.447

**BXS-4**

(Upgradient well)

|        |     |     |     |     | Average Concentration |                      |
|--------|-----|-----|-----|-----|-----------------------|----------------------|
|        |     |     |     |     | <b>m<sub>o</sub></b>  | <b>s<sup>1</sup></b> |
| Apr-05 | 120 |     |     |     |                       |                      |
| Aug-05 | 107 |     |     |     |                       |                      |
| Nov-05 | 112 |     |     |     |                       |                      |
| Jan-06 | 116 | 120 | 107 | 112 | 113.75                | 30.92                |
| May-06 | 109 | 107 | 112 | 116 | 111.00                | 15.33                |
| Aug-06 | 113 | 112 | 116 | 109 | 112.50                | 8.33                 |
| Nov-06 | 113 | 116 | 109 | 113 | 112.75                | 8.25                 |

**BXS-3**

(Downgradient well)

|        |       |       |       |       | <b>X<sub>bar</sub></b> | <b>s<sup>2</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--------|-------|-------|-------|-------|------------------------|----------------------|----------|-------------------------|
| Apr-05 | 14200 |       |       |       |                        |                      |          |                         |
| Aug-05 | 14100 |       |       |       |                        |                      |          |                         |
| Nov-05 | 17200 |       |       |       |                        |                      |          |                         |
| Jan-06 | 17200 | 14200 | 14100 | 17200 | 15675                  | 3102500              | 1761.39  | <b>17.67</b>            |
| May-06 | 13400 | 14100 | 17200 | 17200 | 15475                  | 4049167              | 2012.25  | <b>15.27</b>            |
| Aug-06 | 13000 | 17200 | 17200 | 13400 | 15200                  | 5360000              | 2315.17  | <b>13.03</b>            |
| Nov-06 | 17500 | 17200 | 13400 | 13000 | 15275                  | 5782500              | 2404.68  | <b>12.61</b>            |

**BXS-2**

(Downgradient well)

|        |      |      |      |      | <b>X<sub>bar</sub></b> | <b>s<sup>2</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--------|------|------|------|------|------------------------|----------------------|----------|-------------------------|
| Apr-05 | 1350 |      |      |      |                        |                      |          |                         |
| Aug-05 | 1300 |      |      |      |                        |                      |          |                         |
| Nov-05 | 1300 |      |      |      |                        |                      |          |                         |
| Jan-06 | 1260 | 1350 | 1300 | 1300 | 1303                   | 1358                 | 36.86    | <b>63.79</b>            |
| May-06 | 1320 | 1300 | 1300 | 1260 | 1295                   | 633                  | 25.17    | <b>91.88</b>            |
| Aug-06 | 1350 | 1300 | 1260 | 1320 | 1308                   | 1425                 | 37.75    | <b>62.64</b>            |
| Nov-06 | 1390 | 1260 | 1320 | 1350 | 1330                   | 3000                 | 54.77    | <b>44.22</b>            |

**BXS-1**

(Downgradient well)

|        |     |     |     |     | <b>X<sub>bar</sub></b> | <b>s<sup>2</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--------|-----|-----|-----|-----|------------------------|----------------------|----------|-------------------------|
| Apr-05 | 210 |     |     |     |                        |                      |          |                         |
| Aug-05 | 160 |     |     |     |                        |                      |          |                         |
| Nov-05 | 429 |     |     |     |                        |                      |          |                         |
| Jan-06 | 367 | 210 | 160 | 429 | 292                    | 16180                | 127.20   | <b>2.79</b>             |
| May-06 | 105 | 160 | 429 | 367 | 265                    | 24642                | 156.98   | 1.96                    |
| Aug-06 | 121 | 429 | 367 | 105 | 256                    | 27758                | 166.61   | 1.72                    |
| Nov-06 | 268 | 367 | 105 | 121 | 215                    | 15616                | 124.96   | 1.64                    |

**Notes:**

X<sub>bar</sub> Average Concentration  
s<sup>2</sup> Sample variance  
s<sup>1</sup> Sample variance  
s Sample Standard Deviation  
t<sub>stat</sub> 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<sub>c</sub>** 2.447

**BXS-4**

(Upgradient well)

|        |    |    |    |    | Average Concentration |                      |
|--------|----|----|----|----|-----------------------|----------------------|
|        |    |    |    |    | <b>m<sub>o</sub></b>  | <b>s<sup>1</sup></b> |
| Apr-05 | 10 |    |    |    |                       |                      |
| Aug-05 | 10 |    |    |    |                       |                      |
| Nov-05 | 10 |    |    |    |                       |                      |
| Jan-06 | 10 | 10 | 10 | 10 | 10.00                 | 0.00                 |
| May-06 | 10 | 10 | 10 | 10 | 10.00                 | 0.00                 |
| Aug-06 | 10 | 10 | 10 | 10 | 10.00                 | 0.00                 |
| Nov-06 | 10 | 10 | 10 | 10 | 10.00                 | 0.00                 |

**BXS-3**

(Downgradient well)

|        |      |      |      |      | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--------|------|------|------|------|------------------------|----------------------|----------|-------------------------|
| Apr-05 | 40   |      |      |      |                        |                      |          |                         |
| Aug-05 | 25   |      |      |      |                        |                      |          |                         |
| Nov-05 | 10   |      |      |      |                        |                      |          |                         |
| Jan-06 | 39.4 | 40   | 25   | 10   | 28.60                  | 201.84               | 14.21    | <b>2.62</b>             |
| May-06 | 10   | 25   | 10   | 39.4 | 21.10                  | 198.84               | 14.10    | 1.57                    |
| Aug-06 | 10   | 10   | 39.4 | 10   | 17.35                  | 216.09               | 14.70    | 1.00                    |
| Nov-06 | 10   | 39.4 | 10   | 10   | 17.35                  | 216.09               | 14.70    | 1.00                    |

**BXS-2**

(Downgradient well)

|        |      |    |      |      | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--------|------|----|------|------|------------------------|----------------------|----------|-------------------------|
| Apr-05 | 30   |    |      |      |                        |                      |          |                         |
| Aug-05 | 32   |    |      |      |                        |                      |          |                         |
| Nov-05 | 30   |    |      |      |                        |                      |          |                         |
| Jan-06 | 39   | 30 | 32   | 30   | 32.75                  | 18.25                | 4.27     | <b>10.65</b>            |
| May-06 | 35.3 | 32 | 30   | 39   | 34.08                  | 15.56                | 3.94     | <b>12.21</b>            |
| Aug-06 | 35.5 | 30 | 39   | 35.3 | 34.95                  | 13.78                | 3.71     | <b>13.44</b>            |
| Nov-06 | 27.7 | 39 | 35.3 | 35.5 | 34.38                  | 22.69                | 4.76     | <b>10.23</b>            |

**BXS-1**

(Downgradient well)

|        |    |    |    |    | <b>X<sub>bar</sub></b> | <b>s<sup>1</sup></b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--------|----|----|----|----|------------------------|----------------------|----------|-------------------------|
| Apr-05 | 20 |    |    |    |                        |                      |          |                         |
| Aug-05 | 11 |    |    |    |                        |                      |          |                         |
| Nov-05 | 10 |    |    |    |                        |                      |          |                         |
| Jan-06 | 10 | 20 | 11 | 10 | 12.75                  | 23.58                | 4.86     | 1.13                    |
| May-06 | 10 | 11 | 10 | 10 | 10.25                  | 0.25                 | 0.50     | 1.00                    |
| Aug-06 | 10 | 10 | 10 | 10 | 10.00                  | 0.00                 | 0.00     | #DIV/0!                 |
| Nov-06 | 10 | 10 | 10 | 10 | 10.00                  | 0.00                 | 0.00     | #DIV/0!                 |

**Notes:**

X<sub>bar</sub> Average Concentration  
s<sup>2</sup> Sample variance  
s<sup>1</sup> Sample variance  
s Sample Standard Deviation  
t<sub>stat</sub> 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<sub>c</sub>** 2.447

**BXS-4**

(Upgradient well)

|        |     |     |     |     | Average Concentration |           |
|--------|-----|-----|-----|-----|-----------------------|-----------|
|        |     |     |     |     | <b>m<sub>o</sub></b>  | <b>s'</b> |
| Apr-05 | 5   |     |     |     |                       |           |
| Aug-05 | 5   |     |     |     |                       |           |
| Nov-05 | 5   |     |     |     |                       |           |
| Jan-06 | 6.2 | 5   | 5   | 5   | 5.30                  | 0.36      |
| May-06 | 3   | 5   | 5   | 6.2 | 4.80                  | 1.76      |
| Aug-06 | 2.6 | 5   | 6.2 | 3   | 4.20                  | 2.88      |
| Nov-06 | 5   | 6.2 | 3   | 2.6 | 4.20                  | 2.88      |

**BXS-3**

(Downgradient well)

|        |      |      |      |      | <b>X<sub>bar</sub></b> | <b>s'</b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--------|------|------|------|------|------------------------|-----------|----------|-------------------------|
| Apr-05 | 63   |      |      |      |                        |           |          |                         |
| Aug-05 | 5    |      |      |      |                        |           |          |                         |
| Nov-05 | 7    |      |      |      |                        |           |          |                         |
| Jan-06 | 18.9 | 63   | 5    | 7    | 23.48                  | 731.97    | 27.05    | 1.34                    |
| May-06 | 22.1 | 5    | 7    | 18.9 | 13.25                  | 72.46     | 8.51     | 1.98                    |
| Aug-06 | 13.7 | 7    | 18.9 | 22.1 | 15.43                  | 43.53     | 6.60     | <b>3.39</b>             |
| Nov-06 | 13.7 | 18.9 | 22.1 | 13.7 | 17.10                  | 17.12     | 4.14     | <b>6.17</b>             |

**BXS-2**

(Downgradient well)

|        |      |      |      |      | <b>X<sub>bar</sub></b> | <b>s'</b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--------|------|------|------|------|------------------------|-----------|----------|-------------------------|
| Apr-05 | 10   |      |      |      |                        |           |          |                         |
| Aug-05 | 15   |      |      |      |                        |           |          |                         |
| Nov-05 | 51   |      |      |      |                        |           |          |                         |
| Jan-06 | 19.4 | 10   | 15   | 51   | 23.85                  | 342.36    | 18.50    | 2.00                    |
| May-06 | 46.7 | 15   | 51   | 19.4 | 33.03                  | 340.22    | 18.44    | <b>3.06</b>             |
| Aug-06 | 21.9 | 51   | 19.4 | 46.7 | 34.75                  | 269.20    | 16.41    | <b>3.72</b>             |
| Nov-06 | 18.5 | 19.4 | 46.7 | 21.9 | 26.63                  | 181.18    | 13.46    | <b>3.33</b>             |

**BXS-1**

(Downgradient well)

|        |      |      |      |      | <b>X<sub>bar</sub></b> | <b>s'</b> | <b>s</b> | <b>t<sub>stat</sub></b> |
|--------|------|------|------|------|------------------------|-----------|----------|-------------------------|
| Apr-05 | 13   |      |      |      |                        |           |          |                         |
| Aug-05 | 5    |      |      |      |                        |           |          |                         |
| Nov-05 | 7    |      |      |      |                        |           |          |                         |
| Jan-06 | 25.5 | 13   | 5    | 7    | 12.63                  | 85.23     | 9.23     | 1.58                    |
| May-06 | 8.5  | 5    | 7    | 25.5 | 11.50                  | 89.17     | 9.44     | 1.42                    |
| Aug-06 | 8.1  | 7    | 25.5 | 8.5  | 12.28                  | 78.14     | 8.84     | 1.82                    |
| Nov-06 | 9.6  | 25.5 | 8.5  | 8.1  | 12.93                  | 70.68     | 8.41     | 2.07                    |

**Notes:**

- X<sub>bar</sub>** Average Concentration
- s<sup>2</sup>** Sample variance
- s<sup>1</sup>** Sample variance
- s** Sample Standard Deviation
- t<sub>stat</sub>** 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!