

7 August 2008

Mr. F. Thomas Lubozynski, P.E.  
Waste Program Administrator  
Solid and Hazardous Waste Program  
Florida Department of Environmental Protection, Central District  
3319 Maguire Boulevard, Suite 232  
Orlando, Florida 32803-3767

Re: 8th Semi-Annual Water Quality Monitoring Report  
J.E.D. Solid Waste Management Facility, Osceola County, Florida  
Permit No. SC49-0199726-006 and SO49-0199726-007

RECEIVED  
AUG 18 2008  
DEP Central Dist.

Dear Mr. Lubozynski:

Submitted herewith is the subject report documenting the 8<sup>th</sup> semi-annual water quality monitoring event conducted at the J.E.D. Solid Waste Management (JED) Facility located in Osceola County, Florida. This report is being submitted as required for compliance with the conditions contained within Exhibit I, Monitoring Plan Implementation Schedule (MPIS) of the above referenced permit. In accordance with the permit conditions, the semi-annual water quality monitoring event was performed in May 2008. The final laboratory analytical data was received on 10 June 2008. This report is being submitted within the sixty day period after receipt of final analytical data from the laboratory. This report satisfies the semi-annual water quality monitoring compliance requirements as described in Exhibit I of the permit.

As noted in the permit, one hard copy of the report along with an electronic copy of the report on a CD is being submitted to FDEP. The CD with a PDF copy of the entire report is attached to the inside of the front cover of the report. If you have any questions or need additional information, please do not hesitate to contact the undersigned.

Sincerely,



Kirk Wills  
Project Engineer

Attachments

Copy: Mike Kaiser, WSI

FQ1512/JED 8<sup>th</sup> Semi-Annual WQ Monitoring Report

*Submitted to:*



**Florida Department of  
Environmental Protection**

# **EIGHTH SEMI-ANNUAL WATER QUALITY MONITORING REPORT**

**J.E.D. Solid Waste Management Facility  
Osceola County, Florida**

*Prepared for*



**Waste Services of Florida, Inc.  
1501 Omni Way  
St. Cloud, Florida**

**RECEIVED**  
**AUG 08 2008**  
**DEP. Central Dist.**

*Prepared by*

**Geosyntec**  
consultants

**14055 Riveredge Drive, Suite 300  
Tampa, Florida 33637**

**Project Number FQ1512  
August 2008**





ATTACHMENT I

# Florida Department of Environmental Protection

3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767

## GROUND WATER MONITORING REPORT

Rule 62-522.600(11)

### PART I GENERAL INFORMATION

- (1) Facility Name J.E.D. Solid Waste Management Facility, Class I Landfill  
Address 1501 Omni Way  
City St. Cloud Zip 34773 County Osceola  
Telephone Number (407) 891-3720 (2) WACS\_Facility 89544
- (3) DEP Permit Number SC49-0199726-006 and SO49-0199726-007
- (4) Authorized Representative's Name Title R. Shawn McCash, Senior Vice President  
Address 5002 T-Rex Avenue, Suite 200  
City Boca Raton Zip 33431 County Palm Beach  
Telephone Number (561) 237-3414
- (5) Type of Discharge NA
- (6) Method of Discharge NA

### CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submission of false information including the possibility of fine and imprisonment.

7/18/2008  
Date

R. Shawn McCash  
Owner or Authorized Representative's Signature

### PART II QUALITY ASSURANCE REQUIREMENTS

- Sampling Organization Comp QAP # NA
- Analytical Lab Comp QAP #/ HRS Certification E82502
- Lab Name Columbia Analytical Services, Inc.
- Address 9143 Phillips Highway, Suite 200, Jacksonville, Florida 32256
- Phone Number (904) 739-2277
- E-mail Address cmyers@caslab.com or http://www.caslab.com/

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## **1. INTRODUCTION**

### **1.1 Terms of Reference**

This report documents the implementation of the Water Quality Monitoring Plan (Plan) for the J.E.D. Solid Waste Disposal (JED) Facility, which was previously known as Oak Hammock Disposal Facility (OHDF). The Plan was prepared as a part of the JED facility permit applications. The requirements for executing the Plan are presented in Exhibit I of the current permit (Permit Numbers SC49-0199726-006 and SO49-0199726-007) that authorizes the development of Phases 1 through 3 at the JED facility. The current permit was issued by the Florida Department of Environmental Protection (FDEP) on 4 April 2008. This report presents the results for the eighth semi-annual water quality (groundwater and surface water) monitoring event conducted between 13 May 2008 and 21 May 2008.

This report was prepared on behalf of Waste Services Incorporated (WSI), parent company of Omni Waste of Osceola County, LLC, owner and operator of the JED facility by Mr. Sangho “Jay” Eun and Mr. Kirk E. Wills of Geosyntec Consultants (Geosyntec). In accordance with Geosyntec’s peer review procedures, Mr. Donald Strickland, P.G. reviewed this report.

### **1.2 Overview**

The Plan and Exhibit I describe a water quality monitoring program at the JED facility that has as its intent to: (i) measure and report groundwater and surface water conditions for the monitoring network; (ii) monitor the groundwater flow direction; (iii) monitor the groundwater and surface water quality on a semi-annual basis; and (iv) monitor leachate quality on an annual basis. The eighth semi-annual water quality monitoring has been completed. This report includes presentation and discussions of the sample locations, sampling procedures, laboratory analyses and results, field data measurements, groundwater level measurements, groundwater flow direction, and surface water quality monitoring. In addition, this report includes a comparison of the analytical results of this sampling event to applicable Groundwater Cleanup Target Levels (GCTLs) as promulgated in Chapter 62-777, Florida Administrative Code (FAC).

### 1.3 Site Description

The JED facility is located in eastern Osceola County, Florida, west of highway U.S. 441, and approximately 6.5 miles south of Holopaw. The facility includes a Class I landfill, which is linked to highway U.S. 441 by a 2.86-mile access road. The JED facility comprises a total of approximately 2,179 acres. The landfill footprint at build-out is approximately 264 acres and consists of a total of 21 landfill cells that provide available waste capacity for a period of approximately 30 years. The FDEP issued a permit to construct and operate Phase 1 development of the JED facility in October 2003. Phase 1 development includes four landfill cells (Cells 1 through 4), located in the northern part of the landfill and covering approximately 53 acres. As part of Phase 1, forty-five (45) groundwater monitoring wells were installed in fifteen (15) clusters (MW-1 through MW-15) around the perimeter of the Phase 1 development area. The baseline water quality report for the Phase 1 monitoring well network was submitted to FDEP in May 2004. All components of the Phase 1 development have been constructed.

The FDEP issued a permit to construct and operate Phases 2 and 3 at the JED facility in March 2007. The development of Phases 2 and 3 includes six cells (Cells 5 through 10) with a total footprint of approximately 72 acres. As part of Phases 2 and 3 development, and as approved by FDEP, six (6) existing Phase 1 monitoring wells (MW-14 A, B, and C, and MW-15 A, B, and C), and ten (10) piezometers were decommissioned. The wells and piezometers were decommissioned to allow for construction of future cells, construction of a storm water retention basin located within Phases 2 and 3, and due to the proximity of piezometers to the new network wells installed. The decommissioning of the monitoring wells and piezometers was discussed in the Phase 2 and 3 baseline water quality report. For the development of Phases 2 and 3, twenty-four (24) additional groundwater monitoring wells were installed in eight (8) well clusters (MW-16 through MW-23) around the perimeter of the Phase 2 and 3 development areas in September 2007. The baseline water quality report for the Phases 2 and 3 monitoring well network was submitted to FDEP in January 2008.

The FDEP issued a permit to construct and operate Phases 1 through 3 with vertical expansion at the JED facility in April 2008. The monitoring well networks for Phase 1, and Phases 2 and 3 remain unchanged. For monitoring purposes, the JED facility was given the Water Assurance Compliance System (WACS) facility identification number 89544.

## 2. MONITORING WELL DETAILS

### 2.1 Well Layout and Construction

For the Phase 1 development, forty five (45) groundwater monitoring wells were installed in fifteen (15) clusters (MW-1 through MW-15) around the perimeter of the Phase 1 development area. Monitoring well clusters were located such that the spacing between well clusters was no greater than 500 ft, in accordance with the FDEP permit requirements. For development of Phases 2 and 3, twenty four (24) groundwater monitoring wells were installed in eight (8) clusters (MW-16 through MW-23) around the perimeter of the Phases 2 and 3 development areas. In accordance with the FDEP permit requirements, the monitoring well clusters were located such that the spacing between detection well clusters (MW-16 through MW-21) was approximately 500 feet, and the spacing between background well clusters (MW-22 and MW-23) was approximately 800 feet. Each monitoring well cluster consisted of three (3) groundwater monitoring wells installed (i) across the water table to monitor the upper limit of the surficial aquifer (identified as A-zone [shallow] wells); (ii) within the lower limit of the upper surficial aquifer above the intermediate clay layer (identified as C-zone [deep] wells); and (iii) at an intermediate depth between the shallow and deep wells (identified as B-zone [intermediate] wells).

A layout depicting the location of groundwater monitoring wells installed for Phases 2 and 3, and the previously installed groundwater monitoring wells for Phase 1, and the piezometers installed as part of the hydro-geologic investigation are shown for the shallow, intermediate, and deep zones on Figures 1, 2, and 3, respectively. As shown, groundwater monitoring well clusters MW-1 through MW-13 and MW-23 were installed along the top of the outer edge of the landfill perimeter berm. The ground surface at the location of the wells in the perimeter berm is at approximately Elevation 92 feet with respect to National Geodetic Vertical Datum of 1929 (NGVD, 1929). Groundwater monitoring well clusters MW-16 and MW-17 were installed along the outer edge of the landfill perimeter berm that serves as the initial storm water berm. The ground surface at these two well locations is at approximately Elevation 85 feet (NGVD, 1929). Groundwater monitoring well clusters MW-18 through MW-22 were installed along the interim Phase 3 storm water berm at the southern limit of the Phase 3 development at approximately Elevation 84 feet (NGVD, 1929). The locations of each well, in Florida state plane coordinates and latitude/longitude, and elevation (NGVD, 1929) were surveyed by professional land surveyors licensed in the State of Florida.

Wells were constructed with 2-in diameter schedule 40 PVC casing. The well screens were 10-ft in length with #6-slot (0.006-in.). A 30/45 graded silica sand was placed around the screen to a height of 2 to 3 ft above the top of the screen. A seal of 30/65 graded fine silica sand was placed above the sand filter around the screen. The remaining annular space from the top of the fine sand filter seal to the existing ground surface was grouted using a tremie pipe with a cement/bentonite mixture containing no more than 5 percent bentonite by dry weight. The PVC well casings were extended approximately 2.5 to 3 ft above the existing ground surface. Surface completion consisted of a protective steel or aluminum casing with a lockable cover set in a concrete pad. Each well was provided with a well cap, padlock, and an identification label. A summary of the monitoring well construction details are presented in Table 1.

## 2.2 Turbidity Issues

As discussed in the baseline water quality reports for the Phase 1, and Phases 2 and 3 monitoring networks, the formation around the screened intervals consists primarily of a fine, brown to dark brown, silty sand. Due to the subsurface formation properties, fine-grained and colloidal material are able to pass through the sand filter pack in many wells, primarily in the B-zone and C-zone wells. This is the case even though the wells are constructed using the smallest screen slot size (0.006 in.) commonly available. Most of the intermediate and deep wells had turbidity values in excess of the 20-NTU criterion even after extended well development and the removal of multiple well volumes.

The difficulty in attaining the desired turbidity criterion was originally discussed at a meeting between Geosyntec and FDEP on 12 January 2004 during the well development activities associated with the wells installed as part of the Phase 1 development. Geosyntec notified FDEP again on 14 September 2007 of the elevated turbidity levels even after extended well development during development of the Phase 2 and 3 monitoring wells. In accordance with these discussions, it was agreed to collect field-filtered (1-micron) and unfiltered samples for metals analyses for any sample with a turbidity value greater than 20 NTU. The data generated by the dual sampling is expected to help demonstrate: (i) what effect turbidity may have on metal analyses (i.e., compare total and dissolved metal concentrations); and (ii) whether groundwater samples with turbidities greater than 20 NTU showed higher concentrations of metals than those samples with turbidities less than 20 NTU.

### 3. MONITORING WELL SAMPLING

#### 3.1 Sampling Locations and Procedures

In accordance with the monitoring plan implementation schedule (MPIS), thirty three (33) monitoring wells installed as part of the Phase 1 development and all twenty four (24) monitoring wells installed as part of the Phase 2 and 3 development were sampled. Low-flow sampling techniques were used for groundwater sample collection. Except for the turbidity considerations as described in the previous section, all groundwater sampling was performed in accordance with the current applicable FDEP Standard Operating Procedures (SOP's, February 2004) for groundwater sampling. Additionally for quality control (QC) purposes, two sample duplicates and one equipment blank were collected and analyzed.

Peristaltic pumps were used to purge and sample all A-zone (shallow) and a limited number of B-zone (intermediate), and C-zone (deep) groundwater monitoring wells where the measured turbidity from previous water quality events was below 20 NTU. A stainless steel submersible pump was used to purge and sample the remainder of the B-zone (intermediate) and C-zone (deep) groundwater wells where the turbidity from the previous water quality events was above 20 NTU. New tubing (silicone and/or polyethylene) was used at each monitoring well location.

During the purging process, a YSI 556 water quality meter equipped with a flow-through cell was used to monitor the following field parameters: pH; temperature; field conductivity; Eh; and dissolved oxygen. Turbidity levels were measured using a LaMotte 2020e turbidity meter. Field parameters were recorded on sample collection forms, which are contained in Appendix A. When the field parameters stabilized within the acceptable tolerances required by the FDEP SOP, well purging was considered complete and groundwater samples were collected. For wells where the turbidity was not less than 20 NTU, stability was established by purging at least 5 well volumes and observing variations in the measured turbidity. For problematic wells, once the turbidity had stabilized and all other parameters conformed to the guidance set forth in the FDEP SOP's, samples were collected. A non-filtered and field-filtered (1-micron) metals sample was collected for each monitoring well where turbidity measurements exceeded the 20 NTU level.

For monitoring wells where peristaltic pumps were used, volatile organic compound (VOC) sample vials were filled by removing the down well sample tubing, disconnecting



the tubing from the water quality meter flow through cell, and reversing the flow direction on the peristaltic pump.

For the monitoring wells that were purged and sampled with a submersible pump, all sample aliquots were filled directly from the down-well tubing.

The calibration of the water quality monitoring instruments was checked daily and re-calibrated when necessary. Water quality instrument calibration forms are presented in Appendix B. Samples were placed in coolers and packed with bagged ice for transport to the analytical laboratory. Chain-of-Custody (COC) forms were completed and accompanied the samples to the analytical laboratory. All COC forms have been included in Appendix C of this report. Trip blank samples accompanied all sample coolers with VOC samples. Temperature blanks were packed in each sample cooler. Security seals were affixed to every cooler shipped.

### 3.2 Sample Analyses

Samples were analyzed by Columbia Analytical Services, Inc. (Columbia) of Jacksonville, Florida in accordance with the National Environmental Laboratory Accreditation Conference (NELAC) standards. Columbia holds certification from the Florida Department of Health (FDOH) for the analytical test methods used for this project and is certified in the State of Florida for analysis of environmental samples. A copy of Columbia's Florida Department of Health certificate is included in Appendix D.

Groundwater samples were analyzed by Columbia for total ammonia as nitrogen (N), chlorides, nitrate, total dissolved solids (TDS), iron, mercury, sodium, and the 40 CFR Part 258 Appendix 1 parameters. Other required parameters (i.e., pH; temperature; specific conductance; turbidity; Eh; and dissolved oxygen) were measured in the field during collection of the groundwater samples.

## 4. ANALYTICAL RESULTS

### 4.1 Field Parameters

Table 2 provides a summary of the field measurements of selected water quality parameters utilized for determining sample stability for this semi-annual monitoring event.

### 4.2 Groundwater Monitoring Wells

The analytical results for groundwater sampling event have been transferred to a compact disc (CD) and are included in Appendix E. These data are presented in the FDEP electronic validator spreadsheet format; PDF versions of the laboratory reports have also been included. Analytical results have been summarized in Tables 3 through 6 to show all parameters where a constituent concentration was reported above the method detection limit. Any parameter exceeding GCTLs has been highlighted. The following discussion regarding groundwater quality is organized by analytical methods.

#### *Total Metals (Method 6020 and Method 7470 for Mercury)*

Arsenic was detected in twenty one (21) monitoring wells in concentrations ranging between 0.5 and 24 ug/L. All reported concentrations are less than the GCTL for arsenic of 10 ug/L except for MW-11A, 12A, and 13A, where the reported concentrations were 21, 12, and 24 ug/L, respectively. As discussed in the first biennial water quality monitoring report (November 2006), a positive correlation exists between iron and arsenic levels for monitoring wells at the site. This has been documented throughout the State of Florida, and is due to the fact that low levels of naturally occurring arsenic are bound up primarily by ferric (iron) hydroxides in many Florida soils. This has been discussed in previous correspondence with FDEP. Arsenic was detected in two (2) wells (MW-19A and 17B) where dissolved (filtered) metal samples were collected in concentrations of 6.5 and 0.6 ug/L, respectively, which are all below the GCTL of 10 ug/L.

Barium was detected in all fifty seven (57) monitoring wells in concentrations ranging between 3.1 and 213 ug/L, all of which are all below the GCTL of 2,000 ug/L. For the eleven (11) wells (MW-19A, 16B, 17B, 19B, 20B, 21B, 22B, 18C, 19C, 20C, and 21C) where dissolved (filtered) metals samples were collected, concentrations of barium ranged between 9.7 and 36 ug/L, which are all below the GCTL.

Beryllium was detected in one (1) monitoring well, MW-19A, at a concentration of 1.3 ug/L, which is below the GCTL of 4 ug/L. Beryllium was not detected in any of the dissolved (filtered) metal samples.

Cadmium was detected in one (1) monitoring well, MW-20C, at a concentration of 0.54 ug/L, which is below the GCTL of 5 ug/L. Cadmium was not detected in any of the dissolved (filtered) metal samples.

Chromium was detected in thirty four (34) monitoring wells at concentrations ranging between 2.0 and 45 ug/L, which are all below the GCTL of 100 ug/L. Chromium was detected in one (1) of the dissolved (filtered) metals samples (MW-19A) at a concentration of 30 ug/L, which is below the GCTL.

Six (6) wells (MW-2A, 7A, 8A, 19A, 4B, and 16B) contained detectable concentrations of cobalt ranging between 1.1 and 3.6 ug/L, which are all below the GCTL of 140 ug/L. Cobalt was detected in one (1) of the dissolved (filtered) metals samples (MW-19A) at a concentration of 1.4 ug/L, which is below the GCTL.

Copper was detected in three (3) monitoring wells (MW-16B, 19B, and 2C) at concentrations ranging between 2.8 and 3.4 ug/L, which are all below the GCTL of 1,000 ug/L. Copper was detected in one (1) well (MW-18C) where dissolved (filtered) metals samples were collected at a concentration of 2.9 ug/L.

Iron was detected in all fifty seven (57) monitoring wells in concentrations ranging between 0.2 and 75 mg/L; all but two (2) wells (MW-20A and 21A) exceeded the GCTL of 0.3 mg/L. For the eleven (11) wells (MW-19A, 16B, 17B, 19B, 20B, 21B, 22B, 18C, 19C, 20C, and 21C) where dissolved (filtered) metals samples were collected, concentrations of iron ranged between 0.7 and 10.2 mg/L, all of which are above the GCTL. Iron has historically exceeded the GCTL in all wells at the site for all monitoring events including the baseline event. The iron concentrations reported for the 8<sup>th</sup> semi-annual event are typical of previous monitoring events.

Lead was detected in eighteen (18) monitoring wells in concentrations ranging between 1.0 and 28 ug/L, all of which were below the GCTL of 15 ug/L with the exception of MW-16B which was reported at 28 ug/L. Lead was detected in one (1) of the dissolved (filtered) metals samples (MW-19A) at a concentration of 5.8 ug/L, which is below the GCTL.

Nickel was detected in five (5) monitoring wells (MW-8A, 9A, 10A, 19A, and 16B) at concentrations ranging between 2.5 and 9.9 ug/L, which are all below the GCTL of 100

ug/L. Nickel was detected in one (1) of the dissolved (filtered) metals samples (MW-19A) at a concentration of 6.0 ug/L, which is below the GCTL.

Selenium was detected in four (4) monitoring wells (MW-12A, 19A, 16B, and 20B) at concentrations ranging between 2.0 and 4.7 ug/L, which are all below the GCTL of 50 ug/L. Selenium was detected in one (1) well (MW-19A) where a dissolved (filtered) metals sample was collected at a concentration of 3.7 ug/L.

Sodium was detected in all fifty seven (57) monitoring wells in concentrations ranging between 4.6 and 54 mg/L, which are all below the GCTL of 160 mg/L. For the eleven (11) wells (MW-19A, 16B, 17B, 19B, 20B, 21B, 22B, 18C, 19C, 20C, and 21C) where dissolved (filtered) metals samples were collected, concentrations of sodium ranged between 8.6 and 18 mg/L, which are all below the GCTL.

Vanadium was detected in thirteen (13) monitoring wells at concentrations ranging between 5.0 and 40 ug/L, which are all below the GCTL of 49 ug/L. Vanadium was detected in one (1) of the dissolved (filtered) metals samples (MW-19A) at a concentration of 29 ug/L, which is below the GCTL.

Zinc was detected in one (1) of the dissolved (filtered) metals samples (MW-17B) at a concentration of 32 ug/L, which is below the GCTL of 5,000 ug/L.

#### *Ammonia-N (Method 350.1)*

Ammonia-N was detected in all fifty seven (57) monitoring wells in concentrations ranging between 0.1 mg/L and 9.2 mg/L. All reported concentrations are less than the GCTL for ammonia-N of 2.8 mg/L except for MW-3A, 4A, 5A, 9A, 10A, 11A, and 19A, where the reported concentrations ranged between 3.1 and 9.2 mg/L. Ammonia-N has historically exceeded the GCTL in these wells at the site for the previous monitoring events including the baseline event. The ammonia concentrations reported for the 8<sup>th</sup> semi-annual event are typical of previous monitoring events.

#### *Anions by IC (Method 300.0)*

Chloride was detected in all fifty seven (57) monitoring wells at concentrations ranging between 7 and 229 mg/L. All reported concentrations are less than the GCTL for chloride of 250 mg/L.

*Nitrate-N (Method 300.0)*

Nitrate-N was detected in MW-21A at a concentration of 0.21 mg/L, which is below the GCTL of 10 mg/L.

*Total Dissolved Solids (TDS) (Method 160.1)*

All fifty seven (57) wells contained detectable concentrations of TDS ranging between 28 and 870 mg/L. All reported concentrations are below the GCTL of 500 mg/L except for MW-19A (870 mg/L) and MW-4B (520 mg/L).

*40 CFR Part 258, Appendix I Volatile Compounds (Method 8260)*

Benzene was detected in two (2) wells (MW-9A and 11A) at concentrations of 2.8 and 3.3 ug/L, respectively, which are both above the GCTL of 1.0 ug/L.

Ethyl benzene was detected in two (2) wells (MW-9A and 11A) at concentrations of 1.5 and 3.8 ug/L, respectively, which are both below the GCTL of 30 ug/L.

M&p-xylenes was detected in two (2) wells (MW-9A and 11A) at concentrations of 3.4 and 3.0 ug/L, respectively, which are both below the GCTL of 20 ug/L.

One (1) well (MW-9A) contained a detectable concentration of o-xylenes (1.4 ug/L), which is below the GCTL of 20 ug/L.

Toluene was detected in ten (10) wells (MW-11A, 16A, 22A, 17B, 18B, 19B, 22B, 16C, 17C, and 22C) at concentrations ranging between 1.2 and 10 ug/L, which are all below the GCTL of 40 ug/L. MW-16C was re-sampled on 13 June 2008 for Appendix I list of VOCs because laboratory data for the initial sampling event showed that toluene detected in MW-16C exceeded the GCTL of 40 ug/L. The analytical results for the resampling event showed that toluene was detected in MW-16C at a concentration of 10 ug/L, which is below the GCTL.

Vinyl Chloride was detected in two (2) wells (MW-9A and 11A) at concentrations of 2.4 and 1.7 ug/L, respectively, which are both above the GCTL of 1.0 ug/L.

The GCTL for benzene was exceeded in MW-11A. The GCTL for benzene and vinyl chloride were exceeded in MW-9A. In accordance with Chapter 62-701.510(7)(a) F.A.C. and Paragraph 4 of Monitoring Plan Implementation Schedule section of the FDEP Permit, the re-sampling event was performed within 30 days of receiving data for the initial sampling event (certified data was received by Geosyntec on 23 May 2008) and

WSI notified Mr. Thomas Lubozynski (FDEP) of this finding in a letter dated 3 June 2008.

MW-11A was re-sampled on 4 June 2008 for Appendix I list of volatile organic compounds (VOCs) because laboratory data received on 23 May 2008 showed that the sample collected from MW-11A had to be diluted by the analytical laboratory due to the foaming nature of the sample, resulting in elevated method detection and reporting limits for the VOCs analyzed. With the dilution, benzene was reported above the regulatory limit. To confirm this result, the monitoring well was resampled. To determine if the hydrochloric acid (HCL) preservative had any affect on the foaming of the sample (for the resampling) aliquots were collected in unpreserved and preserved VOC sample vials for analysis. The laboratory did not encounter any problems with foaming of this sample in either the preserved or unpreserved sample vials. A review of the both analytical data showed that the results with the preserved sample were comparable to the results obtained from with the unpreserved sample and the original sample (Table 5). However, the resampling showed detections of vinyl chloride (not detected in the original sample) exceeding the GCTL.

The GCTLs for benzene and vinyl chloride were exceeded in monitoring well MW-9A. Based on previous analytical laboratory results and the collection of duplicate sample at MW-9A, this well was not resampled.

It is believed that these detections are attributable to residual contamination remaining from the erosion caused by surface water run-off from the landfill in the vicinity of MW-9A and MW-11A as previously discussed in the 6<sup>th</sup> semi-annual water quality monitoring report, dated June 2007. Upon notification by the FDEP, WSI will initiate evaluation monitoring, if necessary.

#### **4.3 Data Validation**

All analyses were performed within the method specified holding times.

An equipment blank was collected using the peristaltic pump set up used for collection of the groundwater samples. De-ionized water supplied by Columbia was pumped through the peristaltic tubing and analyzed for the same parameters as the groundwater samples. All constituents analyzed for were non-detect for all analyses performed.

Two blind field duplicates were collected: Dup-01 was a blind duplicate of sample MW-9A and Dup-02 was a blind duplicate of sample MW-18B. A review of the analytical data shows that the blind duplicate sample data are in general agreement to the original sample data for all analytes.

#### 4.4 Impact of Turbidity on Metals Concentrations

As discussed in Section 2.2 of this report, extended well development was not successful in clearing up some of the B-zone (intermediate) and C-zone (deep) groundwater monitoring wells.

Turbidity levels were less than the FDEP guidance of 20 NTU in forty six (46) of the fifty seven (57) wells sampled. A review of the analytical results for these forty six low-turbidity wells shows that arsenic, barium, chromium, cobalt, copper, iron, lead, nickel, sodium, selenium, and vanadium were reported above the method detection limits. Arsenic and barium were detected in thirteen (13) and all forty six (46) monitoring wells, respectively. Chromium and cobalt were detected in twenty three (23) and four (4) monitoring wells, respectively. Copper and iron were detected in one (1) and all forty six (46) monitoring wells, respectively. Lead and nickel were detected in seven (7) and three (3) monitoring wells, respectively. Selenium and Sodium were detected in one (1) and all forty five (45), respectively. Vanadium was detected in three (3) monitoring wells. The reported concentrations are comparable to those reported for samples with turbidity levels greater than 20 NTU. Analytical results for total metals are presented in Table 3.

Table 4 presents dissolved metals (filtered) analytical results for the eleven (11) wells (MW-19A, 16B, 17B, 19B, 20B, 21B, 22B, 18C, 19C, 20C, and 21C). These wells displayed turbidity readings greater than 20 NTU, as a result, filtered samples were collected for each well. Turbidity values for the total metals samples ranged between 42.4 and 590 NTU.

## 5. GROUNDWATER LEVEL MEASUREMENTS AND FLOW DIRECTION

### 5.1 Field Measurements

Groundwater level measurements were obtained on 28 May 2008 from all of the Phases 1 through 3 groundwater monitoring wells and the remaining piezometers installed as part of the original site hydrogeological investigation. All groundwater levels measurements were made within an approximate 4-hr period. The groundwater level measurements from the monitoring wells and piezometers are presented in Table 7.

It should be noted that, as part of the site hydrogeological investigation, a total of 27 piezometers were installed. Two (2) piezometers (DP-1 and DP-2) located at the northern part of the site within Cell 1 footprint were decommissioned and abandoned on 3 October 2003 by Ambient Technologies, Inc. (ATI) of St. Petersburg, Florida. Two (2) additional piezometers (DP-3 and DP-4) located within Cell 3 footprint were decommissioned and abandoned on 16 January 2006 by National Environmental Technology, Inc (NET) Drilling Services of Dover, Florida. For the development of Phases 2 and 3, six (6) of the Phase 1 groundwater monitoring wells (MW-14A, 14B, 14C, 15A, 15B, and 15C) and ten (10) additional piezometers (DP-5, DP-6, DP-7, DP-8, DP-9, DP-10, DP-11, DP-12, DP-13, and SZ-1) were decommissioned and abandoned on 10 and 11 July 2007 by NET Drilling Services. Geosyntec monitored all monitoring well and piezometer decommissioning activities.

### 5.2 Water level Contours

The water level contour maps prepared from groundwater level measurements for the three upper surficial aquifer zones (i.e., A-zone, B-zone and C-zone) are presented in Figures 1, 2, and 3.

Historically, the direction of the horizontal component of groundwater flow for all three zones is predominantly east-northeast towards Bull Creek. However, the dewatering operation for the Bronson's borrow area has created a localized groundwater depression on the west side of Phase 1. Groundwater flow along the western property boundary is predominantly west towards the dewatering area. Based on a review of the groundwater level elevation data collected from the remainder of the A-zone, B-zone, and C-zone monitoring well network, the direction of the horizontal component of groundwater flow is predominantly east-northeast toward Bull Creek.



Comparison of water levels between the A, B and C wells shows a similar vertical gradient ( $1\text{E}^{-3}$  ft/ft). These gradients are consistent with the regional gradient in the upper surficial aquifer and indicate an interconnected, sluggish flow regime in the saturated zone above the Intermediate Confining Unit (ICU).

## **6.0 SURFACE WATER SAMPLING**

### **6.1 Sampling Locations and Procedures**

Two (2) surface water sampling locations established during the initial hydrogeological investigation were selected by FDEP for routine water quality monitoring. As stated in the Permit, surface water samples are only to be collected when there is flow in Bull Creek.

Collection of surface water samples commenced at the upstream monitoring station (SW-4) followed by the downstream monitoring location (SW-3). Bull Creek was observed to be flowing at the time of sampling. Surface water samples were collected from the approximate center of Bull Creek. A YSI 556 water quality meter was used to measure field parameters including temperature, pH, dissolved oxygen, specific conductance, and Eh at each sampling location. Turbidity levels were measured using a LaMotte 2020e turbidity meter. Surface water samples were collected in accordance with FDEP surface water sampling SOPs.

### **6.2 Sample Analyses**

Surface water samples were analyzed by Columbia in accordance with the NELAC (National Environmental Laboratory Accreditation Conference) standards for unionized ammonia, total hardness as  $\text{CaCO}_3$ , total organic carbon, chlorides, nitrate, total dissolved solids (TDS), total suspended solids (TSS), biological oxygen demand (BOD), chemical oxygen demand (COD), total nitrogen as N, nitrate as N, total phosphates as P, chlorophyll A, iron, mercury, fecal coli form, and the 40 CFR, Part 258 Appendix I parameters. Other required parameters (e.g., pH; temperature; specific conductance; turbidity; Eh; and dissolved oxygen) were field measured during collection of the surface water samples.

### **6.3 Field Measurements and Analytical Results**

Table 8 provides a summary of the final field parameter values and field data measured for the surface water samples.

The analytical results for the surface water samples collected are presented on a CD in Appendix E. Copies of the laboratory reports (PDF) and the electronic data files in the FDEP electronic validator spreadsheet format are included on the CD. Analytical results have been summarized in Table 8 to show all parameters where a constituent concentration was reported above the method detection limit and any parameter exceeding Surface Water Quality Criteria (SWQC) Class III concentrations.

The fecal coliform concentration for the SW-4 (upstream or background) monitoring station exceeded the SWQC for a Class III water standard of 800 /100ml. Please note that the analysis for fecal coliform was added to the MPIS by FDEP as part of the Phase 2/3 permit issued in March 2007. Sampling and analysis for fecal coliform was initiated during the 7<sup>th</sup> semi-annual monitoring event. Although the SWQC was exceeded, this monitoring location is upstream of the site. The fecal coliform concentration for the downstream monitoring station (SW-3) was below the SWQC Class III level. The pH concentrations at SW-3 and 4 were both lower than the SWQC range of 6-8.5 standard units, but are consistent with normal ranges of pH as measured in rainfall (i.e., precipitation). The dissolved oxygen levels measured at both monitoring locations were below the SWQC for a Class III water standard of 5 mg/L. Dissolved oxygen levels are dependent upon temperature, among other factors, and based on the time of sampling, the dissolved oxygen levels are consistent with what would be expected.

## 7.0 MONITORING WELL REHABILITATION WORK

On 30 June 2008 and 1 July 2008 new protective casings were installed at monitoring well clusters MW-4 through MW-9. The original 4-inch square steel casings had deteriorated to a point where the hinges were making it difficult to open and resulted in several of the hinges breaking. The new protective casings were installed from the concrete pad surface up; this was the least intrusive method and one that would avoid compromising the integrity of the monitoring wells. The new casings were 6-inches in diameter and made of anodized aluminum. The lids are also made of anodized aluminum and are removable and lockable. The installation process was the same at each cluster and consisted of the following steps:

- The original protective casing lid and hinge were removed and discarded and the protective casing was cut down (if necessary) to a point below the PVC well riser;
- The lock hasp on the original casings were cut off or bent over (to accommodate slipping the new casings over the original);
- A small screw was drilled into each side of the original casing to help anchor the grout between the old and new casings;
- The concrete pad at the base of the casing was cleaned with a wire brush and water;
- The new casings were trimmed to a height based on the tallest well at each cluster for a uniform appearance;
- A 2-inch layer of fast-setting concrete was placed around the base of the old casing and the new casing was slipped over the top and set into the concrete;
- A 2-inch PVC slip cap was placed over the well riser (to prevent grout from entering the well);
- Once the concrete base had set, Portland Type I Grout was poured between the old and new protective casings to a height flush with the top of the old casing;
- The PVC slip cap was replaced with an expanding well cap, the protective casing lid was installed and locked; and
- The casings were labeled with 3-inch reflective numbers as well as a stamped aluminum tag affixed with sheet-metal screws.

Table 1 (1 of 3)

**SUMMARY OF MONITORING WELL CONSTRUCTION DETAILS  
EIGHTH SEMI-ANNUAL WATER QUALITY MONITORING EVENT  
J.E.D. SOLID WASTE MANAGEMENT FACILITY**

Well Designation	Latitude (NAD 1983)	Longitude (NAD 1983)	WACS ID	Date Installed	Top of Casing Elevation, TOC (feet)	Total Depth (feet BTOC)	Screen Setting				Sand Pack (feet BTOC)	Fine-Grained Sand Seal (feet BTOC)
							(feet BTOC)		(feet Elevation)			
							Top	Bottom	Top	Bottom		
MW-1A	28 03 48.55	81 05 59.88	19900	9-Dec-03	95.1	23.0	13.0	23.0	82.1	72.1	10.6	8.2
MW-2A	28 03 51.99	81 05 59.90	19903	10-Dec-03	95.2	22.6	12.6	22.6	82.6	72.6	10.3	8.9
MW-3A	28 03 55.34	81 05 59.91	19906	11-Dec-03	94.6	22.8	12.8	22.8	81.9	71.9	10.4	9.0
MW-4A	28 03 58.97	81 05 59.92	19909	12-Dec-03	95.5	23.1	13.1	23.1	82.4	72.4	10.8	9.4
MW-5A	28 04 02.92	81 05 59.95	19912	24-Nov-03	95.3	22.5	12.5	22.5	82.8	72.8	10.1	9.1
MW-6A	28 04 06.50	81 05 59.15	19915	25-Nov-03	94.7	22.6	12.6	22.6	82.2	72.2	10.6	8.6
MW-7A	28 04 07.13	81 05 54.78	19918	26-Nov-03	95.5	23.3	13.3	23.3	82.2	72.2	10.3	9.3
MW-8A	28 04 06.20	81 05 50.64	19921	5-Dec-03	94.7	22.5	12.5	22.5	82.2	72.2	10.2	8.6
MW-9A	28 04 04.34	81 05 46.60	19924	4-Dec-03	94.7	22.4	12.4	22.4	82.3	72.3	10.0	8.6
MW-10A	28 04 00.07	81 05 44.77	19927	3-Dec-03	96.3	22.1	12.1	22.1	84.1	74.1	9.8	7.6
MW-11A	28 03 55.43	81 05 43.27	19930	3-Dec-03	93.6	22.8	12.8	22.8	80.7	70.7	10.5	9.1
MW-12A	28 03 52.08	81 05 43.26	19933	2-Dec-03	95.1	23.0	13.0	23.0	82.1	72.1	10.7	9.3
MW-13A	28 03 48.67	81 05 43.25	19936	8-Dec-03	95.2	22.5	12.5	22.5	82.7	72.7	10.2	7.7
MW-14A	Monitoring Well Abandoned 10 July 2007											
MW-15A	Monitoring Well Abandoned 10 July 2007											
MW-16A	28 03 44.55	81 05 40.22	22342	21-Sep-07	88.69	18.63	8.1	18.1	80.6	70.6	6.1	5.1
MW-17A	28 03 42.38	81 05 35.42	22345	22-Sep-07	88.86	19.88	9.4	19.4	79.5	69.5	7.4	6.4
MW-18A	28 03 37.21	81 05 35.16	22348	11-Sep-07	87.56	17.70	7.2	17.2	80.4	70.4	5.2	4.2
MW-19A	28 03 33.40	81 05 39.60	22351	11-Sep-07	87.54	17.65	7.2	17.2	80.4	70.4	5.2	4.2
MW-20A	28 03 31.82	81 05 45.45	22354	19-Sep-07	87.12	17.93	7.4	17.4	79.7	69.7	5.4	4.4
MW-21A	28 03 32.10	81 05 52.48	22357	14-Sep-07	87.20	18.04	7.5	17.5	79.7	69.7	5.5	4.5
MW-22A	28 03 32.35	81 05 59.48	22360	14-Sep-07	87.71	18.00	7.5	17.5	80.2	70.2	5.5	4.5
MW-23A	28 03 42.41	81 05 59.79	22363	25-Sep-07	97.90	27.75	17.3	27.3	80.7	70.7	15.3	14.3

Table 1 (2 of 3)

**SUMMARY OF MONITORING WELL CONSTRUCTION DETAILS  
EIGHTH SEMI-ANNUAL WATER QUALITY MONITORING EVENT  
J.E.D. SOLID WASTE MANAGEMENT FACILITY**

Well Designation	Latitude (NAD 1983)	Longitude (NAD 1983)	WACS ID	Date Installed	Top of Casing Elevation, TOC (feet)	Total Depth (feet BTOC)	Screen Setting				Sand Pack (feet BTOC)	Fine-Grained Sand Seal (feet BTOC)
							(feet BTOC)		(feet Elevation)			
							Top	Bottom	Top	Bottom		
MW-1B	28 03 48.59	81 05 59.89	19901	9-Dec-03	95.0	47.9	37.9	47.9	57.1	47.1	35.6	33.1
MW-2B	28 03 51.94	81 05 59.90	19904	10-Dec-03	95.2	48.3	38.3	48.3	56.9	46.9	36.0	34.6
MW-3B	28 03 55.31	81 05 59.91	19907	11-Dec-03	94.7	47.6	37.6	47.6	57.1	47.1	35.3	33.9
MW-4B	28 03 59.01	81 05 59.92	19910	12-Dec-03	95.2	47.4	37.4	47.4	57.8	47.8	35.1	33.5
MW-5B	28 04 02.88	81 05 59.95	19913	24-Nov-03	95.3	47.1	37.1	47.1	58.2	48.2	34.4	32.7
MW-6B	28 04 06.48	81 05 59.18	19916	25-Nov-03	94.6	47.4	37.4	47.4	57.2	47.2	34.9	33.5
MW-7B	28 04 07.13	81 05 54.81	19919	26-Nov-03	95.3	47.5	37.5	47.5	57.8	47.8	34.5	33.5
MW-8B	28 04 06.19	81 05 50.60	19922	5-Dec-03	94.6	49.6	39.6	49.6	55.0	45.0	37.1	35.6
MW-9B	28 04 04.31	81 05 46.56	19925	4-Dec-03	94.6	49.1	39.1	49.1	55.5	45.5	36.8	35.3
MW-10B	28 04 00.04	81 05 44.75	19928	3-Dec-03	96.2	48.3	38.3	48.3	58.0	48.0	35.9	33.9
MW-11B	28 03 55.40	81 05 43.27	19931	2-Dec-03	93.6	47.9	37.9	47.9	55.7	45.7	35.5	34.0
MW-12B	28 03 52.05	81 05 43.27	19934	1-Dec-03	95.0	49.0	39.0	49.0	56.1	46.1	36.6	35.1
MW-13B	28 03 48.64	81 05 43.24	19937	8-Dec-03	95.1	47.2	37.2	47.2	58.0	48.0	34.8	33.4
MW-14B						Monitoring Well Abandoned 10 July 2007						
MW-15B						Monitoring Well Abandoned 10 July 2007						
MW-16B	28 03 44.52	81 05 40.17	22343	21-Sep-07	88.73	38.09	27.6	37.6	61.1	51.1	25.6	24.6
MW-17B	28 03 42.35	81 05 35.36	22346	20-Sep-07	88.79	40.18	29.7	39.7	59.1	49.1	27.7	26.7
MW-18B	28 03 37.16	81 05 35.19	22349	11-Sep-07	87.43	37.80	27.3	37.3	60.1	50.1	25.3	24.3
MW-19B	28 03 33.38	81 05 39.66	22352	11-Sep-07	87.64	37.73	27.2	37.2	60.4	50.4	25.2	24.2
MW-20B	28 03 31.82	81 05 45.51	22355	19-Sep-07	87.27	37.76	27.3	37.3	60.0	50.0	25.3	24.3
MW-21B	28 03 32.09	81 05 52.55	22358	17-Sep-07	87.23	37.63	27.1	37.1	60.1	50.1	25.1	24.1
MW-22B	28 03 32.36	81 05 59.54	22361	14-Sep-07	87.69	37.96	27.5	37.5	60.2	50.2	25.5	24.5
MW-23B	28 03 42.46	81 05 59.79	22364	25-Sep-07	97.91	42.75	32.3	42.3	65.7	55.7	30.3	29.3

Table 1 (3 of 3)

**SUMMARY OF MONITORING WELL CONSTRUCTION DETAILS  
EIGHTH SEMI-ANNUAL WATER QUALITY MONITORING EVENT  
J.E.D. SOLID WASTE MANAGEMENT FACILITY**

Well Designation	Latitude (NAD 1983)	Longitude (NAD 1983)	WACS ID	Date Installed	Top of Casing Elevation, TOC (feet)	Total Depth (feet BTOC)	Screen Setting				Sand Pack (feet BTOC)	Fine-Grained Sand Seal (feet BTOC)
							(feet BTOC)		(feet Elevation)			
							Top	Bottom	Top	Bottom		
MW-1C	28 03 48.63	81 05 59.88	19902	9-Dec-03	95.2	75.2	65.2	75.2	30.0	20.0	62.9	61.4
MW-2C	28 03 51.90	81 05 59.89	19905	10-Dec-03	95.3	68.4	58.4	68.4	36.9	26.9	56.1	53.7
MW-3C	28 03 55.28	81 05 59.91	19908	11-Dec-03	94.7	68.7	58.7	68.7	36.0	26.0	56.3	54.8
MW-4C	28 03 59.04	81 05 59.92	19911	12-Dec-03	95.4	72.5	62.5	72.5	32.9	22.9	61.2	59.6
MW-5C	28 04 02.83	81 05 59.95	19914	24-Nov-03	95.4	73.0	63.0	73.0	32.4	22.4	60.7	58.7
MW-6C	28 04 06.46	81 05 59.22	19917	25-Nov-03	94.6	73.2	63.2	73.2	31.4	21.4	60.2	57.7
MW-7C	28 04 07.13	81 05 54.86	19920	25-Nov-03	94.9	73.3	63.3	73.3	31.6	21.6	60.3	59.3
MW-8C	28 04 06.17	81 05 50.55	19923	5-Dec-03	94.5	73.9	63.9	73.9	30.6	20.6	61.6	59.8
MW-9C	28 04 04.29	81 05 46.53	19926	4-Dec-03	94.5	73.8	63.8	73.8	30.8	20.8	61.4	59.4
MW-10C	28 04 00.01	81 05 44.74	19929	3-Dec-03	96.4	73.7	63.7	73.7	32.7	22.7	61.4	60.0
MW-11C	28 03 55.36	81 05 43.26	19932	2-Dec-03	93.7	73.4	63.4	73.4	30.3	20.3	61.0	59.6
MW-12C	28 03 52.01	81 05 43.26	19935	1-Dec-03	95.1	73.6	63.6	73.6	31.5	21.5	60.2	58.7
MW-13C	28 03 48.60	81 05 43.25	19938	8-Dec-03	95.0	73.0	63.0	73.0	32.1	22.1	60.7	58.2
MW-14C	Monitoring Well Abandoned 10 July 2007											
MW-15C	Monitoring Well Abandoned 10 July 2007											
MW-16C	28 03 44.50	81 05 40.11	22344	21-Sep-07	88.8	67.7	57.2	67.2	31.6	21.6	55.2	54.2
MW-17C	28 03 42.31	81 05 35.31	22347	20-Sep-07	88.9	67.3	56.8	66.8	32.0	22.0	54.8	53.8
MW-18C	28 03 37.10	81 05 35.22	22350	12-Sep-07	87.4	67.2	56.7	66.7	30.8	20.8	54.7	53.7
MW-19C	28 03 33.37	81 05 39.72	22353	10-Sep-07	87.4	66.7	56.2	66.2	31.2	21.2	54.2	53.2
MW-20C	28 03 31.82	81 05 45.57	22356	18-Sep-07	87.4	66.8	56.3	66.3	31.1	21.1	54.3	53.3
MW-21C	28 03 32.10	81 05 52.61	22359	17-Sep-07	87.1	62.6	52.1	62.1	35.1	25.1	50.1	49.1
MW-22B	28 03 32.36	81 05 59.60	22362	13-Sep-07	87.6	67.3	56.8	66.8	30.8	20.8	54.8	53.8
MW-23B	28 03 42.51	81 05 59.80	22365	24-Sep-07	97.9	67.1	56.6	66.6	41.4	31.4	54.6	53.6

Table 2

**SUMMARY OF FINAL FIELD PARAMETER RESULTS AND FIELD DATA  
EIGHTH SEMI-ANNUAL WATER QUALITY MONITORING EVENT**

Monitoring Well	Temperature (°C)	pH (Standard Units)	Specific Conductance (mS/cm) <sup>1</sup>	Turbidity (NTUs) <sup>2</sup>	Oxidation-Reduction Potential (mV) <sup>3</sup>	DO (mg/L) <sup>4</sup>	Purging Method
MW-2A	23.96	4.94	0.125	8.2	-18.5	0.50	Peristaltic Pump
MW-3A	26.64	5.01	0.242	0.9	-178.2	0.36	Peristaltic Pump
MW-4A	24.36	5.12	0.126	2.2	-32.7	0.81	Peristaltic Pump
MW-5A	23.89	4.49	0.138	10.0	-108.8	0.24	Peristaltic Pump
MW-7A	24.02	5.03	0.099	11.3	-95.4	0.76	Peristaltic Pump
MW-8A	25.79	4.82	0.136	0.0	-88.5	0.65	Peristaltic Pump
MW-9A	26.26	4.64	0.095	2.4	-19.2	0.22	Peristaltic Pump
MW-10A	24.82	4.33	0.087	15.8	-40.4	0.65	Peristaltic Pump
MW-11A	27.60	6.30	0.193	9.9	-108.8	0.45	Peristaltic Pump
MW-12A	25.98	6.16	0.284	0.2	-143.8	0.42	Peristaltic Pump
MW-13A	24.49	5.46	0.127	1.9	-98.5	0.45	Peristaltic Pump
MW-16A	25.99	5.13	0.078	0.0	-0.6	0.31	Peristaltic Pump
MW-17A	25.26	5.00	0.078	0.0	6.1	0.86	Peristaltic Pump
MW-18A	24.14	4.55	0.066	0.3	53.1	0.94	Peristaltic Pump
MW-19A	28.82	5.61	0.373	65.7	-88.1	0.34	Peristaltic Pump
MW-20A	25.07	4.84	0.174	7.7	38.0	0.53	Peristaltic Pump
MW-21A	23.87	4.87	0.115	3.9	28.7	0.79	Peristaltic Pump
MW-22A	25.11	4.72	0.114	0.1	-25.6	0.36	Peristaltic Pump
MW-23A	26.96	4.93	0.137	3.2	-57.8	0.36	Peristaltic Pump
MW-2B	23.85	4.43	0.043	17.5	4.5	0.42	Submersible Pump
MW-3B	25.17	5.46	0.066	2.5	-62.2	0.19	Submersible Pump
MW-4B	24.86	4.41	0.515	0.0	-124.0	0.43	Peristaltic Pump
MW-5B	24.22	4.51	0.033	3.7	-22.8	0.53	Submersible Pump
MW-7B	24.25	4.63	0.069	8.5	-56.1	0.33	Submersible Pump
MW-8B	24.35	4.78	0.043	19.1	-46.2	0.32	Submersible Pump
MW-9B	24.98	4.70	0.056	16.2	-38.3	0.28	Peristaltic Pump
MW-10B	24.65	5.09	0.055	0.0	-14.9	0.29	Peristaltic Pump
MW-11B	24.59	6.01	0.085	13.0	-64.0	0.37	Submersible Pump
MW-12B	24.39	5.76	0.061	5.9	-71.2	0.26	Submersible Pump
MW-13B	24.37	5.38	0.048	19.5	-51.9	0.17	Submersible Pump
MW-16B	24.27	5.03	0.052	590.0	-19.6	0.40	Submersible Pump
MW-17B	23.95	5.02	0.073	42.4	38.1	0.27	Submersible Pump
MW-18B	23.37	4.96	0.067	11.0	-30.4	1.37	Submersible Pump
MW-19B	29.39	4.77	0.096	44.2	-27.9	0.17	Submersible Pump
MW-20B	23.63	5.11	0.092	76.0	-13.2	0.29	Submersible Pump
MW-21B	23.74	4.96	0.081	47.0	-9.0	0.31	Submersible Pump
MW-22B	23.63	4.60	0.053	45.3	-13.3	0.25	Submersible Pump
MW-23B	24.58	4.36	0.058	2.0	-4.5	0.53	Submersible Pump
MW-2C	24.40	4.87	0.041	2.2	-36.9	0.79	Submersible Pump
MW-3C	27.02	5.54	0.048	2.7	-55.7	0.29	Submersible Pump
MW-4C	24.45	6.09	0.075	18.9	-72.4	0.29	Submersible Pump
MW-5C	24.00	5.22	0.057	10.8	-22.8	0.51	Peristaltic Pump
MW-7C	25.03	5.53	0.050	6.0	-62.7	0.71	Peristaltic Pump
MW-8C	25.20	4.66	0.041	2.6	-29.3	0.46	Peristaltic Pump
MW-9C	26.28	5.33	0.055	10.2	-23.3	0.33	Peristaltic Pump
MW-10C	23.94	4.51	0.043	7.9	-36.7	0.31	Peristaltic Pump
MW-11C	26.13	5.53	0.112	0.0	-25.5	0.39	Peristaltic Pump
MW-12C	25.77	5.13	0.050	0.0	-48.8	0.22	Peristaltic Pump
MW-13C	24.99	5.18	0.059	12.0	-87.3	0.23	Peristaltic Pump
MW-16C	24.45	5.04	0.066	11.7	-20.6	0.27	Submersible Pump
MW-17C	24.46	5.31	0.073	12.7	-27.4	0.19	Submersible Pump
MW-18C	24.38	5.36	0.075	88.4	-27.9	0.30	Submersible Pump
MW-19C	28.29	5.21	0.086	66.5	-37.6	0.18	Submersible Pump
MW-20C	24.30	5.10	0.085	178.0	-5.8	0.40	Submersible Pump
MW-21C	24.44	5.33	0.080	105.6	-26.3	0.56	Submersible Pump
MW-22C	24.83	6.82	0.400	1.2	-62.3	0.33	Submersible Pump
MW-23C	24.82	5.37	0.088	18.7	-21.3	0.36	Submersible Pump

## Notes:

<sup>1</sup> mS/cm = milli Siemens per centimeter<sup>2</sup> NTU = Nephelometric Turbidity Units<sup>3</sup> mV = millivolts<sup>4</sup> mg/L = milligram per liter



TABLE 3 (1 of 3)

**SUMMARY OF ANALYTICAL RESULTS (TOTAL METALS)**  
**EIGHTH SEMI-ANNUAL WATER QUALITY MONITORING EVENT**

Well ID	Type	Arsenic (ug/L)		Barium (ug/L)		Beryllium (ug/L)		Cadmium (ug/L)		Chromium (ug/L)	
GCTL		10		2,000		4		5		100	
MW-2A	B	0.7		15		0.2	U	0.2	U	3	
MW-3A	B	1.4		31		0.2	U	0.2	U	1.7	I
MW-4A	B	1.9		18		0.2	U	0.2	U	3.7	
MW-5A	B	1.3		3.6		0.2	U	0.2	U	4	
MW-7A	D	1.4		12		0.2	U	0.2	U	2.6	
MW-8A	D	0.2	U	22		0.2	U	0.2	U	2.8	
MW-9A	D	2.2		7.8		0.2	U	0.2	U	2.5	
MW-10A	D	1.2		3.1		0.2	U	0.2	U	2.2	
MW-11A	D	2.1		9.4		0.2	U	0.2	U	5.6	
MW-12A	D	12		15		0.2	U	0.2	U	1.7	I
MW-13A	D	24		10		0.2	U	0.2	U	4.6	
MW-16A	D	0.6		19		0.2	U	0.2	U	2.3	
MW-17A	D	0.5	I	15		0.2	U	0.2	U	1.8	I
MW-18A	D	0.2	U	5.7		0.2	U	0.2	U	1.9	I
MW-19A	D	7.4		46		1.3		0.26	I	45	
MW-20A	D	0.4	I	18		0.2	U	0.25	I	2	I
MW-21A	D	0.2	U	23		0.2	U	0.37	I	1.2	I
MW-22A	B	0.2	U	9.8		0.2	U	0.2	U	1.7	I
MW-23A	B	0.4	I	15		0.2	U	0.2	U	1.3	I
MW-2B	B	0.2	U	12		0.2	U	0.2	U	1.8	I
MW-3B	B	0.4	I	19		0.2	U	0.2	U	1.8	I
MW-4B	B	1.3		171		0.98	I	0.2	U	1.4	I
MW-5B	B	0.2	U	11		0.2	U	0.2	U	1.6	I
MW-7B	D	0.2	U	30		0.2	U	0.2	U	2	
MW-8B	D	0.2	U	34		0.2	U	0.2	U	3.3	
MW-9B	D	0.2	U	27		0.2	U	0.2	U	2.7	
MW-10B	D	0.2	U	11		0.2	U	0.2	U	1.2	I
MW-11B	D	0.4	I	20		0.2	U	0.2	U	1.9	I
MW-12B	D	0.2	I	33		0.2	U	0.2	U	2.1	
MW-13B	D	0.2	U	12		0.2	U	0.2	U	1.7	I
MW-16B	D	1.0		213		0.39	I	0.24	I	20	
MW-17B	D	0.3	I	53		0.2	U	0.2	U	4.3	
MW-18B	D	0.5		15		0.2	U	0.2	U	2	
MW-19B	D	0.3	I	69		0.2	U	0.2	U	5.3	
MW-20B	D	0.7		75		0.2	U	0.27	I	6.4	
MW-21B	D	0.6		35		0.2	U	0.2	U	4.7	
MW-22B	B	0.6		38		0.2	U	0.3	I	4.4	
MW-23B	B	0.2	U	13		0.2	U	0.25	I	2	
MW-2C	B	0.2	U	22		0.2	U	0.2	U	2	I
MW-3C	B	0.2	U	12		0.2	U	0.2	U	1.7	I
MW-4C	B	0.2	I	20		0.2	U	0.2	U	4.9	
MW-5C	B	0.3	I	25		0.2	U	0.2	U	2.2	
MW-7C	D	0.2	U	26		0.2	U	0.2	U	1.8	I
MW-8C	D	0.2	U	14		0.2	U	0.2	U	1.8	I
MW-9C	D	0.2	U	27		0.2	U	0.2	U	1.7	I
MW-10C	D	0.2	U	19		0.2	U	0.2	U	2.6	
MW-11C	D	0.2	U	8.3		0.2	U	0.2	U	1.5	I
MW-12C	D	0.2	U	18		0.2	U	0.2	U	0.85	I
MW-13C	D	0.3	I	22		0.2	U	0.2	U	1.5	I
MW-16C	D	0.5	I	23		0.2	U	0.2	U	2.1	
MW-17C	D	0.4	I	20		0.2	U	0.2	U	2.7	
MW-18C	D	0.6		77		0.36	I	0.2	U	9.1	
MW-19C	D	0.2	U	85		0.61	I	0.24	I	7	
MW-20C	D	1.0		155		0.58	I	0.54		13	
MW-21C	D	0.7		79		0.41	I	0.21	I	6.5	
MW-22C	B	0.2	U	17		0.2	U	0.2	U	2.9	
MW-23C	B	0.2	U	8.2		0.2	U	0.2	U	2.6	
Dup-1 (MW-9A)		2.2		7.7		0.2	U	0.2	U	2.1	
Dup-2 (MW-18B)		0.4	I	14		0.2	U	0.2	U	2	

## Notes:

<sup>1</sup> U = Not detected at value represented<sup>2</sup> I = Value is estimated to be between method detection limit and practical quantitation limit.<sup>3</sup> Constituent detections are shown in shaded cells (green color)<sup>4</sup> Constituent detections exceeding the GCTL are shown in shaded cells (red color)<sup>5</sup> Well type: (B) Background well (D) Detection well



TABLE 3 (2 of 3)

**SUMMARY OF ANALYTICAL RESULTS (TOTAL METALS)**  
**EIGHTH SEMI-ANNUAL WATER QUALITY MONITORING EVENT**

Well ID	Type	Cobalt (ug/L)		Copper (ug/L)		Iron (mg/L)	Lead (ug/L)		Nickel (ug/L)	
GCTL		140		1,000		0.3	15		100	
MW-2A	B	3.6		0.3	U	11.9	0.7	I	1.0	I
MW-3A	B	0.6	I	0.45	I	1.6	0.2	U	0.5	I
MW-4A	B	0.3	I	0.3	U	1.7	0.2	U	0.9	I
MW-5A	B	0.2	U	0.74	I	0.5	1.2		1.7	I
MW-7A	D	1.1		0.36	I	5.1	1.0	I	1.1	I
MW-8A	D	1.1		0.3	U	2.3	0.2	U	2.5	
MW-9A	D	0.9	I	0.3	U	1.8	0.2	U	3.1	
MW-10A	D	0.6	I	0.3	U	2.8	0.2	U	3.2	
MW-11A	D	1	I	0.3	U	23.3	0.3	I	1.0	I
MW-12A	D	1.0	I	0.3	U	76.1	0.2	U	0.6	I
MW-13A	D	1	I	0.3	U	23.0	0.2	U	0.4	I
MW-16A	D	0.5	I	0.64	I	0.9	1.1		1.1	I
MW-17A	D	0.4	I	0.3	U	0.8	0.3	I	0.9	I
MW-18A	D	0.3	I	0.41	I	0.7	1.0		0.8	I
MW-19A	D	2.3		1.2	I	13.7	11.0		9.9	
MW-20A	D	0.2	I	0.31	I	0.2	0.9	I	1.1	I
MW-21A	D	0.2	U	0.3	U	0.2	0.2	I	0.4	I
MW-22A	B	0.2	U	0.3	U	1.0	0.2	U	0.3	U
MW-23A	B	0.3	I	0.3	U	2.3	0.2	U	0.6	I
MW-2B	B	0.3	I	0.62	I	0.8	0.5	I	0.4	I
MW-3B	B	0.3	I	0.3	U	1.1	1.8		0.5	I
MW-4B	B	1.6		0.3	U	14.4	0.2	U	1.0	I
MW-5B	B	0.2	U	0.3	U	0.31	0.2	U	0.4	I
MW-7B	D	0.2	I	0.3	U	1.3	0.6	I	0.7	I
MW-8B	D	0.2	U	0.52	I	0.8	3.2		0.6	I
MW-9B	D	0.2	I	0.42	I	1.0	1.3		0.5	I
MW-10B	D	0.3	I	0.3	U	0.6	0.2	U	0.3	U
MW-11B	D	0.2	U	0.3	U	0.7	0.4	I	0.4	I
MW-12B	D	0.2	U	0.3	U	1.1	1.3		0.5	I
MW-13B	D	0.2	U	0.5	I	0.9	0.9	I	0.4	I
MW-16B	D	1.1		2.8		3.8	26		4.8	
MW-17B	D	0.3	I	0.96	I	2.0	3.0		0.9	I
MW-18B	D	0.2	U	0.76	I	0.7	0.6	I	0.3	I
MW-19B	D	0.3	I	2.8		1.0	6.1		0.7	I
MW-20B	D	0.2	I	1.3	I	2.3	4.3		1.3	I
MW-21B	D	0.2	U	1.8	I	2.2	2.6		1.0	I
MW-22B	B	0.8	I	1.8	I	1.5	3.2		1.5	I
MW-23B	B	0.2	I	0.3	U	0.4	0.2	U	0.8	I
MW-2C	B	0.2	U	3.4		0.7	0.3	I	0.7	I
MW-3C	B	0.2	U	0.3	U	0.8	0.2	U	0.3	I
MW-4C	B	0.2	U	0.3	U	0.8	0.3	I	0.9	I
MW-5C	B	0.2	I	0.3	U	1.0	0.2	U	0.3	U
MW-7C	D	0.2	U	0.3	U	0.7	0.5	I	0.3	I
MW-8C	D	0.2	U	0.3	U	0.8	0.2	U	0.3	U
MW-9C	D	0.2	U	0.3	U	0.9	0.3	I	1.7	I
MW-10C	D	0.2	U	0.3	U	0.8	0.2	U	0.6	I
MW-11C	D	0.2	U	0.3	U	0.5	0.2	U	0.5	I
MW-12C	D	0.2	U	0.3	U	0.7	0.2	U	0.3	U
MW-13C	D	0.2	U	0.3	U	0.6	0.3	I	0.4	I
MW-16C	D	0.2	U	0.3	U	1.8	0.2	I	0.4	I
MW-17C	D	0.2	U	0.3	U	1.3	0.2	U	0.5	I
MW-18C	D	0.5	I	0.61	I	2.0	1.5		1.8	I
MW-19C	D	0.2	I	0.7	I	1.6	1.4		0.8	I
MW-20C	D	0.4	I	1	I	3.4	3.1		1.9	I
MW-21C	D	0.2	U	0.59	I	2.7	1.3		1.0	I
MW-22C	B	0.2	U	0.59	I	0.4	0.2	U	1.1	I
MW-23C	B	0.2	U	0.3	U	0.6	0.2	I	0.5	I
Dup-1 (MW-9A)		0.9	I	0.3	U	1.9	0.2	U	2.9	
Dup-2 (MW-18B)		0.2	U	0.3	U	0.7	0.5	I	0.4	I

## Notes:

<sup>1</sup> U = Not detected at value represented<sup>2</sup> I = Value is estimated to be between method detection limit and practical quantitation limit.<sup>3</sup> Constituent detections are shown in shaded cells (green color)<sup>4</sup> Constituent detections exceeding the GCTL are shown in shaded cells (red color)<sup>5</sup> Well type: (B) Background well (D) Detection well



TABLE 3 (3 of 3)

**SUMMARY OF ANALYTICAL RESULTS (TOTAL METALS)  
EIGHTH SEMI-ANNUAL WATER QUALITY MONITORING EVENT**

Well ID	Type	Selenium (ug/L)		Sodium (mg/L)		Vanadium (ug/L)	
GCTL		50		160		49	
MW-2A	B	0.7	U	11		2.0	U
MW-3A	B	0.9	I	40		2.0	U
MW-4A	B	0.7	U	9.2		2.5	I
MW-5A	B	0.8	I	13		2.0	U
MW-7A	D	0.7	U	11		2.0	U
MW-8A	D	0.7	U	16		2.7	I
MW-9A	D	0.7	U	7.1		2.2	I
MW-10A	D	0.7	U	5.9		2.3	I
MW-11A	D	1	I	9.9		5.0	
MW-12A	D	2.0		14		2.0	U
MW-13A	D	1	I	9		4.4	I
MW-16A	D	0.7	U	8.5		5.2	
MW-17A	D	0.7	U	10		4.2	I
MW-18A	D	0.7	U	6.4		2.0	U
MW-19A	D	4.7		18		40.0	
MW-20A	D	0.8	I	19		4.9	I
MW-21A	D	0.7	U	18		2.0	U
MW-22A	B	0.7	U	20		2.0	U
MW-23A	B	0.7	U	14		2.0	U
MW-2B	B	0.7	U	5.4		2.0	U
MW-3B	B	0.7	U	6.6		2.0	U
MW-4B	B	0.7	U	54		2.0	U
MW-5B	B	0.7	U	4.1		2.0	U
MW-7B	D	0.7	U	7.7		2.0	U
MW-8B	D	0.7	U	5.9		6.2	
MW-9B	D	0.7	U	8.8		3.2	I
MW-10B	D	0.7	U	8.5		2.0	U
MW-11B	D	0.7	U	15		2.0	U
MW-12B	D	0.7	U	7		2.0	U
MW-13B	D	0.7	U	7.8		2.0	U
MW-16B	D	4.0		8.7		20.0	
MW-17B	D	0.8	I	12		5.0	I
MW-18B	D	0.7	U	16		2.1	I
MW-19B	D	1.1	I	16		6.1	
MW-20B	D	2.2		16		7.3	
MW-21B	D	1.7	I	15		5.1	
MW-22B	B	1.4	I	8.6		5.8	
MW-23B	B	0.7	U	9.1		2.0	U
MW-2C	B	0.7	U	4.6		2.0	U
MW-3C	B	0.7	U	4.9		2.0	U
MW-4C	B	0.7	U	8.4		2.0	U
MW-5C	B	0.7	U	8.1		2.0	U
MW-7C	D	0.7	U	5.3		2.0	U
MW-8C	D	0.7	U	5.2		2.0	U
MW-9C	D	0.7	U	5.7		2.2	I
MW-10C	D	0.7	U	5.9		2.0	U
MW-11C	D	0.7	U	10		2.0	U
MW-12C	D	0.7	U	5.4		2.0	U
MW-13C	D	0.7	U	7.8		2.0	U
MW-16C	D	0.7	U	11		2.0	U
MW-17C	D	0.7	U	12		2.3	I
MW-18C	D	0.7	U	12		8.3	
MW-19C	D	0.7	U	9.8		8.1	
MW-20C	D	0.8	I	9.4		11.0	
MW-21C	D	0.7	U	9.6		6.0	
MW-22C	B	0.7	U	6.4		2.0	U
MW-23C	B	0.7	U	5		2.0	U
Dup-1 (MW-9A)		0.7	U	7.2		2.1	I
Dup-2 (MW-18B)		0.7	U	16		2.2	I

## Notes:

- <sup>1</sup> U = Not detected at value represented
- <sup>2</sup> I = Value is estimated to be between method detection limit and practical quantitation limit.
- <sup>3</sup> Constituent detections are shown in shaded cells (green color)
- <sup>4</sup> Constituent detections exceeding the GCTL are shown in shaded cells (red color)
- <sup>5</sup> Well type: (B) Background well (D) Detection well



TABLE 4 (1 of 2)

**SUMMARY OF ANALYTICAL RESULTS (DISSOLVED METALS)  
EIGHTH SEMI-ANNUAL WATER QUALITY MONITORING EVENT**

Well ID	Type	Arsenic (ug/L)		Barium (ug/L)		Chromium (ug/L)		Cobalt (ug/L)		Copper (ug/L)		Iron (mg/L)	
GCTL		10		2,000		100		140		1,000		0.3	
MW-2A	B	NA		NA		NA		NA		NA		NA	
MW-3A	B	NA		NA		NA		NA		NA		NA	
MW-4A	B	NA		NA		NA		NA		NA		NA	
MW-5A	B	NA		NA		NA		NA		NA		NA	
MW-7A	D	NA		NA		NA		NA		NA		NA	
MW-8A	D	NA		NA		NA		NA		NA		NA	
MW-9A	D	NA		NA		NA		NA		NA		NA	
MW-10A	D	NA		NA		NA		NA		NA		NA	
MW-11A	D	NA		NA		NA		NA		NA		NA	
MW-12A	D	NA		NA		NA		NA		NA		NA	
MW-13A	D	NA		NA		NA		NA		NA		NA	
MW-16A	D	NA		NA		NA		NA		NA		NA	
MW-17A	D	NA		NA		NA		NA		NA		NA	
MW-18A	D	NA		NA		NA		NA		NA		NA	
MW-19A	D	6.5		36.0		30.0		1.4		0.6	I	10.2	
MW-20A	D	NA		NA		NA		NA		NA		NA	
MW-21A	D	NA		NA		NA		NA		NA		NA	
MW-22A	B	NA		NA		NA		NA		NA		NA	
MW-23A	B	NA		NA		NA		NA		NA		NA	
MW-2B	B	NA		NA		NA		NA		NA		NA	
MW-3B	B	NA		NA		NA		NA		NA		NA	
MW-4B	B	NA		NA		NA		NA		NA		NA	
MW-5B	B	NA		NA		NA		NA		NA		NA	
MW-7B	D	NA		NA		NA		NA		NA		NA	
MW-8B	D	NA		NA		NA		NA		NA		NA	
MW-9B	D	NA		NA		NA		NA		NA		NA	
MW-10B	D	NA		NA		NA		NA		NA		NA	
MW-11B	D	NA		NA		NA		NA		NA		NA	
MW-12B	D	NA		NA		NA		NA		NA		NA	
MW-13B	D	NA		NA		NA		NA		NA		NA	
MW-16B	D	0.4	I	13		1.3	I	0.2	U	0.3	I	1.2	
MW-17B	D	0.54		28		1	I	0.27	I	0.3	U	1.8	
MW-18B	D	NA		NA		NA		NA		NA		NA	
MW-19B	D	0.4	I	18.0		0.8	I	0.2	U	0.3	I	0.7	
MW-20B	D	0.5	I	12		0.81	I	0.2	U	0.3	U	1.9	
MW-21B	D	0.4	I	9.7		1.1	I	0.2	U	0.3	U	2.0	
MW-22B	B	0.4	I	13		1.1	I	0.23	I	0.3	U	1.3	
MW-23B	B	NA		NA		NA		NA		NA		NA	
MW-2C	B	NA		NA		NA		NA		NA		NA	
MW-3C	B	NA		NA		NA		NA		NA		NA	
MW-4C	B	NA		NA		NA		NA		NA		NA	
MW-5C	B	NA		NA		NA		NA		NA		NA	
MW-7C	D	NA		NA		NA		NA		NA		NA	
MW-8C	D	NA		NA		NA		NA		NA		NA	
MW-9C	D	NA		NA		NA		NA		NA		NA	
MW-10C	D	NA		NA		NA		NA		NA		NA	
MW-11C	D	NA		NA		NA		NA		NA		NA	
MW-12C	D	NA		NA		NA		NA		NA		NA	
MW-13C	D	NA		NA		NA		NA		NA		NA	
MW-16C	D	NA		NA		NA		NA		NA		NA	
MW-17C	D	NA		NA		NA		NA		NA		NA	
MW-18C	D	0.4	I	25		1.3	I	0.2	U	2.9		1.2	
MW-19C	D	0.2	U	30		1	I	0.2	U	0.35	I	1.0	
MW-20C	D	0.3	I	34		1.3	I	0.2	U	0.3	U	1.5	
MW-21C	D	0.3	I	27		1.2	I	0.2	U	0.3	U	1.5	
MW-22C	B	NA		NA		NA		NA		NA		NA	
MW-23C	B	NA		NA		NA		NA		NA		NA	

## Notes:

<sup>1</sup> U = Not detected at value represented<sup>2</sup> I = Value is estimated to be between method detection limit and practical quantitation limit.<sup>3</sup> Constituent detections are shown in shaded cells (green color)<sup>4</sup> Constituent detections exceeding the GCTL are shown in shaded cells (red color)<sup>5</sup> Well type: (B) Background well (D) Detection well



TABLE 4 (2 of 2)

**SUMMARY OF ANALYTICAL RESULTS (DISSOLVED METALS)  
EIGHTH SEMI-ANNUAL WATER QUALITY MONITORING EVENT**

Well ID	Type	Lead (ug/L)		Nickel (ug/L)		Selenium (ug/L)		Sodium (mg/L)		Vanadium (ug/L)		Zinc (ug/L)	
GCTL		15		100		50		180		49		5,000	
MW-2A	B	NA		NA		NA		NA		NA		NA	
MW-3A	B	NA		NA		NA		NA		NA		NA	
MW-4A	B	NA		NA		NA		NA		NA		NA	
MW-5A	B	NA		NA		NA		NA		NA		NA	
MW-7A	D	NA		NA		NA		NA		NA		NA	
MW-8A	D	NA		NA		NA		NA		NA		NA	
MW-9A	D	NA		NA		NA		NA		NA		NA	
MW-10A	D	NA		NA		NA		NA		NA		NA	
MW-11A	D	NA		NA		NA		NA		NA		NA	
MW-12A	D	NA		NA		NA		NA		NA		NA	
MW-13A	D	NA		NA		NA		NA		NA		NA	
MW-16A	D	NA		NA		NA		NA		NA		NA	
MW-17A	D	NA		NA		NA		NA		NA		NA	
MW-18A	D	NA		NA		NA		NA		NA		NA	
MW-19A	D	5.8		6.0		3.7		18.0		29.0		4.9	I
MW-20A	D	NA		NA		NA		NA		NA		NA	
MW-21A	D	NA		NA		NA		NA		NA		NA	
MW-22A	B	NA		NA		NA		NA		NA		NA	
MW-23A	B	NA		NA		NA		NA		NA		NA	
MW-2B	B	NA		NA		NA		NA		NA		NA	
MW-3B	B	NA		NA		NA		NA		NA		NA	
MW-4B	B	NA		NA		NA		NA		NA		NA	
MW-5B	B	NA		NA		NA		NA		NA		NA	
MW-7B	D	NA		NA		NA		NA		NA		NA	
MW-8B	D	NA		NA		NA		NA		NA		NA	
MW-9B	D	NA		NA		NA		NA		NA		NA	
MW-10B	D	NA		NA		NA		NA		NA		NA	
MW-11B	D	NA		NA		NA		NA		NA		NA	
MW-12B	D	NA		NA		NA		NA		NA		NA	
MW-13B	D	NA		NA		NA		NA		NA		NA	
MW-16B	D	0.2	U	0.3	U	0.7	U	8.7		2.0	U	4.0	U
MW-17B	D	0.2	U	0.51	I	0.7	U	12		2.0	U	32.0	
MW-18B	D	NA		NA		NA		NA		NA		NA	
MW-19B	D	0.2	U	0.3	U	0.7	U	17		2.0	U	4.0	U
MW-20B	D	0.2	U	0.31	I	0.7	U	17		2.0	U	4.0	U
MW-21B	D	0.2	U	0.32	I	0.7	U	15		2.0	U	4.4	I
MW-22B	B	0.2	U	0.3	U	0.7	U	8.6		2.0	U	4.0	U
MW-23B	B	NA		NA		NA		NA		NA		NA	
MW-2C	B	NA		NA		NA		NA		NA		NA	
MW-3C	B	NA		NA		NA		NA		NA		NA	
MW-4C	B	NA		NA		NA		NA		NA		NA	
MW-5C	B	NA		NA		NA		NA		NA		NA	
MW-7C	D	NA		NA		NA		NA		NA		NA	
MW-8C	D	NA		NA		NA		NA		NA		NA	
MW-9C	D	NA		NA		NA		NA		NA		NA	
MW-10C	D	NA		NA		NA		NA		NA		NA	
MW-11C	D	NA		NA		NA		NA		NA		NA	
MW-12C	D	NA		NA		NA		NA		NA		NA	
MW-13C	D	NA		NA		NA		NA		NA		NA	
MW-16C	D	NA		NA		NA		NA		NA		NA	
MW-17C	D	NA		NA		NA		NA		NA		NA	
MW-18C	D	0.2	U	0.46	I	0.7	U	12		2.0	U	9.9	I
MW-19C	D	0.2	U	0.3	U	0.7	U	9.8		2.0	U	4.0	U
MW-20C	D	0.2	U	0.3	U	0.7	U	9.2		2.0	U	4.0	U
MW-21C	D	0.2	U	0.3	U	0.7	U	9.2		2.0	U	5.0	I
MW-22C	B	NA		NA		NA		NA		NA		NA	
MW-23C	B	NA		NA		NA		NA		NA		NA	

## Notes:

<sup>1</sup> U = Not detected at value represented<sup>2</sup> I = Value is estimated to be between method detection limit and practical quantitation limit.<sup>3</sup> Constituent detections are shown in shaded cells (green color)<sup>4</sup> Constituent detections exceeding the GCTL are shown in shaded cells (red color)<sup>5</sup> Well type: (B) Background well (D) Detection well



TABLE 5

**SUMMARY OF ANALYTICAL RESULTS (VOLATILE COMPOUNDS)  
EIGHTH SEMI-ANNUAL WATER QUALITY MONITORING EVENT**

Well ID	Type	Benzene (ug/L)		Ethyl Benzene (ug/L)		m&p-Xylenes (ug/L)		o-Xylene (ug/L)		Toluene (ug/L)		Vinyl Chloride (ug/L)	
GCTL		1.0		30		20		20		40		1.0	
MW-2A	B	0.2	U	0.2	U	0.47	U	0.25	U	0.54	I	0.23	U
MW-3A	B	0.2	U	0.29	I	0.47	U	0.25	U	0.77	I	0.23	U
MW-4A	B	0.2	U	0.2	U	0.47	U	0.25	U	0.15	I	0.23	U
MW-5A	B	0.3	I	0.2	U	0.47	U	0.25	U	0.18	I	0.42	I
MW-7A	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-8A	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-9A	D	2.9		1.5		3.4		1.4		0.45	I	2.4	
MW-10A	D	0.4	I	0.2	U	0.47	U	0.25	U	0.41	I	0.61	I
MW-11A	D	3.0	I	4.4	I	2.8	I	1.3	I	0.7	I	1.2	I
MW-11A (R1)	D	3.3		3.8		3.0		0.99	I	1.2		1.7	
MW-11A (R2)	D	3.0		3.6		2.9		0.93	I	1.3		1.5	
MW-12A	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-13A	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-16A	D	0.2	U	0.2	U	0.47	U	0.25	U	2.4		0.23	U
MW-17A	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-18A	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-19A	D	0.2	U	0.2	U	0.47	U	0.25	U	0.65	I	0.23	U
MW-20A	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-21A	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-22A	B	0.2	U	0.2	U	0.47	U	0.25	U	2.7		0.23	U
MW-23A	B	0.2	U	0.2	U	0.47	U	0.25	U	0.76	I	0.23	U
MW-2B	B	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-3B	B	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-4B	B	0.2	U	0.2	U	0.47	U	0.25	U	0.15	I	0.23	U
MW-5B	B	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-7B	D	0.2	U	0.26	I	0.47	U	0.25	U	0.14	U	0.23	U
MW-8B	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-9B	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-10B	D	0.2	U	0.2	U	0.47	U	0.25	U	0.19	I	0.23	U
MW-11B	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-12B	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-13B	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-16B	D	0.2	U	0.2	U	0.47	U	0.25	U	0.51	I	0.23	U
MW-17B	D	0.2	U	0.2	U	0.47	U	0.25	U	5.8		0.23	U
MW-18B	D	0.2	U	0.2	U	0.47	U	0.25	U	8.9		0.23	U
MW-19B	D	0.2	U	0.39	I	0.47	U	0.25	U	1.7		0.23	U
MW-20B	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-21B	D	0.2	U	0.2	U	0.47	U	0.25	U	0.68	I	0.23	U
MW-22B	B	0.2	U	0.2	U	0.47	U	0.25	U	1.3		0.23	U
MW-23B	B	0.2	U	0.2	U	0.47	U	0.25	U	1.1		0.23	U
MW-2C	B	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-3C	B	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-4C	B	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-5C	B	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-7C	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-8C	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-9C	D	0.2	U	0.2	U	0.47	U	0.25	U	0.16	I	0.23	U
MW-10C	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-11C	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-12C	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-13C	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-16C	D	0.2	U	0.2	U	0.47	U	0.25	U	43		0.23	U
MW-16C (R1)	D	0.5	U	0.15	I	0.94	I	0.58	I	10		0.25	U
MW-17C	D	0.2	U	0.2	U	0.47	U	0.25	U	8.7		0.23	U
MW-18C	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-19C	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-20C	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-21C	D	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
MW-22C	B	0.2	U	0.2	U	0.47	U	0.25	U	2.5		0.23	U
MW-23C	B	0.2	U	0.2	U	0.47	U	0.25	U	0.14	U	0.23	U
Dup-1 (MW-9A)		2.8		1.6		3.5		1.3		0.49	I	2.5	
Dup-2 (MW-18B)		0.2	U	0.2	U	0.47	U	0.25	U	8.3		0.23	U

## Notes:

- <sup>1</sup> U = Not detected at value represented
- <sup>2</sup> I = Value is estimated to be between method detection limit and practical quantitation limit.
- <sup>3</sup> Constituent detections are shown in shaded cells (green color)
- <sup>4</sup> Constituent detections exceeding the GCTL are shown in shaded cells (red color)
- <sup>5</sup> Well type: (B) Background well (D) Detection well
- <sup>6</sup> R1 = Indicate that resampling was performed, and the collected sample was preserved with HCl.
- <sup>7</sup> R2 = Indicate that resampling was performed, and the collected sample was unpreserved.



TABLE 6

**SUMMARY OF ANALYTICAL RESULTS (MISCELLANEOUS)  
EIGHT SEMI-ANNUAL WATER QUALITY MONITORING EVENT**

Well ID	Type	Ammonia-N (mg/L)	Chloride (mg/L)	Nitrate-N (mg/L)	Total Dissolved Solids (mg/L)
<b>GCTL</b>		<b>2.8</b>	<b>250</b>	<b>10</b>	<b>500</b>
MW-2A	B	0.2	40	0.160 I	80
MW-3A	B	3.1	89	0.160 I	180
MW-4A	B	0.2	31	0.160 I	120
MW-5A	B	7.5	31	0.170 I	200
MW-7A	D	1.1	26	0.170 I	69
MW-8A	D	1.4	44	0.064 U	110
MW-9A	D	3.5	21	0.160 I	86
MW-10A	D	3.0	13	0.160 I	82
MW-11A	D	8.0	11	0.160 I	190
MW-12A	D	1.6	17	0.160 I	180
MW-13A	D	1.5	16	0.160 I	130
MW-16A	D	0.5	11	0.064 U	100
MW-17A	D	0.6	12	0.064 U	95
MW-18A	D	0.3	12	0.170 I	86
MW-19A	D	9.2	19	0.190 I	870
MW-20A	D	0.1	31	0.160 I	150
MW-21A	D	0.3	31	0.210	81
MW-22A	B	0.3	34	0.064 U	78
MW-23A	B	0.5	41	0.160 I	97
MW-2B	B	0.2	11	0.170 I	40
MW-3B	B	0.2	23	0.064 U	64
MW-4B	B	2.3	89	0.064 U	520
MW-5B	B	0.2	7.8	0.064 U	33
MW-7B	D	0.2	21	0.064 U	59
MW-8B	D	0.2	9.1	0.170 I	55
MW-9B	D	0.2	15	0.064 U	69
MW-10B	D	0.2	15	0.064 U	60
MW-11B	D	0.1	25	0.064 U	66
MW-12B	D	0.2	17	0.064 U	60
MW-13B	D	0.2	12	0.064 U	49
MW-16B	D	0.3	15	0.180 I	190
MW-17B	D	0.3	229	0.170 I	88
MW-18B	D	0.1	27	0.064 U	56
MW-19B	D	0.2	31	0.170 I	110
MW-20B	D	0.3	33	0.180 I	95
MW-21B	D	0.3	28	0.180 I	73
MW-22B	B	0.2	13	0.180 I	55
MW-23B	B	0.2	15	0.064 U	42
MW-2C	B	0.2	6.9	0.064 U	28
MW-3C	B	0.2	7.6	0.064 U	36
MW-4C	B	0.2	9.0	0.064 U	110
MW-5C	B	0.2	16	0.064 U	54
MW-7C	D	0.2	7.4	0.064 U	38
MW-8C	D	0.2	7.2	0.064 U	45
MW-9C	D	0.2	8	0.170 I	48
MW-10C	D	0.2	7.3	0.064 U	65
MW-11C	D	0.1	18	0.064 U	76
MW-12C	D	0.2	8.3	0.064 U	33
MW-13C	D	0.2	11	0.064 U	47
MW-16C	D	0.2	22	0.064 U	69
MW-17C	D	0.2	19	0.064 U	84
MW-18C	D	0.3	21	0.170 I	86
MW-19C	D	0.3	19	0.180 I	94
MW-20C	D	0.4	21	0.180 I	110
MW-21C	D	0.3	21	0.180 I	90
MW-22C	B	0.2	7.6	0.064 U	310
MW-23C	B	0.2	8.8	0.180 I	69
Dup-1 (MW-9A)		4.4	21	0.064 U	56
Dup-2 (MW-18B)		0.1	26	0.064 U	59

## Notes:

- <sup>1</sup> U = Not detected at value represented
- <sup>2</sup> I = Value is estimated to be between method detection limit and practical quantitation limit.
- <sup>3</sup> Constituent detections are shown in shaded cells (green color)
- <sup>4</sup> Constituent detections exceeding the GCTL are shown in shaded cells (red color)
- <sup>5</sup> Well type: (B) Background well (D) Detection well

Table 7  
(1 of 3)  
**GROUNDWATER LEVEL MEASUREMENTS**  
**EIGHTH SEMI-ANNUAL WATER QUALITY MONITORING EVENT**  
**J.E.D. SOLID WASTE MANAGEMENT FACILITY**

Site Name: JED Solid Waste Management Facility				Sampling Personnel: Joe Terry		
Location: Osceola County, Florida				Field Conditions: clear, ~85°F		
Date: 28-May-2008						
Well ID	Time	TOC Elevation	Depth to Water (ft)	Well Depth (ft)	GW Elevation	Field Observations
DP-1						Piezometer Abandoned 03 October 2003
DP-2						Piezometer Abandoned 03 October 2003
DP-3						Piezometer Abandoned 16 January 2006
DP-4						Piezometer Abandoned 16 January 2006
DP-5						Piezometer Abandoned 10 July 2007
DP-6						Piezometer Abandoned 10 July 2007
DP-7						Piezometer Abandoned 10 July 2007
DP-8						Piezometer Abandoned 10 July 2007
DP-9						Piezometer Abandoned 10 July 2007
DP-10						Piezometer Abandoned 10 July 2007
DP-11						Piezometer Abandoned 10 July 2007
DP-12						Piezometer Abandoned 10 July 2007
DP-13						Piezometer Abandoned 11 July 2007
DP-14	9:30	82.0	7.03	18.6	74.94	
DP-15	9:30	82.0	7.05	53.7	74.93	protective casing lid broken
DP-16	8:45	82.6	6.72	18.5	75.85	protective casing hinge rusted
DP-17	8:45	82.6	6.77	53.7	75.81	protective casing hinge rusted
DP-18	8:25	84.4	8.43	52.9	75.95	protective casing rusted, lid broken
DP-19	8:25	84.3	8.35	18.4	75.99	protective casing lid broken
DP-20	10:25	83.1	7.07	18.4	76.00	protective casing lid broken
DP-21	10:25	83.0	7.05	53.7	75.95	
DP-22	10:05	81.0	6.53	18.6	74.47	protective casing lid broken
DP-23	10:05	81.3	6.49	53.8	74.78	
DP-24	10:20	82.2	6.85	18.6	75.37	protective casing lid broken
SZ-1						Piezometer Abandoned 10 July 2007
SZ-2	10:25	83.2	8.10	75.4	75.06	protective casing lid broken
SZ-3	10:05	81.3	6.85	78.9	74.42	protective casing lid broken
MW-1A	7:35	95.1	19.55	23.0	75.57	protective casing rusting inside
MW-1B	7:35	95.0	19.49	47.9	75.51	protective casing rusting inside and dented
MW-1C	7:35	95.2	19.74	74.4	75.44	protective casing rusting inside
MW-2A	7:43	95.2	18.17	22.6	77.04	protective casing rusting inside, lid broken
MW-2B	7:43	95.2	18.15	48.1	77.02	protective casing rusting inside, lid broken
MW-2C	7:43	95.3	18.45	68.4	76.87	protective casing rusting inside
MW-3A	7:48	94.6	17.20	22.8	77.44	
MW-3B	7:48	94.7	17.22	47.7	77.46	
MW-3C	7:48	94.7	17.28	68.8	77.38	



**Table 7**  
(2 of 3)  
**GROUNDWATER LEVEL MEASUREMENTS**  
**EIGHTH SEMI-ANNUAL WATER QUALITY MONITORING EVENT**  
**J.E.D. SOLID WASTE MANAGEMENT FACILITY**

Site Name: JED Solid Waste Management Facility				Sampling Personnel: Joe Terry		
Location: Osceola County, Florida				Field Conditions: clear, ~85°F		
Date: 28-May-2008						
Well ID	Time	TOC Elevation	Depth to Water (ft)	Well Depth (ft)	GW Elevation	Field Observations
MW-4A	7:52	95.5	18.10	23.1	77.38	protective casing rusting inside, lid broken
MW-4B	7:52	95.2	17.84	47.4	77.34	protective casing rusting inside, lid broken
MW-4C	7:52	95.4	18.13	72.6	77.26	protective casing rusting inside
MW-5A	7:55	95.3	17.89	22.5	77.43	protective casing rusting inside
MW-5B	7:55	95.3	18.21	47.1	77.09	protective casing rusting inside
MW-5C	7:55	95.4	18.57	73.0	76.82	protective casing rusting inside
MW-6A	8:05	94.7	18.35	22.6	76.37	protective casing rusting inside
MW-6B	8:05	94.6	18.23	47.5	76.37	protective casing rusting inside
MW-6C	8:05	94.6	18.29	73.1	76.29	protective casing rusting inside
MW-7A	11:00	95.5	19.22	23.3	76.26	protective casing rusting inside, lid broken
MW-7B	11:00	95.3	19.01	48.0	76.26	protective casing rusting inside, lid broken
MW-7C	11:00	94.9	18.74	73.4	76.19	protective casing rusting inside, lid broken
MW-8A	10:55	94.7	18.45	22.5	76.22	protective casing rusting inside, lid broken
MW-8B	10:55	94.6	18.40	49.3	76.18	protective casing hinge rusted
MW-8C	10:55	94.5	18.45	73.8	76.05	protective casing hinge rusted
MW-9A	10:50	94.7	18.68	22.4	75.98	protective casing hinge rusted
MW-9B	10:50	94.6	18.68	49.1	75.95	protective casing hinge rusted
MW-9C	10:50	94.5	18.68	74.7	75.86	protective casing rusting inside
MW-10A	10:45	96.3	20.20	22.1	76.05	protective casing hinge rusted
MW-10B	10:45	96.2	20.21	48.3	76.02	protective casing hinge rusted
MW-10C	10:45	96.4	20.45	74.9	75.91	protective casing hinge rusted
MW-11A	10:42	93.6	17.56	22.8	76.00	protective casing rusting inside
MW-11B	10:42	93.6	17.59	47.9	76.00	protective casing rusting inside
MW-11C	10:42	93.7	17.66	73.6	75.99	protective casing rusting inside
MW-12A	10:37	95.1	18.81	23.0	76.29	protective casing rusting inside
MW-12B	10:37	95.0	18.81	49.0	76.20	protective casing rusting inside
MW-12C	10:37	95.1	18.95	73.6	76.15	protective casing rusting inside
MW-13A	10:30	95.2	19.02	22.5	76.17	protective casing rusting inside
MW-13B	10:30	95.1	18.94	47.3	76.18	protective casing rusting inside
MW-13C	10:30	95.0	18.92	73.0	76.12	protective casing rusting inside
MW-14A	Monitoring Well Abandoned 10 July 2007					
MW-14B	Monitoring Well Abandoned 10 July 2007					
MW-14C	Monitoring Well Abandoned 10 July 2007					
MW-15A	Monitoring Well Abandoned 10 July 2007					
MW-15B	Monitoring Well Abandoned 10 July 2007					
MW-15C	Monitoring Well Abandoned 10 July 2007					

Table 7  
(3 of 3)  
**GROUNDWATER LEVEL MEASUREMENTS**  
**EIGHTH SEMI-ANNUAL WATER QUALITY MONITORING EVENT**  
**J.E.D. SOLID WASTE MANAGEMENT FACILITY**

Site Name: JED Solid Waste Management Facility				Sampling Personnel: Joe Terry		
Location: Osceola County, Florida				Field Conditions: clear, ~85°F		
Date: 28-May-2008						
Well ID	Time	TOC Elevation	Depth to Water (ft)	Well Depth (ft)	GW Elevation	Field Observations
MW-16A	9:10	88.69	12.50	18.63	76.19	
MW-16B	9:10	88.73	12.57	38.09	76.16	
MW-16C	9:10	88.77	12.69	67.65	76.08	
MW-17A	9:05	88.86	12.87	19.88	75.99	
MW-17B	9:05	88.79	12.82	40.18	75.97	
MW-17C	9:05	88.85	12.95	67.33	75.90	
MW-18A	9:00	87.56	11.44	17.70	76.12	
MW-18B	9:00	87.43	11.34	37.80	76.09	
MW-18C	9:00	87.42	11.36	67.15	76.06	
MW-19A	8:40	87.54	11.26	17.65	76.28	
MW-19B	8:40	87.64	11.35	37.73	76.29	
MW-19C	8:40	87.44	11.19	66.70	76.25	
MW-20A	8:35	87.12	10.79	17.93	76.33	
MW-20B	8:35	87.27	10.95	37.76	76.32	
MW-20C	8:35	87.35	11.13	66.75	76.22	
MW-21A	8:30	87.20	11.27	18.04	75.93	
MW-21B	8:30	87.23	11.29	37.63	75.94	
MW-21C	8:30	87.13	11.24	62.57	75.89	
MW-22A	8:15	87.71	13.29	18.00	74.42	
MW-22B	8:15	87.69	13.30	37.96	74.39	
MW-22C	8:15	87.55	12.57	67.25	74.98	
MW-23A	7:30	97.90	25.86	27.75	72.04	
MW-23B	7:30	97.91	25.83	42.75	72.08	
MW-23C	7:30	97.93	25.85	67.05	72.08	

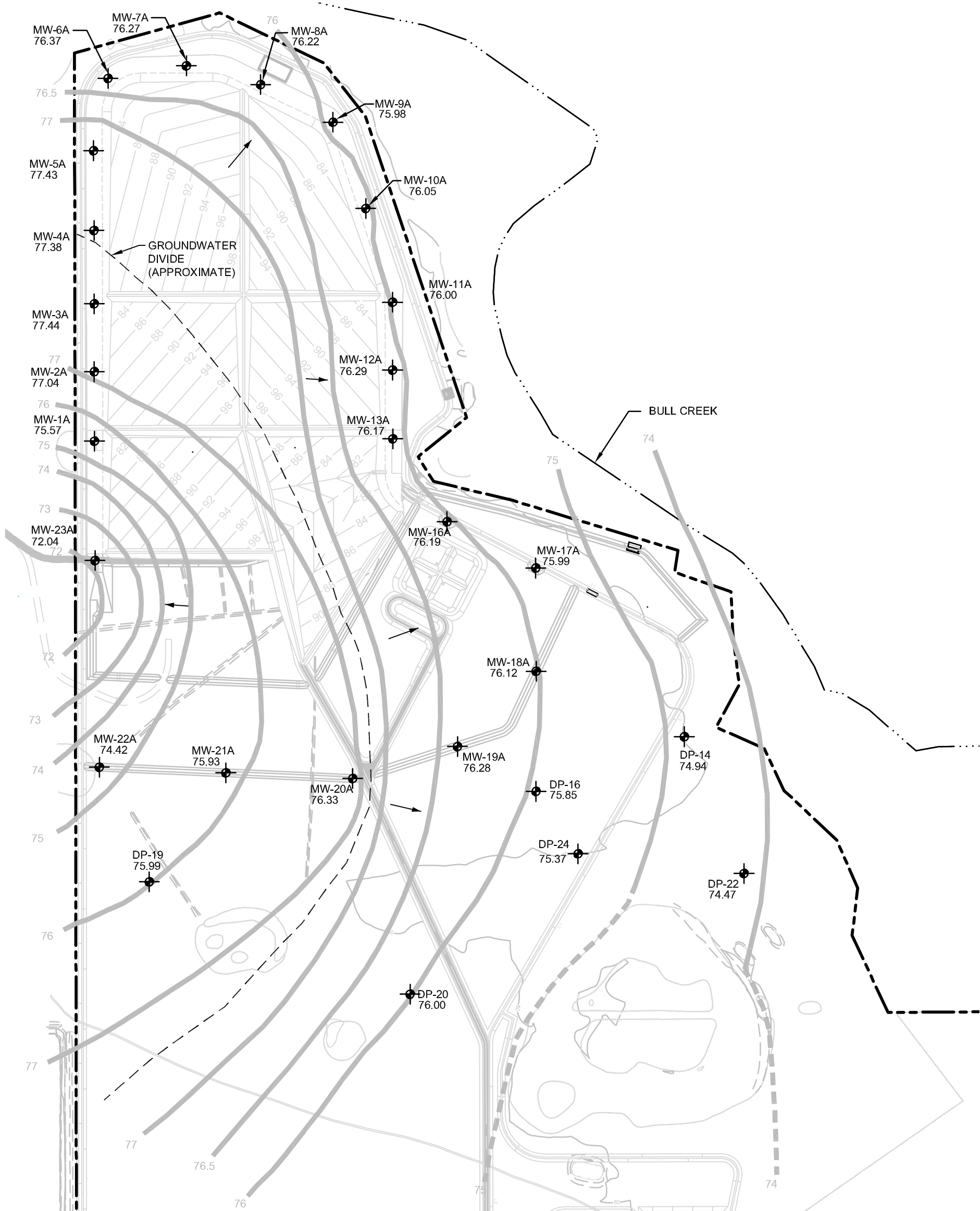
Table 8

**SUMMARY OF SURFACE WATER FIELD MEASUREMENTS AND ANALYTICAL RESULTS  
EIGHTH SEMI-ANNUAL WATER QUALITY MONITORING REPORT  
J.E.D. SOLID WASTE MANAGEMENT FACILITY**

Parameter	Analytical Method	Units	FL-SWQC Class III	Monitoring Location	
				SW-3	SW-4
Barium	6020	ug/L	-	6.7	7.7
Chlorophyll a	SM 10200H	mg/m <sup>3</sup>	-	11	24
COD	410.2	mg/L	-	33	31
Fecal Coli form	SM 9222D	#/100mL	800	240	7200
Hardness as CaCO <sub>3</sub>	6010B	mg/L	-	5.8	5.6
Iron	6010B	mg/L	1	0.279	0.261
Nitrogen, Total as N	351.2/300.0	mg/L	-	1.2	0.82
Organic Carbon, Total	415.1	mg/L	-	9.2	8.6
Phosphorus, Total	365.1	mg/L	-	0.038	0.11
Total Dissolved Solids	160.1	mg/L	-	36	30
Total Suspended Solids	160.2	mg/L	-	8	ND
Dissolved Oxygen	Field Measurement	mg/L	5	3.24	3.74
pH	Field Measurement	std units	6-8.5	5.43	4.8
Temperature	Field Measurement	°C	-	22.99	22.35
Conductivity	Field Measurement	uS/cm	< 50% above background or 1275, whichever is >	31	30
Turbidity	Field Measurement	NTU	< 29 above background	0	7.4
Water Elevation <sup>(1)</sup>	Field Measurement	ft	-	73	77.20

Notes (1): Surface Water Elevations referenced to NGVD 1929

8th MONITORING ( MAY 2008)  
J.E.D. SOLID WASTE MANAGEMENT FACILITY  
WACS FACILITY ID 89455  
"A"-ZONE (SHALLOW) WELLS - WATER LEVEL CONTOURS  
FIGURE 1



LEGEND

- 76.27  
MW-7A  
MONITORING WELL  
GROUNDWATER ELEVATION\*
- 75.85  
DP-16  
PIEZOMETER GROUNDWATER  
ELEVATION\*
- 76.5  
GROUNDWATER CONTOUR

\* WATER LEVEL MEASUREMENTS FROM  
28 MAY 2008 SITE WIDE SURVEY



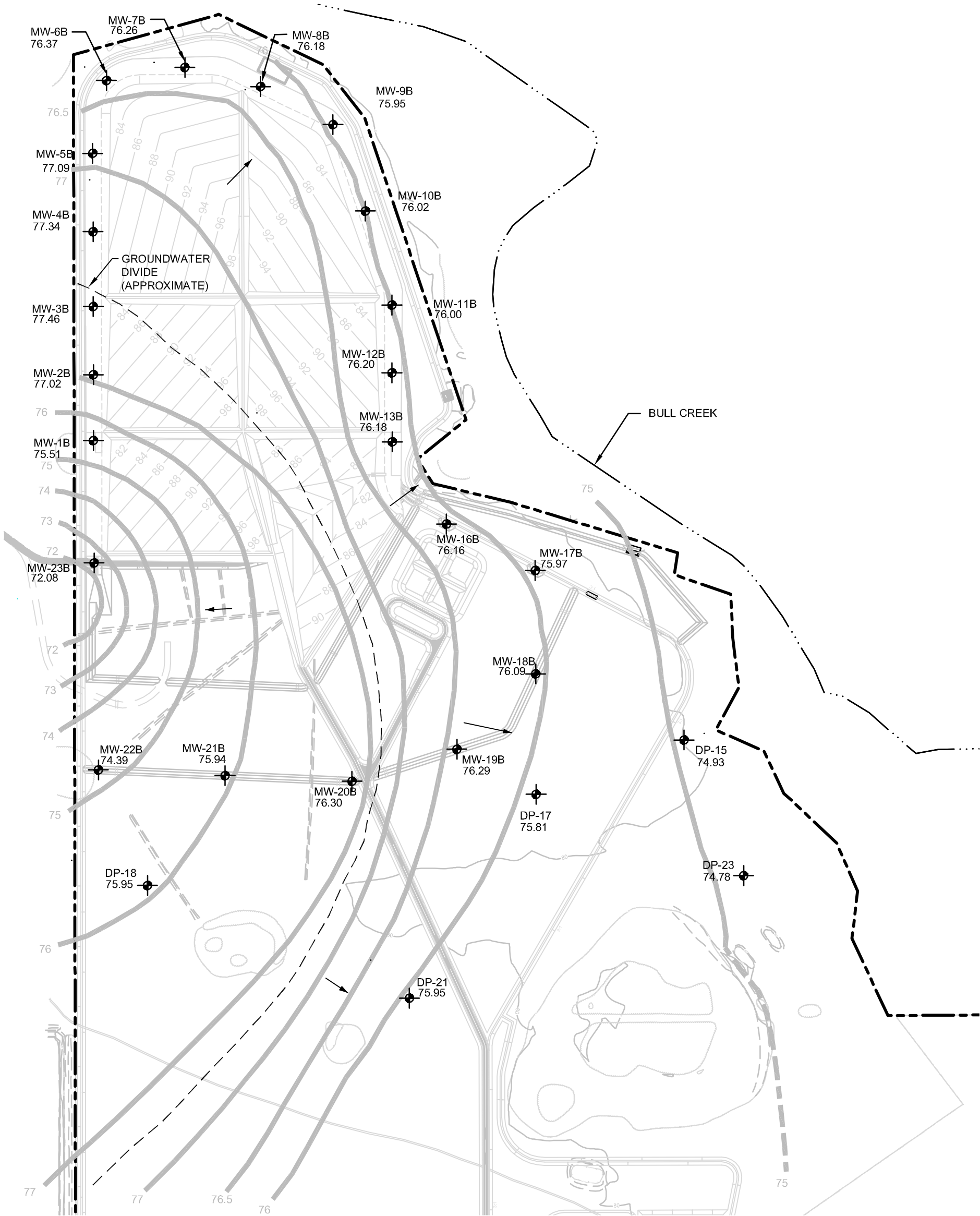
SCALE: 1" = 500'

Geosyntec  
consultants

TAMPA, FL

DATE:	JUNE 2008	FILE NO.	FQ1512.01F01
PROJECT NO.	FQ1512	FIGURE NO.	1

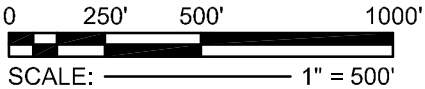
8th MONITORING (MAY 2008)  
J.E.D. SOLID WASTE MANAGEMENT FACILITY  
WACS FACILITY ID 89455  
"B"-ZONE (INTERMEDIATE) WELLS - WATER LEVEL CONTOURS  
FIGURE 2



LEGEND

- 76.26  
MW-7B MONITORING WELL  
GROUNDWATER ELEVATION\*
- 75.81  
DP-17 PIEZOMETER GROUNDWATER  
ELEVATION\*
- 76.5 GROUNDWATER CONTOUR

\* WATER LEVEL MEASUREMENTS FROM  
28 MAY 2008 SITE WIDE SURVEY



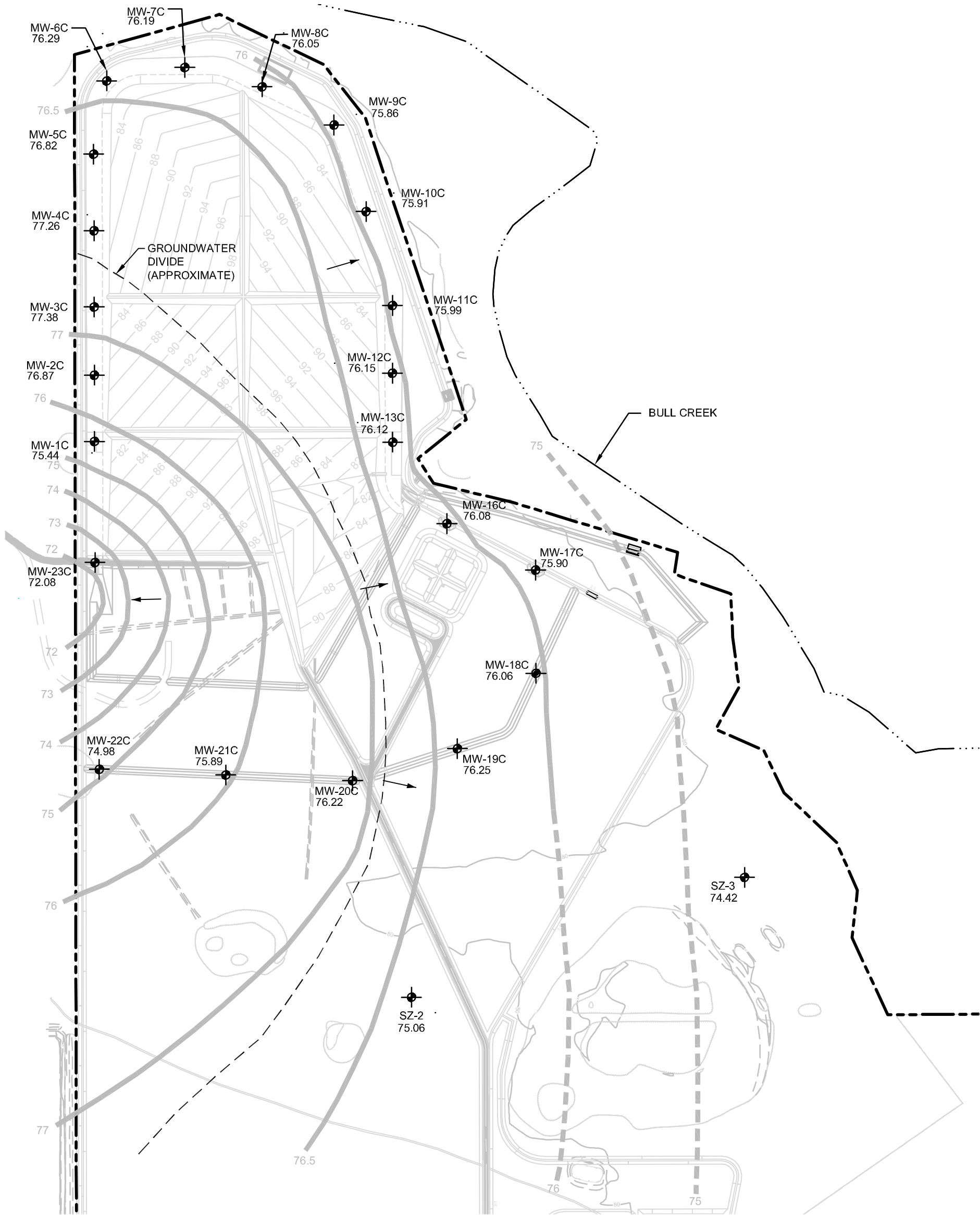
Geosyntec<sup>®</sup>  
consultants

TAMPA, FL

DATE:	JUNE 2008	FILE NO.	FQ1512.01F02
PROJECT NO.	FQ1512	FIGURE NO.	2



8th MONITORING (MAY 2008)  
J.E.D. SOLID WASTE MANAGEMENT FACILITY  
WACS FACILITY ID 89455  
"C"-ZONE (DEEP) WELLS - WATER LEVEL CONTOURS  
FIGURE 3



LEGEND

- 76.26 MW-7B MONITORING WELL GROUNDWATER ELEVATION\*
- 75.81 DP-17 PIEZOMETER GROUNDWATER ELEVATION\*
- 76.5 GROUNDWATER CONTOUR

\* WATER LEVEL MEASUREMENTS FROM 28 MAY 2008 SITE WIDE SURVEY

Geosyntec<sup>®</sup>  
consultants

TAMPA, FL

DATE:	JUNE 2008	FILE NO.	FQ1512.01F03
PROJECT NO.	FQ1512	FIGURE NO.	3

# **APPENDIX A**

## **FIELD SAMPLING FORMS**

# Monit

Station (Well No.): MW-3A WACS ID: 19903  
Purge Method: Pump ☒ Bailor ☐  
Pump Type: \_\_\_\_\_ Submersible (\_\_\_\_) Teflon \_\_\_\_\_ SS \_\_\_\_\_ Other ☒ Peristaltic

Pump (Make & Model): Grundfos RP2 / PA Hurricane  
 Purge Rate: 0.08 gpm  
 Water Quality Meter (Make & Model): YSI 556 gpm  
 S/N or ID: 06A2173 AA1

Water Level Meter: \_\_\_\_\_  
 Salinet \_\_\_\_\_  
 Time @ Start of Purging: 0810  
 Time @ End of Purging: 0900  
 Total Purging Time: 03 min.

Depth of Pump or Intake Tubing: 22 ft. (BTOT)  
20 TW 5/19

[illegible]

Note: When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1-equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied. collecting first field parameter measurements.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and readings; DO is no greater than 20% saturation at field measured temperature, and Turbidity  $\leq 20$  NTUs

turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW-2A Time Collected: 0910 Comments:



# Well Inspection

Field Conditions/Observations: overcast, ~78°F

## Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other

Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No

Well Cap: ☒ Yes ☐ No

Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 16.47 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 22.6 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 16.67 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: -20 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft.

OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: SULFURLIKE

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(22.6 - 16.47) \times 0.16 = 1.0$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) =  $P + (0.041D \times D \times L) + Fc$

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal +  $(0.041 \times (D) \cdot 25 \text{ in.} \times (D) \cdot 25 \text{ in.} \times (L) \cdot 22 \text{ ft.}) + (Fc) \cdot 0.25 \text{ gal} = 3$  gal

3 Well/Equipment Volumes = 19 gallons Purged Volume (actual): 4.4 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.08 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_  $\mu\text{m}$ ; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other ( )

Notes: \_\_\_\_\_

# Monia

Depth of Pump or Intake Tubing: 6/3 ft. (BTOC)

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2$  °C; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and reading; DO is no greater than 20% saturation at field measured temperature, and turbidity  $\leq 20$  NTUs

Sample ID: MW-2B  
Time Collected: 0905  
Comments: indm / for bld. 2y (0928): 57 NTU

# Well Inspection

Field Conditions/Observations: overcast, ~78°F

## Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other

Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.):

Well Labeled: ☒ Yes ☐ No

Well Cap: ☒ Yes ☐ No

Well Cap: ☒ Tight ☐ Loose

Comments:

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 16.41 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 48.3 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 16.68 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.27 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft.

OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: cutler-like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(48.3 - 16.41) \times 0.16 = 5.1$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) =  $P + (0.041D \times D \times L) + Fc$

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal +  $(0.041 \times (D) \cdot 32 \text{ in.} \times (D) \cdot 32 \text{ in.} \times (L) \cdot 43 \text{ ft.}) + (Fc) \cdot 0.25 \text{ gal} = 0.5$  gal

3 Well/Equipment Volumes = 1.5 gallons Purged Volume (actual): 24.5 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: ☐ 55 Gallon Drum ☐ Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 0.08 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: QA Sample Time:

Filtered: ☐ Yes ☒ No Filter Size: 0.45  $\mu\text{m}$ ; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: 0.1 NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis 7.8 Required pH <2 Measured pH 7.8

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. ) ☐ Other ( )

Notes:

**Monit.  $\mu$ g Well Sampling**

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 17 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-2C WACS ID: 19905 Pump Method: Pump ☒ Bailer ☐ Pump Type: X Submersible ( ☐ Teflon XSS Other) Peristaltic

Pump (Make & Model): Geopump II / Grundfos RF2 / PA Hurricane Purge Rate: 0.50 gpm Water Quality Meter (Make & Model): YSI 556 SN or ID: 06A2173 AL

Water Level Meter Solinst Time @ Start of Purging: 1820 Time @ End of Purging: 0845 Total Purging Time: 25 min.

Depth of Pump or Intake Tubing: 63 ft. (BTOC)

[illegible]

Note: When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every 1/4 well volume until purge requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  or  $\pm 200\ \mu\text{mhos/cm}$ , whichever is greater; Dissolved Oxygen (DO) is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs.

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and reading; DO is no greater than 20% saturation at field measured temperature, and turbidity  $\leq 20$  NTUs. DO and Turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW-2C Time Collected: 0850  
Comments: initial turbidity (0823): 4.9 NTU

## Well Inspection

Field Conditions/Observations: overcast, ~78°F

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 16.84 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 68.41 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 17.99 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 1.15 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft.

OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: sulfur-like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(68.41 - 16.84) \times 0.16 = 8.25$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) =  $P + (0.041 D \times D \times L) + Fc$

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV =  $(P) 0.0$  gal +  $(0.041 \times (D) 0.375 \text{ in.} \times (D) 0.375 \text{ in.} \times (L) 75 \text{ ft.}) + (Fc) 0.25$  gal = 0.7 gal

3 Well/Equipment Volumes = 2.1 gallons Purged Volume (actual): 12.5 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 0.09 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_  $\mu\text{m}$ ; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other ( )

Notes: \_\_\_\_\_

Monitor  $\mu\text{g}$  Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 15 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-3A WACS ID: 19906 Purge Method: Pump ☒ Bailor ☐ Pump Type: Submersible (   Teflon    SS    Other) ☒ Peristaltic

Pump (Make & Model): Geopump II / Grundfos RF2 / PA Hurricane Purge Rate: 111 gpm Water Quality Meter (Make & Model): YSI 556 SN or ID: 06A21734M

Water Level Meter: Solinst Time @ Start of Purging: 1110 Time @ End of Purging: 1320 Total Purging Time: 130 min.

Depth of Pump or Intake Tubing: 20.5 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purging requirements are satisfied.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of when purging was with a primary reagent. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW-3A Time Collected: 1325 Comments:

## Well Inspection

Field Conditions/Observations: clear, ~75°F, westerly breeze

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 18.03 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 22.8 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 18.20 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.17 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: SULFUR LIKE

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(22.8 - 18.23) \times 0.16 = 0.76$  gal  
Well Capacity (gal/ft): 0.75"=0.02; 1"=0.04; 1.25"=0.06; 2"=0.16; 3"=0.37; 4"=0.65; 5"=1.02; 6"=1.47; 12"=5.88

1 Equipment Volume (EV) =  $P + (0.041D \times D \times L) + Fc$

Where: P=Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal +  $(0.041 \times (D) \cdot 2.1 \text{ in.} \times (D) \cdot 2.1 \text{ in.} \times (L) \cdot 20.5 \text{ ft.}) + (Fc) \cdot 0.25 \text{ gal} = 0.30$  gal

3 Well Equipment Volumes = 0.9 gallons Purged Volume (actual): 14.3 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 11 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

\_\_\_\_\_ ( \_\_\_\_\_ )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. 52081508943) ☐ Other (\_\_\_\_\_)

Notes:

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





## Well Inspection

Field Conditions/Observations: Clear, ~75°F, westerly breeze

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other

Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No

Well Cap: ☒ Yes ☐ No

Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 18.05 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 47.60 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 18.57 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.52 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft.

OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: Sulfur-like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(47.6 - 18.05) \times 0.16 = 4.73$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 0.375 in. x (L) 43 ft.) + (Fc) 0.25 gal = 0.5 gal

3 Well Equipment Volumes = 1.5 gallons Purged Volume (actual): 40.0 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: ☐ 55 Gallon Drum ☐ Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 0.09 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. 520815089413) ☐ Other ( )

Notes: \_\_\_\_\_

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 15 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-3C WACS ID: 19902 Purge Method: Pump ☒ Bailer ☐ Pump Type: Submersible (   Teflon    SS    Other) ☒ Peristaltic

Pump (Make & Model): Geopump II / Grundfos RF2 / PA Hurricane Purge Rate: 0.07 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173 AC

Water Level Meter: Solinst Time @ Start of Purging: 1110 Time @ End of Purging: 1330 Total Purging Time: 140 min.

Depth of Pump or Intake Tubing: 64 ft. (BTOC)

[illegible]

Note: When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{2}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 5 minutes apart and per 50% requirement.

reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW-3C Time Collected: 1330 Comments:

## Well Inspection

Field Conditions/Observations: clear, ~75°F, westerly breeze

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 18.10 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 68.7 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 18.23 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.13 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: sulfur-like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(68.70 - 18.10) \times 0.16 = 8.1$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 0.25 in. x (D) 0.25 in. x (L) 75 ft.) + (Fc) 0.25 gal = 0.45 gal

3 Well/Equipment Volumes = 1.4 gallons Purged Volume (actual): 9.80 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.07 gpm

QA Sample Collected ☒ Yes ☐ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: Equipment Blank QA Sample Time: 1400

Filtered: ☐ Yes ☒ No Filter Size:   µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter:   NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis   Required pH 2 Measured pH

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. 52001508943) ☐ Other ( )

Notes:

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 15 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-4A WACS ID: 19909 Purge Method: Pump ☒ Bailer ☐ Pump Type: \_\_\_\_\_ Submersible (\_\_\_\_) Teflon \_\_\_\_\_ SS \_\_\_\_\_ Other ☒ Peristaltic \_\_\_\_\_

Pump (Make & Model): Geopump II Grundfos RF2 / PA Hurricane Purge Rate: 008 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173 AL

Water Level Meter: Solinst Time @ Start of Purging: 0955 Time @ End of Purging: 1020 Total Purging Time: 25 min.

Depth of Pump or Intake Tubing: 21 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and reading; DO is no greater than 20% saturation at field measured temperature, and Turbidity  $\leq 20$  NTUs

Sample ID: MW-412 Time Collected: 1025 Comments:

## Well Inspection

Field Conditions/Observations: clear, ~70°F, westerly breeze

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 10.12 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 23.10 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 12.28 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.16 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: SULFUR LIKE

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(23.1 - 10.12) \times 0.16 = 18$  gal (18)  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) =  $P + (0.041D \times D \times L) + Fc$

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 2.5 in. x (D) 2.5 in. x (L) 21 ft.) + (Fc) 0.25 gal = 0.3 gal

3 Well/Equipment Volumes = 2.4 gallons Purged Volume (actual): 2.0 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.08 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_  $\mu$ m; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH 2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. J2081508943) ☐ Other ( )

Notes:

## Monitoring Well Sampling

Site: IED Disposal Facility Project No.: FQ1512 Task: 01 Date: 15 May 2008 Sampled By: T. Wissler, J. Terry

Location: WALLACE      WACS ID: 19910  
 Date: 4/3      Pump Method: BA  
 Pump Type: ☐ Bailor ☒ Submersible ( SS )  
 Other: ☒ Peristaltic

Model: Model 9, Model 9000      Pure Rate: 9.05 gram  
 Groundfos BE7 / PA Hurricane      Water Quality Meter (Make & Model): YSI 556      S/N or ID: 06A2173 AA  
 06A2173 AA

Water Level Meter: \_\_\_\_\_  
Solinst \_\_\_\_\_  
Time @ Start of Purging: 0950  
Time @ End of Purging: 1020  
Total Purging Time: 30 min.

Depth of Pinn or Intake Tying: 4/3 # (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater.

Sample ID: MW-4B Time Collected: 1020 Comments:

## Well Inspection

Field Conditions/Observations: clear, ~70°F, westerly breeze

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other

Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No

Well Cap: ☒ Yes ☐ No

Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 17.88 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 47.4 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 17.97 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.09 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft.

OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: sulfur - 1.5

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(47.4 - 17.88) \times 0.16 = 4.7$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 0.25 in. x (D) 0.25 in. x (L) 55 ft.) + (Fc) 0.25 gal = 0.40 gal

3 Well/Equipment Volumes = 1.2 gallons Purged Volume (actual): 1.50 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.05 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. 5208/508943) ☐ Other ( )

Notes: \_\_\_\_\_

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FO1512 Task: 01 Date: 15 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-4C WACS ID: 19911 Pump Method: Pump ☒ Bailer ☐ Pump Type: ☒ Submersible ( ☐ Teflon ☒ SS ☐ Other) Peristaltic

Pump (Make & Model): Geopump II / Grundfos FF2 (PA Hurricane) Purge Rate: 0.60 gpm Water Quality Meter (Make & Model): YSI 556 SN or ID: 06A2173 47

Water Level Meter: Solinst Time @ Start of Purging: 0950 Time @ End of Purging: 1243 Total Purging Time: 173 min.

Depth of Pump or Intake Tubing: 68 ft. (BTOC)

[illegible]

Note: When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 5 minutes apart until purge requirements are met.

reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW-4C Time Collected: 1248  
Comments: initial turbidity; (0953): 338 NTU



## Well Inspection

Field Conditions/Observations: clear, ~70°F, westerly breeze

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 18.18 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 22.5 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 20.04 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 1.86 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: sulfur - 1.75

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(22.5 - 20.04) \times 0.16 = 8.39$  gal  
Well Capacity (gal/ft): 0.75"=0.02; 1"=0.04; 1.25"=0.06; 2"=0.16; 3"=0.37; 4"=0.65; 5"=1.02; 6"=1.47; 12"=5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P=Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 3.75 in. x (D) 3.75 in. x (L) 68 ft.) + (Fc) 0.25 gal = 1.64 gal

3 Well/Equipment Volumes = 1.92 gallons Purged Volume (actual): 103.8 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: ☐ 55 Gallon Drum ☐ Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 11 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH 2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. J2081508943) ☐ Other ( )

Notes:

### Monitoring Well Sampling

Sampled By: T. Wissler, J. Terry

Peristaltic

S/N or ID: 06A2173 AL

Total Purging Time: 35 min.

20

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements every  $\frac{1}{2}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Comments:

## Well Inspection

Field Conditions/Observations: SUNNY, 10 MPH EASTERLY BREEZE

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 17.45 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 22.50 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 18.17 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.22 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Detectable Odor: ☒ Yes ☐ No Describe: SULFUR LIKE Note: NA = Not Applicable

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(22.5 - 17.45) \times 0.16 = .81$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041 D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) .25 in. x (D) .25 in. x (L) 20 ft.) + (Fc) 0.25 gal = .3 gal

3 Well/Equipment Volumes = .9 gallons Purged Volume (actual): 3.85 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 111 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_  $\mu$ m; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

\_\_\_\_\_ ( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH 2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. J2081508943) ☐ Other (\_\_\_\_\_)

Notes: \_\_\_\_\_

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 5<sup>th</sup> May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-5B WACS ID: 19913 Purge Method: Pump ☒ Bailer ☐ Pump Type: ☒ Submersible ( ☐ Teflon ☒ SS ☐ Other) Peristaltic

Pump (Make & Model): Geopump II / Grundfos RF2 / PA Hurricane Purge Rate: 0.20 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173 AL

Water Level Meter: Solinst Time @ Start of Purging: 0820 Time @ End of Purging: 0850 Total Purging Time: 30 min.

Depth of Pump or Intake Tubing: 42 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

Note: When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

Note: When purging wells no sooner than 2 to 3 minutes apart until purge requirements are satisfied. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

Note: Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of reading.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ , pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 1\%$ .

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW-5B Time Collected: 0850 Comments:

## Well Inspection

Field Conditions/Observations: clear, ~70°F

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 17.83 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 47.10 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 18.14 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.31 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: sulfur-like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(47.1 - 17.83) \times 0.16 = 4.7$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 0.375 in. x (D) 0.375 in. x (L) 5.5 ft.) + (Fc) 0.25 gal = 0.60 gal

3 Well/Equipment Volumes = 1.8 gallons Purged Volume (actual): 6.00 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: ☐ 55 Gallon Drum ☐ Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 0.08 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

\_\_\_\_\_ (\_\_\_\_\_)

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. 52081508943) ☐ Other (\_\_\_\_\_)

Notes: \_\_\_\_\_

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 15 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-5C WACS ID: 19914 Purge Method: ☒ Pump ☐ Bailor ☐ Submersible (    Teflon    SS    Other ) ☒ Peristaltic

Pump (Make & Model): Geopump II / Grundfos RF2 / PA Hurricane Purge Rate: 0.11 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173 AL

Time @ Start of Purging: 0815 Total Purging Time: 0915 min.

Depth of Pump or Intake Tubing: 60 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

Note: When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{2}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units, Specific Conductance:  $\pm 5.0\%$  reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater.

Sample ID: MW-5C Time Collected: 0915 Comments:

## Well Inspection

Field Conditions/Observations:

clear, ~70°F

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other

Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.):

Well Labeled: ☒ Yes ☐ No

Well Cap: ☒ Yes ☐ No

Well Cap: ☒ Tight ☐ Loose

Comments:

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 18.33 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 73.00 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 18.50 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.17 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft.

OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: sulfur-like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(73.0 - 18.33) \times 0.16 = 8.7$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) =  $P + (0.041D \times D \times L) + Fc$

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal +  $(0.041 \times (D) 0.25 \text{ in.} \times (D) 0.25 \text{ in.} \times (L) 75 \text{ ft.}) + (Fc) 0.25 \text{ gal} = 0.45 \text{ gal}$

3 Well Equipment Volumes = 1.4 gallons Purged Volume (actual): 6.6 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.11 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: QA Sample Time:

Filtered: ☐ Yes ☒ No Filter Size: µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis Required pH 2 Measured pH

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. 52081508943) ☐ Other ( )

Notes:

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FO1512 Task: 01  
 Date: 14 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-7A WACS ID: 19918  
 Purge Method: Pump ☒ Bailer ☐  
 Pump Type: Submersible ( ☐ Teflon ☐ ☒ Peristaltic  
 Other: \_\_\_\_\_

Pump (Make & Model): Grundfos RF2 / PA Hurricane  
Purge Rate: 0.16 gpm  
Water Quality Meter (Make & Model): YSI 556  
S/N or ID: 06A2173 AM

Water Level Meter: \_\_\_\_\_  
Solinst \_\_\_\_\_  
Time @ Start of Purging: 14:55 Total Purging Time: 30 min.  
Time @ End of Purging: 15:25

Depth of Pump or Intake Tubing: 21 ft. (BTOC)

[illegible]

- Note: When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 0.0\%$  of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs.

readings; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater.

Sample ID: MW-7A Time Collected: 1525 Comments: 1A7-14 turbid; (503); 110 NTU



## Well Inspection

Field Conditions/Observations: p. cloudy, ~84°F, westerly breeze

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 18.82 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 23.30 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 19.07 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.25 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: sluff - like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(23.3 - 18.82) \times 0.16 = 0.72$  gal  
Well Capacity (gal/ft): 0.75"=0.02; 1"=0.04; 1.25"=0.06; 2"=0.16; 3"=0.37; 4"=0.65; 5"=1.02; 6"=1.47; 12"=5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P= Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 0.25 in. x (D) 0.25 in. x (L) 32 ft.) + (Fc) 0.25 gal = 0.33 gal

3 Well Equipment Volumes = 1.0 gallons Purged Volume (actual): 4.8 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.16 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. 5208150 8434) ☐ Other ( )

Notes:

Site: I.E.D. Disposal Facility Project No.: FO1512 Task: 01 Date: 14/ May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-7B WACS ID: 14919 Pump Method: Pump ☒ Bailer ☐ Pump Type: ☒ Submersible ( ☐ Teflon ☒ SS ☐ Other) Peristaltic

Pump (Make & Model): Geopump II / Grundfos RF27PA Hurricane Purge Rate: 0.40 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A217342

Water Level Meter: Solinst Time @ Start of Purging: 1500 Time @ End of Purging: 1605 Total Purging Time: 65 min.

Depth of Pump or Intake Tubing: 43 ft. (BTOC)

Note: When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following:  $\text{DO} \pm 0.2 \text{ mg/L}$  or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: NW-7B Time Collected: 1540 91 (5-11-00) Comments: in situ corb'd by (1503) 13/ATG  
1605

## Well Inspection

Field Conditions/Observations: p. cloudy, ~84°F, westerly breeze

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

### Comments:

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 18.61 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 47.5 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 20.55 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 1.94 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft.

OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: sulfur-like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(47.5 - 18.61) \times 0.16 = 4.6$  gal  
Well Capacity (gal/ft): 0.75"=0.02; 1"=0.04; 1.25"=0.06; 2"=0.16; 3"=0.37; 4"=0.65; 5"=1.02; 6"=1.47; 12"=5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P=Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 0.375 in. x (D) 0.375 in. x (L) 55 ft.) + (Fc) 0.25 gal = 0.60 gal

3 Well/Equipment Volumes = 1.80 gallons Purged Volume (actual): 26.0 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 0.09 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_  $\mu$ m; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. 52081508934) ☐ Other ( )

Notes:

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 1<sup>st</sup> / May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-7C WACS ID: 19970 Purge Method: Pump ☒ Bailer ☐ Pump Type: Submersible (   Teflon SS Other) X Peristaltic

Pump (Make & Model): Geopump R / Grundfos RF2 / PA Hurricane Purge Rate: 11 gpm Water Quality Meter (Make & Model): YSI 556 SN or ID: 06A2173 AL

Time @ Start of Purging: 1450 Time @ End of Purging: 1526 Total Purging Time: 30 min.

Depth of Pump or Intake Tubing: 68 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\leq 5$  NTUs or 10%, whichever is greater.

Sample ID: MW-7C Time Collected: 1530 Comments:

## Well Inspection

Field Conditions/Observations: p. cloudy, ~84°F, westerly breeze

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 18.38 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 73.3 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 18.5 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: .12 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: SULFUR LIKE

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(73.3 - 18.5) \times 0.16 = 8.77$  gal  
Well Capacity (gal/ft): 0.75"=0.02; 1"=0.04; 1.25"=0.06; 2"=0.16; 3"=0.37; 4"=0.65; 5"=1.02; 6"=1.47; 12"=5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P=Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 2.5 in. x (D) 2.5 in. x (L) 79 ft.) + (Fc) 0.25 gal = .45 gal

3 Well/Equipment Volumes = 1.35 gallons Purged Volume (actual): 3.3 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: .11 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. J2081508934) ☐ Other ( )

Notes: \_\_\_\_\_

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 14 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-2A WACS ID: 1921 Purge Method: Pump ☒ Bailer ☐ Pump Type: Submersible (   Teflon    SS    Other) X Peristaltic

Pump (Make & Model): Geopump II / Grundfos RF2 / PA Hurricane Purge Rate: 0.05 gpm Water Quality Meter (Make & Model): YSL 556 S/N or ID: 06A2173-44

Water Level Meter: Solinst Time @ Start of Purging: 1220 Time @ End of Purging: 1355 Total Purging Time: 95 min.

Depth of Pump or Intake Tubing: 20 ft. (BTOC)

[illegible]

Note: When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied. When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied. When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW-84 Time Collected: 1355 Comments: \_\_\_\_\_

## Well Inspection

Field Conditions/Observations: p. cloudy, ~82°F, westerly breeze

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 18.04 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 22.50 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 18.64 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.60 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.  
Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: sulfur-like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(22.5 - 18.04) \times 0.16 = 0.7$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) =  $P + (0.041D \times D \times L) + Fc$

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal +  $(0.041 \times (D) 0.75 \text{ in.} \times (D) 0.75 \text{ in.} \times (L) 32 \text{ ft.}) + (Fc) 0.25 \text{ gal} = 0.33 \text{ gal}$

3 Well/Equipment Volumes = 1.0 gallons Purged Volume (actual): 4.75 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.05 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

(\_\_\_\_\_)

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. 520B1508934) ☐ Other (\_\_\_\_\_)

Notes: \_\_\_\_\_

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 1/4 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-8B WACS ID: 19922 Purge Method: Pump ☒ Bailer ☐ Pump Type: ☒ Submersible ( ☐ Teflon ☒ SS ☐ Other) Peristaltic

Pump (Make & Model): Geopump II / Grundfos RP2 (PA Hurricane) Purge Rate: 0.50 gpm Water Quality Meter (Make & Model): YSI 556 SN or ID: 06A2173 AL

Water Level Meter: Solinst Time @ Start of Purging: 1825 Time @ End of Purging: 1925 Total Purging Time: 120 min.

Depth of Pump or Intake Tubing: 45 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are met. DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW-8B Time Collected: 1425 Comments:



## Well Inspection

Field Conditions/Observations: p. cloudy, ~82°F, mostly breeze

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 17.90 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 49.6 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 23.59 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 5.69 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: sulfur-like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(49.6 - 17.9) \times 0.16 = 5.1$  gal  
Well Capacity (gal/ft): 0.75"=0.02; 1"=0.04; 1.25"=0.06; 2"=0.16; 3"=0.37; 4"=0.65; 5"=1.02; 6"=1.47; 12"=5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P=Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 0.375 in. x (D) 0.375 in. x (L) 55 ft.) + (Fc) 0.25 gal = 0.6 gal

3 Well Equipment Volumes = 1.8 gallons Purged Volume (actual): 60.0 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: ☐ 55 Gallon Drum ☐ Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 0.08 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

\_\_\_\_\_ (\_\_\_\_\_)

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. 52001508934) ☐ Other (\_\_\_\_\_)

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Monitoring Well Sampling

Site: \_\_\_\_\_  
J.E.D. Disposal Facility \_\_\_\_\_  
Project No.: FO1512 Task: 01 Date: 14 May 2008  
Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-8C WACS ID: 19923

Pump (Make & Model): Geopump II Grundfos RF2 / PA Hurricane  
 Purge Rate: 08 \_\_\_\_\_ gpm  
 Water Quality Meter (Make & Model): \_\_\_\_\_ YSI 556  
 SN or ID: 06A2173 AC

Water Intake Meter \_\_\_\_\_ min.  
Solinet \_\_\_\_\_  
Time @ Start of Purging: 1215 Total Purging Time: 173  
Time @ End of Purging: 1410

Depth of Pump or Intake Tubing: 69 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 5 minutes apart until purge requirements are met. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2\text{ mg/L}$  or  $10\%$ , whichever is greater; and Turbidity  $\leq 5\text{ NTUs}$  or  $10\%$ , whichever is greater

Sample ID: MMW-8C Time Collected: 1410 Comments: \_\_\_\_\_

## Well Inspection

Field Conditions/Observations: PT CLOUDY, 82°F, WESTERLY BREEZE

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 18.06 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 73.9 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 18.18 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: .12 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Detectable Odor: ☒ Yes ☐ No Describe: SULFUR LIKE Note: NA = Not Applicable

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(73.9 - 18.06) \times 0.16 = 8.9$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) .25 in. x (D) .25 in. x (L) 73.9 ft.) + (Fc) 0.25 gal = .44 gal

3 Well/Equipment Volumes = 1.32 gallons Purged Volume (actual): 14.0 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: .08 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH 2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. 52081508934) ☐ Other ( )

Notes: \_\_\_\_\_

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 4/ May 2008 Sampled By: T. Wissler, J. Ferry

Station (Well No.): MW-9A WACS ID: 19924 Purge Method: Pump ☒ Bailer ☐ Pump Type: Submersible ( Teflon SS Other) ☒ Peristaltic

Pump (Make & Model): Geopump II / Grundfos RF2 / PA Hurricane Purge Rate: 0.05 gpm Water Quality Meter (Make & Model): YSI 556 SN or ID: 06A2173 AC

Water Level Meter: Solinst Time @ Start of Purging: 1000 Time @ End of Purging: 1135 Total Purging Time: 95 min.

Depth of Pump or Intake Tubing: 20 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

Sample ID: MW-9A Time Collected: 1/45 Comments:

## Well Inspection

Field Conditions/Observations: clear, ~70°F, westerly breeze

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 18.24 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 22.40 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 18.44 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: .2 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Detectable Odor: ☒ Yes ☐ No Describe: SULFUR LIKE Note: NA = Not Applicable

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(22.4 - 18.24) \times 0.16 = .67$  gal  
Well Capacity (gal/ft): 0.75"=0.02; 1"=0.04; 1.25"=0.06; 2"=0.16; 3"=0.37; 4"=0.65; 5"=1.02; 6"=1.47; 12"=5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P=Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 2.5 in. x (D) 2.5 in. x (L) 20 ft.) + (Fc) 0.25 gal = .3 gal

3 Well/Equipment Volumes = .9 gallons Purged Volume (actual): 4.75 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No \*within cell liner boundary\*

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.05 gpm

QA Sample Collected ☒ Yes ☐ No; ☒ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: DUP I QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. J2091508934) Other ( )

Notes:

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 14 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-9B WACS ID: 19925 Purge Method: Pump ☒ Bailer ☐ Pump Type: Submersible (   Teflon    SS    Other) ☒ Peristaltic

Pump (Make & Model): Geopump II / Grundfos RP2/PA Hurricane Purge Rate: 0.50 gpm Water Quality Meter (Make & Model): YSI 556 SN or ID: 06A2173 AL

Water Level Meter: Solinst Time @ Start of Purging: 1000 Time @ End of Purging: 1105 Total Purging Time: 65 min.

Depth of Pump or Intake Tubing: 141 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  standard units.

reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater.

Sample ID: MW-9B Time Collected: 1105 Comments: initial turbidity (100): 73.0 NTU



## Well Inspection

Field Conditions/Observations: clear, ~78°F, westerly breeze

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 18.23 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 49.1 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 22.79 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 4.56 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: sulfur-like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(49.1 - 18.23) \times 0.16 = 5.0$  gal  
Well Capacity (gal/ft): 0.75"=0.02; 1"=0.04; 1.25"=0.06; 2"=0.16; 3"=0.37; 4"=0.65; 5"=1.02; 6"=1.47; 12"=5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P=Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 0.375 in. x (D) 0.375 in. x (L) 55 ft.) + (Fc) 0.25 gal = 0.6 gal

3 Well/Equipment Volumes = 1.8 gallons Purged Volume (actual): 32.5 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 0.08 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

(\_\_\_\_\_)

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. 52081508934) ☐ Other (\_\_\_\_\_)

Notes: \_\_\_\_\_

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 14 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-9C WACS ID: 19926 Purge Method: Pump ☒ Bailer ☐ Pump Type: Submersible (   Teflon    SS    Other) X Peristaltic

Pump (Make & Model): Geopump II / Grundfos RF2 / PA Hurricane Purge Rate: ~ 08 gpm Water Quality Meter (Make & Model): YSI 556 SN or ID: 06A2173 A

Water Level Meter: Solinst Time @ Start of Purging: 1012 Time @ End of Purging: 1100 Total Purging Time: 48 min.

Depth of Pump or Intake Tubing: 69 ft. (BTOC)

[illegible]

Note: When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater.

Sample ID: MW-4C Time Collected: 1100 Comments:

## Well Inspection

Field Conditions/Observations: SUNNY 80° 15 MPH EAST WIND

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other

Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No

Well Cap: ☒ Yes ☐ No

Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 18.30 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 73.8 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 18.31 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: .01 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft.

OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: SULFUR LIKE

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(73.8 - 18.3) \times 0.16 = 5.85$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 2.5 in. x (D) 2.5 in. x (L) 79 ft.) + (Fc) 0.25 gal = 0.45 gal

3 Well/Equipment Volumes = 1.35 gallons Purged Volume (actual): 3.84 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.08 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH 2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. J2081508934) Other ( )

Notes: \_\_\_\_\_

## Monitoring Well Sampling

Depth of Pump or Intake Tubing: 21 ft. (BTOTC)

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

**Note:** Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW 10-A Time Collected: 0855 Comments: \_\_\_\_\_

## Well Inspection

Field Conditions/Observations: Sunny - 75° SLIGHT EASTERLY Breeze

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 19.9 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 22.1 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 20.06 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: .16 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: SULFUR-Like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(22.1 - 19.9) \times 0.16 = 0.35$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 2.5 in. x (D) 2.5 in. x (L) 21 ft.) + (Fc) 0.25 gal = 0.3 gal

3 Well/Equipment Volumes = 0.9 gallons Purged Volume (actual): 3.12 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum ☐ Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.04 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

(\_\_\_\_\_)

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. J2081508934) ☐ Other (\_\_\_\_\_)

Notes: \_\_\_\_\_

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 14 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-103 WACS ID: 19928 Purge Method: Pump ☒ Bailer ☐ Pump Type: Submersible (   Teflon    SS    Other) X Peristaltic

Pump (Make & Model): Geopump II / Grundfos RF2 / PA Hurricane Purge Rate: 0.09 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173 441

Water Level Meter: Solinst Time @ Start of Purging: 0915 Time @ End of Purging: 0950 Total Purging Time: 35 min.

Depth of Pump or Intake Tubing: 43 ft. (BTOC)

[illegible]

Note: When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until parameters are within specified limits.

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: WW-103 Time Collected: 0950 Comments: \_\_\_\_\_



## Well Inspection

Field Conditions/Observations: clear, ~78°F, westerly breeze

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 19.90 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 48.3 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 19.94 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.04 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: sulfur-like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(48.3 - 19.9) \times 0.16 = 4.5$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) =  $P + (0.041D \times D \times L) + Fc$

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal) (5-14-08)

1 EV = (P) 0.0 gal +  $(0.041 \times (D) \cdot 2.5 \text{ in.} \times (L) \cdot 43 \text{ ft.}) + (Fc) \cdot 0.25 \text{ gal} = \cdot 2.1 \text{ gal}$  0.40

3 Well/Equipment Volumes = 1.2 gallons Purged Volume (actual): 3.15 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.09 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_  $\mu\text{m}$ ; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

(\_\_\_\_\_)

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. 52081508934) ☐ Other (\_\_\_\_\_)

Notes:

# Monitoring Well Sampling

Depth of Pump or Intake Tubing: 69 ft. (BTOC)

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

**Note:** Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW-10C Time Collected: 0920  
Comments: initial water by (1807): 25.1 NTU

## Well Inspection

Field Conditions/Observations: clear, ~76°F

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 20.07 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 73.7 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 20.90 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.83 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: subtle - like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(73.7 - 20.07) \times 0.16 = 8.6$  gal  
Well Capacity (gal/ft): 0.75"=0.02; 1"=0.04; 1.25"=0.06; 2"=0.16; 3"=0.37; 4"=0.65; 5"=1.02; 6"=1.47; 12"=5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P=Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 0.375 in. x (D) 0.375 in. x (L) 80 ft.) + (Fc) 0.25 gal = 0.71 gal

3 Well Equipment Volumes = 2.13 gallons Purged Volume (actual): 59.2 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 0.10 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

(\_\_\_\_\_)

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. 5208/50 8934) Other (\_\_\_\_\_)

Notes:

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

### Monitoring Well Sampling

Site: J.E.D. Disposal Facility  
Project No.: FQ1512 Task: 01 Date: 13 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-11A WACS ID: 19930  
Purge Method: Pump ☒ Bailer ☐ Pump Type: SS Submersible (SS Other) 4 Peristaltic

Pump (Make & Model): Geopump N / Grundfos RF2 / PA Hurricane Purge Rate: 10 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173 AC

Water Level Meter: \_\_\_\_\_ Solinst \_\_\_\_\_  
Time @ Start of Purging: 1315 Time @ End of Purging: 1545 Total Purging Time: 30 min.

Depth of Pump or Intake Tubing: 20 ft. (BTOT)

[illegible]

Note: When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

prior to collecting first field parameter measurements. Take additional field parameter measurements every 74 well volume until purging requirements are satisfied.

Note: When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every 74 well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until proper requirements are obtained.

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: QMW-11A Time Collected: 1556 Comments:

# Well Inspection

Field Conditions/Observations: CLEAR 82°F, Southern River

## Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 17.15 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 22.8 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 17.3 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: .15 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Detectable Odor: ☒ Yes ☐ No Describe: SULFUR LIKE Note: NA = Not Applicable

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(22.8 - 17.3) \times 0.16 = .88$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 2.5 in. x (D) 2.5 in. x (L) 26 ft.) + (Fc) 0.25 gal = .3 gal

3 Well/Equipment Volumes = .9 gallons Purged Volume (actual): 3 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.10 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ BQ Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH < 2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. 5051505142) ☐ Other ( )

Notes:

## Monitoring Well Sampling

Depth of Pump or Intake Tubing: 43 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of collected first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 5 minutes apart until purge requirement is met.

Note: Three (3) consecutive readings within specified limits are to be obtained at each sampling location. If DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs reading; DO is no greater than 20% saturation at field measured temperature; Temp, pH, Conductivity ranges remain unchanged, however, DO and If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW-11B Time Collected: 1620 Comments:



## Well Inspection

Field Conditions/Observations: clear, ~80°F, southerly breeze

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 17.20 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 47.9 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 19.4 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 2.2 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: SCHWARTZ

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(47.9 - 17.2) \times 0.16 = 4.9$  gal  
Well Capacity (gal/ft): 0.75"=0.02; 1"=0.04; 1.25"=0.06; 2"=0.16; 3"=0.37; 4"=0.65; 5"=1.02; 6"=1.47; 12"=5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P=Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 3.75 in. x (D) 3.75 in. x (L) 43 ft.) + (Fc) 0.25 gal = 0.5 gal

3 Well/Equipment Volumes = 1.5 gallons Purged Volume (actual): 8.55 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 112 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

(\_\_\_\_\_)

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. J209105142) Other (\_\_\_\_\_)

Notes: \_\_\_\_\_

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FO1512 Task: 01 Date: 13 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-11C WACS ID: 1993Z Purge Method: Pump ☒ Bailer ☐ Pump Type: Submersible (Teflon SS Other) ☒ Peristaltic

Pump (Make & Model): Geopump IP/Grundfos RF2/PA Hurricane Purge Rate: 0.05 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173 / 44

Water Level Meter: Solinst Time @ Start of Purging: 1505 Time @ End of Purging: 1550 Total Purging Time: 45 min.

Depth of Pump or Intake Tubing: 69 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

Note: When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units, specific Conductance:  $\pm 2.0\%$ .

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW-112 Time Collected: 1550 Comments:

## Well Inspection

Field Conditions/Observations: clear, ~82°F

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 17.27 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 73.40 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 17.42 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.15 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: soil/w-like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(73.4 - 17.27) \times 0.16 = 4.0$  gal  
Well Capacity (gal/ft): 0.75"=0.02; 1"=0.04; 1.25"=0.06; 2"=0.16; 3"=0.37; 4"=0.65; 5"=1.02; 6"=1.47; 12"=5.88

1 Equipment Volume (EV) =  $P + (0.041D \times D \times L) + Fc$

Where: P=Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal +  $(0.041 \times (D) \text{ 0.25 in. } \times (D) \text{ 0.25 in. } \times (L) \text{ 30 ft. }) + (Fc) \text{ 0.25 gal} = \text{0.76 gal}$

3 Well/Equipment Volumes = 1.4 gallons Purged Volume (actual): 2.25 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum ☐ Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.05 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_  $\mu$ m; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

(\_\_\_\_\_)

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. 5208 150 5142) ☐ Other (\_\_\_\_\_)

Notes:

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

## Monitoring Well Sampling

Depth of Pump or Intake Tubing: 21.6 ft. (BTOC)

Note: When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MMW-12A Time Collected: 1405 Comments: \_\_\_\_\_

Sample ID: WW-12A Time Collected: 1400 Comments:

## Well Inspection

Field Conditions/Observations: Sunny, 85°, 10 MPH EASSELY BRACE

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 18.4 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 23.0 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 18.7 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.3 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: SULFUR LIKE

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(23.0 - 18.4) \times 0.16 = .74$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 1.25 in. x (D) 1.25 in. x (L) 21 ft.) + (Fc) 0.25 gal = 3 gal

3 Well/Equipment Volumes = 9 gallons Purged Volume (actual): 7.7 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.05 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH 2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. 52081505742) Other ( )

Notes:

# Monitoing Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 13 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-125 WACS ID: 199341 Pump Method: ☒ Pump ☐ Bailer ☐ Submersible ( Teflon ☒ SS ☐ Other ) Peristaltic

Pump (Make & Model): Geopump II / Grundfos RF2 (PA Hurricane) Purge Rate: 48 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173 AL

Water Level Meter: Solinst Time @ Start of Purging: 1155 Time @ End of Purging: 1505 Total Purging Time: 350 min. 190 min. 313

Depth of Pump or Intake Tubing: 41 ft. (BTOC)

Time	Purge Volume (gal)	Cumulative Purge Volume (gal)	Temp (°C)	PH	Conductivity (mS/cm)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Color	Depth to Water (ft) BTOC	Comments
1420	12.0	12.0	24.43	6.31	0.062	5.35	-97.0	0.72	clear	19.80	
1425	2.4	14.4	24.43	6.26	0.061	12.8	-91.7	0.49	clear	19.80	
1430	2.4	16.8	24.43	6.17	0.062	11.7	-96.6	0.41	clear	19.80	
1435	2.4	19.2	24.44	6.42	0.062		-85.5	0.33	clear	19.81	
1440	2.4	21.6	24.51	6.40	0.061	0.72	-89.7	0.30	clear	19.81	
1445	2.4	24.0	24.42	6.13	0.061	7.2	-81.3	0.41	clear	19.82	
1450	2.4	26.4	24.39	6.04	0.061	0.23	-77.5	0.37	clear	19.82	
1455	2.4	28.8	24.37	5.69	0.061	3.35	-73.5	0.31	clear	19.85	
1500	2.4	31.2	24.42	5.80	0.061	5.30	-72.7	0.27	clear	19.85	
1505	2.4	33.6	24.39	5.76	0.061	5.87	-71.2	0.26	clear	19.80	

Note: When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every 1/2 well volume until purging requirements are satisfied.

Note: When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2$  °C; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW-125 Time Collected: 1505 Comments: \_\_\_\_\_



## Well Inspection

Field Conditions/Observations: Sunny - 85°F, Easterly Breeze

### Well Inspection:

Well Type: Flush Mount ☒ Stick Up ☐ Other ☐ Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 18.40 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 49.00 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 19.85 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 1.45 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Detectable Odor: ☒ Yes ☐ No Describe: SULFUR LIKE Note: NA = Not Applicable

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(49 - 18.4) \times 0.16 = 4.9$  gal  
Well Capacity (gal/ft): 0.75"=0.02; 1"=0.04; 1.25"=0.06; 2"=0.16; 3"=0.37; 4"=0.65; 5"=1.02; 6"=1.47; 12"=5.88

1 Equipment Volume (EV) =  $P + (0.041D \times D \times L) + Fc$

Where: P=Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal +  $(0.041 \times (D) \cdot 375 \text{ in.} \times (D) \cdot 375 \text{ in.} \times (L) 44 \text{ ft.}) + (Fc) 0.25 \text{ gal} = 0.5$  gal

3 Well/Equipment Volumes = 1.5 gallons Purged Volume (actual): 91.2 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 0.9 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_  $\mu\text{m}$ ; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. J2081505743) Other ( )

Notes: \_\_\_\_\_

### Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 13 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-2C WACS ID: 19935  
 Purge Method: Pump ☒ Bailer ☐ Pump Type: Submersible (   Teflon    SS    Other) X Peristaltic

Pump (Make & Model): Geonump / Grundfos RF2 / PA Hurricane Purge Rate: 0.05 gpm  
Water Quality Meter (Make & Model): YSI 556 SN or ID: 06A2173 AM

Water Level Meter: Solinst: \_\_\_\_\_  
Time @ Start of Purging: 12/5 \_\_\_\_\_  
Time @ End of Purging: 1355 \_\_\_\_\_  
Total Purging Time: 100 min.

Depth of Pump or Intake Tubing: 69 ft. (BTOT)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: mw-12c Time Collected: 1355 Comments:

## Well Inspection

Field Conditions/Observations: clear, ~80°F, southerly breeze

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

### Comments:

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 18.57 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 73.6 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 18.67 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.10 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft.

OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: sulfur-like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(73.6 - 18.57) \times 0.16 = 9.8$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 0.25 in. x (D) 0.25 in. x (L) 78 ft.) + (Fc) 0.25 gal = 0.5 gal

3 Well/Equipment Volumes = 1.5 gallons Purged Volume (actual): 5.0 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: ☐ 55 Gallon Drum ☐ Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.05 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH 2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. 5208 150 5742) ☐ Other (\_\_\_\_\_)

Notes:

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility  
Project No.: FQ1512 Task: 01  
Date: 13 May 2008  
Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-13A WACS ID: 19936  
Purge Method: Pump ☒ Baller ☐ Pump Type: \_\_\_\_\_ Submersible (\_\_\_\_ Teflon \_\_\_\_\_ SS \_\_\_\_\_ Other) ✓ Peristaltic

Device (Make & Model): Geomump II / Grundfos RF2 / PA Hurricane      Purge Rate:      gpm      Water Quality Meter (Make & Model): YSI 556      S/N or ID: 06A2173 42

Time @ Start of Purging: 0952  
Time @ End of Purging: 1030  
Total Purging Time: 38 min.

Depth of Pump or Intake Tubing: 21 ft. (BTOC)

[illegible]

Note: When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{2}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

Note: Linec (3) consecutive readings "near" 20 NTUs reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; 1 lemp, pH, Conductivity ranges 100-1000  $\mu$ S/cm, DO ranges 1.0-10.0 mg/L, Turbidity ranges 0-10 NTU, then the following must be met: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater.

Sample ID: MW13-A Time Collected: 1040 Comments:

# Well Inspection

Field Conditions/Observations: Clear, 85°F 10 MPH Easterly Breeze

## Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 18.59 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 22.5 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 18.9 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: .31 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Detectable Odor: ☒ Yes ☐ No Describe: SULFUR LIKE Note: NA = Not Applicable

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(22.5 - 18.59) \times 0.16 = 0.63$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041 D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 2.5 in. x (D) 2.5 in. x (L) 21 ft.) + (Fc) 0.25 gal = 0.3 gal

3 Well/Equipment Volumes = .9 gallons Purged Volume (actual): 3.8 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☐ Submersible Pump Sample Rate: 1 / 1 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. J2081505142) ☐ Other ( )

Notes:

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 13 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-13B WACS ID: 19937

Purge Method: Pump ☒ Bailer ☐ Pump Type: ☒ Submersible ( ☐ Teflon ☒ SS — Other) — Peristaltic

Pump (Make & Model): Geopump II / Grundfos RF20 PA Hurricane Purge Rate: 0.74 gpm Water Quality Meter (Make & Model): YSI 556 SN or ID: 06A2173 AL

Water Level Meter: \_\_\_\_\_  
Solinst \_\_\_\_\_  
Time @ Start of Purging: 1015  
Time @ End of Purging: 1115  
Total Purging Time: 100 min.

Depth of Pump or Intake Tubing: 42 ft. (BTOT)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until proper requirements are met.

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW-13B Time Collected: 1/20 Comments: initial turbidity: 150 NTU

## Well Inspection

Field Conditions/Observations:

Clear, southerly breeze, ~ 78°F

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other

Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.):

Well Labeled: ☒ Yes ☐ No

Well Cap: ☒ Yes ☐ No

Well Cap: ☒ Tight ☐ Loose

Comments:

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 18.53 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 47.20 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 19.1 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: -57 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft.

OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: SULFUR LIKE

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(47.2 - 18.53) \times 0.16 = 4.6$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041 D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 3.75 in. x (D) 3.75 in. x (L) 42 ft.) + (Fc) 0.25 gal = 1.49 gal

3 Well/Equipment Volumes = 1.47 gallons Purged Volume (actual): 44.4 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 11 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: QA Sample Time:

Filtered: ☐ Yes ☒ No Filter Size: 0.45 µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: 0.1 NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis Required pH <2 Measured pH

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. J2081505142) Other ( )

Notes:



## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 13 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-13C WACS ID: 19938 Purge Method: Pump ☒ Bailer ☐ Pump Type: Submersible (   Teflon    SS    Other) ☒ Peristaltic

Pump (Make & Model): Geopump II / Grundfos RF2 / PA Hurricane Purge Rate: 0.08 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173 AN

Water Level Meter: Solinst Time @ Start of Purging: 1002 Time @ End of Purging: 1050 Total Purging Time: 48 min.

Depth of Pump or Intake Tubing: 63 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screened fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume until no more water enters 1/4 well volume.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until pump is required to maintain the effluent at  $\pm 5.0\%$  of Specific Conductance  $\pm 0.2\%$ . Temperature:  $\pm 0.2\%$ .

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units, specific Conductance:  $\pm 0.1\text{ }\mu\text{mhos/cm}$ . Dissolved Oxygen:  $\pm 0.1\text{ mg/L}$ . Turbidity:  $\leq 20\text{ NTU}$ . Dissolved Oxygen is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20\text{ NTU}$ .

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW-13C Time Collected: 1050 Comments:

## Well Inspection

Field Conditions/Observations: clear, ~78°F, southerly breeze

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 18.50 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 73.00 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 18.65 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.15 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: sulfur-like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(73 - 18.5) \times 0.16 = 8.72$  gal  
Well Capacity (gal/ft): 0.75"=0.02; 1"=0.04; 1.25"=0.06; 2"=0.16; 3"=0.37; 4"=0.65; 5"=1.02; 6"=1.47; 12"=5.88

1 Equipment Volume (EV) =  $P + (0.041 D \times D \times L) + Fc$

Where: P=Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal +  $(0.041 \times (D) \ 0.25 \text{ in.} \times (D) \ 0.25 \text{ in.} \times (L) \ 78 \text{ ft.}) + (Fc) \ 0.25 \text{ gal} = 0.40 \text{ gal}$

3 Well/Equipment Volumes = 1.50 gallons Purged Volume (actual): 3.84 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum ☐ Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.08 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_  $\mu\text{m}$ ; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

(\_\_\_\_\_)

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. 52081505142) ☐ Other (\_\_\_\_\_)

Notes:

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

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 21 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-164 WACS ID: 22342  
Purge Method: Pump ☒ Bailer ☐ Pump Type: Submersible ( Teflon SS Other) ☒ Peristaltic

Pump (Make & Model) Grundfos PF2 / PA Hurricane Purge Rate: 0.65 gpm Water Quality Meter (Make & Model): YSI 556 SN or ID: 06A2173 AL

Water Level Meter Solinst  
Time @ Start of Purging: 10:55  
Time @ End of Purging: 11:25  
Total Purging Time: 3:50 min.

Depth of Pump or Intake Tubing: 16 ft. (BTOT)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until page 5 requirements are met. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2\text{ mg/L}$  or 10%, whichever is greater; and Turbidity  $\leq 5\text{ NTUs}$  or 10%, whichever is greater

Sample ID: MW-16A Time Collected: 1125 Comments:

## Well Inspection

Field Conditions/Observations: n. cloudy, ~82°F, nor-northeastly wind

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 12.28 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 18.63 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 12.43 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.15 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.  
Note: NA = Not Applicable

Detectable Odor: ☐ Yes ☒ No Describe: \_\_\_\_\_

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(18.63 - 12.28) \times 0.16 = 1.0$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) \_\_\_\_\_ in. x (D) \_\_\_\_\_ in. x (L) \_\_\_\_\_ ft.) + (Fc) 0.25 gal = \_\_\_\_\_ gal

3 Well/Equipment Volumes = \_\_\_\_\_ gallons Purged Volume (actual): 3.50 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.05 gpm

QA Sample Collected ☐ Yes ☒ No; \_\_\_\_\_ Blind Duplicate; \_\_\_\_\_ EQ. Blank; \_\_\_\_\_ Field Blank; \_\_\_\_\_ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; \_\_\_\_\_ All Analyses; \_\_\_\_\_ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic \_\_\_\_\_ 500 ml plastic

\_\_\_\_\_ ( \_\_\_\_\_ )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other (\_\_\_\_\_)

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 21 May 2008 Sampled By: T. Wissler, J. Terry  
 Station (Well No.): MW-16B WACS ID: 22343 Purge Method: Pump ☒ Bailer ☐ Pump Type: ☒ Submersible ( ☐ Teflon ☒ SS ☐ Other) Peristaltic  
 Pump (Make & Model): Geopump II / Grundfos PF2 / PA Hurricane Purge Rate: 0.60 gpm Water Quality Meter (Make & Model): YSI 556 SN or ID: 06A2173 AL  
 Water Level Meter: Solinst Time @ Start of Purging: 1040 Time @ End of Purging: 1145 Total Purging Time: 65 min.  
 Depth of Pump or Intake Tubing: 33 ft. (BTOC)

[illegible]

Note: When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  DO readings; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\leq 5$  NTUs or 10%, whichever is greater.

Sample ID: MW-16B Time Collected: 1145 Comments: initial turbidity @ 1045) > 2500 NTU

## Well Inspection

Field Conditions/Observations: m. cloudy, ~80°F, north easterly wind

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 12.35 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 38.09 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 13.97 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 1.62 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☐ Yes ☒ No Describe: \_\_\_\_\_

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity = (\_\_\_\_ - \_\_\_\_ ) x 0.16 = \_\_\_\_ gal  
Well Capacity (gal/ft): 0.75"=0.02; 1"=0.04; 1.25"=0.06; 2"=0.16; 3"=0.37; 4"=0.65; 5"=1.02; 6"=1.47; 12"=5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P=Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 0.375 in. x (D) 0.375 in. x (L) 415 ft.) + (Fc) 0.25 gal = 0.5 gal

3 Well Equipment Volumes = 1.5 gallons Purged Volume (actual): 39.00 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum ☐ Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 0.09 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☒ Yes ☐ No Filter Size: 1.00 µm; ☐ All Analyses; ☒ Metals Only;

Turbidity After Filter: 41.9 NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I, dissolved metals

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 3 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

\_\_\_\_ (\_\_\_\_) \_\_\_\_\_

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other (\_\_\_\_\_)

Notes: \_\_\_\_\_

## Moni. ag Well Sampling

Site: J.E.D. Disposal Facility  
Project No.: FQ1512 Task: 01 Date: 21 May 2008  
Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-16C WACS ID: 223414 Purge Method: Pump ☒ Bailer ☐ Pump Type: ☒ Submersible ( ☐ Teflon ☒ Other ) ☐ Peristaltic

Pump (Make & Model): Grundfos RP2 / PA Hurricane      Purge Rate: 4 6 gpm  
 Water Quality Meter (Make & Model): YSI 556      SN or ID: 06A2173 AM

Time @ Start of Purging:	Time @ End of Purging:	Total Purging Time:	min.
11:10	11:50	40	

Depth of Pump or Intake Tubing: 63 ft. (BTOT)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

Note: When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW-16 C Time Collected: 1150 Comments: \_\_\_\_\_



## Well Inspection

Field Conditions/Observations: Sunny, 20-25 MPH WINDS, 87°F

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other

Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No

Well Cap: ☒ Yes ☐ No

Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 12.47 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 67.65 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 16.18 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 3.71 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft.

OVN/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☐ Yes ☒ No Describe: \_\_\_\_\_

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(67.65 - 12.47) \times 0.16 = 8.8$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 3.75 in. x (D) 3.75 in. x (L) 63 ft.) + (Fc) 0.25 gal = 1.6 gal

3 Well/Equipment Volumes = 1.6 gallons Purged Volume (actual): 29.0 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: ☐ 55 Gallon Drum ☐ Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 0.09 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

(\_\_\_\_\_)

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH 2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other (\_\_\_\_\_)

Notes: \_\_\_\_\_

## Monitoring Well Sampling

Site: I.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 2/1 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-17A WACS ID: 22345 Purge Method: Pump ☒ Bailer ☐ Pump Type: Submersible (     Teflon      SS      Other) X Peristaltic

Pump (Make & Model): Geopump IV/ Grundfos RF2/P.A Hurricane Purge Rate: 0.07 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173 AL

Water Level Meter: Solinst Time @ Start of Purging: 0810 Time @ End of Purging: 0955 Total Purging Time: 105 min.

Depth of Pump or Intake Tubing: 16 ft. (BTOT)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first run parameter measurements. Take additional flow purge measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of collecting first field parameter measurements. Take additional field parameter measurements as needed. Maximum number of field measurements is 10. DO is no greater than 20% saturation of field measured temperature; and Turbidity  $\leq 20$  NTUs

reading; DO is no greater than 20% saturation at field measured temperature, and Turbidity  $\leq 20$  NTUs or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW-17A Time Collected: 0955 Comments:

## Well Inspection

Field Conditions/Observations: overcast, ~75°F, north easterly, wind

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 12.58 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 19.88 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 13.15 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.57 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: sulfur-like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(19.88 - 12.58) \times 0.16 = 1.2$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) =  $P + (0.041 D \times D \times L) + Fc$

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV =  $(P) 0.0$  gal +  $(0.041 \times (D) \text{ in.} \times (D) \text{ in.} \times (L) \text{ ft.}) + (Fc) 0.25$  gal = \_\_\_\_\_ gal

3 Well/Equipment Volumes = \_\_\_\_\_ gallons Purged Volume (actual): 7.35 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: ☐ 55 Gallon Drum ☐ Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.07 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_  $\mu\text{m}$ ; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

(\_\_\_\_\_)

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other (\_\_\_\_\_)

Notes:

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

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 2 / May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-176 WACS ID: 22346  
Purge Method: Pump ☒ Bailer ☐ Pump Type: ☒ Submersible (\_\_\_ Teflon ☒ SS \_\_\_ Other) \_\_\_ Peristaltic

Pump (Make & Model): Geopump II / Grundfos RF2 / PA Hurricane Purge Rate: 2.5 gpm Water Quality Meter (Make & Model): YSI 556 SN or ID: 06A2173 AN

Water Level Meter: Solinst \_\_\_\_\_  
Time @ Start of Purgin: 0915 \_\_\_\_\_  
Time @ End of Purgin: 1022 \_\_\_\_\_  
Total Purgin Time: \_\_\_\_\_ min.

Depth of Pump or Intake Tubing: 35 ft. (BTOC)

[illegible]

Note: When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of collecting first field parameter measurements. Lake additional field parameter measurements to 3000  $\mu\text{mhos/cm}$  at  $25^\circ\text{C}$ .  
reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs  
If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: 111A-17B Time Collected: 1005 Comments: \_\_\_\_\_

# Well Inspection

Field Conditions/Observations: overcast, ~82°F, north easterly wind

## Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 12.53 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 40.18 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 15.11 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 2.56 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Detectable Odor: ☒ Yes ☐ No Describe: SULFUR Note: NA = Not Applicable

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(40.18 - 12.53) \times 0.16 = 4.4$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 3.71 in. x (D) 3.71 in. x (L) 3 ft.) + (Fc) 0.25 gal = 1.6 gal

3 Well/Equipment Volumes = 1.8 gallons Purged Volume (actual): \_\_\_\_\_ gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 0.07 gpm

QA Sample Collected ☒ Yes ☒ No 5-21-08 Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☒ Yes ☐ No Filter Size: 10 µm; ☐ All Analyses; ☒ Metals Only;

Turbidity After Filter: 0.03 NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

\_\_\_\_\_ ( \_\_\_\_\_ )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other (\_\_\_\_\_)

Notes: \_\_\_\_\_

## Moni

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 2 / May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-17C WACS ID: 223217

Purge Method: Pump ☒ Bailer ☐ Pump Type: ☒ Submersible ( ☐ Teflon ☒ SS ☐ Other) ☐ Peristaltic

Geonium II / (Grindius RF) / PA Hurricane Purge Rate: 1.00 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173 AL

Water Level Meter: Solinst \_\_\_\_\_

Time @ Start of Purging: 0940 \_\_\_\_\_

Time @ End of Purging: 1045 \_\_\_\_\_

Total Purging Time: 65 min.

Depth of Pump or Intake Tubing: 62 ft. (BTOT)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume every 1/4 well volume until purging requirements are satisfied.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ½ well volume until purging requirements are satisfied.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ½ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ , pH:  $\pm 0.2$  standard units, Specific Conductance:  $\pm 2$  NTUs. DO is to be measured at field temperature; and Turbidity  $\leq 20$  NTUs. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater.

Sample ID: M/W-17C Time Collected: 1050  
Comments: in final turbidity (845): 276 NTU

## Well Inspection

Field Conditions/Observations: h. cloudy, ~88°F, northeasterly wind

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 12.67 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 67.33 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 14.50 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 1.83 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Detectable Odor: ☒ Yes ☐ No Describe: SULFUR LIKE Note: NA = Not Applicable

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(67.33 - 12.67) \times 0.16 = 8.8$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) =  $P + (0.041 D \times L) + Fc$

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 3.75 in. x (L) 62 ft.) + (Fc) 0.25 gal = 1.6 gal

3 Well/Equipment Volumes = 1.8 gallons Purged Volume (actual): 60.0 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: ☐ 55 Gallon Drum ☐ Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.09 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

\_\_\_\_ ( \_\_\_\_\_ )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other (\_\_\_\_\_)

Notes: \_\_\_\_\_



## Moni. ag Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 2 / May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-18A WACS ID: 72348 Purge Method: Pump ☒ Bailer ☐ Pump Type: Submersible (   Teflon    SS    Other) ☒ Peristaltic

Pump (Make & Model): Geopump D / Grundfos RF2 / PA Hurricane Purge Rate: 0.05 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173 AL

Time @ Start of Purging: 0740 Time @ End of Purging: 0823 Total Purging Time: 45 min.

Depth of Pump or Intake Tubing: 14.5 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ½ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units, specific Conductance:  $\pm 5\%$ .  
 readings; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs  
 If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and  
 turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: *WML-18A* Time Collected: *0830*

Comments: Turbidity 5.86 uM 0730

## Well Inspection

Field Conditions/Observations: overcast, ~75°F, mostly wind

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 11.18 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 17.70 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 11.47 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.29 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Detectable Odor: ☐ Yes ☒ No Describe: \_\_\_\_\_ Note: NA = Not Applicable

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(17.7 - 11.18) \times 0.16 = 1.0$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041 D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 2.5 in. x (D) 2.5 in. x (L) 14.5 ft.) + (Fc) 0.25 gal = 0.3 gal

3 Well/Equipment Volumes = 0.9 gallons Purged Volume (actual): 2.25 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: ☐ 55 Gallon Drum ☐ Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.05 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

(\_\_\_\_\_)

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH 2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other (\_\_\_\_\_)

Notes:

## Moni. 1g Well Sampling

Site: J.E.D. Disposal Facility Project No.: FO1512 Task: 01 Date: 2 / May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-18B WACS ID: 22349 Pump Type: ☒ Submersible ( ☐ Teflon ☒ SS ☐ Other) ☐ Peristaltic

Pump (Make & Model): Geopump II / Grundfos RF20PA Hurricane (circled) Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173 44

Water Level Meter: Solinst Time @ Start of Purging: 0745 Time @ End of Purging: 0835 Total Purging Time: 50 min.

Depth of Pump or Intake Tubing: 33 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, full-screening requirements are satisfied.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purge requirements are satisfied.

collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 h after the first measurement. Specific Conductance:  $\pm 0.2$  standard units. pH:  $\pm 0.2$  standard units. Temperature:  $\pm 0.2$  °C. Turbidity:  $\pm 0.6$  NTU.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature  $\pm 0.2^\circ\text{C}$ , pH  $\pm 0.2$  standard units, and TSS  $\pm 20\text{ NTU}$  is.

reading; DO is no greater than 20% saturation at field measured temperature, and turbidity = 20 NTU or less; Conductivity ranges remain unchanged, however, DO and pH Conductivity ranges remain unchanged, however, DO and pH Conductivity ranges remain unchanged, however, DO and pH

If DO or Turbidity measurements cannot meet the above requirements within 5 work volumes, a new pair of measurements must be taken. If DO or Turbidity is greater than 10% whichever is greater + 5 NTUs or 10%, whichever is greater

turbidity must meet the following: DO  $\pm$  0.2 mg/L or 10%, whichever is greater, and turbidity must meet the following: DO  $\pm$  0.2 mg/L or 10%, whichever is greater.

Time Collected: 0933  
 Comments: in 2nd turbidity 0.750; 100 NTU

Sample ID: \_\_\_\_\_  
 Sample Location: \_\_\_\_\_  
 Date: 29.9.08  
 Time: 0815

## Well Inspection

Field Conditions/Observations: overcast ~75°F, easterly wind

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 11.09 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 37.80 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 17.67 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 6.58 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: sulfur like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(37.8 - 11.09) \times 0.16 = 4.3$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) =  $P + (0.041D \times D \times L) + Fc$

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal +  $(0.041 \times (D) \cdot 375 \text{ in.} \times (D) \cdot 375 \text{ in.} \times (L) \cdot 33 \text{ ft.}) + (Fc) \cdot 0.25 \text{ gal} = 0.4$  gal

3 Well/Equipment Volumes = 1.2 gallons Purged Volume (actual): 40.00 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: ☐ 55 Gallon Drum ☐ Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 0.08 gpm

QA Sample Collected ☒ Yes ☐ No; ☒ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: DUP-2 QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_  $\mu\text{m}$ ; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

(\_\_\_\_\_)

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other (\_\_\_\_\_)

Notes:

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 21 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-12C WACS ID: 22350 Purge Method: Pump ☒ Bailer ☐ Pump Type: ☒ Submersible ( ☐ Teflon ☒ SS ☐ Other) Peristaltic

Pump (Make & Model): Geopump II / Grundfos RF2 DPA Hurricane Purge Rate: 1.3 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173

Water Level Meter: Solinst Time @ Start of Purging: 0750 Time @ End of Purging: 0915 Total Purging Time: 85 min.

Depth of Pump or Intake Tubing: 62 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing, within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

Note: When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every 1/2 well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of reading. DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

readings; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater.

Sample ID: MW/EC Time Collected: 0915 Comments: Leaving Thursday 10/12. 0800  
235. 0812

## Well Inspection

Field Conditions/Observations: overcast, ~78°F, easterly wind

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 11.10 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 67.15 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 12.49 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 1.39 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☐ Yes ☒ No Describe: \_\_\_\_\_

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(67.15 - 11.1) \times 0.16 = 9.0$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) =  $P + (0.041D \times D \times L) + Fc$

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal +  $(0.041 \times (D) \cdot 371 \text{ in.} \times (L) 62 \text{ ft.}) + (Fc) 0.25 \text{ gal} = 1.6$  gal

3 Well/Equipment Volumes = 1.8 gallons Purged Volume (actual): 61.80 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: ☐ 55 Gallon Drum ☐ Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 0.09 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☒ Yes ☐ No Filter Size: 1.0  $\mu\text{m}$ ; ☐ All Analyses; ☒ Metals Only;

Turbidity After Filter: 0.0 NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I, Dissolved metals

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass ☒ 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

(3 BT (5-21-08))

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH 2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other (\_\_\_\_\_)

Notes: \_\_\_\_\_

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 20 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-19A WACS ID: 2235-1 Purge Method: Pump ☒ Bailer ☐ Pump Type: \_\_\_\_\_ Submersible ( ☐ Teflon ☐ SS ☐ Other ) ☒ Peristaltic

Pump (Make & Model): Geopump II / Grundfos RF2 / PA Hurricane Purge Rate: 10 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173 AL

Time @ Start of Purging: 1153 Time @ End of Purging: 1355 Total Purging Time: 120 min.

Depth of Pump or Intake Tubing: 14 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are met.

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW-19A  
Time Collected: 1400  
Comments: Initial turbidity (155): 37.2

## Well Inspection

Field Conditions/Observations: OVERCAST, 10-20 mph wind, 80°F

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 11.01 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 17.65 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 11.38 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: .37 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: SULFUR LIKE

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(17.65 - 11.01) \times 0.16 = 1.1$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 2.5 in. x (D) 2.5 in. x (L) 14 ft.) + (Fc) 0.25 gal = 1.3 gal

3 Well/Equipment Volumes = 1.9 gallons Purged Volume (actual): 12.0 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.08 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☒ Yes ☒ No Filter Size: 1 µm; ☐ All Analyses; ☒ Metals Only;

Turbidity After Filter: 58.6 NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I, dissolved metals

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

3 975-20-00

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other ( )

Notes: \_\_\_\_\_



## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 20 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-19B WACS ID: 22352 Purge Method: Pump ☒ Bailer ☐ Pump Type: ☒ Submersible ( ☐ Teflon ☒ SS ☐ Other) ☐ Peristaltic

Pump (Make & Model): Geopump II / Grundfos RFE1PA Hurricane Purge Rate: 1.0 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173 41

Water Level Meter: Solinst Time @ Start of Purging: 1200 Time @ End of Purging: 1355 Total Purging Time: 1/5 min.

Depth of Pump or Intake Tubing: 33 ft. (BTWC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

Note: When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  G.

reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater.

Sample ID: MW-1985 Time Collected: 1400  
Comments: initial subsiding (200): 1787 mU

## Well Inspection

Field Conditions/Observations: overcast, ~83°F, northeasterly wind

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

### Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 11.10 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 37.73 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 12.58 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 1.48 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: sulfur-like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(37.73 - 11.1) \times 0.16 = 4.3$  gal  
Well Capacity (gal/ft): 0.75"=0.02; 1"=0.04; 1.25"=0.06; 2"=0.16; 3"=0.37; 4"=0.65; 5"=1.02; 6"=1.47; 12"=5.88

1 Equipment Volume (EV) =  $P + (0.041D \times D \times L) + Fc$

Where: P= Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV =  $(P) 0.0$  gal +  $(0.041 \times (D) 3.75 \text{ in.} \times (D) 3.75 \text{ in.} \times (L) 33 \text{ ft.}) + (Fc) 0.25$  gal = 0.44 gal

3 Well/Equipment Volumes = 1.32 gallons Purged Volume (actual): 105.0 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 0.09 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☒ Yes ☐ No Filter Size: \_\_\_\_\_  $\mu\text{m}$ ; ☐ All Analyses; ☒ Metals Only;

Turbidity After Filter: 0.0 NTU

Analysis Required: NH<sub>3</sub>, Cl, Fe, Hg, NO<sub>3</sub>, Na, TDS, Appendix I, Dissolved Metals

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 3 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic  
PT (5-20-03)

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other (\_\_\_\_\_)

Notes:

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FO1512 Task: 01 Date: 20 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-19C WACS ID: 22353 Purge Method: Pump ☒ Bailer ☐ Pump Type: X Submersible ( ☐ Teflon X SS ☐ Other) Peristaltic

Pump (Make & Model): Geopump II Grundfos RF2 / PA Hurricane Purge Rate: 1.1 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173 A4

Water Level Meter: Solinst Time @ Start of Purging: 12:10 Time @ End of Purging: 1:420 Total Purging Time: 1:30 min.

Depth of Pump or Intake Tubing: 62 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units, specific conductance:  $\pm 20\ \mu\text{mhos/cm}$ . DO is no greater than 20% saturation at field measured temperature, and Turbidity  $\leq 20$  NTUs. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2\ \text{mg/L}$  or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater.

Sample ID: MW-19C Time Collected: 1425 Comments: Intern (sub-story) (110): 127/NTU

## Well Inspection

Field Conditions/Observations: overcast, ~83°F, strong northeasterly w. wind

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 10.94 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 66.70 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 14.97 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 4.03 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: SULFUR LIKE

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(66.7 - 10.94) \times 0.16 = 8.9$  gal  
Well Capacity (gal/ft): 0.75"=0.02; 1"=0.04; 1.25"=0.06; 2"=0.16; 3"=0.37; 4"=0.65; 5"=1.02; 6"=1.47; 12"=5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P=Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 3.75 in. x (D) 3.75 in. x (L) 62 ft.) + (Fc) 0.25 gal = 0.6 gal

3 Well/Equipment Volumes = 1.8 gallons Purged Volume (actual): 138 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: ☐ 55 Gallon Drum ☐ Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 0.11 gpm

QA Sample Collected ☒ Yes ☒ No: 9/5/2008 Blind Duplicate: ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☒ Yes ☐ No Filter Size: 1.0 µm; ☐ All Analyses; ☒ Metals Only;

Turbidity After Filter: 0.3 NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I, Dissolved metals

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass ☒ 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

(3 9/5/2008)

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other (\_\_\_\_\_)

Notes: \_\_\_\_\_

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 20 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-20A WACS ID: 22354 Purge Method: Pump ☒ Bailor ☐ Pump Type: Submersible (   Teflon    SS    Other) ☒ Peristaltic

Pump (Make & Model): Geopump II Grundfos RF2 / PA Hurricane Purge Rate: 2.1 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173 A

Water Level Meter: Solinst Time @ Start of Purging: 0950 Time @ End of Purging: 1040 Total Purging Time: 110 min.

Depth of Pump or Intake Tubing: 14 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units, Specific Conductance:  $\pm 2.0\%$  standard units; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater.

Sample ID: 11W-20A Time Collected: 1042 Comments:

## Well Inspection

Field Conditions/Observations: OVERCAST, 75°F 10-15 MPH WIND

### Well Inspection:

Well Type:    Flush Mount ☒ Stick Up    Other Well Size (ID):   2   in.    Steel ☒ PVC

Condition (locked, damaged, etc.):   

Well Labeled: ☒ Yes    No Well Cap: ☒ Yes    No Well Cap: ☒ Tight    Loose

Comments:

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 10.55 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 17.93 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 10.84 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 29 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft.

OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor:    Yes ☒ No Describe:   

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(17.93 - 10.55) \times 0.16 = 1.2$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 1.25 in. x (D) 1.25 in. x (L) 17 ft.) + (Fc) 0.25 gal = 3 gal

3 Well/Equipment Volumes = 9 gallons Purged Volume (actual): 11.0 gallons

Purge Water Contained?    Yes ☒ No Container Used:    55 Gallon Drum    Other (    )

Labeled:    Yes    No; Purge Water Discharged to Ground? ☒ Yes    No

Sampling Method:    Bailer ☒ Peristaltic Pump    Submersible Pump Sample Rate: 0.10 gpm

QA Sample Collected    Yes ☒ No;    Blind Duplicate;    EQ. Blank;    Field Blank;    MS/MSD

QA Sample ID:    QA Sample Time:   

Filtered:    Yes ☒ No Filter Size:    µm;    All Analyses;    Metals Only;

Turbidity After Filter:    NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials    1 liter amber glass 2 125 ml plastic 1 250 ml plastic    500 ml plastic

(    )

pH Verification of Preserved Samples: Analysis    Required pH <2 Measured pH   

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment:    Courier ☒ UPS (Airbill No.   )    Other (    )

Notes:

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 20 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-20B WACS ID: 22355 Purge Method: Pump ☒ Bailer ☐ Pump Type: ☒ Submersible ( Teflon ☒ SS Other ) Peristaltic

Pump (Make & Model): Geopump II / Grundfos RP20PA Hurricane Purge Rate: 1.0 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173A11

Water Level Meter: Solinst Time @ Start of Purging: 1010 Time @ End of Purging: 1058 Total Purging Time: 48 min.

Depth of Pump or Intake Tubing: 32 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume until purging requirements are satisfied.

**Note:** prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied. When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units, specific conductance:  $\pm 1\%$ . Turbidity:  $\leq 20$  NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW-20B Time Collected: 1100  
Comments: in situ variability (1010): 172 mTGA  
Twisting @ 1030: 135 mTGA

## Well Inspection

Field Conditions/Observations: overcast, northerly breeze, ~78°F

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

### Comments:

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 10.71 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 37.76 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 11.21 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.5 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: sulfur-like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(37.76 - 10.71) \times 0.16 = 4.3$  gal  
Well Capacity (gal/ft): 0.75"=0.02; 1"=0.04; 1.25"=0.06; 2"=0.16; 3"=0.37; 4"=0.65; 5"=1.02; 6"=1.47; 12"=5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P=Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 3.75 in. x (D) 3.75 in. x (L) 32 ft.) + (Fc) 0.25 gal = 0.4 gal

3 Well/Equipment Volumes = 1.2 gallons Purged Volume (actual): 35.0 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: ☐ 55 Gallon Drum ☐ Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 0.09 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☒ Yes ☐ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☒ Metals Only;

Turbidity After Filter: 0.1 NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I, Dissolved Metals

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other (\_\_\_\_\_)

Notes:



## Monitoring Well Sampling

Depth of Pump or Intake Tubing: 62 ft. (BTOC)

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume every 15 minutes. Take additional field pressure measurements every 1/2 well volume until purging requirements are satisfied.

**NOTE:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

**Note:** Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of collecting first field parameter measurements. Lake additional field parameter measurements no sooner than 2 to 5 minutes apart until page requirements are met.

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and readings: DO is no greater than 20% saturation at field measured temperature, and Turbidity  $\leq 0.1$  NTUs. Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW-20C Time Collected: H20  
Comments: initial turbidity (103): 86.3 NTU  
Turbidity @ 1030: 254 NTU

## Well Inspection

Field Conditions/Observations: overcast, northerly breeze, ~78°F

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other

Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No

Well Cap: ☒ Yes ☐ No

Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 10.87 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 66.75 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 15.27 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 4.4 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft.

OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: subur-l. ke

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(66.75 - 10.87) \times 0.16 = 8.9$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 1.375 in. x (D) 1.375 in. x (L) 62 ft.) + (Fc) 0.25 gal = 0.6 gal

3 Well/Equipment Volumes = 1.8 gallons Purged Volume (actual): 37.5 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.09 gpm

QA Sample Collected ☒ Yes ☐ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☒ Yes ☐ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☒ Metals Only;

Turbidity After Filter: 0.0 NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I, Dissolved Metals

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other (\_\_\_\_\_)

Notes: \_\_\_\_\_

## ag Well Sampling

0123456789101112131415161718192021222324252627282930313233343536373839404142434445464748495051525354555657585960616263646566676869707172737475767778798081828384858687888990919293949596979899100

~~X~~ Peristaltic

S/N or ID: 06A2173 AM

min.

fl. (BTOC)

[illegible]

Note: When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump in water column above the screened zone, purge minimum of 10 well volumes every 1/2 well volume until purging requirements are satisfied.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every 1/4 well volume until purge requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of collecting first field parameter measurements. Use additional field parameter measurements as needed.

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Comments: INITIAL TURBIDITY 21.0 NTU

## Well Inspection

Field Conditions/Observations: Cloudy, 15-20 mph wind, 80°F

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other

Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No

Well Cap: ☒ Yes ☐ No

Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 10.95 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 18.04 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 11.19 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: -24 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft.

OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☐ Yes ☒ No Describe: \_\_\_\_\_

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(18.04 - 10.95) \times 0.16 = 1.1$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041 D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 2 in. x (D) 2 in. x (L) 15 ft.) + (Fc) 0.25 gal = 0.3 gal

3 Well/Equipment Volumes = 0.9 gallons Purged Volume (actual): 3.0 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.1 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

(\_\_\_\_\_)

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other (\_\_\_\_\_)

Notes: \_\_\_\_\_

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: F01512 Date: 01 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-218 WACS ID: 22356  
Purge Method: Pump ☒ Bailer ☐ Pump Type: ☒ Submersible (\_\_\_ Teflon \_\_\_ SS \_\_\_ Other) \_\_\_ Peristaltic

Pump (Make & Model): Geopump II / Grundfos RF2 / PA Hurricane  
Purge Rate: 1.0 gpm  
Water Quality Meter (Make & Model): YSI 556  
SN or ID: 06A2173 AL

Water Level Meter:	Solinst
Time @ Start of Purging:	0810
Time @ End of Purging:	0920
Total Purging Time:	70 min.

Depth of Pump or Intake Tubing: 32 ft. (BTWC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first new parameter measurements. Take additional new parameter measurements every 5 to 10 minutes until the parameter measurements are stable.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and reading; DO is no greater than 20% saturation at field measured temperature, and Turbidity  $\leq 20$  NTUs

Sample ID: MW-21B Time Collected: 0925 Comments: Examine Tubing - 93

# Well Inspection

Field Conditions/Observations: overcast, north easterly breeze, ~78°F

## Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 10.97 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 37.63 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 11.32 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.35 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Detectable Odor: ☒ Yes ☐ No Describe: SULFUR LIKE Note: NA = Not Applicable

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(37.63 - 10.97) \times 0.16 = 4.3$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 3.75 in. x (D) 3.75 in. x (L) 32 ft.) + (Fc) 0.25 gal = 0.4 gal

3 Well/Equipment Volumes = 1.2 gallons Purged Volume (actual): 62.5 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.10 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☒ Yes ☐ No Filter Size: 1.0 µm; ☐ All Analyses; ☒ Metals Only;

Turbidity After Filter: 0.0 NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I, Dissolved Metals

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass ☒ 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH 2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other ( )

Notes: \_\_\_\_\_

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 20 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-21C WACS ID: 22359 Pump Method: Pump ☒ Bailer ☐ Pump Type: X Submersible (    Teflon    SS    Other)    Peristaltic

Pump (Make & Model): Geopump II / Grundfos RE24 PA Hurricane Purge Rate: 1.0 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173 A21

Water Level Meter: Solinst Time @ Start of Purging: 0800 Time @ End of Purging: 0910 Total Purging Time: 70 min.

Depth of Pump or Intake Tubing: 57 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

Note: When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of collecting first field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ , pH:  $\pm 0.2$ . Conductivity ranges remain unchanged, however, DO and Turbidity ranges remain unchanged; and Turbidity  $\leq 20$  NTUs.

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; 1 temp, pH, Conductivity ranges remain unchanged, and DO or Turbidity measurements cannot meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW-2/C Time Collected: 0915  
Comments: initial turbidity (0003): 1924 NTU

## Well Inspection

Field Conditions/Observations: p. cloudy, northerly breeze, ~78°F

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other

Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No

Well Cap: ☒ Yes ☐ No

Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 10.90 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 62.57 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 16.93 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 6.03 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft.

OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: sulfur-like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(62.57 - 10.90) \times 0.16 = 8.3$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 3.75 in. x (D) 3.75 in. x (L) 57 ft.) + (Fc) 0.25 gal = 1.6 gal

3 Well/Equipment Volumes = 1.8 gallons Purged Volume (actual): 62.5 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: ☐ 55 Gallon Drum ☐ Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 0.00 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☒ Yes ☐ No Filter Size: 1.0 µm; ☐ All Analyses; ☒ Metals Only;

Turbidity After Filter: 0.38 NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I, Dissolved Metals

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other ( )

Notes: \_\_\_\_\_



## Moni

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 19 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-22A WACS ID: 22360  
Purge Method: Pump ☒ Bailer ☐ Pump Type: Submersible ( Teflon SS Other) ☒ Peristaltic

Pump (Make & Model): Grundfos RF2 / PA Hurricane Purge Rate: 408 gpm  
 Water Quality Meter (Make & Model): YSI 556 SN or ID: 06A2173 A2

Water Level Meter: Solinst

Time @ Start of Purging: 1205

Time @ End of Purging: 1355

Total Purging Time: 110 min.

Depth of Pump or Intake Tubing: 15.5 ft. (BTCL)

[illegible]

Note: When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ , pH:  $\pm 0.2$  standard units, Specific Conductance:  $\pm 20\text{ NTUs}$  reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20\text{ NTUs}$ . If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2\text{ mg/L}$  or 10%, whichever is greater; and Turbidity  $\pm 5\text{ NTUs}$  or 10%, whichever is greater.

Sample ID: NW-22A Time Collected: 1400 Comments:

## Well Inspection

Field Conditions/Observations: h. cloudy, northerly breeze, ~80°F

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other

Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No

Well Cap: ☒ Yes ☐ No

Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 13.00 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 18.00 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 13.21 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 2.1 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft.

OVN/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: SULFUR LIKE

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(18.0 - 13.0) \times 0.16 = 0.8$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041 D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 2.1 in. x (D) 2.1 in. x (L) 13.5 ft.) + (Fc) 0.25 gal = 0.3 gal

3 Well/Equipment Volumes = 2.9 gallons Purged Volume (actual): 8.8 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.00 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other ( )

Notes: \_\_\_\_\_

## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 19 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-22B WACS ID: 22361 Purge Method: Pump ☒ Bailer ☐ Pump Type: ☒ Submersible ( Teflon ☒ SS ☐ Other) Peristaltic

Pump (Make & Model): Geopump II / Grundfos RF2 (PA Hurricane) Purge Rate: 1.1 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173 AL

Water Level Meter: Solinst Time @ Start of Purging: 1200 Time @ End of Purging: 1415 Total Purging Time: 135 min.

Depth of Pump or Intake Tubing: 32 ft. (BTOC)

[illegible]

Note: When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 5 minutes apart until parameters required are obtained.

reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater.

Sample ID:	MW-22 B	Time Collected:	1420	Comments:	in the jarbird jar (1202): 825 N46
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## Well Inspection

Field Conditions/Observations: h.c. cloudy, northerly breeze, ~80°F

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 13.00 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 37.96 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 13.58 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: .58 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Detectable Odor: ☒ Yes ☐ No Describe: SULFURLIKE Note: NA = Not Applicable

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(37.96 - 13.0) \times 0.16 = .4$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) .375 in. x (D) .375 in. x (L) 32 ft.) + (Fc) 0.25 gal = .3 gal

3 Well/Equipment Volumes = .9 gallons Purged Volume (actual): 148.5 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.10 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☒ Yes ☐ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☒ Metals Only;

Turbidity After Filter: 2.6 NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I, Dissolved Metals

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass ☒ 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other ( )

Notes: \_\_\_\_\_

# Moni

Station (Well No.): MW-22C WACS ID: 22362

Purge Method: Pump ☒ Bailor ☐ Pump Type: \_\_\_\_\_ Submersible (\_\_\_\_) Teflon \_\_\_\_\_ Other ☒ Peristaltic

pump (Make & Model): Geopump II / Grundfos RF2 / PA Hurricane      Water Quality Meter (Make & Model): YSL 556      S/N or ID: 06A2173 A44  
 Purge Rate: 2.08 gpm

Water Level	Meter	Solinst	Time @ Start of Purging:	1155	Time @ End of Purging:	1348	Total Purging Time:	108	min.
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Depth of Pump or Intake Tubing: 62 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs if DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

Sample ID: MW-22C Time Collected: 1350 Comments:

## Well Inspection

Field Conditions/Observations: m. cloudy, northerly breeze, ~80°F

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 12.30 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 67.25 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 14.58 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 2.25 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☐ Yes ☒ No Describe: \_\_\_\_\_

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(67.25 - 12.3) \times 0.16 = 8.8$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 2.5 in. x (D) 2.5 in. x (L) 62 ft.) + (Fc) 0.25 gal = 1.41 gal

3 Well/Equipment Volumes = 1.23 gallons Purged Volume (actual): 8.64 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.03 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

\_\_\_\_\_ (\_\_\_\_\_)

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other (\_\_\_\_\_)

Notes: \_\_\_\_\_

## Using Well Sampling

Depth of Pump or Intake Tubing: 26.5 f. (BTOC)

[illegible]

sampled. The minimum of one well volume

prior to collecting first field parameter measurements. Lake additional field parameter measurements every  $\frac{1}{4}$  well volume until purging is complete. Purging is complete when the water volume in the well is replaced by the water from the formation.

collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied. 5.0% of

reading: DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

11. DO or turbidity measurements cannot meet the more stringent DO or turbidity requirements. DO or 0.2 mg/l or 10% whichever is greater and Turbidity + 5 NTUs or 10%, whichever is greater

Sample ID: MW-23A  
Time Collected: 1103  
Comments: \_\_\_\_\_

## Well Inspection

Field Conditions/Observations: OVERCAST, OCCASIONAL DRIZZLE, 75°F

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 25.83 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 27.75 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 26.1 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 27 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Detectable Odor: ☒ Yes ☐ No Describe: SULFURLIKE Note: NA = Not Applicable

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(27.75 - 26.1) \times 0.16 = 0.27$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 2.5 in. x (D) 2.5 in. x (L) 26.5 ft.) + (Fc) 0.25 gal = 0.32 gal

3 Well/Equipment Volumes = 0.96 gallons Purged Volume (actual): 1.2 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.04 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH 2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other ( )

Notes:



## Monitoring Well Sampling

Site: J.E.D. Disposal Facility Project No.: FO1512 Task: 01 Date: 9 May 2008 Sampled By: T. Wissler, J. Terry

Station (Well No.): MW-233 WACS ID: 223641 Purge Method: Pump ☒ Bailer ☐ Pump Type: ☒ Submersible ( ☐ Teflon ☒ SS ☐ Other) Peristaltic

Pump (Make & Model): Geopump II / Grundfos RF2 / FA Hurricane Purge Rate: 0.70 gpm Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173 AL

Time @ Start of Purging: 10/5 Time @ End of Purging: 1055 Total Purging Time: 40 min.

Depth of Pump or Intake Tubing: 38 ft. (BTOT)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\leq 5$  NTUs or 10%, whichever is greater.

Sample ID: MW-23B Time Collected: 1100 Comments:

## Well Inspection

Field Conditions/Observations: overcast, occasional drizzle, ~75°F

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other

Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No

Well Cap: ☒ Yes ☐ No

Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 25.80 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 42.75 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 26.03 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 23 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft.

OVN/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: SULFUR LIKE

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(42.75 - 25.80) \times 0.16 = 2.7$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1. Equipment Volume (EV) =  $P + (0.041 D \times D \times L) + Fc$

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV =  $(P) 0.0$  gal +  $(0.041 \times (D) 3.75$  in.  $\times (D) 3.75$  in.  $\times (L) 38$  ft.) +  $(Fc) 0.25$  gal = 0.46 gal

3 Well (Equipment) Volumes = 1.38 gallons Purged Volume (actual): 28.0 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.09 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ BQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_  $\mu$ m; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other ( )

Notes: \_\_\_\_\_

# Moniag Well Sampling

Sampled By: T. Wissler, J. Terry

Submersible (\_\_\_ Teflon \_\_\_ SS \_\_\_ Other) \_\_\_ Peristaltic \_\_\_

Model): YSI 556 S/N or ID: 06A2173 AL

1/8  
Total Purging Time: 13 min.

Depth of Pump or Intake Tubing: 62 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied. Prior to collecting first field parameter measurements.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^{\circ}\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

reading; DO is no greater than 20% saturation at field measured temperature, and Turbidity  $\leq 20$  NTUs. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater

sample ID:	MW-23C	Time Collected:	1120	Comments:	1000 In situ + 1000 BOD	DO m/y	200 m/y
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## Well Inspection

Field Conditions/Observations: OVERCAST, OCCASIONAL SHOWERS, 85°F

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No Well Cap: ☒ Yes ☐ No Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_  
(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 25.79 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 67.05 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 27.15 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 1.36 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

Detectable Odor: ☒ Yes ☐ No Describe: SULFUR LIKE Note: NA = Not Applicable

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(67.05 - 25.79) \times 0.16 = 6.6$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 3.25 in. x (D) 3.25 in. x (L) 62 ft.) + (Fc) 0.25 gal = 0.61 gal

3 Well/Equipment Volumes = 1.83 gallons Purged Volume (actual): 51.1 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 0.11 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I

Sample Bottles Filled: 6 40 ml vials ☐ 1 liter amber glass 2 125 ml plastic 1 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other ( )

Notes:

## Monitoring Well Sampling (Resampling)

Site: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 4 June 2008 Sampled By: J. Terry

Station (Well No.): MW-1A WACS ID: 19930  
 Pump Type: Submersible (   Teflon    SS    Other   )  
 Purge Method: ☒ Pump ☐ Bailor ☐  
☐ Peristaltic

Pump (Make & Model): Geopump II / Grundfos RF2 / PA Hurricane Purge Rate: 0.05 gpm Water Quality Meter (Make & Model): YSI 556 SN or ID: 06A2173 AL

Water Level Meter:	Solinst:	Time @ Start of Purging:	0630	Time @ End of Purging:	0715	Total Purging Time:	45 min.
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Depth of Pump or Intake Tubing: 20 ft. (BTOC)

[illegible]

**Note:** When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

**Note:** When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every  $\frac{1}{4}$  well volume until purging requirements are satisfied.

**Note:** When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature:  $\pm 0.2^\circ\text{C}$ ; pH:  $\pm 0.2$  standard units; Specific Conductance:  $\pm 5.0\%$  of reading; DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs

If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and reading; DO is no greater than 20% saturation at field measured temperature, and Turbidity  $\leq 20$  NTUs

Sample ID: MW-11A Time Collected: 0715 Comments:

## Well Inspection

Field Conditions/Observations:

clear, ~78°F

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other

Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.):

Well Labeled: ☒ Yes ☐ No

Well Cap: ☒ Yes ☐ No

Well Cap: ☒ Tight ☐ Loose

Comments:

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01ft)

Depth to Water (initial): 17.73 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 22.80 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): 17.80 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: 0.07 ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft.

OVN/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No

Describe: Sulfur - 1 liter

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity =  $(22.8 - 17.73) \times 0.16 = 0.81$  gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 0.25 in. x (D) 0.25 in. x (L) 48 ft.) + (Fc) 0.25 gal = 0.9 gal

3 Well Equipment Volumes = 1.2 gallons Purged Volume (actual): 2.25 gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: ☐ 55 Gallon Drum ☐ Other ( )

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No within landfill cell liner ST

Sampling Method: ☐ Bailer ☒ Peristaltic Pump ☐ Submersible Pump Sample Rate: 0.04 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: QA Sample Time:

Filtered: ☐ Yes ☒ No Filter Size: ☐    $\mu$ m; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter:   NTU

Analysis Required: Appendix I

Sample Bottles Filled: ☒ 6 40 ml vials ☐ 1 liter amber glass ☐ 125 ml plastic ☐ 250 ml plastic ☐ 500 ml plastic

( )

pH Verification of Preserved Samples: Analysis   Required pH <2 Measured pH

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No.  ) ☐ Other ( )

Notes:

Site: \_\_\_\_\_ J.E.D. Disposal Facility \_\_\_\_\_  
Project No.: FQ1512 Task: 01  
Date: 13 June 2003 Sampled By: N. W. F. J. Kelly

Site: \_\_\_\_\_ J.E.D. Disposal Facility \_\_\_\_\_  
Project No.: FQ1512 Task: 01  
Date: 13 June 2003 Sampled By: N. W. F. J. Kelly

Drum Method: ☒ Drum ☐ Bailor ☐ Pump Type: ☒ Submersible ( ☐ Teflon ☒ SS ☐ Other) ☐ Peristaltic

Drum Method: ☒ Drum ☐ Bailor ☐ Pump Type: ☒ Submersible ( ☐ Teflon ☒ SS ☐ Other) ☐ Peristaltic

Water Quality Meter (Make & Model): YSI 556  
 SN or ID: 06A2173 M

Water Quality Meter (Make & Model): YSI 556  
 SN or ID: 06A2173 M

Time @ Start of Purging: 11:50  
Time @ End of Purging: \_\_\_\_\_  
Total Purging Time: \_\_\_\_\_ min.

Time @ Start of Purging: 11:50  
Time @ End of Purging: \_\_\_\_\_  
Total Purging Time: \_\_\_\_\_ min.

Depth of Pump or Intake Tubing: \_\_\_\_\_ ft. (BTOC) \_\_\_\_\_

[illegible]

Note: When purging well with pump or intake tubing within a fully submerged well screen, purge minimum of 1 equipment volume prior to first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart, must purge minimum of 3 equipment volume + stabilized field parameters for sampling.

Note: When purging a well with well screen fully submerged and pump or intake tubing is placed in water column above the screened zone, purge minimum of one well volume sampling.

Note: When purging a well with a pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: When purging wells with a partially submerged well screen and pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements no sooner than 2 to 3 minutes apart until purge requirements are satisfied.

Note: When purging a well with a pump or tubing placed within a submerged screen zone, purge a minimum of one well volume prior to collecting first field parameter measurements. Take additional field parameter measurements every ¼ well volume until purging requirements are satisfied.

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. Temperature  $\pm 0.2^\circ\text{C}$ , pH  $\pm 0.2$  units; DO  $\pm 0.2$  mg/L; Conductivity  $\pm 5$  NTUs. DO is no greater than 20% saturation at field measured temperature; and Turbidity  $\leq 20$  NTUs. If DO or Turbidity measurements cannot meet the above requirements within 5 well volumes; Temp, pH, Conductivity ranges remain unchanged, however, DO and turbidity must meet the following: DO  $\pm 0.2$  mg/L or 10%, whichever is greater; and Turbidity  $\pm 5$  NTUs or 10%, whichever is greater.

Sample ID: MW-16C Time Collected: 1350 Comments:

## Well Inspection

Field Conditions/Observations: Overcast, n.w. wind, breeze, ~89°F

### Well Inspection:

Well Type: ☐ Flush Mount ☒ Stick Up ☐ Other

Well Size (ID): 2 in. ☐ Steel ☒ PVC

Condition (locked, damaged, etc.): \_\_\_\_\_

Well Labeled: ☒ Yes ☐ No

Well Cap: ☒ Yes ☐ No

Well Cap: ☒ Tight ☐ Loose

Comments: \_\_\_\_\_

(If capped, remove and allow well to stabilize before recording water level)

Well Sampling: (Note: Measure Water Levels to Nearest 0.01 ft)

Depth to Water (initial): 13.00 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth of Well: 67.65 ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Depth to Water (final): \_\_\_\_\_ ft. (measured from mark on top of riser pipe, otherwise measure from North side)

Draw down: \_\_\_\_\_ ft. (Depth to Water (initial) - Depth to Water (final))

Free Product Thickness (if applicable): NA ft.

OVM/PID Reading (if applicable): NA ppm.

Note: NA = Not Applicable

Detectable Odor: ☒ Yes ☐ No Describe: sulfur-like

1 Well Volume (WV) = (depth of well - depth to water (initial)) x well capacity = (\_\_\_\_ - \_\_\_\_ ) x 0.16 = \_\_\_\_\_ gal  
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

1 Equipment Volume (EV) = P + (0.041 D x D x L) + Fc

Where: P = Pump Volume (gal); D = Tubing Diameter (inches); L = Length of Tubing (ft); Fc = Flow Cell Volume (gal)

1 EV = (P) 0.0 gal + (0.041 x (D) 0.375 in. x (D) 0.375 in. x (L) 75 ft.) + (Fc) 0.25 gal = 0.70 gal

3 Well/Equipment Volumes = 2.1 gallons Purged Volume (actual): \_\_\_\_\_ gallons

Purge Water Contained? ☐ Yes ☒ No Container Used: 55 Gallon Drum Other (\_\_\_\_\_)

Labeled: ☐ Yes ☐ No; Purge Water Discharged to Ground? ☒ Yes ☐ No

Sampling Method: ☐ Bailer ☐ Peristaltic Pump ☒ Submersible Pump Sample Rate: 0.03 gpm

QA Sample Collected ☐ Yes ☒ No; ☐ Blind Duplicate; ☐ EQ. Blank; ☐ Field Blank; ☐ MS/MSD

QA Sample ID: \_\_\_\_\_ QA Sample Time: \_\_\_\_\_

Filtered: ☐ Yes ☒ No Filter Size: \_\_\_\_\_ µm; ☐ All Analyses; ☐ Metals Only;

Turbidity After Filter: \_\_\_\_\_ NTU

Analysis Required: ~~NH3, Cl, Fe, Hg, NO3, Na, TDS, Appendix I~~ 8260 JT (6-13-08)

Sample Bottles Filled: 6 40 ml vials 3 1 liter amber glass 2 125 ml plastic 1 250 ml plastic 500 ml plastic  
3 2 2

pH Verification of Preserved Samples: Analysis \_\_\_\_\_ Required pH <2 Measured pH \_\_\_\_\_

Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment: ☐ Courier ☒ UPS (Airbill No. \_\_\_\_\_) ☐ Other (\_\_\_\_\_)

Notes: \_\_\_\_\_



## **APPENDIX B**

### **WATER QUALITY INSTRUMENT CALIBRATION FORMS**

# Field Instrument Calibration Record

Project Name: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 12 May 2008

Rental Company: EPS

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AM

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME12953

Time: 20:30

Lot No.	Calibration Standard		Instrument Response	Percent Deviation <sup>(1)</sup> or Difference	Allowable Deviation <sup>(2)</sup>	Calibrated? Yes or No	Type of Calibration <sup>(3)</sup>	Calibration Performed By:
	Expiration Date	Standard Value						
6039	Nov 2008	pH = 4.00	4.80	0.00	0.2	Y	I	PT
6054	Nov 2008	pH = 7.00	7.00	0.00	0.2	Y	I	PT
6174	Feb 2009	pH = 10.00			0.2	Y	I	PT
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P784551	Feb 2009	Turbidity = 10 NTU	10.02	0.2	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
2704104	June 2008	Conductivity = 0.084 mS/cm	0.084	0.00	5%	Y	C	PT
6068	Nov 2008	Conductivity = 1.000 mS/cm			5%			
	Per Table →	D.O. = 8.07 mg/L @ 26.3 °C	8.09	0.02	0.2 mg/l	Y	I	PT

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AL

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME10404

Lot No.	Calibration Standard		Instrument Response	Percent Deviation <sup>(1)</sup> or Difference	Allowable Deviation <sup>(2)</sup>	Calibrated? Yes or No	Type of Calibration <sup>(3)</sup>	Calibration Performed By:
	Expiration Date	Standard Value						
6039	Nov 2008	pH = 4.00	4.00	0.00	0.2	Y	I	PT
6054	Nov 2008	pH = 7.00	7.00	0.00	0.2	Y	I	PT
6174	Feb 2009	pH = 10.00	10.02	0.02	0.2	Y	I	PT
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P784551	Feb 2009	Turbidity = 10 NTU	9.93	0.7	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
2704104	June 2008	Conductivity = 0.084 mS/cm	0.084	0.00	5%	Y	I	PT
6068	Nov 2008	Conductivity = 1.000 mS/cm			5%			
	Per Table →	D.O. = 8.07 mg/L @ 26.3 °C	8.08	0.01	0.2 mg/l	Y	I	PT

Note (1): Percent Deviation = (Standard Value - Instrument Response) ÷ Standard Value x 100

Note (2): Allowable Deviation: pH ± 0.2 of Standard Value; Conductivity ± 5 % of Standard Value; Salinity ± 3 % of Standard Value; DO ± 0.2 mg/L; Turbidity 0.1-10 NTU ± 10% of Standard Value, 11-40 NTU ± 8% of Standard Value, 41-100 NTU ± 6.5% of Standard Value, >100 NTU ± 5% of Standard Value

Note (3): Initial, Continual, Final

# Field Instrument Calibration Record

Project Name: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 13 May 2008

Rental Company: EPS

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AM

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME12953  
Time: 1930

Lot No.	Calibration Standard		Instrument Response	Percent Deviation <sup>(1)</sup> or Difference	Allowable Deviation <sup>(2)</sup>	Calibrated? Yes or No	Type of Calibration <sup>(3)</sup>	Calibration Performed By:
	Expiration Date	Standard Value						
6039	Nov 2008	pH = 4.00	4.08	0.08	0.2	Y	C	T.W
6054	Nov 2008	pH = 7.00	7.01	0.01	0.2	Y	C	T.W
6174	Feb 2009	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P784551	Feb 2009	Turbidity = 10 NTU	10.05	0.5	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
2704104	June 2008	Conductivity = 0.084 mS/cm	0.083	0.0112%	5%	Y	I	T.W
6068	Nov 2008	Conductivity = 1.000 mS/cm			5%			
	Per Table →	D.O. = 8.248 mg/L @ 25°C	8.31	0.062	0.2 mg/l	Y	I	T.W

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AL

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME10404

Lot No.	Calibration Standard		Instrument Response	Percent Deviation <sup>(1)</sup> or Difference	Allowable Deviation <sup>(2)</sup>	Calibrated? Yes or No	Type of Calibration <sup>(3)</sup>	Calibration Performed By:
	Expiration Date	Standard Value						
6039	Nov 2008	pH = 4.00	3.97	0.03	0.2	Y	C	PT
6054	Nov 2008	pH = 7.00	6.95	0.05	0.2	Y	C	PT
6174	Feb 2009	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P784551	Feb 2009	Turbidity = 10 NTU	10.00	0.0	10%	Y	I	PT
		Turbidity = 50 NTU			6.5%			
2704104	June 2008	Conductivity = 0.084 mS/cm	0.085	1.2	5%	Y	C	PT
6068	Nov 2008	Conductivity = 1.000 mS/cm			5%			
	Per Table →	D.O. = 8.511 mg/L @ 24.3°C	8.41	0.04	0.2 mg/l	Y	I	PT

Note (1): Percent Deviation = (Standard Value - Instrument Response) ÷ Standard Value x 100

Note (2): Allowable Deviation: pH ± 0.2 of Standard Value; Conductivity ± 5 % of Standard Value; Salinity ± 3 % of Standard Value; DO ± 0.2 mg/L; Turbidity 0.1-10 NTU ± 10% of Standard Value, 11-40 NTU ± 8% of Standard Value, 41-100 NTU ± 6.5% of Standard Value, >100 NTU ± 5% of Standard Value

Note (3): Initial, Continual, Final

# Field Instrument Calibration Record

Project Name: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 14 May 2008

Rental Company: EPS

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AM

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME12953

Time: 1930

Lot No.	Calibration Standard		Instrument Response	Percent Deviation <sup>(1)</sup> or Difference	Allowable Deviation <sup>(2)</sup>	Calibrated? Yes or No	Type of Calibration <sup>(3)</sup>	Calibration Performed By:
	Expiration Date	Standard Value						
6039	Nov 2008	pH = 4.00	4.00	0.02	0.2	Y	I	T.W.
6054	Nov 2008	pH = 7.00	7.00	0.06	0.2	Y	I	T.W.
6174	Feb 2009	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P784551	Feb 2009	Turbidity = 10 NTU	10.05	0.5	10%	Y	I	GT
		Turbidity = 50 NTU			6.5%			
2704104	June 2008	Conductivity = 0.084 mS/cm	0.085	1.2	5%	Y	C	GT
6068	Nov 2008	Conductivity = 1.000 mS/cm			5%			
	Per Table →	D.O. = 8.58 mg/L @ 25.7°C	8.26	0.102	0.2 mg/l	Y	I	GT

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AL

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME10404

Lot No.	Calibration Standard		Instrument Response	Percent Deviation <sup>(1)</sup> or Difference	Allowable Deviation <sup>(2)</sup>	Calibrated? Yes or No	Type of Calibration <sup>(3)</sup>	Calibration Performed By:
	Expiration Date	Standard Value						
6039	Nov 2008	pH = 4.00	4.00	0	0.2	Y	I	T.W.
6054	Nov 2008	pH = 7.00	7.00	0	0.2	Y	I	T.W.
6174	Feb 2009	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P784551	Feb 2009	Turbidity = 10 NTU	10.16	1.6	10%	Y	I	T.W.
		Turbidity = 50 NTU			6.5%			
2704104	June 2008	Conductivity = 0.084 mS/cm	0.083	1.2	5%	Y	I	T.W.
6068	Nov 2008	Conductivity = 1.000 mS/cm			5%			
	Per Table →	D.O. = 8.24 mg/L @ 25.1°C	8.30	0.052	0.2 mg/l	Y	I	T.W.

Note (1): Percent Deviation = (Standard Value - Instrument Response) ÷ Standard Value x 100

Note (2): Allowable Deviation: pH ± 0.2 of Standard Value; Conductivity ± 5 % of Standard Value; Salinity ± 3 % of Standard Value; DO ± 0.2 mg/L;

Turbidity 0.1-10 NTU ± 10% of Standard Value, 11-40 NTU ± 8% of Standard Value, 41-100 NTU ± 6.5% of Standard Value, >100 NTU ± 5% of Standard Value

Note (3): Initial, Continual, Final

# Field Instrument Calibration Record

Project Name: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: May 15, 2008

Rental Company: EPS

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AM

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME12953 AM  
Time: \_\_\_\_\_

Lot No.	Calibration Standard		Instrument Response	Percent Deviation <sup>(1)</sup> or Difference	Allowable Deviation <sup>(2)</sup>	Calibrated? Yes or No	Type of Calibration <sup>(3)</sup>	Calibration Performed By:
	Expiration Date	Standard Value						
6039	Nov 2008	pH = 4.00	4.16	1.6	0.2	Y	I	T.W.
6054	Nov 2008	pH = 7.00	7.02	.02	0.2	Y	I	T.W.
6174	Feb 2009	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P784551	Feb 2009	Turbidity = 10 NTU			10%			
		Turbidity = 50 NTU			6.5%			
2704104	June 2008	Conductivity = 0.084 mS/cm	0.084	0	5%	Y	I	T.W.
6068	Nov 2008	Conductivity = 1.000 mS/cm			5%			
	Per Table →	D.O. = 5.244 mg/L @ 24.85°C	8.33	.036	0.2 mg/l	Y	I	T.W.

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AL

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME10404 AL

Lot No.	Calibration Standard		Instrument Response	Percent Deviation <sup>(1)</sup> or Difference	Allowable Deviation <sup>(2)</sup>	Calibrated? Yes or No	Type of Calibration <sup>(3)</sup>	Calibration Performed By:
	Expiration Date	Standard Value						
6039	Nov 2008	pH = 4.00	3.86	0.14	0.2	Y	I	T.W.
6054	Nov 2008	pH = 7.00	7.00	0	0.2	Y	I	T.W.
6174	Feb 2009	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P784551	Feb 2009	Turbidity = 10 NTU			10%			
		Turbidity = 50 NTU			6.5%			
2704104	June 2008	Conductivity = 0.084 mS/cm	0.082	2.4%	5%	Y	I	T.W.
6068	Nov 2008	Conductivity = 1.000 mS/cm			5%			
	Per Table →	D.O. = 5.372 mg/L @ 24.48°C	8.31	.046	0.2 mg/l	Y	I	T.W.

Note (1): Percent Deviation = (Standard Value - Instrument Response) ÷ Standard Value x 100

Note (2): Allowable Deviation: pH ± 0.2 of Standard Value; Conductivity ± 5 % of Standard Value; Salinity ± 3 % of Standard Value; DO ± 0.2 mg/L; Turbidity 0.1-10 NTU ± 10% of Standard Value, 11-40 NTU ± 8% of Standard Value, 41-100 NTU ± 6.5% of Standard Value, >100 NTU ± 5% of Standard Value

Note (3): Initial, Continual, Final

# Field Instrument Calibration Record

Project Name: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 18 May 2008

Rental Company: EPS

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AM

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME12953

Time: 1700

Lot No.	Calibration Standard		Instrument Response	Percent Deviation <sup>(1)</sup> or Difference	Allowable Deviation <sup>(2)</sup>	Calibrated? Yes or No	Type of Calibration <sup>(3)</sup>	Calibration Performed By:
	Expiration Date	Standard Value						
6039	Nov 2008	pH = 4.00	4.13	0.13	0.2	Y	C	PT
6054	Nov 2008	pH = 7.00	7.00	0.00	0.2	Y	I	PT
6174	Feb 2009	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P784551	Feb 2009	Turbidity = 10 NTU	10.16	1.6	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
2704104	June 2008	Conductivity = 0.084 mS/cm	0.084	0.0	5%	Y	I	PT
6068	Nov 2008	Conductivity = 1.000 mS/cm			5%			
	Per Table →	D.O. = 8.173 mg/L @ 25.6°C	8.17	0.023	0.2 mg/l	Y	I	PT

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AL

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME10404

Lot No.	Calibration Standard		Instrument Response	Percent Deviation <sup>(1)</sup> or Difference	Allowable Deviation <sup>(2)</sup>	Calibrated? Yes or No	Type of Calibration <sup>(3)</sup>	Calibration Performed By:
	Expiration Date	Standard Value						
6039	Nov 2008	pH = 4.00	3.97	0.03	0.2	Y	C	PT
6054	Nov 2008	pH = 7.00	7.00	0.00	0.2	Y	I	PT
6174	Feb 2009	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P784551	Feb 2009	Turbidity = 10 NTU	9.95	0.5	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
2704104	June 2008	Conductivity = 0.084 mS/cm	0.084	0.0	5%	Y	I	PT
6068	Nov 2008	Conductivity = 1.000 mS/cm			5%			
	Per Table →	D.O. = 8.158 mg/L @ 25.7°C	8.15	0.008	0.2 mg/l	Y	I	PT

Note (1): Percent Deviation = (Standard Value - Instrument Response) ÷ Standard Value x 100

Note (2): Allowable Deviation: pH ± 0.2 of Standard Value; Conductivity ± 5% of Standard Value; Salinity ± 3% of Standard Value; DO ± 0.2 mg/L; Turbidity 0.1-10 NTU ± 10% of Standard Value, 11-40 NTU ± 8% of Standard Value, 41-100 NTU ± 6.5% of Standard Value, >100 NTU ± 5% of Standard Value

Note (3): Initial, Continual, Final

# Field Instrument Calibration Record

Project Name: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 19 May 2008

Rental Company: EPS

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AM

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME12953  
Time: 1830

Lot No.	Calibration Standard		Instrument Response	Percent Deviation <sup>(1)</sup> or Difference	Allowable Deviation <sup>(2)</sup>	Calibrated? Yes or No	Type of Calibration <sup>(3)</sup>	Calibration Performed By:
	Expiration Date	Standard Value						
6039	Nov 2008	pH = 4.00	41.00	0.00	0.2	Y	I	PT
6054	Nov 2008	pH = 7.00	7.00	0.00	0.2	Y	C	PT
6174	Feb 2009	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P784551	Feb 2009	Turbidity = 10 NTU	10.07	0.7	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
2704104	June 2008	Conductivity = 0.084 mS/cm	0.084	0.0	5%	Y	I	PT
6068	Nov 2008	Conductivity = 1.000 mS/cm			5%			
	Per Table →	D.O. = 8.325 mg/L @ 24.6 °C	8.31	0.02	0.2 mg/l	Y	I	PT

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AL

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME10404

Lot No.	Calibration Standard		Instrument Response	Percent Deviation <sup>(1)</sup> or Difference	Allowable Deviation <sup>(2)</sup>	Calibrated? Yes or No	Type of Calibration <sup>(3)</sup>	Calibration Performed By:
	Expiration Date	Standard Value						
6039	Nov 2008	pH = 4.00	41.00	0.00	0.2	Y	I	PT
6054	Nov 2008	pH = 7.00	6.90	0.10	0.2	Y	C	PT
6174	Feb 2009	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P784551	Feb 2009	Turbidity = 10 NTU	10.10	1.0	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
2704104	June 2008	Conductivity = 0.084 mS/cm	0.084	0.0	5%	Y	I	PT
6068	Nov 2008	Conductivity = 1.000 mS/cm			5%			
	Per Table →	D.O. = 8.325 mg/L @ 24.6 °C	8.31	0.02	0.2 mg/l	Y	I	PT

Note (1): Percent Deviation = (Standard Value - Instrument Response) ÷ Standard Value x 100

Note (2): Allowable Deviation: pH ± 0.2 of Standard Value; Conductivity ± 5 % of Standard Value; Salinity ± 3 % of Standard Value; DO ± 0.2 mg/L; Turbidity 0.1-10 NTU ± 10% of Standard Value, 11-40 NTU ± 8% of Standard Value, 41-100 NTU ± 6.5% of Standard Value, >100 NTU ± 5% of Standard Value

Note (3): Initial, Continual, Final

# Field Instrument Calibration Record

Project Name: J.E.D. Disposal Facility Project No.: FO1512 Task: 01 Date: 20 May 2008

Rental Company: EPS

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AM

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME12953  
Time: 1930

Lot No.	Calibration Standard		Instrument Response	Percent Deviation <sup>(1)</sup> or Difference	Allowable Deviation <sup>(2)</sup>	Calibrated? Yes or No	Type of Calibration <sup>(3)</sup>	Calibration Performed By:
	Expiration Date	Standard Value						
6039	Nov 2008	pH = 4.00	4.00	0.00	0.2	Y	C	PT
6054	Nov 2008	pH = 7.00	6.95	0.05	0.2	Y	C	PT
6174	Feb 2009	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P784551	Feb 2009	Turbidity = 10 NTU	9.98	0.2	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
2704104	June 2008	Conductivity = 0.084 mS/cm	0.084	0.00	5%	Y	F	PT
6068	Nov 2008	Conductivity = 1.000 mS/cm			5%			
	Per Table →	D.O. = 8.371 mg/L @ 24.3 °C	8.35	0.021	0.2 mg/l	Y	F	PT

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AL

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME10404

Lot No.	Calibration Standard		Instrument Response	Percent Deviation <sup>(1)</sup> or Difference	Allowable Deviation <sup>(2)</sup>	Calibrated? Yes or No	Type of Calibration <sup>(3)</sup>	Calibration Performed By:
	Expiration Date	Standard Value						
6039	Nov 2008	pH = 4.00	4.06	0.06	0.2	Y	C	PT
6054	Nov 2008	pH = 7.00	6.99	0.01	0.2	Y	C	PT
6174	Feb 2009	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P784551	Feb 2009	Turbidity = 10 NTU	9.92	0.08	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
2704104	June 2008	Conductivity = 0.084 mS/cm	0.084	0.0	5%	Y	F	PT
6068	Nov 2008	Conductivity = 1.000 mS/cm			5%			
	Per Table →	D.O. = 8.371 mg/L @ 24.3 °C	8.33	0.041	0.2 mg/l	Y	F	PT

Note (1): Percent Deviation = (Standard Value - Instrument Response) ÷ Standard Value x 100

Note (2): Allowable Deviation: pH ± 0.2 of Standard Value; Conductivity ± 5 % of Standard Value; Salinity ± 3 % of Standard Value; DO ± 0.2 mg/L;

Turbidity 0.1-10 NTU ± 10% of Standard Value, 11-40 NTU ± 8% of Standard Value, 41-100 NTU ± 6.5% of Standard Value, >100 NTU ± 5% of Standard Value

Note (3): Initial, Continual, Final



# Field Instrument Calibration Record

Project Name: J.E.D. Disposal Facility Project No.: EQ1512 Task: 01 Date: 21 May 2008

Rental Company: EPS

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AM

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME12953  
Time: 1700

Lot No.	Calibration Standard		Instrument Response	Percent Deviation <sup>(1)</sup> or Difference	Allowable Deviation <sup>(2)</sup>	Calibrated? Yes or No	Type of Calibration <sup>(3)</sup>	Calibration Performed By:
	Expiration Date	Standard Value						
6039	Nov 2008	pH = 4.00	3.94	0.06	0.2	Y	C	gt
6054	Nov 2008	pH = 7.00	6.92	0.08	0.2	Y	C	gt
6174	Feb 2009	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P784551	Feb 2009	Turbidity = 10 NTU	9.96	0.04	10%	Y	C	gt
		Turbidity = 50 NTU			6.5%			
2704104	June 2008	Conductivity = 0.084 mS/cm	0.093	1.2	5%	Y	C	gt
6068	Nov 2008	Conductivity = 1.000 mS/cm			5%			
	Per Table →	D.O. = 8.055 mg/L @ 26.4 °C	8.04	0.02	0.2 mg/l	Y	F	gt

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AL

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME10404

Lot No.	Calibration Standard		Instrument Response	Percent Deviation <sup>(1)</sup> or Difference	Allowable Deviation <sup>(2)</sup>	Calibrated? Yes or No	Type of Calibration <sup>(3)</sup>	Calibration Performed By:
	Expiration Date	Standard Value						
6039	Nov 2008	pH = 4.00	3.91	0.09	0.2	Y	C	gt
6054	Nov 2008	pH = 7.00	6.97	0.03	0.2	Y	C	gt
6174	Feb 2009	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P784551	Feb 2009	Turbidity = 10 NTU	10.02	0.20	10%	Y	C	gt
		Turbidity = 50 NTU			6.5%			
2704104	June 2008	Conductivity = 0.084 mS/cm	0.093	1.2	5%	Y	C	gt
6068	Nov 2008	Conductivity = 1.000 mS/cm			5%			
	Per Table →	D.O. = 8.010 mg/L @ 26.3 °C	8.08	0.01	0.2 mg/l	Y	F	gt

Note (1): Percent Deviation = (Standard Value - Instrument Response) ÷ Standard Value x 100

Note (2): Allowable Deviation: pH ± 0.2 of Standard Value; Conductivity ± 5 % of Standard Value; Salinity ± 3 % of Standard Value; DO ± 0.2 mg/L; Turbidity 0.1-10 NTU ± 10% of Standard Value, 11-40 NTU ± 8% of Standard Value, 41-100 NTU ± 6.5% of Standard Value, >100 NTU ± 5% of Standard Value

Note (3): Initial, Continual, Final

# Field Instrument Calibration Record

Project Name: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 4 June 2008

Rental Company: EPS

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AL

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME12953  
Time: 1315

Lot No.	Calibration Standard		Instrument Response	Percent Deviation <sup>(1)</sup> or Difference	Allowable Deviation <sup>(2)</sup>	Calibrated? Yes or No	Type of Calibration <sup>(3)</sup>	Calibration Performed By:
	Expiration Date	Standard Value						
6039	Nov 2008	pH = 4.00			0.2			
6054	Nov 2008	pH = 7.00			0.2			
6174	Feb 2009	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P784551	Feb 2009	Turbidity = 10 NTU	<u>10.06</u>	<u>0.6</u>	10%	<u>Y</u>	<u>C</u>	<u>PT</u>
		Turbidity = 50 NTU			6.5%			
2704104	June 2008	Conductivity = 0.084 mS/cm			5%			
6068	Nov 2008	Conductivity = 1.000 mS/cm			5%			
	Per Table →	D.O. = mg/L @ °C			0.2 mg/l			

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AL

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME10404

Lot No.	Calibration Standard		Instrument Response	Percent Deviation <sup>(1)</sup> or Difference	Allowable Deviation <sup>(2)</sup>	Calibrated? Yes or No	Type of Calibration <sup>(3)</sup>	Calibration Performed By:
	Expiration Date	Standard Value						
6039	Nov 2008	pH = 4.00	<u>4.04</u>	<u>0.04</u>	0.2	<u>Y</u>	<u>C</u>	<u>PT</u>
6054	Nov 2008	pH = 7.00	<u>7.07</u>	<u>0.07</u>	0.2	<u>Y</u>	<u>C</u>	<u>PT</u>
6174	Feb 2009	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P784551	Feb 2009	Turbidity = 10 NTU			10%			
		Turbidity = 50 NTU			6.5%			
2704104	June 2008	Conductivity = 0.084 mS/cm	<u>0.083</u>	<u>1.2</u>	5%	<u>Y</u>	<u>C</u>	<u>PT</u>
6068	Nov 2008	Conductivity = 1.000 mS/cm			5%			
	Per Table →	D.O. = <u>7.87</u> mg/L @ <u>27.9</u> °C	<u>7.90</u>	<u>0.06</u>	0.2 mg/l	<u>Y</u>	<u>F</u>	<u>PT</u>

Note (1): Percent Deviation = (Standard Value - Instrument Response) ÷ Standard Value x 100

Note (2): Allowable Deviation: pH ± 0.2 of Standard Value; Conductivity ± 5 % of Standard Value; Salinity ± 3 % of Standard Value; DO ± 0.2 mg/L;

Turbidity 0.1-10 NTU ± 10% of Standard Value, 11-40 NTU ± 8% of Standard Value, 41-100 NTU ± 6.5% of Standard Value, >100 NTU ± 5% of Standard Value

Note (3): Initial, Continual, Final

# Field Instrument Calibration Record

Project Name: J.E.D. Disposal Facility Project No.: FQ1512 Task: 01 Date: 4 June 2008

Rental Company: EPS

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AM

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME12953  
Time: 0635

Lot No.	Calibration Standard		Instrument Response	Percent Deviation <sup>(1)</sup> or Difference	Allowable Deviation <sup>(2)</sup>	Calibrated? Yes or No	Type of Calibration <sup>(3)</sup>	Calibration Performed By:
	Expiration Date	Standard Value						
6039	Nov 2008	pH = 4.00			0.2			
6054	Nov 2008	pH = 7.00			0.2			
6174	Feb 2009	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P784551	Feb 2009	Turbidity = 10 NTU	10.06	0.6	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
2704104	June 2008	Conductivity = 0.084 mS/cm			5%			
6068	Nov 2008	Conductivity = 1.000 mS/cm			5%			
	Per Table →	D.O. = mg/L @ °C			0.2 mg/l			

Water Quality Instrument Make: YSI Instrument Model Number: 556 Instrument Serial Number: 06A2173AL

Turbidity Instrument Make: LaMotte Instrument Model Number: 2020e Instrument Serial Number: ME10404

Lot No.	Calibration Standard		Instrument Response	Percent Deviation <sup>(1)</sup> or Difference	Allowable Deviation <sup>(2)</sup>	Calibrated? Yes or No	Type of Calibration <sup>(3)</sup>	Calibration Performed By:
	Expiration Date	Standard Value						
6039	Nov 2008	pH = 4.00	4.03	0.03	0.2	Y	C	PT
6054	Nov 2008	pH = 7.00	7.05	0.05	0.2	Y	C	PT
6174	Feb 2009	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P784551	Feb 2009	Turbidity = 10 NTU			10%			
		Turbidity = 50 NTU			6.5%			
2704104	June 2008	Conductivity = 0.084 mS/cm	0.084	0.0	5%	Y	I	PT
6068	Nov 2008	Conductivity = 1.000 mS/cm			5%			
	Per Table →	D.O. = 8.24 mg/L @ 21.8 °C	8.30	0.06	0.2 mg/l	Y	I	PT

Note (1): Percent Deviation = (Standard Value - Instrument Response) ÷ Standard Value x 100

Note (2): Allowable Deviation: pH ± 0.2 of Standard Value; Conductivity ± 5 % of Standard Value; Salinity ± 3 % of Standard Value; DO ± 0.2 mg/L; Turbidity 0.1-10 NTU ± 10% of Standard Value, 11-40 NTU ± 8% of Standard Value, 41-100 NTU ± 6.5% of Standard Value, >100 NTU ± 5% of Standard Value

Note (3): Initial, Continual, Final

## **APPENDIX C**

### **CHAIN-OF-CUSTODY FORMS**



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SR # 5080436  
CAS Contact

9143 Phillips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011 PAGE 1 OF 2

Project Name		Project Number	ANALYSIS REQUESTED (Include Method Number)										PRESERVATIVE		NUMBER OF CONTAINERS	REMARKS/ ALTERNATE DESCRIPTION
Company/Address		Email Address														
IED Disposal Facility		FQ 1512.01											103202			
Kirk Wills		Kwills@geosyntec.com														
Geosyntec																
14055 Riveridge Dr. STE300																
Tampa, FL 33637																
Phone # 813-558-0990		FAX# 813-558-9726														
Sample's Signature Joe Terry		Sample's Printed Name Joe Terry, Tom Wills														
CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	TIME	MATRIX												
MW-16A		5/21/08	1125	GW												
MW-16B			1145													
MW-16C			1150													
MW-17A			0955													
MW-17B			1005													
MW-17C			1050													
MW-18A			0830													
MW-18B			0835													
MW-18C			0915													
DUP-2																

SPECIAL INSTRUCTIONS/COMMENTS		TURNAROUND REQUIREMENTS		REPORT REQUIREMENTS		INVOICE INFORMATION	
		<input type="checkbox"/> RUSH (SURCHARGES APPLY) <input type="checkbox"/> STANDARD REQUESTED FAX DATE REQUESTED REPORT DATE		<input type="checkbox"/> I. Results Only <input type="checkbox"/> II. Results + QC Summaries (LCS, DUP, MSMSD as required) <input type="checkbox"/> III. Results + QC and Calibration Summaries <input type="checkbox"/> IV. Data Validation Report with Raw Data <input type="checkbox"/> V. Specialized Forms / Custom Report Edata <input type="checkbox"/> Yes <input type="checkbox"/> No		PO# BILL TO:  	

SAMPLE RECEIPT: CONDITION/COOLER TEMP:		CUSTODY SEALS: Y N	
RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Joe Terry Printed Name: Joe Terry Firm: Geosyntec Date/Time: 5-21-08/1315	Signature: [Signature] Printed Name: [Name] Firm: [Firm] Date/Time: [Date/Time]	Signature: [Signature] Printed Name: [Name] Firm: [Firm] Date/Time: [Date/Time]	Signature: [Signature] Printed Name: [Name] Firm: [Firm] Date/Time: [Date/Time]

## CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SR# 280d436  
CAS Contact

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# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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SR #

50802409

CAS Contact

Project Name <b>JED DISPOSAL FACILITY</b>		Project Number <b>FQ 1512-01</b>		ANALYSIS REQUESTED (Include Method Number and Container Description)																																			
Project Manager <b>KIRK WILLS</b>		Email Address <b>KWILLS@GEOSYNTEC.COM</b>		PRESERVATIVE <b>1</b>		<b>0</b>		<b>3</b>		<b>2</b>		<b>0</b>		<b>2</b>																									
Company/Address <b>GEOSYNTEC</b>																																							
<b>14055 Riverchase Dr. Ste 300</b>																																							
<b>Tamara FL 33637</b>																																							
Phone # <b>813-558-0990</b>		FAX# <b>813-558-9726</b>																																					
Sampler's Signature <i>[Signature]</i>		Sampler's Printed Name <b>Ton Willsen, Joe Terry</b>																																					
CLIENT SAMPLE ID		LAB ID		SAMPLING DATE		TIME		MATRIX																															
<b>MW-19A</b>				<b>520-03</b>		<b>1400</b>		<b>6W</b>		<b>10</b>		<b>X</b>																											
<b>MW-19B</b>				<b>1400</b>		<b>1400</b>		<b>10</b>		<b>10</b>		<b>X</b>																											
<b>MW-19C</b>				<b>1425</b>		<b>1425</b>		<b>10</b>		<b>10</b>		<b>X</b>																											
<b>MW-20A</b>				<b>1042</b>		<b>1042</b>		<b>9</b>		<b>9</b>		<b>X</b>																											
<b>MW-20B</b>				<b>1100</b>		<b>1100</b>		<b>10</b>		<b>10</b>		<b>X</b>																											
<b>MW-20C</b>				<b>1120</b>		<b>1120</b>		<b>10</b>		<b>10</b>		<b>X</b>																											
<b>MW-21A</b>				<b>0900</b>		<b>0900</b>		<b>9</b>		<b>9</b>		<b>X</b>																											
<b>MW-21B</b>				<b>0925</b>		<b>0925</b>		<b>10</b>		<b>10</b>		<b>X</b>																											
<b>MW-21C</b>				<b>0915</b>		<b>0915</b>		<b>10</b>		<b>10</b>		<b>X</b>																											
<b>Trp Blank</b>				<b>W</b>		<b>W</b>		<b>W</b>		<b>W</b>		<b>X</b>																											
SPECIAL INSTRUCTIONS/COMMENTS										TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) <input checked="" type="checkbox"/> STANDARD REQUESTED FAX DATE REQUESTED REPORT DATE										REPORT REQUIREMENTS I. Results Only <input checked="" type="checkbox"/> II. Results + QC Summaries (LCS, DUP, MS/MSD as required) <input checked="" type="checkbox"/> III. Results + QC and Calibration Summaries <input checked="" type="checkbox"/> IV. Data Validation Report with Raw Data <input checked="" type="checkbox"/> V. Specialized Forms / Custom Report <input checked="" type="checkbox"/> Edata Yes No										INVOICE INFORMATION PO# BILL TO: RECEIVED BY									
See QAPP <input type="checkbox"/>										CUSTODY SEALS: Y N										RECEIVED BY																			
SAMPLE RECEIPT: CONDITION/COOLER TEMP: <b>91</b>										RELINQUISHED BY										RELINQUISHED BY																			
Signature <i>[Signature]</i>										Signature <i>[Signature]</i>										Signature																			
Printed Name <b>Joe Terry</b>										Printed Name <b>Joe Terry</b>										Printed Name																			
Firm <b>Geosyntec</b>										Firm <b>Geosyntec</b>										Firm																			
Date/Time <b>5-20-08/1515</b>										Date/Time <b>5/21/08 CAS</b>										Date/Time																			



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SR # 70802382  
CAS Contact

9143 Phillips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011 PAGE 1 OF 1

Project Name <u>JED Disposal Facility</u>		Project Number <u>FQ 1512-01</u>		ANALYSIS REQUESTED (Include Method Number and Preservative)										PRESERVATIVE	NUMBER OF CONTAINERS	REMARKS/ ALTERNATE DESCRIPTION
Project Manager <u>Kirk Willis</u>	Email Address <u>kwillis@geosyntec.com</u>	Company/Address <u>Geosyntec</u>	14055 Riveredge Dr. <u>Tampa, FL 33637</u>	Phone # <u>813-558-0990</u>	FAX# <u>813-558-9726</u>	Sample's Printed Name <u>Joe Terry, Tan Wushu</u>	CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX					
MW-2A																
MW-2B																
MW-2C																
MW-23A																
MW-23B																
MW-23C																
MW-23A																
MW-23B																
MW-23C																
Tr-p Blank																

SPECIAL INSTRUCTIONS/COMMENTS		TURNAROUND REQUIREMENTS		REPORT REQUIREMENTS		INVOICE INFORMATION	
		<input checked="" type="checkbox"/> RUSH (SURCHARGES APPLY) <input checked="" type="checkbox"/> STANDARD REQUESTED FAX DATE _____ REQUESTED REPORT DATE _____		<input type="checkbox"/> I. Results Only <input checked="" type="checkbox"/> II. Results + QC Summaries (LCS, DUP, MS/MSD as required) <input type="checkbox"/> III. Results + QC and Calibration Summaries <input type="checkbox"/> IV. Data Validation Report with Raw Data <input type="checkbox"/> V. Specialized Forms / Custom Report Edata Yes No		PO# _____ BILL TO: _____ RECEIVED BY _____ SIGNATURE _____ PRINTED NAME _____ FIRM _____ DATE/TIME _____	

SAMPLE RECEIPT: CONDITION/COOLER TEMP:		CUSTODY SEALS: Y N	
RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature <u>Joe Terry</u>	Signature <u>Joe Terry</u>	Signature <u>Joe Terry</u>	Signature <u>Joe Terry</u>
Printed Name <u>Joe Terry</u>	Printed Name <u>Joe Terry</u>	Printed Name <u>Joe Terry</u>	Printed Name <u>Joe Terry</u>
Firm <u>Geosyntec</u>	Firm <u>Geosyntec</u>	Firm <u>Geosyntec</u>	Firm <u>Geosyntec</u>
Date/Time <u>5-19-09/1510</u>	Date/Time <u>5-19-09/1510</u>	Date/Time <u>5-19-09/1510</u>	Date/Time <u>5-19-09/1510</u>

## CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

#SR

50802349

CAS Contact

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Project Name		Project Number		ANALYSIS REQUESTED (Include Method Number)		PRESERVATIVE		NUMBER OF CONTAINERS		REMARKS/ALTERNATE DESCRIPTION	
JED DISPOSAL FACILITY		FA 1512.01				10320					
Project Manager		Kirk Willis		Email Address		KWillis@GEOSYNTEC.COM					
Company/Address		14055 RIVEREDGE DR. (GEOSYNTEC)		Tampa FL 33637							
Phone #		813-558-0990		FAX#		813-558-9726					
Sampler's Signature		Joe Terry		Sampler's Printed Name		JOE TERRY					
CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX							
MW-3A		5/15	1325	GW	9	X	X	X	X		
MW-3B			1355								
MW-3C			1330								
MW-4A			1025								
MW-4B			1020								
MW-4C			1245								
MW-5A			0905								
MW-5B			0850								
MW-5C			0915								
Equipment Blank			1400	DIAG							
SPECIAL INSTRUCTIONS/COMMENTS											
See QAPP <input type="checkbox"/>				TURNAROUND REQUIREMENTS				REPORT REQUIREMENTS			
				RUSH (SURCHARGES APPLY)				I. Results Only			
				STANDARD				X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)			
				REQUESTED FAX DATE				III. Results + QC and Calibration Summaries			
				REQUESTED REPORT DATE				IV. Data Validation Report with Raw Data			
								V. Specialized Forms / Custom Report			
								Edata Yes No			
SAMPLE RECEIPT: CONDITION/COOLER TEMP:				RECEIVED BY				RELINQUISHED BY			
78				Signature				Signature			
Printed Name				Printed Name				Printed Name			
Firm				Firm				Firm			
Date/Time				Date/Time				Date/Time			
5-15-08/1500				5/16/08				5/16/08			



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011 PAGE 2 OF 2

SR #

50802349

CAS Contact

Project Name <b>SPD. Disposal Facility</b>		Project Number <b>F01512.01</b>		ANALYSIS REQUESTED (Include Method Number)	
Project Manager <b>Kirk W. Iles</b>		Email Address		PRESERVATIVE <b>1</b>	
Company/Address <b>Geosynce</b>				NUMBER OF CONTAINERS <b>0960</b>	
Phone # <b>813-558-0490</b>	FAX# <b>813-558-9726</b>	Sampler's Printed Name			
Client Sample ID <b>Trip Blk</b>	LAB ID	SAMPLING DATE	MATRIX <b>W</b>		
SPECIAL INSTRUCTIONS/COMMENTS <b>91</b>					
TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) <input checked="" type="checkbox"/> STANDARD REQUESTED FAX DATE REQUESTED REPORT DATE		REPORT REQUIREMENTS I. Results Only <input checked="" type="checkbox"/> II. Results + QC Summaries (LCS, DUP, MS/MSD as required) III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data V. Specialized Forms / Custom Report Edata Yes No		INVOICE INFORMATION PO# BILL TO:	
RECEIVED BY <b>[Signature]</b> Signature Printed Name Firm Date/Time		RECEIVED BY <b>[Signature]</b> Signature Printed Name Firm Date/Time		RECEIVED BY <b>[Signature]</b> Signature Printed Name Firm Date/Time	



## CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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SR# X804306  
CAS Contact

Project Name <b>S&amp;B Disposal Facility</b>		Project Number <b>R2/12.01</b>	
Project Manager <b>Kirk Wills</b>		Email Address <b>kwillk@geosyntex.com</b>	
Company Address <b>Geosyntex</b> <b>14055 Riveredge Dr.</b> <b>Tampa, FL 33637</b>			
Phone # <b>813-558-0940</b>		FAX# <b>813-558-9726</b>	
Sampler's Signature <i>[Signature]</i>		Sampler's Printed Name <b>Joe Terry, Tom Willis</b>	

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE	ANALYSIS REQUESTED (Include Method Numbers)	REMARKS/ ALTERNATE DESCRIPTION
MW-7A		5-14-08	1525	GW	X	Boll Metals NH <sub>3</sub> HS <sub>2</sub> A, NO <sub>3</sub>	
MW-7B			1605		X		
MW-7C			1530		X		
MW-8A			1355		X		
MW-8B			1425		X		
MW-8C			1410		X		
MW-9A			1145		X		
MW-9B			1105		X		
MW-9C			1100		X		
MW-10A			0855		X		

SPECIAL INSTRUCTIONS/COMMENTS		TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) <input checked="" type="checkbox"/> RUSH STANDARD		REPORT REQUIREMENTS I. Results Only <input checked="" type="checkbox"/> II. Results + OC Summaries (LCS, DUP, MSMSD as required) III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data V. Specialized Forms / Custom Report		INVOICE INFORMATION PO# BILL TO:	
See QAPP <input type="checkbox"/>		REQUESTED FAX DATE REQUESTED REPORT DATE		Edata Yes No			

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 102		CUSTODY SEALS: Y N	
RELINQUISHED BY Signature: <i>[Signature]</i> Printed Name: <b>Joe Terry</b> Firm: <b>Geosyntex</b> Date/Time: <b>5-14-08/1645</b>		RELINQUISHED BY Signature: <i>[Signature]</i> Printed Name: <b>Sumner Ostrom</b> Firm: <b>CAS</b> Date/Time: <b>5/15/08 1017</b>	

RECEIVED BY: \_\_\_\_\_

31111  
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# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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SR# 50802506  
CAS Contact

Project Name JED Disposal Facility		Project Number EQ/1512.01	ANALYSIS REQUESTED (Include Method Number)								
Project Manager Kirk Wilks	Company/Address Geosyntec 14055 Rinnedy Dr. Tampa, FL 33637	Email Address	PRESERVATIVE	1	0	2	3	0			
Phone # 813-558-0990	FAX# 813-558-9726										
Sampler's Signature Joe Terry	Sampler's Printed Name Joe Terry										
CLIENT SAMPLE ID MW-10B	LAB ID	SAMPLING DATE 5.14.08	MATRIX GW								
MW-10C		5.14.08	GW								
Trip Blank			W								
DUP-1		5.14.08	GW								
SPECIAL INSTRUCTIONS/COMMENTS			TURNAROUND REQUIREMENTS			REPORT REQUIREMENTS			INVOICE INFORMATION		
See QAPP <input type="checkbox"/>			RUSH (SURCHARGES APPLY)			I. Results Only			PO#		
			STANDARD			II. Results + QC Summaries (LCS, DUP, MS/MSD as required)			BILL TO:		
			REQUESTED FAX DATE			III. Results + QC and Calibration Summaries					
			REQUESTED REPORT DATE			IV. Data Validation Report with Raw Data					
V. Specialized Forms / Custom Report			Edata Yes No								
SAMPLE RECEIPT: CONDITION/COOLER TEMP: 103			CUSTODY SEALS: Y N			RELINQUISHED BY			RECEIVED BY		
Signature Joe Terry			Signature Joe Terry			Signature Joe Terry			Signature		
Printed Name Joe Terry			Printed Name Joe Terry			Printed Name Joe Terry			Printed Name		
Firm Geosyntec			Firm Geosyntec			Firm Geosyntec			Firm		
Date/Time 5.14.08/1645			Date/Time 5.14.08/1010			Date/Time 5.14.08/1010			Date/Time		

# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SR # 8802241  
CAS Contact

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Project Name <b>JED Disposal Facility</b>		Project Number <b>LR 1512.01</b>		ANALYSIS REQUESTED (Include Method Number)	
Project Manager <b>Kirk Wills</b>		Email Address <b>kwill@geosyntex.com</b>		PRESERVATIVE <b>1 0 3 2 0</b>	
Company/Address <b>Geosyntex</b>				NUMBER OF CONTAINERS	
<b>14055 R.R. veeby Dr.</b>		<b>STB300</b>			
<b>Tampa, FL 33637</b>					
Phone # <b>813-558-0990</b>		FAX # <b>813-558-9726</b>			
Sampler's Signature <i>Joe Terry</i>		Sampler's Printed Name <b>Joe Terry, for Wills</b>			
CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	REMARKS/ALTERNATE DESCRIPTION
MW-11A		5/13/08	1530	GW	
MW-11B			1620		
MW-11C			1850		
MW-12A			1405		
MW-12B			1500		
MW-12C			1355		
MW-13A			1040		
MW-13B			1120		
MW-13C			1050		
Trip Blanks					
SPECIAL INSTRUCTIONS/COMMENTS					
TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) <input checked="" type="checkbox"/> STANDARD REQUESTED FAX DATE REQUESTED REPORT DATE			REPORT REQUIREMENTS I. Results Only <input checked="" type="checkbox"/> II. Results + QC Summaries (LCS, DUP, MS/MSD as required) III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data V. Specialized Forms / Custom Report Edata Yes No		
INVOICE INFORMATION PO# BILL TO:			RECEIVED BY		
RELINQUISHED BY			RELINQUISHED BY		
Signature <i>Joe Terry</i>			Signature		
Printed Name <b>Joe Terry</b>			Printed Name		
Firm <b>Geosyntex</b>			Firm		
Date/Time <b>5-13-08/1710</b>			Date/Time		
SAMPLE RECEIPT: CONDITION/COOLER TEMP: RELINQUISHED BY			CUSTODY SEALS: Y N		
Signature <i>Joe Terry</i>			Signature		
Printed Name <b>Joe Terry</b>			Printed Name		
Firm <b>Geosyntex</b>			Firm		
Date/Time <b>5-13-08/1710</b>			Date/Time		



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CAS Contact

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SR # 562877  
CAS Contact

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JS606-01/29/08



## **APPENDIX D**

### **COLUMBIA-JACKSONVILLE LABORATORY CERTIFICATIONS**



State of Florida

Department of Health, Bureau of Laboratories

This is to certify that

E82502

COLUMBIA ANALYTICAL SERVICES, INC. - FL

8540 BAYCENTER ROAD

JACKSONVILLE, FL 32256

has complied with Florida Administrative Code 64E-1,

for the examination of Environmental samples in the following categories

DRINKING WATER - GROUP II UNREGULATED CONTAMINANTS, DRINKING WATER - MICROBIOLOGY, DRINKING WATER - OTHER REGULATED CONTAMINANTS, DRINKING WATER - PRIMARY INORGANIC CONTAMINANTS, DRINKING WATER - SECONDARY INORGANIC CONTAMINANTS, NON-POTABLE WATER - EXTRACTABLE ORGANICS, NON-POTABLE WATER - GENERAL CHEMISTRY, NON-POTABLE WATER - METALS, NON-POTABLE WATER - MICROBIOLOGY, NON-POTABLE WATER - PESTICIDES-HERBICIDES-PCB'S, NON-POTABLE WATER - VOLATILE ORGANICS, SOLID AND CHEMICAL MATERIALS - EXTRACTABLE ORGANICS, SOLID AND CHEMICAL MATERIALS - GENERAL CHEMISTRY, SOLID AND CHEMICAL MATERIALS - METALS, SOLID AND CHEMICAL MATERIALS - PESTICIDES-HERBICIDES-PCB'S, SOLID AND CHEMICAL MATERIALS - VOLATILE ORGANICS

Continued certification is contingent upon successful on-going compliance with the NELAC Standards and FAC Rule 64E-1 regulations. Specific methods and analytes certified are cited on the Laboratory Scope of Accreditation for this laboratory and are on file at the Bureau of Laboratories, P. O. Box 210, Jacksonville, Florida 32231. Clients and customers are urged to verify with this agency the laboratory's certification status in Florida for particular methods and analytes.

**EFFECTIVE July 01, 2007 THROUGH June 30, 2008**



*Max Saifinger, M.D.*

Max Saifinger, M.D.

Chief, Bureau of Laboratories

Florida Department of Health

DH Form 1697, 7/04

NON-TRANSFERABLE E82502-07-7/1/2007

Supersedes all previously issued certificates

*Laboratory Scope of Accreditation*

Page 1 of 28

Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E82502

EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL  
8540 Baycenter Road  
Jacksonville, FL 32256

Matrix: Drinking Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
1,1,1,2-Tetrachloroethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
1,1,1-Trichloroethane	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
1,1,2,2-Tetrachloroethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
1,1,2-Trichloroethane	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
1,1-Dichloroethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
1,1-Dichloroethylene	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
1,1-Dichloropropene	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
1,2,3-Trichlorobenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
1,2,3-Trichloropropane	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
1,2,4-Trichlorobenzene	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
1,2,4-Trimethylbenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
1,2-Dichlorobenzene	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
1,2-Dichloroethane	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
1,2-Dichloropropane	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
1,3,5-Trimethylbenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
1,3-Dichlorobenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
1,3-Dichloropropane	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
1,4-Dichlorobenzene	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
2,2-Dichloropropane	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
2-Chlorotoluene	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
4-Chlorotoluene	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
4-Isopropyltoluene	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
Alkalinity as CaCO <sub>3</sub>	SM 2320 B	Primary Inorganic Contaminants	NELAP	7/25/2005
Aluminum	EPA 200.7	Secondary Inorganic Contaminants	NELAP	2/19/2002
Aluminum	EPA 200.8	Secondary Inorganic Contaminants	NELAP	2/19/2002
Antimony	EPA 200.8	Primary Inorganic Contaminants	NELAP	2/19/2002
Arsenic	EPA 200.8	Primary Inorganic Contaminants	NELAP	2/19/2002
Barium	EPA 200.7	Primary Inorganic Contaminants	NELAP	2/19/2002
Barium	EPA 200.8	Primary Inorganic Contaminants	NELAP	2/19/2002
Benzene	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
Beryllium	EPA 200.8	Primary Inorganic Contaminants	NELAP	2/19/2002
Bromobenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
Bromochloromethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
Bromodichloromethane	EPA 524.2	Other Regulated Contaminants, Group II Unregulated Contaminants	NELAP	2/19/2002

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Issue Date: 7/1/2007

Expiration Date: 6/30/2008

*Laboratory Scope of Accreditation*

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Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E82502

EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL

8540 Baycenter Road

Jacksonville, FL 32256

Matrix: Drinking Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Bromoform	EPA 524.2	Other Regulated Contaminants, Group II Unregulated Contaminants	NELAP	2/19/2002
Cadmium	EPA 200.7	Primary Inorganic Contaminants	NELAP	2/19/2002
Cadmium	EPA 200.8	Primary Inorganic Contaminants	NELAP	2/19/2002
Calcium	EPA 200.7	Primary Inorganic Contaminants	NELAP	2/19/2002
Carbon tetrachloride	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
Chloride	EPA 300.0	Secondary Inorganic Contaminants	NELAP	2/19/2002
Chlorobenzene	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
Chloroethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
Chloroform	EPA 524.2	Other Regulated Contaminants, Group II Unregulated Contaminants	NELAP	2/19/2002
Chromium	EPA 200.7	Primary Inorganic Contaminants	NELAP	2/19/2002
Chromium	EPA 200.8	Primary Inorganic Contaminants	NELAP	2/19/2002
cis-1,2-Dichloroethylene	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
cis-1,3-Dichloropropene	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
Color	EPA 110.2	Secondary Inorganic Contaminants	NELAP	2/19/2002
Conductivity	SM 2510 B	Primary Inorganic Contaminants	NELAP	8/30/2002
Copper	EPA 200.7	Secondary Inorganic Contaminants, Primary Inorganic Contaminants	NELAP	2/19/2002
Copper	EPA 200.8	Primary Inorganic Contaminants, Secondary Inorganic Contaminants	NELAP	2/19/2002
Cyanide	SM 4500CN-E	Primary Inorganic Contaminants	NELAP	2/19/2002
Dibromochloromethane	EPA 524.2	Other Regulated Contaminants, Group II Unregulated Contaminants	NELAP	2/19/2002
Dibromomethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
Dichlorodifluoromethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/21/2003
Dichloromethane (DCM, Methylene chloride)	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
Ethylbenzene	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
Fluoride	EPA 300.0	Primary Inorganic Contaminants, Secondary Inorganic Contaminants	NELAP	2/19/2002
Fluoride	SM 4500 F-C	Primary Inorganic Contaminants, Secondary Inorganic Contaminants	NELAP	2/19/2002
Heterotrophic plate count	SM 9215 B	Microbiology	NELAP	9/22/2004
Hexachlorobutadiene	EPA 524.2	Group II Unregulated Contaminants	NELAP	7/25/2005
Iron	EPA 200.7	Secondary Inorganic Contaminants	NELAP	2/19/2002

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Issue Date: 7/1/2007

Expiration Date: 6/30/2008

*Laboratory Scope of Accreditation*

Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E82502

EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL

8540 Baycenter Road

Jacksonville, FL 32256

Matrix: Drinking Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Isopropylbenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	7/25/2005
Lead	EPA 200.8	Primary Inorganic Contaminants	NELAP	2/19/2002
Magnesium	EPA 200.7	Primary Inorganic Contaminants	NELAP	2/19/2002
Manganese	EPA 200.7	Secondary Inorganic Contaminants	NELAP	2/19/2002
Manganese	EPA 200.8	Secondary Inorganic Contaminants	NELAP	2/19/2002
Mercury	EPA 245.1	Primary Inorganic Contaminants	NELAP	2/19/2002
Methyl bromide (Bromomethane)	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
Methyl chloride (Chloromethane)	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
Methyl tert-butyl ether (MTBE)	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
Naphthalene	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
n-Butylbenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
Nickel	EPA 200.7	Primary Inorganic Contaminants	NELAP	2/19/2002
Nickel	EPA 200.8	Primary Inorganic Contaminants	NELAP	2/19/2002
Nitrate	EPA 300.0	Primary Inorganic Contaminants	NELAP	2/19/2002
Nitrate as N	EPA 353.2	Primary Inorganic Contaminants	NELAP	7/25/2005
Nitrite	EPA 300.0	Primary Inorganic Contaminants	NELAP	2/19/2002
Nitrite as N	EPA 353.2	Primary Inorganic Contaminants	NELAP	7/25/2005
n-Propylbenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
Odor	EPA 140.1	Secondary Inorganic Contaminants	NELAP	2/19/2002
pH	EPA 150.1	Secondary Inorganic Contaminants, Primary Inorganic Contaminants	NELAP	2/19/2002
sec-Butylbenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
Selenium	EPA 200.8	Primary Inorganic Contaminants	NELAP	2/19/2002
Silver	EPA 200.7	Secondary Inorganic Contaminants	NELAP	2/19/2002
Silver	EPA 200.8	Secondary Inorganic Contaminants	NELAP	2/19/2002
Sodium	EPA 200.7	Primary Inorganic Contaminants	NELAP	2/19/2002
Styrene	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
Sulfate	EPA 300.0	Secondary Inorganic Contaminants, Primary Inorganic Contaminants	NELAP	2/19/2002
Surfactants - MBAS	EPA 425.1	Secondary Inorganic Contaminants	NELAP	2/19/2002
tert-Butylbenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
Tetrachloroethylene (Perchloroethylene)	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
Thallium	EPA 200.8	Primary Inorganic Contaminants	NELAP	2/19/2002
Toluene	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
Total coliforms	SM 9222 B	Microbiology	NELAP	2/19/2002
Total coliforms & E. coli	COLITAG	Microbiology	NELAP	7/25/2005

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Issue Date: 7/1/2007

Expiration Date: 6/30/2008

Charlie Crist  
Governor



Ana M. Viamonte Ros, M.D., M.P.H.  
Secretary of Health

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Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E82502

EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL

8540 Baycenter Road

Jacksonville, FL 32256

Matrix: Drinking Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Total cyanide	EPA 335.4	Primary Inorganic Contaminants	NELAP	7/25/2005
Total dissolved solids	EPA 160.1	Secondary Inorganic Contaminants	NELAP	2/19/2002
Total nitrate-nitrite	EPA 300.0	Primary Inorganic Contaminants	NELAP	2/19/2002
Total nitrate-nitrite	EPA 353.2	Primary Inorganic Contaminants	NELAP	7/25/2005
Total trihalomethanes	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
trans-1,2-Dichloroethylene	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
trans-1,3-Dichloropropylene	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
Trichloroethene (Trichloroethylene)	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
Trichlorofluoromethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	2/19/2002
Turbidity	EPA 180.1	Secondary Inorganic Contaminants	NELAP	2/19/2002
Vinyl chloride	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
Xylene (total)	EPA 524.2	Other Regulated Contaminants	NELAP	2/19/2002
Zinc	EPA 200.7	Secondary Inorganic Contaminants	NELAP	2/19/2002
Zinc	EPA 200.8	Secondary Inorganic Contaminants	NELAP	2/19/2002

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Issue Date: 7/1/2007

Expiration Date: 6/30/2008

*Laboratory Scope of Accreditation*

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Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E82502

EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL  
8540 Baycenter Road  
Jacksonville, FL 32256

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
1,1,1,2-Tetrachloroethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,1,1-Trichloroethane	EPA 624	Volatile Organics	NELAP	2/19/2002
1,1,1-Trichloroethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,1,2,2-Tetrachloroethane	EPA 624	Volatile Organics	NELAP	2/19/2002
1,1,2,2-Tetrachloroethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,1,2-Trichloroethane	EPA 624	Volatile Organics	NELAP	2/19/2002
1,1,2-Trichloroethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,1-Dichloroethane	EPA 624	Volatile Organics	NELAP	2/19/2002
1,1-Dichloroethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,1-Dichloroethylene	EPA 624	Volatile Organics	NELAP	2/19/2002
1,1-Dichloroethylene	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,1-Dichloropropene	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,2,3-Trichlorobenzene	EPA 8260	Volatile Organics	NELAP	7/25/2005
1,2,3-Trichloropropane	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,2,4,5-Tetrachlorobenzene	EPA 8270	Extractable Organics	NELAP	7/1/2003
1,2,4-Trichlorobenzene	EPA 625	Extractable Organics	NELAP	2/19/2002
1,2,4-Trichlorobenzene	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,2,4-Trichlorobenzene	EPA 8270	Extractable Organics	NELAP	7/1/2003
1,2,4-Trimethylbenzene	EPA 8260	Volatile Organics	NELAP	7/25/2005
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8011	Volatile Organics	NELAP	7/1/2003
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8011	Volatile Organics	NELAP	7/1/2003
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,2-Dichlorobenzene	EPA 624	Volatile Organics	NELAP	2/19/2002
1,2-Dichlorobenzene	EPA 625	Extractable Organics	NELAP	2/19/2002
1,2-Dichlorobenzene	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,2-Dichlorobenzene	EPA 8270	Extractable Organics	NELAP	7/1/2003
1,2-Dichloroethane	EPA 624	Volatile Organics	NELAP	2/19/2002
1,2-Dichloroethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,2-Dichloropropane	EPA 624	Volatile Organics	NELAP	2/19/2002
1,2-Dichloropropane	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,2-Diphenylhydrazine	EPA 8270	Extractable Organics	NELAP	7/1/2003
1,3,5-Trimethylbenzene	EPA 8260	Volatile Organics	NELAP	7/25/2005
1,3,5-Trinitrobenzene (1,3,5-TNB)	EPA 8270	Extractable Organics	NELAP	7/1/2003
1,3-Dichlorobenzene	EPA 624	Volatile Organics	NELAP	2/19/2002
1,3-Dichlorobenzene	EPA 625	Extractable Organics	NELAP	2/19/2002

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Issue Date: 7/1/2007

Expiration Date: 6/30/2008

Charlie Crist  
Governor



Ana M. Viamonte Ros, M.D., M.P.H.  
Secretary of Health

*Laboratory Scope of Accreditation*

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Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E82502

EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL  
8540 Baycenter Road  
Jacksonville, FL 32256

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
1,3-Dichlorobenzene	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,3-Dichlorobenzene	EPA 8270	Extractable Organics	NELAP	7/1/2003
1,3-Dichloropropane	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,3-Dinitrobenzene (1,3-DNB)	EPA 8270	Extractable Organics	NELAP	7/1/2003
1,4-Dichlorobenzene	EPA 624	Volatile Organics	NELAP	2/19/2002
1,4-Dichlorobenzene	EPA 625	Extractable Organics	NELAP	2/19/2002
1,4-Dichlorobenzene	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,4-Dichlorobenzene	EPA 8270	Extractable Organics	NELAP	7/1/2003
1,4-Dioxane (1,4-Diethyleneoxide)	CASF SOC-8270CSIM Rev. 1 (5/23/05)/GC-MS	Extractable Organics	NELAP	8/26/2005
1,4-Naphthoquinone	EPA 8270	Extractable Organics	NELAP	7/1/2003
1,4-Phenylenediamine	EPA 8270	Extractable Organics	NELAP	7/1/2003
1-Chlorohexane	EPA 8260	Volatile Organics	NELAP	7/25/2005
1-Chloronaphthalene	EPA 8270	Extractable Organics	NELAP	7/1/2003
1-Methylnaphthalene	CASF SOC-SVOAMS Rev. 0 (3/29/04)/GC-MS	Extractable Organics	NELAP	8/26/2005
1-Naphthylamine	EPA 8270	Extractable Organics	NELAP	7/1/2003
2,2-Dichloropropane	EPA 8260	Volatile Organics	NELAP	7/1/2003
2,3,4,6-Tetrachlorophenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
2,4,5-Trichlorophenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
2,4,6-Trichlorophenol	EPA 625	Extractable Organics	NELAP	2/19/2002
2,4,6-Trichlorophenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
2,4-Dichlorophenol	EPA 625	Extractable Organics	NELAP	2/19/2002
2,4-Dichlorophenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
2,4-Dimethylphenol	EPA 625	Extractable Organics	NELAP	2/19/2002
2,4-Dimethylphenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
2,4-Dinitrophenol	EPA 625	Extractable Organics	NELAP	2/19/2002
2,4-Dinitrophenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
2,4-Dinitrotoluene (2,4-DNT)	EPA 625	Extractable Organics	NELAP	2/19/2002
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270	Extractable Organics	NELAP	7/1/2003
2,6-Dichlorophenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
2,6-Dinitrotoluene (2,6-DNT)	EPA 625	Extractable Organics	NELAP	2/19/2002
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270	Extractable Organics	NELAP	7/1/2003
2-Acetylaminofluorene	EPA 8270	Extractable Organics	NELAP	7/1/2003
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260	Volatile Organics	NELAP	7/1/2003
2-Butanone (Methyl ethyl ketone, MEK)	NCASI 99.01	Volatile Organics	NELAP	4/9/2003
2-Chloroethyl vinyl ether	EPA 624	Volatile Organics	NELAP	2/19/2002

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Laboratory Scope of Accreditation

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State Laboratory ID: E82502

EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL  
8540 Baycenter Road  
Jacksonville, FL 32256

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
2-Chloroethyl vinyl ether	EPA 8260	Volatile Organics	NELAP	7/1/2003
2-Chloronaphthalene	EPA 625	Extractable Organics	NELAP	2/19/2002
2-Chloronaphthalene	EPA 8270	Extractable Organics	NELAP	7/1/2003
2-Chlorophenol	EPA 625	Extractable Organics	NELAP	2/19/2002
2-Chlorophenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
2-Chlorotoluene	EPA 8260	Volatile Organics	NELAP	7/1/2003
2-Hexanone	EPA 8260	Volatile Organics	NELAP	7/1/2003
2-Methyl-4,6-dinitrophenol	EPA 625	Extractable Organics	NELAP	2/19/2002
2-Methyl-4,6-dinitrophenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
2-Methylnaphthalene	EPA 8270	Extractable Organics	NELAP	7/1/2003
2-Methylphenol (o-Cresol)	EPA 8270	Extractable Organics	NELAP	7/1/2003
2-Nitroaniline	EPA 8270	Extractable Organics	NELAP	7/1/2003
2-Nitrophenol	EPA 625	Extractable Organics	NELAP	2/19/2002
2-Nitrophenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
2-Nitropropane	EPA 8260	Volatile Organics	NELAP	7/25/2005
2-Picoline (2-Methylpyridine)	EPA 8270	Extractable Organics	NELAP	7/1/2003
3,3'-Dichlorobenzidine	EPA 625	Extractable Organics	NELAP	2/19/2002
3,3'-Dichlorobenzidine	EPA 8270	Extractable Organics	NELAP	7/1/2003
3,3'-Dimethylbenzidine	EPA 8270	Extractable Organics	NELAP	7/1/2003
3-Methylcholanthrene	EPA 8270	Extractable Organics	NELAP	7/1/2003
3-Nitroaniline	EPA 8270	Extractable Organics	NELAP	7/1/2003
4,4'-DDD	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
4,4'-DDD	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
4,4'-DDE	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
4,4'-DDE	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
4,4'-DDT	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
4,4'-DDT	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
4-Aminobiphenyl	EPA 8270	Extractable Organics	NELAP	7/1/2003
4-Bromophenyl phenyl ether	EPA 625	Extractable Organics	NELAP	2/19/2002
4-Bromophenyl phenyl ether	EPA 8270	Extractable Organics	NELAP	7/1/2003
4-Chloro-3-methylphenol	EPA 625	Extractable Organics	NELAP	2/19/2002
4-Chloro-3-methylphenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
4-Chloroaniline	EPA 8270	Extractable Organics	NELAP	7/1/2003
4-Chlorophenyl phenylether	EPA 625	Extractable Organics	NELAP	2/19/2002
4-Chlorophenyl phenylether	EPA 8270	Extractable Organics	NELAP	7/1/2003
4-Chlorotoluene	EPA 8260	Volatile Organics	NELAP	7/1/2003

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State Laboratory ID: E82502

EPA Lab Code: FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL

8540 Baycenter Road

Jacksonville, FL 32256

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
4-Dimethyl aminoazobenzene	EPA 8270	Extractable Organics	NELAP	7/1/2003
4-Methyl-2-pentanone (MIBK)	EPA 8260	Volatile Organics	NELAP	7/1/2003
4-Methylphenol (p-Cresol)	EPA 8270	Extractable Organics	NELAP	7/1/2003
4-Nitroaniline	EPA 8270	Extractable Organics	NELAP	7/1/2003
4-Nitrophenol	EPA 625	Extractable Organics	NELAP	2/19/2002
4-Nitrophenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
5-Nitro-o-toluidine	EPA 8270	Extractable Organics	NELAP	7/1/2003
7,12-Dimethylbenz(a) anthracene	EPA 8270	Extractable Organics	NELAP	7/1/2003
a-a-Dimethylphenethylamine	EPA 8270	Extractable Organics	NELAP	7/25/2005
Acenaphthene	EPA 625	Extractable Organics	NELAP	2/19/2002
Acenaphthene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Acenaphthylene	EPA 625	Extractable Organics	NELAP	2/19/2002
Acenaphthylene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Acetaldehyde	NCASI 99.01	Volatile Organics	NELAP	4/9/2003
Acetone	EPA 8260	Volatile Organics	NELAP	7/1/2003
Acetonitrile	EPA 8260	Volatile Organics	NELAP	7/1/2003
Acetophenone	EPA 8270	Extractable Organics	NELAP	7/1/2003
Acidity, as CaCO <sub>3</sub>	EPA 305.1	General Chemistry	NELAP	2/19/2002
Acrolein (Propenal)	EPA 624	Volatile Organics	NELAP	7/25/2005
Acrolein (Propenal)	EPA 8260	Volatile Organics	NELAP	7/1/2003
Acrylonitrile	EPA 624	Volatile Organics	NELAP	7/25/2005
Acrylonitrile	EPA 8260	Volatile Organics	NELAP	7/1/2003
Aldrin	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Aldrin	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Alkalinity as CaCO <sub>3</sub>	EPA 310.1	General Chemistry	NELAP	2/19/2002
Alkalinity as CaCO <sub>3</sub>	SM 2320 B	General Chemistry	NELAP	7/25/2005
Allyl chloride (3-Chloropropene)	EPA 8260	Volatile Organics	NELAP	7/1/2003
alpha-BHC (alpha-Hexachlorocyclohexane)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
alpha-BHC (alpha-Hexachlorocyclohexane)	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
alpha-Chlordane	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Aluminum	EPA 200.7	Metals	NELAP	2/19/2002
Aluminum	EPA 200.8	Metals	NELAP	2/19/2002
Aluminum	EPA 6010	Metals	NELAP	7/1/2003
Aluminum	EPA 6020	Metals	NELAP	7/1/2003
Amenable cyanide	EPA 9012	General Chemistry	NELAP	9/22/2004
Ammonia as N	EPA 350.1	General Chemistry	NELAP	8/30/2002

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Issue Date: 7/1/2007

Expiration Date: 6/30/2008

Charlie Crist  
Governor



Ana M. Viamonte Ros, M.D., M.P.H.  
Secretary of Health

*Laboratory Scope of Accreditation*

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Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E82502

EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL

8540 Baycenter Road

Jacksonville, FL 32256

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Aniline	EPA 8270	Extractable Organics	NELAP	7/1/2003
Anthracene	EPA 625	Extractable Organics	NELAP	2/19/2002
Anthracene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Antimony	EPA 200.7	Metals	NELAP	2/19/2002
Antimony	EPA 200.8	Metals	NELAP	2/19/2002
Antimony	EPA 6010	Metals	NELAP	7/1/2003
Antimony	EPA 6020	Metals	NELAP	7/1/2003
Aramite	EPA 8270	Extractable Organics	NELAP	7/1/2003
Aroclor-1016 (PCB-1016)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Aroclor-1016 (PCB-1016)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Aroclor-1221 (PCB-1221)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Aroclor-1221 (PCB-1221)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Aroclor-1232 (PCB-1232)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Aroclor-1232 (PCB-1232)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Aroclor-1242 (PCB-1242)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Aroclor-1242 (PCB-1242)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Aroclor-1248 (PCB-1248)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Aroclor-1248 (PCB-1248)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Aroclor-1254 (PCB-1254)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Aroclor-1254 (PCB-1254)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Aroclor-1260 (PCB-1260)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Aroclor-1260 (PCB-1260)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Arsenic	EPA 200.7	Metals	NELAP	2/19/2002
Arsenic	EPA 200.8	Metals	NELAP	2/19/2002
Arsenic	EPA 6010	Metals	NELAP	2/19/2002
Arsenic	EPA 6020	Metals	NELAP	2/19/2002
Barium	EPA 200.7	Metals	NELAP	2/19/2002
Barium	EPA 200.8	Metals	NELAP	2/19/2002
Barium	EPA 6010	Metals	NELAP	7/1/2003
Barium	EPA 6020	Metals	NELAP	7/1/2003
Benzene	EPA 624	Volatile Organics	NELAP	2/19/2002
Benzene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Benzidine	EPA 625	Extractable Organics	NELAP	2/19/2002
Benzidine	EPA 8270	Extractable Organics	NELAP	7/1/2003
Benzo(a)anthracene	EPA 625	Extractable Organics	NELAP	2/19/2002
Benzo(a)anthracene	EPA 8270	Extractable Organics	NELAP	7/1/2003

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Issue Date: 7/1/2007

Expiration Date: 6/30/2008

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Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E82502

EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL

8540 Baycenter Road

Jacksonville, FL 32256

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Benzo(a)pyrene	EPA 625	Extractable Organics	NELAP	2/19/2002
Benzo(a)pyrene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Benzo(b)fluoranthene	EPA 625	Extractable Organics	NELAP	2/19/2002
Benzo(b)fluoranthene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Benzo(g,h,i)perylene	EPA 625	Extractable Organics	NELAP	2/19/2002
Benzo(g,h,i)perylene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Benzo(k)fluoranthene	EPA 625	Extractable Organics	NELAP	2/19/2002
Benzo(k)fluoranthene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Benzoic acid	EPA 8270	Extractable Organics	NELAP	7/1/2003
Benzyl alcohol	EPA 8270	Extractable Organics	NELAP	7/1/2003
Beryllium	EPA 200.7	Metals	NELAP	2/19/2002
Beryllium	EPA 200.8	Metals	NELAP	2/19/2002
Beryllium	EPA 6010	Metals	NELAP	7/1/2003
Beryllium	EPA 6020	Metals	NELAP	7/1/2003
beta-BHC (beta-Hexachlorocyclohexane)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
beta-BHC (beta-Hexachlorocyclohexane)	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
beta-Naphthylamine	EPA 8270	Extractable Organics	NELAP	7/1/2003
Biochemical oxygen demand	EPA 405.1	General Chemistry	NELAP	2/19/2002
bis(2-Chloroethoxy)methane	EPA 625	Extractable Organics	NELAP	2/19/2002
bis(2-Chloroethoxy)methane	EPA 8270	Extractable Organics	NELAP	7/1/2003
bis(2-Chloroethyl) ether	EPA 625	Extractable Organics	NELAP	2/19/2002
bis(2-Chloroethyl) ether	EPA 8270	Extractable Organics	NELAP	7/1/2003
bis(2-Chloroisopropyl) ether (2,2'-Oxybis(1-chloropropane))	EPA 625	Extractable Organics	NELAP	2/19/2002
bis(2-Chloroisopropyl) ether (2,2'-Oxybis(1-chloropropane))	EPA 8270	Extractable Organics	NELAP	7/1/2003
bis(2-Ethylhexyl) phthalate (DEHP)	EPA 625	Extractable Organics	NELAP	2/19/2002
bis(2-Ethylhexyl) phthalate (DEHP)	EPA 8270	Extractable Organics	NELAP	7/1/2003
Boron	EPA 200.7	Metals	NELAP	2/19/2002
Boron	EPA 6010	Metals	NELAP	7/1/2003
Bromide	EPA 300.0	General Chemistry	NELAP	2/19/2002
Bromide	EPA 9056	General Chemistry	NELAP	7/1/2003
Bromobenzene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Bromochloromethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
Bromodichloromethane	EPA 624	Volatile Organics	NELAP	2/19/2002
Bromodichloromethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
Bromoform	EPA 624	Volatile Organics	NELAP	2/19/2002

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Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E82502

EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL

8540 Baycenter Road

Jacksonville, FL 32256

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Bromoform	EPA 8260	Volatile Organics	NELAP	7/1/2003
Butyl benzyl phthalate	EPA 625	Extractable Organics	NELAP	2/19/2002
Butyl benzyl phthalate	EPA 8270	Extractable Organics	NELAP	7/1/2003
Cadmium	EPA 200.7	Metals	NELAP	2/19/2002
Cadmium	EPA 200.8	Metals	NELAP	2/19/2002
Cadmium	EPA 6010	Metals	NELAP	2/19/2002
Cadmium	EPA 6020	Metals	NELAP	2/19/2002
Calcium	EPA 200.7	Metals	NELAP	2/19/2002
Calcium	EPA 6010	Metals	NELAP	7/1/2003
Carbon disulfide	EPA 8260	Volatile Organics	NELAP	7/1/2003
Carbon tetrachloride	EPA 624	Volatile Organics	NELAP	2/19/2002
Carbon tetrachloride	EPA 8260	Volatile Organics	NELAP	7/1/2003
Carbonaceous BOD (CBOD)	SM 5210 B	General Chemistry	NELAP	2/19/2002
Chemical oxygen demand	EPA 410.2	General Chemistry	NELAP	2/19/2002
Chlordane (tech.)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Chlordane (tech.)	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Chloride	EPA 300.0	General Chemistry	NELAP	2/19/2002
Chloride	EPA 9056	General Chemistry	NELAP	7/1/2003
Chlorobenzene	EPA 624	Volatile Organics	NELAP	2/19/2002
Chlorobenzene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Chlorobenzilate	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Chloroethane	EPA 624	Volatile Organics	NELAP	2/19/2002
Chloroethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
Chloroform	EPA 624	Volatile Organics	NELAP	2/19/2002
Chloroform	EPA 8260	Volatile Organics	NELAP	7/1/2003
Chlorophylls	SM 10200 H	General Chemistry	NELAP	7/25/2005
Chloroprene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Chromium	EPA 200.7	Metals	NELAP	2/19/2002
Chromium	EPA 200.8	Metals	NELAP	2/19/2002
Chromium	EPA 6010	Metals	NELAP	7/1/2003
Chromium	EPA 6020	Metals	NELAP	7/1/2003
Chromium VI	EPA 7196	General Chemistry	NELAP	7/1/2003
Chromium VI	SM 3500-Cr D (18th/19th Ed.)/COLOR	Metals	NELAP	8/30/2002
Chrysene	EPA 625	Extractable Organics	NELAP	2/19/2002
Chrysene	EPA 8270	Extractable Organics	NELAP	7/1/2003
cis-1,2-Dichloroethylene	EPA 8260	Volatile Organics	NELAP	7/1/2003

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Expiration Date: 6/30/2008

*Laboratory Scope of Accreditation*

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State Laboratory ID: E82502

EPA Lab Code: FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL  
8540 Baycenter Road  
Jacksonville, FL 32256

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
cis-1,3-Dichloropropene	EPA 624	Volatile Organics	NELAP	2/19/2002
cis-1,3-Dichloropropene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Cobalt	EPA 200.7	Metals	NELAP	2/19/2002
Cobalt	EPA 200.8	Metals	NELAP	2/19/2002
Cobalt	EPA 6010	Metals	NELAP	7/1/2003
Cobalt	EPA 6020	Metals	NELAP	7/1/2003
Color	EPA 110.2	General Chemistry	NELAP	2/19/2002
Conductivity	EPA 120.1	General Chemistry	NELAP	2/19/2002
Copper	EPA 200.7	Metals	NELAP	2/19/2002
Copper	EPA 200.8	Metals	NELAP	2/19/2002
Copper	EPA 6010	Metals	NELAP	2/19/2002
Copper	EPA 6020	Metals	NELAP	2/19/2002
Cyanide	SM 4500CN-E	General Chemistry	NELAP	2/19/2002
delta-BHC	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
delta-BHC	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Diallate	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Dibenz(a, j) acridine	EPA 8270	Extractable Organics	NELAP	7/1/2003
Dibenz(a,h) anthracene	EPA 625	Extractable Organics	NELAP	2/19/2002
Dibenz(a,h) anthracene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Dibenzofuran	EPA 8270	Extractable Organics	NELAP	7/1/2003
Dibromochloromethane	EPA 624	Volatile Organics	NELAP	2/19/2002
Dibromochloromethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
Dibromomethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
Dichlorodifluoromethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
Dieldrin	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Dieldrin	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Diethyl ether	EPA 8260	Volatile Organics	NELAP	7/25/2005
Diethyl phthalate	EPA 625	Extractable Organics	NELAP	2/19/2002
Diethyl phthalate	EPA 8270	Extractable Organics	NELAP	7/1/2003
Dimethoate	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Dimethyl phthalate	EPA 625	Extractable Organics	NELAP	2/19/2002
Dimethyl phthalate	EPA 8270	Extractable Organics	NELAP	7/1/2003
Di-n-butyl phthalate	EPA 625	Extractable Organics	NELAP	2/19/2002
Di-n-butyl phthalate	EPA 8270	Extractable Organics	NELAP	7/1/2003
Di-n-octyl phthalate	EPA 625	Extractable Organics	NELAP	2/19/2002
Di-n-octyl phthalate	EPA 8270	Extractable Organics	NELAP	7/1/2003

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*Laboratory Scope of Accreditation*

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Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

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EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL

8540 Baycenter Road

Jacksonville, FL 32256

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Diphenylamine	EPA 8270	Extractable Organics	NELAP	7/1/2003
Disulfoton	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	7/25/2005
Endosulfan I	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Endosulfan I	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Endosulfan II	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Endosulfan II	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Endosulfan sulfate	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Endosulfan sulfate	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Endrin	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Endrin	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Endrin aldehyde	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Endrin aldehyde	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Ethyl methacrylate	EPA 8260	Volatile Organics	NELAP	7/1/2003
Ethyl methanesulfonate	EPA 8270	Extractable Organics	NELAP	7/1/2003
Ethylbenzene	EPA 624	Volatile Organics	NELAP	2/19/2002
Ethylbenzene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Famphur	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Fecal coliforms	SM 9222 D	Microbiology	NELAP	2/19/2002
Ferrous iron	SM 3500-Fe D (18th/19th Ed.)/COLOR	General Chemistry	NELAP	8/26/2005
Fluoranthene	EPA 625	Extractable Organics	NELAP	2/19/2002
Fluoranthene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Fluorene	EPA 625	Extractable Organics	NELAP	2/19/2002
Fluorene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Fluoride	EPA 300.0	General Chemistry	NELAP	2/19/2002
Fluoride	EPA 340.2	General Chemistry	NELAP	2/19/2002
Fluoride	EPA 9056	General Chemistry	NELAP	7/1/2003
gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
gamma-Chlordane	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Heptachlor	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Heptachlor	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Heptachlor epoxide	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Heptachlor epoxide	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Hexachlorobenzene	EPA 625	Extractable Organics	NELAP	2/19/2002
Hexachlorobenzene	EPA 8270	Extractable Organics	NELAP	7/1/2003

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Issue Date: 7/1/2007

Expiration Date: 6/30/2008

Charlie Crist  
Governor



Ana M. Viamonte Ros, M.D., M.P.H.  
Secretary of Health

*Laboratory Scope of Accreditation*

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Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E82502

EPA Lab Code: FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL

8540 Baycenter Road

Jacksonville, FL 32256

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Hexachlorobutadiene	EPA 625	Extractable Organics	NELAP	2/19/2002
Hexachlorobutadiene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Hexachlorobutadiene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Hexachlorocyclopentadiene	EPA 625	Extractable Organics	NELAP	2/19/2002
Hexachlorocyclopentadiene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Hexachloroethane	EPA 625	Extractable Organics	NELAP	2/19/2002
Hexachloroethane	EPA 8270	Extractable Organics	NELAP	7/1/2003
Hexachlorophene	EPA 8270	Extractable Organics	NELAP	7/25/2005
Hexachloropropene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Ignitability	EPA 1020	General Chemistry	NELAP	7/1/2003
Indeno(1,2,3-cd)pyrene	EPA 625	Extractable Organics	NELAP	2/19/2002
Indeno(1,2,3-cd)pyrene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Iodomethane (Methyl iodide)	EPA 8260	Volatile Organics	NELAP	7/1/2003
Iron	EPA 200.7	Metals	NELAP	2/19/2002
Iron	EPA 6010	Metals	NELAP	7/1/2003
Isobutyl alcohol (2-Methyl-1-propanol)	EPA 8260	Volatile Organics	NELAP	7/1/2003
Isodrin	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Isophorone	EPA 625	Extractable Organics	NELAP	2/19/2002
Isophorone	EPA 8270	Extractable Organics	NELAP	7/1/2003
Isopropylbenzene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Isosafrole	EPA 8270	Extractable Organics	NELAP	7/1/2003
Kepone	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Kjeldahl nitrogen - total	EPA 351.2	General Chemistry	NELAP	8/30/2002
Lead	EPA 200.7	Metals	NELAP	2/19/2002
Lead	EPA 200.8	Metals	NELAP	2/19/2002
Lead	EPA 6010	Metals	NELAP	2/19/2002
Lead	EPA 6020	Metals	NELAP	2/19/2002
Magnesium	EPA 200.7	Metals	NELAP	2/19/2002
Magnesium	EPA 6010	Metals	NELAP	7/1/2003
Manganese	EPA 200.7	Metals	NELAP	2/19/2002
Manganese	EPA 200.8	Metals	NELAP	2/19/2002
Manganese	EPA 6010	Metals	NELAP	7/1/2003
Manganese	EPA 6020	Metals	NELAP	7/1/2003
Mercury	EPA 245.1	Metals	NELAP	2/19/2002
Mercury	EPA 7470	Metals	NELAP	2/19/2002
Methacrylonitrile	EPA 8260	Volatile Organics	NELAP	7/1/2003

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Issue Date: 7/1/2007

Expiration Date: 6/30/2008



*Laboratory Scope of Accreditation*

Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E82502

EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL

8540 Baycenter Road

Jacksonville, FL 32256

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Methanol	NCASI 94.03	Volatile Organics	NELAP	4/9/2003
Methanol	NCASI 99.01	Volatile Organics	NELAP	4/9/2003
Methapyrilene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Methoxychlor	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Methyl bromide (Bromomethane)	EPA 624	Volatile Organics	NELAP	2/19/2002
Methyl bromide (Bromomethane)	EPA 8260	Volatile Organics	NELAP	7/1/2003
Methyl chloride (Chloromethane)	EPA 624	Volatile Organics	NELAP	2/19/2002
Methyl chloride (Chloromethane)	EPA 8260	Volatile Organics	NELAP	7/1/2003
Methyl methacrylate	EPA 8260	Volatile Organics	NELAP	7/1/2003
Methyl methanesulfonate	EPA 8270	Extractable Organics	NELAP	7/1/2003
Methyl parathion (Parathion, methyl)	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Methyl tert-butyl ether (MTBE)	EPA 8260	Volatile Organics	NELAP	7/1/2003
Methylene chloride	EPA 624	Volatile Organics	NELAP	2/19/2002
Methylene chloride	EPA 8260	Volatile Organics	NELAP	7/1/2003
Molybdenum	EPA 200.7	Metals	NELAP	2/19/2002
Molybdenum	EPA 200.8	Metals	NELAP	2/19/2002
Molybdenum	EPA 6010	Metals	NELAP	2/19/2002
Molybdenum	EPA 6020	Metals	NELAP	7/25/2005
Naphthalene	EPA 625	Extractable Organics	NELAP	2/19/2002
Naphthalene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Naphthalene	EPA 8270	Extractable Organics	NELAP	7/1/2003
n-Butyl alcohol	EPA 8260	Volatile Organics	NELAP	7/1/2003
n-Butylbenzene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Nickel	EPA 200.7	Metals	NELAP	2/19/2002
Nickel	EPA 200.8	Metals	NELAP	2/19/2002
Nickel	EPA 6010	Metals	NELAP	2/19/2002
Nickel	EPA 6020	Metals	NELAP	2/19/2002
Nitrate	EPA 9056	General Chemistry	NELAP	7/1/2003
Nitrate as N	EPA 300.0	General Chemistry	NELAP	2/19/2002
Nitrate as N	EPA 353.2	General Chemistry	NELAP	8/30/2002
Nitrate-nitrite	EPA 300.0	General Chemistry	NELAP	2/19/2002
Nitrite	EPA 9056	General Chemistry	NELAP	7/1/2003
Nitrite as N	EPA 300.0	General Chemistry	NELAP	2/19/2002
Nitrite as N	EPA 353.2	General Chemistry	NELAP	8/30/2002
Nitrobenzene	EPA 625	Extractable Organics	NELAP	2/19/2002
Nitrobenzene	EPA 8270	Extractable Organics	NELAP	7/1/2003

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Issue Date: 7/1/2007

Expiration Date: 6/30/2008

Charlie Crist  
Governor



Ana M. Viamonte Ros, M.D., M.P.H.  
Secretary of Health

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Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E82502

EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL  
8540 Baycenter Road  
Jacksonville, FL 32256

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Nitroquinoline-1-oxide	EPA 8270	Extractable Organics	NELAP	7/1/2003
n-Nitrosodiethylamine	EPA 8270	Extractable Organics	NELAP	7/1/2003
n-Nitrosodimethylamine	EPA 625	Extractable Organics	NELAP	2/19/2002
n-Nitrosodimethylamine	EPA 8270	Extractable Organics	NELAP	7/1/2003
n-Nitroso-di-n-butylamine	EPA 8270	Extractable Organics	NELAP	7/1/2003
n-Nitrosodi-n-propylamine	EPA 625	Extractable Organics	NELAP	2/19/2002
n-Nitrosodi-n-propylamine	EPA 8270	Extractable Organics	NELAP	7/1/2003
n-Nitrosodiphenylamine	EPA 625	Extractable Organics	NELAP	2/19/2002
n-Nitrosodiphenylamine	EPA 8270	Extractable Organics	NELAP	7/1/2003
n-Nitrosomethylethylamine	EPA 8270	Extractable Organics	NELAP	7/1/2003
n-Nitrosomorpholine	EPA 8270	Extractable Organics	NELAP	7/1/2003
n-Nitrosopiperidine	EPA 8270	Extractable Organics	NELAP	7/1/2003
n-Nitrosopyrrolidine	EPA 8270	Extractable Organics	NELAP	7/1/2003
n-Propylbenzene	EPA 8260	Volatile Organics	NELAP	7/25/2005
o,o,o-Triethyl phosphorothioate	EPA 8270	Extractable Organics	NELAP	7/1/2003
Oil & Grease	EPA 1664	General Chemistry	NELAP	2/19/2002
Organic nitrogen	EPA 351.2 - EPA 350.1	General Chemistry	NELAP	7/25/2005
Organic nitrogen	EPA 351.4 - EPA 350.3	General Chemistry	NELAP	2/19/2002
Orthophosphate as P	EPA 365.1	General Chemistry	NELAP	8/30/2002
Orthophosphate as P	EPA 365.3	General Chemistry	NELAP	2/19/2002
o-Toluidine	EPA 8270	Extractable Organics	NELAP	7/1/2003
o-Xylene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Parathion, ethyl	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
p-Dioxane	EPA 8260	Volatile Organics	NELAP	7/1/2003
Pentachlorobenzene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Pentachloronitrobenzene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Pentachlorophenol	EPA 625	Extractable Organics	NELAP	2/19/2002
Pentachlorophenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
pH	EPA 150.1	General Chemistry	NELAP	2/19/2002
Phenacetin	EPA 8270	Extractable Organics	NELAP	7/1/2003
Phenanthrene	EPA 625	Extractable Organics	NELAP	2/19/2002
Phenanthrene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Phenol	EPA 625	Extractable Organics	NELAP	2/19/2002
Phenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
Phorate	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Phosphorus, total	EPA 365.1	General Chemistry	NELAP	8/30/2002

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Issue Date: 7/1/2007

Expiration Date: 6/30/2008

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Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E82502

EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL

8540 Baycenter Road

Jacksonville, FL 32256

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Phosphorus, total	EPA 365.3	General Chemistry	NELAP	2/19/2002
p-Isopropyltoluene	EPA 8260	Volatile Organics	NELAP	7/25/2005
Potassium	EPA 200.7	Metals	NELAP	2/19/2002
Potassium	EPA 6010	Metals	NELAP	2/19/2002
Pronamide (Kerb)	EPA 8270	Extractable Organics	NELAP	7/1/2003
Propionaldehyde	NCASI 99.01	Volatile Organics	NELAP	4/9/2003
Propionitrile (Ethyl cyanide)	EPA 8260	Volatile Organics	NELAP	7/1/2003
Pyrene	EPA 625	Extractable Organics	NELAP	2/19/2002
Pyrene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Pyridine	EPA 8270	Extractable Organics	NELAP	7/1/2003
Residue-filterable (TDS)	EPA 160.1	General Chemistry	NELAP	2/19/2002
Residue-nonfilterable (TSS)	EPA 160.2	General Chemistry	NELAP	2/19/2002
Residue-settleable	EPA 160.5	General Chemistry	NELAP	2/19/2002
Residue-total	EPA 160.3	General Chemistry	NELAP	2/19/2002
Residue-volatile	EPA 160.4	General Chemistry	NELAP	2/19/2002
Safrole	EPA 8270	Extractable Organics	NELAP	7/1/2003
sec-Butylbenzene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Selenium	EPA 200.7	Metals	NELAP	2/19/2002
Selenium	EPA 200.8	Metals	NELAP	2/19/2002
Selenium	EPA 6010	Metals	NELAP	2/19/2002
Selenium	EPA 6020	Metals	NELAP	7/25/2005
Silica-dissolved	EPA 370.1	General Chemistry	NELAP	8/30/2002
Silver	EPA 200.7	Metals	NELAP	2/19/2002
Silver	EPA 200.8	Metals	NELAP	2/19/2002
Silver	EPA 6010	Metals	NELAP	7/1/2003
Silver	EPA 6020	Metals	NELAP	7/1/2003
Sodium	EPA 200.7	Metals	NELAP	2/19/2002
Sodium	EPA 6010	Metals	NELAP	7/1/2003
Styrene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Sulfate	EPA 300.0	General Chemistry	NELAP	2/19/2002
Sulfate	EPA 9056	General Chemistry	NELAP	7/1/2003
Sulfide	EPA 376.1	General Chemistry	NELAP	7/25/2005
Sulfotepp	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	7/25/2005
Surfactants - MBAS	EPA 425.1	General Chemistry	NELAP	2/19/2002
Tannin & Lignin	SM 5550 B	General Chemistry	NELAP	2/19/2002
tert-Butyl alcohol	EPA 8260	Volatile Organics	NELAP	7/1/2003

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Issue Date: 7/1/2007

Expiration Date: 6/30/2008

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Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E82502

EPA Lab Code: FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL  
8540 Baycenter Road  
Jacksonville, FL 32256

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
tert-Butylbenzene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Tetrachloroethylene (Perchloroethylene)	EPA 624	Volatile Organics	NELAP	2/19/2002
Tetrachloroethylene (Perchloroethylene)	EPA 8260	Volatile Organics	NELAP	7/1/2003
Thallium	EPA 200.7	Metals	NELAP	2/19/2002
Thallium	EPA 200.8	Metals	NELAP	2/19/2002
Thallium	EPA 6010	Metals	NELAP	7/1/2003
Thallium	EPA 6020	Metals	NELAP	7/1/2003
Thionazin (Zinophos)	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Tin	EPA 200.7	Metals	NELAP	8/30/2002
Tin	EPA 6010	Metals	NELAP	7/1/2003
Titanium	CASF MET-ICPMS Rev. 4 (5/20/05)/ICP-MS	Metals	NELAP	8/26/2005
Titanium	EPA 6020	Metals	NELAP	7/25/2005
Toluene	EPA 624	Volatile Organics	NELAP	2/19/2002
Toluene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Total coliforms	SM 9222 B	Microbiology	NELAP	2/19/2002
Total cyanide	EPA 335.4	General Chemistry	NELAP	7/25/2005
Total cyanide	EPA 9012	General Chemistry	NELAP	9/22/2004
Total hardness as CaCO <sub>3</sub>	SM 2340 B	Metals	NELAP	9/30/2002
Total nitrate-nitrite	EPA 353.2	General Chemistry	NELAP	8/30/2002
Total nitrate-nitrite	EPA 9056	General Chemistry	NELAP	7/1/2003
Total organic carbon	EPA 415.1	General Chemistry	NELAP	2/19/2002
Total organic carbon	EPA 9060	General Chemistry	NELAP	7/1/2003
Total Petroleum Hydrocarbons (TPH)	EPA 1664	General Chemistry	NELAP	2/19/2002
Total Petroleum Hydrocarbons (TPH)	FL-PRO	Extractable Organics	NELAP	7/1/2003
Total Petroleum Hydrocarbons (TPH)	TX1005	Extractable Organics	NELAP	7/1/2003
Toxaphene (Chlorinated camphene)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Toxaphene (Chlorinated camphene)	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
trans-1,2-Dichloroethylene	EPA 624	Volatile Organics	NELAP	2/19/2002
trans-1,2-Dichloroethylene	EPA 8260	Volatile Organics	NELAP	7/1/2003
trans-1,3-Dichloropropylene	EPA 624	Volatile Organics	NELAP	2/19/2002
trans-1,3-Dichloropropylene	EPA 8260	Volatile Organics	NELAP	7/1/2003
trans-1,4-Dichloro-2-butene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Trichloroethene (Trichloroethylene)	EPA 624	Volatile Organics	NELAP	2/19/2002
Trichloroethene (Trichloroethylene)	EPA 8260	Volatile Organics	NELAP	7/1/2003
Trichlorofluoromethane	EPA 624	Volatile Organics	NELAP	2/19/2002
Trichlorofluoromethane	EPA 8260	Volatile Organics	NELAP	7/1/2003

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Charlie Crist  
Governor



Ana M. Viamonte Ros, M.D., M.P.H.  
Secretary of Health

*Laboratory Scope of Accreditation*

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Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E82502

EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL  
8540 Baycenter Road  
Jacksonville, FL 32256

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Turbidity	EPA 180.1	General Chemistry	NELAP	2/19/2002
Un-ionized Ammonia	DEP SOP 10/03/83	General Chemistry	NELAP	2/19/2002
Vanadium	EPA 200.7	Metals	NELAP	2/19/2002
Vanadium	EPA 200.8	Metals	NELAP	2/19/2002
Vanadium	EPA 6010	Metals	NELAP	7/1/2003
Vanadium	EPA 6020	Metals	NELAP	7/25/2005
Vinyl acetate	EPA 8260	Volatile Organics	NELAP	7/1/2003
Vinyl chloride	EPA 624	Volatile Organics	NELAP	2/19/2002
Vinyl chloride	EPA 8260	Volatile Organics	NELAP	7/1/2003
Xylene (total)	EPA 8260	Volatile Organics	NELAP	7/1/2003
Zinc	EPA 200.7	Metals	NELAP	2/19/2002
Zinc	EPA 200.8	Metals	NELAP	2/19/2002
Zinc	EPA 6010	Metals	NELAP	2/19/2002
Zinc	EPA 6020	Metals	NELAP	2/19/2002

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*Laboratory Scope of Accreditation*

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Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E82502

EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL  
8540 Baycenter Road  
Jacksonville, FL 32256

Matrix: Solid and Chemical Materials

Analyte	Method/Tech	Category	Certification Type	Effective Date
1,1,1,2-Tetrachloroethane	EPA 8260	Volatile Organics	NELAP	2/19/2002
1,1,1-Trichloroethane	EPA 8260	Volatile Organics	NELAP	2/19/2002
1,1,2,2-Tetrachloroethane	EPA 8260	Volatile Organics	NELAP	2/19/2002
1,1,2-Trichloroethane	EPA 8260	Volatile Organics	NELAP	2/19/2002
1,1-Dichloroethane	EPA 8260	Volatile Organics	NELAP	2/19/2002
1,1-Dichloroethylene	EPA 8260	Volatile Organics	NELAP	2/19/2002
1,1-Dichloropropene	EPA 8260	Volatile Organics	NELAP	2/19/2002
1,2,3-Trichloropropane	EPA 8260	Volatile Organics	NELAP	2/19/2002
1,2,4,5-Tetrachlorobenzene	EPA 8270	Extractable Organics	NELAP	2/19/2002
1,2,4-Trichlorobenzene	EPA 8260	Volatile Organics	NELAP	2/19/2002
1,2,4-Trichlorobenzene	EPA 8270	Extractable Organics	NELAP	2/19/2002
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260	Volatile Organics	NELAP	2/19/2002
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260	Volatile Organics	NELAP	2/19/2002
1,2-Dichlorobenzene	EPA 8260	Volatile Organics	NELAP	2/19/2002
1,2-Dichlorobenzene	EPA 8270	Extractable Organics	NELAP	2/19/2002
1,2-Dichloroethane	EPA 8260	Volatile Organics	NELAP	2/19/2002
1,2-Dichloropropane	EPA 8260	Volatile Organics	NELAP	2/19/2002
1,2-Diphenylhydrazine	EPA 8270	Extractable Organics	NELAP	2/19/2002
1,3,5-Trinitrobenzene (1,3,5-TNB)	EPA 8270	Extractable Organics	NELAP	2/19/2002
1,3-Dichlorobenzene	EPA 8260	Volatile Organics	NELAP	2/19/2002
1,3-Dichlorobenzene	EPA 8270	Extractable Organics	NELAP	2/19/2002
1,3-Dichloropropane	EPA 8260	Volatile Organics	NELAP	2/19/2002
1,3-Dinitrobenzene (1,3-DNB)	EPA 8270	Extractable Organics	NELAP	2/19/2002
1,4-Dichlorobenzene	EPA 8260	Volatile Organics	NELAP	2/19/2002
1,4-Dichlorobenzene	EPA 8270	Extractable Organics	NELAP	2/19/2002
1,4-Naphthoquinone	EPA 8270	Extractable Organics	NELAP	2/19/2002
1,4-Phenylenediamine	EPA 8270	Extractable Organics	NELAP	2/19/2002
1-Chloronaphthalene	EPA 8270	Extractable Organics	NELAP	2/19/2002
1-Naphthylamine	EPA 8270	Extractable Organics	NELAP	2/19/2002
2,2-Dichloropropane	EPA 8260	Volatile Organics	NELAP	2/19/2002
2,3,4,6-Tetrachlorophenol	EPA 8270	Extractable Organics	NELAP	2/19/2002
2,4,5-Trichlorophenol	EPA 8270	Extractable Organics	NELAP	2/19/2002
2,4,6-Trichlorophenol	EPA 8270	Extractable Organics	NELAP	2/19/2002
2,4-Dichlorophenol	EPA 8270	Extractable Organics	NELAP	2/19/2002
2,4-Dimethylphenol	EPA 8270	Extractable Organics	NELAP	2/19/2002
2,4-Dinitrophenol	EPA 8270	Extractable Organics	NELAP	2/19/2002

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Issue Date: 7/1/2007

Expiration Date: 6/30/2008

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State Laboratory ID: E82502

EPA Lab Code: FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL

8540 Baycenter Road

Jacksonville, FL 32256

Matrix: Solid and Chemical Materials

Analyte	Method/Tech	Category	Certification Type	Effective Date
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270	Extractable Organics	NELAP	2/19/2002
2,6-Dichlorophenol	EPA 8270	Extractable Organics	NELAP	2/19/2002
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270	Extractable Organics	NELAP	2/19/2002
2-Acetylaminofluorene	EPA 8270	Extractable Organics	NELAP	2/19/2002
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260	Volatile Organics	NELAP	2/19/2002
2-Chloroethyl vinyl ether	EPA 8260	Volatile Organics	NELAP	2/19/2002
2-Chloronaphthalene	EPA 8270	Extractable Organics	NELAP	2/19/2002
2-Chlorophenol	EPA 8270	Extractable Organics	NELAP	2/19/2002
2-Chlorotoluene	EPA 8260	Volatile Organics	NELAP	2/19/2002
2-Hexanone	EPA 8260	Volatile Organics	NELAP	2/19/2002
2-Methyl-4,6-dinitrophenol	EPA 8270	Extractable Organics	NELAP	2/19/2002
2-Methylnaphthalene	EPA 8270	Extractable Organics	NELAP	2/19/2002
2-Methylphenol (o-Cresol)	EPA 8270	Extractable Organics	NELAP	2/19/2002
2-Nitroaniline	EPA 8270	Extractable Organics	NELAP	2/19/2002
2-Nitrophenol	EPA 8270	Extractable Organics	NELAP	5/7/2003
2-Picoline (2-Methylpyridine)	EPA 8270	Extractable Organics	NELAP	2/19/2002
3,3'-Dichlorobenzidine	EPA 8270	Extractable Organics	NELAP	2/19/2002
3,3'-Dimethylbenzidine	EPA 8270	Extractable Organics	NELAP	2/19/2002
3-Methylcholanthrene	EPA 8270	Extractable Organics	NELAP	2/19/2002
3-Nitroaniline	EPA 8270	Extractable Organics	NELAP	2/19/2002
4,4'-DDD	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
4,4'-DDE	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
4,4'-DDT	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
4-Aminobiphenyl	EPA 8270	Extractable Organics	NELAP	2/19/2002
4-Bromophenyl phenyl ether	EPA 8270	Extractable Organics	NELAP	2/19/2002
4-Chloro-3-methylphenol	EPA 8270	Extractable Organics	NELAP	2/19/2002
4-Chloroaniline	EPA 8270	Extractable Organics	NELAP	2/19/2002
4-Chlorophenyl phenylether	EPA 8270	Extractable Organics	NELAP	2/19/2002
4-Chlorotoluene	EPA 8260	Volatile Organics	NELAP	2/19/2002
4-Dimethyl aminoazobenzene	EPA 8270	Extractable Organics	NELAP	2/19/2002
4-Methyl-2-pentanone (MIBK)	EPA 8260	Volatile Organics	NELAP	2/19/2002
4-Methylphenol (p-Cresol)	EPA 8270	Extractable Organics	NELAP	2/19/2002
4-Nitroaniline	EPA 8270	Extractable Organics	NELAP	2/19/2002
4-Nitrophenol	EPA 8270	Extractable Organics	NELAP	2/19/2002
5-Nitro-o-toluidine	EPA 8270	Extractable Organics	NELAP	2/19/2002
7,12-Dimethylbenz(a) anthracene	EPA 8270	Extractable Organics	NELAP	2/19/2002

Clients and Customers are urged to verify the laboratory's current certification status with the Environmental Laboratory Certification Program.

Issue Date: 7/1/2007

Expiration Date: 6/30/2008

Charlie Crist  
Governor



Ana M. Viamonte-Ros, M.D., M.P.H.  
Secretary of Health

*Laboratory Scope of Accreditation*

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Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E82502

EPA Lab Code: FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL

8540 Baycenter Road

Jacksonville, FL 32256

Matrix: Solid and Chemical Materials

Analyte	Method/Tech	Category	Certification Type	Effective Date
Acenaphthene	EPA 8270	Extractable Organics	NELAP	2/19/2002
Acenaphthylene	EPA 8270	Extractable Organics	NELAP	2/19/2002
Acetone	EPA 8260	Volatile Organics	NELAP	2/19/2002
Acetonitrile	EPA 8260	Volatile Organics	NELAP	2/19/2002
Acetophenone	EPA 8270	Extractable Organics	NELAP	2/19/2002
Acrolein (Propenal)	EPA 8260	Volatile Organics	NELAP	2/19/2002
Acrylonitrile	EPA 8260	Volatile Organics	NELAP	2/19/2002
Aldrin	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Allyl chloride (3-Chloropropene)	EPA 8260	Volatile Organics	NELAP	2/19/2002
alpha-BHC (alpha-Hexachlorocyclohexane)	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
alpha-Chlordane	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	8/30/2002
Aluminum	EPA 6010	Metals	NELAP	2/19/2002
Aluminum	EPA 6020	Metals	NELAP	2/19/2002
Amenable cyanide	EPA 9012	General Chemistry	NELAP	9/22/2004
Aniline	EPA 8270	Extractable Organics	NELAP	2/19/2002
Anthracene	EPA 8270	Extractable Organics	NELAP	2/19/2002
Antimony	EPA 6010	Metals	NELAP	2/19/2002
Antimony	EPA 6020	Metals	NELAP	2/19/2002
Aramite	EPA 8270	Extractable Organics	NELAP	2/19/2002
Aroclor-1016 (PCB-1016)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Aroclor-1221 (PCB-1221)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Aroclor-1232 (PCB-1232)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Aroclor-1242 (PCB-1242)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Aroclor-1248 (PCB-1248)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Aroclor-1254 (PCB-1254)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Aroclor-1260 (PCB-1260)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Arsenic	EPA 6010	Metals	NELAP	2/19/2002
Arsenic	EPA 6020	Metals	NELAP	2/19/2002
Barium	EPA 6010	Metals	NELAP	2/19/2002
Barium	EPA 6020	Metals	NELAP	2/19/2002
Benzene	EPA 8260	Volatile Organics	NELAP	2/19/2002
Benzidine	EPA 8270	Extractable Organics	NELAP	8/30/2002
Benzo(a)anthracene	EPA 8270	Extractable Organics	NELAP	2/19/2002
Benzo(a)pyrene	EPA 8270	Extractable Organics	NELAP	2/19/2002
Benzo(b)fluoranthene	EPA 8270	Extractable Organics	NELAP	2/19/2002
Benzo(g,h,i)perylene	EPA 8270	Extractable Organics	NELAP	2/19/2002

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Issue Date: 7/1/2007

Expiration Date: 6/30/2008



Charlie Crist  
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Ana M. Viamonte Ros, M.D., M.P.H.  
Secretary of Health

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Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E82502

EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL

8540 Baycenter Road

Jacksonville, FL 32256

Matrix: Solid and Chemical Materials

Analyte	Method/Tech	Category	Certification Type	Effective Date
Benzo(k)fluoranthene	EPA 8270	Extractable Organics	NELAP	2/19/2002
Benzoic acid	EPA 8270	Extractable Organics	NELAP	2/19/2002
Benzyl alcohol	EPA 8270	Extractable Organics	NELAP	2/19/2002
Beryllium	EPA 6010	Metals	NELAP	2/19/2002
Beryllium	EPA 6020	Metals	NELAP	2/19/2002
beta-BHC (beta-Hexachlorocyclohexane)	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
beta-Naphthylamine	EPA 8270	Extractable Organics	NELAP	2/19/2002
bis(2-Chloroethoxy)methane	EPA 8270	Extractable Organics	NELAP	2/19/2002
bis(2-Chloroethyl) ether	EPA 8270	Extractable Organics	NELAP	2/19/2002
bis(2-Chloroisopropyl) ether (2,2'-Oxybis(1-chloropropane))	EPA 8270	Extractable Organics	NELAP	2/19/2002
bis(2-Ethylhexyl) phthalate (DBHP)	EPA 8270	Extractable Organics	NELAP	2/19/2002
Boron	EPA 6010	Metals	NELAP	2/19/2002
Bromide	EPA 9056	General Chemistry	NELAP	2/19/2002
Bromobenzene	EPA 8260	Volatile Organics	NELAP	2/19/2002
Bromochloromethane	EPA 8260	Volatile Organics	NELAP	2/19/2002
Bromodichloromethane	EPA 8260	Volatile Organics	NELAP	2/19/2002
Bromoform	EPA 8260	Volatile Organics	NELAP	2/19/2002
Butyl benzyl phthalate	EPA 8270	Extractable Organics	NELAP	2/19/2002
Cadmium	EPA 6010	Metals	NELAP	2/19/2002
Cadmium	EPA 6020	Metals	NELAP	2/19/2002
Calcium	EPA 6010	Metals	NELAP	2/19/2002
Carbon disulfide	EPA 8260	Volatile Organics	NELAP	2/19/2002
Carbon tetrachloride	EPA 8260	Volatile Organics	NELAP	2/19/2002
Chlordane (tech.)	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Chloride	EPA 9056	General Chemistry	NELAP	2/19/2002
Chlorobenzene	EPA 8260	Volatile Organics	NELAP	2/19/2002
Chlorobenzilate	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Chloroethane	EPA 8260	Volatile Organics	NELAP	2/19/2002
Chloroform	EPA 8260	Volatile Organics	NELAP	2/19/2002
Chloroprene	EPA 8260	Volatile Organics	NELAP	2/19/2002
Chromium	EPA 6010	Metals	NELAP	2/19/2002
Chromium	EPA 6020	Metals	NELAP	2/19/2002
Chromium VI	EPA 7196	General Chemistry	NELAP	2/19/2002
Chrysene	EPA 8270	Extractable Organics	NELAP	2/19/2002
cis-1,2-Dichloroethylene	EPA 8260	Volatile Organics	NELAP	2/19/2002
cis-1,3-Dichloropropene	EPA 8260	Volatile Organics	NELAP	2/19/2002

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Issue Date: 7/1/2007

Expiration Date: 6/30/2008

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Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E82502

EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL

8540 Baycenter Road

Jacksonville, FL 32256

Matrix: Solid and Chemical Materials

Analyte	Method/Tech	Category	Certification Type	Effective Date
Cobalt	EPA 6010	Metals	NELAP	2/19/2002
Cobalt	EPA 6020	Metals	NELAP	2/19/2002
Copper	EPA 6010	Metals	NELAP	2/19/2002
Copper	EPA 6020	Metals	NELAP	2/19/2002
delta-BHC	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Diallate	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Dibenz(a, j) acridine	EPA 8270	Extractable Organics	NELAP	2/19/2002
Dibenz(a,h) anthracene	EPA 8270	Extractable Organics	NELAP	2/19/2002
Dibenzofuran	EPA 8270	Extractable Organics	NELAP	2/19/2002
Dibromochloromethane	EPA 8260	Volatile Organics	NELAP	2/19/2002
Dibromomethane	EPA 8260	Volatile Organics	NELAP	2/19/2002
Dichlorodifluoromethane	EPA 8260	Volatile Organics	NELAP	2/19/2002
Dieldrin	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Diesel range organics (DRO)	EPA 8015	Extractable Organics	NELAP	2/19/2002
Diethyl phthalate	EPA 8270	Extractable Organics	NELAP	2/19/2002
Dimethoate	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Dimethyl phthalate	EPA 8270	Extractable Organics	NELAP	2/19/2002
Di-n-butyl phthalate	EPA 8270	Extractable Organics	NELAP	2/19/2002
Di-n-octyl phthalate	EPA 8270	Extractable Organics	NELAP	2/19/2002
Diphenylamine	EPA 8270	Extractable Organics	NELAP	2/19/2002
Endosulfan I	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Endosulfan II	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Endosulfan sulfate	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Endrin	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Endrin aldehyde	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Ethyl methacrylate	EPA 8260	Volatile Organics	NELAP	2/19/2002
Ethyl methanesulfonate	EPA 8270	Extractable Organics	NELAP	2/19/2002
Ethylbenzene	EPA 8260	Volatile Organics	NELAP	2/19/2002
Famphur	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Fluoranthene	EPA 8270	Extractable Organics	NELAP	2/19/2002
Fluorene	EPA 8270	Extractable Organics	NELAP	2/19/2002
Fluoride	EPA 9056	General Chemistry	NELAP	2/19/2002
gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
gamma-Chlordane	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	8/30/2002
Gasoline range organics (GRO)	EPA 8015	Extractable Organics	NELAP	2/19/2002
Heptachlor	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	2/19/2002

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Issue Date: 7/1/2007

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Charlie Crist  
Governor



Ana M. Viamonte-Ros, M.D., M.P.H.  
Secretary of Health

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Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E82502

EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL  
8540 Baycenter Road  
Jacksonville, FL 32256

Matrix: Solid and Chemical Materials

Analyte	Method/Tech	Category	Certification Type	Effective Date
Heptachlor epoxide	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Hexachlorobenzene	EPA 8270	Extractable Organics	NELAP	2/19/2002
Hexachlorobutadiene	EPA 8260	Volatile Organics	NELAP	2/19/2002
Hexachlorobutadiene	EPA 8270	Extractable Organics	NELAP	2/19/2002
Hexachlorocyclopentadiene	EPA 8270	Extractable Organics	NELAP	2/19/2002
Hexachloroethane	EPA 8270	Extractable Organics	NELAP	2/19/2002
Hexachloropropene	EPA 8270	Extractable Organics	NELAP	2/19/2002
Ignitability	EPA 1020	General Chemistry	NELAP	2/19/2002
Indeno(1,2,3-cd)pyrene	EPA 8270	Extractable Organics	NELAP	2/19/2002
Iodomethane (Methyl iodide)	EPA 8260	Volatile Organics	NELAP	2/19/2002
Iron	EPA 6010	Metals	NELAP	2/19/2002
Isobutyl alcohol (2-Methyl-1-propanol)	EPA 8015	Volatile Organics	NELAP	2/19/2002
Isobutyl alcohol (2-Methyl-1-propanol)	EPA 8260	Volatile Organics	NELAP	2/19/2002
Isodrin	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Isophorone	EPA 8270	Extractable Organics	NELAP	2/19/2002
Isopropylbenzene	EPA 8260	Volatile Organics	NELAP	2/19/2002
Isosafrole	EPA 8270	Extractable Organics	NELAP	2/19/2002
Kepone	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Lead	EPA 6010	Metals	NELAP	2/19/2002
Lead	EPA 6020	Metals	NELAP	2/19/2002
Magnesium	EPA 6010	Metals	NELAP	2/19/2002
Manganese	EPA 6010	Metals	NELAP	2/19/2002
Manganese	EPA 6020	Metals	NELAP	2/19/2002
Mercury	EPA 7471	Metals	NELAP	2/19/2002
Methacrylonitrile	EPA 8260	Volatile Organics	NELAP	2/19/2002
Methanol	EPA 8015	Volatile Organics	NELAP	2/19/2002
Methapyrilene	EPA 8270	Extractable Organics	NELAP	2/19/2002
Methoxychlor	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Methyl bromide (Bromomethane)	EPA 8260	Volatile Organics	NELAP	2/19/2002
Methyl chloride (Chloromethane)	EPA 8260	Volatile Organics	NELAP	2/19/2002
Methyl methacrylate	EPA 8260	Volatile Organics	NELAP	2/19/2002
Methyl methanesulfonate	EPA 8270	Extractable Organics	NELAP	2/19/2002
Methyl parathion (Parathion, methyl)	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Methyl tert-butyl ether (MTBE)	EPA 8260	Volatile Organics	NELAP	8/30/2002
Methylene chloride	EPA 8260	Volatile Organics	NELAP	2/19/2002
Molybdenum	EPA 6010	Metals	NELAP	2/19/2002

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Expiration Date: 6/30/2008



Laboratory Scope of Accreditation

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State Laboratory ID: E82502

EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL

8540 Baycenter Road

Jacksonville, FL 32256

Matrix: Solid and Chemical Materials

Analyte	Method/Tech	Category	Certification Type	Effective Date
Molybdenum	EPA 6020	Metals	NELAP	7/25/2005
Naphthalene	EPA 8260	Volatile Organics	NELAP	2/19/2002
Naphthalene	EPA 8270	Extractable Organics	NELAP	2/19/2002
n-Butyl alcohol	EPA 8015	Volatile Organics	NELAP	2/19/2002
n-Butylbenzene	EPA 8260	Volatile Organics	NELAP	2/19/2002
Nickel	EPA 6010	Metals	NELAP	2/19/2002
Nickel	EPA 6020	Metals	NELAP	2/19/2002
Nitrate	EPA 9056	General Chemistry	NELAP	2/19/2002
Nitrite	EPA 9056	General Chemistry	NELAP	2/19/2002
Nitrobenzene	EPA 8270	Extractable Organics	NELAP	2/19/2002
Nitroquinoline-1-oxide	EPA 8270	Extractable Organics	NELAP	2/19/2002
n-Nitrosodiethylamine	EPA 8270	Extractable Organics	NELAP	2/19/2002
n-Nitrosodimethylamine	EPA 8270	Extractable Organics	NELAP	2/19/2002
n-Nitroso-di-n-butylamine	EPA 8270	Extractable Organics	NELAP	2/19/2002
n-Nitrosodi-n-propylamine	EPA 8270	Extractable Organics	NELAP	2/19/2002
n-Nitrosodiphenylamine	EPA 8270	Extractable Organics	NELAP	2/19/2002
n-Nitrosomethylethylamine	EPA 8270	Extractable Organics	NELAP	2/19/2002
n-Nitrosomorpholine	EPA 8270	Extractable Organics	NELAP	8/30/2002
n-Nitrosopiperidine	EPA 8270	Extractable Organics	NELAP	2/19/2002
n-Nitrosopyrrolidine	EPA 8270	Extractable Organics	NELAP	2/19/2002
o,o,o-Triethyl phosphorothioate	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
o-Toluidine	EPA 8270	Extractable Organics	NELAP	2/19/2002
o-Xylene	EPA 8260	Volatile Organics	NELAP	8/30/2002
Parathion, ethyl	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
p-Dioxane	EPA 8260	Volatile Organics	NELAP	2/19/2002
Pentachlorobenzene	EPA 8270	Extractable Organics	NELAP	2/19/2002
Pentachloronitrobenzene	EPA 8270	Extractable Organics	NELAP	2/19/2002
Pentachlorophenol	EPA 8270	Extractable Organics	NELAP	2/19/2002
pH	EPA 9045	General Chemistry	NELAP	2/19/2002
Phenacetin	EPA 8270	Extractable Organics	NELAP	2/19/2002
Phenanthrene	EPA 8270	Extractable Organics	NELAP	2/19/2002
Phenol	EPA 8270	Extractable Organics	NELAP	2/19/2002
Phorate	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Potassium	EPA 6010	Metals	NELAP	2/19/2002
Pronamide (Kerb)	EPA 8270	Extractable Organics	NELAP	2/19/2002
Propionitrile (Ethyl cyanide)	EPA 8260	Volatile Organics	NELAP	2/19/2002

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Issue Date: 7/1/2007

Expiration Date: 6/30/2008

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Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

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EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL

8540 Baycenter Road

Jacksonville, FL 32256

Matrix: Solid and Chemical Materials

Analyte	Method/Tech	Category	Certification Type	Effective Date
Pyrene	EPA 8270	Extractable Organics	NELAP	2/19/2002
Pyridine	EPA 8270	Extractable Organics	NELAP	2/19/2002
Safrole	EPA 8270	Extractable Organics	NELAP	2/19/2002
sec-Butylbenzene	EPA 8260	Volatile Organics	NELAP	2/19/2002
Selenium	EPA 6010	Metals	NELAP	2/19/2002
Selenium	EPA 6020	Metals	NELAP	7/25/2005
Silver	EPA 6010	Metals	NELAP	2/19/2002
Silver	EPA 6020	Metals	NELAP	2/19/2002
Sodium	EPA 6010	Metals	NELAP	2/19/2002
Styrene	EPA 8260	Volatile Organics	NELAP	2/19/2002
Sulfate	EPA 9056	General Chemistry	NELAP	2/19/2002
Synthetic Precipitation Leaching Procedure	EPA 1312	General Chemistry	NELAP	2/19/2002
tert-Butylbenzene	EPA 8260	Volatile Organics	NELAP	2/19/2002
Tetrachloroethylene (Perchloroethylene)	EPA 8260	Volatile Organics	NELAP	2/19/2002
Thallium	EPA 6010	Metals	NELAP	2/19/2002
Thallium	EPA 6020	Metals	NELAP	2/19/2002
Thionazin (Zinophos)	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	2/19/2002
Tin	EPA 6010	Metals	NELAP	8/30/2002
Toluene	EPA 8260	Volatile Organics	NELAP	2/19/2002
Total cyanide	EPA 9012	General Chemistry	NELAP	9/22/2004
Total nitrate-nitrite	EPA 9056	General Chemistry	NELAP	2/19/2002
Total organic carbon	EPA 9060	General Chemistry	NELAP	8/30/2002
Total Petroleum Hydrocarbons (TPH)	FL-PRO	Extractable Organics	NELAP	2/19/2002
Total Petroleum Hydrocarbons (TPH)	TX1005	Extractable Organics	NELAP	2/19/2002
Toxaphene (Chlorinated camphene)	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	5/7/2003
Toxicity Characteristic Leaching Procedure	EPA 1311	General Chemistry	NELAP	2/19/2002
trans-1,2-Dichloroethylene	EPA 8260	Volatile Organics	NELAP	2/19/2002
trans-1,3-Dichloropropylene	EPA 8260	Volatile Organics	NELAP	2/19/2002
trans-1,4-Dichloro-2-butene	EPA 8260	Volatile Organics	NELAP	8/30/2002
Trichloroethene (Trichloroethylene)	EPA 8260	Volatile Organics	NELAP	2/19/2002
Trichlorofluoromethane	EPA 8260	Volatile Organics	NELAP	2/19/2002
Vanadium	EPA 6010	Metals	NELAP	2/19/2002
Vanadium	EPA 6020	Metals	NELAP	7/25/2005
Vinyl acetate	EPA 8260	Volatile Organics	NELAP	2/19/2002
Vinyl chloride	EPA 8260	Volatile Organics	NELAP	2/19/2002
Xylene (total)	EPA 8260	Volatile Organics	NELAP	2/19/2002

Clients and Customers are urged to verify the laboratory's current certification status with the Environmental Laboratory Certification Program.

Issue Date: 7/1/2007

Expiration Date: 6/30/2008

Charlie Crist  
Governor



Ana M. Viamonte Ros, M.D., M.P.H.  
Secretary of Health

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Attachment to Certificate #: E82502-07, expiration date June 30, 2008. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E82502

EPA Lab Code:

FL00937

(904) 739-2277

E82502

Columbia Analytical Services, Inc. - FL

8540 Baycenter Road

Jacksonville, FL 32256

Matrix: Solid and Chemical Materials

Analyte	Method/Tech	Category	Certification Type	Effective Date
Zinc	EPA 6010	Metals	NELAP	2/19/2002
Zinc	EPA 6020	Metals	NELAP	2/19/2002

Clients and Customers are urged to verify the laboratory's current certification status with the Environmental Laboratory Certification Program.

Issue Date: 7/1/2007

Expiration Date: 6/30/2008

May 22, 2008

Service Request No: J0802291

Kirk Wills  
GeoSyntec Consultants  
14055 Riveredge Drive  
Suite 300  
Tampa, FL 33637

**RE: JED Disposal Facility/FQ1512.01**

Dear Kirk:

Enclosed are the results of the sample(s) submitted to our laboratory on May 14, 2008. For your reference, these analyses have been assigned our service request number **J0802291**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP 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. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please call if you have any questions. My extension is 4409. You may also contact me via email at [CMyers@caslab.com](mailto:CMyers@caslab.com).

Respectfully submitted,

**Columbia Analytical Services, Inc.**



Craig Myers  
Project Chemist

Page 1 of 78

*Laboratory Manager: Greg Jordan*

*Quality Assurance Officer: Kathy Brungard*

*CAS Jacksonville is NELAC-accredited by the State of Florida, #E82502 valid through 6/30/08. Other state accreditations include: Arkansas, #88-0600 valid through 1/12/06; Georgia, #958 valid through 6/30/08; Louisiana, #02086 valid through 6/30/08; Texas, #T104704197-06-TX valid through 5/31/08; North Carolina, #527 valid through 12/31/07; South Carolina, #96021001 valid through 6/30/08.*

## COLUMBIA ANALYTICAL SERVICES, INC.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility  
**Sample Matrix:** Water

**Service Request No.:** J0802291  
**Date Received:** 5/14/08

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

#### Sample Receipt

Nine water samples and one trip blank were received for analysis at Columbia Analytical Services on 5/14/08. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at  $4\pm 2^{\circ}\text{C}$  upon receipt at the lab except for aqueous samples designated for metals analyses, which were stored at room temperature.

#### Volatile Organic Compounds by GC-MS

The samples were analyzed for Volatile Organics using EPA Method 8260. The following observations were made regarding this delivery group.

#### Matrix Spike Recovery Exceptions

The upper control criterion was exceeded for the following analyte in Matrix Spike (MS) MW-11BMS and Duplicate Matrix Spike (DMS) MW-11BDMS: Dibromochloromethane. The analyte in question was not detected in the associated field samples above the method reporting limit. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

#### Lab Control Sample Exceptions

The spike recovery of Dibromochloromethane for Laboratory Control Sample (LCS) JWG0801846-3 was outside the upper control criterion. The analyte in question was not detected in the associated field samples above the method reporting limit. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

#### Elevated Method Reporting Limits

The reporting limits are elevated for all analytes in sample MW-11A. The sample was diluted prior to instrumental analysis due to the foaming nature of the matrix. The reporting limits are adjusted to reflect the dilution.

#### EDB and DBCP by GC-ECD

The samples were analyzed for EDB and DBCP using EPA Method 8011. No problems were observed.

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



Date 5/22/08



#### Batch QC Notes and Discussion

Quality control samples for MS/DMS were performed using samples from another sample delivery group (SDG). The frequency requirement for quality control sample analysis was consistent with the project's requirements. Matrix specific quality control results have no bearing on sample data from a different matrix or location. Therefore, control of the batch has been evaluated using the method blank and the laboratory control sample.

#### Metals by ICP-MS/ICP-OES/CVAA

The samples were analyzed for Total Metals using EPA Methods 6020/6010B/7470A. The following observations were made regarding this delivery group.

#### Matrix Spike Recovery Exceptions

The control criteria for matrix spike recoveries of Iron for sample MW-11A are not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

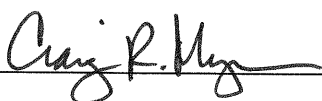
#### Batch QC Notes and Discussion

Quality control samples for some parameters (i.e., Dup/Spike or MS/DMS samples) were performed using samples from another sample delivery group (SDG). The frequency requirement for quality control sample analysis was consistent with the project's requirements. Matrix specific quality control results have no bearing on sample data from a different matrix or location. Therefore, control of the batch has been evaluated using the method blank and the laboratory control sample.

#### General Chemistry Parameters

The samples were analyzed for Inorganic Parameters using various EPA Methods. No problems were observed.

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



Date \_\_\_\_\_

5/22/08

## Florida DEP Data Qualifiers

B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
H	Value based on field kit determination; results may not be accurate.
i	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J	Estimated value (one of the following reasons is discussed in the project case narrative). <ol style="list-style-type: none"><li>1. The result may be inaccurate because the surrogate recovery limits have been exceeded.</li><li>2. No known quality control criteria exists for the component.</li><li>3. The reported value failed to meet the established quality control criteria for either precision or accuracy.</li><li>4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).</li><li>5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).</li></ol>
K	Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
L	Off scale high. The analyte is above the upper limit of the linear calibration range.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
N	Presumptive evidence of the analyte. Confirmation was not performed.
Q	Sample held beyond the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	The laboratory analysis was from an improperly preserved sample.
Z	Too many colonies were present (TNTC). The numeric value represents the filtration volume.

## 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.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01

**Service Request:** J0802291

**SAMPLE CROSS-REFERENCE**

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J0802291-001	MW-11A	05/13/08	15:50
J0802291-002	MW-11B	05/13/08	16:20
J0802291-003	MW-11C	05/13/08	15:50
J0802291-004	MW-12A	05/13/08	14:05
J0802291-005	MW-12B	05/13/08	15:00
J0802291-006	MW-12C	05/13/08	13:55
J0802291-007	MW-13A	05/13/08	10:40
J0802291-008	MW-13B	05/13/08	11:20
J0802291-009	MW-13C	05/13/08	10:50
J0802291-010	Trip Blank	05/13/08	00:00

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802291  
 Date Collected: 05/13/2008  
 Date Received: 05/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-11A  
 Lab Code: J0802291-001  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	5.0	1.1	5	05/16/08	05/16/08	JWG0801846	
Vinyl Chloride	ND	U	5.0	1.2	5	05/16/08	05/16/08	JWG0801846	
Bromomethane	ND	U	5.0	1.0	5	05/16/08	05/16/08	JWG0801846	
Chloroethane	ND	U	5.0	1.2	5	05/16/08	05/16/08	JWG0801846	
Trichlorofluoromethane	ND	U	5.0	1.3	5	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethene	ND	U	5.0	1.4	5	05/16/08	05/16/08	JWG0801846	
Acetone	ND	U	250	8.5	5	05/16/08	05/16/08	JWG0801846	
Iodomethane (Methyl Iodide)	ND	U	25	3.8	5	05/16/08	05/16/08	JWG0801846	
Carbon Disulfide	ND	U	50	5.0	5	05/16/08	05/16/08	JWG0801846	
Methylene Chloride	ND	U	25	2.6	5	05/16/08	05/16/08	JWG0801846	
trans-1,2-Dichloroethene	ND	U	5.0	1.1	5	05/16/08	05/16/08	JWG0801846	
Acrylonitrile	ND	U	50	3.9	5	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethane	ND	U	5.0	1.2	5	05/16/08	05/16/08	JWG0801846	
Vinyl Acetate	ND	U	50	3.7	5	05/16/08	05/16/08	JWG0801846	
cis-1,2-Dichloroethene	ND	U	5.0	1.0	5	05/16/08	05/16/08	JWG0801846	
2-Butanone (MEK)	ND	U	50	3.9	5	05/16/08	05/16/08	JWG0801846	
Bromochloromethane	ND	U	5.0	0.95	5	05/16/08	05/16/08	JWG0801846	
Chloroform	ND	U	5.0	0.90	5	05/16/08	05/16/08	JWG0801846	
1,1,1-Trichloroethane (TCA)	ND	U	5.0	0.85	5	05/16/08	05/16/08	JWG0801846	
Carbon Tetrachloride	ND	U	5.0	1.3	5	05/16/08	05/16/08	JWG0801846	
<b>Benzene</b>	<b>3.0</b>	<b>I</b>	5.0	1.0	5	05/16/08	05/16/08	JWG0801846	
1,2-Dichloroethane (EDC)	ND	U	5.0	0.90	5	05/16/08	05/16/08	JWG0801846	
Trichloroethene (TCE)	ND	U	5.0	1.2	5	05/16/08	05/16/08	JWG0801846	
1,2-Dichloropropane	ND	U	5.0	0.90	5	05/16/08	05/16/08	JWG0801846	
Dibromomethane	ND	U	5.0	1.0	5	05/16/08	05/16/08	JWG0801846	
Bromodichloromethane	ND	U	5.0	0.75	5	05/16/08	05/16/08	JWG0801846	
cis-1,3-Dichloropropene	ND	U	5.0	0.70	5	05/16/08	05/16/08	JWG0801846	
4-Methyl-2-pentanone (MIBK)	ND	U	130	3.4	5	05/16/08	05/16/08	JWG0801846	
Toluene	ND	U	5.0	0.70	5	05/16/08	05/16/08	JWG0801846	
trans-1,3-Dichloropropene	ND	U	5.0	0.70	5	05/16/08	05/16/08	JWG0801846	
1,1,2-Trichloroethane	ND	U	5.0	1.1	5	05/16/08	05/16/08	JWG0801846	
Tetrachloroethene (PCE)	ND	U	5.0	2.2	5	05/16/08	05/16/08	JWG0801846	
2-Hexanone	ND	U	130	2.7	5	05/16/08	05/16/08	JWG0801846	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802291  
 Date Collected: 05/13/2008  
 Date Received: 05/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-11A  
 Lab Code: J0802291-001  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	UJ	5.0	1.3	5	05/16/08	05/16/08	JWG0801846	J(3)
1,2-Dibromoethane (EDB)	ND	U	5.0	1.0	5	05/16/08	05/16/08	JWG0801846	
Chlorobenzene	ND	U	5.0	0.95	5	05/16/08	05/16/08	JWG0801846	
1,1,1,2-Tetrachloroethane	ND	U	5.0	1.1	5	05/16/08	05/16/08	JWG0801846	
Ethylbenzene	4.4	I	5.0	1.0	5	05/16/08	05/16/08	JWG0801846	
m,p-Xylenes	2.8	I	10	2.4	5	05/16/08	05/16/08	JWG0801846	
o-Xylene	ND	U	5.0	1.3	5	05/16/08	05/16/08	JWG0801846	
Styrene	ND	U	5.0	1.1	5	05/16/08	05/16/08	JWG0801846	
Bromoform	ND	U	5.0	1.2	5	05/16/08	05/16/08	JWG0801846	
1,1,2,2-Tetrachloroethane	ND	U	5.0	0.70	5	05/16/08	05/16/08	JWG0801846	
1,2,3-Trichloropropane	ND	U	5.0	2.4	5	05/16/08	05/16/08	JWG0801846	
1,4-Dichlorobenzene	ND	U	5.0	1.1	5	05/16/08	05/16/08	JWG0801846	
trans-1,4-Dichloro-2-butene	ND	U	100	3.0	5	05/16/08	05/16/08	JWG0801846	
1,2-Dichlorobenzene	ND	U	5.0	1.7	5	05/16/08	05/16/08	JWG0801846	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	10	4.0	5	05/16/08	05/16/08	JWG0801846	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	86	71-122	05/16/08	Acceptable
4-Bromofluorobenzene	83	75-120	05/16/08	Acceptable
Dibromofluoromethane	92	82-116	05/16/08	Acceptable
Toluene-d8	111	88-117	05/16/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802291  
**Date Collected:** 05/13/2008  
**Date Received:** 05/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-11B  
**Lab Code:** J0802291-002  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
Vinyl Chloride	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
Bromomethane	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Chloroethane	ND	U	1.0	0.24	1	05/16/08	05/16/08	JWG0801846	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/16/08	05/16/08	JWG0801846	
Acetone	ND	U	50	1.7	1	05/16/08	05/16/08	JWG0801846	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/16/08	05/16/08	JWG0801846	
Carbon Disulfide	ND	U	10	1.0	1	05/16/08	05/16/08	JWG0801846	
Methylene Chloride	ND	U	5.0	0.51	1	05/16/08	05/16/08	JWG0801846	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Acrylonitrile	ND	U	10	0.77	1	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
Vinyl Acetate	ND	U	10	0.73	1	05/16/08	05/16/08	JWG0801846	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
2-Butanone (MEK)	ND	U	10	0.77	1	05/16/08	05/16/08	JWG0801846	
Bromochloromethane	ND	U	1.0	0.19	1	05/16/08	05/16/08	JWG0801846	
Chloroform	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/16/08	05/16/08	JWG0801846	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/16/08	05/16/08	JWG0801846	
Benzene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
Dibromomethane	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Bromodichloromethane	ND	U	1.0	0.15	1	05/16/08	05/16/08	JWG0801846	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/16/08	05/16/08	JWG0801846	
Toluene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/16/08	05/16/08	JWG0801846	
2-Hexanone	ND	U	25	0.54	1	05/16/08	05/16/08	JWG0801846	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802291  
**Date Collected:** 05/13/2008  
**Date Received:** 05/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-11B  
**Lab Code:** J0802291-002  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	UJ	1.0	0.25	1	05/16/08	05/16/08	JWG0801846	J(3)
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Chlorobenzene	ND	U	1.0	0.19	1	05/16/08	05/16/08	JWG0801846	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Ethylbenzene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
m,p-Xylenes	ND	U	2.0	0.47	1	05/16/08	05/16/08	JWG0801846	
o-Xylene	ND	U	1.0	0.25	1	05/16/08	05/16/08	JWG0801846	
Styrene	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Bromoform	ND	U	1.0	0.24	1	05/16/08	05/16/08	JWG0801846	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/16/08	05/16/08	JWG0801846	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/16/08	05/16/08	JWG0801846	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/16/08	05/16/08	JWG0801846	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	87	71-122	05/16/08	Acceptable
4-Bromofluorobenzene	84	75-120	05/16/08	Acceptable
Dibromofluoromethane	92	82-116	05/16/08	Acceptable
Toluene-d8	111	88-117	05/16/08	Acceptable

Comments:



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802291  
**Date Collected:** 05/13/2008  
**Date Received:** 05/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-11C  
**Lab Code:** J0802291-003  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
Vinyl Chloride	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
Bromomethane	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Chloroethane	ND	U	1.0	0.24	1	05/16/08	05/16/08	JWG0801846	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/16/08	05/16/08	JWG0801846	
Acetone	ND	U	50	1.7	1	05/16/08	05/16/08	JWG0801846	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/16/08	05/16/08	JWG0801846	
Carbon Disulfide	ND	U	10	1.0	1	05/16/08	05/16/08	JWG0801846	
Methylene Chloride	ND	U	5.0	0.51	1	05/16/08	05/16/08	JWG0801846	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Acrylonitrile	ND	U	10	0.77	1	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
Vinyl Acetate	ND	U	10	0.73	1	05/16/08	05/16/08	JWG0801846	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
2-Butanone (MEK)	ND	U	10	0.77	1	05/16/08	05/16/08	JWG0801846	
Bromochloromethane	ND	U	1.0	0.19	1	05/16/08	05/16/08	JWG0801846	
Chloroform	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/16/08	05/16/08	JWG0801846	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/16/08	05/16/08	JWG0801846	
Benzene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
Dibromomethane	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Bromodichloromethane	ND	U	1.0	0.15	1	05/16/08	05/16/08	JWG0801846	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/16/08	05/16/08	JWG0801846	
Toluene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/16/08	05/16/08	JWG0801846	
2-Hexanone	ND	U	25	0.54	1	05/16/08	05/16/08	JWG0801846	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802291  
 Date Collected: 05/13/2008  
 Date Received: 05/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-11C  
 Lab Code: J0802291-003  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	UJ	1.0	0.25	1	05/16/08	05/16/08	JWG0801846	J(3)
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Chlorobenzene	ND	U	1.0	0.19	1	05/16/08	05/16/08	JWG0801846	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Ethylbenzene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
m,p-Xylenes	ND	U	2.0	0.47	1	05/16/08	05/16/08	JWG0801846	
o-Xylene	ND	U	1.0	0.25	1	05/16/08	05/16/08	JWG0801846	
Styrene	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Bromoform	ND	U	1.0	0.24	1	05/16/08	05/16/08	JWG0801846	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/16/08	05/16/08	JWG0801846	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/16/08	05/16/08	JWG0801846	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/16/08	05/16/08	JWG0801846	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	85	71-122	05/16/08	Acceptable
4-Bromofluorobenzene	85	75-120	05/16/08	Acceptable
Dibromofluoromethane	92	82-116	05/16/08	Acceptable
Toluene-d8	110	88-117	05/16/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802291  
 Date Collected: 05/13/2008  
 Date Received: 05/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-12A  
 Lab Code: J0802291-004  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
Vinyl Chloride	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
Bromomethane	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Chloroethane	ND	U	1.0	0.24	1	05/16/08	05/16/08	JWG0801846	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/16/08	05/16/08	JWG0801846	
Acetone	ND	U	50	1.7	1	05/16/08	05/16/08	JWG0801846	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/16/08	05/16/08	JWG0801846	
Carbon Disulfide	ND	U	10	1.0	1	05/16/08	05/16/08	JWG0801846	
Methylene Chloride	ND	U	5.0	0.51	1	05/16/08	05/16/08	JWG0801846	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Acrylonitrile	ND	U	10	0.77	1	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
Vinyl Acetate	ND	U	10	0.73	1	05/16/08	05/16/08	JWG0801846	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
2-Butanone (MEK)	ND	U	10	0.77	1	05/16/08	05/16/08	JWG0801846	
Bromochloromethane	ND	U	1.0	0.19	1	05/16/08	05/16/08	JWG0801846	
Chloroform	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/16/08	05/16/08	JWG0801846	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/16/08	05/16/08	JWG0801846	
Benzene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
Dibromomethane	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Bromodichloromethane	ND	U	1.0	0.15	1	05/16/08	05/16/08	JWG0801846	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/16/08	05/16/08	JWG0801846	
Toluene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/16/08	05/16/08	JWG0801846	
2-Hexanone	ND	U	25	0.54	1	05/16/08	05/16/08	JWG0801846	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802291  
 Date Collected: 05/13/2008  
 Date Received: 05/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-12A  
 Lab Code: J0802291-004  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	UJ	1.0	0.25	1	05/16/08	05/16/08	JWG0801846	J(3)
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Chlorobenzene	ND	U	1.0	0.19	1	05/16/08	05/16/08	JWG0801846	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Ethylbenzene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
m,p-Xylenes	ND	U	2.0	0.47	1	05/16/08	05/16/08	JWG0801846	
o-Xylene	ND	U	1.0	0.25	1	05/16/08	05/16/08	JWG0801846	
Styrene	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Bromoform	ND	U	1.0	0.24	1	05/16/08	05/16/08	JWG0801846	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/16/08	05/16/08	JWG0801846	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/16/08	05/16/08	JWG0801846	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/16/08	05/16/08	JWG0801846	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	86	71-122	05/16/08	Acceptable
4-Bromofluorobenzene	85	75-120	05/16/08	Acceptable
Dibromofluoromethane	93	82-116	05/16/08	Acceptable
Toluene-d8	112	88-117	05/16/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802291  
 Date Collected: 05/13/2008  
 Date Received: 05/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-12B  
 Lab Code: J0802291-005  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
Vinyl Chloride	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
Bromomethane	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Chloroethane	ND	U	1.0	0.24	1	05/16/08	05/16/08	JWG0801846	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/16/08	05/16/08	JWG0801846	
Acetone	ND	U	50	1.7	1	05/16/08	05/16/08	JWG0801846	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/16/08	05/16/08	JWG0801846	
Carbon Disulfide	ND	U	10	1.0	1	05/16/08	05/16/08	JWG0801846	
Methylene Chloride	ND	U	5.0	0.51	1	05/16/08	05/16/08	JWG0801846	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Acrylonitrile	ND	U	10	0.77	1	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
Vinyl Acetate	ND	U	10	0.73	1	05/16/08	05/16/08	JWG0801846	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
2-Butanone (MEK)	ND	U	10	0.77	1	05/16/08	05/16/08	JWG0801846	
Bromochloromethane	ND	U	1.0	0.19	1	05/16/08	05/16/08	JWG0801846	
Chloroform	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/16/08	05/16/08	JWG0801846	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/16/08	05/16/08	JWG0801846	
Benzene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
Dibromomethane	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Bromodichloromethane	ND	U	1.0	0.15	1	05/16/08	05/16/08	JWG0801846	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/16/08	05/16/08	JWG0801846	
Toluene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/16/08	05/16/08	JWG0801846	
2-Hexanone	ND	U	25	0.54	1	05/16/08	05/16/08	JWG0801846	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802291  
**Date Collected:** 05/13/2008  
**Date Received:** 05/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-12B  
**Lab Code:** J0802291-005  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	UJ	1.0	0.25	1	05/16/08	05/16/08	JWG0801846	J(3)
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Chlorobenzene	ND	U	1.0	0.19	1	05/16/08	05/16/08	JWG0801846	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Ethylbenzene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
m,p-Xylenes	ND	U	2.0	0.47	1	05/16/08	05/16/08	JWG0801846	
o-Xylene	ND	U	1.0	0.25	1	05/16/08	05/16/08	JWG0801846	
Styrene	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Bromoform	ND	U	1.0	0.24	1	05/16/08	05/16/08	JWG0801846	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/16/08	05/16/08	JWG0801846	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/16/08	05/16/08	JWG0801846	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/16/08	05/16/08	JWG0801846	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	86	71-122	05/16/08	Acceptable
4-Bromofluorobenzene	84	75-120	05/16/08	Acceptable
Dibromofluoromethane	93	82-116	05/16/08	Acceptable
Toluene-d8	111	88-117	05/16/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802291  
 Date Collected: 05/13/2008  
 Date Received: 05/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-12C  
 Lab Code: J0802291-006  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
Vinyl Chloride	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
Bromomethane	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Chloroethane	ND	U	1.0	0.24	1	05/16/08	05/16/08	JWG0801846	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/16/08	05/16/08	JWG0801846	
Acetone	ND	U	50	1.7	1	05/16/08	05/16/08	JWG0801846	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/16/08	05/16/08	JWG0801846	
Carbon Disulfide	ND	U	10	1.0	1	05/16/08	05/16/08	JWG0801846	
Methylene Chloride	ND	U	5.0	0.51	1	05/16/08	05/16/08	JWG0801846	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Acrylonitrile	ND	U	10	0.77	1	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
Vinyl Acetate	ND	U	10	0.73	1	05/16/08	05/16/08	JWG0801846	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
2-Butanone (MEK)	ND	U	10	0.77	1	05/16/08	05/16/08	JWG0801846	
Bromochloromethane	ND	U	1.0	0.19	1	05/16/08	05/16/08	JWG0801846	
Chloroform	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/16/08	05/16/08	JWG0801846	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/16/08	05/16/08	JWG0801846	
Benzene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
Dibromomethane	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Bromodichloromethane	ND	U	1.0	0.15	1	05/16/08	05/16/08	JWG0801846	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/16/08	05/16/08	JWG0801846	
Toluene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/16/08	05/16/08	JWG0801846	
2-Hexanone	ND	U	25	0.54	1	05/16/08	05/16/08	JWG0801846	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802291  
 Date Collected: 05/13/2008  
 Date Received: 05/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-12C  
 Lab Code: J0802291-006  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	UJ	1.0	0.25	1	05/16/08	05/16/08	JWG0801846	J(3)
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Chlorobenzene	ND	U	1.0	0.19	1	05/16/08	05/16/08	JWG0801846	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Ethylbenzene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
m,p-Xylenes	ND	U	2.0	0.47	1	05/16/08	05/16/08	JWG0801846	
o-Xylene	ND	U	1.0	0.25	1	05/16/08	05/16/08	JWG0801846	
Styrene	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Bromoform	ND	U	1.0	0.24	1	05/16/08	05/16/08	JWG0801846	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/16/08	05/16/08	JWG0801846	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/16/08	05/16/08	JWG0801846	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/16/08	05/16/08	JWG0801846	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	87	71-122	05/16/08	Acceptable
4-Bromofluorobenzene	84	75-120	05/16/08	Acceptable
Dibromofluoromethane	93	82-116	05/16/08	Acceptable
Toluene-d8	111	88-117	05/16/08	Acceptable

Comments:



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802291  
 Date Collected: 05/13/2008  
 Date Received: 05/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-13A  
 Lab Code: J0802291-007  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
Vinyl Chloride	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
Bromomethane	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Chloroethane	ND	U	1.0	0.24	1	05/16/08	05/16/08	JWG0801846	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/16/08	05/16/08	JWG0801846	
Acetone	ND	U	50	1.7	1	05/16/08	05/16/08	JWG0801846	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/16/08	05/16/08	JWG0801846	
Carbon Disulfide	ND	U	10	1.0	1	05/16/08	05/16/08	JWG0801846	
Methylene Chloride	ND	U	5.0	0.51	1	05/16/08	05/16/08	JWG0801846	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Acrylonitrile	ND	U	10	0.77	1	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
Vinyl Acetate	ND	U	10	0.73	1	05/16/08	05/16/08	JWG0801846	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
2-Butanone (MEK)	ND	U	10	0.77	1	05/16/08	05/16/08	JWG0801846	
Bromochloromethane	ND	U	1.0	0.19	1	05/16/08	05/16/08	JWG0801846	
Chloroform	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/16/08	05/16/08	JWG0801846	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/16/08	05/16/08	JWG0801846	
Benzene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
Dibromomethane	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Bromodichloromethane	ND	U	1.0	0.15	1	05/16/08	05/16/08	JWG0801846	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/16/08	05/16/08	JWG0801846	
Toluene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/16/08	05/16/08	JWG0801846	
2-Hexanone	ND	U	25	0.54	1	05/16/08	05/16/08	JWG0801846	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802291  
**Date Collected:** 05/13/2008  
**Date Received:** 05/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-13A  
**Lab Code:** J0802291-007  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	UJ	1.0	0.25	1	05/16/08	05/16/08	JWG0801846	J(3)
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Chlorobenzene	ND	U	1.0	0.19	1	05/16/08	05/16/08	JWG0801846	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Ethylbenzene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
m,p-Xylenes	ND	U	2.0	0.47	1	05/16/08	05/16/08	JWG0801846	
o-Xylene	ND	U	1.0	0.25	1	05/16/08	05/16/08	JWG0801846	
Styrene	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Bromoform	ND	U	1.0	0.24	1	05/16/08	05/16/08	JWG0801846	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/16/08	05/16/08	JWG0801846	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/16/08	05/16/08	JWG0801846	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/16/08	05/16/08	JWG0801846	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	86	71-122	05/16/08	Acceptable
4-Bromofluorobenzene	85	75-120	05/16/08	Acceptable
Dibromofluoromethane	92	82-116	05/16/08	Acceptable
Toluene-d8	111	88-117	05/16/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802291  
 Date Collected: 05/13/2008  
 Date Received: 05/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-13B  
 Lab Code: J0802291-008  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
Vinyl Chloride	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
Bromomethane	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Chloroethane	ND	U	1.0	0.24	1	05/16/08	05/16/08	JWG0801846	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/16/08	05/16/08	JWG0801846	
Acetone	ND	U	50	1.7	1	05/16/08	05/16/08	JWG0801846	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/16/08	05/16/08	JWG0801846	
Carbon Disulfide	ND	U	10	1.0	1	05/16/08	05/16/08	JWG0801846	
Methylene Chloride	ND	U	5.0	0.51	1	05/16/08	05/16/08	JWG0801846	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Acrylonitrile	ND	U	10	0.77	1	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
Vinyl Acetate	ND	U	10	0.73	1	05/16/08	05/16/08	JWG0801846	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
2-Butanone (MEK)	ND	U	10	0.77	1	05/16/08	05/16/08	JWG0801846	
Bromochloromethane	ND	U	1.0	0.19	1	05/16/08	05/16/08	JWG0801846	
Chloroform	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/16/08	05/16/08	JWG0801846	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/16/08	05/16/08	JWG0801846	
Benzene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
Dibromomethane	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Bromodichloromethane	ND	U	1.0	0.15	1	05/16/08	05/16/08	JWG0801846	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/16/08	05/16/08	JWG0801846	
Toluene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/16/08	05/16/08	JWG0801846	
2-Hexanone	ND	U	25	0.54	1	05/16/08	05/16/08	JWG0801846	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802291  
**Date Collected:** 05/13/2008  
**Date Received:** 05/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-13B  
**Lab Code:** J0802291-008  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	UJ	1.0	0.25	1	05/16/08	05/16/08	JWG0801846	J(3)
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Chlorobenzene	ND	U	1.0	0.19	1	05/16/08	05/16/08	JWG0801846	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Ethylbenzene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
m,p-Xylenes	ND	U	2.0	0.47	1	05/16/08	05/16/08	JWG0801846	
o-Xylene	ND	U	1.0	0.25	1	05/16/08	05/16/08	JWG0801846	
Styrene	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Bromoform	ND	U	1.0	0.24	1	05/16/08	05/16/08	JWG0801846	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/16/08	05/16/08	JWG0801846	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/16/08	05/16/08	JWG0801846	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/16/08	05/16/08	JWG0801846	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	86	71-122	05/16/08	Acceptable
4-Bromofluorobenzene	85	75-120	05/16/08	Acceptable
Dibromofluoromethane	91	82-116	05/16/08	Acceptable
Toluene-d8	111	88-117	05/16/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802291  
 Date Collected: 05/13/2008  
 Date Received: 05/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-13C  
 Lab Code: J0802291-009  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
Vinyl Chloride	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
Bromomethane	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Chloroethane	ND	U	1.0	0.24	1	05/16/08	05/16/08	JWG0801846	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/16/08	05/16/08	JWG0801846	
Acetone	ND	U	50	1.7	1	05/16/08	05/16/08	JWG0801846	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/16/08	05/16/08	JWG0801846	
Carbon Disulfide	ND	U	10	1.0	1	05/16/08	05/16/08	JWG0801846	
Methylene Chloride	ND	U	5.0	0.51	1	05/16/08	05/16/08	JWG0801846	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Acrylonitrile	ND	U	10	0.77	1	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
Vinyl Acetate	ND	U	10	0.73	1	05/16/08	05/16/08	JWG0801846	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
2-Butanone (MEK)	ND	U	10	0.77	1	05/16/08	05/16/08	JWG0801846	
Bromochloromethane	ND	U	1.0	0.19	1	05/16/08	05/16/08	JWG0801846	
Chloroform	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/16/08	05/16/08	JWG0801846	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/16/08	05/16/08	JWG0801846	
Benzene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
Dibromomethane	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Bromodichloromethane	ND	U	1.0	0.15	1	05/16/08	05/16/08	JWG0801846	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/16/08	05/16/08	JWG0801846	
Toluene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/16/08	05/16/08	JWG0801846	
2-Hexanone	ND	U	25	0.54	1	05/16/08	05/16/08	JWG0801846	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802291  
 Date Collected: 05/13/2008  
 Date Received: 05/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-13C  
 Lab Code: J0802291-009  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	UJ	1.0	0.25	1	05/16/08	05/16/08	JWG0801846	J(3)
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Chlorobenzene	ND	U	1.0	0.19	1	05/16/08	05/16/08	JWG0801846	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Ethylbenzene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
m,p-Xylenes	ND	U	2.0	0.47	1	05/16/08	05/16/08	JWG0801846	
o-Xylene	ND	U	1.0	0.25	1	05/16/08	05/16/08	JWG0801846	
Styrene	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Bromoform	ND	U	1.0	0.24	1	05/16/08	05/16/08	JWG0801846	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/16/08	05/16/08	JWG0801846	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/16/08	05/16/08	JWG0801846	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/16/08	05/16/08	JWG0801846	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	86	71-122	05/16/08	Acceptable
4-Bromofluorobenzene	83	75-120	05/16/08	Acceptable
Dibromofluoromethane	92	82-116	05/16/08	Acceptable
Toluene-d8	111	88-117	05/16/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802291  
**Date Collected:** 05/13/2008  
**Date Received:** 05/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** Trip Blank  
**Lab Code:** J0802291-010  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
Vinyl Chloride	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
Bromomethane	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Chloroethane	ND	U	1.0	0.24	1	05/16/08	05/16/08	JWG0801846	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/16/08	05/16/08	JWG0801846	
Acetone	ND	U	50	1.7	1	05/16/08	05/16/08	JWG0801846	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/16/08	05/16/08	JWG0801846	
Carbon Disulfide	ND	U	10	1.0	1	05/16/08	05/16/08	JWG0801846	
Methylene Chloride	ND	U	5.0	0.51	1	05/16/08	05/16/08	JWG0801846	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Acrylonitrile	ND	U	10	0.77	1	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
Vinyl Acetate	ND	U	10	0.73	1	05/16/08	05/16/08	JWG0801846	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
2-Butanone (MEK)	ND	U	10	0.77	1	05/16/08	05/16/08	JWG0801846	
Bromochloromethane	ND	U	1.0	0.19	1	05/16/08	05/16/08	JWG0801846	
Chloroform	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/16/08	05/16/08	JWG0801846	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/16/08	05/16/08	JWG0801846	
Benzene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
Dibromomethane	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Bromodichloromethane	ND	U	1.0	0.15	1	05/16/08	05/16/08	JWG0801846	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/16/08	05/16/08	JWG0801846	
Toluene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/16/08	05/16/08	JWG0801846	
2-Hexanone	ND	U	25	0.54	1	05/16/08	05/16/08	JWG0801846	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802291  
 Date Collected: 05/13/2008  
 Date Received: 05/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Trip Blank  
 Lab Code: J0802291-010  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	0.33	I	1.0	0.25	1	05/16/08	05/16/08	JWG0801846	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Chlorobenzene	ND	U	1.0	0.19	1	05/16/08	05/16/08	JWG0801846	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Ethylbenzene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
m,p-Xylenes	ND	U	2.0	0.47	1	05/16/08	05/16/08	JWG0801846	
o-Xylene	ND	U	1.0	0.25	1	05/16/08	05/16/08	JWG0801846	
Styrene	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Bromoform	ND	U	1.0	0.24	1	05/16/08	05/16/08	JWG0801846	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/16/08	05/16/08	JWG0801846	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/16/08	05/16/08	JWG0801846	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/16/08	05/16/08	JWG0801846	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	87	71-122	05/16/08	Acceptable
4-Bromofluorobenzene	84	75-120	05/16/08	Acceptable
Dibromofluoromethane	92	82-116	05/16/08	Acceptable
Toluene-d8	111	88-117	05/16/08	Acceptable

Comments:



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802291  
 Date Collected: NA  
 Date Received: NA

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Method Blank  
 Lab Code: JWG0801846-4  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
Vinyl Chloride	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
Bromomethane	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Chloroethane	ND	U	1.0	0.24	1	05/16/08	05/16/08	JWG0801846	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/16/08	05/16/08	JWG0801846	
Acetone	ND	U	50	1.7	1	05/16/08	05/16/08	JWG0801846	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/16/08	05/16/08	JWG0801846	
Carbon Disulfide	ND	U	10	1.0	1	05/16/08	05/16/08	JWG0801846	
Methylene Chloride	ND	U	5.0	0.51	1	05/16/08	05/16/08	JWG0801846	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Acrylonitrile	ND	U	10	0.77	1	05/16/08	05/16/08	JWG0801846	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
Vinyl Acetate	ND	U	10	0.73	1	05/16/08	05/16/08	JWG0801846	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
2-Butanone (MEK)	ND	U	10	0.77	1	05/16/08	05/16/08	JWG0801846	
Bromochloromethane	ND	U	1.0	0.19	1	05/16/08	05/16/08	JWG0801846	
Chloroform	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/16/08	05/16/08	JWG0801846	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/16/08	05/16/08	JWG0801846	
Benzene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/16/08	05/16/08	JWG0801846	
Dibromomethane	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Bromodichloromethane	ND	U	1.0	0.15	1	05/16/08	05/16/08	JWG0801846	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/16/08	05/16/08	JWG0801846	
Toluene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/16/08	05/16/08	JWG0801846	
2-Hexanone	ND	U	25	0.54	1	05/16/08	05/16/08	JWG0801846	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802291  
 Date Collected: NA  
 Date Received: NA

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Method Blank  
 Lab Code: JWG0801846-4  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	UJ	1.0	0.25	1	05/16/08	05/16/08	JWG0801846	J(3)
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
Chlorobenzene	ND	U	1.0	0.19	1	05/16/08	05/16/08	JWG0801846	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Ethylbenzene	ND	U	1.0	0.20	1	05/16/08	05/16/08	JWG0801846	
m,p-Xylenes	ND	U	2.0	0.47	1	05/16/08	05/16/08	JWG0801846	
o-Xylene	ND	U	1.0	0.25	1	05/16/08	05/16/08	JWG0801846	
Styrene	ND	U	1.0	0.22	1	05/16/08	05/16/08	JWG0801846	
Bromoform	ND	U	1.0	0.24	1	05/16/08	05/16/08	JWG0801846	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/16/08	05/16/08	JWG0801846	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/16/08	05/16/08	JWG0801846	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/16/08	05/16/08	JWG0801846	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/16/08	05/16/08	JWG0801846	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/16/08	05/16/08	JWG0801846	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/16/08	05/16/08	JWG0801846	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	86	71-122	05/16/08	Acceptable
4-Bromofluorobenzene	84	75-120	05/16/08	Acceptable
Dibromofluoromethane	93	82-116	05/16/08	Acceptable
Toluene-d8	112	88-117	05/16/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802291  
**Date Collected:** 05/13/2008  
**Date Received:** 05/14/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-11A  
**Lab Code:** J0802291-001  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/20/08	JWG0801842	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/20/08	JWG0801842	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	126	77-150	05/20/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802291  
**Date Collected:** 05/13/2008  
**Date Received:** 05/14/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-11B  
**Lab Code:** J0802291-002  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/20/08	JWG0801842	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/20/08	JWG0801842	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	126	77-150	05/20/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802291  
**Date Collected:** 05/13/2008  
**Date Received:** 05/14/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-11C  
**Lab Code:** J0802291-003  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/20/08	JWG0801842	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/20/08	JWG0801842	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	123	77-150	05/20/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802291  
**Date Collected:** 05/13/2008  
**Date Received:** 05/14/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-12A  
**Lab Code:** J0802291-004  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/20/08	JWG0801842	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/20/08	JWG0801842	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	121	77-150	05/20/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802291  
**Date Collected:** 05/13/2008  
**Date Received:** 05/14/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-12B  
**Lab Code:** J0802291-005  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/20/08	JWG0801842	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/20/08	JWG0801842	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	124	77-150	05/20/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802291  
**Date Collected:** 05/13/2008  
**Date Received:** 05/14/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-12C  
**Lab Code:** J0802291-006  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/20/08	JWG0801842	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/20/08	JWG0801842	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	119	77-150	05/20/08	Acceptable

Comments: \_\_\_\_\_



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802291  
**Date Collected:** 05/13/2008  
**Date Received:** 05/14/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-13A  
**Lab Code:** J0802291-007  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/20/08	JWG0801842	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/20/08	JWG0801842	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	105	77-150	05/20/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802291  
**Date Collected:** 05/13/2008  
**Date Received:** 05/14/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-13B  
**Lab Code:** J0802291-008  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/20/08	JWG0801842	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/20/08	JWG0801842	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	122	77-150	05/20/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802291  
**Date Collected:** 05/13/2008  
**Date Received:** 05/14/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-13C  
**Lab Code:** J0802291-009  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/20/08	JWG0801842	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/20/08	JWG0801842	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	123	77-150	05/20/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802291  
**Date Collected:** NA  
**Date Received:** NA

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** Method Blank  
**Lab Code:** JWG0801842-4

**Units:** ug/L  
**Basis:** NA

**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/19/08	JWG0801842	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/19/08	JWG0801842	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	132	77-150	05/19/08	Acceptable

Comments: \_\_\_\_\_

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802291  
**Date Collected:** 5/13/2008  
**Date Received:** 5/14/2008

### Total Metals

**Sample Name:** MW-11A  
**Lab Code:** J0802291-001

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/14/2008	05/15/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/14/2008	05/15/2008	21	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/14/2008	05/15/2008	9.4	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/14/2008	05/15/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/14/2008	05/15/2008	5.6	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	0.96	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/14/2008	05/15/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/15/2008	05/15/2008	23300	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	0.33	i
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/14/2008	05/15/2008	1.0	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/14/2008	05/15/2008	1.3	i
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/14/2008	05/15/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/14/2008	05/15/2008	5.0	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/14/2008	05/15/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802291  
**Date Collected:** 5/13/2008  
**Date Received:** 5/14/2008

### Total Metals

**Sample Name:** MW-11B  
**Lab Code:** J0802291-002

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/14/2008	05/15/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/14/2008	05/15/2008	0.41	i
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/14/2008	05/15/2008	20	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/14/2008	05/15/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/14/2008	05/15/2008	1.9	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/14/2008	05/15/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/15/2008	05/15/2008	685	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	0.38	i
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/14/2008	05/15/2008	0.37	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/14/2008	05/15/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/14/2008	05/15/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/14/2008	05/15/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/14/2008	05/15/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802291  
**Date Collected:** 5/13/2008  
**Date Received:** 5/14/2008

### Total Metals

**Sample Name:** MW-11C  
**Lab Code:** J0802291-003

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/14/2008	05/15/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/14/2008	05/15/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/14/2008	05/15/2008	8.3	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/14/2008	05/15/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/14/2008	05/15/2008	1.5	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/14/2008	05/15/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/15/2008	05/15/2008	513	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/14/2008	05/15/2008	0.46	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/14/2008	05/15/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/14/2008	05/15/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/14/2008	05/15/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/14/2008	05/15/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802291  
**Date Collected:** 5/13/2008  
**Date Received:** 5/14/2008

### Total Metals

**Sample Name:** MW-12A  
**Lab Code:** J0802291-004

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/14/2008	05/15/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/14/2008	05/15/2008	12	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/14/2008	05/15/2008	15	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/14/2008	05/15/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/14/2008	05/15/2008	1.7	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	0.96	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/14/2008	05/15/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/15/2008	05/15/2008	75100	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/14/2008	05/15/2008	0.63	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/14/2008	05/15/2008	2.0	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/14/2008	05/15/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/14/2008	05/15/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/14/2008	05/15/2008	U	



# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802291  
**Date Collected:** 5/13/2008  
**Date Received:** 5/14/2008

### Total Metals

**Sample Name:** MW-12B  
**Lab Code:** J0802291-005

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/14/2008	05/15/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/14/2008	05/15/2008	0.22	i
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/14/2008	05/15/2008	33	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/14/2008	05/15/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/14/2008	05/15/2008	2.1	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/14/2008	05/15/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/15/2008	05/15/2008	1080	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	1.3	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/14/2008	05/15/2008	0.53	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/14/2008	05/15/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/14/2008	05/15/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/14/2008	05/15/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/14/2008	05/15/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802291  
**Date Collected:** 5/13/2008  
**Date Received:** 5/14/2008

### Total Metals

**Sample Name:** MW-12C  
**Lab Code:** J0802291-006

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/14/2008	05/15/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/14/2008	05/15/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/14/2008	05/15/2008	18	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/14/2008	05/15/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/14/2008	05/15/2008	0.85	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/14/2008	05/15/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/15/2008	05/15/2008	653	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/14/2008	05/15/2008	U	
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/14/2008	05/15/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/14/2008	05/15/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/14/2008	05/15/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/14/2008	05/15/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802291  
**Date Collected:** 5/13/2008  
**Date Received:** 5/14/2008

### Total Metals

**Sample Name:** MW-13A  
**Lab Code:** J0802291-007

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/14/2008	05/15/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/14/2008	05/15/2008	24	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/14/2008	05/15/2008	10.0	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/14/2008	05/15/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/14/2008	05/15/2008	4.6	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	0.77	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/14/2008	05/15/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/15/2008	05/15/2008	23000	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/14/2008	05/15/2008	0.37	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/14/2008	05/15/2008	0.71	i
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/14/2008	05/15/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/14/2008	05/15/2008	4.4	i
Zinc	EPA 3020A	6020	10	4.0	1.0	05/14/2008	05/15/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802291  
**Date Collected:** 5/13/2008  
**Date Received:** 5/14/2008

### Total Metals

**Sample Name:** MW-13B  
**Lab Code:** J0802291-008

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/14/2008	05/15/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/14/2008	05/15/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/14/2008	05/15/2008	12	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/14/2008	05/15/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/14/2008	05/15/2008	1.7	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/14/2008	05/15/2008	0.50	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/15/2008	05/15/2008	875	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	0.90	i
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/14/2008	05/15/2008	0.37	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/14/2008	05/15/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/14/2008	05/15/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/14/2008	05/15/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/14/2008	05/15/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802291  
**Date Collected:** 5/13/2008  
**Date Received:** 5/14/2008

### Total Metals

**Sample Name:** MW-13C  
**Lab Code:** J0802291-009

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/14/2008	05/15/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/14/2008	05/15/2008	0.34	i
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/14/2008	05/15/2008	22	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/14/2008	05/15/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/14/2008	05/15/2008	1.5	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/14/2008	05/15/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/15/2008	05/15/2008	640	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	0.28	i
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/14/2008	05/15/2008	0.38	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/14/2008	05/15/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/14/2008	05/15/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/14/2008	05/15/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/14/2008	05/15/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/14/2008	05/15/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802291  
**Date Collected:** N/A  
**Date Received:** N/A

### Total Metals

**Sample Name:** Method Blank  
**Lab Code:** MB2-0514

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.4	1.0	05/14/2008	05/15/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/14/2008	05/15/2008	U	
Barium	EPA 3020A	6020	2.0	0.6	1.0	05/14/2008	05/15/2008	U	
Beryllium	EPA 3020A	6020	1.0	0.2	1.0	05/14/2008	05/15/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/14/2008	05/15/2008	U	
Chromium	EPA 3020A	6020	2.0	0.8	1.0	05/14/2008	05/15/2008	U	
Cobalt	EPA 3020A	6020	1.0	0.2	1.0	05/14/2008	05/15/2008	U	
Copper	EPA 3020A	6020	2.0	0.3	1.0	05/14/2008	05/15/2008	U	
Iron	EPA 3010A	6010B	50.0	4.0	1.0	05/15/2008	05/15/2008	U	
Lead	EPA 3020A	6020	1.0	0.2	1.0	05/14/2008	05/15/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.3	1.0	05/14/2008	05/15/2008	U	
Selenium	EPA 3020A	6020	2.0	0.7	1.0	05/14/2008	05/15/2008	U	
Silver	EPA 3020A	6020	0.5	0.1	1.0	05/14/2008	05/15/2008	U	
Thallium	EPA 3020A	6020	1.0	0.2	1.0	05/14/2008	05/15/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/14/2008	05/15/2008	U	
Zinc	EPA 3020A	6020	10.0	4.0	1.0	05/14/2008	05/15/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802291  
**Date Collected:** 05/13/2008  
**Date Received:** 05/14/2008

### Total Metals Sodium

**Prep Method:** EPA 3010A  
**Analysis Method:** 6010B  
**Test Notes:**

**Units:** mg/L  
**Basis:** N/A

Sample Name:	Lab Code:	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MW-11A	J0802291-001	0.50	0.02	1.0	05/15/2008	05/15/2008	9.9	
MW-11B	J0802291-002	0.50	0.02	1.0	05/15/2008	05/15/2008	15	
MW-11C	J0802291-003	0.50	0.02	1.0	05/15/2008	05/15/2008	10	
MW-12A	J0802291-004	0.50	0.02	1.0	05/15/2008	05/15/2008	14	
MW-12B	J0802291-005	0.50	0.02	1.0	05/15/2008	05/15/2008	7.0	
MW-12C	J0802291-006	0.50	0.02	1.0	05/15/2008	05/15/2008	5.4	
MW-13A	J0802291-007	0.50	0.02	1.0	05/15/2008	05/15/2008	9.0	
MW-13B	J0802291-008	0.50	0.02	1.0	05/15/2008	05/15/2008	7.8	
MW-13C	J0802291-009	0.50	0.02	1.0	05/15/2008	05/15/2008	7.8	
Method Blank	MB2-0515	0.50	0.02	1.0	05/15/2008	05/15/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802291  
**Date Collected :** 05/13/08  
**Date Received :** 05/14/08

## Inorganic Parameters

**Sample Name :** MW-11A  
**Lab Code :** J0802291-001  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/14/08 12:10	8.0	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/14/08 12:33	11	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/14/08 17:33	0.16	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/15/08 13:30	190	



# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802291  
**Date Collected :** 05/13/08  
**Date Received :** 05/14/08

## Inorganic Parameters

**Sample Name :** MW-11B  
**Lab Code :** J0802291-002  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/14/08 12:10	0.13	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/14/08 12:33	25	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/14/08 18:16	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/15/08 13:30	66	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802291  
**Date Collected :** 05/13/08  
**Date Received :** 05/14/08

## Inorganic Parameters

**Sample Name :** MW-11C  
**Lab Code :** J0802291-003  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/14/08 12:10	0.14	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/14/08 12:33	18	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/14/08 18:31	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/15/08 13:30	76	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802291  
**Date Collected :** 05/13/08  
**Date Received :** 05/14/08

## Inorganic Parameters

**Sample Name :** MW-12A  
**Lab Code :** J0802291-004  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/14/08 12:10	1.6	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/14/08 12:33	17	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/14/08 18:46	0.16	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/15/08 13:30	180	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802291  
**Date Collected :** 05/13/08  
**Date Received :** 05/14/08

## Inorganic Parameters

**Sample Name :** MW-12B  
**Lab Code :** J0802291-005  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/14/08 12:10	0.17	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/14/08 12:33	17	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/14/08 19:31	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/15/08 13:30	60	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802291  
**Date Collected :** 05/13/08  
**Date Received :** 05/14/08

## Inorganic Parameters

**Sample Name :** MW-12C  
**Lab Code :** J0802291-006  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/14/08 12:10	0.15	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/14/08 12:33	8.3	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/14/08 19:46	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/15/08 13:30	33	

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802291  
**Date Collected :** 05/13/08  
**Date Received :** 05/14/08

## Inorganic Parameters

**Sample Name :** MW-13A  
**Lab Code :** J0802291-007  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/14/08 12:10	1.5	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/14/08 12:33	16	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/14/08 20:01	0.16	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/15/08 13:30	130	

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802291  
**Date Collected :** 05/13/08  
**Date Received :** 05/14/08

## Inorganic Parameters

**Sample Name :** MW-13B  
**Lab Code :** J0802291-008  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/14/08 12:10	0.17	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/14/08 12:33	12	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/14/08 20:16	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/15/08 13:30	49	

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802291  
**Date Collected :** 05/13/08  
**Date Received :** 05/14/08

## Inorganic Parameters

**Sample Name :** MW-13C  
**Lab Code :** J0802291-009  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/14/08 12:10	0.16	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/14/08 12:33	11	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/14/08 20:31	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/15/08 13:30	47	



# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802291  
**Date Collected :** NA  
**Date Received :** NA

## Inorganic Parameters

**Sample Name :** Method Blank  
**Lab Code :** J0802291-MB  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/14/08 12:10	U	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/14/08 12:33	U	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/14/08 12:33	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/15/08 13:30	U	

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoSyntec Consultants  
Project: JED Disposal Facility/FQ1512.01  
Sample Matrix: Water

Service Request: J0802291

Surrogate Recovery Summary  
Appendix I Volatile Organic Compounds by GC/MS

Extraction Method: EPA 5030B  
Analysis Method: 8260B

Units: PERCENT  
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>	<u>Sur4</u>
MW-11A	J0802291-001	86	83	92	111
MW-11B	J0802291-002	87	84	92	111
MW-11C	J0802291-003	85	85	92	110
MW-12A	J0802291-004	86	85	93	112
MW-12B	J0802291-005	86	84	93	111
MW-12C	J0802291-006	87	84	93	111
MW-13A	J0802291-007	86	85	92	111
MW-13B	J0802291-008	86	85	91	111
MW-13C	J0802291-009	86	83	92	111
Trip Blank	J0802291-010	87	84	92	111
Method Blank	JWG0801846-4	86	84	93	112
MW-11BMS	JWG0801846-1	89	85	94	109
MW-11BDMS	JWG0801846-2	87	85	93	110
Lab Control Sample	JWG0801846-3	86	84	93	110

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Surrogate Recovery Control Limits (%)

Sur1 = 1,2-Dichloroethane-d4	71-122
Sur2 = 4-Bromofluorobenzene	75-120
Sur3 = Dibromofluoromethane	82-116
Sur4 = Toluene-d8	88-117

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Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802291  
 Date Extracted: 05/16/2008  
 Date Analyzed: 05/16/2008

Matrix Spike/Duplicate Matrix Spike Summary  
 Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-11B  
 Lab Code: J0802291-002  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0801846

Analyte Name	Sample Result	MW-11BMS JWG0801846-1 Matrix Spike			MW-11BDMS JWG0801846-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Chloromethane	ND	23.7	20.0	119	22.5	20.0	113	73-139	5	30
Vinyl Chloride	ND	24.2	20.0	121	23.9	20.0	120	78-141	1	30
Bromomethane	ND	20.9	20.0	104	19.7	20.0	98	78-129	6	30
Chloroethane	ND	21.9	20.0	109	20.8	20.0	104	76-129	5	30
Trichlorofluoromethane	ND	23.2	20.0	116	22.1	20.0	111	81-133	5	30
1,1-Dichloroethene	ND	21.5	20.0	107	20.8	20.0	104	79-133	3	30
Acetone	ND	87.1	100	87	86.8	100	87	56-139	0	30
Iodomethane (Methyl Iodide)	ND	104	100	104	102	100	102	74-134	2	30
Carbon Disulfide	ND	106	100	106	105	100	105	71-146	1	30
Methylene Chloride	ND	18.9	20.0	95	18.6	20.0	93	75-123	2	30
trans-1,2-Dichloroethene	ND	19.9	20.0	99	18.9	20.0	95	76-125	5	30
Acrylonitrile	ND	90.1	100	90	89.7	100	90	68-131	0	30
1,1-Dichloroethane	ND	19.4	20.0	97	19.0	20.0	95	78-125	2	30
Vinyl Acetate	ND	53.2	100	53	53.7	100	54	43-163	1	30
cis-1,2-Dichloroethene	ND	21.2	20.0	106	20.7	20.0	103	75-127	2	30
2-Butanone (MEK)	ND	87.5	100	88	87.2	100	87	63-134	0	30
Bromochloromethane	ND	21.5	20.0	108	21.6	20.0	108	80-124	0	30
Chloroform	ND	21.5	20.0	108	21.0	20.0	105	81-124	2	30
1,1,1-Trichloroethane (TCA)	ND	19.9	20.0	100	19.2	20.0	96	76-130	4	30
Carbon Tetrachloride	ND	22.8	20.0	114	22.1	20.0	111	76-131	3	30
Benzene	ND	19.6	20.0	98	19.2	20.0	96	78-123	2	30
1,2-Dichloroethane (EDC)	ND	21.0	20.0	105	19.1	20.0	96	74-126	10	30
Trichloroethene (TCE)	ND	20.7	20.0	104	20.7	20.0	103	77-128	0	30
1,2-Dichloropropane	ND	18.4	20.0	92	18.0	20.0	90	77-122	2	30
Dibromomethane	ND	20.1	20.0	101	20.0	20.0	100	78-124	0	30
Bromodichloromethane	ND	21.5	20.0	108	20.9	20.0	105	79-125	3	30
cis-1,3-Dichloropropene	ND	20.1	20.0	101	19.9	20.0	100	77-117	1	30
4-Methyl-2-pentanone (MIBK)	ND	101	100	101	100	100	100	65-138	0	30
Toluene	ND	23.3	20.0	117	22.5	20.0	113	86-119	4	30
trans-1,3-Dichloropropene	ND	18.8	20.0	94	18.8	20.0	94	75-120	0	30
1,1,2-Trichloroethane	ND	21.4	20.0	107	21.4	20.0	107	77-124	0	30
Tetrachloroethene (PCE)	ND	24.1	20.0	121	24.0	20.0	120	79-123	1	30
2-Hexanone	ND	96.8	100	97	98.5	100	98	63-142	2	30

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802291  
 Date Extracted: 05/16/2008  
 Date Analyzed: 05/16/2008

Matrix Spike/Duplicate Matrix Spike Summary  
 Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-11B  
 Lab Code: J0802291-002  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0801846

Analyte Name	Sample Result	MW-11BMS JWG0801846-1 Matrix Spike			MW-11BDMS JWG0801846-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Dibromochloromethane	ND	26.9	20.0	134 *	26.8	20.0	134 *	78-124	0	30
1,2-Dibromoethane (EDB)	ND	22.0	20.0	110	21.7	20.0	108	81-119	1	30
Chlorobenzene	ND	22.3	20.0	112	21.8	20.0	109	81-120	3	30
1,1,1,2-Tetrachloroethane	ND	23.2	20.0	116	23.1	20.0	115	82-118	0	30
Ethylbenzene	ND	23.0	20.0	115	22.4	20.0	112	87-122	3	30
m,p-Xylenes	ND	45.7	40.0	114	44.3	40.0	111	82-120	3	30
o-Xylene	ND	22.4	20.0	112	21.9	20.0	109	85-119	2	30
Styrene	ND	22.2	20.0	111	21.7	20.0	109	84-126	2	30
Bromoform	ND	24.7	20.0	124	24.6	20.0	123	70-129	1	30
1,1,2,2-Tetrachloroethane	ND	21.8	20.0	109	22.1	20.0	110	72-127	1	30
1,2,3-Trichloropropane	ND	21.8	20.0	109	21.8	20.0	109	76-123	0	30
1,4-Dichlorobenzene	ND	20.8	20.0	104	20.4	20.0	102	75-115	2	30
trans-1,4-Dichloro-2-butene	ND	13.1	20.0	65	13.3	20.0	66	22-135	2	30
1,2-Dichlorobenzene	ND	20.2	20.0	101	20.3	20.0	102	77-116	1	30
1,2-Dibromo-3-chloropropane (DBCP)	ND	19.4	20.0	97	20.5	20.0	102	54-120	5	30

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802291  
 Date Extracted: 05/16/2008  
 Date Analyzed: 05/16/2008

Lab Control Spike Summary  
 Appendix I Volatile Organic Compounds by GC/MS

Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0801846

Lab Control Sample  
 JWG0801846-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Chloromethane	15.7	20.0	79	67-135
Vinyl Chloride	17.2	20.0	86	78-132
Bromomethane	18.4	20.0	92	79-130
Chloroethane	16.4	20.0	82	74-126
Trichlorofluoromethane	18.5	20.0	92	74-134
1,1-Dichloroethene	16.7	20.0	84	78-130
Acetone	79.9	100	80	67-133
Iodomethane (Methyl Iodide)	94.9	100	95	68-134
Carbon Disulfide	87.6	100	88	76-138
Methylene Chloride	16.9	20.0	84	72-124
trans-1,2-Dichloroethene	16.5	20.0	82	77-124
Acrylonitrile	82.0	100	82	77-127
1,1-Dichloroethane	16.6	20.0	83	80-128
Vinyl Acetate	81.1	100	81	61-148
cis-1,2-Dichloroethene	18.7	20.0	93	80-126
2-Butanone (MEK)	80.2	100	80	73-127
Bromochloromethane	20.5	20.0	102	79-129
Chloroform	18.1	20.0	91	83-124
1,1,1-Trichloroethane (TCA)	17.7	20.0	88	79-124
Carbon Tetrachloride	20.9	20.0	105	81-125
Benzene	17.0	20.0	85	79-119
1,2-Dichloroethane (EDC)	18.9	20.0	94	80-124
Trichloroethene (TCE)	18.7	20.0	93	76-124
1,2-Dichloropropane	16.0	20.0	80	79-123
Dibromomethane	18.8	20.0	94	83-123
Bromodichloromethane	19.6	20.0	98	81-123
cis-1,3-Dichloropropene	20.3	20.0	101	86-123
4-Methyl-2-pentanone (MIBK)	93.1	100	93	72-136
Toluene	20.8	20.0	104	86-117
trans-1,3-Dichloropropene	20.1	20.0	100	83-124
1,1,2-Trichloroethane	20.7	20.0	103	86-114
Tetrachloroethene (PCE)	21.7	20.0	109	80-121
2-Hexanone	91.9	100	92	71-138
Dibromochloromethane	26.4	20.0	132 *	82-121
1,2-Dibromoethane (EDB)	21.7	20.0	109	88-117

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802291  
**Date Extracted:** 05/16/2008  
**Date Analyzed:** 05/16/2008

**Lab Control Spike Summary**  
**Appendix I Volatile Organic Compounds by GC/MS**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0801846

Lab Control Sample  
JWG0801846-3  
Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Chlorobenzene	20.5	20.0	103	86-113
1,1,1,2-Tetrachloroethane	23.0	20.0	115	85-117
Ethylbenzene	20.5	20.0	102	90-118
m,p-Xylenes	41.4	40.0	104	86-121
o-Xylene	20.2	20.0	101	89-119
Styrene	21.2	20.0	106	89-122
Bromoform	25.3	20.0	126	68-129
1,1,2,2-Tetrachloroethane	20.6	20.0	103	83-120
1,2,3-Trichloropropane	21.2	20.0	106	83-123
1,4-Dichlorobenzene	19.8	20.0	99	83-113
trans-1,4-Dichloro-2-butene	15.0	20.0	75	53-143
1,2-Dichlorobenzene	19.7	20.0	99	84-115
1,2-Dibromo-3-chloropropane (DBCP)	21.9	20.0	109	62-123

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802291

**Surrogate Recovery Summary**  
**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** PERCENT  
**Level:** Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
MW-11A	J0802291-001	126
MW-11B	J0802291-002	126
MW-11C	J0802291-003	123
MW-12A	J0802291-004	121
MW-12B	J0802291-005	124
MW-12C	J0802291-006	119
MW-13A	J0802291-007	105
MW-13B	J0802291-008	122
MW-13C	J0802291-009	123
Method Blank	JWG0801842-4	132
Lab Control Sample	JWG0801842-3	120

**Surrogate Recovery Control Limits (%)**

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Sur1 = 1,1,1,2-Tetrachloroethane 77-150

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Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802291  
**Date Extracted:** 05/16/2008  
**Date Analyzed:** 05/19/2008

**Lab Control Spike Summary**  
**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0801842

Analyte Name	Lab Control Sample JWG0801842-3			%Rec Limits
	Lab Control Spike			
	Result	Expected	%Rec	
1,2-Dibromoethane (EDB)	0.273	0.250	109	70-130
1,2-Dibromo-3-chloropropane (DBCP)	0.273	0.250	109	70-130

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

Client: GeoSyntec Consultants  
Project Name: JED Disposal Facility  
Project Number: FQ1512.01  
Matrix: WATER

Service Request: J0802291  
Date Collected: 05/13/2008  
Date Received: 05/14/2008  
Date Extracted: 05/15/2008  
Date Analyzed: 05/15/2008

### Matrix Spike/Matrix Spike Duplicate Summary Total Metals

Sample Name: MW-11A  
Lab Code: J0802291-001

J0802291-001S

Units: ug/L  
Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec		Result Notes
				MS	DMS		MS	DMS	MS	DMS	RPD	Acceptance Limits		
Iron	EPA 3010	6010B	50	2000	2000	23300	25200	25300	NC	NC	<1	75 - 125		

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802291  
**Date Collected:** 05/13/2008  
**Date Received:** 05/14/2008  
**Date Extracted:** 05/15/2008  
**Date Analyzed:** 05/15/2008

### Matrix Spike/Matrix Spike Duplicate Summary Total Metals

**Sample Name:** MW-11A  
**Lab Code:** J0802291-001

J0802291-001S

**Units:** mg/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec	Result Notes
				MS	DMS		MS	DMS	MS	DMS	RPD	Acceptance Limits	
Sodium	EPA 3010	6010B	0.5	10.0	10.0	9.9	19.7	19.6	98	97	1	75 - 125	

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802291  
**Date Collected:** N/A  
**Date Received:** N/A  
**Date Extracted:** 05/14/2008  
**Date Analyzed:** 05/15/2008

### Laboratory Control Sample Summary Total Metals

**Sample Name:** Lab Control Sample  
**Lab Code:** LCS2-0514

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	True Value	Results	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Antimony	EPA 3020A	6020	50.0	47.3	95	80 - 120	
Arsenic	EPA 3020A	6020	50.0	52.4	105	80 - 120	
Barium	EPA 3020A	6020	50.0	49.0	98	80 - 120	
Beryllium	EPA 3020A	6020	50.0	47.7	95	80 - 120	
Cadmium	EPA 3020A	6020	50.0	47.2	94	80 - 120	
Chromium	EPA 3020A	6020	50.0	48.9	98	80 - 120	
Cobalt	EPA 3020A	6020	50.0	49.3	99	80 - 120	
Copper	EPA 3020A	6020	50.0	59.0	118	80 - 120	
Iron	EPA 3010A	6010B	2000	1960	98	80 - 120	
Lead	EPA 3020A	6020	50.0	51.4	103	80 - 120	
Mercury	METHOD	7470A	5.00	4.83	97	80 - 120	
Nickel	EPA 3020A	6020	50.0	50.4	101	80 - 120	
Selenium	EPA 3020A	6020	50.0	47.5	95	80 - 120	
Silver	EPA 3020A	6020	50.0	51.9	104	80 - 120	
Thallium	EPA 3020A	6020	50.0	49.2	98	80 - 120	
Vanadium	EPA 3020A	6020	50.0	49.0	98	80 - 120	
Zinc	EPA 3020A	6020	100	114.0	114	80 - 120	

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802291  
**Date Collected:** N/A  
**Date Received:** N/A  
**Date Extracted:** 05/15/2008  
**Date Analyzed:** 05/15/2008

### Laboratory Control Sample Summary Total Metals

**Sample Name:** Lab Control Sample  
**Lab Code:** LCS2-0515

**Units:** mg/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	True Value	Results	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Sodium	EPA 3010A	6010B	10.0	9.6	96	80 - 120	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802291  
**Date Collected :** 05/13/08  
**Date Received :** 05/14/08  
**Date Extracted :** NA  
**Date Analyzed :** 05/14,15/08

### Duplicate Summary Inorganic Parameters

**Sample Name :** MW-11A  
**Lab Code :** J0802291-001DUP  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	Sample Result	Duplicate		Relative Percent Difference	Result Notes
					Sample Result	Average		
Chloride	mg/L (ppm)	300.0	0.2	11	11	11	<1	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.16	0.16	0.16	<1	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	190	200	195	5	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802291  
**Date Collected :** 05/13/08  
**Date Received :** 05/14/08  
**Date Extracted :** NA  
**Date Analyzed :** 05/14/08

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** MW-11A  
**Lab Code :** J0802291-001MS  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
								Percent Recovery Acceptance Limits	
Chloride	mg/L (ppm)	300.0	0.2	50.0	11	59.8	98	90-110	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	10	0.16	9.76	96	90-110	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802291  
**Date Collected :** 05/13/08  
**Date Received :** 05/14/08  
**Date Extracted :** NA  
**Date Analyzed :** 05/14/08

### Duplicate Summary Inorganic Parameters

**Sample Name :** MW-11B  
**Lab Code :** J0802291-002DUP  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</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	mg/L (ppm)	350.1	0.05	0.13	0.12	0.125	8	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802291  
**Date Collected :** 05/13/08  
**Date Received :** 05/14/08  
**Date Extracted :** NA  
**Date Analyzed :** 05/14/08

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** MW-11B  
**Lab Code :** J0802291-002MS  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
								Percent Recovery Acceptance Limits	
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	5.00	0.13	4.69	91	90-110	



# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802291  
**Date Collected :** NA  
**Date Received :** NA  
**Date Extracted :** NA  
**Date Analyzed :** 05/14,15/08

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** J0802291-LCS  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	True Value	Result	Percent Recovery	CAS	Result Notes
						Percent Recovery Acceptance Limits	
Ammonia as Nitrogen	mg/L (ppm)	350.1	5.00	5.06	101	90-110	
Chloride	mg/L (ppm)	300.0	50.0	53.0	106	90-110	
Nitrate as Nitrogen	mg/L (ppm)	300.0	10	10.5	105	90-110	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	300	299	100	85-115	

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

Client: Geosyntec  
Project: SED Disposal Facility

Service Request # JS02291

Cooler received on 5/14/08

and opened on 5/14/08 by 820

COURIER: CAS UPS FEDEX DHL CLIENT

Tracking # JS081505142

- |    |   |            |    |     |
|----|---|------------|----|-----|
| 1  | Were custody seals on outside of cooler?                                      | <u>Yes</u> | No | N/A |
| 2  | Were seals intact, signed and dated?  | <u>Yes</u> | No | N/A |
| 3  | Were custody papers properly filled out?                                      | <u>Yes</u> | No | N/A |
| 4  | Temperature of cooler(s) upon receipt (Should be 4 +/- 2 degrees C)           | <u>0.5</u> |    |     |
| 5  | Correct Temperature?  | <u>Yes</u> | No | N/A |
| 6  | Were Ice or Ice Packs present   | <u>Yes</u> | No | N/A |
| 7  | Did all bottles arrive in good condition (unbroken, etc....)?                 | <u>Yes</u> | No | N/A |
| 8  | Were all bottle labels complete (sample ID, preservation, etc....)?           | <u>Yes</u> | No | N/A |
| 9  | Did all bottle labels and tags agree with custody papers?                     | <u>Yes</u> | No | N/A |
| 10 | Were the correct bottles used for the tests indicated?                        | <u>Yes</u> | No | N/A |
| 11 | Were all of the preserved bottles received with the appropriate preservative? | <u>Yes</u> | No | N/A |

HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2  
Preservative additions noted below

- |    |   |            |        |     |
|----|---|------------|--------|-----|
| 12 | Were all samples received within analysis holding times?                  | <u>Yes</u> | No     | N/A |
| 13 | Were VOA vials checked for absence of air bubbles? If present, note below | <u>Yes</u> | No     | N/A |
| 14 | Where did the bottles originate?  | <u>CAS</u> | Client |     |

Sample ID	Reagent	Manuf. Lot # or CAS Chem ID	ml added	Initials

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted:

Date: 76

Initials:

Date:

Note that pH is checked and meets the required pH criterion listed in the column heading unless otherwise noted on cooler receipt form.

		Bottle Code																														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Container	Pres.	40ml 4umL	40ml 4umL	40ml	40ml	125ml	125ml	125ml	125ml	125ml	250ml	250ml	250ml	250ml	250ml	250ml	500ml	500ml	500ml	500ml	1L	1L	1L	1L	1L	202	402	802	1602	5g	100ml	Misc.
Req. pH	Sample #	G	G	G	G	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	G	G	G	G	G	G	G	G	G	P	Misc.	
	-001	N/A	HCl	N/A	H2SO4	HCl	H2SO4	HNO3	H2SO4	HNO3	ZnAcetate	NaOH	NaOH	HNO3	HNO3	H2SO4	HNO3	H2SO4	HNO3	HNO3	HCl	H2SO4	H2SO4	H2SO4	H2SO4	H2SO4	H2SO4	H2SO4	H2SO4	N/A	N/A	
	-002	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	-003	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	-004	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	-005	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	-006	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	-007	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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	-040	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

## CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM



**Columbia  
Analytical  
Services** INC.  
An Employee - Owned Company  
[www.caslab.com](http://www.caslab.com)

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

#SR

162208291

CAS Contact

PAGE / OF

• FAX (904) 739-2011

800-695-7227

rville, FL 32256 (904

Highway, Ste 200 • J

Company 9143 P

### An Employee

Project Name		Project Number		ANALYSIS REQUESTED (Include Method Number)	
JED Disposal Facility		FQ 1512.01			
Project Manager		Email Address			
Kirk Wills		kwill@geosyntec.com			
Company/Address					
Geosyntec					
14055 R. Vreba Dr.		STB300			
Tampa, FL 33637					
Phone #		FAX #			
813-558-0940		813-558-9726			
Sample's Signature		Sampler's Printed Name			
Joe Terry		Joe Terry, Tom Wills			
CLIENT SAMPLE ID		LAB ID		SAMPLING DATE	
MW-11A				5/13/08	
MW-11B				1550	
MW-11C				1600	
MW-12A				1550	
MW-12B				1405	
MW-12C				1500	
MW-13A				1355	
MW-13B				1040	
MW-13C				1120	
Trip Blanks				1050	
SPECIAL INSTRUCTIONS/COMMENTS		CUSTODY SEALS: Y N		RECEIVED BY	
				RELINQUISHED BY	
				Signature	
				Printed Name	
				Firm	
				Date/Time	
				78	
				Signature	
				Printed Name	
				Firm	
				Date/Time	
				Joe Terry	
				Firm	
				Date/Time	
				5-13-08/1710	

May 27, 2008

Service Request No: J0802326

Kirk Wills  
GeoSyntec Consultants  
14055 Riveredge Drive  
Suite 300  
Tampa, FL 33637

**RE: JED Disposal Facility/FQ1512.01**

Dear Kirk:

Enclosed are the results of the sample(s) submitted to our laboratory on May 15, 2008. For your reference, these analyses have been assigned our service request number **J0802326**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP 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. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please call if you have any questions. My extension is 4409. You may also contact me via email at [CMyers@caslab.com](mailto:CMyers@caslab.com).

Respectfully submitted,

**Columbia Analytical Services, Inc.**



Craig Myers  
Project Chemist

Page 1 of 103

*Laboratory Manager: Greg Jordan*

*Quality Assurance Officer: Kathy Brungard*

*CAS Jacksonville is NELAC-accredited by the State of Florida, #E82502 valid through 6/30/08. Other state accreditations include: Arkansas, #88-0600 valid through 1/12/06; Georgia, #958 valid through 6/30/08; Louisiana, #02086 valid through 6/30/08; Texas, #T104704197-06-TX valid through 5/31/08; North Carolina, #527 valid through 12/31/07; South Carolina, #96021001 valid through 6/30/08.*

## COLUMBIA ANALYTICAL SERVICES, INC.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility  
**Sample Matrix:** Water

**Service Request No.:** J0802326  
**Date Received:** 5/15/08

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

#### Sample Receipt

Thirteen water samples and one trip blank were received for analysis at Columbia Analytical Services on 5/15/08. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at  $4\pm 2^{\circ}\text{C}$  upon receipt at the lab except for aqueous samples designated for metals analyses, which were stored at room temperature.

#### Volatile Organic Compounds by GC-MS

The samples were analyzed for Volatile Organics using EPA Method 8260. The following observations were made regarding this delivery group.

#### Tune Window Exceptions

The Matrix Spike for sample MW-7A was analyzed forty-six minutes outside the method specified GC/MS tune window. Insufficient sample remained for additional analysis. Although the tune criterion is clearly stated in the EPA analytical method, daily operation and calibration verification procedures indicate the sample data are not significantly biased by this nonconformity.

#### Matrix Spike Recovery Exceptions

The matrix spike recoveries of Bromomethane and Vinyl Acetate for sample MW-7A were outside the control criterion. Recoveries in the Laboratory Control Sample (LCS) were acceptable, which indicates the analytical batch was in control. No further corrective action was appropriate.

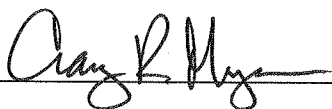
#### EDB and DBCP by GC-ECD

The samples were analyzed for EDB and DBCP using EPA Method 8011. No problems were observed.

#### Metals by ICP-MS/ICP-OES/CVAA

The samples were analyzed for Total Metals using EPA Methods 6020/6010B/7470A. The following observations were made regarding this delivery group.

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



Date \_\_\_\_\_

5/27/08

#### Matrix Spike Recovery Exceptions

The matrix spike recovery of Selenium for sample MW-7B was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicates the analytical batch was in control. The matrix spike outlier suggests a potential low bias in this matrix. No further corrective action was appropriate.

#### General Chemistry Parameters

The samples were analyzed for Inorganic Parameters using various EPA Methods. No problems were observed.

#### Batch QC Notes and Discussion

Quality control samples for Total Dissolved Solids (i.e., Dup/Spike or MS/DMS samples) were performed using samples from another sample delivery group (SDG). The frequency requirement for quality control sample analysis was consistent with the project's requirements. Matrix specific quality control results have no bearing on sample data from a different matrix or location. Therefore, control of the batch has been evaluated using the method blank and the laboratory control sample.

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



Date \_\_\_\_\_

5/27/08

## Florida DEP Data Qualifiers

- B Results based upon colony counts outside the acceptable range.
- D Measurement was made in the field.
- H Value based on field kit determination; results may not be accurate.
- i The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J Estimated value (one of the following reasons is discussed in the project case narrative).
1. The result may be inaccurate because the surrogate recovery limits have been exceeded.
  2. No known quality control criteria exists for the component.
  3. The reported value failed to meet the established quality control criteria for either precision or accuracy.
  4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).
  5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).
- K Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
- L Off scale high. The analyte is above the upper limit of the linear calibration range.
- M The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
- N Presumptive evidence of the analyte. Confirmation was not performed.
- Q Sample held beyond the accepted holding time.
- T Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
- U Indicates that the compound was analyzed for but not detected.
- V Indicates that the analyte was detected in both the sample and the associated method blank.
- Y The laboratory analysis was from an improperly preserved sample.
- Z Too many colonies were present (TNTC). The numeric value represents the filtration volume.



## 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 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.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01

**Service Request:** J0802326

**SAMPLE CROSS-REFERENCE**

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J0802326-001	MW-7A	05/14/08	15:25
J0802326-002	MW-7B	05/14/08	16:05
J0802326-003	MW-7C	05/14/08	15:30
J0802326-004	MW-8A	05/14/08	13:55
J0802326-005	MW-8B	05/14/08	14:25
J0802326-006	MW-8C	05/14/08	14:10
J0802326-007	MW-9A	05/14/08	11:45
J0802326-008	MW-9B	05/14/08	11:05
J0802326-009	MW-9C	05/14/08	11:00
J0802326-010	MW-10A	05/14/08	08:55
J0802326-011	MW-10B	05/14/08	08:50
J0802326-012	MW-10C	05/14/08	09:20
J0802326-013	TRIP BLANK	05/14/08	00:00
J0802326-014	DUP-1	05/14/08	00:00

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-7A  
 Lab Code: J0802326-001  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Vinyl Chloride	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Bromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chloroethane	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/20/08	05/20/08	JWG0801896	
Acetone	ND	U	50	1.7	1	05/20/08	05/20/08	JWG0801896	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/20/08	05/20/08	JWG0801896	
Carbon Disulfide	ND	U	10	1.0	1	05/20/08	05/20/08	JWG0801896	
Methylene Chloride	ND	U	5.0	0.51	1	05/20/08	05/20/08	JWG0801896	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Acrylonitrile	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Vinyl Acetate	ND	U	10	0.73	1	05/20/08	05/20/08	JWG0801896	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
2-Butanone (MEK)	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
Bromochloromethane	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
Chloroform	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/20/08	05/20/08	JWG0801896	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
Benzene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Dibromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Bromodichloromethane	ND	U	1.0	0.15	1	05/20/08	05/20/08	JWG0801896	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/20/08	05/20/08	JWG0801896	
Toluene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/20/08	05/20/08	JWG0801896	
2-Hexanone	ND	U	25	0.54	1	05/20/08	05/20/08	JWG0801896	
Dibromochloromethane	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	

Comments:

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-7A  
**Lab Code:** J0802326-001  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chlorobenzene	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Ethylbenzene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
m,p-Xylenes	ND	U	2.0	0.47	1	05/20/08	05/20/08	JWG0801896	
o-Xylene	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	
Styrene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Bromoform	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/20/08	05/20/08	JWG0801896	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/20/08	05/20/08	JWG0801896	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/20/08	05/20/08	JWG0801896	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	83	71-122	05/20/08	Acceptable
4-Bromofluorobenzene	113	75-120	05/20/08	Acceptable
Dibromofluoromethane	87	82-116	05/20/08	Acceptable
Toluene-d8	106	88-117	05/20/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-7B  
**Lab Code:** J0802326-002  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Vinyl Chloride	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Bromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chloroethane	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/20/08	05/20/08	JWG0801896	
Acetone	ND	U	50	1.7	1	05/20/08	05/20/08	JWG0801896	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/20/08	05/20/08	JWG0801896	
Carbon Disulfide	ND	U	10	1.0	1	05/20/08	05/20/08	JWG0801896	
Methylene Chloride	ND	U	5.0	0.51	1	05/20/08	05/20/08	JWG0801896	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Acrylonitrile	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Vinyl Acetate	ND	U	10	0.73	1	05/20/08	05/20/08	JWG0801896	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
2-Butanone (MEK)	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
Bromochloromethane	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
Chloroform	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/20/08	05/20/08	JWG0801896	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
Benzene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Dibromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Bromodichloromethane	ND	U	1.0	0.15	1	05/20/08	05/20/08	JWG0801896	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/20/08	05/20/08	JWG0801896	
Toluene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/20/08	05/20/08	JWG0801896	
2-Hexanone	ND	U	25	0.54	1	05/20/08	05/20/08	JWG0801896	
Dibromochloromethane	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-7B  
 Lab Code: J0802326-002  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chlorobenzene	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Ethylbenzene	0.26	I	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
m,p-Xylenes	ND	U	2.0	0.47	1	05/20/08	05/20/08	JWG0801896	
o-Xylene	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	
Styrene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Bromoform	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/20/08	05/20/08	JWG0801896	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/20/08	05/20/08	JWG0801896	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/20/08	05/20/08	JWG0801896	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	83	71-122	05/20/08	Acceptable
4-Bromofluorobenzene	111	75-120	05/20/08	Acceptable
Dibromofluoromethane	92	82-116	05/20/08	Acceptable
Toluene-d8	108	88-117	05/20/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-7C  
 Lab Code: J0802326-003  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Vinyl Chloride	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Bromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chloroethane	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/20/08	05/20/08	JWG0801896	
Acetone	ND	U	50	1.7	1	05/20/08	05/20/08	JWG0801896	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/20/08	05/20/08	JWG0801896	
Carbon Disulfide	ND	U	10	1.0	1	05/20/08	05/20/08	JWG0801896	
Methylene Chloride	ND	U	5.0	0.51	1	05/20/08	05/20/08	JWG0801896	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Acrylonitrile	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Vinyl Acetate	ND	U	10	0.73	1	05/20/08	05/20/08	JWG0801896	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
2-Butanone (MEK)	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
Bromochloromethane	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
Chloroform	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/20/08	05/20/08	JWG0801896	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
Benzene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Dibromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Bromodichloromethane	ND	U	1.0	0.15	1	05/20/08	05/20/08	JWG0801896	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/20/08	05/20/08	JWG0801896	
Toluene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/20/08	05/20/08	JWG0801896	
2-Hexanone	ND	U	25	0.54	1	05/20/08	05/20/08	JWG0801896	
Dibromochloromethane	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-7C  
 Lab Code: J0802326-003  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chlorobenzene	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Ethylbenzene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
m,p-Xylenes	ND	U	2.0	0.47	1	05/20/08	05/20/08	JWG0801896	
o-Xylene	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	
Styrene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Bromoform	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/20/08	05/20/08	JWG0801896	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/20/08	05/20/08	JWG0801896	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/20/08	05/20/08	JWG0801896	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	86	71-122	05/20/08	Acceptable
4-Bromofluorobenzene	114	75-120	05/20/08	Acceptable
Dibromofluoromethane	94	82-116	05/20/08	Acceptable
Toluene-d8	103	88-117	05/20/08	Acceptable

Comments:



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-8A  
 Lab Code: J0802326-004  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Vinyl Chloride	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Bromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chloroethane	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/20/08	05/20/08	JWG0801896	
Acetone	ND	U	50	1.7	1	05/20/08	05/20/08	JWG0801896	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/20/08	05/20/08	JWG0801896	
Carbon Disulfide	ND	U	10	1.0	1	05/20/08	05/20/08	JWG0801896	
Methylene Chloride	ND	U	5.0	0.51	1	05/20/08	05/20/08	JWG0801896	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Acrylonitrile	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Vinyl Acetate	ND	U	10	0.73	1	05/20/08	05/20/08	JWG0801896	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
2-Butanone (MEK)	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
Bromochloromethane	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
Chloroform	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/20/08	05/20/08	JWG0801896	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
Benzene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Dibromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Bromodichloromethane	ND	U	1.0	0.15	1	05/20/08	05/20/08	JWG0801896	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/20/08	05/20/08	JWG0801896	
Toluene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/20/08	05/20/08	JWG0801896	
2-Hexanone	ND	U	25	0.54	1	05/20/08	05/20/08	JWG0801896	
Dibromochloromethane	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-8A  
 Lab Code: J0802326-004  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chlorobenzene	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Ethylbenzene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
m,p-Xylenes	ND	U	2.0	0.47	1	05/20/08	05/20/08	JWG0801896	
o-Xylene	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	
Styrene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Bromoform	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/20/08	05/20/08	JWG0801896	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/20/08	05/20/08	JWG0801896	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/20/08	05/20/08	JWG0801896	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	85	71-122	05/20/08	Acceptable
4-Bromofluorobenzene	110	75-120	05/20/08	Acceptable
Dibromofluoromethane	92	82-116	05/20/08	Acceptable
Toluene-d8	105	88-117	05/20/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-8B  
 Lab Code: J0802326-005  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Vinyl Chloride	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Bromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chloroethane	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/20/08	05/20/08	JWG0801896	
Acetone	ND	U	50	1.7	1	05/20/08	05/20/08	JWG0801896	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/20/08	05/20/08	JWG0801896	
Carbon Disulfide	ND	U	10	1.0	1	05/20/08	05/20/08	JWG0801896	
Methylene Chloride	ND	U	5.0	0.51	1	05/20/08	05/20/08	JWG0801896	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Acrylonitrile	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Vinyl Acetate	ND	U	10	0.73	1	05/20/08	05/20/08	JWG0801896	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
2-Butanone (MEK)	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
Bromochloromethane	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
Chloroform	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/20/08	05/20/08	JWG0801896	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
Benzene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Dibromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Bromodichloromethane	ND	U	1.0	0.15	1	05/20/08	05/20/08	JWG0801896	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/20/08	05/20/08	JWG0801896	
Toluene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/20/08	05/20/08	JWG0801896	
2-Hexanone	ND	U	25	0.54	1	05/20/08	05/20/08	JWG0801896	
Dibromochloromethane	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-8B  
 Lab Code: J0802326-005  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chlorobenzene	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Ethylbenzene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
m,p-Xylenes	ND	U	2.0	0.47	1	05/20/08	05/20/08	JWG0801896	
o-Xylene	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	
Styrene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Bromoform	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/20/08	05/20/08	JWG0801896	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/20/08	05/20/08	JWG0801896	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/20/08	05/20/08	JWG0801896	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	87	71-122	05/20/08	Acceptable
4-Bromofluorobenzene	109	75-120	05/20/08	Acceptable
Dibromofluoromethane	93	82-116	05/20/08	Acceptable
Toluene-d8	104	88-117	05/20/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-8C  
 Lab Code: J0802326-006  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Vinyl Chloride	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Bromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chloroethane	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/20/08	05/20/08	JWG0801896	
Acetone	ND	U	50	1.7	1	05/20/08	05/20/08	JWG0801896	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/20/08	05/20/08	JWG0801896	
Carbon Disulfide	ND	U	10	1.0	1	05/20/08	05/20/08	JWG0801896	
Methylene Chloride	ND	U	5.0	0.51	1	05/20/08	05/20/08	JWG0801896	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Acrylonitrile	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Vinyl Acetate	ND	U	10	0.73	1	05/20/08	05/20/08	JWG0801896	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
2-Butanone (MEK)	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
Bromochloromethane	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
Chloroform	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/20/08	05/20/08	JWG0801896	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
Benzene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Dibromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Bromodichloromethane	ND	U	1.0	0.15	1	05/20/08	05/20/08	JWG0801896	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/20/08	05/20/08	JWG0801896	
Toluene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/20/08	05/20/08	JWG0801896	
2-Hexanone	ND	U	25	0.54	1	05/20/08	05/20/08	JWG0801896	
Dibromochloromethane	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-8C  
 Lab Code: J0802326-006  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chlorobenzene	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Ethylbenzene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
m,p-Xylenes	ND	U	2.0	0.47	1	05/20/08	05/20/08	JWG0801896	
o-Xylene	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	
Styrene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Bromoform	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/20/08	05/20/08	JWG0801896	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/20/08	05/20/08	JWG0801896	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/20/08	05/20/08	JWG0801896	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	88	71-122	05/20/08	Acceptable
4-Bromofluorobenzene	113	75-120	05/20/08	Acceptable
Dibromofluoromethane	92	82-116	05/20/08	Acceptable
Toluene-d8	106	88-117	05/20/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-9A  
**Lab Code:** J0802326-007  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
<b>Vinyl Chloride</b>	<b>2.4</b>		1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Bromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chloroethane	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/20/08	05/20/08	JWG0801896	
Acetone	ND	U	50	1.7	1	05/20/08	05/20/08	JWG0801896	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/20/08	05/20/08	JWG0801896	
Carbon Disulfide	ND	U	10	1.0	1	05/20/08	05/20/08	JWG0801896	
Methylene Chloride	ND	U	5.0	0.51	1	05/20/08	05/20/08	JWG0801896	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Acrylonitrile	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Vinyl Acetate	ND	U	10	0.73	1	05/20/08	05/20/08	JWG0801896	
<b>cis-1,2-Dichloroethene</b>	<b>0.88</b>	I	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
2-Butanone (MEK)	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
Bromochloromethane	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
Chloroform	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/20/08	05/20/08	JWG0801896	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
<b>Benzene</b>	<b>2.8</b>		1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Dibromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Bromodichloromethane	ND	U	1.0	0.15	1	05/20/08	05/20/08	JWG0801896	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/20/08	05/20/08	JWG0801896	
<b>Toluene</b>	<b>0.45</b>	I	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/20/08	05/20/08	JWG0801896	
2-Hexanone	ND	U	25	0.54	1	05/20/08	05/20/08	JWG0801896	
Dibromochloromethane	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-9A  
 Lab Code: J0802326-007  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chlorobenzene	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Ethylbenzene	1.5		1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
m,p-Xylenes	3.4		2.0	0.47	1	05/20/08	05/20/08	JWG0801896	
o-Xylene	1.4		1.0	0.25	1	05/20/08	05/20/08	JWG0801896	
Styrene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Bromoform	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/20/08	05/20/08	JWG0801896	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/20/08	05/20/08	JWG0801896	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/20/08	05/20/08	JWG0801896	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	86	71-122	05/20/08	Acceptable
4-Bromofluorobenzene	112	75-120	05/20/08	Acceptable
Dibromofluoromethane	91	82-116	05/20/08	Acceptable
Toluene-d8	101	88-117	05/20/08	Acceptable

Comments:



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-9B  
 Lab Code: J0802326-008  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Vinyl Chloride	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Bromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chloroethane	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/20/08	05/20/08	JWG0801896	
Acetone	ND	U	50	1.7	1	05/20/08	05/20/08	JWG0801896	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/20/08	05/20/08	JWG0801896	
Carbon Disulfide	ND	U	10	1.0	1	05/20/08	05/20/08	JWG0801896	
Methylene Chloride	ND	U	5.0	0.51	1	05/20/08	05/20/08	JWG0801896	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Acrylonitrile	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Vinyl Acetate	ND	U	10	0.73	1	05/20/08	05/20/08	JWG0801896	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
2-Butanone (MEK)	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
Bromochloromethane	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
Chloroform	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/20/08	05/20/08	JWG0801896	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
Benzene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Dibromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Bromodichloromethane	ND	U	1.0	0.15	1	05/20/08	05/20/08	JWG0801896	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/20/08	05/20/08	JWG0801896	
Toluene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/20/08	05/20/08	JWG0801896	
2-Hexanone	ND	U	25	0.54	1	05/20/08	05/20/08	JWG0801896	
Dibromochloromethane	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	

Comments:

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-9B  
**Lab Code:** J0802326-008  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chlorobenzene	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Ethylbenzene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
m,p-Xylenes	ND	U	2.0	0.47	1	05/20/08	05/20/08	JWG0801896	
o-Xylene	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	
Styrene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Bromoform	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/20/08	05/20/08	JWG0801896	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/20/08	05/20/08	JWG0801896	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/20/08	05/20/08	JWG0801896	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	84	71-122	05/20/08	Acceptable
4-Bromofluorobenzene	108	75-120	05/20/08	Acceptable
Dibromofluoromethane	90	82-116	05/20/08	Acceptable
Toluene-d8	105	88-117	05/20/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-9C  
 Lab Code: J0802326-009  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Vinyl Chloride	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Bromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chloroethane	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/20/08	05/20/08	JWG0801896	
Acetone	ND	U	50	1.7	1	05/20/08	05/20/08	JWG0801896	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/20/08	05/20/08	JWG0801896	
Carbon Disulfide	ND	U	10	1.0	1	05/20/08	05/20/08	JWG0801896	
Methylene Chloride	ND	U	5.0	0.51	1	05/20/08	05/20/08	JWG0801896	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Acrylonitrile	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Vinyl Acetate	ND	U	10	0.73	1	05/20/08	05/20/08	JWG0801896	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
2-Butanone (MEK)	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
Bromochloromethane	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
Chloroform	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/20/08	05/20/08	JWG0801896	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
Benzene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Dibromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Bromodichloromethane	ND	U	1.0	0.15	1	05/20/08	05/20/08	JWG0801896	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/20/08	05/20/08	JWG0801896	
<b>Toluene</b>	<b>0.16</b>	<b>I</b>	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/20/08	05/20/08	JWG0801896	
2-Hexanone	ND	U	25	0.54	1	05/20/08	05/20/08	JWG0801896	
Dibromochloromethane	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	

Comments:

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-9C  
**Lab Code:** J0802326-009  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chlorobenzene	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Ethylbenzene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
m,p-Xylenes	ND	U	2.0	0.47	1	05/20/08	05/20/08	JWG0801896	
o-Xylene	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	
Styrene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Bromoform	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/20/08	05/20/08	JWG0801896	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/20/08	05/20/08	JWG0801896	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/20/08	05/20/08	JWG0801896	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	91	71-122	05/20/08	Acceptable
4-Bromofluorobenzene	111	75-120	05/20/08	Acceptable
Dibromofluoromethane	94	82-116	05/20/08	Acceptable
Toluene-d8	100	88-117	05/20/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-10A  
 Lab Code: J0802326-010  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
<b>Vinyl Chloride</b>	<b>0.61</b>	<b>I</b>	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Bromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chloroethane	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/20/08	05/20/08	JWG0801896	
Acetone	ND	U	50	1.7	1	05/20/08	05/20/08	JWG0801896	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/20/08	05/20/08	JWG0801896	
Carbon Disulfide	ND	U	10	1.0	1	05/20/08	05/20/08	JWG0801896	
Methylene Chloride	ND	U	5.0	0.51	1	05/20/08	05/20/08	JWG0801896	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Acrylonitrile	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Vinyl Acetate	ND	U	10	0.73	1	05/20/08	05/20/08	JWG0801896	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
2-Butanone (MEK)	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
Bromochloromethane	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
Chloroform	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/20/08	05/20/08	JWG0801896	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
<b>Benzene</b>	<b>0.41</b>	<b>I</b>	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Dibromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Bromodichloromethane	ND	U	1.0	0.15	1	05/20/08	05/20/08	JWG0801896	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/20/08	05/20/08	JWG0801896	
<b>Toluene</b>	<b>0.41</b>	<b>I</b>	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/20/08	05/20/08	JWG0801896	
2-Hexanone	ND	U	25	0.54	1	05/20/08	05/20/08	JWG0801896	
Dibromochloromethane	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-10A  
 Lab Code: J0802326-010  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chlorobenzene	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Ethylbenzene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
m,p-Xylenes	ND	U	2.0	0.47	1	05/20/08	05/20/08	JWG0801896	
o-Xylene	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	
Styrene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Bromoform	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/20/08	05/20/08	JWG0801896	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/20/08	05/20/08	JWG0801896	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/20/08	05/20/08	JWG0801896	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	83	71-122	05/20/08	Acceptable
4-Bromofluorobenzene	111	75-120	05/20/08	Acceptable
Dibromofluoromethane	89	82-116	05/20/08	Acceptable
Toluene-d8	105	88-117	05/20/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-10B  
 Lab Code: J0802326-011  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Vinyl Chloride	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Bromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chloroethane	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/20/08	05/20/08	JWG0801896	
<b>Acetone</b>	<b>9.7</b>	<b>I</b>	50	1.7	1	05/20/08	05/20/08	JWG0801896	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/20/08	05/20/08	JWG0801896	
Carbon Disulfide	ND	U	10	1.0	1	05/20/08	05/20/08	JWG0801896	
Methylene Chloride	ND	U	5.0	0.51	1	05/20/08	05/20/08	JWG0801896	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Acrylonitrile	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Vinyl Acetate	ND	U	10	0.73	1	05/20/08	05/20/08	JWG0801896	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
2-Butanone (MEK)	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
Bromochloromethane	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
Chloroform	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/20/08	05/20/08	JWG0801896	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
Benzene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Dibromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Bromodichloromethane	ND	U	1.0	0.15	1	05/20/08	05/20/08	JWG0801896	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/20/08	05/20/08	JWG0801896	
<b>Toluene</b>	<b>0.19</b>	<b>I</b>	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/20/08	05/20/08	JWG0801896	
2-Hexanone	ND	U	25	0.54	1	05/20/08	05/20/08	JWG0801896	
Dibromochloromethane	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-10B  
**Lab Code:** J0802326-011  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chlorobenzene	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Ethylbenzene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
m,p-Xylenes	ND	U	2.0	0.47	1	05/20/08	05/20/08	JWG0801896	
o-Xylene	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	
Styrene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Bromoform	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/20/08	05/20/08	JWG0801896	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/20/08	05/20/08	JWG0801896	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/20/08	05/20/08	JWG0801896	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	84	71-122	05/20/08	Acceptable
4-Bromofluorobenzene	113	75-120	05/20/08	Acceptable
Dibromofluoromethane	93	82-116	05/20/08	Acceptable
Toluene-d8	103	88-117	05/20/08	Acceptable

Comments:



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-10C  
 Lab Code: J0802326-012  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801896	
Vinyl Chloride	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801896	
Bromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801896	
Chloroethane	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801896	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801896	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/21/08	05/21/08	JWG0801896	
Acetone	ND	U	50	1.7	1	05/21/08	05/21/08	JWG0801896	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/21/08	05/21/08	JWG0801896	
Carbon Disulfide	ND	U	10	1.0	1	05/21/08	05/21/08	JWG0801896	
Methylene Chloride	ND	U	5.0	0.51	1	05/21/08	05/21/08	JWG0801896	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801896	
Acrylonitrile	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801896	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801896	
Vinyl Acetate	ND	U	10	0.73	1	05/21/08	05/21/08	JWG0801896	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801896	
2-Butanone (MEK)	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801896	
Bromochloromethane	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801896	
Chloroform	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801896	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/21/08	05/21/08	JWG0801896	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801896	
Benzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801896	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801896	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801896	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801896	
Dibromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801896	
Bromodichloromethane	ND	U	1.0	0.15	1	05/21/08	05/21/08	JWG0801896	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801896	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/21/08	05/21/08	JWG0801896	
Toluene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801896	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801896	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801896	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/21/08	05/21/08	JWG0801896	
2-Hexanone	ND	U	25	0.54	1	05/21/08	05/21/08	JWG0801896	
Dibromochloromethane	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801896	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-10C  
**Lab Code:** J0802326-012  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801896	
Chlorobenzene	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801896	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801896	
Ethylbenzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801896	
m,p-Xylenes	ND	U	2.0	0.47	1	05/21/08	05/21/08	JWG0801896	
o-Xylene	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801896	
Styrene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801896	
Bromoform	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801896	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801896	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/21/08	05/21/08	JWG0801896	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801896	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/21/08	05/21/08	JWG0801896	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/21/08	05/21/08	JWG0801896	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/21/08	05/21/08	JWG0801896	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	80	71-122	05/21/08	Acceptable
4-Bromofluorobenzene	112	75-120	05/21/08	Acceptable
Dibromofluoromethane	86	82-116	05/21/08	Acceptable
Toluene-d8	101	88-117	05/21/08	Acceptable

Comments:

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: TRIP BLANK  
 Lab Code: J0802326-013  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801896	
Vinyl Chloride	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801896	
Bromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801896	
Chloroethane	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801896	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801896	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/21/08	05/21/08	JWG0801896	
Acetone	ND	U	50	1.7	1	05/21/08	05/21/08	JWG0801896	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/21/08	05/21/08	JWG0801896	
Carbon Disulfide	ND	U	10	1.0	1	05/21/08	05/21/08	JWG0801896	
Methylene Chloride	ND	U	5.0	0.51	1	05/21/08	05/21/08	JWG0801896	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801896	
Acrylonitrile	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801896	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801896	
Vinyl Acetate	ND	U	10	0.73	1	05/21/08	05/21/08	JWG0801896	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801896	
2-Butanone (MEK)	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801896	
Bromochloromethane	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801896	
Chloroform	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801896	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/21/08	05/21/08	JWG0801896	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801896	
Benzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801896	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801896	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801896	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801896	
Dibromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801896	
Bromodichloromethane	ND	U	1.0	0.15	1	05/21/08	05/21/08	JWG0801896	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801896	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/21/08	05/21/08	JWG0801896	
Toluene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801896	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801896	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801896	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/21/08	05/21/08	JWG0801896	
2-Hexanone	ND	U	25	0.54	1	05/21/08	05/21/08	JWG0801896	
Dibromochloromethane	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801896	

Comments:

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: TRIP BLANK  
 Lab Code: J0802326-013  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801896	
Chlorobenzene	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801896	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801896	
Ethylbenzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801896	
m,p-Xylenes	ND	U	2.0	0.47	1	05/21/08	05/21/08	JWG0801896	
o-Xylene	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801896	
Styrene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801896	
Bromoform	0.72	I	1.0	0.24	1	05/21/08	05/21/08	JWG0801896	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801896	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/21/08	05/21/08	JWG0801896	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801896	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/21/08	05/21/08	JWG0801896	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/21/08	05/21/08	JWG0801896	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/21/08	05/21/08	JWG0801896	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	89	71-122	05/21/08	Acceptable
4-Bromofluorobenzene	107	75-120	05/21/08	Acceptable
Dibromofluoromethane	95	82-116	05/21/08	Acceptable
Toluene-d8	105	88-117	05/21/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: DUP-1  
 Lab Code: J0802326-014  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801896	
<b>Vinyl Chloride</b>	<b>2.5</b>		1.0	0.23	1	05/21/08	05/21/08	JWG0801896	
Bromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801896	
Chloroethane	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801896	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801896	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/21/08	05/21/08	JWG0801896	
Acetone	ND	U	50	1.7	1	05/21/08	05/21/08	JWG0801896	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/21/08	05/21/08	JWG0801896	
Carbon Disulfide	ND	U	10	1.0	1	05/21/08	05/21/08	JWG0801896	
Methylene Chloride	ND	U	5.0	0.51	1	05/21/08	05/21/08	JWG0801896	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801896	
Acrylonitrile	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801896	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801896	
Vinyl Acetate	ND	U	10	0.73	1	05/21/08	05/21/08	JWG0801896	
<b>cis-1,2-Dichloroethene</b>	<b>0.88</b>	<b>I</b>	1.0	0.20	1	05/21/08	05/21/08	JWG0801896	
2-Butanone (MEK)	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801896	
Bromochloromethane	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801896	
Chloroform	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801896	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/21/08	05/21/08	JWG0801896	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801896	
<b>Benzene</b>	<b>2.8</b>		1.0	0.20	1	05/21/08	05/21/08	JWG0801896	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801896	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801896	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801896	
Dibromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801896	
Bromodichloromethane	ND	U	1.0	0.15	1	05/21/08	05/21/08	JWG0801896	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801896	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/21/08	05/21/08	JWG0801896	
<b>Toluene</b>	<b>0.49</b>	<b>I</b>	1.0	0.14	1	05/21/08	05/21/08	JWG0801896	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801896	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801896	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/21/08	05/21/08	JWG0801896	
2-Hexanone	ND	U	25	0.54	1	05/21/08	05/21/08	JWG0801896	
Dibromochloromethane	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801896	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: DUP-1  
 Lab Code: J0802326-014  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	1.0	0.20	1	05/21/08	05/21/08	JWG0801896	
Chlorobenzene	ND U	1.0	0.19	1	05/21/08	05/21/08	JWG0801896	
1,1,1,2-Tetrachloroethane	ND U	1.0	0.22	1	05/21/08	05/21/08	JWG0801896	
Ethylbenzene	1.6	1.0	0.20	1	05/21/08	05/21/08	JWG0801896	
m,p-Xylenes	3.5	2.0	0.47	1	05/21/08	05/21/08	JWG0801896	
o-Xylene	1.3	1.0	0.25	1	05/21/08	05/21/08	JWG0801896	
Styrene	ND U	1.0	0.22	1	05/21/08	05/21/08	JWG0801896	
Bromoform	ND U	1.0	0.24	1	05/21/08	05/21/08	JWG0801896	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.14	1	05/21/08	05/21/08	JWG0801896	
1,2,3-Trichloropropane	ND U	1.0	0.47	1	05/21/08	05/21/08	JWG0801896	
1,4-Dichlorobenzene	ND U	1.0	0.21	1	05/21/08	05/21/08	JWG0801896	
trans-1,4-Dichloro-2-butene	ND U	20	0.60	1	05/21/08	05/21/08	JWG0801896	
1,2-Dichlorobenzene	ND U	1.0	0.34	1	05/21/08	05/21/08	JWG0801896	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	2.0	0.79	1	05/21/08	05/21/08	JWG0801896	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	88	71-122	05/21/08	Acceptable
4-Bromofluorobenzene	107	75-120	05/21/08	Acceptable
Dibromofluoromethane	94	82-116	05/21/08	Acceptable
Toluene-d8	103	88-117	05/21/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Collected: NA  
 Date Received: NA

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Method Blank  
 Lab Code: JWG0801896-4  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Vinyl Chloride	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Bromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chloroethane	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/20/08	05/20/08	JWG0801896	
Acetone	ND	U	50	1.7	1	05/20/08	05/20/08	JWG0801896	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/20/08	05/20/08	JWG0801896	
Carbon Disulfide	ND	U	10	1.0	1	05/20/08	05/20/08	JWG0801896	
Methylene Chloride	ND	U	5.0	0.51	1	05/20/08	05/20/08	JWG0801896	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Acrylonitrile	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
Vinyl Acetate	ND	U	10	0.73	1	05/20/08	05/20/08	JWG0801896	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
2-Butanone (MEK)	ND	U	10	0.77	1	05/20/08	05/20/08	JWG0801896	
Bromochloromethane	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
Chloroform	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/20/08	05/20/08	JWG0801896	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/20/08	05/20/08	JWG0801896	
Benzene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/20/08	05/20/08	JWG0801896	
Dibromomethane	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Bromodichloromethane	ND	U	1.0	0.15	1	05/20/08	05/20/08	JWG0801896	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/20/08	05/20/08	JWG0801896	
Toluene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/20/08	05/20/08	JWG0801896	
2-Hexanone	ND	U	25	0.54	1	05/20/08	05/20/08	JWG0801896	
Dibromochloromethane	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	

Comments:

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** NA  
**Date Received:** NA

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank  
**Lab Code:** JWG0801896-4  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
Chlorobenzene	ND	U	1.0	0.19	1	05/20/08	05/20/08	JWG0801896	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Ethylbenzene	ND	U	1.0	0.20	1	05/20/08	05/20/08	JWG0801896	
m,p-Xylenes	ND	U	2.0	0.47	1	05/20/08	05/20/08	JWG0801896	
o-Xylene	ND	U	1.0	0.25	1	05/20/08	05/20/08	JWG0801896	
Styrene	ND	U	1.0	0.22	1	05/20/08	05/20/08	JWG0801896	
Bromoform	ND	U	1.0	0.24	1	05/20/08	05/20/08	JWG0801896	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/20/08	05/20/08	JWG0801896	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/20/08	05/20/08	JWG0801896	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/20/08	05/20/08	JWG0801896	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/20/08	05/20/08	JWG0801896	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/20/08	05/20/08	JWG0801896	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/20/08	05/20/08	JWG0801896	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	77	71-122	05/20/08	Acceptable
4-Bromofluorobenzene	105	75-120	05/20/08	Acceptable
Dibromofluoromethane	86	82-116	05/20/08	Acceptable
Toluene-d8	96	88-117	05/20/08	Acceptable

Comments:



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-7A  
**Lab Code:** J0802326-001  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/20/08	JWG0801841	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/20/08	JWG0801841	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	114	77-150	05/20/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-7B  
**Lab Code:** J0802326-002  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/20/08	JWG0801841	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/20/08	JWG0801841	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	117	77-150	05/20/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-7C  
**Lab Code:** J0802326-003  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/20/08	JWG0801841	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/20/08	JWG0801841	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	118	77-150	05/20/08	Acceptable

Comments:

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-8A  
**Lab Code:** J0802326-004  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/20/08	JWG0801841	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/20/08	JWG0801841	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	115	77-150	05/20/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-8B  
**Lab Code:** J0802326-005  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/20/08	JWG0801841	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/20/08	JWG0801841	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	109	77-150	05/20/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-8C  
**Lab Code:** J0802326-006  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/20/08	JWG0801841	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/20/08	JWG0801841	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	132	77-150	05/20/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-9A  
**Lab Code:** J0802326-007  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/20/08	JWG0801841	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/20/08	JWG0801841	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	123	77-150	05/20/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-9B  
**Lab Code:** J0802326-008  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/20/08	JWG0801841	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/20/08	JWG0801841	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	118	77-150	05/20/08	Acceptable

Comments: \_\_\_\_\_



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-9C  
**Lab Code:** J0802326-009  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/20/08	JWG0801841	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/20/08	JWG0801841	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	117	77-150	05/20/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-10A  
**Lab Code:** J0802326-010  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/21/08	JWG0801841	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/21/08	JWG0801841	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	123	77-150	05/21/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-10B  
**Lab Code:** J0802326-011  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/20/08	JWG0801841	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/20/08	JWG0801841	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	119	77-150	05/20/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-10C  
**Lab Code:** J0802326-012  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/20/08	JWG0801841	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/20/08	JWG0801841	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	114	77-150	05/20/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** DUP-1  
**Lab Code:** J0802326-014  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/20/08	JWG0801841	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/20/08	JWG0801841	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	124	77-150	05/20/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Collected:** NA  
**Date Received:** NA

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** Method Blank  
**Lab Code:** JWG0801841-3  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/16/08	05/19/08	JWG0801841	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/16/08	05/19/08	JWG0801841	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	121	77-150	05/19/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

Client: GeoSyntec Consultants  
 Project Name: JED Disposal Facility  
 Project Number: FQ1512.01  
 Matrix: WATER

Service Request: J0802326  
 Date Collected: 5/14/2008  
 Date Received: 5/15/2008

## Total Metals

Sample Name: MW-7A  
 Lab Code: J0802326-001

Units: ug/L  
 Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/16/2008	05/20/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	1.4	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/16/2008	05/20/2008	12	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/16/2008	05/20/2008	2.6	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	1.1	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	0.36	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/16/2008	05/19/2008	5060	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	0.96	i
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	1.1	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/16/2008	05/20/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/16/2008	05/20/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/16/2008	05/20/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/16/2008	05/20/2008	5.3	i

## COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

Client: GeoSyntec Consultants  
 Project Name: JED Disposal Facility  
 Project Number: FQ1512.01  
 Matrix: WATER

Service Request: J0802326  
 Date Collected: 5/14/2008  
 Date Received: 5/15/2008

## Total Metals

Sample Name: MW-7B  
 Lab Code: J0802326-002

Units: ug/L  
 Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/16/2008	05/20/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/16/2008	05/20/2008	30	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/16/2008	05/20/2008	2.0	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	0.24	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/16/2008	05/19/2008	1300	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	0.57	i
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	0.65	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/16/2008	05/20/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/16/2008	05/20/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/16/2008	05/20/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/16/2008	05/20/2008	U	



## COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

Client: GeoSyntec Consultants  
 Project Name: JED Disposal Facility  
 Project Number: FQ1512.01  
 Matrix: WATER

Service Request: J0802326  
 Date Collected: 5/14/2008  
 Date Received: 5/15/2008

## Total Metals

Sample Name: MW-7C  
 Lab Code: J0802326-003

Units: ug/L  
 Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/16/2008	05/20/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/16/2008	05/20/2008	26	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/16/2008	05/20/2008	1.8	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/16/2008	05/19/2008	664	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	0.50	i
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	0.34	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/16/2008	05/20/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/16/2008	05/20/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/16/2008	05/20/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/16/2008	05/20/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802326  
**Date Collected:** 5/14/2008  
**Date Received:** 5/15/2008

### Total Metals

**Sample Name:** MW-8A  
**Lab Code:** J0802326-004

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/16/2008	05/20/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/16/2008	05/20/2008	22	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/16/2008	05/20/2008	2.8	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	1.1	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/16/2008	05/19/2008	2280	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	2.5	
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/16/2008	05/20/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/16/2008	05/20/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/16/2008	05/20/2008	2.7	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/16/2008	05/20/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802326  
**Date Collected:** 5/14/2008  
**Date Received:** 5/15/2008

### Total Metals

**Sample Name:** MW-8B  
**Lab Code:** J0802326-005

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/16/2008	05/20/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/16/2008	05/20/2008	34	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/16/2008	05/20/2008	3.3	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	0.52	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/16/2008	05/19/2008	838	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	3.2	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	0.61	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/16/2008	05/20/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/16/2008	05/20/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/16/2008	05/20/2008	6.2	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/16/2008	05/20/2008	U	

## COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

Client: GeoSyntec Consultants  
 Project Name: JED Disposal Facility  
 Project Number: FQ1512.01  
 Matrix: WATER

Service Request: J0802326  
 Date Collected: 5/14/2008  
 Date Received: 5/15/2008

## Total Metals

Sample Name: MW-8C  
 Lab Code: J0802326-006

Units: ug/L  
 Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/16/2008	05/20/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/16/2008	05/20/2008	14	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/16/2008	05/20/2008	1.8	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/16/2008	05/19/2008	818	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	U	
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/16/2008	05/20/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/16/2008	05/20/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/16/2008	05/20/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/16/2008	05/20/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

Client: GeoSyntec Consultants  
 Project Name: JED Disposal Facility  
 Project Number: FQ1512.01  
 Matrix: WATER

Service Request: J0802326  
 Date Collected: 5/14/2008  
 Date Received: 5/15/2008

### Total Metals

Sample Name: MW-9A  
 Lab Code: J0802326-007

Units: ug/L  
 Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/16/2008	05/20/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	2.2	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/16/2008	05/20/2008	7.8	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/16/2008	05/20/2008	2.5	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	0.87	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/16/2008	05/19/2008	1800	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	3.1	
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/16/2008	05/20/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/16/2008	05/20/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/16/2008	05/20/2008	2.2	i
Zinc	EPA 3020A	6020	10	4.0	1.0	05/16/2008	05/20/2008	5.1	i

## COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802326  
**Date Collected:** 5/14/2008  
**Date Received:** 5/15/2008

## Total Metals

**Sample Name:** MW-9B  
**Lab Code:** J0802326-008

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/16/2008	05/20/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/16/2008	05/20/2008	27	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/16/2008	05/20/2008	2.7	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	0.22	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	0.42	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/16/2008	05/19/2008	974	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	1.3	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	0.53	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/16/2008	05/20/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/16/2008	05/20/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/16/2008	05/20/2008	3.2	i
Zinc	EPA 3020A	6020	10	4.0	1.0	05/16/2008	05/20/2008	U	

## COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

Client: GeoSyntec Consultants  
 Project Name: JED Disposal Facility  
 Project Number: FQ1512.01  
 Matrix: WATER

Service Request: J0802326  
 Date Collected: 5/14/2008  
 Date Received: 5/15/2008

## Total Metals

Sample Name: MW-9C  
 Lab Code: J0802326-009

Units: ug/L  
 Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/16/2008	05/20/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/16/2008	05/20/2008	27	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/16/2008	05/20/2008	1.7	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/16/2008	05/19/2008	898	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	0.30	i
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	1.7	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/16/2008	05/20/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/16/2008	05/20/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/16/2008	05/20/2008	2.2	i
Zinc	EPA 3020A	6020	10	4.0	1.0	05/16/2008	05/20/2008	U	

## COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

Client: GeoSyntec Consultants  
 Project Name: JED Disposal Facility  
 Project Number: FQ1512.01  
 Matrix: WATER

Service Request: J0802326  
 Date Collected: 5/14/2008  
 Date Received: 5/15/2008

## Total Metals

Sample Name: MW-10A  
 Lab Code: J0802326-010

Units: ug/L  
 Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/16/2008	05/20/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	1.2	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/16/2008	05/20/2008	3.1	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/16/2008	05/20/2008	2.2	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	0.60	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/16/2008	05/19/2008	2760	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	3.2	
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/16/2008	05/20/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/16/2008	05/20/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/16/2008	05/20/2008	2.3	i
Zinc	EPA 3020A	6020	10	4.0	1.0	05/16/2008	05/20/2008	U	



# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802326  
**Date Collected:** 5/14/2008  
**Date Received:** 5/15/2008

### Total Metals

**Sample Name:** MW-10B  
**Lab Code:** J0802326-011

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/16/2008	05/20/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/16/2008	05/20/2008	11	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/16/2008	05/20/2008	1.2	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	0.27	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/16/2008	05/19/2008	601	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	U	
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/16/2008	05/20/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/16/2008	05/20/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/16/2008	05/20/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/16/2008	05/20/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802326  
**Date Collected:** 5/14/2008  
**Date Received:** 5/15/2008

### Total Metals

**Sample Name:** MW-10C  
**Lab Code:** J0802326-012

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/16/2008	05/20/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/16/2008	05/20/2008	19	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/16/2008	05/20/2008	2.6	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/16/2008	05/19/2008	793	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	0.63	
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/16/2008	05/20/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/16/2008	05/20/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/16/2008	05/20/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/16/2008	05/20/2008	U	

## COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802326  
**Date Collected:** 5/14/2008  
**Date Received:** 5/15/2008

## Total Metals

**Sample Name:** DUP-1  
**Lab Code:** J0802326-014

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/16/2008	05/20/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	2.2	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/16/2008	05/20/2008	7.7	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/16/2008	05/20/2008	2.1	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	0.94	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/16/2008	05/19/2008	1880	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/16/2008	05/20/2008	2.9	
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/16/2008	05/20/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/16/2008	05/20/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/16/2008	05/20/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/16/2008	05/20/2008	2.1	i
Zinc	EPA 3020A	6020	10	4.0	1.0	05/16/2008	05/20/2008	U	

## COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

Client: GeoSyntec Consultants  
 Project Name: JED Disposal Facility  
 Project Number: FQ1512.01  
 Matrix: WATER

Service Request: J0802326  
 Date Collected: N/A  
 Date Received: N/A

## Total Metals

Sample Name: Method Blank  
 Lab Code: MB2-0516

Units: ug/L  
 Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.4	1.0	05/16/2008	05/20/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Barium	EPA 3020A	6020	2.0	0.6	1.0	05/16/2008	05/20/2008	U	
Beryllium	EPA 3020A	6020	1.0	0.2	1.0	05/16/2008	05/20/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/16/2008	05/20/2008	U	
Chromium	EPA 3020A	6020	2.0	0.8	1.0	05/16/2008	05/20/2008	U	
Cobalt	EPA 3020A	6020	1.0	0.2	1.0	05/16/2008	05/20/2008	U	
Copper	EPA 3020A	6020	2.0	0.3	1.0	05/16/2008	05/20/2008	U	
Iron	EPA 3010A	6010B	50.0	4.0	1.0	05/16/2008	05/19/2008	U	
Lead	EPA 3020A	6020	1.0	0.2	1.0	05/16/2008	05/20/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/19/2008	05/20/2008	U	
Nickel	EPA 3020A	6020	2.0	0.3	1.0	05/16/2008	05/20/2008	U	
Selenium	EPA 3020A	6020	2.0	0.7	1.0	05/16/2008	05/20/2008	U	
Silver	EPA 3020A	6020	0.5	0.1	1.0	05/16/2008	05/20/2008	U	
Thallium	EPA 3020A	6020	1.0	0.2	1.0	05/16/2008	05/20/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/16/2008	05/20/2008	U	
Zinc	EPA 3020A	6020	10.0	4.0	1.0	05/16/2008	05/20/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008

### Total Metals Sodium

**Prep Method:** EPA 3010A  
**Analysis Method:** 6010B  
**Test Notes:**

**Units:** mg/L  
**Basis:** N/A

Sample Name:	Lab Code:	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MW-7A	J0802326-001	0.50	0.02	1.0	05/16/2008	05/19/2008	11	
MW-7B	J0802326-002	0.50	0.02	1.0	05/16/2008	05/19/2008	7.7	
MW-7C	J0802326-003	0.50	0.02	1.0	05/16/2008	05/19/2008	5.3	
MW-8A	J0802326-004	0.50	0.02	1.0	05/16/2008	05/19/2008	16	
MW-8B	J0802326-005	0.50	0.02	1.0	05/16/2008	05/19/2008	5.9	
MW-8C	J0802326-006	0.50	0.02	1.0	05/16/2008	05/19/2008	5.2	
MW-9A	J0802326-007	0.50	0.02	1.0	05/16/2008	05/19/2008	7.1	
MW-9B	J0802326-008	0.50	0.02	1.0	05/16/2008	05/19/2008	8.8	
MW-9C	J0802326-009	0.50	0.02	1.0	05/16/2008	05/19/2008	5.7	
MW-10A	J0802326-010	0.50	0.02	1.0	05/16/2008	05/19/2008	5.9	
MW-10B	J0802326-011	0.50	0.02	1.0	05/16/2008	05/19/2008	8.5	
MW-10C	J0802326-012	0.50	0.02	1.0	05/16/2008	05/19/2008	5.9	
DUP-1	J0802326-014	0.50	0.02	1.0	05/16/2008	05/19/2008	7.2	
Method Blank	MB1-0516	0.50	0.02	1.0	05/16/2008	05/19/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802326  
**Date Collected :** 05/14/08  
**Date Received :** 05/15/08

## Inorganic Parameters

**Sample Name :** MW-7A  
**Lab Code :** J0802326-001  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/15/08 14:59	1.1	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/15/08 19:06	26	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/15/08 19:36	0.17	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/19/08 09:00	69	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802326  
**Date Collected :** 05/14/08  
**Date Received :** 05/15/08

## Inorganic Parameters

**Sample Name :** MW-7B  
**Lab Code :** J0802326-002  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/15/08 14:59	0.19	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/15/08 19:06	21	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/15/08 20:21	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/19/08 09:00	59	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802326  
**Date Collected :** 05/14/08  
**Date Received :** 05/15/08

## Inorganic Parameters

**Sample Name :** MW-7C  
**Lab Code :** J0802326-003  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/15/08 14:59	0.15	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/15/08 19:06	7.4	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/15/08 20:36	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/19/08 09:00	38	



# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802326  
**Date Collected :** 05/14/08  
**Date Received :** 05/15/08

## Inorganic Parameters

**Sample Name :** MW-8A  
**Lab Code :** J0802326-004  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/15/08 14:59	1.4	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/15/08 19:06	44	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/15/08 20:51	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/19/08 09:00	110	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802326  
**Date Collected :** 05/14/08  
**Date Received :** 05/15/08

## Inorganic Parameters

**Sample Name :** MW-8B  
**Lab Code :** J0802326-005  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/15/08 14:59	0.18	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/15/08 19:06	9.1	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/15/08 21:05	0.17	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/19/08 09:00	55	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802326  
**Date Collected :** 05/14/08  
**Date Received :** 05/15/08

## Inorganic Parameters

**Sample Name :** MW-8C  
**Lab Code :** J0802326-006  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/15/08 14:59	0.16	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/15/08 19:06	7.2	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/15/08 21:20	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/19/08 09:00	45	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802326  
**Date Collected :** 05/14/08  
**Date Received :** 05/15/08

## Inorganic Parameters

**Sample Name :** MW-9A  
**Lab Code :** J0802326-007  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/15/08 14:59	4.5	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/15/08 19:06	21	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/15/08 22:06	0.16	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/19/08 09:00	86	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802326  
**Date Collected :** 05/14/08  
**Date Received :** 05/15/08

## Inorganic Parameters

**Sample Name :** MW-9B  
**Lab Code :** J0802326-008  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/15/08 14:59	0.17	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/15/08 19:06	15	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/15/08 22:20	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/19/08 09:00	69	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802326  
**Date Collected :** 05/14/08  
**Date Received :** 05/15/08

## Inorganic Parameters

**Sample Name :** MW-9C  
**Lab Code :** J0802326-009  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/15/08 14:59	0.20	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/15/08 19:06	8.1	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/15/08 22:35	0.17	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/19/08 09:00	48	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802326  
**Date Collected :** 05/14/08  
**Date Received :** 05/15/08

## Inorganic Parameters

**Sample Name :** MW-10A  
**Lab Code :** J0802326-010  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/15/08 14:59	3.8	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/15/08 19:06	13	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/15/08 22:51	0.16	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/19/08 09:00	82	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802326  
**Date Collected :** 05/14/08  
**Date Received :** 05/15/08

## Inorganic Parameters

**Sample Name :** MW-10B  
**Lab Code :** J0802326-011  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/15/08 14:59	0.15	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/15/08 19:06	15	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/15/08 23:05	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/19/08 09:00	60	



# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802326  
**Date Collected :** 05/14/08  
**Date Received :** 05/15/08

## Inorganic Parameters

**Sample Name :** MW-10C  
**Lab Code :** J0802326-012  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/15/08 14:59	0.17	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/15/08 19:06	7.3	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/15/08 23:50	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/19/08 09:00	65	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802326  
**Date Collected :** 05/14/08  
**Date Received :** 05/15/08

## Inorganic Parameters

**Sample Name :** DUP-1  
**Lab Code :** J0802326-014  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/15/08 14:59	4.4	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/15/08 19:06	21	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/16/08 00:05	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/19/08 09:00	56	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802326  
**Date Collected :** NA  
**Date Received :** NA

## Inorganic Parameters

**Sample Name :** Method Blank  
**Lab Code :** J0802326-MB  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/15/08 14:59	U	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/15/08 19:06	U	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/15/08 19:06	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/19/08 09:00	U	

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326

**Surrogate Recovery Summary**  
**Appendix I Volatile Organic Compounds by GC/MS**

Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: PERCENT  
 Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>	<u>Sur4</u>
MW-7A	J0802326-001	83	113	87	106
MW-7B	J0802326-002	83	111	92	108
MW-7C	J0802326-003	86	114	94	103
MW-8A	J0802326-004	85	110	92	105
MW-8B	J0802326-005	87	109	93	104
MW-8C	J0802326-006	88	113	92	106
MW-9A	J0802326-007	86	112	91	101
MW-9B	J0802326-008	84	108	90	105
MW-9C	J0802326-009	91	111	94	100
MW-10A	J0802326-010	83	111	89	105
MW-10B	J0802326-011	84	113	93	103
MW-10C	J0802326-012	80	112	86	101
TRIP BLANK	J0802326-013	89	107	95	105
DUP-1	J0802326-014	88	107	94	103
Method Blank	JWG0801896-4	77	105	86	96
MW-7AMS	JWG0801896-1	83	114	90	100
MW-7ADMS	JWG0801896-2	81	117	94	106
Lab Control Sample	JWG0801896-3	77	106	84	95

**Surrogate Recovery Control Limits (%)**


---

Sur1 = 1,2-Dichloroethane-d4	71-122
Sur2 = 4-Bromofluorobenzene	75-120
Sur3 = Dibromofluoromethane	82-116
Sur4 = Toluene-d8	88-117

---

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Extracted: 05/21/2008  
 Date Analyzed: 05/21/2008

**Matrix Spike/Duplicate Matrix Spike Summary**  
**Appendix I Volatile Organic Compounds by GC/MS**

Sample Name: MW-7A  
 Lab Code: J0802326-001  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0801896

Analyte Name	Sample Result	MW-7AMS JWG0801896-1 Matrix Spike			MW-7ADMS JWG0801896-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Chloromethane	ND	22.1	20.0	111	22.0	20.0	110	73-139	1	30
Vinyl Chloride	ND	24.6	20.0	123	24.5	20.0	123	78-141	0	30
Bromomethane	ND	12.3	20.0	62 *	14.1	20.0	70 *	78-129	13	30
Chloroethane	ND	21.2	20.0	106	21.9	20.0	110	76-129	3	30
Trichlorofluoromethane	ND	23.4	20.0	117	22.9	20.0	115	81-133	2	30
1,1-Dichloroethene	ND	23.9	20.0	120	23.5	20.0	117	79-133	2	30
Acetone	ND	127	100	127	126	100	126	56-139	1	30
Iodomethane (Methyl Iodide)	ND	120	100	120	134	100	134	74-134	11	30
Carbon Disulfide	ND	121	100	121	116	100	116	71-146	4	30
Methylene Chloride	ND	21.1	20.0	105	20.9	20.0	105	75-123	1	30
trans-1,2-Dichloroethene	ND	20.1	20.0	100	20.4	20.0	102	76-125	2	30
Acrylonitrile	ND	116	100	116	116	100	116	68-131	1	30
1,1-Dichloroethane	ND	21.2	20.0	106	20.9	20.0	105	78-125	2	30
Vinyl Acetate	ND	43.0	100	43	41.0	100	41 *	43-163	5	30
cis-1,2-Dichloroethene	ND	21.2	20.0	106	21.4	20.0	107	75-127	1	30
2-Butanone (MEK)	ND	124	100	124	120	100	120	63-134	3	30
Bromochloromethane	ND	22.4	20.0	112	20.5	20.0	103	80-124	9	30
Chloroform	ND	21.2	20.0	106	21.5	20.0	108	81-124	1	30
1,1,1-Trichloroethane (TCA)	ND	21.0	20.0	105	21.8	20.0	109	76-130	4	30
Carbon Tetrachloride	ND	21.0	20.0	105	21.5	20.0	108	76-131	3	30
Benzene	ND	21.9	20.0	109	21.8	20.0	109	78-123	0	30
1,2-Dichloroethane (EDC)	ND	19.6	20.0	98	19.6	20.0	98	74-126	0	30
Trichloroethene (TCE)	ND	21.4	20.0	107	20.4	20.0	102	77-128	5	30
1,2-Dichloropropane	ND	21.1	20.0	105	21.9	20.0	109	77-122	4	30
Dibromomethane	ND	20.7	20.0	103	20.2	20.0	101	78-124	2	30
Bromodichloromethane	ND	19.9	20.0	99	20.7	20.0	103	79-125	4	30
cis-1,3-Dichloropropene	ND	19.6	20.0	98	18.2	20.0	91	77-117	7	30
4-Methyl-2-pentanone (MIBK)	ND	114	100	114	105	100	105	65-138	8	30
Toluene	ND	21.7	20.0	108	21.5	20.0	108	86-119	1	30
trans-1,3-Dichloropropene	ND	17.5	20.0	88	18.6	20.0	93	75-120	6	30
1,1,2-Trichloroethane	ND	20.6	20.0	103	20.7	20.0	104	77-124	0	30
Tetrachloroethene (PCE)	ND	22.6	20.0	113	21.8	20.0	109	79-123	4	30
2-Hexanone	ND	118	100	118	111	100	111	63-142	6	30
Dibromochloromethane	ND	19.1	20.0	95	20.5	20.0	102	78-124	7	30

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Extracted: 05/21/2008  
 Date Analyzed: 05/21/2008

Matrix Spike/Duplicate Matrix Spike Summary  
 Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-7A  
 Lab Code: J0802326-001  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0801896

Analyte Name	Sample Result	MW-7AMS JWG0801896-1 Matrix Spike			MW-7ADMS JWG0801896-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
1,2-Dibromoethane (EDB)	ND	20.1	20.0	100	20.7	20.0	103	81-119	3	30
Chlorobenzene	ND	20.6	20.0	103	20.4	20.0	102	81-120	1	30
1,1,1,2-Tetrachloroethane	ND	20.1	20.0	101	20.0	20.0	100	82-118	1	30
Ethylbenzene	ND	22.4	20.0	112	22.8	20.0	114	87-122	2	30
m,p-Xylenes	ND	45.2	40.0	113	43.4	40.0	108	82-120	4	30
o-Xylene	ND	22.1	20.0	110	21.3	20.0	106	85-119	4	30
Styrene	ND	21.7	20.0	109	20.8	20.0	104	84-126	4	30
Bromoform	ND	19.9	20.0	99	19.8	20.0	99	70-129	0	30
1,1,2,2-Tetrachloroethane	ND	23.3	20.0	117	22.2	20.0	111	72-127	5	30
1,2,3-Trichloropropane	ND	21.1	20.0	105	21.1	20.0	105	76-123	0	30
1,4-Dichlorobenzene	ND	21.9	20.0	110	20.5	20.0	102	75-115	7	30
trans-1,4-Dichloro-2-butene	ND	16.9	20.0	84	16.4	20.0	82	22-135	3	30
1,2-Dichlorobenzene	ND	21.7	20.0	109	20.8	20.0	104	77-116	4	30
1,2-Dibromo-3-chloropropane (DBCP)	ND	19.7	20.0	99	20.5	20.0	103	54-120	4	30

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802326  
 Date Extracted: 05/20/2008  
 Date Analyzed: 05/20/2008

Lab Control Spike Summary  
 Appendix I Volatile Organic Compounds by GC/MS

Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0801896

Lab Control Sample  
 JWG0801896-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Chloromethane	23.9	20.0	120	67-135
Vinyl Chloride	24.5	20.0	122	78-132
Bromomethane	23.2	20.0	116	79-130
Chloroethane	21.4	20.0	107	74-126
Trichlorofluoromethane	22.2	20.0	111	74-134
1,1-Dichloroethene	21.3	20.0	106	78-130
Acetone	125	100	125	67-133
Iodomethane (Methyl Iodide)	126	100	126	68-134
Carbon Disulfide	118	100	118	76-138
Methylene Chloride	20.6	20.0	103	72-124
trans-1,2-Dichloroethene	19.1	20.0	95	77-124
Acrylonitrile	110	100	110	77-127
1,1-Dichloroethane	20.2	20.0	101	80-128
Vinyl Acetate	81.2	100	81	61-148
cis-1,2-Dichloroethene	21.0	20.0	105	80-126
2-Butanone (MEK)	118	100	118	73-127
Bromochloromethane	21.1	20.0	106	79-129
Chloroform	20.6	20.0	103	83-124
1,1,1-Trichloroethane (TCA)	20.3	20.0	101	79-124
Carbon Tetrachloride	20.5	20.0	103	81-125
Benzene	20.5	20.0	102	79-119
1,2-Dichloroethane (EDC)	19.2	20.0	96	80-124
Trichloroethene (TCE)	20.4	20.0	102	76-124
1,2-Dichloropropane	20.4	20.0	102	79-123
Dibromomethane	19.9	20.0	99	83-123
Bromodichloromethane	20.3	20.0	102	81-123
cis-1,3-Dichloropropene	19.2	20.0	96	86-123
4-Methyl-2-pentanone (MIBK)	104	100	104	72-136
Toluene	20.3	20.0	102	86-117
trans-1,3-Dichloropropene	18.4	20.0	92	83-124
1,1,2-Trichloroethane	19.1	20.0	96	86-114
Tetrachloroethene (PCE)	20.9	20.0	104	80-121
2-Hexanone	110	100	110	71-138
Dibromochloromethane	18.8	20.0	94	82-121
1,2-Dibromoethane (EDB)	19.6	20.0	98	88-117
Chlorobenzene	20.0	20.0	100	86-113

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Extracted:** 05/20/2008  
**Date Analyzed:** 05/20/2008

**Lab Control Spike Summary**  
**Appendix I Volatile Organic Compounds by GC/MS**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0801896

Lab Control Sample  
JWG0801896-3  
Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	19.3	20.0	97	85-117
Ethylbenzene	21.3	20.0	106	90-118
m,p-Xylenes	42.6	40.0	107	86-121
o-Xylene	21.4	20.0	107	89-119
Styrene	21.2	20.0	106	89-122
Bromoform	20.5	20.0	102	68-129
1,1,2,2-Tetrachloroethane	21.0	20.0	105	83-120
1,2,3-Trichloropropane	22.0	20.0	110	83-123
1,4-Dichlorobenzene	20.9	20.0	105	83-113
trans-1,4-Dichloro-2-butene	20.5	20.0	103	53-143
1,2-Dichlorobenzene	21.1	20.0	105	84-115
1,2-Dibromo-3-chloropropane (DBCP)	22.8	20.0	114	62-123

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



Client: GeoSyntec Consultants  
Project: JED Disposal Facility/FQ1512.01  
Sample Matrix: Water

Service Request: J0802326

Surrogate Recovery Summary  
1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

Extraction Method: METHOD  
Analysis Method: 8011

Units: PERCENT  
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
MW-7A	J0802326-001	114
MW-7B	J0802326-002	117
MW-7C	J0802326-003	118
MW-8A	J0802326-004	115
MW-8B	J0802326-005	109
MW-8C	J0802326-006	132
MW-9A	J0802326-007	123
MW-9B	J0802326-008	118
MW-9C	J0802326-009	117
MW-10A	J0802326-010	123
MW-10B	J0802326-011	119
MW-10C	J0802326-012	114
DUP-1	J0802326-014	124
Method Blank	JWG0801841-3	121
Lab Control Sample	JWG0801841-1	117
Duplicate Lab Control Sample	JWG0801841-2	120

---

**Surrogate Recovery Control Limits (%)**

Sur1 = 1,1,1,2-Tetrachloroethane 77-150

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Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802326  
**Date Extracted:** 05/16/2008  
**Date Analyzed:** 05/19/2008

**Lab Control Spike/Duplicate Lab Control Spike Summary**  
**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0801841

Analyte Name	Lab Control Sample JWG0801841-1 Lab Control Spike			Duplicate Lab Control Sample JWG0801841-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Expected	%Rec	Result	Expected	%Rec			
1,2-Dibromoethane (EDB)	0.275	0.250	110	0.279	0.250	112	70-130	1	20
1,2-Dibromo-3-chloropropane (DBCP)	0.265	0.250	106	0.269	0.250	108	70-130	1	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008  
**Date Extracted:** 05/16/2008  
**Date Analyzed:** 05/19/2008

### Matrix Spike/Matrix Spike Duplicate Summary Total Metals

**Sample Name:** MW-7A  
**Lab Code:** J0802326-001

J0802326-001S

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec		Result
				MS	DMS		MS	DMS	MS	DMS	RPD	Acceptance Limits	Notes	
Iron	EPA 3010	6010B	50	2000	2000	5060	7100	6910	102	92	3	75 - 125		

## COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

Client: GeoSyntec Consultants  
 Project Name: JED Disposal Facility  
 Project Number: FQ1512.01  
 Matrix: WATER

Service Request: J0802326  
 Date Collected: 05/14/2008  
 Date Received: 05/15/2008  
 Date Extracted: 05/16/2008  
 Date Analyzed: 05/20/2008

Matrix Spike/Matrix Spike Duplicate Summary  
 Total Metals

Sample Name: MW-7B  
 Lab Code: J0802326-002

J0802326-002S

Units: ug/L  
 Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec Acceptance		Result Notes
				MS	DMS		MS	DMS	MS	DMS	RPD	Limits		
Antimony	EPA 3020	6020	2.0	50.0	50.0	U	47.0	47.1	94	94	<1	75 - 125		
Arsenic	EPA 3020	6020	0.5	50.0	50.0	U	45.9	46.5	92	93	1	75 - 125		
Barium	EPA 3020	6020	2.0	50.0	50.0	29.8	80.5	82.2	101	105	2	75 - 125		
Beryllium	EPA 3020	6020	1.0	50.0	50.0	U	45.7	47.1	91	94	3	75 - 125		
Cadmium	EPA 3020	6020	0.5	50.0	50.0	U	46.4	47.5	93	95	2	75 - 125		
Chromium	EPA 3020	6020	2.0	50.0	50.0	2.0	52.3	52.7	101	101	1	75 - 125		
Cobalt	EPA 3020	6020	1.0	50.0	50.0	0.2	49.7	51.1	99	102	3	75 - 125		
Copper	EPA 3020	6020	2.0	50.0	50.0	U	48.0	50.4	95	100	5	75 - 125		
Lead	EPA 3020	6020	1.0	50.0	50.0	0.6	51.0	51.4	101	102	1	75 - 125		
Nickel	EPA 3020	6020	2.0	50.0	50.0	0.6	48.7	50.2	96	99	3	75 - 125		
Selenium	EPA 3020	6020	2.0	50.0	50.0	U	32.8	33.1	66	66	1	75 - 125		N
Silver	EPA 3020	6020	0.5	50.0	50.0	U	50.7	51.4	101	103	1	75 - 125		
Thallium	EPA 3020	6020	1.0	50.0	50.0	U	49.5	50.7	99	101	2	75 - 125		
Vanadium	EPA 3020	6020	5.0	50.0	50.0	U	52.5	52.7	105	105	<1	75 - 125		
Zinc	EPA 3020	6020	10.0	100	100	U	91.2	98.7	91	99	8	75 - 125		

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802326  
**Date Collected:** 05/14/2008  
**Date Received:** 05/15/2008  
**Date Extracted:** 05/19/2008  
**Date Analyzed:** 05/20/2008

### Matrix Spike/Matrix Spike Duplicate Summary Total Metals

**Sample Name:** MW-7C  
**Lab Code:** J0802326-003

J0802326-003S

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec		Result
				MS	DMS		MS	DMS	MS	DMS	RPD	Acceptance Limits	Notes	
Mercury	METHOD	7470A	0.50	5.00	5.00	U	4.55	5.38	91	108	17	75 - 125		

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

Client: GeoSyntec Consultants  
Project Name: JED Disposal Facility  
Project Number: FQ1512.01  
Matrix: WATER

Service Request: J0802326  
Date Collected: 05/14/2008  
Date Received: 05/15/2008  
Date Extracted: 05/16/2008  
Date Analyzed: 05/19/2008

### Matrix Spike/Matrix Spike Duplicate Summary Total Metals

Sample Name: MW-7A  
Lab Code: J0802326-001

J0802326-001S

Units: mg/L  
Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec	Result Notes
				MS	DMS		MS	DMS	MS	DMS	RPD	Acceptance Limits	
Sodium	EPA 3010	6010B	0.5	10.0	10.0	11.3	21.2	20.6	99	93	3	75 - 125	

## COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

Client: GeoSyntec Consultants  
 Project Name: JED Disposal Facility  
 Project Number: FQ1512.01  
 Matrix: WATER

Service Request: J0802326  
 Date Collected: N/A  
 Date Received: N/A  
 Date Extracted: 05/16/2008  
 Date Analyzed: 05/20/2008

Laboratory Control Sample Summary  
 Total Metals

Sample Name: Lab Control Sample  
 Lab Code: LCS2-0516

Units: ug/L  
 Basis: N/A

Analyte	Prep Method	Analysis Method	True Value	Results	Percent Recovery	CAS Percent	Result Notes
						Recovery Acceptance Limits	
Antimony	EPA 3020A	6020	50.0	47.5	95	80 - 120	
Arsenic	EPA 3020A	6020	50.0	45.9	92	80 - 120	
Barium	EPA 3020A	6020	50.0	49.5	99	80 - 120	
Beryllium	EPA 3020A	6020	50.0	45.0	90	80 - 120	
Cadmium	EPA 3020A	6020	50.0	46.5	93	80 - 120	
Chromium	EPA 3020A	6020	50.0	50.7	101	80 - 120	
Cobalt	EPA 3020A	6020	50.0	48.5	97	80 - 120	
Copper	EPA 3020A	6020	50.0	48.7	97	80 - 120	
Iron	EPA 3010A	6010B	2000	2000	100	80 - 120	
Lead	EPA 3020A	6020	50.0	49.7	99	80 - 120	
Mercury	METHOD	7470A	5.00	5.61	112	80 - 120	
Nickel	EPA 3020A	6020	50.0	49.1	98	80 - 120	
Selenium	EPA 3020A	6020	50.0	42.6	85	80 - 120	
Silver	EPA 3020A	6020	50.0	50.7	101	80 - 120	
Thallium	EPA 3020A	6020	50.0	49.6	99	80 - 120	
Vanadium	EPA 3020A	6020	50.0	49.4	99	80 - 120	
Zinc	EPA 3020A	6020	100	102.0	102	80 - 120	

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

Client: GeoSyntec Consultants  
Project Name: JED Disposal Facility  
Project Number: FQ1512.01  
Matrix: WATER

Service Request: J0802326  
Date Collected: N/A  
Date Received: N/A  
Date Extracted: 05/16/2008  
Date Analyzed: 05/19/2008

### Laboratory Control Sample Summary Total Metals

Sample Name: Lab Control Sample  
Lab Code: LCS1-0516

Units: mg/L  
Basis: N/A

Analyte	Prep Method	Analysis Method	True Value	Results	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Sodium	EPA 3010A	6010B	10.0	9.6	96	80 - 120	



# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802326  
**Date Collected :** 05/14/08  
**Date Received :** 05/15/08  
**Date Extracted :** NA  
**Date Analyzed :** 05/15/08

### Duplicate Summary Inorganic Parameters

**Sample Name :** MW-7A  
**Lab Code :** J0802326-001DUP  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Chloride	mg/L (ppm)	300.0	0.2	26	26	26	<1	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.17	U	NC	-	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802326  
**Date Collected :** 05/14/08  
**Date Received :** 05/15/08  
**Date Extracted :** NA  
**Date Analyzed :** 05/15/08

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** MW-7A  
**Lab Code :** J0802326-001MS  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
								Percent Recovery Acceptance Limits	
Chloride	mg/L (ppm)	300.0	0.2	50.0	26	76.4	101	90-110	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	10	0.17	10.4	102	90-110	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802326  
**Date Collected :** 05/14/08  
**Date Received :** 05/15/08  
**Date Extracted :** NA  
**Date Analyzed :** 05/15/08

### Duplicate Summary Inorganic Parameters

**Sample Name :** MW-8C  
**Lab Code :** J0802326-006DUP  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</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	mg/L (ppm)	350.1	0.05	0.16	0.16	0.16	<1	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802326  
**Date Collected :** 05/14/08  
**Date Received :** 05/15/08  
**Date Extracted :** NA  
**Date Analyzed :** 05/15/08

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** MW-8C  
**Lab Code :** J0802326-006MS  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
								Percent Recovery Acceptance Limits	
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	5.00	0.16	5.30	103	90-110	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802326  
**Date Collected :** 05/14/08  
**Date Received :** 05/15/08  
**Date Extracted :** NA  
**Date Analyzed :** 05/15/08

### Duplicate Summary Inorganic Parameters

**Sample Name :** MW-10B  
**Lab Code :** J0802326-011DUP  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</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	mg/L (ppm)	300.0	0.2	15	15	15	<1	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	U	U	U	-	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802326  
**Date Collected :** 05/14/08  
**Date Received :** 05/15/08  
**Date Extracted :** NA  
**Date Analyzed :** 05/15/08

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** MW-10B  
**Lab Code :** J0802326-011MS  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
								Percent Recovery Acceptance Limits	
Chloride	mg/L (ppm)	300.0	0.2	50.0	15	67.1	104	90-110	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	10	U	10.2	102	90-110	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802326  
**Date Collected :** NA  
**Date Received :** NA  
**Date Extracted :** NA  
**Date Analyzed :** 05/15-19/08

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** J0802326-LCS  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	True Value	Result	Percent Recovery	CAS	Result Notes
						Percent Recovery Acceptance Limits	
Ammonia as Nitrogen	mg/L (ppm)	350.1	5.00	5.21	104	90-110	
Chloride	mg/L (ppm)	300.0	50.0	51.7	103	90-110	
Nitrate as Nitrogen	mg/L (ppm)	300.0	10	10.2	102	90-110	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	300	300	100	85-115	

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

Client: Geosyntec Service Request # J0802326  
 Project: JED Disposal Facility  
 Cooler received on 5/15/08 and opened on 5/15/08 by SN  
 COURIER: CAS UPS FEDEX DHL CLIENT Tracking # J2081508934

- |    |   |            |        |     |
|----|---|------------|--------|-----|
| 1  | Were custody seals on outside of cooler?                                      | <u>Yes</u> | No     | N/A |
| 2  | Were seals intact, signed and dated?  | <u>Yes</u> | No     | N/A |
| 3  | Were custody papers properly filled out?                                      | <u>Yes</u> | No     | N/A |
| 4  | Temperature of cooler(s) upon receipt (Should be 4 +/- 2 degrees C)           | <u>0.7</u> |        |     |
| 5  | Correct Temperature?  | <u>Yes</u> | No     | N/A |
| 6  | Were Ice or Ice Packs present   | <u>Yes</u> | No     | N/A |
| 7  | Did all bottles arrive in good condition (unbroken, etc....)?                 | <u>Yes</u> | No     | N/A |
| 8  | Were all bottle labels complete (sample ID, preservation, etc....)?           | <u>Yes</u> | No     | N/A |
| 9  | Did all bottle labels and tags agree with custody papers?                     | <u>Yes</u> | No     | N/A |
| 10 | Were the correct bottles used for the tests indicated?                        | <u>Yes</u> | No     | N/A |
| 11 | Were all of the preserved bottles received with the appropriate preservative? | <u>Yes</u> | No     | N/A |
|    | <u>HNO3 pH&lt;2</u> <u>H2SO4 pH&lt;2</u> ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2  |            |        |     |
|    | Preservative additions noted below  |            |        |     |
| 12 | Were all samples received within analysis holding times?                      | <u>Yes</u> | No     | N/A |
| 13 | Were VOA vials checked for absence of air bubbles? If present, note below     | <u>Yes</u> | No     | N/A |
| 14 | Where did the bottles originate?  | <u>CAS</u> | Client |     |

Sample ID	Reagent	Manuf. Lot # or CAS Chem ID	ml added	Initials

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted:

Date 100



[illegible]



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011 PAGE 1 OF 2

SR # 50802306  
CAS Contact

Project Name <b>SED Digital Facility</b>		Project Number <b>PR/12.01</b>		ANALYSIS REQUESTED (Include Method Number)	
Project Manager <b>Kirk Wills</b>		Email Address <b>kwillis@geosyntec.com</b>		PRESERVATIVE <b>1 0 2 3 0</b>	
Company Address <b>Geosyntec</b>		14055 Riverway Dr. STE 300		NUMBER OF CONTAINERS <b>8260</b>	
Phone # <b>813-558-0940</b>		FAX # <b>813-558-9726</b>		<b>Boil</b>	
Sample Signature <b>Joe Terry</b>		Sampler's Printed Name <b>Joe Terry, Tom Wills</b>		<b>Metals</b>	
CLIENT SAMPLE ID		LAB ID		<b>NH3</b>	
MW-7A		5-14-08 1525		<b>HS, Cl, NO3</b>	
MW-7B		1605			
MW-7C		1530			
MW-8A		1355			
MW-8B		1425			
MW-8C		1410			
MW-9A		1145			
MW-9B		1105			
MW-9C		1100			
MW-10A		0855			
SPECIAL INSTRUCTIONS/COMMENTS		TURNAROUND REQUIREMENTS <input checked="" type="checkbox"/> RUSH (SURCHARGES APPLY) <input checked="" type="checkbox"/> STANDARD		REPORT REQUIREMENTS <input checked="" type="checkbox"/> I. Results Only <input checked="" type="checkbox"/> II. Results + QC Summaries (LCS, DUP, MS/MSD as required) <input type="checkbox"/> III. Results + QC and Calibration Summaries <input type="checkbox"/> IV. Data Validation Report with Raw Data <input type="checkbox"/> V. Specialized Forms / Custom Report	
See QAPP <input type="checkbox"/>		REQUESTED FAX DATE		PO#	
		REQUESTED REPORT DATE		BILL TO:	
SAMPLE RECEIPT: CONDITION/COOLER TEMP.		CUSTODY SEALS: Y N		INVOICE INFORMATION	
RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY	
Signature <b>Joe Terry</b>		Signature <b>Joe Terry</b>		Signature	
Printed Name <b>Joe Terry</b>		Printed Name <b>Joe Terry</b>		Printed Name	
Firm <b>Geosyntec</b>		Firm <b>Geosyntec</b>		Firm	
Date/Time <b>5-14-08/1645</b>		Date/Time <b>5/15/08 1010</b>		Date/Time	



## CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

An Employee - Owned Company  
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www.caslab.com

SR # 10807306  
CAS Contact

Project Name <b>SED Disposal Facility</b>		Project Number <b>FQ1512.01</b>	
Project Manager <b>Kirk Wilks</b>		Email Address	
Company/Address <b>Geosyntec</b> <b>14055 Riveredge Dr.</b> <b>STE300</b> <b>Tampa, FL 33637</b>			
Phone # <b>813-558-0990</b>		FAX # <b>813-558-9726</b>	
Sampler's Signature <i>[Signature]</i>		Sampler's Printed Name <b>Jae Terrell</b>	
CLIENT SAMPLE ID <b>MW-10B</b>		LAB ID	
SAMPLING DATE <b>5.14.08</b>		SAMPLING TIME <b>0850</b>	
MATRIX <b>GW</b>		MATRIX <b>GW</b>	
SAMPLING DATE <b>5.14.08</b>		SAMPLING TIME <b>0920</b>	
MATRIX <b>W</b>		MATRIX <b>W</b>	
SAMPLING DATE <b>5.14.08</b>		SAMPLING TIME <b>0920</b>	
MATRIX <b>GW</b>		MATRIX <b>GW</b>	
SPECIAL INSTRUCTIONS/COMMENTS <b>See QAPP</b>			
CUSTODY SEALS: Y N			
RECEIVED BY <i>[Signature]</i>		RECEIVED BY <i>[Signature]</i>	
Signature <b>Jae Terrell</b>		Signature <b>Jae Terrell</b>	
Printed Name <b>Jae Terrell</b>		Printed Name <b>Jae Terrell</b>	
Firm <b>Geosyntec</b>		Firm <b>Geosyntec</b>	
Date/Time <b>5.14.08 / 1645</b>		Date/Time <b>5.15.08 / 1010</b>	

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

JSCOC-01/29/08

June 09, 2008

Service Request No: J0802349

Kirk Wills  
GeoSyntec Consultants  
14055 Riveredge Drive  
Suite 300  
Tampa, FL 33637

**RE: JED Disposal Facility/FQ1512.01**

Dear Kirk:

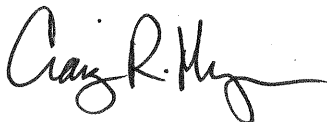
Enclosed are the results of the sample(s) submitted to our laboratory on May 16, 2008. For your reference, these analyses have been assigned our service request number **J0802349**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP 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. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please call if you have any questions. My extension is 4409. You may also contact me via email at CMyers@caslab.com.

Respectfully submitted,

**Columbia Analytical Services, Inc.**



Craig Myers  
Project Chemist

Page 1 of 79

*Laboratory Manager: Greg Jordan*

*Quality Assurance Officer: Kathy Brungard*

*CAS Jacksonville is NELAC-accredited by the State of Florida, #E82502 valid through 6/30/08. Other state accreditations include: Arkansas, #88-0600 valid through 1/12/06; Georgia, #958 valid through 6/30/08; Louisiana, #02086 valid through 6/30/08; Texas, #T104704197-06-TX valid through 5/31/08; North Carolina, #527 valid through 12/31/07; South Carolina, #96021001 valid through 6/30/08.*

## COLUMBIA ANALYTICAL SERVICES, INC.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility  
**Sample Matrix:** Water

**Service Request No.:** J0802349  
**Date Received:** 5/16/08

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

#### Sample Receipt

Ten water samples and one trip blank were received for analysis at Columbia Analytical Services on 5/16/08. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at 4±2°C upon receipt at the lab except for aqueous samples designated for metals analyses, which were stored at room temperature.

#### Volatile Organic Compounds by GC-MS

The samples were analyzed for Volatile Organics using EPA Method 8260. The following observations were made regarding this delivery group.

#### Surrogate Exceptions

The upper control criterion was exceeded for the following surrogate in sample MW-3A: 4-Bromofluorobenzene. No target analytes were detected in the sample above the method reporting limit. The error associated with an elevated recovery equates to a high bias. The quality of the sample data is not significantly affected. No further corrective action was appropriate.

#### Batch QC Notes and Discussion

Quality control samples for MS/DMS were performed using samples from another sample delivery group (SDG). The frequency requirement for quality control sample analysis was consistent with the project's requirements. Matrix specific quality control results have no bearing on sample data from a different matrix or location. Therefore, control of the batch has been evaluated using the method blank and the laboratory control sample.

#### EDB and DBCP by GC-ECD

The samples were analyzed for EDB and DBCP using EPA Method 8011. No problems were observed.

#### Metals by ICP-MS/ICP-OES/CVAA

The samples were analyzed for Total Metals using EPA Methods 6020/6010B/7470A. The following observations were made regarding this delivery group.

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



Date \_\_\_\_\_

6/9/08

#### Batch QC Notes and Discussion

Quality control samples (i.e., Dup/Spike or MS/DMS samples) were performed using samples from another sample delivery group (SDG). The frequency requirement for quality control sample analysis was consistent with the project's requirements. Matrix specific quality control results have no bearing on sample data from a different matrix or location. Therefore, control of the batch has been evaluated using the method blank and the laboratory control sample.

#### General Chemistry Parameters

The samples were analyzed for Inorganic Parameters using various EPA and Standard Methods. The following observations were made regarding this delivery group.

#### Sample Notes and Discussion

Result for sample SW-4 is based on colony counts outside the optimal colony range of 20-60 CFU. The data has been qualified. This is an informational flag and it does not impact the quality of the data.

#### Batch QC Notes and Discussion

Quality control samples for some parameters (i.e., Dup/Spike or MS/DMS samples) were performed using samples from another sample delivery group (SDG). The frequency requirement for quality control sample analysis was consistent with the project's requirements. Matrix specific quality control results have no bearing on sample data from a different matrix or location. Therefore, control of the batch has been evaluated using the method blank and the laboratory control sample.

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



Date \_\_\_\_\_

6/9/08

## Florida DEP Data Qualifiers

B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
H	Value based on field kit determination; results may not be accurate.
i	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J	Estimated value (one of the following reasons is discussed in the project case narrative). <ol style="list-style-type: none"><li>1. The result may be inaccurate because the surrogate recovery limits have been exceeded.</li><li>2. No known quality control criteria exists for the component.</li><li>3. The reported value failed to meet the established quality control criteria for either precision or accuracy.</li><li>4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).</li><li>5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).</li></ol>
K	Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
L	Off scale high. The analyte is above the upper limit of the linear calibration range.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
N	Presumptive evidence of the analyte. Confirmation was not performed.
Q	Sample held beyond the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	The laboratory analysis was from an improperly preserved sample.
Z	Too many colonies were present (TNTC). The numeric value represents the filtration volume.

## 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.



**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01

**Service Request:** J0802349

**SAMPLE CROSS-REFERENCE**

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J0802349-001	MW-3A	05/15/08	13:25
J0802349-002	MW-3B	05/15/08	13:55
J0802349-003	MW-3C	05/15/08	13:30
J0802349-004	MW-4A	05/15/08	10:25
J0802349-005	MW-4B	05/15/08	10:20
J0802349-006	MW-4C	05/15/08	12:45
J0802349-007	MW-5A	05/15/08	09:05
J0802349-008	MW-5B	05/15/08	08:50
J0802349-009	MW-5C	05/15/08	09:15
J0802349-010	Equipment Blank	05/15/08	14:00
J0802349-011	Trip Blank	05/15/08	00:00

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-3A  
**Lab Code:** J0802349-001  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Vinyl Chloride	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Bromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Chloroethane	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/21/08	05/21/08	JWG0801925	
Acetone	ND	U	50	1.7	1	05/21/08	05/21/08	JWG0801925	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/21/08	05/21/08	JWG0801925	
Carbon Disulfide	ND	U	10	1.0	1	05/21/08	05/21/08	JWG0801925	
Methylene Chloride	ND	U	5.0	0.51	1	05/21/08	05/21/08	JWG0801925	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Acrylonitrile	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Vinyl Acetate	ND	U	10	0.73	1	05/21/08	05/21/08	JWG0801925	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
2-Butanone (MEK)	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
Bromochloromethane	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
Chloroform	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/21/08	05/21/08	JWG0801925	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
Benzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Dibromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Bromodichloromethane	ND	U	1.0	0.15	1	05/21/08	05/21/08	JWG0801925	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/21/08	05/21/08	JWG0801925	
<b>Toluene</b>	<b>0.77</b>	<b>I</b>	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/21/08	05/21/08	JWG0801925	
2-Hexanone	ND	U	25	0.54	1	05/21/08	05/21/08	JWG0801925	
Dibromochloromethane	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	

**Comments:**

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-3A  
**Lab Code:** J0802349-001  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Ethylbenzene	0.29	I	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
m,p-Xylenes	ND	U	2.0	0.47	1	05/21/08	05/21/08	JWG0801925	
o-Xylene	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
Styrene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Bromoform	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/21/08	05/21/08	JWG0801925	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/21/08	05/21/08	JWG0801925	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	79	71-122	05/21/08	Acceptable
4-Bromofluorobenzene	123	75-120	05/21/08	Outside Control Limits
Dibromofluoromethane	92	82-116	05/21/08	Acceptable
Toluene-d8	110	88-117	05/21/08	Acceptable

Comments:

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802349  
 Date Collected: 05/15/2008  
 Date Received: 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-3B  
 Lab Code: J0802349-002  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Vinyl Chloride	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Bromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Chloroethane	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/21/08	05/21/08	JWG0801925	
Acetone	ND	U	50	1.7	1	05/21/08	05/21/08	JWG0801925	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/21/08	05/21/08	JWG0801925	
Carbon Disulfide	ND	U	10	1.0	1	05/21/08	05/21/08	JWG0801925	
Methylene Chloride	ND	U	5.0	0.51	1	05/21/08	05/21/08	JWG0801925	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Acrylonitrile	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Vinyl Acetate	ND	U	10	0.73	1	05/21/08	05/21/08	JWG0801925	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
2-Butanone (MEK)	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
Bromochloromethane	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
Chloroform	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/21/08	05/21/08	JWG0801925	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
Benzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Dibromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Bromodichloromethane	ND	U	1.0	0.15	1	05/21/08	05/21/08	JWG0801925	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/21/08	05/21/08	JWG0801925	
Toluene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/21/08	05/21/08	JWG0801925	
2-Hexanone	ND	U	25	0.54	1	05/21/08	05/21/08	JWG0801925	
Dibromochloromethane	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	

Comments:

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-3B  
**Lab Code:** J0802349-002  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Ethylbenzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
m,p-Xylenes	ND	U	2.0	0.47	1	05/21/08	05/21/08	JWG0801925	
o-Xylene	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
Styrene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Bromoform	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/21/08	05/21/08	JWG0801925	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/21/08	05/21/08	JWG0801925	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	84	71-122	05/21/08	Acceptable
4-Bromofluorobenzene	117	75-120	05/21/08	Acceptable
Dibromofluoromethane	86	82-116	05/21/08	Acceptable
Toluene-d8	100	88-117	05/21/08	Acceptable

Comments: \_\_\_\_\_

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802349  
 Date Collected: 05/15/2008  
 Date Received: 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-3C  
 Lab Code: J0802349-003  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Vinyl Chloride	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Bromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Chloroethane	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/21/08	05/21/08	JWG0801925	
Acetone	ND	U	50	1.7	1	05/21/08	05/21/08	JWG0801925	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/21/08	05/21/08	JWG0801925	
Carbon Disulfide	ND	U	10	1.0	1	05/21/08	05/21/08	JWG0801925	
Methylene Chloride	ND	U	5.0	0.51	1	05/21/08	05/21/08	JWG0801925	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Acrylonitrile	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Vinyl Acetate	ND	U	10	0.73	1	05/21/08	05/21/08	JWG0801925	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
2-Butanone (MEK)	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
Bromochloromethane	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
Chloroform	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/21/08	05/21/08	JWG0801925	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
Benzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Dibromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Bromodichloromethane	ND	U	1.0	0.15	1	05/21/08	05/21/08	JWG0801925	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/21/08	05/21/08	JWG0801925	
Toluene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/21/08	05/21/08	JWG0801925	
2-Hexanone	ND	U	25	0.54	1	05/21/08	05/21/08	JWG0801925	
Dibromochloromethane	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	

Comments:

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802349  
 Date Collected: 05/15/2008  
 Date Received: 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-3C  
 Lab Code: J0802349-003  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Ethylbenzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
m,p-Xylenes	ND	U	2.0	0.47	1	05/21/08	05/21/08	JWG0801925	
o-Xylene	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
Styrene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Bromoform	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/21/08	05/21/08	JWG0801925	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/21/08	05/21/08	JWG0801925	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	85	71-122	05/21/08	Acceptable
4-Bromofluorobenzene	115	75-120	05/21/08	Acceptable
Dibromofluoromethane	89	82-116	05/21/08	Acceptable
Toluene-d8	106	88-117	05/21/08	Acceptable

Comments:

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-4A  
**Lab Code:** J0802349-004  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Vinyl Chloride	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Bromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Chloroethane	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/21/08	05/21/08	JWG0801925	
Acetone	ND	U	50	1.7	1	05/21/08	05/21/08	JWG0801925	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/21/08	05/21/08	JWG0801925	
Carbon Disulfide	ND	U	10	1.0	1	05/21/08	05/21/08	JWG0801925	
Methylene Chloride	ND	U	5.0	0.51	1	05/21/08	05/21/08	JWG0801925	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Acrylonitrile	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Vinyl Acetate	ND	U	10	0.73	1	05/21/08	05/21/08	JWG0801925	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
2-Butanone (MEK)	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
Bromochloromethane	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
Chloroform	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/21/08	05/21/08	JWG0801925	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
Benzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Dibromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Bromodichloromethane	ND	U	1.0	0.15	1	05/21/08	05/21/08	JWG0801925	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/21/08	05/21/08	JWG0801925	
<b>Toluene</b>	<b>0.15</b>	<b>I</b>	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/21/08	05/21/08	JWG0801925	
2-Hexanone	ND	U	25	0.54	1	05/21/08	05/21/08	JWG0801925	
Dibromochloromethane	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	

Comments:



## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-4A  
**Lab Code:** J0802349-004  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Ethylbenzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
m,p-Xylenes	ND	U	2.0	0.47	1	05/21/08	05/21/08	JWG0801925	
o-Xylene	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
Styrene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Bromoform	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/21/08	05/21/08	JWG0801925	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/21/08	05/21/08	JWG0801925	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	86	71-122	05/21/08	Acceptable
4-Bromofluorobenzene	109	75-120	05/21/08	Acceptable
Dibromofluoromethane	91	82-116	05/21/08	Acceptable
Toluene-d8	104	88-117	05/21/08	Acceptable

Comments: \_\_\_\_\_

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-4B  
**Lab Code:** J0802349-005  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Vinyl Chloride	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Bromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Chloroethane	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/21/08	05/21/08	JWG0801925	
Acetone	ND	U	50	1.7	1	05/21/08	05/21/08	JWG0801925	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/21/08	05/21/08	JWG0801925	
Carbon Disulfide	ND	U	10	1.0	1	05/21/08	05/21/08	JWG0801925	
Methylene Chloride	ND	U	5.0	0.51	1	05/21/08	05/21/08	JWG0801925	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Acrylonitrile	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Vinyl Acetate	ND	U	10	0.73	1	05/21/08	05/21/08	JWG0801925	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
2-Butanone (MEK)	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
Bromochloromethane	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
Chloroform	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/21/08	05/21/08	JWG0801925	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
Benzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Dibromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Bromodichloromethane	ND	U	1.0	0.15	1	05/21/08	05/21/08	JWG0801925	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/21/08	05/21/08	JWG0801925	
<b>Toluene</b>	<b>0.15</b>	<b>I</b>	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/21/08	05/21/08	JWG0801925	
2-Hexanone	ND	U	25	0.54	1	05/21/08	05/21/08	JWG0801925	
Dibromochloromethane	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	

Comments:

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802349  
 Date Collected: 05/15/2008  
 Date Received: 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-4B  
 Lab Code: J0802349-005  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Ethylbenzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
m,p-Xylenes	ND	U	2.0	0.47	1	05/21/08	05/21/08	JWG0801925	
o-Xylene	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
Styrene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Bromoform	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/21/08	05/21/08	JWG0801925	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/21/08	05/21/08	JWG0801925	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	86	71-122	05/21/08	Acceptable
4-Bromofluorobenzene	111	75-120	05/21/08	Acceptable
Dibromofluoromethane	91	82-116	05/21/08	Acceptable
Toluene-d8	100	88-117	05/21/08	Acceptable

Comments: \_\_\_\_\_

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-4C  
**Lab Code:** J0802349-006  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Vinyl Chloride	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Bromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Chloroethane	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/21/08	05/21/08	JWG0801925	
Acetone	ND	U	50	1.7	1	05/21/08	05/21/08	JWG0801925	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/21/08	05/21/08	JWG0801925	
Carbon Disulfide	ND	U	10	1.0	1	05/21/08	05/21/08	JWG0801925	
Methylene Chloride	ND	U	5.0	0.51	1	05/21/08	05/21/08	JWG0801925	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Acrylonitrile	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Vinyl Acetate	ND	U	10	0.73	1	05/21/08	05/21/08	JWG0801925	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
2-Butanone (MEK)	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
Bromochloromethane	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
Chloroform	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/21/08	05/21/08	JWG0801925	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
Benzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Dibromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Bromodichloromethane	ND	U	1.0	0.15	1	05/21/08	05/21/08	JWG0801925	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/21/08	05/21/08	JWG0801925	
Toluene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/21/08	05/21/08	JWG0801925	
2-Hexanone	ND	U	25	0.54	1	05/21/08	05/21/08	JWG0801925	
Dibromochloromethane	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	

**Comments:**

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-4C  
**Lab Code:** J0802349-006  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Ethylbenzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
m,p-Xylenes	ND	U	2.0	0.47	1	05/21/08	05/21/08	JWG0801925	
o-Xylene	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
Styrene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Bromoform	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/21/08	05/21/08	JWG0801925	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/21/08	05/21/08	JWG0801925	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	87	71-122	05/21/08	Acceptable
4-Bromofluorobenzene	110	75-120	05/21/08	Acceptable
Dibromofluoromethane	93	82-116	05/21/08	Acceptable
Toluene-d8	100	88-117	05/21/08	Acceptable

Comments: \_\_\_\_\_

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-5A  
**Lab Code:** J0802349-007  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
<b>Vinyl Chloride</b>	<b>0.42</b>	<b>I</b>	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Bromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Chloroethane	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/21/08	05/21/08	JWG0801925	
Acetone	ND	U	50	1.7	1	05/21/08	05/21/08	JWG0801925	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/21/08	05/21/08	JWG0801925	
Carbon Disulfide	ND	U	10	1.0	1	05/21/08	05/21/08	JWG0801925	
Methylene Chloride	ND	U	5.0	0.51	1	05/21/08	05/21/08	JWG0801925	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Acrylonitrile	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Vinyl Acetate	ND	U	10	0.73	1	05/21/08	05/21/08	JWG0801925	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
2-Butanone (MEK)	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
Bromochloromethane	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
Chloroform	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/21/08	05/21/08	JWG0801925	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
<b>Benzene</b>	<b>0.28</b>	<b>I</b>	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Dibromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Bromodichloromethane	ND	U	1.0	0.15	1	05/21/08	05/21/08	JWG0801925	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/21/08	05/21/08	JWG0801925	
<b>Toluene</b>	<b>0.18</b>	<b>I</b>	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/21/08	05/21/08	JWG0801925	
2-Hexanone	ND	U	25	0.54	1	05/21/08	05/21/08	JWG0801925	
Dibromochloromethane	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	

**Comments:**

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-5A  
**Lab Code:** J0802349-007  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Ethylbenzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
m,p-Xylenes	ND	U	2.0	0.47	1	05/21/08	05/21/08	JWG0801925	
o-Xylene	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
Styrene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Bromoform	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/21/08	05/21/08	JWG0801925	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/21/08	05/21/08	JWG0801925	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	84	71-122	05/21/08	Acceptable
4-Bromofluorobenzene	108	75-120	05/21/08	Acceptable
Dibromofluoromethane	92	82-116	05/21/08	Acceptable
Toluene-d8	102	88-117	05/21/08	Acceptable

Comments: \_\_\_\_\_

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-5B  
**Lab Code:** J0802349-008  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Vinyl Chloride	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Bromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Chloroethane	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/21/08	05/21/08	JWG0801925	
Acetone	ND	U	50	1.7	1	05/21/08	05/21/08	JWG0801925	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/21/08	05/21/08	JWG0801925	
Carbon Disulfide	ND	U	10	1.0	1	05/21/08	05/21/08	JWG0801925	
Methylene Chloride	ND	U	5.0	0.51	1	05/21/08	05/21/08	JWG0801925	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Acrylonitrile	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Vinyl Acetate	ND	U	10	0.73	1	05/21/08	05/21/08	JWG0801925	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
2-Butanone (MEK)	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
Bromochloromethane	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
Chloroform	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/21/08	05/21/08	JWG0801925	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
Benzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Dibromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Bromodichloromethane	ND	U	1.0	0.15	1	05/21/08	05/21/08	JWG0801925	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/21/08	05/21/08	JWG0801925	
Toluene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/21/08	05/21/08	JWG0801925	
2-Hexanone	ND	U	25	0.54	1	05/21/08	05/21/08	JWG0801925	
Dibromochloromethane	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	

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



## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-5B  
**Lab Code:** J0802349-008  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Ethylbenzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
m,p-Xylenes	ND	U	2.0	0.47	1	05/21/08	05/21/08	JWG0801925	
o-Xylene	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
Styrene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Bromoform	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/21/08	05/21/08	JWG0801925	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/21/08	05/21/08	JWG0801925	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	87	71-122	05/21/08	Acceptable
4-Bromofluorobenzene	110	75-120	05/21/08	Acceptable
Dibromofluoromethane	90	82-116	05/21/08	Acceptable
Toluene-d8	104	88-117	05/21/08	Acceptable

**Comments:**

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-5C  
**Lab Code:** J0802349-009  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Vinyl Chloride	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Bromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Chloroethane	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/21/08	05/21/08	JWG0801925	
Acetone	ND	U	50	1.7	1	05/21/08	05/21/08	JWG0801925	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/21/08	05/21/08	JWG0801925	
Carbon Disulfide	ND	U	10	1.0	1	05/21/08	05/21/08	JWG0801925	
Methylene Chloride	ND	U	5.0	0.51	1	05/21/08	05/21/08	JWG0801925	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Acrylonitrile	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Vinyl Acetate	ND	U	10	0.73	1	05/21/08	05/21/08	JWG0801925	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
2-Butanone (MEK)	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
Bromochloromethane	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
Chloroform	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/21/08	05/21/08	JWG0801925	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
Benzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Dibromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Bromodichloromethane	ND	U	1.0	0.15	1	05/21/08	05/21/08	JWG0801925	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/21/08	05/21/08	JWG0801925	
Toluene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/21/08	05/21/08	JWG0801925	
2-Hexanone	ND	U	25	0.54	1	05/21/08	05/21/08	JWG0801925	
Dibromochloromethane	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	

Comments:

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-5C  
**Lab Code:** J0802349-009  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Ethylbenzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
m,p-Xylenes	ND	U	2.0	0.47	1	05/21/08	05/21/08	JWG0801925	
o-Xylene	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
Styrene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Bromoform	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/21/08	05/21/08	JWG0801925	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/21/08	05/21/08	JWG0801925	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	82	71-122	05/21/08	Acceptable
4-Bromofluorobenzene	112	75-120	05/21/08	Acceptable
Dibromofluoromethane	90	82-116	05/21/08	Acceptable
Toluene-d8	105	88-117	05/21/08	Acceptable

Comments: \_\_\_\_\_

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** Equipment Blank  
**Lab Code:** J0802349-010  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Vinyl Chloride	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Bromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Chloroethane	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/21/08	05/21/08	JWG0801925	
Acetone	ND	U	50	1.7	1	05/21/08	05/21/08	JWG0801925	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/21/08	05/21/08	JWG0801925	
Carbon Disulfide	ND	U	10	1.0	1	05/21/08	05/21/08	JWG0801925	
Methylene Chloride	ND	U	5.0	0.51	1	05/21/08	05/21/08	JWG0801925	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Acrylonitrile	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Vinyl Acetate	ND	U	10	0.73	1	05/21/08	05/21/08	JWG0801925	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
2-Butanone (MEK)	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
Bromochloromethane	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
Chloroform	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/21/08	05/21/08	JWG0801925	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
Benzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Dibromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Bromodichloromethane	ND	U	1.0	0.15	1	05/21/08	05/21/08	JWG0801925	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/21/08	05/21/08	JWG0801925	
Toluene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/21/08	05/21/08	JWG0801925	
2-Hexanone	ND	U	25	0.54	1	05/21/08	05/21/08	JWG0801925	
Dibromochloromethane	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	

Comments:

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** Equipment Blank  
**Lab Code:** J0802349-010  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Ethylbenzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
m,p-Xylenes	ND	U	2.0	0.47	1	05/21/08	05/21/08	JWG0801925	
o-Xylene	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
Styrene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Bromoform	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/21/08	05/21/08	JWG0801925	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/21/08	05/21/08	JWG0801925	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	84	71-122	05/21/08	Acceptable
4-Bromofluorobenzene	109	75-120	05/21/08	Acceptable
Dibromofluoromethane	96	82-116	05/21/08	Acceptable
Toluene-d8	104	88-117	05/21/08	Acceptable

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

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** Trip Blank  
**Lab Code:** J0802349-011  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Vinyl Chloride	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Bromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Chloroethane	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/21/08	05/21/08	JWG0801925	
Acetone	ND	U	50	1.7	1	05/21/08	05/21/08	JWG0801925	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/21/08	05/21/08	JWG0801925	
Carbon Disulfide	ND	U	10	1.0	1	05/21/08	05/21/08	JWG0801925	
Methylene Chloride	ND	U	5.0	0.51	1	05/21/08	05/21/08	JWG0801925	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Acrylonitrile	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Vinyl Acetate	ND	U	10	0.73	1	05/21/08	05/21/08	JWG0801925	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
2-Butanone (MEK)	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
Bromochloromethane	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
Chloroform	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/21/08	05/21/08	JWG0801925	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
Benzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Dibromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Bromodichloromethane	ND	U	1.0	0.15	1	05/21/08	05/21/08	JWG0801925	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/21/08	05/21/08	JWG0801925	
Toluene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/21/08	05/21/08	JWG0801925	
2-Hexanone	ND	U	25	0.54	1	05/21/08	05/21/08	JWG0801925	
<b>Dibromochloromethane</b>	<b>0.51</b>	<b>I</b>	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	

**Comments:**

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** Trip Blank  
**Lab Code:** J0802349-011  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Ethylbenzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
m,p-Xylenes	ND	U	2.0	0.47	1	05/21/08	05/21/08	JWG0801925	
o-Xylene	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
Styrene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
<b>Bromoform</b>	<b>0.76</b>	<b>I</b>	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/21/08	05/21/08	JWG0801925	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/21/08	05/21/08	JWG0801925	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	85	71-122	05/21/08	Acceptable
4-Bromofluorobenzene	109	75-120	05/21/08	Acceptable
Dibromofluoromethane	88	82-116	05/21/08	Acceptable
Toluene-d8	102	88-117	05/21/08	Acceptable

Comments: \_\_\_\_\_

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** NA  
**Date Received:** NA

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank  
**Lab Code:** JWG0801925-2  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Vinyl Chloride	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Bromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Chloroethane	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/21/08	05/21/08	JWG0801925	
Acetone	ND	U	50	1.7	1	05/21/08	05/21/08	JWG0801925	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/21/08	05/21/08	JWG0801925	
Carbon Disulfide	ND	U	10	1.0	1	05/21/08	05/21/08	JWG0801925	
Methylene Chloride	ND	U	5.0	0.51	1	05/21/08	05/21/08	JWG0801925	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Acrylonitrile	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
Vinyl Acetate	ND	U	10	0.73	1	05/21/08	05/21/08	JWG0801925	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
2-Butanone (MEK)	ND	U	10	0.77	1	05/21/08	05/21/08	JWG0801925	
Bromochloromethane	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
Chloroform	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/21/08	05/21/08	JWG0801925	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/21/08	05/21/08	JWG0801925	
Benzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/21/08	05/21/08	JWG0801925	
Dibromomethane	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
Bromodichloromethane	ND	U	1.0	0.15	1	05/21/08	05/21/08	JWG0801925	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/21/08	05/21/08	JWG0801925	
Toluene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/21/08	05/21/08	JWG0801925	
2-Hexanone	ND	U	25	0.54	1	05/21/08	05/21/08	JWG0801925	
Dibromochloromethane	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	

Comments:



## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** NA  
**Date Received:** NA

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank  
**Lab Code:** JWG0801925-2  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chlorobenzene	ND	U	1.0	0.19	1	05/21/08	05/21/08	JWG0801925	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Ethylbenzene	ND	U	1.0	0.20	1	05/21/08	05/21/08	JWG0801925	
m,p-Xylenes	ND	U	2.0	0.47	1	05/21/08	05/21/08	JWG0801925	
o-Xylene	ND	U	1.0	0.25	1	05/21/08	05/21/08	JWG0801925	
Styrene	ND	U	1.0	0.22	1	05/21/08	05/21/08	JWG0801925	
Bromoform	ND	U	1.0	0.24	1	05/21/08	05/21/08	JWG0801925	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/21/08	05/21/08	JWG0801925	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/21/08	05/21/08	JWG0801925	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/21/08	05/21/08	JWG0801925	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/21/08	05/21/08	JWG0801925	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/21/08	05/21/08	JWG0801925	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/21/08	05/21/08	JWG0801925	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	88	71-122	05/21/08	Acceptable
4-Bromofluorobenzene	112	75-120	05/21/08	Acceptable
Dibromofluoromethane	87	82-116	05/21/08	Acceptable
Toluene-d8	103	88-117	05/21/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-3A  
**Lab Code:** J0802349-001  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801882	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801882	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	127	77-150	05/21/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-3B  
**Lab Code:** J0802349-002  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801882	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801882	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	120	77-150	05/21/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-3C  
**Lab Code:** J0802349-003  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801882	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801882	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	123	77-150	05/21/08	Acceptable

Comments: \_\_\_\_\_

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-4A  
**Lab Code:** J0802349-004  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801882	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801882	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	119	77-150	05/21/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-4B  
**Lab Code:** J0802349-005  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801882	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801882	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	117	77-150	05/21/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-4C  
**Lab Code:** J0802349-006  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801882	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801882	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	109	77-150	05/21/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-5A  
**Lab Code:** J0802349-007  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801882	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801882	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	116	77-150	05/21/08	Acceptable

Comments: \_\_\_\_\_



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-5B  
**Lab Code:** J0802349-008  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801882	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801882	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	114	77-150	05/21/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-5C  
**Lab Code:** J0802349-009  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801882	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801882	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	119	77-150	05/21/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** Equipment Blank  
**Lab Code:** J0802349-010  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801882	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801882	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	116	77-150	05/21/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Collected:** NA  
**Date Received:** NA

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** Method Blank  
**Lab Code:** JWG0801882-3  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801882	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801882	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	123	77-150	05/21/08	Acceptable

Comments: \_\_\_\_\_

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802349  
**Date Collected:** 5/15/2008  
**Date Received:** 5/16/2008

### Total Metals

**Sample Name:** MW-3A  
**Lab Code:** J0802349-001

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/21/2008	06/06/2008	0.41	i
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	1.4	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/21/2008	06/06/2008	31	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/21/2008	06/06/2008	1.7	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	0.63	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	0.45	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/20/2008	05/21/2008	1490	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/24/2008	05/22/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	0.47	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/21/2008	06/06/2008	0.93	i
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/21/2008	06/06/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/21/2008	06/06/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/21/2008	06/06/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802349  
**Date Collected:** 5/15/2008  
**Date Received:** 5/16/2008

### Total Metals

**Sample Name:** MW-3B  
**Lab Code:** J0802349-002

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/21/2008	06/06/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	0.43	i
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/21/2008	06/06/2008	19	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/21/2008	06/06/2008	1.8	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	0.32	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/20/2008	05/21/2008	1130	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	1.8	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/24/2008	05/22/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	0.51	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/21/2008	06/06/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/21/2008	06/06/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	0.22	i
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/21/2008	06/06/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/21/2008	06/06/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802349  
**Date Collected:** 5/15/2008  
**Date Received:** 5/16/2008

### Total Metals

**Sample Name:** MW-3C  
**Lab Code:** J0802349-003

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/21/2008	06/06/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/21/2008	06/06/2008	12	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/21/2008	06/06/2008	1.7	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/20/2008	05/21/2008	804	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/24/2008	05/22/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	0.33	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/21/2008	06/06/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/21/2008	06/06/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/21/2008	06/06/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/21/2008	06/06/2008	5.3	i

## COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802349  
**Date Collected:** 5/15/2008  
**Date Received:** 5/16/2008

## Total Metals

**Sample Name:** MW-4A  
**Lab Code:** J0802349-004

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/21/2008	06/06/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	1.9	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/21/2008	06/06/2008	18	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/21/2008	06/06/2008	3.7	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	0.26	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/20/2008	05/21/2008	1740	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/24/2008	05/22/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	0.94	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/21/2008	06/06/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/21/2008	06/06/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/21/2008	06/06/2008	2.5	i
Zinc	EPA 3020A	6020	10	4.0	1.0	05/21/2008	06/06/2008	U	



## COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802349  
**Date Collected:** 5/15/2008  
**Date Received:** 5/16/2008

## Total Metals

**Sample Name:** MW-4B  
**Lab Code:** J0802349-005

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/21/2008	06/06/2008	0.48	i
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	1.3	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/21/2008	06/06/2008	171	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	0.98	i
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/21/2008	06/06/2008	1.4	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	1.6	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/20/2008	05/21/2008	14400	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/24/2008	05/22/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	0.98	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/21/2008	06/06/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/21/2008	06/06/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/21/2008	06/06/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/21/2008	06/06/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802349  
**Date Collected:** 5/15/2008  
**Date Received:** 5/16/2008

### Total Metals

**Sample Name:** MW-4C  
**Lab Code:** J0802349-006

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/21/2008	06/06/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	0.20	i
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/21/2008	06/06/2008	20	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/21/2008	06/06/2008	4.9	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/20/2008	05/21/2008	755	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	0.29	i
Mercury	METHOD	7470A	0.50	0.08	1.0	05/24/2008	05/22/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	0.90	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/21/2008	06/06/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/21/2008	06/06/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/21/2008	06/06/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/21/2008	06/06/2008	U	

## COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802349  
**Date Collected:** 5/15/2008  
**Date Received:** 5/16/2008

## Total Metals

**Sample Name:** MW-5A  
**Lab Code:** J0802349-007

**Units:** ug/L

**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/21/2008	06/06/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	1.3	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/21/2008	06/06/2008	3.6	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/21/2008	06/06/2008	4.0	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	0.74	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/20/2008	05/21/2008	504	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	1.2	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/24/2008	05/22/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	1.7	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/21/2008	06/06/2008	0.80	i
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/21/2008	06/06/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/21/2008	06/06/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/21/2008	06/06/2008	7.6	i

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802349  
**Date Collected:** 5/15/2008  
**Date Received:** 5/16/2008

### Total Metals

**Sample Name:** MW-5B  
**Lab Code:** J0802349-008

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/21/2008	06/06/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/21/2008	06/06/2008	11	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/21/2008	06/06/2008	1.6	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/20/2008	05/21/2008	312	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/24/2008	05/22/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	0.37	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/21/2008	06/06/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/21/2008	06/06/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/21/2008	06/06/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/21/2008	06/06/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802349  
**Date Collected:** 5/15/2008  
**Date Received:** 5/16/2008

### Total Metals

**Sample Name:** MW-5C  
**Lab Code:** J0802349-009

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/21/2008	06/06/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	0.34	i
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/21/2008	06/06/2008	25	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/21/2008	06/06/2008	2.2	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	0.23	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/20/2008	05/21/2008	1000	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/24/2008	05/22/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	U	
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/21/2008	06/06/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/21/2008	06/06/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/21/2008	06/06/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/21/2008	06/06/2008	U	

## COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802349  
**Date Collected:** 5/15/2008  
**Date Received:** 5/16/2008

## Total Metals

**Sample Name:** Equipment Blank  
**Lab Code:** J0802349-010

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/21/2008	06/06/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/21/2008	06/06/2008	U	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/21/2008	06/06/2008	3.5	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/20/2008	05/21/2008	29	i
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/24/2008	05/22/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	0.54	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/21/2008	06/06/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/21/2008	06/06/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/21/2008	06/06/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/21/2008	06/06/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802349  
**Date Collected:** N/A  
**Date Received:** N/A

### Total Metals

**Sample Name:** Method Blank  
**Lab Code:** MB1-0521

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/21/2008	06/06/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/21/2008	06/06/2008	U	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/21/2008	06/06/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/21/2008	06/06/2008	U	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/20/2008	05/21/2008	U	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/24/2008	05/22/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/21/2008	06/06/2008	U	
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/21/2008	06/06/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/21/2008	06/06/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/21/2008	06/06/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/21/2008	06/06/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/21/2008	06/06/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008

### Total Metals Sodium

**Prep Method:** EPA 3010A  
**Analysis Method:** 6010B  
**Test Notes:**

**Units:** mg/L  
**Basis:** N/A

Sample Name:	Lab Code:	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MW-3A	J0802349-001	0.50	0.02	1.0	05/20/2008	05/21/2008	40	
MW-3B	J0802349-002	0.50	0.02	1.0	05/20/2008	05/21/2008	6.6	
MW-3C	J0802349-003	0.50	0.02	1.0	05/20/2008	05/21/2008	4.9	
MW-4A	J0802349-004	0.50	0.02	1.0	05/20/2008	05/21/2008	9.2	
MW-4B	J0802349-005	0.50	0.02	1.0	05/20/2008	05/21/2008	54	
MW-4C	J0802349-006	0.50	0.02	1.0	05/20/2008	05/21/2008	8.4	
MW-5A	J0802349-007	0.50	0.02	1.0	05/20/2008	05/21/2008	13	
MW-5B	J0802349-008	0.50	0.02	1.0	05/20/2008	05/21/2008	4.1	
MW-5C	J0802349-009	0.50	0.02	1.0	05/20/2008	05/21/2008	8.1	
Equipment Blank	J0802349-010	0.50	0.02	1.0	05/20/2008	05/21/2008	0.13	i
Method Blank	MB2-0520	0.50	0.02	1.0	05/20/2008	05/21/2008	U	



# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802349  
**Date Collected :** 05/15/08  
**Date Received :** 05/16/08

### Inorganic Parameters

**Sample Name :** MW-3A  
**Lab Code :** J0802349-001  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/19/08 09:32	3.1	
Chloride	mg/L (ppm)	300.0	0.4	0.136	2	05/20/08 11:32	89	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/16/08 16:53	0.16	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/21/08 09:00	180	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802349  
**Date Collected :** 05/15/08  
**Date Received :** 05/16/08

## Inorganic Parameters

**Sample Name :** MW-3B  
**Lab Code :** J0802349-002  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/19/08 09:32	0.22	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/16/08 16:23	23	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/16/08 17:37	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/21/08 09:00	64	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802349  
**Date Collected :** 05/15/08  
**Date Received :** 05/16/08

## Inorganic Parameters

**Sample Name :** MW-3C  
**Lab Code :** J0802349-003  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/19/08 09:32	0.16	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/16/08 16:23	7.6	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/16/08 17:52	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/21/08 09:00	36	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802349  
**Date Collected :** 05/15/08  
**Date Received :** 05/16/08

## Inorganic Parameters

**Sample Name :** MW-4A  
**Lab Code :** J0802349-004  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/19/08 09:32	6.2	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/16/08 16:23	31	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/16/08 18:38	0.16	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/21/08 09:00	120	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802349  
**Date Collected :** 05/15/08  
**Date Received :** 05/16/08

## Inorganic Parameters

**Sample Name :** MW-4B  
**Lab Code :** J0802349-005  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/19/08 09:32	2.3	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/16/08 16:23	89	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/16/08 18:52	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/21/08 09:00	520	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802349  
**Date Collected :** 05/15/08  
**Date Received :** 05/16/08

## Inorganic Parameters

**Sample Name :** MW-4C  
**Lab Code :** J0802349-006  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/19/08 09:32	0.21	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/16/08 16:23	9.0	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/16/08 19:07	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/21/08 09:00	110	

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802349  
**Date Collected :** 05/15/08  
**Date Received :** 05/16/08

## Inorganic Parameters

**Sample Name :** MW-5A  
**Lab Code :** J0802349-007  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/19/08 09:32	7.5	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/16/08 16:23	31	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/16/08 19:23	0.17	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/21/08 09:00	200	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802349  
**Date Collected :** 05/15/08  
**Date Received :** 05/16/08

## Inorganic Parameters

**Sample Name :** MW-5B  
**Lab Code :** J0802349-008  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/19/08 09:32	0.23	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/16/08 16:23	7.8	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/16/08 19:37	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/21/08 09:00	33	



# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802349  
**Date Collected :** 05/15/08  
**Date Received :** 05/16/08

## Inorganic Parameters

**Sample Name :** MW-5C  
**Lab Code :** J0802349-009  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/19/08 09:32	0.18	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/16/08 16:23	16	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/16/08 19:52	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/21/08 09:00	54	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802349  
**Date Collected :** 05/15/08  
**Date Received :** 05/16/08

## Inorganic Parameters

**Sample Name :** Equipment Blank  
**Lab Code :** J0802349-010  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/19/08 09:32	0.093	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/16/08 16:23	U	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/16/08 20:07	0.17	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/21/08 09:00	U	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802349  
**Date Collected :** NA  
**Date Received :** NA

## Inorganic Parameters

**Sample Name :** Method Blank  
**Lab Code :** J0802349-MB  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/19/08 09:32	U	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/16/08 16:23	U	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/20/08 11:32	U	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/16/08 16:23	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/21/08 09:00	U	

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802349

**Surrogate Recovery Summary**  
**Appendix I Volatile Organic Compounds by GC/MS**

Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: PERCENT  
 Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>	<u>Sur4</u>
MW-3A	J0802349-001	79	123 #	92	110
MW-3B	J0802349-002	84	117	86	100
MW-3C	J0802349-003	85	115	89	106
MW-4A	J0802349-004	86	109	91	104
MW-4B	J0802349-005	86	111	91	100
MW-4C	J0802349-006	87	110	93	100
MW-5A	J0802349-007	84	108	92	102
MW-5B	J0802349-008	87	110	90	104
MW-5C	J0802349-009	82	112	90	105
Equipment Blank	J0802349-010	84	109	96	104
Trip Blank	J0802349-011	85	109	88	102
Method Blank	JWG0801925-2	88	112	87	103
Lab Control Sample	JWG0801925-1	86	113	91	102

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**Surrogate Recovery Control Limits (%)**

Sur1 = 1,2-Dichloroethane-d4	71-122
Sur2 = 4-Bromofluorobenzene	75-120
Sur3 = Dibromofluoromethane	82-116
Sur4 = Toluene-d8	88-117

---

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512.01  
 Sample Matrix: Water

Service Request: J0802349  
 Date Extracted: 05/21/2008  
 Date Analyzed: 05/21/2008

**Lab Control Spike Summary**  
**Appendix I Volatile Organic Compounds by GC/MS**

Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0801925

Analyte Name	Lab Control Sample JWG0801925-1 Lab Control Spike			%Rec Limits
	Result	Expected	%Rec	
Chloromethane	20.4	20.0	102	67-135
Vinyl Chloride	22.0	20.0	110	78-132
Bromomethane	24.0	20.0	120	79-130
Chloroethane	21.3	20.0	106	74-126
Trichlorofluoromethane	22.0	20.0	110	74-134
1,1-Dichloroethene	20.5	20.0	103	78-130
Acetone	117	100	117	67-133
Iodomethane (Methyl Iodide)	106	100	106	68-134
Carbon Disulfide	106	100	106	76-138
Methylene Chloride	20.8	20.0	104	72-124
trans-1,2-Dichloroethene	19.2	20.0	96	77-124
Acrylonitrile	109	100	109	77-127
1,1-Dichloroethane	19.9	20.0	99	80-128
Vinyl Acetate	100	100	100	61-148
cis-1,2-Dichloroethene	20.3	20.0	101	80-126
2-Butanone (MEK)	112	100	112	73-127
Bromochloromethane	20.5	20.0	103	79-129
Chloroform	19.8	20.0	99	83-124
1,1,1-Trichloroethane (TCA)	20.1	20.0	101	79-124
Carbon Tetrachloride	19.7	20.0	99	81-125
Benzene	20.3	20.0	101	79-119
1,2-Dichloroethane (EDC)	20.2	20.0	101	80-124
Trichloroethene (TCE)	20.1	20.0	101	76-124
1,2-Dichloropropane	20.7	20.0	103	79-123
Dibromomethane	20.9	20.0	104	83-123
Bromodichloromethane	20.1	20.0	101	81-123
cis-1,3-Dichloropropene	19.5	20.0	98	86-123
4-Methyl-2-pentanone (MIBK)	101	100	101	72-136
Toluene	20.0	20.0	100	86-117
trans-1,3-Dichloropropene	19.4	20.0	97	83-124
1,1,2-Trichloroethane	19.4	20.0	97	86-114
Tetrachloroethene (PCE)	20.2	20.0	101	80-121
2-Hexanone	106	100	106	71-138
Dibromochloromethane	19.1	20.0	96	82-121
1,2-Dibromoethane (EDB)	20.2	20.0	101	88-117
Chlorobenzene	19.5	20.0	98	86-113
1,1,1,2-Tetrachloroethane	19.4	20.0	97	85-117

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Extracted:** 05/21/2008  
**Date Analyzed:** 05/21/2008

**Lab Control Spike Summary**  
**Appendix I Volatile Organic Compounds by GC/MS**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0801925

Analyte Name	Lab Control Sample JWG0801925-1 Lab Control Spike			%Rec Limits
	Result	Expected	%Rec	
Ethylbenzene	20.6	20.0	103	90-118
m,p-Xylenes	40.2	40.0	100	86-121
o-Xylene	20.4	20.0	102	89-119
Styrene	20.3	20.0	101	89-122
Bromoform	20.1	20.0	100	68-129
1,1,2,2-Tetrachloroethane	21.3	20.0	106	83-120
1,2,3-Trichloropropane	20.8	20.0	104	83-123
1,4-Dichlorobenzene	20.6	20.0	103	83-113
trans-1,4-Dichloro-2-butene	19.6	20.0	98	53-143
1,2-Dichlorobenzene	20.6	20.0	103	84-115
1,2-Dibromo-3-chloropropane (DBCP)	24.1	20.0	121	62-123

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349

**Surrogate Recovery Summary**  
**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** PERCENT  
**Level:** Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
MW-3A	J0802349-001	127
MW-3B	J0802349-002	120
MW-3C	J0802349-003	123
MW-4A	J0802349-004	119
MW-4B	J0802349-005	117
MW-4C	J0802349-006	109
MW-5A	J0802349-007	116
MW-5B	J0802349-008	114
MW-5C	J0802349-009	119
Equipment Blank	J0802349-010	116
Method Blank	JWG0801882-3	123
Lab Control Sample	JWG0801882-1	120
Duplicate Lab Control Sample	JWG0801882-2	115

**Surrogate Recovery Control Limits (%)**

---

Sur1 = 1,1,1,2-Tetrachloroethane 77-150

---

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802349  
**Date Extracted:** 05/20/2008  
**Date Analyzed:** 05/21/2008

**Lab Control Spike/Duplicate Lab Control Spike Summary**  
**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0801882

Analyte Name	Lab Control Sample JWG0801882-1 Lab Control Spike			Duplicate Lab Control Sample JWG0801882-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Expected	%Rec	Result	Expected	%Rec			
1,2-Dibromoethane (EDB)	0.283	0.250	113	0.273	0.250	109	70-130	4	20
1,2-Dibromo-3-chloropropane (DBCP)	0.257	0.250	103	0.252	0.250	101	70-130	2	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802349  
**Date Collected:** 05/15/2008  
**Date Received:** 05/16/2008  
**Date Extracted:** 05/21/2008  
**Date Analyzed:** 06/06/2008

### Matrix Spike/Matrix Spike Duplicate Summary Total Metals

**Sample Name:** MW-3A  
**Lab Code:** J0802349-001

J0802349-001S

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec	Result Notes
				MS	DMS		MS	DMS	MS	DMS	RPD	Acceptance Limits	
Antimony	EPA 3020	6020	2.0	50.0	50.0	0.4	56.2	56.8	112	113	1	75 - 125	
Arsenic	EPA 3020	6020	0.5	50.0	50.0	1.4	49.5	49.8	96	97	1	75 - 125	
Barium	EPA 3020	6020	2.0	50.0	50.0	31.5	84.5	84.3	106	106	<1	75 - 125	
Beryllium	EPA 3020	6020	1.0	50.0	50.0	U	46.4	44.8	93	90	4	75 - 125	
Cadmium	EPA 3020	6020	0.5	50.0	50.0	U	49.4	49.7	99	99	1	75 - 125	
Chromium	EPA 3020	6020	2.0	50.0	50.0	1.7	51.7	52.2	100	101	1	75 - 125	
Cobalt	EPA 3020	6020	1.0	50.0	50.0	0.6	51.1	50.7	101	100	1	75 - 125	
Copper	EPA 3020	6020	2.0	50.0	50.0	0.5	49.0	48.9	97	97	<1	75 - 125	
Lead	EPA 3020	6020	1.0	50.0	50.0	U	53.3	53.1	107	106	<1	75 - 125	
Mercury	METHOD	7470A	0.50	5.00	5.00	U	2.76	2.55	55	51	8	75 - 125	N
Nickel	EPA 3020	6020	2.0	50.0	50.0	0.5	49.7	49.9	98	99	<1	75 - 125	
Selenium	EPA 3020	6020	2.0	50.0	50.0	0.9	27.4	28.3	53	55	3	75 - 125	N
Silver	EPA 3020	6020	0.5	50.0	50.0	U	51.2	51.0	102	102	<1	75 - 125	
Thallium	EPA 3020	6020	1.0	50.0	50.0	U	51.9	52.5	104	105	1	75 - 125	
Vanadium	EPA 3020	6020	5.0	50.0	50.0	U	52.7	52.6	105	105	<1	75 - 125	
Zinc	EPA 3020	6020	10.0	100	100	U	99.5	99.5	100	100	<1	75 - 125	

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802349  
**Date Collected:** N/A  
**Date Received:** N/A  
**Date Extracted:** 05/21/2008  
**Date Analyzed:** 06/06/2008

### Laboratory Control Sample Summary Total Metals

**Sample Name:** Lab Control Sample  
**Lab Code:** LCS1-0521

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	True Value	Results	Percent Recovery	CAS Percent	Result Notes
						Recovery Acceptance Limits	
Antimony	EPA 3020A	6020	50.0	55.0	110	80 - 120	
Arsenic	EPA 3020A	6020	50.0	48.8	98	80 - 120	
Barium	EPA 3020A	6020	50.0	51.7	103	80 - 120	
Beryllium	EPA 3020A	6020	50.0	44.8	90	80 - 120	
Cadmium	EPA 3020A	6020	50.0	50.0	100	80 - 120	
Chromium	EPA 3020A	6020	50.0	50.4	101	80 - 120	
Cobalt	EPA 3020A	6020	50.0	50.1	100	80 - 120	
Copper	EPA 3020A	6020	50.0	49.0	98	80 - 120	
Iron	EPA 3010A	6010B	2000	1990	100	80 - 120	
Lead	EPA 3020A	6020	50.0	51.1	102	80 - 120	
Mercury	METHOD	7470A	5.00	5.05	101	80 - 120	
Nickel	EPA 3020A	6020	50.0	49.9	100	80 - 120	
Selenium	EPA 3020A	6020	50.0	44.4	89	80 - 120	
Silver	EPA 3020A	6020	50.0	52.0	104	80 - 120	
Thallium	EPA 3020A	6020	50.0	50.5	101	80 - 120	
Vanadium	EPA 3020A	6020	50.0	50.8	102	80 - 120	
Zinc	EPA 3020A	6020	100	102.0	102	80 - 120	

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512.01  
**Matrix:** WATER

**Service Request:** J0802349  
**Date Collected:** N/A  
**Date Received:** N/A  
**Date Extracted:** 05/20/2008  
**Date Analyzed:** 05/21/2008

### Laboratory Control Sample Summary Total Metals

**Sample Name:** Lab Control Sample  
**Lab Code:** LCS2-0520

**Units:** mg/L  
**Basis:** N/A

<b>Analyte</b>	<b>Prep Method</b>	<b>Analysis Method</b>	<b>True Value</b>	<b>Results</b>	<b>Percent Recovery</b>	<b>CAS Percent Recovery Acceptance Limits</b>	<b>Result Notes</b>
Sodium	EPA 3010A	6010B	10.0	9.9	99	80 - 120	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802349  
**Date Collected :** 05/15/08  
**Date Received :** 05/16/08  
**Date Extracted :** NA  
**Date Analyzed :** 05/16-21/08

### Duplicate Summary Inorganic Parameters

**Sample Name :** MW-3A  
**Lab Code :** J0802349-001DUP  
**Test Notes :**

Basis : NA

Analyte	Units	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Chloride	mg/L (ppm)	300.0	0.4	89	89	89	<1	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.16	0.16	0.16	<1	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	180	180	180	<1	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802349  
**Date Collected :** 05/15/08  
**Date Received :** 05/16/08  
**Date Extracted :** NA  
**Date Analyzed :** 05/16-20/08

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** MW-3A  
**Lab Code :** J0802349-001MS  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
								Percent Recovery Acceptance Limits	
Chloride	mg/L (ppm)	300.0	0.4	100	89	188	99	90-110	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	10	0.16	10.0	98	90-110	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802349  
**Date Collected :** NA  
**Date Received :** NA  
**Date Extracted :** NA  
**Date Analyzed :** 05/16-21/08

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** J0802349-LCS  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	True Value	Result	Percent Recovery	CAS	Result Notes
						Percent Recovery Acceptance Limits	
Ammonia as Nitrogen	mg/L (ppm)	350.1	5.00	5.16	103	90-110	
Chloride	mg/L (ppm)	300.0	50.0	50.3	101	90-110	
Chloride	mg/L (ppm)	300.0	50.0	51.7	103	90-110	
Nitrate as Nitrogen	mg/L (ppm)	300.0	10	10.2	102	90-110	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	300	300	100	85-115	

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

Client: Geosyntec Service Request # J0802349  
 Project: JED Disposal facility  
 Cooler received on 5/16/08 and opened on 5/16/08 by \_\_\_\_\_  
 COURIER: CAS UPS FEDEX DHL CLIENT Tracking # J2081508943

- |    |   |            |    |     |
|----|---|------------|----|-----|
| 1  | Were custody seals on outside of cooler?                                      | <u>Yes</u> | No | N/A |
| 2  | Were seals intact, signed and dated?  | <u>Yes</u> | No | N/A |
| 3  | Were custody papers properly filled out?                                      | <u>Yes</u> | No | N/A |
| 4  | Temperature of cooler(s) upon receipt (Should be 4 +/- 2 degrees C)           | <u>3.7</u> |    |     |
| 5  | Correct Temperature?  | <u>Yes</u> | No | N/A |
| 6  | Were Ice or Ice Packs present   | <u>Yes</u> | No | N/A |
| 7  | Did all bottles arrive in good condition (unbroken, etc....)?                 | <u>Yes</u> | No | N/A |
| 8  | Were all bottle labels complete (sample ID, preservation, etc....)?           | <u>Yes</u> | No | N/A |
| 9  | Did all bottle labels and tags agree with custody papers?                     | <u>Yes</u> | No | N/A |
| 10 | Were the correct bottles used for the tests indicated?                        | <u>Yes</u> | No | N/A |
| 11 | Were all of the preserved bottles received with the appropriate preservative? | <u>Yes</u> | No | N/A |

HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2  
 Preservative additions noted below

- |    |   |            |        |     |
|----|---|------------|--------|-----|
| 12 | Were all samples received within analysis holding times?                  | <u>Yes</u> | No     | N/A |
| 13 | Were VOA vials checked for absence of air bubbles? If present, note below | <u>Yes</u> | No     | N/A |
| 14 | Where did the bottles originate?  | <u>CAS</u> | Client |     |

Sample ID	Reagent	Manuf. Lot # or CAS Chem ID	ml added	Initials

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted:

Date: 7/6

[illegible]





# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011 PAGE 1 OF 2

SR # J0802349

CAS Contact

Project Name <b>JED DISPOSAL FACILITY</b>		Project Number <b>FA 1512.01</b>		ANALYSIS REQUESTED (Include Method Number)									
Project Manager <b>Kirk Willis</b>		Email Address <b>KWILLIS@GEOSYNTEC.COM</b>		PRESERVATIVE <b>1 0 3 2 0</b>		<div style="background-color: black; width: 100px; height: 40px; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between;"> <div> <b>8760</b>  <b>0988</b>  <b>BO11</b>  <b>NH3</b>  <b>METALS</b>  <b>TDS, CL, NO3</b> </div> <div>           1. HCL            2. HNO3            3. H2SO4            4. NaOH            5. Zn. Acetate            6. MeOH            7. NaHSO4            8. Other         </div> </div>							
Company/Address <b>14055 RIVEREDGE DR (GEOSYNTEC)</b>		City/State/Zip <b>TAMPA FL 33639</b>		NUMBER OF CONTAINERS									
Phone # <b>813-558-0990</b>		FAX# <b>813-558-9726</b>											
Sampler's Signature <i>[Signature]</i>		Sampler's Printed Name <b>Tommy Wilson Joe Terry</b>											
CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX									
MW-3A		5/15	1325	GW	9	X	X	X	X				
MW-3B			1355										
MW-3C			1330										
MW-4A			1025										
MW-4B			1020										
MW-4C			1245										
MW-5A			0905										
MW-5B			0850										
MW-5C			0915										
Equipment Blank			1400	DIAG									
SPECIAL INSTRUCTIONS/COMMENTS													
See QAPP <input type="checkbox"/>				TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) <input checked="" type="checkbox"/> STANDARD				REPORT REQUIREMENTS I. Results Only <input checked="" type="checkbox"/> II. Results + QC Summaries (LCS, DUP, MS/MSD as required) III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data V. Specialized Forms / Custom Report				INVOICE INFORMATION PO# BILL TO:	
SAMPLE RECEIPT: CONDITION/COOLER TEMP: <b>78</b>				CUSTODY SEALS: Y N				REINQUISHED BY				RECEIVED BY	
RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY		RECEIVED BY	
Signature <i>[Signature]</i>	Signature <i>[Signature]</i>	Signature <i>[Signature]</i>	Signature <i>[Signature]</i>	Signature <i>[Signature]</i>	Signature <i>[Signature]</i>	Signature <i>[Signature]</i>	Signature <i>[Signature]</i>	Signature <i>[Signature]</i>	Signature <i>[Signature]</i>	Signature <i>[Signature]</i>	Signature <i>[Signature]</i>	Signature <i>[Signature]</i>	Signature <i>[Signature]</i>
Printed Name <b>Joe Terry</b>	Printed Name <b>Joe Terry</b>	Printed Name <b>Joe Terry</b>	Printed Name <b>Joe Terry</b>	Printed Name <b>Joe Terry</b>	Printed Name <b>Joe Terry</b>	Printed Name <b>Joe Terry</b>	Printed Name <b>Joe Terry</b>	Printed Name <b>Joe Terry</b>	Printed Name <b>Joe Terry</b>	Printed Name <b>Joe Terry</b>	Printed Name <b>Joe Terry</b>	Printed Name <b>Joe Terry</b>	Printed Name <b>Joe Terry</b>
Firm <b>GEOSYNTEC</b>	Firm <b>GEOSYNTEC</b>	Firm <b>GEOSYNTEC</b>	Firm <b>GEOSYNTEC</b>	Firm <b>GEOSYNTEC</b>	Firm <b>GEOSYNTEC</b>	Firm <b>GEOSYNTEC</b>	Firm <b>GEOSYNTEC</b>	Firm <b>GEOSYNTEC</b>	Firm <b>GEOSYNTEC</b>	Firm <b>GEOSYNTEC</b>	Firm <b>GEOSYNTEC</b>	Firm <b>GEOSYNTEC</b>	Firm <b>GEOSYNTEC</b>
Date/Time <b>5-15-08/1500</b>	Date/Time <b>5-15-08/1500</b>	Date/Time <b>5-15-08/1500</b>	Date/Time <b>5-15-08/1500</b>	Date/Time <b>5-15-08/1500</b>	Date/Time <b>5-15-08/1500</b>	Date/Time <b>5-15-08/1500</b>	Date/Time <b>5-15-08/1500</b>	Date/Time <b>5-15-08/1500</b>	Date/Time <b>5-15-08/1500</b>	Date/Time <b>5-15-08/1500</b>	Date/Time <b>5-15-08/1500</b>	Date/Time <b>5-15-08/1500</b>	Date/Time <b>5-15-08/1500</b>



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

An Employee - Owned Company  
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PAGE 2 OF 2

SR #

70802349

CAS Contact

Project Name SPD. Digosa / Facility		Project Number FD/1512.01		ANALYSIS REQUESTED (Include Method Number)	
Project Manager Kirk W. Ibs		Email Address		PRESERVATIVE 1	
Company/Address Geosyntec					
Phone # 813-558-0490		FAX # 813-558-9726			
Sampler's Signature		Sampler's Printed Name			
CLIENT SAMPLE ID Trip Blk	LAB ID	SAMPLING DATE	TIME	MATRIX W 3 X	
<div>See QAPP <input type="checkbox"/></div> <div>8760</div>					
SPECIAL INSTRUCTIONS/COMMENTS					INVOICE INFORMATION
TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) STANDARD REQUESTED FAX DATE REQUESTED REPORT DATE					REPORT REQUIREMENTS I. Results Only II. Results + QC Summaries (LCS, DUP, MS/MSD as required) III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data V. Specialized Forms / Custom Report Edata Yes No
CUSTODY SEALS: Y N					RECEIVED BY
RELINQUISHED BY		RELINQUISHED BY		RECEIVED BY	
Signature Jon Long	Signature	Signature	Signature	Signature	Signature
Printed Name	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm	Firm	Firm	Firm	Firm	Firm
Date/Time 5-15-08/1500	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

June 09, 2008

Service Request No: J0802359

Kirk Wills  
GeoSyntec Consultants  
14055 Riveredge Drive  
Suite 300  
Tampa, FL 33637

**RE: JED Disposal Facility/GQ1512.01**

Dear Kirk:

Enclosed are the results of the sample(s) submitted to our laboratory on May 16, 2008. For your reference, these analyses have been assigned our service request number **J0802359**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP 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. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please call if you have any questions. My extension is 4409. You may also contact me via email at CMyers@caslab.com.

Respectfully submitted,

**Columbia Analytical Services, Inc.**



Craig Myers  
Project Chemist

Page 1 of 37

*Laboratory Manager: Greg Jordan  
Quality Assurance Officer: Kathy Brungard*

*CAS Jacksonville is NELAC-accredited by the State of Florida, #E82502 valid through 6/30/08.  
Other state accreditations include: Arkansas, #88-0600 valid through 1/12/06; Georgia, #958 valid through 6/30/08; Louisiana, #02086 valid through 6/30/08; Texas, #T104704197-06-TX valid through 5/31/08; North Carolina, #527 valid through 12/31/07; South Carolina, #96021001 valid through 6/30/08.*

## COLUMBIA ANALYTICAL SERVICES, INC.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility  
**Sample Matrix:** Water

**Service Request No.:** J0802359  
**Date Received:** 5/16/08

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

#### Sample Receipt

Two water samples and one trip blank were received for analysis at Columbia Analytical Services on 5/16/08. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at 4±2°C upon receipt at the lab except for aqueous samples designated for metals analyses, which were stored at room temperature.

#### Volatile Organic Compounds by GC-MS

The samples were analyzed for Volatile Organics using EPA Method 8260. The following observations were made regarding this delivery group.

#### Lab Control Sample Exceptions

The spike recoveries of 2-Butanone (MEK) and 1,2-Dibromo-3-chloropropane (DBCP) for Laboratory Control Sample (LCS) JWG0801932-3 were outside the upper control criterion. The analytes in question were not detected in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

#### Batch QC Notes and Discussion

Quality control samples for MS/DMS were performed using samples from another sample delivery group (SDG). The frequency requirement for quality control sample analysis was consistent with the project's requirements. Matrix specific quality control results have no bearing on sample data from a different matrix or location. Therefore, control of the batch has been evaluated using the method blank and the laboratory control sample.

#### EDB and DBCP by GC-ECD

The samples were analyzed for EDB and DBCP using EPA Method 8011. No problems were observed.

#### Metals by ICP-MS/ICP-OES/CVAA

The samples were analyzed for Total Metals using EPA Methods 6020/6010B/7470A. No problems were observed.

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



Date \_\_\_\_\_

6/9/08

#### Batch QC Notes and Discussion

Quality control samples (i.e., Dup/Spike or MS/DMS samples) were performed using samples from another sample delivery group (SDG). The frequency requirement for quality control sample analysis was consistent with the project's requirements. Matrix specific quality control results have no bearing on sample data from a different matrix or location. Therefore, control of the batch has been evaluated using the method blank and the laboratory control sample.

#### General Chemistry Parameters

The samples were analyzed for Inorganic Parameters using various EPA and Standard Methods. No problems were observed.

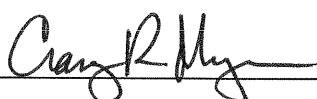
#### Sample Notes and Discussion

Result for sample SW-4 is based on colony counts outside the optimal colony range of 20-60 CFU. The data has been qualified. This is an informational flag and it does not impact the quality of the data.

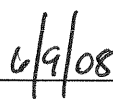
#### Batch QC Notes and Discussion

Quality control samples for some parameters (i.e., Dup/Spike or MS/DMS samples) were performed using samples from another sample delivery group (SDG). The frequency requirement for quality control sample analysis was consistent with the project's requirements. Matrix specific quality control results have no bearing on sample data from a different matrix or location. Therefore, control of the batch has been evaluated using the method blank and the laboratory control sample.

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



Date \_\_\_\_\_



## Florida DEP Data Qualifiers

B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
H	Value based on field kit determination; results may not be accurate.
i	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J	Estimated value (one of the following reasons is discussed in the project case narrative). <ol style="list-style-type: none"><li>1. The result may be inaccurate because the surrogate recovery limits have been exceeded.</li><li>2. No known quality control criteria exists for the component.</li><li>3. The reported value failed to meet the established quality control criteria for either precision or accuracy.</li><li>4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).</li><li>5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).</li></ol>
K	Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
L	Off scale high. The analyte is above the upper limit of the linear calibration range.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
N	Presumptive evidence of the analyte. Confirmation was not performed.
Q	Sample held beyond the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	The laboratory analysis was from an improperly preserved sample.
Z	Too many colonies were present (TNTC). The numeric value represents the filtration volume.

## 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.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/GQ1512.01

**Service Request:** J0802359

**SAMPLE CROSS-REFERENCE**

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J0802359-001	SW-3	05/16/08	09:30
J0802359-002	SW-4	05/16/08	10:15
J0802359-003	Trip Blank	05/16/08	00:00



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/GQ1512.01  
 Sample Matrix: Water

Service Request: J0802359  
 Date Collected: 05/16/2008  
 Date Received: 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: SW-3  
 Lab Code: J0802359-001  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/22/08	05/22/08	JWG0801932	
Vinyl Chloride	ND	U	1.0	0.23	1	05/22/08	05/22/08	JWG0801932	
Bromomethane	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
Chloroethane	ND	U	1.0	0.24	1	05/22/08	05/22/08	JWG0801932	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/22/08	05/22/08	JWG0801932	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/22/08	05/22/08	JWG0801932	
Acetone	ND	U	50	1.7	1	05/22/08	05/22/08	JWG0801932	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/22/08	05/22/08	JWG0801932	
Carbon Disulfide	ND	U	10	1.0	1	05/22/08	05/22/08	JWG0801932	
Methylene Chloride	ND	U	5.0	0.51	1	05/22/08	05/22/08	JWG0801932	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/22/08	05/22/08	JWG0801932	
Acrylonitrile	ND	U	10	0.77	1	05/22/08	05/22/08	JWG0801932	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/22/08	05/22/08	JWG0801932	
Vinyl Acetate	ND	U	10	0.73	1	05/22/08	05/22/08	JWG0801932	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
2-Butanone (MEK)	ND	UJ	10	0.77	1	05/22/08	05/22/08	JWG0801932	J(3)
Bromochloromethane	ND	U	1.0	0.19	1	05/22/08	05/22/08	JWG0801932	
Chloroform	ND	U	1.0	0.18	1	05/22/08	05/22/08	JWG0801932	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/22/08	05/22/08	JWG0801932	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/22/08	05/22/08	JWG0801932	
Benzene	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/22/08	05/22/08	JWG0801932	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/22/08	05/22/08	JWG0801932	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/22/08	05/22/08	JWG0801932	
Dibromomethane	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
Bromodichloromethane	ND	U	1.0	0.15	1	05/22/08	05/22/08	JWG0801932	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/22/08	05/22/08	JWG0801932	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/22/08	05/22/08	JWG0801932	
Toluene	ND	U	1.0	0.14	1	05/22/08	05/22/08	JWG0801932	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/22/08	05/22/08	JWG0801932	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/22/08	05/22/08	JWG0801932	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/22/08	05/22/08	JWG0801932	
2-Hexanone	ND	U	25	0.54	1	05/22/08	05/22/08	JWG0801932	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/GQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802359  
**Date Collected:** 05/16/2008  
**Date Received:** 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** SW-3  
**Lab Code:** J0802359-001  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/22/08	05/22/08	JWG0801932	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
Chlorobenzene	ND	U	1.0	0.19	1	05/22/08	05/22/08	JWG0801932	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/22/08	05/22/08	JWG0801932	
Ethylbenzene	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
m,p-Xylenes	ND	U	2.0	0.47	1	05/22/08	05/22/08	JWG0801932	
o-Xylene	ND	U	1.0	0.25	1	05/22/08	05/22/08	JWG0801932	
Styrene	ND	U	1.0	0.22	1	05/22/08	05/22/08	JWG0801932	
Bromoform	ND	U	1.0	0.24	1	05/22/08	05/22/08	JWG0801932	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/22/08	05/22/08	JWG0801932	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/22/08	05/22/08	JWG0801932	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/22/08	05/22/08	JWG0801932	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/22/08	05/22/08	JWG0801932	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/22/08	05/22/08	JWG0801932	
1,2-Dibromo-3-chloropropane (DBCP)	ND	UJ	2.0	0.79	1	05/22/08	05/22/08	JWG0801932	J(3)

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	87	71-122	05/22/08	Acceptable
4-Bromofluorobenzene	119	75-120	05/22/08	Acceptable
Dibromofluoromethane	94	82-116	05/22/08	Acceptable
Toluene-d8	105	88-117	05/22/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/GQ1512.01  
 Sample Matrix: Water

Service Request: J0802359  
 Date Collected: 05/16/2008  
 Date Received: 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: SW-4  
 Lab Code: J0802359-002  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/22/08	05/22/08	JWG0801932	
Vinyl Chloride	ND	U	1.0	0.23	1	05/22/08	05/22/08	JWG0801932	
Bromomethane	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
Chloroethane	ND	U	1.0	0.24	1	05/22/08	05/22/08	JWG0801932	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/22/08	05/22/08	JWG0801932	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/22/08	05/22/08	JWG0801932	
Acetone	ND	U	50	1.7	1	05/22/08	05/22/08	JWG0801932	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/22/08	05/22/08	JWG0801932	
Carbon Disulfide	ND	U	10	1.0	1	05/22/08	05/22/08	JWG0801932	
Methylene Chloride	ND	U	5.0	0.51	1	05/22/08	05/22/08	JWG0801932	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/22/08	05/22/08	JWG0801932	
Acrylonitrile	ND	U	10	0.77	1	05/22/08	05/22/08	JWG0801932	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/22/08	05/22/08	JWG0801932	
Vinyl Acetate	ND	U	10	0.73	1	05/22/08	05/22/08	JWG0801932	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
2-Butanone (MEK)	ND	UJ	10	0.77	1	05/22/08	05/22/08	JWG0801932	J(3)
Bromochloromethane	ND	U	1.0	0.19	1	05/22/08	05/22/08	JWG0801932	
Chloroform	ND	U	1.0	0.18	1	05/22/08	05/22/08	JWG0801932	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/22/08	05/22/08	JWG0801932	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/22/08	05/22/08	JWG0801932	
Benzene	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/22/08	05/22/08	JWG0801932	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/22/08	05/22/08	JWG0801932	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/22/08	05/22/08	JWG0801932	
Dibromomethane	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
Bromodichloromethane	ND	U	1.0	0.15	1	05/22/08	05/22/08	JWG0801932	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/22/08	05/22/08	JWG0801932	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/22/08	05/22/08	JWG0801932	
Toluene	ND	U	1.0	0.14	1	05/22/08	05/22/08	JWG0801932	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/22/08	05/22/08	JWG0801932	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/22/08	05/22/08	JWG0801932	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/22/08	05/22/08	JWG0801932	
2-Hexanone	ND	U	25	0.54	1	05/22/08	05/22/08	JWG0801932	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/GQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802359  
**Date Collected:** 05/16/2008  
**Date Received:** 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** SW-4  
**Lab Code:** J0802359-002  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/22/08	05/22/08	JWG0801932	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
Chlorobenzene	ND	U	1.0	0.19	1	05/22/08	05/22/08	JWG0801932	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/22/08	05/22/08	JWG0801932	
Ethylbenzene	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
m,p-Xylenes	ND	U	2.0	0.47	1	05/22/08	05/22/08	JWG0801932	
o-Xylene	ND	U	1.0	0.25	1	05/22/08	05/22/08	JWG0801932	
Styrene	ND	U	1.0	0.22	1	05/22/08	05/22/08	JWG0801932	
Bromoform	ND	U	1.0	0.24	1	05/22/08	05/22/08	JWG0801932	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/22/08	05/22/08	JWG0801932	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/22/08	05/22/08	JWG0801932	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/22/08	05/22/08	JWG0801932	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/22/08	05/22/08	JWG0801932	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/22/08	05/22/08	JWG0801932	
1,2-Dibromo-3-chloropropane (DBCP)	ND	UJ	2.0	0.79	1	05/22/08	05/22/08	JWG0801932	J(3)

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	89	71-122	05/22/08	Acceptable
4-Bromofluorobenzene	119	75-120	05/22/08	Acceptable
Dibromofluoromethane	94	82-116	05/22/08	Acceptable
Toluene-d8	103	88-117	05/22/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/GQ1512.01  
 Sample Matrix: Water

Service Request: J0802359  
 Date Collected: 05/16/2008  
 Date Received: 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Trip Blank  
 Lab Code: J0802359-003  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/22/08	05/22/08	JWG0801932	
Vinyl Chloride	ND	U	1.0	0.23	1	05/22/08	05/22/08	JWG0801932	
Bromomethane	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
Chloroethane	ND	U	1.0	0.24	1	05/22/08	05/22/08	JWG0801932	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/22/08	05/22/08	JWG0801932	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/22/08	05/22/08	JWG0801932	
Acetone	ND	U	50	1.7	1	05/22/08	05/22/08	JWG0801932	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/22/08	05/22/08	JWG0801932	
Carbon Disulfide	ND	U	10	1.0	1	05/22/08	05/22/08	JWG0801932	
Methylene Chloride	ND	U	5.0	0.51	1	05/22/08	05/22/08	JWG0801932	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/22/08	05/22/08	JWG0801932	
Acrylonitrile	ND	U	10	0.77	1	05/22/08	05/22/08	JWG0801932	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/22/08	05/22/08	JWG0801932	
Vinyl Acetate	ND	U	10	0.73	1	05/22/08	05/22/08	JWG0801932	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
2-Butanone (MEK)	ND	UJ	10	0.77	1	05/22/08	05/22/08	JWG0801932	J(3)
Bromochloromethane	ND	U	1.0	0.19	1	05/22/08	05/22/08	JWG0801932	
Chloroform	ND	U	1.0	0.18	1	05/22/08	05/22/08	JWG0801932	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/22/08	05/22/08	JWG0801932	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/22/08	05/22/08	JWG0801932	
Benzene	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/22/08	05/22/08	JWG0801932	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/22/08	05/22/08	JWG0801932	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/22/08	05/22/08	JWG0801932	
Dibromomethane	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
Bromodichloromethane	ND	U	1.0	0.15	1	05/22/08	05/22/08	JWG0801932	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/22/08	05/22/08	JWG0801932	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/22/08	05/22/08	JWG0801932	
Toluene	ND	U	1.0	0.14	1	05/22/08	05/22/08	JWG0801932	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/22/08	05/22/08	JWG0801932	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/22/08	05/22/08	JWG0801932	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/22/08	05/22/08	JWG0801932	
2-Hexanone	ND	U	25	0.54	1	05/22/08	05/22/08	JWG0801932	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/GQ1512.01  
 Sample Matrix: Water

Service Request: J0802359  
 Date Collected: 05/16/2008  
 Date Received: 05/16/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Trip Blank  
 Lab Code: J0802359-003  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	0.43	I	1.0	0.25	1	05/22/08	05/22/08	JWG0801932	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
Chlorobenzene	ND	U	1.0	0.19	1	05/22/08	05/22/08	JWG0801932	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/22/08	05/22/08	JWG0801932	
Ethylbenzene	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
m,p-Xylenes	ND	U	2.0	0.47	1	05/22/08	05/22/08	JWG0801932	
o-Xylene	ND	U	1.0	0.25	1	05/22/08	05/22/08	JWG0801932	
Styrene	ND	U	1.0	0.22	1	05/22/08	05/22/08	JWG0801932	
Bromoform	0.44	I	1.0	0.24	1	05/22/08	05/22/08	JWG0801932	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/22/08	05/22/08	JWG0801932	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/22/08	05/22/08	JWG0801932	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/22/08	05/22/08	JWG0801932	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/22/08	05/22/08	JWG0801932	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/22/08	05/22/08	JWG0801932	
1,2-Dibromo-3-chloropropane (DBCP)	ND	UJ	2.0	0.79	1	05/22/08	05/22/08	JWG0801932	J(3)

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	96	71-122	05/22/08	Acceptable
4-Bromofluorobenzene	114	75-120	05/22/08	Acceptable
Dibromofluoromethane	96	82-116	05/22/08	Acceptable
Toluene-d8	101	88-117	05/22/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/GQ1512.01  
 Sample Matrix: Water

Service Request: J0802359  
 Date Collected: NA  
 Date Received: NA

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Method Blank  
 Lab Code: JWG0801932-4  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/22/08	05/22/08	JWG0801932	
Vinyl Chloride	ND	U	1.0	0.23	1	05/22/08	05/22/08	JWG0801932	
Bromomethane	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
Chloroethane	ND	U	1.0	0.24	1	05/22/08	05/22/08	JWG0801932	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/22/08	05/22/08	JWG0801932	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/22/08	05/22/08	JWG0801932	
Acetone	ND	U	50	1.7	1	05/22/08	05/22/08	JWG0801932	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/22/08	05/22/08	JWG0801932	
Carbon Disulfide	ND	U	10	1.0	1	05/22/08	05/22/08	JWG0801932	
Methylene Chloride	ND	U	5.0	0.51	1	05/22/08	05/22/08	JWG0801932	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/22/08	05/22/08	JWG0801932	
Acrylonitrile	ND	U	10	0.77	1	05/22/08	05/22/08	JWG0801932	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/22/08	05/22/08	JWG0801932	
Vinyl Acetate	ND	U	10	0.73	1	05/22/08	05/22/08	JWG0801932	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
2-Butanone (MEK)	ND	UJ	10	0.77	1	05/22/08	05/22/08	JWG0801932	J(3)
Bromochloromethane	ND	U	1.0	0.19	1	05/22/08	05/22/08	JWG0801932	
Chloroform	ND	U	1.0	0.18	1	05/22/08	05/22/08	JWG0801932	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/22/08	05/22/08	JWG0801932	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/22/08	05/22/08	JWG0801932	
Benzene	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/22/08	05/22/08	JWG0801932	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/22/08	05/22/08	JWG0801932	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/22/08	05/22/08	JWG0801932	
Dibromomethane	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
Bromodichloromethane	ND	U	1.0	0.15	1	05/22/08	05/22/08	JWG0801932	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/22/08	05/22/08	JWG0801932	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/22/08	05/22/08	JWG0801932	
Toluene	ND	U	1.0	0.14	1	05/22/08	05/22/08	JWG0801932	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/22/08	05/22/08	JWG0801932	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/22/08	05/22/08	JWG0801932	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/22/08	05/22/08	JWG0801932	
2-Hexanone	ND	U	25	0.54	1	05/22/08	05/22/08	JWG0801932	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/GQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802359  
**Date Collected:** NA  
**Date Received:** NA

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank  
**Lab Code:** JWG0801932-4  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/22/08	05/22/08	JWG0801932	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
Chlorobenzene	ND	U	1.0	0.19	1	05/22/08	05/22/08	JWG0801932	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/22/08	05/22/08	JWG0801932	
Ethylbenzene	ND	U	1.0	0.20	1	05/22/08	05/22/08	JWG0801932	
m,p-Xylenes	ND	U	2.0	0.47	1	05/22/08	05/22/08	JWG0801932	
o-Xylene	ND	U	1.0	0.25	1	05/22/08	05/22/08	JWG0801932	
Styrene	ND	U	1.0	0.22	1	05/22/08	05/22/08	JWG0801932	
Bromoform	ND	U	1.0	0.24	1	05/22/08	05/22/08	JWG0801932	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/22/08	05/22/08	JWG0801932	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/22/08	05/22/08	JWG0801932	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/22/08	05/22/08	JWG0801932	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/22/08	05/22/08	JWG0801932	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/22/08	05/22/08	JWG0801932	
1,2-Dibromo-3-chloropropane (DBCP)	ND	UJ	2.0	0.79	1	05/22/08	05/22/08	JWG0801932	J(3)

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	90	71-122	05/22/08	Acceptable
4-Bromofluorobenzene	116	75-120	05/22/08	Acceptable
Dibromofluoromethane	94	82-116	05/22/08	Acceptable
Toluene-d8	106	88-117	05/22/08	Acceptable

Comments:



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/GQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802359  
**Date Collected:** 05/16/2008  
**Date Received:** 05/16/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** SW-3  
**Lab Code:** J0802359-001  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801882	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801882	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	118	77-150	05/21/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/GQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802359  
**Date Collected:** 05/16/2008  
**Date Received:** 05/16/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** SW-4  
**Lab Code:** J0802359-002  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801882	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801882	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	120	77-150	05/21/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/GQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802359  
**Date Collected:** NA  
**Date Received:** NA

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** Method Blank  
**Lab Code:** JWG0801882-3  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801882	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801882	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	123	77-150	05/21/08	Acceptable

Comments: \_\_\_\_\_

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** GQ1512.01  
**Matrix:** WATER

**Service Request:** J0802359  
**Date Collected:** 5/16/2008  
**Date Received:** 5/16/2008

### Total Metals

**Sample Name:** SW-3  
**Lab Code:** J0802359-001

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	06/04/2008	06/06/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	06/04/2008	06/06/2008	0.23	i
Barium	EPA 3020A	6020	2.0	0.60	1.0	06/04/2008	06/06/2008	6.7	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	06/04/2008	06/06/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	06/04/2008	06/06/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	06/04/2008	06/06/2008	1.6	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	06/04/2008	06/06/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	06/04/2008	06/06/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/20/2008	05/21/2008	279	
Lead	EPA 3020A	6020	1.0	0.20	1.0	06/04/2008	06/06/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/21/2008	05/22/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	06/04/2008	06/06/2008	0.48	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	06/04/2008	06/06/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	06/04/2008	06/06/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	06/04/2008	06/06/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	06/04/2008	06/06/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	06/04/2008	06/06/2008	U	

## COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** GQ1512.01  
**Matrix:** WATER

**Service Request:** J0802359  
**Date Collected:** 5/16/2008  
**Date Received:** 5/16/2008

## Total Metals

**Sample Name:** SW-4  
**Lab Code:** J0802359-002

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	06/04/2008	06/06/2008	0.43	i
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	06/04/2008	06/06/2008	0.46	i
Barium	EPA 3020A	6020	2.0	0.60	1.0	06/04/2008	06/06/2008	7.7	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	06/04/2008	06/06/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	06/04/2008	06/06/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	06/04/2008	06/06/2008	1.5	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	06/04/2008	06/06/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	06/04/2008	06/06/2008	0.36	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/20/2008	05/21/2008	261	
Lead	EPA 3020A	6020	1.0	0.20	1.0	06/04/2008	06/06/2008	0.31	i
Mercury	METHOD	7470A	0.50	0.08	1.0	05/21/2008	05/22/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	06/04/2008	06/06/2008	0.38	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	06/04/2008	06/06/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	06/04/2008	06/06/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	06/04/2008	06/06/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	06/04/2008	06/06/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	06/04/2008	06/06/2008	4.0	i

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** GQ1512.01  
**Matrix:** WATER

**Service Request:** J0802359  
**Date Collected:** N/A  
**Date Received:** N/A

### Total Metals

**Sample Name:** Method Blank  
**Lab Code:** MB3-0604

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.4	1.0	06/04/2008	06/06/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	06/04/2008	06/06/2008	U	
Barium	EPA 3020A	6020	2.0	0.6	1.0	06/04/2008	06/06/2008	U	
Beryllium	EPA 3020A	6020	1.0	0.2	1.0	06/04/2008	06/06/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	06/04/2008	06/06/2008	U	
Chromium	EPA 3020A	6020	2.0	0.8	1.0	06/04/2008	06/06/2008	U	
Cobalt	EPA 3020A	6020	1.0	0.2	1.0	06/04/2008	06/06/2008	U	
Copper	EPA 3020A	6020	2.0	0.3	1.0	06/04/2008	06/06/2008	U	
Iron	EPA 3010A	6010B	50.0	4.0	1.0	05/20/2008	05/21/2008	U	
Lead	EPA 3020A	6020	1.0	0.2	1.0	06/04/2008	06/06/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/21/2008	05/22/2008	U	
Nickel	EPA 3020A	6020	2.0	0.3	1.0	06/04/2008	06/06/2008	U	
Selenium	EPA 3020A	6020	2.0	0.7	1.0	06/04/2008	06/06/2008	U	
Silver	EPA 3020A	6020	0.5	0.1	1.0	06/04/2008	06/06/2008	U	
Thallium	EPA 3020A	6020	1.0	0.2	1.0	06/04/2008	06/06/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	06/04/2008	06/06/2008	U	
Zinc	EPA 3020A	6020	10.0	4.0	1.0	06/04/2008	06/06/2008	U	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/GQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802359  
**Date Collected:** 5/16/2008  
**Date Received:** 5/16/2008

Hardness, Total

Prep Method: METHOD  
Analysis Method: SM 2340B  
Test Notes:

Units: mg/L (ppm)  
Basis: NA

Sample Name	Lab Code	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
SW-3	J0802359-001	1.7	1	5/20/2008	5/21/2008	5.8	
SW-4	J0802359-002	1.7	1	5/20/2008	5/21/2008	5.6	
Method Blank	J080520-MB	1.7	1	5/20/2008	5/21/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** GQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802359  
**Date Collected :** 05/16/08  
**Date Received :** 05/16/08

## Inorganic Parameters

**Sample Name :** SW-3  
**Lab Code :** J0802359-001  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as N, Unionized	mg/L (ppm)	FDEP	0.05	0.006	1	05/19/08 09:32	U	
Biochemical Oxygen Demand (BOD)	mg/L (ppm)	405.1	4	0.86	1	05/16/08 15:45	2.4	i
Carbon, Total Organic	mg/L (ppm)	415.1	1	0.41	1	05/28/08 17:22	9.2	
Chemical Oxygen Demand	mg/L (ppm)	410.2	5	1.5	1	05/23/08 17:00	33	
Chlorophyll a (Monochromatic)	mg/m3	SM 10200 H	4	4	4	05/23/08 10:00	11	
Coliform, Fecal	CFU/100mL	SM 9222D	10	10	10	05/16/08 15:00	240	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/16/08 20:22	0.17	i
Nitrogen, Total as Nitrogen	mg/L (ppm)	300.0 + 351.2	0.5	0.048	1	05/27/08 03:20	1.2	
Phosphorus, Total	mg/L (ppm)	365.1	0.01	0.006	1	05/21/08 15:12	0.038	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/22/08 08:30	30	
Solids, Total Suspended (TSS)	mg/L (ppm)	160.2	5	1.6	1	05/20/08 14:40	8.0	



# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** GQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802359  
**Date Collected :** 05/16/08  
**Date Received :** 05/16/08

### Inorganic Parameters

**Sample Name :** SW-4  
**Lab Code :** J0802359-002  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as N, Unionized	mg/L (ppm)	FDEP	0.05	0.006	1	05/19/08 09:32	U	
Biochemical Oxygen Demand (BOD)	mg/L (ppm)	405.1	4	0.86	1	05/16/08 15:45	2.0	i
Carbon, Total Organic	mg/L (ppm)	415.1	1	0.41	1	05/28/08 17:22	8.6	
Chemical Oxygen Demand	mg/L (ppm)	410.2	5	1.5	1	05/23/08 17:00	31	
Chlorophyll a (Monochromatic)	mg/m3	SM 10200 H	4	4	4	05/23/08 10:00	24	
Coliform, Fecal	CFU/100mL	SM 9222D	100	100	100	05/16/08 15:00	7200	B
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/16/08 21:37	0.17	i
Nitrogen, Total as Nitrogen	mg/L (ppm)	300.0 + 351.2	0.5	0.048	1	05/27/08 03:20	0.82	
Phosphorus, Total	mg/L (ppm)	365.1	0.01	0.006	1	05/21/08 15:12	0.11	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/22/08 08:30	36	
Solids, Total Suspended (TSS)	mg/L (ppm)	160.2	5	1.6	1	05/20/08 14:40	3.0	i

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** GQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802359  
**Date Collected :** NA  
**Date Received :** NA

### Inorganic Parameters

**Sample Name :** Method Blank  
**Lab Code :** J0802359-MB  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as N, Unionized	mg/L (ppm)	FDEP	0.05	0.006	1	05/19/08 09:32	U	
Biochemical Oxygen Demand (BOD)	mg/L (ppm)	405.1	4	0.86	1	05/16/08 15:45	U	
Carbon, Total Organic	mg/L (ppm)	415.1	1	0.41	1	05/28/08 17:22	U	
Chemical Oxygen Demand	mg/L (ppm)	410.2	5	1.5	1	05/23/08 17:00	U	
Chlorophyll a (Monochromatic)	mg/m3	SM 10200 H	1	1	1	05/23/08 10:00	U	
Coliform, Fecal	CFU/100mL	SM 9222D	1	1	1	05/16/08 13:00	U	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/16/08 16:23	U	
Nitrogen, Total as Nitrogen	mg/L (ppm)	300.0 + 351.2	0.5	0.048	1	05/27/08 03:20	U	
Phosphorus, Total	mg/L (ppm)	365.1	0.01	0.006	1	05/21/08 15:12	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/22/08 08:30	U	
Solids, Total Suspended (TSS)	mg/L (ppm)	160.2	5	1.6	1	05/20/08 14:40	U	

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/GQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802359

**Surrogate Recovery Summary**  
**Appendix I Volatile Organic Compounds by GC/MS**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** PERCENT  
**Level:** Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>	<u>Sur4</u>
SW-3	J0802359-001	87	119	94	105
SW-4	J0802359-002	89	119	94	103
Trip Blank	J0802359-003	96	114	96	101
Method Blank	JWG0801932-4	90	116	94	106
Lab Control Sample	JWG0801932-3	86	116	95	111

**Surrogate Recovery Control Limits (%)**

---

Sur1 = 1,2-Dichloroethane-d4	71-122
Sur2 = 4-Bromofluorobenzene	75-120
Sur3 = Dibromofluoromethane	82-116
Sur4 = Toluene-d8	88-117

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Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/GQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802359  
**Date Extracted:** 05/22/2008  
**Date Analyzed:** 05/22/2008

**Lab Control Spike Summary**  
**Appendix I Volatile Organic Compounds by GC/MS**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0801932

Lab Control Sample  
JWG0801932-3  
**Lab Control Spike**

Analyte Name	Result	Expected	%Rec	%Rec Limits
Chloromethane	19.0	20.0	95	67-135
Vinyl Chloride	20.7	20.0	103	78-132
Bromomethane	19.2	20.0	96	79-130
Chloroethane	20.8	20.0	104	74-126
Trichlorofluoromethane	20.9	20.0	104	74-134
1,1-Dichloroethene	21.3	20.0	106	78-130
Acetone	117	100	117	67-133
Iodomethane (Methyl Iodide)	108	100	108	68-134
Carbon Disulfide	106	100	106	76-138
Methylene Chloride	19.3	20.0	96	72-124
trans-1,2-Dichloroethene	19.6	20.0	98	77-124
Acrylonitrile	111	100	111	77-127
1,1-Dichloroethane	20.5	20.0	103	80-128
Vinyl Acetate	111	100	111	61-148
cis-1,2-Dichloroethene	21.0	20.0	105	80-126
2-Butanone (MEK)	128	100	128 *	73-127
Bromochloromethane	20.8	20.0	104	79-129
Chloroform	20.4	20.0	102	83-124
1,1,1-Trichloroethane (TCA)	21.3	20.0	106	79-124
Carbon Tetrachloride	19.9	20.0	99	81-125
Benzene	21.4	20.0	107	79-119
1,2-Dichloroethane (EDC)	20.8	20.0	104	80-124
Trichloroethene (TCE)	21.9	20.0	109	76-124
1,2-Dichloropropane	21.1	20.0	105	79-123
Dibromomethane	21.9	20.0	110	83-123
Bromodichloromethane	21.3	20.0	106	81-123
cis-1,3-Dichloropropene	22.0	20.0	110	86-123
4-Methyl-2-pentanone (MIBK)	115	100	115	72-136
Toluene	20.8	20.0	104	86-117
trans-1,3-Dichloropropene	21.0	20.0	105	83-124
1,1,2-Trichloroethane	22.4	20.0	112	86-114
Tetrachloroethene (PCE)	22.3	20.0	112	80-121
2-Hexanone	120	100	120	71-138
Dibromochloromethane	20.6	20.0	103	82-121
1,2-Dibromoethane (EDB)	22.6	20.0	113	88-117

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/GQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802359  
**Date Extracted:** 05/22/2008  
**Date Analyzed:** 05/22/2008

**Lab Control Spike Summary**  
**Appendix I Volatile Organic Compounds by GC/MS**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0801932

Lab Control Sample  
JWG0801932-3  
Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Chlorobenzene	21.3	20.0	107	86-113
1,1,1,2-Tetrachloroethane	20.8	20.0	104	85-117
Ethylbenzene	21.6	20.0	108	90-118
m,p-Xylenes	41.4	40.0	104	86-121
o-Xylene	21.0	20.0	105	89-119
Styrene	20.7	20.0	104	89-122
Bromoform	21.3	20.0	106	68-129
1,1,2,2-Tetrachloroethane	21.7	20.0	108	83-120
1,2,3-Trichloropropane	22.0	20.0	110	83-123
1,4-Dichlorobenzene	21.0	20.0	105	83-113
trans-1,4-Dichloro-2-butene	19.7	20.0	99	53-143
1,2-Dichlorobenzene	20.8	20.0	104	84-115
1,2-Dibromo-3-chloropropane (DBCP)	25.2	20.0	126 *	62-123

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/GQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802359

**Surrogate Recovery Summary**  
**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** PERCENT  
**Level:** Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
SW-3	J0802359-001	118
SW-4	J0802359-002	120
Method Blank	JWG0801882-3	123
Lab Control Sample	JWG0801882-1	120
Duplicate Lab Control Sample	JWG0801882-2	115

**Surrogate Recovery Control Limits (%)**

---

Sur1 = 1,1,1,2-Tetrachloroethane 77-150

---

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/GQ1512.01  
**Sample Matrix:** Water

**Service Request:** J0802359  
**Date Extracted:** 05/20/2008  
**Date Analyzed:** 05/21/2008

**Lab Control Spike/Duplicate Lab Control Spike Summary**  
**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0801882

Analyte Name	Lab Control Sample JWG0801882-1 Lab Control Spike			Duplicate Lab Control Sample JWG0801882-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Expected	%Rec	Result	Expected	%Rec			
1,2-Dibromoethane (EDB)	0.283	0.250	113	0.273	0.250	109	70-130	4	20
1,2-Dibromo-3-chloropropane (DBCP)	0.257	0.250	103	0.252	0.250	101	70-130	2	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** GQ1512.01  
**Matrix:** WATER

**Service Request:** J0802359  
**Date Collected:** N/A  
**Date Received:** N/A  
**Date Extracted:** 06/04/2008  
**Date Analyzed:** 06/06/2008

### Laboratory Control Sample Summary Total Metals

**Sample Name:** Lab Control Sample  
**Lab Code:** LCS3-0604

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	True Value	Results	Percent Recovery	CAS Percent	Result Notes
						Recovery Acceptance Limits	
Antimony	EPA 3020A	6020	50.0	52.2	104	80 - 120	
Arsenic	EPA 3020A	6020	50.0	48.7	97	80 - 120	
Barium	EPA 3020A	6020	50.0	50.3	101	80 - 120	
Beryllium	EPA 3020A	6020	50.0	48.7	97	80 - 120	
Cadmium	EPA 3020A	6020	50.0	49.8	100	80 - 120	
Chromium	EPA 3020A	6020	50.0	51.3	103	80 - 120	
Cobalt	EPA 3020A	6020	50.0	50.3	101	80 - 120	
Copper	EPA 3020A	6020	50.0	49.5	99	80 - 120	
Iron	EPA 3010A	6010B	2000	1990	100	80 - 120	
Lead	EPA 3020A	6020	50.0	50.6	101	80 - 120	
Mercury	METHOD	7470A	5.00	5.05	101	80 - 120	
Nickel	EPA 3020A	6020	50.0	50.7	101	80 - 120	
Selenium	EPA 3020A	6020	50.0	45.7	91	80 - 120	
Silver	EPA 3020A	6020	50.0	52.3	105	80 - 120	
Thallium	EPA 3020A	6020	50.0	50.0	100	80 - 120	
Vanadium	EPA 3020A	6020	50.0	50.2	100	80 - 120	
Zinc	EPA 3020A	6020	100	97.4	97	80 - 120	



**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/GQ1512.01  
**LCS Matrix:** Water

**Service Request:** J0802359  
**Date Collected:** NA  
**Date Received:** NA  
**Date Extracted:** 5/20/2008  
**Date Analyzed:** 5/21/2008

Laboratory Control Sample Summary  
Total Metals

**Sample Name:** Lab Control Sample  
**Lab Code:** J080520-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	
Hardness as CaCO3, Total	METHOD	SM 2340B	91.1	90.4	99	85-115	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** GQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802359  
**Date Collected :** 05/16/08  
**Date Received :** 05/16/08  
**Date Extracted :** NA  
**Date Analyzed :** 05/16-23/08

### Duplicate Summary Inorganic Parameters

**Sample Name :** SW-3  
**Lab Code :** J0802359-001DUP  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Ammonia as N, Unionized	mg/L (ppm)	FDEP	0.05	U	U	U	-	
Chlorophyll a (Monochromatic)	mg/m3	SM 10200 H	4	11	13	12	17	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.17	0.17	0.17	<1	i
Solids, Total Suspended (TSS)	mg/L (ppm)	160.2	5	8.0	8.7	8.35	8	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** GQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802359  
**Date Collected :** 05/16/08  
**Date Received :** 05/16/08  
**Date Extracted :** NA  
**Date Analyzed :** 05/16/08

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** SW-3  
**Lab Code :** J0802359-001MS  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
								Percent Recovery Acceptance Limits	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	10	0.17	9.64	95	90-110	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** GQ1512.01  
**Sample Matrix :** WATER

**Service Request :** J0802359  
**Date Collected :** NA  
**Date Received :** NA  
**Date Extracted :** NA  
**Date Analyzed :** 05/16-28/08

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** J0802359-LCS  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	True Value	Result	Percent Recovery	CAS	Result Notes
						Percent Recovery Acceptance Limits	
Biochemical Oxygen Demand (BOD)	mg/L (ppm)	405.1	198	172	87	85-115	
Carbon, Total Organic	mg/L (ppm)	415.1	50	54.6	109	90-110	
Chemical Oxygen Demand	mg/L (ppm)	410.2	85.8	92.1	107	85-115	
Nitrate as Nitrogen	mg/L (ppm)	300.0	10	10.2	102	90-110	
Phosphorus, Total	mg/L (ppm)	365.1	0.500	0.531	106	90-110	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	300	300	100	85-115	
Solids, Total Suspended (TSS)	mg/L (ppm)	160.2	80	75.0	94	85-115	

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

Client: Geosyntec Service Request # 50802359  
 Project: DED Disposal Facility  
 Cooler received on 5-16-08 and opened on 5-16-08 by DML  
 COURIER: CAS UPS FEDEX DHL CLIENT Tracking # \_\_\_\_\_

- |    |  |            |            |     |
|----|--|------------|------------|-----|
| 1  | Were custody seals on outside of cooler?   | <u>Yes</u> | No         | N/A |
| 2  | Were seals intact, signed and dated?   | <u>Yes</u> | No         | N/A |
| 3  | Were custody papers properly filled out?   | <u>Yes</u> | No         | N/A |
| 4  | Temperature of cooler(s) upon receipt (Should be 4 +/- 2 degrees C)                    | <u>0.5</u> | <u>0.5</u> |     |
| 5  | Correct Temperature?   | <u>Yes</u> | No         | N/A |
| 6  | Were Ice or Ice Packs present  | <u>Yes</u> | No         | N/A |
| 7  | Did all bottles arrive in good condition (unbroken, etc....)?                          | <u>Yes</u> | No         | N/A |
| 8  | Were all bottle labels complete (sample ID, preservation, etc....)?                    | <u>Yes</u> | No         | N/A |
| 9  | Did all bottle labels and tags agree with custody papers?                              | <u>Yes</u> | No         | N/A |
| 10 | Were the correct bottles used for the tests indicated?                                 | <u>Yes</u> | No         | N/A |
| 11 | Were all of the preserved bottles received with the appropriate preservative?          | <u>Yes</u> | No         | N/A |
|    | <u>HNO3 pH&lt;2</u> <u>H2SO4 pH&lt;2</u> ZnAc2/NaOH pH>9 NaOH pH>12 <u>HCl pH&lt;2</u> |            |            |     |
|    | <small>Preservative additions noted below</small>                                      |            |            |     |
| 12 | Were all samples received within analysis holding times?                               | <u>Yes</u> | No         | N/A |
| 13 | Were VOA vials checked for absence of air bubbles? If present, note below              | <u>Yes</u> | No         | N/A |
| 14 | Where did the bottles originate?   | <u>CAS</u> | Client     |     |

Sample ID	Reagent	Manuf. Lot # or CAS Chem ID	ml added	Initials

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted:

Date: 5/16/08

DME

Bottle Code

36



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# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011 PAGE 1 OF 1

SR #

50802359

CAS Contact

Project Name IED Disposal Facility		Project Number KQ1512.01		ANALYSIS REQUESTED (Include Method Number and C)																																					
Project Manager Kirk Wills		Email Address kwills@geosyntec.com		PRESERVATIVE 1 0 1 2 3 0 0 8																																					
Company/Address Geosyntec				B260 TQC Metals TDS, TS, NO <sub>3</sub> , NO <sub>2</sub> , COB Chlorophyll A Fecal Coliform																																					
14055 Riveredge Dr.		STE 300																																							
Tampa, FL		33637																																							
Phone #		FAX#																																							
813-558-0990		813-558-9726																																							
Sampler's Signature Joe Terry		Sampler's Printed Name Joe Terry, Tom Wissler																																							
CLIENT SAMPLE ID		LAB ID		SAMPLING DATE		TIME		MATRIX																																	
SW-3				5-16-08		0430		SW		12 X X X X X X X X X X																															
SW-4				5-16-08		1015		SW		12 X X X X X X X X X X																															
Trip Blank										6 X																															
SPECIAL INSTRUCTIONS/COMMENTS Temp. (°C) pH SW-3 22.99 5.43 SW-4 22.35 4.80 (2 coolers)												TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) X STANDARD REQUESTED FAX DATE REQUESTED REPORT DATE										REPORT REQUIREMENTS I. Results Only X II. Results + QC Summaries (LCS, DUP, MS/MSD as required) III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data V. Specialized Forms / Custom Report Edata Yes No										INVOICE INFORMATION PO# BILL TO:									
See QAPP <input type="checkbox"/>												CUSTODY SEALS: Y N										RECEIVED BY																			
SAMPLE RECEIPT: CONDITION/COOLER TEMP:												RELINQUISHED BY										RELINQUISHED BY										RECEIVED BY									
37												Signature Joe Terry										Signature										Signature									
Printed Name Joe Terry												Printed Name										Printed Name										Printed Name									
Firm Geosyntec												Firm										Firm										Firm									
Date/Time 5-16-08/1150												Date/Time 5-16-08 11:50										Date/Time										Date/Time									

June 09, 2008

Service Request No: J0802382

Kirk Wills  
GeoSyntec Consultants  
14055 Riveredge Drive  
Suite 300  
Tampa, FL 33637

**RE: JED Disposal Facility/FQ1512-01**

Dear Kirk:

Enclosed are the results of the sample(s) submitted to our laboratory on May 20, 2008. For your reference, these analyses have been assigned our service request number **J0802382**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP 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. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please call if you have any questions. My extension is 4409. You may also contact me via email at [CMyers@caslab.com](mailto:CMyers@caslab.com).

Respectfully submitted,

**Columbia Analytical Services, Inc.**



Craig Myers  
Project Chemist

Page 1 of 81

*Laboratory Manager: Greg Jordan  
Quality Assurance Officer: Kathy Brungard*

*CAS Jacksonville is NELAC-accredited by the State of Florida, #E82502 valid through 6/30/08. Other state accreditations include: Arkansas, #88-0600 valid through 1/12/06; Georgia, #958 valid through 6/30/08; Louisiana, #02086 valid through 6/30/08; Texas, #T104704197-06-TX valid through 5/31/08; North Carolina, #527 valid through 12/31/07; South Carolina, #96021001 valid through 6/30/08.*



## COLUMBIA ANALYTICAL SERVICES, INC.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility  
**Sample Matrix:** Water

**Service Request No.:** J0802382  
**Date Received:** 5/20/08

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

#### Sample Receipt

Nine water samples and one trip blank were received for analysis at Columbia Analytical Services on 5/20/08. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at 4±2°C upon receipt at the lab except for aqueous samples designated for metals analyses, which were stored at room temperature.

#### Volatile Organic Compounds by GC-MS

The samples were analyzed for Volatile Organics using EPA Method 8260. No problems were observed.

#### Batch QC Notes and Discussion

Quality control samples for MS/DMS were performed using samples from another sample delivery group (SDG). The frequency requirement for quality control sample analysis was consistent with the project's requirements. Matrix specific quality control results have no bearing on sample data from a different matrix or location. Therefore, control of the batch has been evaluated using the method blank and the laboratory control sample.

#### EDB and DBCP by GC-ECD

The samples were analyzed for EDB and DBCP using EPA Method 8011. No problems were observed.

#### Metals by ICP-MS/ICP-OES/CVAA

The samples were analyzed for Total Metals using EPA Methods 6020/6010B/7470A. The following observations were made regarding this delivery group.

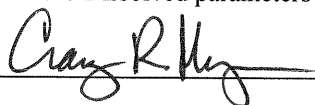
#### Matrix Spike Recovery Exceptions

The control criteria for matrix spike recoveries of Total Iron for sample MW-2A are not applicable. The analyte concentrations in the samples were significantly higher than the added spike concentration, preventing accurate evaluation of the spike recoveries.

#### Batch QC Notes and Discussion

Quality control samples for the Dissolved parameters (i.e., Dup/Spike or MS/DMS samples) were performed using

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



Date \_\_\_\_\_

6/9/08

samples from another sample delivery group (SDG). The frequency requirement for quality control sample analysis was consistent with the project's requirements. Matrix specific quality control results have no bearing on sample data from a different matrix or location. Therefore, control of the batch has been evaluated using the method blank and the laboratory control sample.

#### **General Chemistry Parameters**

The samples were analyzed for Inorganic Parameters using various EPA and Standard Methods. No problems were observed.

#### **Batch QC Notes and Discussion**

Quality control samples for Total Dissolved Solids (i.e., Dup/Spike or MS/DMS samples) were performed using samples from another sample delivery group (SDG). The frequency requirement for quality control sample analysis was consistent with the project's requirements. Matrix specific quality control results have no bearing on sample data from a different matrix or location. Therefore, control of the batch has been evaluated using the method blank and the laboratory control sample.

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



Date \_\_\_\_\_

6/9/08

## Florida DEP Data Qualifiers

B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
H	Value based on field kit determination; results may not be accurate.
i	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J	Estimated value (one of the following reasons is discussed in the project case narrative). <ol style="list-style-type: none"><li>1. The result may be inaccurate because the surrogate recovery limits have been exceeded.</li><li>2. No known quality control criteria exists for the component.</li><li>3. The reported value failed to meet the established quality control criteria for either precision or accuracy.</li><li>4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).</li><li>5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).</li></ol>
K	Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
L	Off scale high. The analyte is above the upper limit of the linear calibration range.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
N	Presumptive evidence of the analyte. Confirmation was not performed.
Q	Sample held beyond the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	The laboratory analysis was from an improperly preserved sample.
Z	Too many colonies were present (TNTC). The numeric value represents the filtration volume.

## 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.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01

**Service Request:** J0802382

**SAMPLE CROSS-REFERENCE**

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J0802382-001	MW-2A	05/19/08	09:10
J0802382-002	MW-2B	05/19/08	09:05
J0802382-003	MW-2C	05/19/08	08:50
J0802382-004	MW-23A	05/19/08	11:05
J0802382-005	MW-23B	05/19/08	11:00
J0802382-006	MW-23C	05/19/08	11:20
J0802382-007	MW-22A	05/19/08	14:00
J0802382-008	MW-22B	05/19/08	14:20
J0802382-009	MW-22C	05/19/08	13:50
J0802382-010	Trip Blank	05/19/08	00:00

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802382  
 Date Collected: 05/19/2008  
 Date Received: 05/20/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-2A  
 Lab Code: J0802382-001  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
Acetone	ND	U	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
<b>Toluene</b>	<b>0.54</b>	<b>I</b>	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-2A  
**Lab Code:** J0802382-001  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	103	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	95	75-120	05/24/08	Acceptable
Dibromofluoromethane	96	82-116	05/24/08	Acceptable
Toluene-d8	106	88-117	05/24/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802382  
 Date Collected: 05/19/2008  
 Date Received: 05/20/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-2B  
 Lab Code: J0802382-002  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
Acetone	ND	U	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
Toluene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

Comments:



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-2B  
**Lab Code:** J0802382-002  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	102	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	96	75-120	05/24/08	Acceptable
Dibromofluoromethane	96	82-116	05/24/08	Acceptable
Toluene-d8	106	88-117	05/24/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802382  
 Date Collected: 05/19/2008  
 Date Received: 05/20/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-2C  
 Lab Code: J0802382-003  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
Acetone	ND	U	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
Toluene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802382  
 Date Collected: 05/19/2008  
 Date Received: 05/20/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-2C  
 Lab Code: J0802382-003  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	102	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	94	75-120	05/24/08	Acceptable
Dibromofluoromethane	96	82-116	05/24/08	Acceptable
Toluene-d8	105	88-117	05/24/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802382  
 Date Collected: 05/19/2008  
 Date Received: 05/20/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-23A  
 Lab Code: J0802382-004  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
Acetone	ND	U	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
<b>Toluene</b>	<b>0.76</b>	<b>I</b>	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-23A  
**Lab Code:** J0802382-004  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	102	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	95	75-120	05/24/08	Acceptable
Dibromofluoromethane	96	82-116	05/24/08	Acceptable
Toluene-d8	106	88-117	05/24/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-23B  
**Lab Code:** J0802382-005  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
Acetone	ND	U	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
<b>Toluene</b>	<b>1.1</b>		1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802382  
 Date Collected: 05/19/2008  
 Date Received: 05/20/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-23B  
 Lab Code: J0802382-005  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	102	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	94	75-120	05/24/08	Acceptable
Dibromofluoromethane	95	82-116	05/24/08	Acceptable
Toluene-d8	106	88-117	05/24/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-23C  
**Lab Code:** J0802382-006  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
Acetone	ND	U	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
Toluene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

**Comments:**



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-23C  
**Lab Code:** J0802382-006  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	103	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	95	75-120	05/24/08	Acceptable
Dibromofluoromethane	96	82-116	05/24/08	Acceptable
Toluene-d8	107	88-117	05/24/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-22A  
**Lab Code:** J0802382-007  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
Acetone	ND	U	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
<b>Toluene</b>	<b>2.7</b>		1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-22A  
**Lab Code:** J0802382-007  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	102	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	95	75-120	05/24/08	Acceptable
Dibromofluoromethane	96	82-116	05/24/08	Acceptable
Toluene-d8	106	88-117	05/24/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-22B  
**Lab Code:** J0802382-008  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
Acetone	ND	U	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
<b>Toluene</b>	<b>1.3</b>		1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

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

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802382  
 Date Collected: 05/19/2008  
 Date Received: 05/20/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-22B  
 Lab Code: J0802382-008  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	103	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	96	75-120	05/24/08	Acceptable
Dibromofluoromethane	96	82-116	05/24/08	Acceptable
Toluene-d8	107	88-117	05/24/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-22C  
**Lab Code:** J0802382-009  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
Acetone	ND	U	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
<b>Toluene</b>	<b>2.5</b>		1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802382  
 Date Collected: 05/19/2008  
 Date Received: 05/20/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-22C  
 Lab Code: J0802382-009  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	103	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	95	75-120	05/24/08	Acceptable
Dibromofluoromethane	96	82-116	05/24/08	Acceptable
Toluene-d8	106	88-117	05/24/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802382  
 Date Collected: 05/19/2008  
 Date Received: 05/20/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Trip Blank  
 Lab Code: J0802382-010  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
Acetone	ND	U	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
Toluene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

Comments:



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802382  
 Date Collected: 05/19/2008  
 Date Received: 05/20/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Trip Blank  
 Lab Code: J0802382-010  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	0.59	I	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	0.68	I	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	102	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	94	75-120	05/24/08	Acceptable
Dibromofluoromethane	95	82-116	05/24/08	Acceptable
Toluene-d8	106	88-117	05/24/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802382  
 Date Collected: NA  
 Date Received: NA

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Method Blank  
 Lab Code: JWG0801948-4  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
Acetone	ND	U	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
Toluene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Collected:** NA  
**Date Received:** NA

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank  
**Lab Code:** JWG0801948-4  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	102	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	94	75-120	05/24/08	Acceptable
Dibromofluoromethane	96	82-116	05/24/08	Acceptable
Toluene-d8	106	88-117	05/24/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-2A  
**Lab Code:** J0802382-001  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801880	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801880	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	121	77-150	05/21/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-2B  
**Lab Code:** J0802382-002  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801880	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801880	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	119	77-150	05/21/08	Acceptable

Comments: \_\_\_\_\_

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-2C  
**Lab Code:** J0802382-003  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801880	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801880	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	117	77-150	05/21/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-23A  
**Lab Code:** J0802382-004  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801880	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801880	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	118	77-150	05/21/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-23B  
**Lab Code:** J0802382-005  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801880	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801880	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	123	77-150	05/21/08	Acceptable

Comments: \_\_\_\_\_



## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-23C  
**Lab Code:** J0802382-006  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801880	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801880	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	127	77-150	05/21/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-22A  
**Lab Code:** J0802382-007  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801880	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801880	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	126	77-150	05/21/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-22B  
**Lab Code:** J0802382-008  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801880	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801880	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	127	77-150	05/21/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-22C  
**Lab Code:** J0802382-009  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801880	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801880	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	130	77-150	05/21/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Collected:** NA  
**Date Received:** NA

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** Method Blank  
**Lab Code:** JWG0801880-3  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND U	0.020	0.0070	1	05/20/08	05/21/08	JWG0801880	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	0.020	0.0057	1	05/20/08	05/21/08	JWG0801880	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	121	77-150	05/21/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802382  
**Date Collected:** 5/19/2008  
**Date Received:** 5/20/2008

## Total Metals

**Sample Name:** MW-2A  
**Lab Code:** J0802382-001

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	0.74	i
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.67	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	15	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	3.0	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	3.6	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/21/2008	05/22/2008	11900	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	0.68	i
Mercury	METHOD	7470A	0.50	0.08	1.0	05/23/2008	05/24/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	0.97	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/22/2008	06/07/2008	8.1	i

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802382  
**Date Collected:** 5/19/2008  
**Date Received:** 5/20/2008

### Total Metals

**Sample Name:** MW-2B  
**Lab Code:** J0802382-002

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	12	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	1.8	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	0.31	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	0.62	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/21/2008	05/22/2008	821	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	0.48	i
Mercury	METHOD	7470A	0.50	0.08	1.0	05/23/2008	05/24/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	0.44	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/22/2008	06/07/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802382  
**Date Collected:** 5/19/2008  
**Date Received:** 5/20/2008

### Total Metals

**Sample Name:** MW-2C  
**Lab Code:** J0802382-003

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	22	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	2.0	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	3.4	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/21/2008	05/22/2008	668	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	0.26	i
Mercury	METHOD	7470A	0.50	0.08	1.0	05/23/2008	05/24/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	0.67	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/22/2008	06/07/2008	8.8	i



# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802382  
**Date Collected:** 5/19/2008  
**Date Received:** 5/20/2008

### Total Metals

**Sample Name:** MW-23A  
**Lab Code:** J0802382-004

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.35	i
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	15	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	1.3	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	0.30	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/21/2008	05/22/2008	2300	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/23/2008	05/24/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	0.58	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/22/2008	06/07/2008	U	

## COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802382  
**Date Collected:** 5/19/2008  
**Date Received:** 5/20/2008

## Total Metals

**Sample Name:** MW-23B  
**Lab Code:** J0802382-005

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	13	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.25	i
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	2.0	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	0.22	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/21/2008	05/22/2008	425	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/23/2008	05/24/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	0.81	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/22/2008	06/07/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802382  
**Date Collected:** 5/19/2008  
**Date Received:** 5/20/2008

### Total Metals

**Sample Name:** MW-23C  
**Lab Code:** J0802382-006

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	8.2	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	2.6	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/21/2008	05/22/2008	560	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	0.21	i
Mercury	METHOD	7470A	0.50	0.08	1.0	05/23/2008	05/24/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	0.53	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/22/2008	06/07/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802382  
**Date Collected:** 5/19/2008  
**Date Received:** 5/20/2008

### Total Metals

**Sample Name:** MW-22A  
**Lab Code:** J0802382-007

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	9.8	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	1.7	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/21/2008	05/22/2008	1040	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/23/2008	05/24/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	U	
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/22/2008	06/07/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802382  
**Date Collected:** 5/19/2008  
**Date Received:** 5/20/2008

### Total Metals

**Sample Name:** MW-22B  
**Lab Code:** J0802382-008

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.56	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	38	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.30	i
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	4.4	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	0.80	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	1.8	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/21/2008	05/22/2008	1520	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	3.2	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/30/2008	05/30/2008	0.11	i
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	1.5	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	1.4	i
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	5.8	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/22/2008	06/07/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802382  
**Date Collected:** 5/19/2008  
**Date Received:** 5/20/2008

### Total Metals

**Sample Name:** MW-22C  
**Lab Code:** J0802382-009

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	17	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	2.9	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	0.59	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/21/2008	05/22/2008	440	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/23/2008	05/24/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	1.1	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/22/2008	06/07/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802382  
**Date Collected:** N/A  
**Date Received:** N/A

### Total Metals

**Sample Name:** Method Blank  
**Lab Code:** MB4-0522

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.4	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Barium	EPA 3020A	6020	2.0	0.6	1.0	05/22/2008	06/07/2008	U	
Beryllium	EPA 3020A	6020	1.0	0.2	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Chromium	EPA 3020A	6020	2.0	0.8	1.0	05/22/2008	06/07/2008	U	
Cobalt	EPA 3020A	6020	1.0	0.2	1.0	05/22/2008	06/07/2008	U	
Copper	EPA 3020A	6020	2.0	0.3	1.0	05/22/2008	06/07/2008	U	
Iron	EPA 3010A	6010B	50.0	4.0	1.0	05/21/2008	05/22/2008	11.0	i
Lead	EPA 3020A	6020	1.0	0.2	1.0	05/22/2008	06/07/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/23/2008	05/24/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/30/2008	05/30/2008	U	
Nickel	EPA 3020A	6020	2.0	0.3	1.0	05/22/2008	06/07/2008	U	
Selenium	EPA 3020A	6020	2.0	0.7	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3020A	6020	0.50	0.08	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3020A	6020	1.0	0.2	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	U	
Zinc	EPA 3020A	6020	10.0	4.0	1.0	05/22/2008	06/07/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802382  
**Date Collected:** 5/19/2008  
**Date Received:** 5/20/2008

### Dissolved Metals

**Sample Name:** MW-22B  
**Lab Code:** J0802382-008

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3005A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3005A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.40	i
Barium	EPA 3005A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	13	
Beryllium	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3005A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Chromium	EPA 3005A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	1.1	i
Cobalt	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	0.23	i
Copper	EPA 3005A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	U	
Iron	EPA 3005A	6010B	50	4.0	1.0	05/22/2008	05/22/2008	1270	
Lead	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/23/2008	05/24/2008	0.12	i
Nickel	EPA 3005A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	U	
Selenium	EPA 3005A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3005A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3005A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	U	
Zinc	EPA 3005A	6020	10	4.0	1.0	05/22/2008	06/07/2008	U	



# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802382  
**Date Collected:** N/A  
**Date Received:** N/A

## Dissolved Metals

**Sample Name:** Method Blank  
**Lab Code:** MB6-0522

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3005A	6020	2.0	0.4	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3005A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Barium	EPA 3005A	6020	2.0	0.6	1.0	05/22/2008	06/07/2008	U	
Beryllium	EPA 3005A	6020	1.0	0.2	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3005A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Chromium	EPA 3005A	6020	2.0	0.8	1.0	05/22/2008	06/07/2008	U	
Cobalt	EPA 3005A	6020	1.0	0.2	1.0	05/22/2008	06/07/2008	U	
Copper	EPA 3005A	6020	2.0	0.3	1.0	05/22/2008	06/07/2008	U	
Iron	EPA 3005A	6010B	50.0	4.0	1.0	05/22/2008	05/22/2008	U	
Lead	EPA 3005A	6020	1.0	0.2	1.0	05/22/2008	06/07/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/23/2008	05/24/2008	U	
Nickel	EPA 3005A	6020	2.0	0.3	1.0	05/22/2008	06/07/2008	U	
Selenium	EPA 3005A	6020	2.0	0.7	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3005A	6020	0.5	0.1	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3005A	6020	1.0	0.2	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3005A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	U	
Zinc	EPA 3005A	6020	10.0	4.0	1.0	05/22/2008	06/07/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

Client: GeoSyntec Consultants  
 Project Name: JED Disposal Facility  
 Project Number: FQ1512-01  
 Matrix: WATER

Service Request: J0802382  
 Date Collected: 05/19/2008  
 Date Received: 05/20/2008

### Total Metals Sodium

Prep Method: EPA 3010A  
 Analysis Method: 6010B  
 Test Notes:

Units: mg/L  
 Basis: N/A

Sample Name:	Lab Code:	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MW-2A	J0802382-001	0.50	0.02	1.0	05/21/2008	05/22/2008	11	
MW-2B	J0802382-002	0.50	0.02	1.0	05/21/2008	05/22/2008	5.4	
MW-2C	J0802382-003	0.50	0.02	1.0	05/21/2008	05/22/2008	4.6	
MW-23A	J0802382-004	0.50	0.02	1.0	05/21/2008	05/22/2008	14	
MW-23B	J0802382-005	0.50	0.02	1.0	05/21/2008	05/22/2008	9.1	
MW-23C	J0802382-006	0.50	0.02	1.0	05/21/2008	05/22/2008	5.0	
MW-22A	J0802382-007	0.50	0.02	1.0	05/21/2008	05/22/2008	20	
MW-22B	J0802382-008	0.50	0.02	1.0	05/21/2008	05/22/2008	8.6	
MW-22C	J0802382-009	0.50	0.02	1.0	05/21/2008	05/22/2008	6.4	
Method Blank	MB5-0521	0.50	0.02	1.0	05/21/2008	05/22/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008

### Dissolved Metals Sodium

**Prep Method:** EPA 3005A  
**Analysis Method:** 6010B  
**Test Notes:**

**Units:** mg/L  
**Basis:** N/A

Sample Name:	Lab Code:	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MW-22B	J0802382-008	0.50	0.02	1.0	05/22/2008	05/22/2008	8.6	
Method Blank	MB1-0522	0.50	0.02	1.0	05/22/2008	05/22/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802382  
**Date Collected :** 05/19/08  
**Date Received :** 05/20/08

## Inorganic Parameters

**Sample Name :** MW-2A  
**Lab Code :** J0802382-001  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.007	1	05/20/08 13:44	0.24	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/20/08 11:32	40	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/20/08 12:01	0.16	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/22/08 12:00	80	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802382  
**Date Collected :** 05/19/08  
**Date Received :** 05/20/08

## Inorganic Parameters

**Sample Name :** MW-2B  
**Lab Code :** J0802382-002  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.007	1	05/20/08 13:44	0.20	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/20/08 11:32	11	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/20/08 12:46	0.17	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/22/08 12:00	40	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802382  
**Date Collected :** 05/19/08  
**Date Received :** 05/20/08

## Inorganic Parameters

**Sample Name :** MW-2C  
**Lab Code :** J0802382-003  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.007	1	05/20/08 13:44	0.17	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/20/08 11:32	6.9	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/20/08 13:16	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/22/08 12:00	28	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802382  
**Date Collected :** 05/19/08  
**Date Received :** 05/20/08

## Inorganic Parameters

**Sample Name :** MW-23A  
**Lab Code :** J0802382-004  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.007	1	05/20/08 13:44	0.50	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/20/08 11:32	41	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/20/08 13:16	0.16	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/22/08 12:00	97	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802382  
**Date Collected :** 05/19/08  
**Date Received :** 05/20/08

## Inorganic Parameters

**Sample Name :** MW-23B  
**Lab Code :** J0802382-005  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.007	1	05/20/08 13:44	0.19	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/20/08 11:32	15	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/20/08 13:31	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/22/08 12:00	42	



# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802382  
**Date Collected :** 05/19/08  
**Date Received :** 05/20/08

## Inorganic Parameters

**Sample Name :** MW-23C  
**Lab Code :** J0802382-006  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.007	1	05/20/08 13:44	0.21	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/20/08 11:32	8.8	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/20/08 13:46	0.18	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/22/08 12:00	69	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802382  
**Date Collected :** 05/19/08  
**Date Received :** 05/20/08

## Inorganic Parameters

**Sample Name :** MW-22A  
**Lab Code :** J0802382-007  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.007	1	05/20/08 13:44	0.28	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/20/08 11:32	34	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/20/08 14:30	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/22/08 12:00	78	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802382  
**Date Collected :** 05/19/08  
**Date Received :** 05/20/08

## Inorganic Parameters

**Sample Name :** MW-22B  
**Lab Code :** J0802382-008  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.007	1	05/20/08 13:44	0.23	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/20/08 11:32	13	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/20/08 14:45	0.18	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/22/08 12:00	55	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802382  
**Date Collected :** 05/19/08  
**Date Received :** 05/20/08

## Inorganic Parameters

**Sample Name :** MW-22C  
**Lab Code :** J0802382-009  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.007	1	05/20/08 13:44	0.23	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/20/08 11:32	7.6	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/20/08 15:00	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/22/08 12:00	310	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802382  
**Date Collected :** NA  
**Date Received :** NA

## Inorganic Parameters

**Sample Name :** Method Blank  
**Lab Code :** J0802382-MB  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.007	1	05/20/08 13:44	U	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/20/08 11:32	U	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/20/08 11:32	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/22/08 12:00	U	

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoSyntec Consultants  
Project: JED Disposal Facility/FQ1512-01  
Sample Matrix: Water

Service Request: J0802382

Surrogate Recovery Summary  
Appendix I Volatile Organic Compounds by GC/MS

Extraction Method: EPA 5030B  
Analysis Method: 8260B

Units: PERCENT  
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>	<u>Sur4</u>
MW-2A	J0802382-001	103	95	96	106
MW-2B	J0802382-002	102	96	96	106
MW-2C	J0802382-003	102	94	96	105
MW-23A	J0802382-004	102	95	96	106
MW-23B	J0802382-005	102	94	95	106
MW-23C	J0802382-006	103	95	96	107
MW-22A	J0802382-007	102	95	96	106
MW-22B	J0802382-008	103	96	96	107
MW-22C	J0802382-009	103	95	96	106
Trip Blank	J0802382-010	102	94	95	106
Method Blank	JWG0801948-4	102	94	96	106
Lab Control Sample	JWG0801948-3	103	93	97	105

## Surrogate Recovery Control Limits (%)

---

Sur1 = 1,2-Dichloroethane-d4	71-122
Sur2 = 4-Bromofluorobenzene	75-120
Sur3 = Dibromofluoromethane	82-116
Sur4 = Toluene-d8	88-117

---

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802382  
 Date Extracted: 05/24/2008  
 Date Analyzed: 05/24/2008

Lab Control Spike Summary  
 Appendix I Volatile Organic Compounds by GC/MS

Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0801948

Lab Control Sample  
 JWG0801948-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Chloromethane	24.6	20.0	123	67-135
Vinyl Chloride	24.8	20.0	124	78-132
Bromomethane	22.1	20.0	111	79-130
Chloroethane	23.2	20.0	116	74-126
Trichlorofluoromethane	20.7	20.0	104	74-134
1,1-Dichloroethene	21.9	20.0	110	78-130
Acetone	108	100	108	67-133
Iodomethane (Methyl Iodide)	95.4	100	95	68-134
Carbon Disulfide	85.5	100	86	76-138
Methylene Chloride	19.7	20.0	99	72-124
trans-1,2-Dichloroethene	20.5	20.0	103	77-124
Acrylonitrile	115	100	115	77-127
1,1-Dichloroethane	20.6	20.0	103	80-128
Vinyl Acetate	94.0	100	94	61-148
cis-1,2-Dichloroethene	20.5	20.0	102	80-126
2-Butanone (MEK)	108	100	108	73-127
Bromochloromethane	20.6	20.0	103	79-129
Chloroform	21.5	20.0	107	83-124
1,1,1-Trichloroethane (TCA)	19.8	20.0	99	79-124
Carbon Tetrachloride	19.0	20.0	95	81-125
Benzene	20.0	20.0	100	79-119
1,2-Dichloroethane (EDC)	20.9	20.0	104	80-124
Trichloroethene (TCE)	19.1	20.0	96	76-124
1,2-Dichloropropane	20.8	20.0	104	79-123
Dibromomethane	20.8	20.0	104	83-123
Bromodichloromethane	20.5	20.0	102	81-123
cis-1,3-Dichloropropene	20.4	20.0	102	86-123
4-Methyl-2-pentanone (MIBK)	109	100	109	72-136
Toluene	20.3	20.0	102	86-117
trans-1,3-Dichloropropene	20.5	20.0	103	83-124
1,1,2-Trichloroethane	20.9	20.0	105	86-114
Tetrachloroethene (PCE)	18.7	20.0	94	80-121
2-Hexanone	108	100	108	71-138
Dibromochloromethane	20.4	20.0	102	82-121
1,2-Dibromoethane (EDB)	20.8	20.0	104	88-117

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Extracted:** 05/24/2008  
**Date Analyzed:** 05/24/2008

**Lab Control Spike Summary**  
**Appendix I Volatile Organic Compounds by GC/MS**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0801948

Analyte Name	Lab Control Sample JWG0801948-3 Lab Control Spike			%Rec Limits
	Result	Expected	%Rec	
Chlorobenzene	19.7	20.0	99	86-113
1,1,1,2-Tetrachloroethane	19.7	20.0	98	85-117
Ethylbenzene	20.3	20.0	101	90-118
m,p-Xylenes	38.8	40.0	97	86-121
o-Xylene	19.9	20.0	100	89-119
Styrene	19.8	20.0	99	89-122
Bromoform	19.8	20.0	99	68-129
1,1,2,2-Tetrachloroethane	21.1	20.0	105	83-120
1,2,3-Trichloropropane	20.3	20.0	101	83-123
1,4-Dichlorobenzene	19.6	20.0	98	83-113
trans-1,4-Dichloro-2-butene	20.3	20.0	101	53-143
1,2-Dichlorobenzene	18.9	20.0	94	84-115
1,2-Dibromo-3-chloropropane (DBCP)	18.4	20.0	92	62-123

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382

**Surrogate Recovery Summary**  
**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** PERCENT  
**Level:** Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
MW-2A	J0802382-001	121
MW-2B	J0802382-002	119
MW-2C	J0802382-003	117
MW-23A	J0802382-004	118
MW-23B	J0802382-005	123
MW-23C	J0802382-006	127
MW-22A	J0802382-007	126
MW-22B	J0802382-008	127
MW-22C	J0802382-009	130
Method Blank	JWG0801880-3	121
Lab Control Sample	JWG0801880-1	124
Duplicate Lab Control Sample	JWG0801880-2	126

**Surrogate Recovery Control Limits (%)**

---

Sur1 = 1,1,1,2-Tetrachloroethane 77-150

---

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802382  
**Date Extracted:** 05/20/2008  
**Date Analyzed:** 05/21/2008

**Lab Control Spike/Duplicate Lab Control Spike Summary**  
**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0801880

Analyte Name	Lab Control Sample JWG0801880-1 Lab Control Spike			Duplicate Lab Control Sample JWG0801880-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Expected	%Rec	Result	Expected	%Rec			
1,2-Dibromoethane (EDB)	0.288	0.250	115	0.296	0.250	118	70-130	3	20
1,2-Dibromo-3-chloropropane (DBCP)	0.259	0.250	104	0.268	0.250	107	70-130	3	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008  
**Date Extracted:** 05/21/2008  
**Date Analyzed:** 05/22/2008

### Matrix Spike/Matrix Spike Duplicate Summary Total Metals

**Sample Name:** MW-2A  
**Lab Code:** J0802382-001

J0802382-001S

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec		Result Notes
				MS	DMS		MS	DMS	MS	DMS	RPD	Acceptance Limits		
Iron	EPA 3010	6010B	50	2000	2000	11900	14000	13900	NC	NC	1	75 - 125		

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008  
**Date Extracted:** 05/22/2008  
**Date Analyzed:** 06/07/2008

### Matrix Spike/Matrix Spike Duplicate Summary Total Metals

**Sample Name:** MW-2B  
**Lab Code:** J0802382-002

J0802382-002S

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec	Result Notes
				MS	DMS		MS	DMS	MS	DMS	RPD	Acceptance Limits	
Antimony	EPA 3020	6020	2.0	50.0	50.0	U	47.4	46.9	95	94	1	75 - 125	
Arsenic	EPA 3020	6020	0.5	50.0	50.0	U	46.2	46.7	92	93	1	75 - 125	
Barium	EPA 3020	6020	2.0	50.0	50.0	12.4	62.7	62.0	101	99	1	75 - 125	
Beryllium	EPA 3020	6020	1.0	50.0	50.0	U	47.4	46.8	95	94	1	75 - 125	
Cadmium	EPA 3020	6020	0.5	50.0	50.0	U	46.4	46.8	93	94	1	75 - 125	
Chromium	EPA 3020	6020	2.0	50.0	50.0	1.8	51.4	51.8	99	100	1	75 - 125	
Cobalt	EPA 3020	6020	1.0	50.0	50.0	0.3	51.1	51.4	102	102	1	75 - 125	
Copper	EPA 3020	6020	2.0	50.0	50.0	0.6	51.3	51.4	101	102	<1	75 - 125	
Lead	EPA 3020	6020	1.0	50.0	50.0	0.5	51.3	50.7	102	100	1	75 - 125	
Nickel	EPA 3020	6020	2.0	50.0	50.0	0.4	51.5	51.6	102	102	<1	75 - 125	
Selenium	EPA 3020	6020	2.0	50.0	50.0	U	43.6	43.9	87	88	1	75 - 125	
Silver	EPA 3020	6020	0.5	50.0	50.0	0.1	51.8	52.2	103	104	1	75 - 125	
Thallium	EPA 3020	6020	1.0	50.0	50.0	U	51.3	50.4	103	101	2	75 - 125	
Vanadium	EPA 3020	6020	5.0	50.0	50.0	U	51.1	51.7	102	103	1	75 - 125	
Zinc	EPA 3020	6020	10.0	100	100	U	91.0	90.3	91	90	1	75 - 125	

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008  
**Date Extracted:** 05/23/2008  
**Date Analyzed:** 05/24/2008

### Matrix Spike/Matrix Spike Duplicate Summary Total Metals

**Sample Name:** MW-2C  
**Lab Code:** J0802382-003

J0802382-003S

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec Acceptance		Result Notes
				MS	DMS		MS	DMS	MS	DMS	RPD	Limits		
Mercury	METHOD	7470A	0.50	5.00	5.00	U	4.71	4.96	94	99	5	75 - 125		

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802382  
**Date Collected:** N/A  
**Date Received:** N/A  
**Date Extracted:** 05/22/2008  
**Date Analyzed:** 06/07/2008

### Laboratory Control Sample Summary Total Metals

**Sample Name:** Lab Control Sample  
**Lab Code:** LCS4-0522

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	True Value	Results	Percent Recovery	CAS Percent	Result Notes
						Recovery Acceptance Limits	
Antimony	EPA 3020A	6020	50.0	48.9	98	80 - 120	
Arsenic	EPA 3020A	6020	50.0	46.7	93	80 - 120	
Barium	EPA 3020A	6020	50.0	49.7	99	80 - 120	
Beryllium	EPA 3020A	6020	50.0	47.3	95	80 - 120	
Cadmium	EPA 3020A	6020	50.0	47.4	95	80 - 120	
Chromium	EPA 3020A	6020	50.0	50.4	101	80 - 120	
Cobalt	EPA 3020A	6020	50.0	50.2	100	80 - 120	
Copper	EPA 3020A	6020	50.0	50.1	100	80 - 120	
Iron	EPA 3010A	6010B	2000	2030	102	80 - 120	
Lead	EPA 3020A	6020	50.0	50.3	101	80 - 120	
Mercury	METHOD	7470A	5.00	4.94	99	80 - 120	
Mercury	METHOD	7470A	5.00	5.47	109	80 - 120	
Nickel	EPA 3020A	6020	50.0	50.2	100	80 - 120	
Selenium	EPA 3020A	6020	50.0	43.8	88	80 - 120	
Silver	EPA 3020A	6020	50.0	52.2	104	80 - 120	
Thallium	EPA 3020A	6020	50.0	51.0	102	80 - 120	
Vanadium	EPA 3020A	6020	50.0	50.0	100	80 - 120	
Zinc	EPA 3020A	6020	100	93.1	93	80 - 120	

## COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802382  
**Date Collected:** N/A  
**Date Received:** N/A  
**Date Extracted:** 05/22/2008  
**Date Analyzed:** 06/07/2008

Laboratory Control Sample Summary  
Dissolved Metals

**Sample Name:** Lab Control Sample  
**Lab Code:** LCS6-0522

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	True Value	Results	Percent Recovery	CAS Percent	Result Notes
						Recovery Acceptance Limits	
Antimony	EPA 3005A	6020	50.0	51.5	103	80 - 120	
Arsenic	EPA 3005A	6020	50.0	51.1	102	80 - 120	
Barium	EPA 3005A	6020	50.0	49.2	98	80 - 120	
Beryllium	EPA 3005A	6020	50.0	50.6	101	80 - 120	
Cadmium	EPA 3005A	6020	50.0	50.5	101	80 - 120	
Chromium	EPA 3005A	6020	50.0	50.2	100	80 - 120	
Cobalt	EPA 3005A	6020	50.0	50.1	100	80 - 120	
Copper	EPA 3005A	6020	50.0	49.5	99	80 - 120	
Iron	EPA 3005A	6010B	2000	2040	102	80 - 120	
Lead	EPA 3005A	6020	50.0	50.3	101	80 - 120	
Mercury	METHOD	7470A	5.00	4.94	99	80 - 120	
Nickel	EPA 3005A	6020	50.0	50.9	102	80 - 120	
Selenium	EPA 3005A	6020	50.0	52.1	104	80 - 120	
Silver	EPA 3005A	6020	50.0	52.8	106	80 - 120	
Thallium	EPA 3005A	6020	50.0	50.4	101	80 - 120	
Vanadium	EPA 3005A	6020	50.0	49.8	100	80 - 120	
Zinc	EPA 3005A	6020	100	106.0	106	80 - 120	

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802382  
**Date Collected:** 05/19/2008  
**Date Received:** 05/20/2008  
**Date Extracted:** 05/21/2008  
**Date Analyzed:** 05/22/2008

### Matrix Spike/Matrix Spike Duplicate Summary Total Metals

**Sample Name:** MW-2A  
**Lab Code:** J0802382-001

J0802382-001S

**Units:** mg/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec Acceptance	Result Notes
				MS	DMS		MS	DMS	MS	DMS	RPD	Limits	
Sodium	EPA 3010	6010B	0.5	10.0	10.0	10.9	20.8	20.7	99	98	<1	75 - 125	



# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802382  
**Date Collected:** N/A  
**Date Received:** N/A  
**Date Extracted:** 05/21/2008  
**Date Analyzed:** 05/22/2008

### Laboratory Control Sample Summary Total Metals

**Sample Name:** Lab Control Sample  
**Lab Code:** LCS5-0521

**Units:** mg/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	True Value	Results	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Sodium	EPA 3010A	6010B	10.0	9.9	99	80 - 120	

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802382  
**Date Collected:** N/A  
**Date Received:** N/A  
**Date Extracted:** 05/22/2008  
**Date Analyzed:** 05/22/2008

### Laboratory Control Sample Summary Dissolved Metals

**Sample Name:** Lab Control Sample  
**Lab Code:** LCS1-0522

**Units:** mg/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	True Value	Results	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Sodium	EPA 3005A	6010B	10.0	10.2	102	80 - 120	

## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802382  
**Date Collected :** 05/19/08  
**Date Received :** 05/20/08  
**Date Extracted :** NA  
**Date Analyzed :** 05/20/08

Duplicate Summary  
Inorganic Parameters

**Sample Name :** MW-2A  
**Lab Code :** J0802382-001DUP  
**Test Notes :**

Basis : NA

Analyte	Units	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.24	0.24	0.24	<1	
Chloride	mg/L (ppm)	300.0	0.2	40	40	40	<1	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.16	0.16	0.16	<1	i

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802382  
**Date Collected :** 05/19/08  
**Date Received :** 05/20/08  
**Date Extracted :** NA  
**Date Analyzed :** 05/20/08

### Matrix Spike Summary Inorganic Parameters

**Sample Name :** MW-2A  
**Lab Code :** J0802382-001MS  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
								Percent Recovery Acceptance Limits	
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	1.00	0.24	1.16	92	90-110	
Chloride	mg/L (ppm)	300.0	0.2	50.0	40	88.5	97	90-110	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	10	0.16	10.4	102	90-110	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802382  
**Date Collected :** NA  
**Date Received :** NA  
**Date Extracted :** NA  
**Date Analyzed :** 05/20-22/08

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** J0802382-LCS  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	True Value	Result	Percent Recovery	CAS	Result Notes
						Percent Recovery Acceptance Limits	
Ammonia as Nitrogen	mg/L (ppm)	350.1	1.00	1.05	105	90-110	
Chloride	mg/L (ppm)	300.0	50.0	50.3	101	90-110	
Nitrate as Nitrogen	mg/L (ppm)	300.0	10	9.90	99	90-110	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	300	300	100	85-115	

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

Client: Geosyntec Service Request # J202382  
 Project: JED DISPOSAL Facility  
 Cooler received on 5/20/08 and opened on 5/20/08 by SN  
 COURIER: CAS UPS FEDEX DHL CLIENT Tracking # J2081508952

- |    |  |            |        |     |
|----|--|------------|--------|-----|
| 1  | Were custody seals on outside of cooler?   | <u>Yes</u> | No     | N/A |
| 2  | Were seals intact, signed and dated?   | <u>Yes</u> | No     | N/A |
| 3  | Were custody papers properly filled out?   | <u>Yes</u> | No     | N/A |
| 4  | Temperature of cooler(s) upon receipt (Should be 4 +/- 2 degrees C)  | <u>1.2</u> |        |     |
| 5  | Correct Temperature?   | <u>Yes</u> | No     | N/A |
| 6  | Were Ice or Ice Packs present  | <u>Yes</u> | No     | N/A |
| 7  | Did all bottles arrive in good condition (unbroken, etc....)?  | <u>Yes</u> | No     | N/A |
| 8  | Were all bottle labels complete (sample ID, preservation, etc....)?  | <u>Yes</u> | No     | N/A |
| 9  | Did all bottle labels and tags agree with custody papers?  | <u>Yes</u> | No     | N/A |
| 10 | Were the correct bottles used for the tests indicated?   | <u>Yes</u> | No     | N/A |
| 11 | Were all of the preserved bottles received with the appropriate preservative?  | <u>Yes</u> | No     | N/A |
|    | <u>HNO3 pH&lt;2</u> <u>H2SO4 pH&lt;2</u> ZnAc2/NaOH pH>9 <u>NaOH pH&gt;12</u> HCl pH<2<br>Preservative additions noted below |            |        |     |
| 12 | Were all samples received within analysis holding times?   | <u>Yes</u> | No     | N/A |
| 13 | Were VOA vials checked for absence of air bubbles? If present, note below  | <u>Yes</u> | No     | N/A |
| 14 | Where did the bottles originate?   | <u>CAS</u> | Client |     |

Sample ID	Reagent	Manuf. Lot # or CAS Chem ID	ml added	Initials

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted:

Date: 7/9

SR #: J 2802352

Date:

Initials:

Note that pH is checked and meets the required pH criterion listed in the column heading unless otherwise noted on cooler receipt form.

Bottle Code																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Container	40mL	40mL	40mL	40mL	125mL	125mL	125mL	125mL	125mL	250mL	250mL	250mL	250mL	250mL	250mL	500mL	500mL	500mL	1L	1L	1L	1L	1L	202	402	802	1602	5g	100mL	Misc	
Pres.												ZnAcetate	NaOH																		
Req pH	N/A	<2	N/A	<2	N/A	<2	<2	<2	N/A	<2	<2	NaOH	>12	N/A	<2	N/A	<2	HNO3	<2	N/A	<2	HCl	<2	G	G	G	G	ENC	P		
Sample #																															
-001																															
-002																															
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-040																															



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011 PAGE 1 OF 1

SR #

50802382

CAS Contact

Project Name <b>JED Disposal Facility</b>		Project Number <b>FQ 1512-01</b>		
Project Manager <b>Kirk Willis</b>		Email Address <b>Kwillis@geosyntec.com</b>		
Company/Address <b>Geosyntec</b>				
<b>14055 Riveredge Dr. STE300</b>				
<b>Tampa, FL 33637</b>				
Phone # <b>813-558-0990</b>	FAX# <b>813-558-9726</b>			
Sampler's Signature <i>Joe Terry</i>		Sampler's Printed Name <b>Joe Terry, Ter W514</b>		
CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	TIME	MATRIX
MW-2A		5-19-08	0910	GW
MW-2B			0905	
MW-2C			0850	
MW-23A			1105	
MW-23B			1100	
MW-23C			1120	
MW-23A			1400	
MW-23B			1420	
MW-22C			1350	
Tr.p Blank				W
NUMBER OF CONTAINERS				
PRESERVATIVE				
103202				
8260				
Boil				
NHS				
Metals				
TDS, Cl, NO3				
Dissolved Metals				
PRESERVATIVE KEY				
0. NONE				
1. HCL				
2. HNO3				
3. H2SO4				
4. NaOH				
5. Zn. Acetate				
6. MeOH				
7. NaHSO4				
8. Other				
REMARKS/ ALTERNATE DESCRIPTION				
SPECIAL INSTRUCTIONS/COMMENTS				
See QAPP				
TURNAROUND REQUIREMENTS				
RUSH (SURCHARGES APPLY)				
STANDARD				
REQUESTED FAX DATE				
REQUESTED REPORT DATE				
REPORT REQUIREMENTS				
I. Results Only				
II. Results + QC Summaries (LCS, DUP, MS/MSD as required)				
III. Results + QC and Calibration Summaries				
IV. Data Validation Report with Raw Data				
V. Specialized Forms / Custom Report				
Edata Yes No				
INVOICE INFORMATION				
PO#				
BILL TO:				
RECEIVED BY				
Signature				
Printed Name				
Firm				
Date/Time				
RECEIVED BY				
Signature				
Printed Name				
Firm				
Date/Time				
CUSTODY SEALS: Y N				
RELINQUISHED BY				
Signature				
Printed Name				
Firm				
Date/Time				
RECEIVED BY				
Signature				
Printed Name				
Firm				
Date/Time				
SAMPLE RECEIPT: CONDITION/COOLER TEMP:				
RELINQUISHED BY				
Signature				
Printed Name				
Firm				
Date/Time				
RELINQUISHED BY				
Signature				
Printed Name				
Firm				
Date/Time				



June 09, 2008

Service Request No: J0802409

Kirk Wills  
GeoSyntec Consultants  
14055 Riveredge Drive  
Suite 300  
Tampa, FL 33637

**RE: JED Disposal Facility/FQ1512-01**

Dear Kirk:

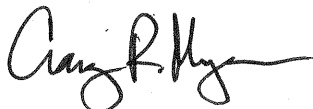
Enclosed are the results of the sample(s) submitted to our laboratory on May 21, 2008. For your reference, these analyses have been assigned our service request number **J0802409**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP 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. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please call if you have any questions. My extension is 4409. You may also contact me via email at [CMyers@caslab.com](mailto:CMyers@caslab.com).

Respectfully submitted,

**Columbia Analytical Services, Inc.**



Craig Myers  
Project Chemist

Page 1 of 91

*Laboratory Manager: Greg Jordan  
Quality Assurance Officer: Kathy Brungard*

*CAS Jacksonville is NELAC-accredited by the State of Florida, #E82502 valid through 6/30/08. Other state accreditations include: Arkansas, #88-0600 valid through 1/12/06; Georgia, #958 valid through 6/30/08; Louisiana, #02086 valid through 6/30/08; Texas, #T104704197-06-TX valid through 5/31/08; North Carolina, #527 valid through 12/31/07; South Carolina, #96021001 valid through 6/30/08.*

## COLUMBIA ANALYTICAL SERVICES, INC.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility  
**Sample Matrix:** Water

**Service Request No.:** J0802409  
**Date Received:** 5/21/08

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

#### Sample Receipt

Nine water samples and one trip blank were received for analysis at Columbia Analytical Services on 5/21/08. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at  $4\pm 2^{\circ}\text{C}$  upon receipt at the lab except for aqueous samples designated for metals analyses, which were stored at room temperature.

#### Volatile Organic Compounds by GC-MS

The samples were analyzed for Volatile Organics using EPA Method 8260. The following observations were made regarding this delivery group.

#### Matrix Spike Recovery Exceptions

The matrix spike recoveries of several analytes for sample MW-21C were outside the control criterion. Recoveries in the Laboratory Control Sample (LCS) were acceptable, which indicates the analytical batch was in control. No further corrective action was appropriate.

#### EDB and DBCP by GC-ECD

The samples were analyzed for EDB and DBCP using EPA Method 8011. No problems were observed.

#### Metals by ICP-MS/ICP-OES/CVAA

The samples were analyzed for Total Metals using EPA Methods 6020/6010B/7470A. The following observations were made regarding this delivery group.

#### Matrix Spike Recovery Exceptions

The control criteria for matrix spike recovery of Total Iron for sample SW-19A not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

#### Batch QC Notes and Discussion

Quality control samples for some parameters (i.e., Dup/Spike or MS/DMS samples) were performed using samples

Approved by  Date 6/9/08

from another sample delivery group (SDG). The frequency requirement for quality control sample analysis was consistent with the project's requirements. Matrix specific quality control results have no bearing on sample data from a different matrix or location. Therefore, control of the batch has been evaluated using the method blank and the laboratory control sample

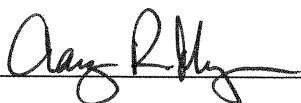
#### **General Chemistry Parameters**

The samples were analyzed for Inorganic Parameters using various EPA Methods. No problems were observed.

#### **Batch QC Notes and Discussion**

Quality control samples for some parameters (i.e., Dup/Spike or MS/DMS samples) were performed using samples from another sample delivery group (SDG). The frequency requirement for quality control sample analysis was consistent with the project's requirements. Matrix specific quality control results have no bearing on sample data from a different matrix or location. Therefore, control of the batch has been evaluated using the method blank and the laboratory control sample.

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



Date \_\_\_\_\_

6/9/08

## Florida DEP Data Qualifiers

B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
H	Value based on field kit determination; results may not be accurate.
i	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J	Estimated value (one of the following reasons is discussed in the project case narrative). <ol style="list-style-type: none"><li>1. The result may be inaccurate because the surrogate recovery limits have been exceeded.</li><li>2. No known quality control criteria exists for the component.</li><li>3. The reported value failed to meet the established quality control criteria for either precision or accuracy.</li><li>4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).</li><li>5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).</li></ol>
K	Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
L	Off scale high. The analyte is above the upper limit of the linear calibration range.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
N	Presumptive evidence of the analyte. Confirmation was not performed.
Q	Sample held beyond the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	The laboratory analysis was from an improperly preserved sample.
Z	Too many colonies were present (TNTC). The numeric value represents the filtration volume.

## 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.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01

**Service Request:** J0802409

**SAMPLE CROSS-REFERENCE**

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J0802409-001	MW-19A	05/20/08	14:00
J0802409-002	MW-19B	05/20/08	14:00
J0802409-003	MW-19C	05/20/08	14:25
J0802409-004	MW-20A	05/20/08	10:42
J0802409-005	MW-20B	05/20/08	10:00
J0802409-006	MW-20C	05/20/08	11:20
J0802409-007	MW-21A	05/20/08	09:00
J0802409-008	MW-21B	05/20/08	09:25
J0802409-009	MW-21C	05/20/08	09:15
J0802409-010	Trip Blank	05/20/08	00:00

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802409  
 Date Collected: 05/20/2008  
 Date Received: 05/21/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-19A  
 Lab Code: J0802409-001  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
<b>Acetone</b>	<b>6.0</b>	<b>I</b>	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
<b>Toluene</b>	<b>0.65</b>	<b>I</b>	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802409  
 Date Collected: 05/20/2008  
 Date Received: 05/21/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-19A  
 Lab Code: J0802409-001  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	104	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	97	75-120	05/24/08	Acceptable
Dibromofluoromethane	96	82-116	05/24/08	Acceptable
Toluene-d8	106	88-117	05/24/08	Acceptable

Comments:



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802409  
 Date Collected: 05/20/2008  
 Date Received: 05/21/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-19B  
 Lab Code: J0802409-002  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
Acetone	ND	U	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
<b>Toluene</b>	<b>1.7</b>		1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802409  
 Date Collected: 05/20/2008  
 Date Received: 05/21/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-19B  
 Lab Code: J0802409-002  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	0.39	I	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	102	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	94	75-120	05/24/08	Acceptable
Dibromofluoromethane	95	82-116	05/24/08	Acceptable
Toluene-d8	106	88-117	05/24/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802409  
 Date Collected: 05/20/2008  
 Date Received: 05/21/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-19C  
 Lab Code: J0802409-003  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
Acetone	ND	U	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
Toluene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802409  
**Date Collected:** 05/20/2008  
**Date Received:** 05/21/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-19C  
**Lab Code:** J0802409-003  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	103	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	95	75-120	05/24/08	Acceptable
Dibromofluoromethane	94	82-116	05/24/08	Acceptable
Toluene-d8	106	88-117	05/24/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802409  
 Date Collected: 05/20/2008  
 Date Received: 05/21/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-20A  
 Lab Code: J0802409-004  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
Acetone	ND	U	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
Toluene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802409  
**Date Collected:** 05/20/2008  
**Date Received:** 05/21/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-20A  
**Lab Code:** J0802409-004  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	103	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	96	75-120	05/24/08	Acceptable
Dibromofluoromethane	94	82-116	05/24/08	Acceptable
Toluene-d8	106	88-117	05/24/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802409  
**Date Collected:** 05/20/2008  
**Date Received:** 05/21/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-20B  
**Lab Code:** J0802409-005  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
Acetone	ND	U	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
Toluene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802409  
 Date Collected: 05/20/2008  
 Date Received: 05/21/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-20B  
 Lab Code: J0802409-005  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	102	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	96	75-120	05/24/08	Acceptable
Dibromofluoromethane	95	82-116	05/24/08	Acceptable
Toluene-d8	106	88-117	05/24/08	Acceptable

Comments:



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802409  
 Date Collected: 05/20/2008  
 Date Received: 05/21/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-20C  
 Lab Code: J0802409-006  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
Acetone	ND	U	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
Toluene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802409  
**Date Collected:** 05/20/2008  
**Date Received:** 05/21/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-20C  
**Lab Code:** J0802409-006  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	104	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	95	75-120	05/24/08	Acceptable
Dibromofluoromethane	95	82-116	05/24/08	Acceptable
Toluene-d8	106	88-117	05/24/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802409  
 Date Collected: 05/20/2008  
 Date Received: 05/21/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-21A  
 Lab Code: J0802409-007  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
Acetone	ND	U	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
Toluene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802409  
 Date Collected: 05/20/2008  
 Date Received: 05/21/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-21A  
 Lab Code: J0802409-007  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	103	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	95	75-120	05/24/08	Acceptable
Dibromofluoromethane	96	82-116	05/24/08	Acceptable
Toluene-d8	107	88-117	05/24/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802409  
 Date Collected: 05/20/2008  
 Date Received: 05/21/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-21B  
 Lab Code: J0802409-008  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
Acetone	ND	U	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
<b>Toluene</b>	<b>0.68</b>	<b>I</b>	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802409  
 Date Collected: 05/20/2008  
 Date Received: 05/21/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-21B  
 Lab Code: J0802409-008  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	103	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	95	75-120	05/24/08	Acceptable
Dibromofluoromethane	95	82-116	05/24/08	Acceptable
Toluene-d8	106	88-117	05/24/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802409  
 Date Collected: 05/20/2008  
 Date Received: 05/21/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-21C  
 Lab Code: J0802409-009  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
Acetone	ND	U	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
Toluene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802409  
 Date Collected: 05/20/2008  
 Date Received: 05/21/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-21C  
 Lab Code: J0802409-009  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	102	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	95	75-120	05/24/08	Acceptable
Dibromofluoromethane	95	82-116	05/24/08	Acceptable
Toluene-d8	105	88-117	05/24/08	Acceptable

Comments:



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802409  
 Date Collected: 05/20/2008  
 Date Received: 05/21/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Trip Blank  
 Lab Code: J0802409-010  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
Acetone	ND	U	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
Toluene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802409  
 Date Collected: 05/20/2008  
 Date Received: 05/21/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Trip Blank  
 Lab Code: J0802409-010  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	0.83	I	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	0.89	I	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	103	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	94	75-120	05/24/08	Acceptable
Dibromofluoromethane	95	82-116	05/24/08	Acceptable
Toluene-d8	105	88-117	05/24/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802409  
 Date Collected: NA  
 Date Received: NA

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Method Blank  
 Lab Code: JWG0801948-4  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Vinyl Chloride	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Bromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chloroethane	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/24/08	05/24/08	JWG0801948	
Acetone	ND	U	50	1.7	1	05/24/08	05/24/08	JWG0801948	
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/24/08	05/24/08	JWG0801948	
Carbon Disulfide	ND	U	10	1.0	1	05/24/08	05/24/08	JWG0801948	
Methylene Chloride	ND	U	5.0	0.51	1	05/24/08	05/24/08	JWG0801948	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Acrylonitrile	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
Vinyl Acetate	ND	U	10	0.73	1	05/24/08	05/24/08	JWG0801948	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
2-Butanone (MEK)	ND	U	10	0.77	1	05/24/08	05/24/08	JWG0801948	
Bromochloromethane	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
Chloroform	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/24/08	05/24/08	JWG0801948	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/24/08	05/24/08	JWG0801948	
Benzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/24/08	05/24/08	JWG0801948	
Dibromomethane	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Bromodichloromethane	ND	U	1.0	0.15	1	05/24/08	05/24/08	JWG0801948	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/24/08	05/24/08	JWG0801948	
Toluene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/24/08	05/24/08	JWG0801948	
2-Hexanone	ND	U	25	0.54	1	05/24/08	05/24/08	JWG0801948	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802409  
 Date Collected: NA  
 Date Received: NA

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Method Blank  
 Lab Code: JWG0801948-4  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
Chlorobenzene	ND	U	1.0	0.19	1	05/24/08	05/24/08	JWG0801948	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Ethylbenzene	ND	U	1.0	0.20	1	05/24/08	05/24/08	JWG0801948	
m,p-Xylenes	ND	U	2.0	0.47	1	05/24/08	05/24/08	JWG0801948	
o-Xylene	ND	U	1.0	0.25	1	05/24/08	05/24/08	JWG0801948	
Styrene	ND	U	1.0	0.22	1	05/24/08	05/24/08	JWG0801948	
Bromoform	ND	U	1.0	0.24	1	05/24/08	05/24/08	JWG0801948	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/24/08	05/24/08	JWG0801948	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/24/08	05/24/08	JWG0801948	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/24/08	05/24/08	JWG0801948	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/24/08	05/24/08	JWG0801948	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/24/08	05/24/08	JWG0801948	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/24/08	05/24/08	JWG0801948	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	102	71-122	05/24/08	Acceptable
4-Bromofluorobenzene	94	75-120	05/24/08	Acceptable
Dibromofluoromethane	96	82-116	05/24/08	Acceptable
Toluene-d8	106	88-117	05/24/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802409  
**Date Collected:** 05/20/2008  
**Date Received:** 05/21/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-19A  
**Lab Code:** J0802409-001  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/28/08	JWG0801943	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/28/08	JWG0801943	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	124	77-150	05/28/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802409  
**Date Collected:** 05/20/2008  
**Date Received:** 05/21/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-19B  
**Lab Code:** J0802409-002  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/28/08	JWG0801943	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/28/08	JWG0801943	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	125	77-150	05/28/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802409  
**Date Collected:** 05/20/2008  
**Date Received:** 05/21/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-19C  
**Lab Code:** J0802409-003  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/28/08	JWG0801943	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/28/08	JWG0801943	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	120	77-150	05/28/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802409  
**Date Collected:** 05/20/2008  
**Date Received:** 05/21/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-20A  
**Lab Code:** J0802409-004  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/28/08	JWG0801943	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/28/08	JWG0801943	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	124	77-150	05/28/08	Acceptable

Comments: \_\_\_\_\_



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802409  
**Date Collected:** 05/20/2008  
**Date Received:** 05/21/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-20B  
**Lab Code:** J0802409-005  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/28/08	JWG0801943	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/28/08	JWG0801943	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	122	77-150	05/28/08	Acceptable

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

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802409  
**Date Collected:** 05/20/2008  
**Date Received:** 05/21/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-20C  
**Lab Code:** J0802409-006  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/29/08	JWG0801943	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/29/08	JWG0801943	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	118	77-150	05/29/08	Acceptable

Comments: \_\_\_\_\_

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802409  
**Date Collected:** 05/20/2008  
**Date Received:** 05/21/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-21A  
**Lab Code:** J0802409-007  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/29/08	JWG0801943	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/29/08	JWG0801943	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	119	77-150	05/29/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802409  
**Date Collected:** 05/20/2008  
**Date Received:** 05/21/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-21B  
**Lab Code:** J0802409-008  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/29/08	JWG0801943	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/29/08	JWG0801943	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	120	77-150	05/29/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802409  
**Date Collected:** 05/20/2008  
**Date Received:** 05/21/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-21C  
**Lab Code:** J0802409-009  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/29/08	JWG0801943	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/29/08	JWG0801943	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	113	77-150	05/29/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802409  
**Date Collected:** NA  
**Date Received:** NA

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** Method Blank **Units:** ug/L  
**Lab Code:** JWG0801943-3 **Basis:** NA  
**Extraction Method:** METHOD **Level:** Low  
**Analysis Method:** 8011

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/28/08	JWG0801943	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/28/08	JWG0801943	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	122	77-150	05/28/08	Acceptable

Comments: \_\_\_\_\_

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 5/20/2008  
**Date Received:** 5/21/2008

### Total Metals

**Sample Name:** MW-19A  
**Lab Code:** J0802409-001

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	7.4	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	46	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	1.3	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.26	i
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	45	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	2.3	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	1.2	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/22/2008	05/23/2008	13700	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	11	
Mercury	METHOD	7470A	0.50	0.08	1.0	06/05/2008	06/05/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	9.9	
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	4.7	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	40	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/22/2008	06/07/2008	5.2	i

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 5/20/2008  
**Date Received:** 5/21/2008

### Total Metals

**Sample Name:** MW-19B  
**Lab Code:** J0802409-002

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.30	i
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	69	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	5.3	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	0.25	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	2.8	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/22/2008	05/23/2008	957	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	6.1	
Mercury	METHOD	7470A	0.50	0.08	1.0	06/05/2008	06/05/2008	0.11	i
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	0.69	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	1.1	i
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	6.1	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/22/2008	06/07/2008	U	



# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 5/20/2008  
**Date Received:** 5/21/2008

### Total Metals

**Sample Name:** MW-19C  
**Lab Code:** J0802409-003

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	85	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	0.61	i
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.24	i
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	7.0	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	0.21	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	0.70	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/22/2008	05/23/2008	1640	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	1.4	
Mercury	METHOD	7470A	0.50	0.08	1.0	06/05/2008	06/05/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	0.80	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	8.1	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/22/2008	06/07/2008	U	

## COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 5/20/2008  
**Date Received:** 5/21/2008

## Total Metals

**Sample Name:** MW-20A  
**Lab Code:** J0802409-004

**Units:** ug/L

**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	0.53	i
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.37	i
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	18	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.25	i
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	2.0	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	0.22	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	0.31	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/22/2008	05/23/2008	164	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	0.92	i
Mercury	METHOD	7470A	0.50	0.08	1.0	06/05/2008	06/05/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	1.1	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	0.82	i
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	4.9	i
Zinc	EPA 3020A	6020	10	4.0	1.0	05/22/2008	06/07/2008	4.8	i

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 5/20/2008  
**Date Received:** 5/21/2008

### Total Metals

**Sample Name:** MW-20B  
**Lab Code:** J0802409-005

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.74	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	75	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.27	i
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	6.4	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	0.23	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	1.3	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/22/2008	05/23/2008	2250	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	4.3	
Mercury	METHOD	7470A	0.50	0.08	1.0	06/05/2008	06/05/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	1.3	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	2.2	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	7.3	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/22/2008	06/07/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 5/20/2008  
**Date Received:** 5/21/2008

### Total Metals

**Sample Name:** MW-20C  
**Lab Code:** J0802409-006

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	1.0	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	155	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	0.58	i
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.54	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	13	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	0.38	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	1.0	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/22/2008	05/23/2008	3380	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	3.1	
Mercury	METHOD	7470A	0.50	0.08	1.0	06/05/2008	06/05/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	1.9	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	0.80	i
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	11	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/22/2008	06/07/2008	7.0	i

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 5/20/2008  
**Date Received:** 5/21/2008

### Total Metals

**Sample Name:** MW-21A  
**Lab Code:** J0802409-007

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	0.56	i
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	23	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.37	i
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	1.2	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/22/2008	05/23/2008	195	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	0.21	i
Mercury	METHOD	7470A	0.50	0.08	1.0	06/05/2008	06/05/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	0.42	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/22/2008	06/07/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 5/20/2008  
**Date Received:** 5/21/2008

### Total Metals

**Sample Name:** MW-21B  
**Lab Code:** J0802409-008

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.56	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	35	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	4.7	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	1.8	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/22/2008	05/23/2008	2180	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	2.6	
Mercury	METHOD	7470A	0.50	0.08	1.0	06/05/2008	06/05/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	0.96	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	1.7	i
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	5.1	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/22/2008	06/07/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 5/20/2008  
**Date Received:** 5/21/2008

### Total Metals

**Sample Name:** MW-21C  
**Lab Code:** J0802409-009

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.74	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	79	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	0.41	i
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.21	i
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	6.5	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	0.59	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/22/2008	05/23/2008	2740	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	1.3	
Mercury	METHOD	7470A	0.50	0.08	1.0	06/05/2008	06/05/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	0.99	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	6.0	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/22/2008	06/07/2008	4.8	i

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** N/A  
**Date Received:** N/A

### Total Metals

**Sample Name:** Method Blank  
**Lab Code:** MB4-0522

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.4	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Barium	EPA 3020A	6020	2.0	0.6	1.0	05/22/2008	06/07/2008	U	
Beryllium	EPA 3020A	6020	1.0	0.2	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Chromium	EPA 3020A	6020	2.0	0.8	1.0	05/22/2008	06/07/2008	U	
Cobalt	EPA 3020A	6020	1.0	0.2	1.0	05/22/2008	06/07/2008	U	
Copper	EPA 3020A	6020	2.0	0.3	1.0	05/22/2008	06/07/2008	U	
Iron	EPA 3010A	6010B	50.0	4.0	1.0	05/22/2008	05/23/2008	U	
Lead	EPA 3020A	6020	1.0	0.2	1.0	05/22/2008	06/07/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	06/05/2008	06/05/2008	U	
Nickel	EPA 3020A	6020	2.0	0.3	1.0	05/22/2008	06/07/2008	U	
Selenium	EPA 3020A	6020	2.0	0.7	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3020A	6020	0.50	0.08	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3020A	6020	1.0	0.2	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	U	
Zinc	EPA 3020A	6020	10.0	4.0	1.0	05/22/2008	06/07/2008	U	



# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 5/20/2008  
**Date Received:** 5/21/2008

### Dissolved Metals

**Sample Name:** MW-19A  
**Lab Code:** J0802409-001

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3005A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3005A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	6.5	
Barium	EPA 3005A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	36	
Beryllium	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	0.92	i
Cadmium	EPA 3005A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Chromium	EPA 3005A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	30	
Cobalt	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	1.4	
Copper	EPA 3005A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	0.55	i
Iron	EPA 3005A	6010B	50	4.0	1.0	05/22/2008	05/22/2008	10200	
Lead	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	5.8	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/30/2008	05/30/2008	0.16	i
Nickel	EPA 3005A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	6.0	
Selenium	EPA 3005A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	3.7	
Silver	EPA 3005A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3005A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	29	
Zinc	EPA 3005A	6020	10	4.0	1.0	05/22/2008	06/07/2008	4.9	i

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 5/20/2008  
**Date Received:** 5/21/2008

### Dissolved Metals

**Sample Name:** MW-19B  
**Lab Code:** J0802409-002

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3005A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3005A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.37	i
Barium	EPA 3005A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	18	
Beryllium	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3005A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Chromium	EPA 3005A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	0.82	i
Cobalt	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Copper	EPA 3005A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	0.31	i
Iron	EPA 3005A	6010B	50	4.0	1.0	05/22/2008	05/22/2008	666	
Lead	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/30/2008	05/30/2008	U	
Nickel	EPA 3005A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	U	
Selenium	EPA 3005A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3005A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3005A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	U	
Zinc	EPA 3005A	6020	10	4.0	1.0	05/22/2008	06/07/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 5/20/2008  
**Date Received:** 5/21/2008

### Dissolved Metals

**Sample Name:** MW-19C  
**Lab Code:** J0802409-003

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3005A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3005A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Barium	EPA 3005A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	30	
Beryllium	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3005A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Chromium	EPA 3005A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	1.0	i
Cobalt	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Copper	EPA 3005A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	0.35	i
Iron	EPA 3005A	6010B	50	4.0	1.0	05/22/2008	05/22/2008	954	
Lead	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/30/2008	05/30/2008	U	
Nickel	EPA 3005A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	U	
Selenium	EPA 3005A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3005A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3005A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	U	
Zinc	EPA 3005A	6020	10	4.0	1.0	05/22/2008	06/07/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 5/20/2008  
**Date Received:** 5/21/2008

### Dissolved Metals

**Sample Name:** MW-20B  
**Lab Code:** J0802409-005

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3005A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3005A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.49	i
Barium	EPA 3005A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	12	
Beryllium	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3005A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Chromium	EPA 3005A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	0.81	i
Cobalt	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Copper	EPA 3005A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	U	
Iron	EPA 3005A	6010B	50	4.0	1.0	05/22/2008	05/22/2008	1900	
Lead	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/30/2008	05/30/2008	U	
Nickel	EPA 3005A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	0.31	i
Selenium	EPA 3005A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3005A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3005A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	U	
Zinc	EPA 3005A	6020	10	4.0	1.0	05/22/2008	06/07/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 5/20/2008  
**Date Received:** 5/21/2008

### Dissolved Metals

**Sample Name:** MW-20C  
**Lab Code:** J0802409-006

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3005A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3005A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.28	i
Barium	EPA 3005A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	34	
Beryllium	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3005A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Chromium	EPA 3005A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	1.3	i
Cobalt	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Copper	EPA 3005A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	U	
Iron	EPA 3005A	6010B	50	4.0	1.0	05/22/2008	05/22/2008	1460	
Lead	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/30/2008	05/30/2008	U	
Nickel	EPA 3005A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	U	
Selenium	EPA 3005A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3005A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3005A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	U	
Zinc	EPA 3005A	6020	10	4.0	1.0	05/22/2008	06/07/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 5/20/2008  
**Date Received:** 5/21/2008

### Dissolved Metals

**Sample Name:** MW-21B  
**Lab Code:** J0802409-008

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3005A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3005A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.36	i
Barium	EPA 3005A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	9.7	
Beryllium	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3005A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Chromium	EPA 3005A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	1.1	i
Cobalt	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Copper	EPA 3005A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	U	
Iron	EPA 3005A	6010B	50	4.0	1.0	05/22/2008	05/22/2008	1950	
Lead	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/30/2008	05/30/2008	U	
Nickel	EPA 3005A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	0.32	i
Selenium	EPA 3005A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3005A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3005A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	U	
Zinc	EPA 3005A	6020	10	4.0	1.0	05/22/2008	06/07/2008	4.4	i

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 5/20/2008  
**Date Received:** 5/21/2008

### Dissolved Metals

**Sample Name:** MW-21C  
**Lab Code:** J0802409-009

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3005A	6020	2.0	0.40	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3005A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	0.25	i
Barium	EPA 3005A	6020	2.0	0.60	1.0	05/22/2008	06/07/2008	27	
Beryllium	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3005A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Chromium	EPA 3005A	6020	2.0	0.80	1.0	05/22/2008	06/07/2008	1.2	i
Cobalt	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Copper	EPA 3005A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	U	
Iron	EPA 3005A	6010B	50	4.0	1.0	05/22/2008	05/22/2008	1520	
Lead	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/30/2008	05/30/2008	U	
Nickel	EPA 3005A	6020	2.0	0.30	1.0	05/22/2008	06/07/2008	U	
Selenium	EPA 3005A	6020	2.0	0.70	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3005A	6020	0.50	0.080	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3005A	6020	1.0	0.20	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3005A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	U	
Zinc	EPA 3005A	6020	10	4.0	1.0	05/22/2008	06/07/2008	5.0	i

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** N/A  
**Date Received:** N/A

### Dissolved Metals

**Sample Name:** Method Blank  
**Lab Code:** MB6-0522

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3005A	6020	2.0	0.4	1.0	05/22/2008	06/07/2008	U	
Arsenic	EPA 3005A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Barium	EPA 3005A	6020	2.0	0.6	1.0	05/22/2008	06/07/2008	U	
Beryllium	EPA 3005A	6020	1.0	0.2	1.0	05/22/2008	06/07/2008	U	
Cadmium	EPA 3005A	6020	0.50	0.20	1.0	05/22/2008	06/07/2008	U	
Chromium	EPA 3005A	6020	2.0	0.8	1.0	05/22/2008	06/07/2008	U	
Cobalt	EPA 3005A	6020	1.0	0.2	1.0	05/22/2008	06/07/2008	U	
Copper	EPA 3005A	6020	2.0	0.3	1.0	05/22/2008	06/07/2008	U	
Iron	EPA 3005A	6010B	50.0	4.0	1.0	05/22/2008	05/22/2008	U	
Lead	EPA 3005A	6020	1.0	0.2	1.0	05/22/2008	06/07/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/30/2008	05/30/2008	U	
Nickel	EPA 3005A	6020	2.0	0.3	1.0	05/22/2008	06/07/2008	U	
Selenium	EPA 3005A	6020	2.0	0.7	1.0	05/22/2008	06/07/2008	U	
Silver	EPA 3005A	6020	0.5	0.1	1.0	05/22/2008	06/07/2008	U	
Thallium	EPA 3005A	6020	1.0	0.2	1.0	05/22/2008	06/07/2008	U	
Vanadium	EPA 3005A	6020	5.0	2.0	1.0	05/22/2008	06/07/2008	U	
Zinc	EPA 3005A	6020	10.0	4.0	1.0	05/22/2008	06/07/2008	U	



# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 05/20/2008  
**Date Received:** 05/21/2008

### Total Metals Sodium

**Prep Method:** EPA 3010A  
**Analysis Method:** 6010B  
**Test Notes:**

**Units:** mg/L  
**Basis:** N/A

Sample Name:	Lab Code:	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MW-19A	J0802409-001	0.50	0.02	1.0	05/22/2008	05/23/2008	18	
MW-19B	J0802409-002	0.50	0.02	1.0	05/22/2008	05/23/2008	16	
MW-19C	J0802409-003	0.50	0.02	1.0	05/22/2008	05/23/2008	9.8	
MW-20A	J0802409-004	0.50	0.02	1.0	05/22/2008	05/23/2008	19	
MW-20B	J0802409-005	0.50	0.02	1.0	05/22/2008	05/23/2008	16	
MW-20C	J0802409-006	0.50	0.02	1.0	05/22/2008	05/23/2008	9.4	
MW-21A	J0802409-007	0.50	0.02	1.0	05/22/2008	05/23/2008	18	
MW-21B	J0802409-008	0.50	0.02	1.0	05/22/2008	05/23/2008	15	
MW-21C	J0802409-009	0.50	0.02	1.0	05/22/2008	05/23/2008	9.6	
Method Blank	MB2-0522	0.50	0.02	1.0	05/22/2008	05/23/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 05/20/2008  
**Date Received:** 05/21/2008

### Dissolved Metals Sodium

**Prep Method:** EPA 3005A  
**Analysis Method:** 6010B  
**Test Notes:**

**Units:** mg/L  
**Basis:** N/A

Sample Name:	Lab Code:	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MW-19A	J0802409-001	0.50	0.02	1.0	05/22/2008	05/22/2008	18	
MW-19B	J0802409-002	0.50	0.02	1.0	05/22/2008	05/22/2008	17	
MW-19C	J0802409-003	0.50	0.02	1.0	05/22/2008	05/22/2008	9.8	
MW-20B	J0802409-005	0.50	0.02	1.0	05/22/2008	05/22/2008	17	
MW-20C	J0802409-006	0.50	0.02	1.0	05/22/2008	05/22/2008	9.2	
MW-21B	J0802409-008	0.50	0.02	1.0	05/22/2008	05/22/2008	15	
MW-21C	J0802409-009	0.50	0.02	1.0	05/22/2008	05/22/2008	9.2	
Method Blank	MB1-0522	0.50	0.02	1.0	05/22/2008	05/22/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802409  
**Date Collected :** 05/20/08  
**Date Received :** 05/21/08

## Inorganic Parameters

**Sample Name :** MW-19A  
**Lab Code :** J0802409-001  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/22/08 09:59	9.2	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/21/08 12:12	19	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/21/08 13:57	0.19	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/23/08 08:45	870	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802409  
**Date Collected :** 05/20/08  
**Date Received :** 05/21/08

## Inorganic Parameters

**Sample Name :** MW-19B  
**Lab Code :** J0802409-002  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/22/08 09:59	0.21	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/21/08 12:12	31	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/21/08 13:12	0.17	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1.3	05/23/08 08:45	110	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802409  
**Date Collected :** 05/20/08  
**Date Received :** 05/21/08

## Inorganic Parameters

**Sample Name :** MW-19C  
**Lab Code :** J0802409-003  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/22/08 09:59	0.26	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/21/08 12:12	19	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/21/08 14:12	0.18	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/23/08 08:45	94	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802409  
**Date Collected :** 05/20/08  
**Date Received :** 05/21/08

## Inorganic Parameters

**Sample Name :** MW-20A  
**Lab Code :** J0802409-004  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/22/08 09:59	0.14	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/21/08 12:12	31	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/21/08 14:27	0.16	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/23/08 08:45	150	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802409  
**Date Collected :** 05/20/08  
**Date Received :** 05/21/08

## Inorganic Parameters

**Sample Name :** MW-20B  
**Lab Code :** J0802409-005  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/22/08 09:59	0.30	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/21/08 12:12	33	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/21/08 15:12	0.18	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/23/08 08:45	95	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802409  
**Date Collected :** 05/20/08  
**Date Received :** 05/21/08

## Inorganic Parameters

**Sample Name :** MW-20C  
**Lab Code :** J0802409-006  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/22/08 09:59	0.42	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/21/08 12:12	21	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/21/08 15:27	0.18	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/23/08 08:45	110	



# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802409  
**Date Collected :** 05/20/08  
**Date Received :** 05/21/08

## Inorganic Parameters

**Sample Name :** MW-21A  
**Lab Code :** J0802409-007  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/22/08 09:59	0.28	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/21/08 12:12	31	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/21/08 15:42	0.21	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/27/08 09:00	81	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802409  
**Date Collected :** 05/20/08  
**Date Received :** 05/21/08

## Inorganic Parameters

**Sample Name :** MW-21B  
**Lab Code :** J0802409-008  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/22/08 09:59	0.28	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/21/08 12:12	28	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/21/08 15:57	0.18	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/27/08 09:00	73	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802409  
**Date Collected :** 05/20/08  
**Date Received :** 05/21/08

## Inorganic Parameters

**Sample Name :** MW-21C  
**Lab Code :** J0802409-009  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/22/08 09:59	0.33	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/21/08 12:12	21	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/21/08 16:12	0.18	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/27/08 09:00	90	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802409  
**Date Collected :** NA  
**Date Received :** NA

## Inorganic Parameters

**Sample Name :** Method Blank  
**Lab Code :** J0802409-MB  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/22/08 09:59	U	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/21/08 12:12	U	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/21/08 12:12	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/27/08 09:00	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/23/08 08:45	U	

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoSyntec Consultants  
Project: JED Disposal Facility/FQ1512-01  
Sample Matrix: Water

Service Request: J0802409

Surrogate Recovery Summary  
Appendix I Volatile Organic Compounds by GC/MS

Extraction Method: EPA 5030B  
Analysis Method: 8260B

Units: PERCENT  
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>	<u>Sur4</u>
MW-19A	J0802409-001	104	97	96	106
MW-19B	J0802409-002	102	94	95	106
MW-19C	J0802409-003	103	95	94	106
MW-20A	J0802409-004	103	96	94	106
MW-20B	J0802409-005	102	96	95	106
MW-20C	J0802409-006	104	95	95	106
MW-21A	J0802409-007	103	95	96	107
MW-21B	J0802409-008	103	95	95	106
MW-21C	J0802409-009	102	95	95	105
Trip Blank	J0802409-010	103	94	95	105
Method Blank	JWG0801948-4	102	94	96	106
MW-21CMS	JWG0801948-1	105	96	95	105
MW-21CDMS	JWG0801948-2	105	95	95	105
Lab Control Sample	JWG0801948-3	103	93	97	105

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Surrogate Recovery Control Limits (%)

Sur1 = 1,2-Dichloroethane-d4	71-122
Sur2 = 4-Bromofluorobenzene	75-120
Sur3 = Dibromofluoromethane	82-116
Sur4 = Toluene-d8	88-117

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Results flagged with an asterisk (\*) indicate values outside control criteria.

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## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802409  
 Date Extracted: 05/24/2008  
 Date Analyzed: 05/24/2008

Matrix Spike/Duplicate Matrix Spike Summary  
 Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-21C  
 Lab Code: J0802409-009  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0801948

Analyte Name	Sample Result	MW-21CMS JWG0801948-1 Matrix Spike			MW-21CDMS JWG0801948-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Chloromethane	ND	31.7	20.0	159 *	32.5	20.0	162 *	73-139	2	30
Vinyl Chloride	ND	29.4	20.0	147 *	30.8	20.0	154 *	78-141	5	30
Bromomethane	ND	23.5	20.0	118	24.9	20.0	125	78-129	6	30
Chloroethane	ND	27.3	20.0	137 *	29.3	20.0	146 *	76-129	7	30
Trichlorofluoromethane	ND	23.7	20.0	118	24.5	20.0	123	81-133	3	30
1,1-Dichloroethene	ND	22.7	20.0	113	24.6	20.0	123	79-133	8	30
Acetone	ND	110	100	110	114	100	114	56-139	4	30
Iodomethane (Methyl Iodide)	ND	88.3	100	88	93.7	100	94	74-134	6	30
Carbon Disulfide	ND	94.3	100	94	99.0	100	99	71-146	5	30
Methylene Chloride	ND	17.3	20.0	87	18.1	20.0	91	75-123	4	30
trans-1,2-Dichloroethene	ND	22.3	20.0	111	23.3	20.0	117	76-125	5	30
Acrylonitrile	ND	108	100	108	114	100	114	68-131	5	30
1,1-Dichloroethane	ND	21.7	20.0	109	22.8	20.0	114	78-125	5	30
Vinyl Acetate	ND	37.3	100	37 *	40.0	100	40 *	43-163	7	30
cis-1,2-Dichloroethene	ND	20.9	20.0	105	22.0	20.0	110	75-127	5	30
2-Butanone (MEK)	ND	105	100	105	109	100	109	63-134	3	30
Bromochloromethane	ND	20.4	20.0	102	21.0	20.0	105	80-124	3	30
Chloroform	ND	21.9	20.0	110	23.0	20.0	115	81-124	5	30
1,1,1-Trichloroethane (TCA)	ND	19.8	20.0	99	21.1	20.0	106	76-130	6	30
Carbon Tetrachloride	ND	19.2	20.0	96	20.8	20.0	104	76-131	8	30
Benzene	ND	21.0	20.0	105	22.0	20.0	110	78-123	5	30
1,2-Dichloroethane (EDC)	ND	22.7	20.0	114	21.7	20.0	109	74-126	4	30
Trichloroethene (TCE)	ND	19.6	20.0	98	20.3	20.0	101	77-128	3	30
1,2-Dichloropropane	ND	21.7	20.0	109	22.7	20.0	114	77-122	5	30
Dibromomethane	ND	20.8	20.0	104	21.5	20.0	108	78-124	3	30
Bromodichloromethane	ND	20.8	20.0	104	21.8	20.0	109	79-125	5	30
cis-1,3-Dichloropropene	ND	18.0	20.0	90	18.9	20.0	95	77-117	5	30
4-Methyl-2-pentanone (MIBK)	ND	112	100	112	118	100	118	65-138	5	30
Toluene	ND	21.1	20.0	105	22.1	20.0	111	86-119	5	30
trans-1,3-Dichloropropene	ND	17.3	20.0	86	18.6	20.0	93	75-120	7	30
1,1,2-Trichloroethane	ND	20.3	20.0	102	21.2	20.0	106	77-124	4	30
Tetrachloroethene (PCE)	ND	18.7	20.0	94	19.8	20.0	99	79-123	6	30
2-Hexanone	ND	111	100	111	118	100	118	63-142	5	30

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## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802409  
 Date Extracted: 05/24/2008  
 Date Analyzed: 05/24/2008

Matrix Spike/Duplicate Matrix Spike Summary  
 Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-21C  
 Lab Code: J0802409-009  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0801948

Analyte Name	Sample Result	MW-21CMS JWG0801948-1 Matrix Spike			MW-21CDMS JWG0801948-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Dibromochloromethane	ND	20.1	20.0	100	20.9	20.0	104	78-124	4	30
1,2-Dibromoethane (EDB)	ND	19.7	20.0	99	20.8	20.0	104	81-119	5	30
Chlorobenzene	ND	19.8	20.0	99	20.7	20.0	103	81-120	5	30
1,1,1,2-Tetrachloroethane	ND	19.1	20.0	96	20.1	20.0	100	82-118	5	30
Ethylbenzene	ND	20.8	20.0	104	21.9	20.0	110	87-122	5	30
m,p-Xylenes	ND	39.5	40.0	99	41.7	40.0	104	82-120	6	30
o-Xylene	ND	20.4	20.0	102	21.4	20.0	107	85-119	5	30
Styrene	ND	18.8	20.0	94	19.4	20.0	97	84-126	3	30
Bromoform	ND	19.0	20.0	95	19.4	20.0	97	70-129	2	30
1,1,2,2-Tetrachloroethane	ND	20.6	20.0	103	22.0	20.0	110	72-127	7	30
1,2,3-Trichloropropane	ND	19.8	20.0	99	21.4	20.0	107	76-123	8	30
1,4-Dichlorobenzene	ND	19.3	20.0	97	20.3	20.0	102	75-115	5	30
trans-1,4-Dichloro-2-butene	ND	14.4	20.0	72	15.0	20.0	75	22-135	4	30
1,2-Dichlorobenzene	ND	18.9	20.0	95	19.8	20.0	99	77-116	5	30
1,2-Dibromo-3-chloropropane (DBCP)	ND	17.7	20.0	88	18.8	20.0	94	54-120	6	30

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## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802409  
 Date Extracted: 05/24/2008  
 Date Analyzed: 05/24/2008

Lab Control Spike Summary  
 Appendix I Volatile Organic Compounds by GC/MS

Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0801948

Analyte Name	Lab Control Sample JWG0801948-3 Lab Control Spike			%Rec Limits
	Result	Expected	%Rec	
Chloromethane	24.6	20.0	123	67-135
Vinyl Chloride	24.8	20.0	124	78-132
Bromomethane	22.1	20.0	111	79-130
Chloroethane	23.2	20.0	116	74-126
Trichlorofluoromethane	20.7	20.0	104	74-134
1,1-Dichloroethene	21.9	20.0	110	78-130
Acetone	108	100	108	67-133
Iodomethane (Methyl Iodide)	95.4	100	95	68-134
Carbon Disulfide	85.5	100	86	76-138
Methylene Chloride	19.7	20.0	99	72-124
trans-1,2-Dichloroethene	20.5	20.0	103	77-124
Acrylonitrile	115	100	115	77-127
1,1-Dichloroethane	20.6	20.0	103	80-128
Vinyl Acetate	94.0	100	94	61-148
cis-1,2-Dichloroethene	20.5	20.0	102	80-126
2-Butanone (MEK)	108	100	108	73-127
Bromochloromethane	20.6	20.0	103	79-129
Chloroform	21.5	20.0	107	83-124
1,1,1-Trichloroethane (TCA)	19.8	20.0	99	79-124
Carbon Tetrachloride	19.0	20.0	95	81-125
Benzene	20.0	20.0	100	79-119
1,2-Dichloroethane (EDC)	20.9	20.0	104	80-124
Trichloroethene (TCE)	19.1	20.0	96	76-124
1,2-Dichloropropane	20.8	20.0	104	79-123
Dibromomethane	20.8	20.0	104	83-123
Bromodichloromethane	20.5	20.0	102	81-123
cis-1,3-Dichloropropene	20.4	20.0	102	86-123
4-Methyl-2-pentanone (MIBK)	109	100	109	72-136
Toluene	20.3	20.0	102	86-117
trans-1,3-Dichloropropene	20.5	20.0	103	83-124
1,1,2-Trichloroethane	20.9	20.0	105	86-114
Tetrachloroethene (PCE)	18.7	20.0	94	80-121
2-Hexanone	108	100	108	71-138
Dibromochloromethane	20.4	20.0	102	82-121
1,2-Dibromoethane (EDB)	20.8	20.0	104	88-117

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## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802409  
**Date Extracted:** 05/24/2008  
**Date Analyzed:** 05/24/2008

**Lab Control Spike Summary**  
**Appendix I Volatile Organic Compounds by GC/MS**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0801948

Lab Control Sample  
JWG0801948-3  
Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Chlorobenzene	19.7	20.0	99	86-113
1,1,1,2-Tetrachloroethane	19.7	20.0	98	85-117
Ethylbenzene	20.3	20.0	101	90-118
m,p-Xylenes	38.8	40.0	97	86-121
o-Xylene	19.9	20.0	100	89-119
Styrene	19.8	20.0	99	89-122
Bromoform	19.8	20.0	99	68-129
1,1,2,2-Tetrachloroethane	21.1	20.0	105	83-120
1,2,3-Trichloropropane	20.3	20.0	101	83-123
1,4-Dichlorobenzene	19.6	20.0	98	83-113
trans-1,4-Dichloro-2-butene	20.3	20.0	101	53-143
1,2-Dichlorobenzene	18.9	20.0	94	84-115
1,2-Dibromo-3-chloropropane (DBCP)	18.4	20.0	92	62-123

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802409

**Surrogate Recovery Summary**  
**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** PERCENT  
**Level:** Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
MW-19A	J0802409-001	124
MW-19B	J0802409-002	125
MW-19C	J0802409-003	120
MW-20A	J0802409-004	124
MW-20B	J0802409-005	122
MW-20C	J0802409-006	118
MW-21A	J0802409-007	119
MW-21B	J0802409-008	120
MW-21C	J0802409-009	113
Method Blank	JWG0801943-3	122
Lab Control Sample	JWG0801943-1	127
Duplicate Lab Control Sample	JWG0801943-2	129

**Surrogate Recovery Control Limits (%)**

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Sur1 = 1,1,1,2-Tetrachloroethane 77-150

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**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802409  
**Date Extracted:** 05/23/2008  
**Date Analyzed:** 05/28/2008

**Lab Control Spike/Duplicate Lab Control Spike Summary**  
**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0801943

Analyte Name	Lab Control Sample JWG0801943-1 Lab Control Spike			Duplicate Lab Control Sample JWG0801943-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Expected	%Rec	Result	Expected	%Rec			
1,2-Dibromoethane (EDB)	0.318	0.250	127	0.312	0.250	125	70-130	2	20
1,2-Dibromo-3-chloropropane (DBCP)	0.296	0.250	118	0.302	0.250	121	70-130	2	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 05/20/2008  
**Date Received:** 05/21/2008  
**Date Extracted:** 05/22/2008  
**Date Analyzed:** 05/23/2008

### Matrix Spike/Matrix Spike Duplicate Summary Total Metals

**Sample Name:** MW-19A  
**Lab Code:** J0802409-001

J0802409-001S

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec	Result
				MS	DMS		MS	DMS	MS	DMS	RPD	Acceptance Limits	
Iron	EPA 3010	6010B	50	2000	2000	13700	15900	16100	NC	NC	1	75 - 125	Notes

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 05/20/2008  
**Date Received:** 05/21/2008  
**Date Extracted:** 06/05/2008  
**Date Analyzed:** 06/05/2008

### Matrix Spike/Matrix Spike Duplicate Summary Total Metals

**Sample Name:** MW-19C  
**Lab Code:** J0802409-003

J0802409-003S

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec	Result Notes
				MS	DMS		MS	DMS	MS	DMS	RPD	Acceptance Limits	
Mercury	METHOD	7470A	0.50	5.00	5.00	U	5.00	4.94	100	99	1	75 - 125	

## COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

Client: GeoSyntec Consultants  
 Project Name: JED Disposal Facility  
 Project Number: FQ1512-01  
 Matrix: WATER

Service Request: J0802409  
 Date Collected: N/A  
 Date Received: N/A  
 Date Extracted: 05/22/2008  
 Date Analyzed: 06/07/2008

Laboratory Control Sample Summary  
 Total Metals

Sample Name: Lab Control Sample  
 Lab Code: LCS4-0522

Units: ug/L  
 Basis: N/A

Analyte	Prep Method	Analysis Method	True Value	Results	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Antimony	EPA 3020A	6020	50.0	48.9	98	80 - 120	
Arsenic	EPA 3020A	6020	50.0	46.7	93	80 - 120	
Barium	EPA 3020A	6020	50.0	49.7	99	80 - 120	
Beryllium	EPA 3020A	6020	50.0	47.3	95	80 - 120	
Cadmium	EPA 3020A	6020	50.0	47.4	95	80 - 120	
Chromium	EPA 3020A	6020	50.0	50.4	101	80 - 120	
Cobalt	EPA 3020A	6020	50.0	50.2	100	80 - 120	
Copper	EPA 3020A	6020	50.0	50.1	100	80 - 120	
Iron	EPA 3010A	6010B	2000	2090	104	80 - 120	
Lead	EPA 3020A	6020	50.0	50.3	101	80 - 120	
Mercury	METHOD	7470A	5.00	4.67	93	80 - 120	
Nickel	EPA 3020A	6020	50.0	50.2	100	80 - 120	
Selenium	EPA 3020A	6020	50.0	43.8	88	80 - 120	
Silver	EPA 3020A	6020	50.0	52.2	104	80 - 120	
Thallium	EPA 3020A	6020	50.0	51.0	102	80 - 120	
Vanadium	EPA 3020A	6020	50.0	50.0	100	80 - 120	
Zinc	EPA 3020A	6020	100	93.1	93	80 - 120	

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 05/20/2008  
**Date Received:** 05/21/2008  
**Date Extracted:** 05/22/2008  
**Date Analyzed:** 06/07/2008

### Matrix Spike/Matrix Spike Duplicate Summary Dissolved Metals

**Sample Name:** MW-19B  
**Lab Code:** J0802409-002

J0802409-002S

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec	Result Notes
				MS	DMS		MS	DMS	MS	DMS	RPD	Acceptance Limits	
Antimony	EPA 3005	6020	2.0	50.0	50.0	U	55.0	55.1	110	110	<1	75 - 125	
Arsenic	EPA 3005	6020	0.5	50.0	50.0	0.4	51.1	50.9	101	101	<1	75 - 125	
Barium	EPA 3005	6020	2.0	50.0	50.0	17.7	68.1	68.4	101	101	<1	75 - 125	
Beryllium	EPA 3005	6020	1.0	50.0	50.0	U	49.3	48.9	99	98	1	75 - 125	
Cadmium	EPA 3005	6020	0.5	50.0	50.0	U	51.5	50.8	103	102	1	75 - 125	
Chromium	EPA 3005	6020	2.0	50.0	50.0	0.8	48.7	49.3	96	97	1	75 - 125	
Cobalt	EPA 3005	6020	1.0	50.0	50.0	0.2	47.5	48.8	95	97	3	75 - 125	
Copper	EPA 3005	6020	2.0	50.0	50.0	0.3	47.6	48.4	95	96	2	75 - 125	
Lead	EPA 3005	6020	1.0	50.0	50.0	U	49.5	50.5	99	101	2	75 - 125	
Nickel	EPA 3005	6020	2.0	50.0	50.0	U	48.4	48.1	97	96	1	75 - 125	
Selenium	EPA 3005	6020	2.0	50.0	50.0	U	50.4	50.9	101	102	1	75 - 125	
Silver	EPA 3005	6020	0.5	50.0	50.0	U	51.3	51.9	103	104	1	75 - 125	
Thallium	EPA 3005	6020	1.0	50.0	50.0	U	48.4	49.2	97	98	2	75 - 125	
Vanadium	EPA 3005	6020	5.0	50.0	50.0	U	51.5	51.1	103	102	1	75 - 125	
Zinc	EPA 3005	6020	10.0	100	100	U	103.0	101.0	103	101	2	75 - 125	

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

Client: GeoSyntec Consultants  
 Project Name: JED Disposal Facility  
 Project Number: FQ1512-01  
 Matrix: WATER

Service Request: J0802409  
 Date Collected: 05/20/2008  
 Date Received: 05/21/2008  
 Date Extracted: 05/22/2008  
 Date Analyzed: 05/22/2008

### Matrix Spike/Matrix Spike Duplicate Summary Dissolved Metals

Sample Name: MW-19C  
 Lab Code: J0802409-003

J0802409-003S

Units: ug/L  
 Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec	Result
				MS	DMS		MS	DMS	MS	DMS	RPD	Acceptance Limits	
Iron	EPA 3005	6010B	50	2000	2000	954	2940	3030	99	104	3	70 - 130	Notes



# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** N/A  
**Date Received:** N/A  
**Date Extracted:** 05/22/2008  
**Date Analyzed:** 06/07/2008

### Laboratory Control Sample Summary Dissolved Metals

**Sample Name:** Lab Control Sample  
**Lab Code:** LCS6-0522

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	True Value	Results	Percent Recovery	CAS Percent	Result Notes
						Recovery Acceptance Limits	
Antimony	EPA 3005A	6020	50.0	51.5	103	80 - 120	
Arsenic	EPA 3005A	6020	50.0	51.1	102	80 - 120	
Barium	EPA 3005A	6020	50.0	49.2	98	80 - 120	
Beryllium	EPA 3005A	6020	50.0	50.6	101	80 - 120	
Cadmium	EPA 3005A	6020	50.0	50.5	101	80 - 120	
Chromium	EPA 3005A	6020	50.0	50.2	100	80 - 120	
Cobalt	EPA 3005A	6020	50.0	50.1	100	80 - 120	
Copper	EPA 3005A	6020	50.0	49.5	99	80 - 120	
Iron	EPA 3005A	6010B	2000	2040	102	85 - 115	
Lead	EPA 3005A	6020	50.0	50.3	101	80 - 120	
Mercury	METHOD	7470A	5.00	5.47	109	80 - 120	
Nickel	EPA 3005A	6020	50.0	50.9	102	80 - 120	
Selenium	EPA 3005A	6020	50.0	52.1	104	80 - 120	
Silver	EPA 3005A	6020	50.0	52.8	106	80 - 120	
Thallium	EPA 3005A	6020	50.0	50.4	101	80 - 120	
Vanadium	EPA 3005A	6020	50.0	49.8	100	80 - 120	
Zinc	EPA 3005A	6020	100	106.0	106	80 - 120	

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

Client: GeoSyntec Consultants  
Project Name: JED Disposal Facility  
Project Number: FQ1512-01  
Matrix: WATER

Service Request: J0802409  
Date Collected: 05/20/2008  
Date Received: 05/21/2008  
Date Extracted: 05/22/2008  
Date Analyzed: 05/23/2008

### Matrix Spike/Matrix Spike Duplicate Summary Total Metals

Sample Name: MW-19A  
Lab Code: J0802409-001

J0802409-001S

Units: mg/L  
Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec Acceptance		Result Notes
				MS	DMS		MS	DMS	MS	DMS	RPD	Limits		
Sodium	EPA 3010	6010B	0.5	10.0	10.0	18.3	27.9	28.2	96	99	1	75 - 125		

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** N/A  
**Date Received:** N/A  
**Date Extracted:** 05/22/2008  
**Date Analyzed:** 05/23/2008

### Laboratory Control Sample Summary Total Metals

**Sample Name:** Lab Control Sample  
**Lab Code:** LCS2-0522

**Units:** mg/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	True Value	Results	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Sodium	EPA 3010A	6010B	10.0	10.3	103	80 - 120	

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** 05/20/2008  
**Date Received:** 05/21/2008  
**Date Extracted:** 05/22/2008  
**Date Analyzed:** 05/22/2008

### Matrix Spike/Matrix Spike Duplicate Summary Dissolved Metals

**Sample Name:** MW-19C  
**Lab Code:** J0802409-003

J0802409-003S

**Units:** mg/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec	Result
				MS	DMS		MS	DMS	MS	DMS	RPD	Acceptance Limits	
Sodium	EPA 3005	6010B	0.5	10.0	10.0	9.8	19.5	19.6	97	98	1	75 - 125	Notes

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802409  
**Date Collected:** N/A  
**Date Received:** N/A  
**Date Extracted:** 05/22/2008  
**Date Analyzed:** 05/22/2008

### Laboratory Control Sample Summary Dissolved Metals

**Sample Name:** Lab Control Sample  
**Lab Code:** LCS1-0522

**Units:** mg/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	True Value	Results	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Sodium	EPA 3005A	6010B	10.0	10.2	102	80 - 120	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802409  
**Date Collected :** 05/20/08  
**Date Received :** 05/21/08  
**Date Extracted :** NA  
**Date Analyzed :** 05/21/08

### Duplicate Summary Inorganic Parameters

**Sample Name :** MW-19B  
**Lab Code :** J0802409-002DUP  
**Test Notes :**

Basis : NA

Analyte	Units	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Chloride	mg/L (ppm)	300.0	0.2	31	31	31	<1	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.17	0.17	0.17	<1	i

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : GeoSyntec Consultants  
Project Name : JED Disposal Facility  
Project Number : FQ1512-01  
Sample Matrix : WATER

Service Request : J0802409  
Date Collected : 05/20/08  
Date Received : 05/21/08  
Date Extracted : NA  
Date Analyzed : 05/21/08

Matrix Spike Summary  
Inorganic Parameters

Sample Name : MW-19B  
Lab Code : J0802409-002MS  
Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
								Percent Recovery Acceptance Limits	
Chloride	mg/L (ppm)	300.0	0.2	50.0	31	78.4	95	90-110	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	10	0.17	9.99	98	90-110	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802409  
**Date Collected :** NA  
**Date Received :** NA  
**Date Extracted :** NA  
**Date Analyzed :** 05/21-27/08

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** J0802409-LCS  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	True Value	Result	Percent Recovery	CAS	Result Notes
						Percent Recovery Acceptance Limits	
Ammonia as Nitrogen	mg/L (ppm)	350.1	5.00	5.32	106	90-110	
Chloride	mg/L (ppm)	300.0	50.0	49.9	100	90-110	
Nitrate as Nitrogen	mg/L (ppm)	300.0	10	9.91	99	90-110	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	300	301	100	85-115	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	300	300	100	85-115	



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

Client: GEOSYNTEC Service Request # 56802409  
 Project: TEP waste facility  
 Cooler received on 5/21/08 and opened on 5/21/08 by SN  
 COURIER: CAS UPS FEDEX DHL CLIENT Tracking # 52081508961

- |    |   |            |    |     |
|----|---|------------|----|-----|
| 1  | Were custody seals on outside of cooler?                                      | <u>Yes</u> | No | N/A |
| 2  | Were seals intact, signed and dated?  | <u>Yes</u> | No | N/A |
| 3  | Were custody papers properly filled out?                                      | <u>Yes</u> | No | N/A |
| 4  | Temperature of cooler(s) upon receipt (Should be 4 +/- 2 degrees C)           | <u>1.7</u> |    |     |
| 5  | Correct Temperature?  | <u>No</u>  | No | N/A |
| 6  | Were Ice or Ice Packs present   | <u>Yes</u> | No | N/A |
| 7  | Did all bottles arrive in good condition (unbroken, etc....)?                 | <u>Yes</u> | No | N/A |
| 8  | Were all bottle labels complete (sample ID, preservation, etc....)?           | <u>Yes</u> | No | N/A |
| 9  | Did all bottle labels and tags agree with custody papers?                     | <u>Yes</u> | No | N/A |
| 10 | Were the correct bottles used for the tests indicated?                        | <u>Yes</u> | No | N/A |
| 11 | Were all of the preserved bottles received with the appropriate preservative? | <u>Yes</u> | No | N/A |

HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2  
 Preservative additions noted below

- |    |   |            |        |     |
|----|---|------------|--------|-----|
| 12 | Were all samples received within analysis holding times?                  | <u>Yes</u> | No     | N/A |
| 13 | Were VOA vials checked for absence of air bubbles? If present, note below | <u>Yes</u> | No     | N/A |
| 14 | Where did the bottles originate?  | <u>CAS</u> | Client |     |

Sample ID	Reagent	Manuf. Lot # or CAS Chem ID	ml added	Initials

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted:

Date: 89

Initials: 52

Note that pH is checked and meets the required pH criterion listed in the column heading unless otherwise noted on cooler receipt form.

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# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011 PAGE 1 OF 1

SR #

70802409

CAS Contact

Project Name <b>JED DISPOSAL FACILITY</b>		Project Number <b>FQ 1512-01</b>		ANALYSIS REQUESTED (Include Method Number and Container Description)															
Project Manager <b>KIRK WILLS</b>		Email Address <b>KWILLS@GEOSYNTEC.COM</b>		PRESERVATIVE	1	0	3	2	0	2	<div>8260 100% H<sub>2</sub>O NH<sub>3</sub> METHANOL TDS CL NO<sub>3</sub> Dissolved Metals</div>								
Company/Address <b>GEOSYNTEC</b>				NUMBER OF CONTAINERS															
14055 Riverchase Dr. Ste 300																			
Tampa FL 33637																			
Phone #		FAX#																	
813-558-0990		813-558-9726																	
Sampler's Signature <b>Joe Terry</b>		Sampler's Printed Name <b>Joe Terry</b>																	
Lab/Address <b>Joe Terry</b>																			
CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX															
MW-19A		5-20-08	1400	GW	10	X	X	X	X	X									
MW-19B			1400		10														
MW-19C			1425		10														
MW-20A			1042		9														
MW-20B			1100		10														
MW-20C			1120		10														
MW-21A			0900		9														
MW-21B			0925		10														
MW-21C			0915	↓	10														
Trp Blank				W															
SPECIAL INSTRUCTIONS/COMMENTS					TURNAROUND REQUIREMENTS					REPORT REQUIREMENTS					INVOICE INFORMATION				
See QAPP <input type="checkbox"/>					RUSH (SURCHARGES APPLY) <input checked="" type="checkbox"/> STANDARD					<input checked="" type="checkbox"/> I. Results Only <input checked="" type="checkbox"/> II. Results + QC Summaries (LCS, DUP, MS/MSD as required) <input type="checkbox"/> III. Results + QC and Calibration Summaries <input type="checkbox"/> IV. Data Validation Report with Raw Data <input type="checkbox"/> V. Specialized Forms / Custom Report					PO# BILL TO:				
					REQUESTED FAX DATE					REQUESTED REPORT DATE					Edata Yes No				
					RECEIVED BY					RECEIVED BY					RECEIVED BY				
RELINQUISHED BY					RELINQUISHED BY					RELINQUISHED BY					RELINQUISHED BY				
Signature <b>Joe Terry</b>					Signature <b>Joe Terry</b>					Signature <b>Joe Terry</b>					Signature				
Printed Name <b>Joe Terry</b>					Printed Name <b>Joe Terry</b>					Printed Name <b>Joe Terry</b>					Printed Name				
Firm <b>Geosyntec</b>					Firm <b>Geosyntec</b>					Firm <b>Geosyntec</b>					Firm				
Date/Time <b>5-20-08/1515</b>					Date/Time <b>5-20-08/1515</b>					Date/Time <b>5-20-08/1515</b>					Date/Time				

June 10, 2008

Service Request No: J0802436

Kirk Wills  
GeoSyntec Consultants  
14055 Riveredge Drive  
Suite 300  
Tampa, FL 33637

**RE: JED Disposal Facility/FQ1512-01**

Dear Kirk:


Enclosed are the results of the sample(s) submitted to our laboratory on May 22, 2008. For your reference, these analyses have been assigned our service request number **J0802436**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP 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. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please call if you have any questions. My extension is 4409. You may also contact me via email at CMyers@caslab.com.

Respectfully submitted,

**Columbia Analytical Services, Inc.**



Craig Myers  
Project Chemist

Page 1 of 95

*Laboratory Manager: Greg Jordan  
Quality Assurance Officer: Kathy Brungard*

*CAS Jacksonville is NELAC-accredited by the State of Florida, #E82502 valid through 6/30/08. Other state accreditations include: Arkansas, #88-0600 valid through 1/12/06; Georgia, #958 valid through 6/30/08; Louisiana, #02086 valid through 6/30/08; Texas, #T104704197-06-TX valid through 5/31/08; North Carolina, #527 valid through 12/31/07; South Carolina, #96021001 valid through 6/30/08.*

## COLUMBIA ANALYTICAL SERVICES, INC.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility  
**Sample Matrix:** Water

**Service Request No.:** J0802436  
**Date Received:** 5/22/08

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

#### Sample Receipt

Ten water samples and one trip blank were received for analysis at Columbia Analytical Services on 5/22/08. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at 4±2°C upon receipt at the lab except for aqueous samples designated for metals analyses, which were stored at room temperature.

#### Volatile Organic Compounds by GC-MS

The samples were analyzed for Volatile Organics using EPA Method 8260. The following observations were made regarding this delivery group.

#### Matrix Spike Recovery Exceptions

The upper control criterion was exceeded for the following analyte in Duplicate Matrix Spike (DMS) MW-17ADMS: Vinyl Chloride. The analyte in question was not detected in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data are not significantly affected. No further corrective action was appropriate.

#### EDB and DBCP by GC-ECD

The samples were analyzed for EDB and DBCP using EPA Method 8011. No problems were observed.

#### Metals by ICP-MS/ICP-OES/CVAA

The samples were analyzed for Total and Dissolved Metals using EPA Methods 6020/6010B/7470A. The following observations were made regarding this delivery group.

#### Matrix Spike Recovery Exceptions

The matrix spike recoveries of Total Iron for sample MW-16B were outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicates the analytical batch was in control. The matrix spike outlier suggests a potential high bias in this matrix. No further corrective action was taken.

The matrix spike duplicate recovery of Dissolved Copper and Zinc for sample MW-16B was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicates the analytical batch was in control. The matrix spike outlier suggests a potential high bias in this sample spike. Since the sample results were

Approved by  Date 6/10/08

less than the MRL, no further corrective action was taken.

#### Relative Percent Difference Exceptions

The Relative Percent Difference (RPD) for the following analytes in the replicate matrix spike analyses of sample MW-16B was outside control criteria: Dissolved Copper and Zinc. All spike recoveries in the MS and associated Laboratory Control Sample (LCS) were within acceptance limits, indicating the analytical batch was in control. No further corrective action was taken.

#### Batch QC Notes and Discussion

Quality control samples for some parameters (i.e., Dup/Spike or MS/DMS samples) were performed using samples from another sample delivery group (SDG). The frequency requirement for quality control sample analysis was consistent with the project's requirements. Matrix specific quality control results have no bearing on sample data from a different matrix or location. Therefore, control of the batch has been evaluated using the method blank and the laboratory control sample.

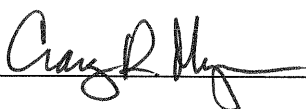
#### General Chemistry Parameters

The samples were analyzed for Inorganic Parameters using various EPA and Standard Methods. No problems were observed.

#### Batch QC Notes and Discussion

Quality control samples for Total Dissolved Solids (i.e., Dup/Spike or MS/DMS samples) were performed using samples from another sample delivery group (SDG). The frequency requirement for quality control sample analysis was consistent with the project's requirements. Matrix specific quality control results have no bearing on sample data from a different matrix or location. Therefore, control of the batch has been evaluated using the method blank and the laboratory control sample.

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



Date \_\_\_\_\_

6/19/08

## Florida DEP Data Qualifiers

B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
H	Value based on field kit determination; results may not be accurate.
i	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J	Estimated value (one of the following reasons is discussed in the project case narrative). <ol style="list-style-type: none"><li>1. The result may be inaccurate because the surrogate recovery limits have been exceeded.</li><li>2. No known quality control criteria exists for the component.</li><li>3. The reported value failed to meet the established quality control criteria for either precision or accuracy.</li><li>4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).</li><li>5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).</li></ol>
K	Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
L	Off scale high. The analyte is above the upper limit of the linear calibration range.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
N	Presumptive evidence of the analyte. Confirmation was not performed.
Q	Sample held beyond the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	The laboratory analysis was from an improperly preserved sample.
Z	Too many colonies were present (TNTC). The numeric value represents the filtration volume.

## 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.



**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01

**Service Request:** J0802436

**SAMPLE CROSS-REFERENCE**

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J0802436-001	MW-16A	05/21/08	11:25
J0802436-002	MW-16B	05/21/08	11:45
J0802436-003	MW-16C	05/21/08	11:50
J0802436-004	MW-17A	05/21/08	09:55
J0802436-005	MW-17B	05/21/08	10:05
J0802436-006	MW-17C	05/21/08	10:50
J0802436-007	MW-18A	05/21/08	08:30
J0802436-008	MW-18B	05/21/08	08:35
J0802436-009	MW-18C	05/21/08	09:15
J0802436-010	DUP-2	05/21/08	00:00
J0802436-011	TRIP BLANK	05/21/08	00:00

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802436  
 Date Collected: 05/21/2008  
 Date Received: 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-16A  
 Lab Code: J0802436-001  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/29/08	05/29/08	JWG0802030	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/29/08	05/29/08	JWG0802030	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
2-Butanone (MEK)	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
2-Hexanone	ND	U	25	0.54	1	05/29/08	05/29/08	JWG0802030	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/29/08	05/29/08	JWG0802030	
Acetone	ND	U	50	1.7	1	05/29/08	05/29/08	JWG0802030	
Acrylonitrile	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
Benzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Bromochloromethane	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Bromodichloromethane	ND	U	1.0	0.15	1	05/29/08	05/29/08	JWG0802030	
Bromoform	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Bromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Carbon Disulfide	ND	U	10	1.0	1	05/29/08	05/29/08	JWG0802030	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Chlorobenzene	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Chloroethane	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Chloroform	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
Chloromethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
Dibromochloromethane	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Dibromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Ethylbenzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802436  
 Date Collected: 05/21/2008  
 Date Received: 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-16A  
 Lab Code: J0802436-001  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/29/08	05/29/08	JWG0802030	
m,p-Xylenes	ND	U	2.0	0.47	1	05/29/08	05/29/08	JWG0802030	
Methylene Chloride	ND	U	5.0	0.51	1	05/29/08	05/29/08	JWG0802030	
o-Xylene	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Styrene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/29/08	05/29/08	JWG0802030	
<b>Toluene</b>	<b>2.4</b>		1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/29/08	05/29/08	JWG0802030	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Vinyl Acetate	ND	U	10	0.73	1	05/29/08	05/29/08	JWG0802030	
Vinyl Chloride	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	100	71-122	05/29/08	Acceptable
4-Bromofluorobenzene	95	75-120	05/29/08	Acceptable
Dibromofluoromethane	98	82-116	05/29/08	Acceptable
Toluene-d8	110	88-117	05/29/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802436  
 Date Collected: 05/21/2008  
 Date Received: 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-16B  
 Lab Code: J0802436-002  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/29/08	05/29/08	JWG0802030	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/29/08	05/29/08	JWG0802030	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
2-Butanone (MEK)	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
2-Hexanone	ND	U	25	0.54	1	05/29/08	05/29/08	JWG0802030	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/29/08	05/29/08	JWG0802030	
Acetone	ND	U	50	1.7	1	05/29/08	05/29/08	JWG0802030	
Acrylonitrile	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
Benzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Bromochloromethane	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Bromodichloromethane	ND	U	1.0	0.15	1	05/29/08	05/29/08	JWG0802030	
Bromoform	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Bromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Carbon Disulfide	ND	U	10	1.0	1	05/29/08	05/29/08	JWG0802030	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Chlorobenzene	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Chloroethane	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Chloroform	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
Chloromethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
Dibromochloromethane	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Dibromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Ethylbenzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Collected:** 05/21/2008  
**Date Received:** 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-16B  
**Lab Code:** J0802436-002  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/29/08	05/29/08	JWG0802030	
m,p-Xylenes	ND	U	2.0	0.47	1	05/29/08	05/29/08	JWG0802030	
Methylene Chloride	ND	U	5.0	0.51	1	05/29/08	05/29/08	JWG0802030	
o-Xylene	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Styrene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/29/08	05/29/08	JWG0802030	
<b>Toluene</b>	<b>0.51</b>	<b>I</b>	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/29/08	05/29/08	JWG0802030	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Vinyl Acetate	ND	U	10	0.73	1	05/29/08	05/29/08	JWG0802030	
Vinyl Chloride	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	100	71-122	05/29/08	Acceptable
4-Bromofluorobenzene	94	75-120	05/29/08	Acceptable
Dibromofluoromethane	97	82-116	05/29/08	Acceptable
Toluene-d8	109	88-117	05/29/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802436  
 Date Collected: 05/21/2008  
 Date Received: 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-16C  
 Lab Code: J0802436-003  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/29/08	05/29/08	JWG0802030	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/29/08	05/29/08	JWG0802030	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
2-Butanone (MEK)	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
2-Hexanone	ND	U	25	0.54	1	05/29/08	05/29/08	JWG0802030	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/29/08	05/29/08	JWG0802030	
Acetone	ND	U	50	1.7	1	05/29/08	05/29/08	JWG0802030	
Acrylonitrile	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
Benzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Bromochloromethane	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Bromodichloromethane	ND	U	1.0	0.15	1	05/29/08	05/29/08	JWG0802030	
Bromoform	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Bromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Carbon Disulfide	ND	U	10	1.0	1	05/29/08	05/29/08	JWG0802030	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Chlorobenzene	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Chloroethane	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Chloroform	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
Chloromethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
Dibromochloromethane	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Dibromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Ethylbenzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Collected:** 05/21/2008  
**Date Received:** 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-16C  
**Lab Code:** J0802436-003  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/29/08	05/29/08	JWG0802030	
m,p-Xylenes	ND	U	2.0	0.47	1	05/29/08	05/29/08	JWG0802030	
Methylene Chloride	ND	U	5.0	0.51	1	05/29/08	05/29/08	JWG0802030	
o-Xylene	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Styrene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/29/08	05/29/08	JWG0802030	
<b>Toluene</b>	<b>43</b>		1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/29/08	05/29/08	JWG0802030	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Vinyl Acetate	ND	U	10	0.73	1	05/29/08	05/29/08	JWG0802030	
Vinyl Chloride	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	100	71-122	05/29/08	Acceptable
4-Bromofluorobenzene	94	75-120	05/29/08	Acceptable
Dibromofluoromethane	96	82-116	05/29/08	Acceptable
Toluene-d8	110	88-117	05/29/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802436  
 Date Collected: 05/21/2008  
 Date Received: 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-17A  
 Lab Code: J0802436-004  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/29/08	05/29/08	JWG0802030	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/29/08	05/29/08	JWG0802030	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
2-Butanone (MEK)	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
2-Hexanone	ND	U	25	0.54	1	05/29/08	05/29/08	JWG0802030	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/29/08	05/29/08	JWG0802030	
Acetone	ND	U	50	1.7	1	05/29/08	05/29/08	JWG0802030	
Acrylonitrile	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
Benzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Bromochloromethane	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Bromodichloromethane	ND	U	1.0	0.15	1	05/29/08	05/29/08	JWG0802030	
Bromoform	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Bromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Carbon Disulfide	ND	U	10	1.0	1	05/29/08	05/29/08	JWG0802030	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Chlorobenzene	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Chloroethane	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Chloroform	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
Chloromethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
Dibromochloromethane	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Dibromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Ethylbenzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	

Comments:



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Collected:** 05/21/2008  
**Date Received:** 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-17A  
**Lab Code:** J0802436-004  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/29/08	05/29/08	JWG0802030	
m,p-Xylenes	ND	U	2.0	0.47	1	05/29/08	05/29/08	JWG0802030	
Methylene Chloride	ND	U	5.0	0.51	1	05/29/08	05/29/08	JWG0802030	
o-Xylene	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Styrene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/29/08	05/29/08	JWG0802030	
Toluene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/29/08	05/29/08	JWG0802030	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Vinyl Acetate	ND	U	10	0.73	1	05/29/08	05/29/08	JWG0802030	
Vinyl Chloride	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	100	71-122	05/29/08	Acceptable
4-Bromofluorobenzene	95	75-120	05/29/08	Acceptable
Dibromofluoromethane	97	82-116	05/29/08	Acceptable
Toluene-d8	110	88-117	05/29/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802436  
 Date Collected: 05/21/2008  
 Date Received: 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-17B  
 Lab Code: J0802436-005  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/29/08	05/29/08	JWG0802030	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/29/08	05/29/08	JWG0802030	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
2-Butanone (MEK)	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
2-Hexanone	ND	U	25	0.54	1	05/29/08	05/29/08	JWG0802030	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/29/08	05/29/08	JWG0802030	
Acetone	ND	U	50	1.7	1	05/29/08	05/29/08	JWG0802030	
Acrylonitrile	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
Benzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Bromochloromethane	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Bromodichloromethane	ND	U	1.0	0.15	1	05/29/08	05/29/08	JWG0802030	
Bromoform	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Bromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Carbon Disulfide	ND	U	10	1.0	1	05/29/08	05/29/08	JWG0802030	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Chlorobenzene	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Chloroethane	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Chloroform	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
Chloromethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
Dibromochloromethane	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Dibromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Ethylbenzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802436  
 Date Collected: 05/21/2008  
 Date Received: 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-17B  
 Lab Code: J0802436-005  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/29/08	05/29/08	JWG0802030	
m,p-Xylenes	ND	U	2.0	0.47	1	05/29/08	05/29/08	JWG0802030	
Methylene Chloride	ND	U	5.0	0.51	1	05/29/08	05/29/08	JWG0802030	
o-Xylene	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Styrene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/29/08	05/29/08	JWG0802030	
<b>Toluene</b>	<b>5.8</b>		1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/29/08	05/29/08	JWG0802030	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Vinyl Acetate	ND	U	10	0.73	1	05/29/08	05/29/08	JWG0802030	
Vinyl Chloride	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	100	71-122	05/29/08	Acceptable
4-Bromofluorobenzene	92	75-120	05/29/08	Acceptable
Dibromofluoromethane	97	82-116	05/29/08	Acceptable
Toluene-d8	111	88-117	05/29/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802436  
 Date Collected: 05/21/2008  
 Date Received: 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-17C  
 Lab Code: J0802436-006  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/29/08	05/29/08	JWG0802030	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/29/08	05/29/08	JWG0802030	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
2-Butanone (MEK)	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
2-Hexanone	ND	U	25	0.54	1	05/29/08	05/29/08	JWG0802030	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/29/08	05/29/08	JWG0802030	
Acetone	ND	U	50	1.7	1	05/29/08	05/29/08	JWG0802030	
Acrylonitrile	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
Benzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Bromochloromethane	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Bromodichloromethane	ND	U	1.0	0.15	1	05/29/08	05/29/08	JWG0802030	
Bromoform	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Bromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Carbon Disulfide	ND	U	10	1.0	1	05/29/08	05/29/08	JWG0802030	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Chlorobenzene	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Chloroethane	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Chloroform	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
Chloromethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
Dibromochloromethane	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Dibromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Ethylbenzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Collected:** 05/21/2008  
**Date Received:** 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-17C  
**Lab Code:** J0802436-006  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/29/08	05/29/08	JWG0802030	
m,p-Xylenes	ND	U	2.0	0.47	1	05/29/08	05/29/08	JWG0802030	
Methylene Chloride	ND	U	5.0	0.51	1	05/29/08	05/29/08	JWG0802030	
o-Xylene	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Styrene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/29/08	05/29/08	JWG0802030	
<b>Toluene</b>	<b>8.7</b>		1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/29/08	05/29/08	JWG0802030	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Vinyl Acetate	ND	U	10	0.73	1	05/29/08	05/29/08	JWG0802030	
Vinyl Chloride	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	100	71-122	05/29/08	Acceptable
4-Bromofluorobenzene	93	75-120	05/29/08	Acceptable
Dibromofluoromethane	96	82-116	05/29/08	Acceptable
Toluene-d8	109	88-117	05/29/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802436  
 Date Collected: 05/21/2008  
 Date Received: 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-18A  
 Lab Code: J0802436-007  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/29/08	05/29/08	JWG0802030	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/29/08	05/29/08	JWG0802030	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
2-Butanone (MEK)	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
2-Hexanone	ND	U	25	0.54	1	05/29/08	05/29/08	JWG0802030	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/29/08	05/29/08	JWG0802030	
Acetone	ND	U	50	1.7	1	05/29/08	05/29/08	JWG0802030	
Acrylonitrile	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
Benzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Bromochloromethane	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Bromodichloromethane	ND	U	1.0	0.15	1	05/29/08	05/29/08	JWG0802030	
Bromoform	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Bromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Carbon Disulfide	ND	U	10	1.0	1	05/29/08	05/29/08	JWG0802030	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Chlorobenzene	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Chloroethane	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Chloroform	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
Chloromethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
Dibromochloromethane	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Dibromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Ethylbenzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Collected:** 05/21/2008  
**Date Received:** 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-18A  
**Lab Code:** J0802436-007  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/29/08	05/29/08	JWG0802030	
m,p-Xylenes	ND	U	2.0	0.47	1	05/29/08	05/29/08	JWG0802030	
Methylene Chloride	ND	U	5.0	0.51	1	05/29/08	05/29/08	JWG0802030	
o-Xylene	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Styrene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/29/08	05/29/08	JWG0802030	
Toluene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/29/08	05/29/08	JWG0802030	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Vinyl Acetate	ND	U	10	0.73	1	05/29/08	05/29/08	JWG0802030	
Vinyl Chloride	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	101	71-122	05/29/08	Acceptable
4-Bromofluorobenzene	93	75-120	05/29/08	Acceptable
Dibromofluoromethane	97	82-116	05/29/08	Acceptable
Toluene-d8	109	88-117	05/29/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802436  
 Date Collected: 05/21/2008  
 Date Received: 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-18B  
 Lab Code: J0802436-008  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/29/08	05/29/08	JWG0802030	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/29/08	05/29/08	JWG0802030	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
2-Butanone (MEK)	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
2-Hexanone	ND	U	25	0.54	1	05/29/08	05/29/08	JWG0802030	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/29/08	05/29/08	JWG0802030	
Acetone	ND	U	50	1.7	1	05/29/08	05/29/08	JWG0802030	
Acrylonitrile	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
Benzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Bromochloromethane	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Bromodichloromethane	ND	U	1.0	0.15	1	05/29/08	05/29/08	JWG0802030	
Bromoform	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Bromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Carbon Disulfide	ND	U	10	1.0	1	05/29/08	05/29/08	JWG0802030	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Chlorobenzene	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Chloroethane	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Chloroform	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
Chloromethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
Dibromochloromethane	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Dibromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Ethylbenzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	

Comments:



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802436  
 Date Collected: 05/21/2008  
 Date Received: 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-18B  
 Lab Code: J0802436-008  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/29/08	05/29/08	JWG0802030	
m,p-Xylenes	ND	U	2.0	0.47	1	05/29/08	05/29/08	JWG0802030	
Methylene Chloride	ND	U	5.0	0.51	1	05/29/08	05/29/08	JWG0802030	
o-Xylene	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Styrene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/29/08	05/29/08	JWG0802030	
<b>Toluene</b>	<b>8.9</b>		1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/29/08	05/29/08	JWG0802030	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Vinyl Acetate	ND	U	10	0.73	1	05/29/08	05/29/08	JWG0802030	
Vinyl Chloride	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	102	71-122	05/29/08	Acceptable
4-Bromofluorobenzene	95	75-120	05/29/08	Acceptable
Dibromofluoromethane	95	82-116	05/29/08	Acceptable
Toluene-d8	110	88-117	05/29/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802436  
 Date Collected: 05/21/2008  
 Date Received: 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-18C  
 Lab Code: J0802436-009  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/29/08	05/29/08	JWG0802030	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/29/08	05/29/08	JWG0802030	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
2-Butanone (MEK)	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
2-Hexanone	ND	U	25	0.54	1	05/29/08	05/29/08	JWG0802030	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/29/08	05/29/08	JWG0802030	
Acetone	ND	U	50	1.7	1	05/29/08	05/29/08	JWG0802030	
Acrylonitrile	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
Benzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Bromochloromethane	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Bromodichloromethane	ND	U	1.0	0.15	1	05/29/08	05/29/08	JWG0802030	
Bromoform	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Bromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Carbon Disulfide	ND	U	10	1.0	1	05/29/08	05/29/08	JWG0802030	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Chlorobenzene	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Chloroethane	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Chloroform	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
Chloromethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
Dibromochloromethane	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Dibromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Ethylbenzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	

Comments:

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Collected:** 05/21/2008  
**Date Received:** 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-18C  
**Lab Code:** J0802436-009  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/29/08	05/29/08	JWG0802030	
m,p-Xylenes	ND	U	2.0	0.47	1	05/29/08	05/29/08	JWG0802030	
Methylene Chloride	ND	U	5.0	0.51	1	05/29/08	05/29/08	JWG0802030	
o-Xylene	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Styrene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/29/08	05/29/08	JWG0802030	
Toluene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/29/08	05/29/08	JWG0802030	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Vinyl Acetate	ND	U	10	0.73	1	05/29/08	05/29/08	JWG0802030	
Vinyl Chloride	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	101	71-122	05/29/08	Acceptable
4-Bromofluorobenzene	93	75-120	05/29/08	Acceptable
Dibromofluoromethane	96	82-116	05/29/08	Acceptable
Toluene-d8	110	88-117	05/29/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802436  
 Date Collected: 05/21/2008  
 Date Received: 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: DUP-2  
 Lab Code: J0802436-010  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/29/08	05/29/08	JWG0802030	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/29/08	05/29/08	JWG0802030	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
2-Butanone (MEK)	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
2-Hexanone	ND	U	25	0.54	1	05/29/08	05/29/08	JWG0802030	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/29/08	05/29/08	JWG0802030	
Acetone	ND	U	50	1.7	1	05/29/08	05/29/08	JWG0802030	
Acrylonitrile	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
Benzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Bromochloromethane	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Bromodichloromethane	ND	U	1.0	0.15	1	05/29/08	05/29/08	JWG0802030	
Bromoform	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Bromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Carbon Disulfide	ND	U	10	1.0	1	05/29/08	05/29/08	JWG0802030	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Chlorobenzene	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Chloroethane	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Chloroform	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
Chloromethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
Dibromochloromethane	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Dibromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Ethylbenzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802436  
 Date Collected: 05/21/2008  
 Date Received: 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: DUP-2  
 Lab Code: J0802436-010  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/29/08	05/29/08	JWG0802030	
m,p-Xylenes	ND	U	2.0	0.47	1	05/29/08	05/29/08	JWG0802030	
Methylene Chloride	ND	U	5.0	0.51	1	05/29/08	05/29/08	JWG0802030	
o-Xylene	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Styrene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/29/08	05/29/08	JWG0802030	
<b>Toluene</b>	<b>8.3</b>		1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/29/08	05/29/08	JWG0802030	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Vinyl Acetate	ND	U	10	0.73	1	05/29/08	05/29/08	JWG0802030	
Vinyl Chloride	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	102	71-122	05/29/08	Acceptable
4-Bromofluorobenzene	93	75-120	05/29/08	Acceptable
Dibromofluoromethane	98	82-116	05/29/08	Acceptable
Toluene-d8	109	88-117	05/29/08	Acceptable

Comments:

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802436  
 Date Collected: 05/21/2008  
 Date Received: 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: TRIP BLANK  
 Lab Code: J0802436-011  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/29/08	05/29/08	JWG0802030	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/29/08	05/29/08	JWG0802030	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
2-Butanone (MEK)	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
2-Hexanone	ND	U	25	0.54	1	05/29/08	05/29/08	JWG0802030	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/29/08	05/29/08	JWG0802030	
Acetone	ND	U	50	1.7	1	05/29/08	05/29/08	JWG0802030	
Acrylonitrile	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
Benzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Bromochloromethane	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Bromodichloromethane	ND	U	1.0	0.15	1	05/29/08	05/29/08	JWG0802030	
<b>Bromoform</b>	<b>0.73</b>	<b>I</b>	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Bromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Carbon Disulfide	ND	U	10	1.0	1	05/29/08	05/29/08	JWG0802030	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Chlorobenzene	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Chloroethane	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Chloroform	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
Chloromethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
<b>Dibromochloromethane</b>	<b>0.65</b>	<b>I</b>	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Dibromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Ethylbenzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802436  
 Date Collected: 05/21/2008  
 Date Received: 05/22/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: TRIP BLANK  
 Lab Code: J0802436-011  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/29/08	05/29/08	JWG0802030	
m,p-Xylenes	ND	U	2.0	0.47	1	05/29/08	05/29/08	JWG0802030	
Methylene Chloride	ND	U	5.0	0.51	1	05/29/08	05/29/08	JWG0802030	
o-Xylene	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Styrene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/29/08	05/29/08	JWG0802030	
Toluene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/29/08	05/29/08	JWG0802030	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Vinyl Acetate	ND	U	10	0.73	1	05/29/08	05/29/08	JWG0802030	
Vinyl Chloride	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	101	71-122	05/29/08	Acceptable
4-Bromofluorobenzene	93	75-120	05/29/08	Acceptable
Dibromofluoromethane	96	82-116	05/29/08	Acceptable
Toluene-d8	111	88-117	05/29/08	Acceptable

Comments:

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802436

Date Collected: NA

Date Received: NA

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Method Blank  
 Lab Code: JWG0802030-4

Units: ug/L

Basis: NA

Extraction Method: EPA 5030B

Level: Low

Analysis Method: 8260B

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.17	1	05/29/08	05/29/08	JWG0802030	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethane	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
1,1-Dichloroethene	ND	U	1.0	0.27	1	05/29/08	05/29/08	JWG0802030	
1,2,3-Trichloropropane	ND	U	1.0	0.47	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.79	1	05/29/08	05/29/08	JWG0802030	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichlorobenzene	ND	U	1.0	0.34	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,2-Dichloropropane	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
1,4-Dichlorobenzene	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
2-Butanone (MEK)	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
2-Hexanone	ND	U	25	0.54	1	05/29/08	05/29/08	JWG0802030	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.67	1	05/29/08	05/29/08	JWG0802030	
Acetone	ND	U	50	1.7	1	05/29/08	05/29/08	JWG0802030	
Acrylonitrile	ND	U	10	0.77	1	05/29/08	05/29/08	JWG0802030	
Benzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Bromochloromethane	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Bromodichloromethane	ND	U	1.0	0.15	1	05/29/08	05/29/08	JWG0802030	
Bromoform	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Bromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Carbon Disulfide	ND	U	10	1.0	1	05/29/08	05/29/08	JWG0802030	
Carbon Tetrachloride	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Chlorobenzene	ND	U	1.0	0.19	1	05/29/08	05/29/08	JWG0802030	
Chloroethane	ND	U	1.0	0.24	1	05/29/08	05/29/08	JWG0802030	
Chloroform	ND	U	1.0	0.18	1	05/29/08	05/29/08	JWG0802030	
Chloromethane	ND	U	1.0	0.21	1	05/29/08	05/29/08	JWG0802030	
cis-1,2-Dichloroethene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
cis-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
Dibromochloromethane	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Dibromomethane	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	
Ethylbenzene	ND	U	1.0	0.20	1	05/29/08	05/29/08	JWG0802030	

Comments:



**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Collected:** NA  
**Date Received:** NA

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank  
**Lab Code:** JWG0802030-4  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Iodomethane (Methyl Iodide)	ND	U	5.0	0.75	1	05/29/08	05/29/08	JWG0802030	
m,p-Xylenes	ND	U	2.0	0.47	1	05/29/08	05/29/08	JWG0802030	
Methylene Chloride	ND	U	5.0	0.51	1	05/29/08	05/29/08	JWG0802030	
o-Xylene	ND	U	1.0	0.25	1	05/29/08	05/29/08	JWG0802030	
Styrene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
Tetrachloroethene (PCE)	ND	U	1.0	0.44	1	05/29/08	05/29/08	JWG0802030	
Toluene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,2-Dichloroethene	ND	U	1.0	0.22	1	05/29/08	05/29/08	JWG0802030	
trans-1,3-Dichloropropene	ND	U	1.0	0.14	1	05/29/08	05/29/08	JWG0802030	
trans-1,4-Dichloro-2-butene	ND	U	20	0.60	1	05/29/08	05/29/08	JWG0802030	
Trichloroethene (TCE)	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	
Trichlorofluoromethane	ND	U	1.0	0.26	1	05/29/08	05/29/08	JWG0802030	
Vinyl Acetate	ND	U	10	0.73	1	05/29/08	05/29/08	JWG0802030	
Vinyl Chloride	ND	U	1.0	0.23	1	05/29/08	05/29/08	JWG0802030	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	105	71-122	05/29/08	Acceptable
4-Bromofluorobenzene	98	75-120	05/29/08	Acceptable
Dibromofluoromethane	103	82-116	05/29/08	Acceptable
Toluene-d8	115	88-117	05/29/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Collected:** 05/21/2008  
**Date Received:** 05/22/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-16A  
**Lab Code:** J0802436-001  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/28/08	JWG0801944	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/28/08	JWG0801944	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	115	77-150	05/28/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Collected:** 05/21/2008  
**Date Received:** 05/22/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-16B  
**Lab Code:** J0802436-002  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/28/08	JWG0801944	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/28/08	JWG0801944	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	114	77-150	05/28/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Collected:** 05/21/2008  
**Date Received:** 05/22/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-16C  
**Lab Code:** J0802436-003  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/28/08	JWG0801944	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/28/08	JWG0801944	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	115	77-150	05/28/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Collected:** 05/21/2008  
**Date Received:** 05/22/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-17A  
**Lab Code:** J0802436-004  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/28/08	JWG0801944	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/28/08	JWG0801944	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	114	77-150	05/28/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Collected:** 05/21/2008  
**Date Received:** 05/22/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-17B  
**Lab Code:** J0802436-005  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/28/08	JWG0801945	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/28/08	JWG0801945	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	118	77-150	05/28/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Collected:** 05/21/2008  
**Date Received:** 05/22/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-17C  
**Lab Code:** J0802436-006  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/28/08	JWG0801945	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/28/08	JWG0801945	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	115	77-150	05/28/08	Acceptable

Comments: \_\_\_\_\_

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Collected:** 05/21/2008  
**Date Received:** 05/22/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-18A  
**Lab Code:** J0802436-007  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/29/08	JWG0801945	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/29/08	JWG0801945	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	118	77-150	05/29/08	Acceptable

Comments: \_\_\_\_\_



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Collected:** 05/21/2008  
**Date Received:** 05/22/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-18B  
**Lab Code:** J0802436-008  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/29/08	JWG0801945	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/29/08	JWG0801945	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	116	77-150	05/29/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Collected:** 05/21/2008  
**Date Received:** 05/22/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-18C  
**Lab Code:** J0802436-009  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/29/08	JWG0801945	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/29/08	JWG0801945	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	116	77-150	05/29/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Collected:** 05/21/2008  
**Date Received:** 05/22/2008

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** DUP-2  
**Lab Code:** J0802436-010  
**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/29/08	JWG0801945	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/29/08	JWG0801945	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	119	77-150	05/29/08	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Collected:** NA  
**Date Received:** NA

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** Method Blank **Units:** ug/L  
**Lab Code:** JWG0801944-3 **Basis:** NA  
**Extraction Method:** METHOD **Level:** Low  
**Analysis Method:** 8011

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/28/08	JWG0801944	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/28/08	JWG0801944	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	131	77-150	05/28/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Collected:** NA  
**Date Received:** NA

## 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** Method Blank **Units:** ug/L  
**Lab Code:** JWG0801945-3 **Basis:** NA  
**Extraction Method:** METHOD **Level:** Low  
**Analysis Method:** 8011

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.020	0.0070	1	05/23/08	05/28/08	JWG0801945	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	05/23/08	05/28/08	JWG0801945	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	127	77-150	05/28/08	Acceptable

Comments: \_\_\_\_\_

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** 5/21/2008  
**Date Received:** 5/22/2008

### Total Metals

**Sample Name:** MW-16A  
**Lab Code:** J0802436-001

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/23/2008	06/08/2008	0.48	i
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	0.58	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/23/2008	06/08/2008	19	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/23/2008	06/08/2008	2.3	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	0.48	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	0.64	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/23/2008	05/27/2008	859	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	1.1	
Mercury	METHOD	7470A	0.50	0.08	1.0	06/05/2008	06/05/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	1.1	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/23/2008	06/08/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/23/2008	06/08/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/23/2008	06/08/2008	5.2	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/23/2008	06/08/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** 5/21/2008  
**Date Received:** 5/22/2008

### Total Metals

**Sample Name:** MW-16B  
**Lab Code:** J0802436-002

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/23/2008	06/08/2008	1.1	i
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	1.00	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/23/2008	06/08/2008	213	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	0.39	i
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	0.24	i
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/23/2008	06/08/2008	20	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	1.1	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	2.8	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/23/2008	05/27/2008	3800	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	28	
Mercury	METHOD	7470A	0.50	0.08	1.0	06/05/2008	06/05/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	4.8	
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/23/2008	06/08/2008	4.0	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/23/2008	06/08/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/23/2008	06/08/2008	20	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/23/2008	06/08/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** 5/21/2008  
**Date Received:** 5/22/2008

### Total Metals

**Sample Name:** MW-16C  
**Lab Code:** J0802436-003

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/23/2008	06/08/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	0.48	i
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/23/2008	06/08/2008	23	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/23/2008	06/08/2008	2.1	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/23/2008	05/27/2008	1790	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	0.23	i
Mercury	METHOD	7470A	0.50	0.08	1.0	06/05/2008	06/05/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	0.44	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/23/2008	06/08/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/23/2008	06/08/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/23/2008	06/08/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/23/2008	06/08/2008	U	



## COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** 5/21/2008  
**Date Received:** 5/22/2008

## Total Metals

**Sample Name:** MW-17A  
**Lab Code:** J0802436-004

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/23/2008	06/08/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	0.50	i
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/23/2008	06/08/2008	15	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/23/2008	06/08/2008	1.8	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	0.37	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/23/2008	05/27/2008	776	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	0.28	i
Mercury	METHOD	7470A	0.50	0.08	1.0	06/05/2008	06/05/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	0.86	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/23/2008	06/08/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/23/2008	06/08/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/23/2008	06/08/2008	4.2	i
Zinc	EPA 3020A	6020	10	4.0	1.0	05/23/2008	06/08/2008	4.1	i

## COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** 5/21/2008  
**Date Received:** 5/22/2008

## Total Metals

**Sample Name:** MW-17B  
**Lab Code:** J0802436-005

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/23/2008	06/08/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	0.27	i
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/23/2008	06/08/2008	53	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/23/2008	06/08/2008	4.3	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	0.32	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	0.96	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/23/2008	05/27/2008	2040	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	3.0	
Mercury	METHOD	7470A	0.50	0.08	1.0	06/05/2008	06/05/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	0.94	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/23/2008	06/08/2008	0.81	i
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/23/2008	06/08/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/23/2008	06/08/2008	5.0	i
Zinc	EPA 3020A	6020	10	4.0	1.0	05/23/2008	06/08/2008	5.0	i

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** 5/21/2008  
**Date Received:** 5/22/2008

### Total Metals

**Sample Name:** MW-17C  
**Lab Code:** J0802436-006

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/23/2008	06/08/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	0.35	i
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/23/2008	06/08/2008	20	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/23/2008	06/08/2008	2.7	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/23/2008	05/27/2008	1300	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	06/05/2008	06/05/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	0.46	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/23/2008	06/08/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/23/2008	06/08/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/23/2008	06/08/2008	2.3	i
Zinc	EPA 3020A	6020	10	4.0	1.0	05/23/2008	06/08/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** 5/21/2008  
**Date Received:** 5/22/2008

### Total Metals

**Sample Name:** MW-18A  
**Lab Code:** J0802436-007

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/23/2008	06/08/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	U	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/23/2008	06/08/2008	5.7	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/23/2008	06/08/2008	1.9	i
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	0.26	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	0.41	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/23/2008	05/27/2008	696	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	1.0	
Mercury	METHOD	7470A	0.50	0.08	1.0	06/05/2008	06/05/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	0.82	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/23/2008	06/08/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/23/2008	06/08/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/23/2008	06/08/2008	U	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/23/2008	06/08/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** 5/21/2008  
**Date Received:** 5/22/2008

### Total Metals

**Sample Name:** MW-18B  
**Lab Code:** J0802436-008

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/23/2008	06/08/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	0.51	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/23/2008	06/08/2008	15	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/23/2008	06/08/2008	2.0	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	0.76	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/23/2008	05/27/2008	731	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	0.58	i
Mercury	METHOD	7470A	0.50	0.08	1.0	06/05/2008	06/05/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	0.34	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/23/2008	06/08/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/23/2008	06/08/2008	0.14	i
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/23/2008	06/08/2008	2.1	i
Zinc	EPA 3020A	6020	10	4.0	1.0	05/23/2008	06/08/2008	U	

## COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** 5/21/2008  
**Date Received:** 5/22/2008

## Total Metals

**Sample Name:** MW-18C  
**Lab Code:** J0802436-009

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/23/2008	06/08/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	0.62	
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/23/2008	06/08/2008	77	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	0.36	i
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/23/2008	06/08/2008	9.1	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	0.46	i
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	0.61	i
Iron	EPA 3010A	6010B	50	4.0	1.0	05/23/2008	05/27/2008	2000	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	1.5	
Mercury	METHOD	7470A	0.50	0.08	1.0	06/05/2008	06/05/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	1.8	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/23/2008	06/08/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/23/2008	06/08/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/23/2008	06/08/2008	8.3	
Zinc	EPA 3020A	6020	10	4.0	1.0	05/23/2008	06/08/2008	4.4	i

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** 5/21/2008  
**Date Received:** 5/22/2008

### Total Metals

**Sample Name:** DUP-2  
**Lab Code:** J0802436-010

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.40	1.0	05/23/2008	06/08/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	0.37	i
Barium	EPA 3020A	6020	2.0	0.60	1.0	05/23/2008	06/08/2008	14	
Beryllium	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	U	
Chromium	EPA 3020A	6020	2.0	0.80	1.0	05/23/2008	06/08/2008	2.0	
Cobalt	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Copper	EPA 3020A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	U	
Iron	EPA 3010A	6010B	50	4.0	1.0	05/23/2008	05/27/2008	668	
Lead	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	0.53	i
Mercury	METHOD	7470A	0.50	0.08	1.0	06/05/2008	06/05/2008	U	
Nickel	EPA 3020A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	0.36	i
Selenium	EPA 3020A	6020	2.0	0.70	1.0	05/23/2008	06/08/2008	U	
Silver	EPA 3020A	6020	0.50	0.080	1.0	05/23/2008	06/08/2008	U	
Thallium	EPA 3020A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/23/2008	06/08/2008	2.2	i
Zinc	EPA 3020A	6020	10	4.0	1.0	05/23/2008	06/08/2008	4.9	i

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** N/A  
**Date Received:** N/A

### Total Metals

**Sample Name:** Method Blank  
**Lab Code:** MB2-0523

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3020A	6020	2.0	0.4	1.0	05/23/2008	06/08/2008	U	
Arsenic	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	U	
Barium	EPA 3020A	6020	2.0	0.6	1.0	05/23/2008	06/08/2008	U	
Beryllium	EPA 3020A	6020	1.0	0.2	1.0	05/23/2008	06/08/2008	U	
Cadmium	EPA 3020A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	U	
Chromium	EPA 3020A	6020	2.0	0.8	1.0	05/23/2008	06/08/2008	U	
Cobalt	EPA 3020A	6020	1.0	0.2	1.0	05/23/2008	06/08/2008	U	
Copper	EPA 3020A	6020	2.0	0.3	1.0	05/23/2008	06/08/2008	U	
Iron	EPA 3010A	6010B	50.0	4.0	1.0	05/23/2008	05/27/2008	U	
Lead	EPA 3020A	6020	1.0	0.2	1.0	05/23/2008	06/08/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	06/05/2008	06/05/2008	U	
Nickel	EPA 3020A	6020	2.0	0.3	1.0	05/23/2008	06/08/2008	U	
Selenium	EPA 3020A	6020	2.0	0.7	1.0	05/23/2008	06/08/2008	U	
Silver	EPA 3020A	6020	0.50	0.08	1.0	05/23/2008	06/08/2008	U	
Thallium	EPA 3020A	6020	1.0	0.2	1.0	05/23/2008	06/08/2008	U	
Vanadium	EPA 3020A	6020	5.0	2.0	1.0	05/23/2008	06/08/2008	U	
Zinc	EPA 3020A	6020	10.0	4.0	1.0	05/23/2008	06/08/2008	U	



# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** 05/21/2008  
**Date Received:** 05/22/2008

### Total Metals Sodium

**Prep Method:** EPA 3010A  
**Analysis Method:** 6010B  
**Test Notes:**

**Units:** mg/L  
**Basis:** N/A

Sample Name:	Lab Code:	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MW-16A	J0802436-001	0.50	0.02	1.0	05/23/2008	05/27/2008	8.5	
MW-16B	J0802436-002	0.50	0.02	1.0	05/23/2008	05/27/2008	8.7	
MW-16C	J0802436-003	0.50	0.02	1.0	05/23/2008	05/27/2008	11	
MW-17A	J0802436-004	0.50	0.02	1.0	05/23/2008	05/27/2008	10	
MW-17B	J0802436-005	0.50	0.02	1.0	05/23/2008	05/27/2008	12	
MW-17C	J0802436-006	0.50	0.02	1.0	05/23/2008	05/27/2008	12	
MW-18A	J0802436-007	0.50	0.02	1.0	05/23/2008	05/27/2008	6.4	
MW-18B	J0802436-008	0.50	0.02	1.0	05/23/2008	05/27/2008	16	
MW-18C	J0802436-009	0.50	0.02	1.0	05/23/2008	05/27/2008	12	
DUP-2	J0802436-010	0.50	0.02	1.0	05/23/2008	05/27/2008	16	
Method Blank	MB4-0523	0.50	0.02	1.0	05/23/2008	05/27/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** 5/21/2008  
**Date Received:** 5/22/2008

### Dissolved Metals

**Sample Name:** MW-16B  
**Lab Code:** J0802436-002

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3005A	6020	2.0	0.40	1.0	05/23/2008	06/08/2008	U	
Arsenic	EPA 3005A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	0.38	i
Barium	EPA 3005A	6020	2.0	0.60	1.0	05/23/2008	06/09/2008	13	
Beryllium	EPA 3005A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Cadmium	EPA 3005A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	U	
Chromium	EPA 3005A	6020	2.0	0.80	1.0	05/23/2008	06/08/2008	1.3	i
Cobalt	EPA 3005A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Copper	EPA 3005A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	0.30	i
Iron	EPA 3005A	6010B	50	4.0	1.0	05/27/2008	05/27/2008	1170	
Lead	EPA 3005A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/30/2008	05/30/2008	U	
Nickel	EPA 3005A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	U	
Selenium	EPA 3005A	6020	2.0	0.70	1.0	05/23/2008	06/08/2008	U	
Silver	EPA 3005A	6020	0.50	0.080	1.0	05/23/2008	06/08/2008	U	
Thallium	EPA 3005A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Vanadium	EPA 3005A	6020	5.0	2.0	1.0	05/23/2008	06/08/2008	U	
Zinc	EPA 3005A	6020	10	4.0	1.0	05/23/2008	06/09/2008	U	

## COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** 5/21/2008  
**Date Received:** 5/22/2008

## Dissolved Metals

**Sample Name:** MW-17B  
**Lab Code:** J0802436-005

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3005A	6020	2.0	0.40	1.0	05/23/2008	06/08/2008	U	
Arsenic	EPA 3005A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	0.54	
Barium	EPA 3005A	6020	2.0	0.60	1.0	05/23/2008	06/09/2008	28	
Beryllium	EPA 3005A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Cadmium	EPA 3005A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	U	
Chromium	EPA 3005A	6020	2.0	0.80	1.0	05/23/2008	06/08/2008	1.0	i
Cobalt	EPA 3005A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	0.27	i
Copper	EPA 3005A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	U	
Iron	EPA 3005A	6010B	50	4.0	1.0	05/27/2008	05/27/2008	1760	
Lead	EPA 3005A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/30/2008	05/30/2008	U	
Nickel	EPA 3005A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	0.51	i
Selenium	EPA 3005A	6020	2.0	0.70	1.0	05/23/2008	06/08/2008	U	
Silver	EPA 3005A	6020	0.50	0.080	1.0	05/23/2008	06/08/2008	U	
Thallium	EPA 3005A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Vanadium	EPA 3005A	6020	5.0	2.0	1.0	05/23/2008	06/08/2008	U	
Zinc	EPA 3005A	6020	10	4.0	1.0	05/23/2008	06/09/2008	32	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** 5/21/2008  
**Date Received:** 5/22/2008

## Dissolved Metals

**Sample Name:** MW-18C  
**Lab Code:** J0802436-009

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3005A	6020	2.0	0.40	1.0	05/23/2008	06/08/2008	U	
Arsenic	EPA 3005A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	0.37	i
Barium	EPA 3005A	6020	2.0	0.60	1.0	05/23/2008	06/09/2008	25	
Beryllium	EPA 3005A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Cadmium	EPA 3005A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	U	
Chromium	EPA 3005A	6020	2.0	0.80	1.0	05/23/2008	06/08/2008	1.3	i
Cobalt	EPA 3005A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Copper	EPA 3005A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	2.9	
Iron	EPA 3005A	6010B	50	4.0	1.0	05/27/2008	05/27/2008	1210	
Lead	EPA 3005A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/30/2008	05/30/2008	U	
Nickel	EPA 3005A	6020	2.0	0.30	1.0	05/23/2008	06/08/2008	0.46	i
Selenium	EPA 3005A	6020	2.0	0.70	1.0	05/23/2008	06/08/2008	U	
Silver	EPA 3005A	6020	0.50	0.080	1.0	05/23/2008	06/08/2008	U	
Thallium	EPA 3005A	6020	1.0	0.20	1.0	05/23/2008	06/08/2008	U	
Vanadium	EPA 3005A	6020	5.0	2.0	1.0	05/23/2008	06/08/2008	U	
Zinc	EPA 3005A	6020	10	4.0	1.0	05/23/2008	06/09/2008	9.9	i

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** N/A  
**Date Received:** N/A

### Dissolved Metals

**Sample Name:** Method Blank  
**Lab Code:** MB5-0523

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Antimony	EPA 3005A	6020	2.0	0.4	1.0	05/23/2008	06/08/2008	U	
Arsenic	EPA 3005A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	U	
Barium	EPA 3005A	6020	2.0	0.6	1.0	05/23/2008	06/09/2008	U	
Beryllium	EPA 3005A	6020	1.0	0.2	1.0	05/23/2008	06/08/2008	U	
Cadmium	EPA 3005A	6020	0.50	0.20	1.0	05/23/2008	06/08/2008	U	
Chromium	EPA 3005A	6020	2.0	0.8	1.0	05/23/2008	06/08/2008	U	
Cobalt	EPA 3005A	6020	1.0	0.2	1.0	05/23/2008	06/08/2008	U	
Copper	EPA 3005A	6020	2.0	0.3	1.0	05/23/2008	06/08/2008	U	
Iron	EPA 3005A	6010B	50	4.0	1.0	05/27/2008	05/27/2008	19	i
Lead	EPA 3005A	6020	1.0	0.2	1.0	05/23/2008	06/08/2008	U	
Mercury	METHOD	7470A	0.50	0.08	1.0	05/30/2008	05/30/2008	U	
Nickel	EPA 3005A	6020	2.0	0.3	1.0	05/23/2008	06/08/2008	U	
Selenium	EPA 3005A	6020	2.0	0.7	1.0	05/23/2008	06/08/2008	U	
Silver	EPA 3005A	6020	0.5	0.1	1.0	05/23/2008	06/08/2008	U	
Thallium	EPA 3005A	6020	1.0	0.2	1.0	05/23/2008	06/08/2008	U	
Vanadium	EPA 3005A	6020	5.0	2.0	1.0	05/23/2008	06/08/2008	U	
Zinc	EPA 3005A	6020	10.0	4.0	1.0	05/23/2008	06/09/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC

## Analytical Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** 05/21/2008  
**Date Received:** 05/22/2008

### Dissolved Metals Sodium

**Prep Method:** EPA 3005A  
**Analysis Method:** 6010B  
**Test Notes:**

**Units:** mg/L  
**Basis:** N/A

Sample Name:	Lab Code:	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MW-16B	J0802436-002	0.50	0.02	1.0	05/27/2008	05/27/2008	8.7	
MW-17B	J0802436-005	0.50	0.02	1.0	05/27/2008	05/27/2008	12	
MW-18C	J0802436-009	0.50	0.02	1.0	05/27/2008	05/27/2008	12	
Method Blank	MB5-0527	0.50	0.02	1.0	05/27/2008	05/27/2008	U	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802436  
**Date Collected :** 05/21/08  
**Date Received :** 05/22/08

## Inorganic Parameters

**Sample Name :** MW-16A  
**Lab Code :** J0802436-001  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/28/08 09:14	0.46	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/22/08 13:54	11	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/22/08 15:39	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/28/08 09:00	100	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802436  
**Date Collected :** 05/21/08  
**Date Received :** 05/22/08

## Inorganic Parameters

**Sample Name :** MW-16B  
**Lab Code :** J0802436-002  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/28/08 09:14	0.28	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/22/08 13:54	15	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/22/08 15:54	0.18	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/28/08 09:00	190	



# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802436  
**Date Collected :** 05/21/08  
**Date Received :** 05/22/08

## Inorganic Parameters

**Sample Name :** MW-16C  
**Lab Code :** J0802436-003  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/28/08 09:14	0.21	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/22/08 13:54	22	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/22/08 16:13	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/28/08 09:00	69	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802436  
**Date Collected :** 05/21/08  
**Date Received :** 05/22/08

## Inorganic Parameters

**Sample Name :** MW-17A  
**Lab Code :** J0802436-004  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/28/08 09:14	0.62	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/22/08 13:54	12	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/22/08 16:58	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/28/08 09:00	95	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802436  
**Date Collected :** 05/21/08  
**Date Received :** 05/22/08

## Inorganic Parameters

**Sample Name :** MW-17B  
**Lab Code :** J0802436-005  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/28/08 09:14	0.28	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/22/08 13:54	229	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/22/08 17:13	0.17	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/28/08 09:00	88	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802436  
**Date Collected :** 05/21/08  
**Date Received :** 05/22/08

## Inorganic Parameters

**Sample Name :** MW-17C  
**Lab Code :** J0802436-006  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/28/08 09:14	0.23	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/22/08 13:54	19	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/22/08 17:31	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1.	05/28/08 09:00	84	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802436  
**Date Collected :** 05/21/08  
**Date Received :** 05/22/08

## Inorganic Parameters

**Sample Name :** MW-18A  
**Lab Code :** J0802436-007  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/28/08 09:14	0.25	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/22/08 13:54	12	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/22/08 17:46	0.17	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/28/08 09:00	86	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802436  
**Date Collected :** 05/21/08  
**Date Received :** 05/22/08

## Inorganic Parameters

**Sample Name :** MW-18B  
**Lab Code :** J0802436-008  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/28/08 09:14	0.12	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/22/08 13:54	27	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/22/08 18:01	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/28/08 09:00	56	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802436  
**Date Collected :** 05/21/08  
**Date Received :** 05/22/08

## Inorganic Parameters

**Sample Name :** MW-18C  
**Lab Code :** J0802436-009  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/28/08 09:14	0.26	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/22/08 13:54	21	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/22/08 18:46	0.17	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/28/08 09:00	86	

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802436  
**Date Collected :** 05/21/08  
**Date Received :** 05/22/08

## Inorganic Parameters

**Sample Name :** DUP-2  
**Lab Code :** J0802436-010  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MRL</b>	<b>MDL</b>	<b>Dilution Factor</b>	<b>Date/Time Analyzed</b>	<b>Result</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/28/08 09:14	0.12	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/22/08 13:54	26	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/22/08 19:01	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/28/08 09:00	59	



# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802436  
**Date Collected :** NA  
**Date Received :** NA

## Inorganic Parameters

**Sample Name :** Method Blank  
**Lab Code :** J0802436-MB  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.02	1	05/28/08 09:14	U	
Chloride	mg/L (ppm)	300.0	0.2	0.068	1	05/22/08 13:54	U	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.064	1	05/22/08 13:54	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	10	4.8	1	05/28/08 09:00	U	

Client: GeoSyntec Consultants  
Project: JED Disposal Facility/FQ1512-01  
Sample Matrix: Water

Service Request: J0802436

Surrogate Recovery Summary  
Appendix I Volatile Organic Compounds by GC/MS

Extraction Method: EPA 5030B  
Analysis Method: 8260B

Units: PERCENT  
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>	<u>Sur4</u>
MW-16A	J0802436-001	100	95	98	110
MW-16B	J0802436-002	100	94	97	109
MW-16C	J0802436-003	100	94	96	110
MW-17A	J0802436-004	100	95	97	110
MW-17B	J0802436-005	100	92	97	111
MW-17C	J0802436-006	100	93	96	109
MW-18A	J0802436-007	101	93	97	109
MW-18B	J0802436-008	102	95	95	110
MW-18C	J0802436-009	101	93	96	110
DUP-2	J0802436-010	102	93	98	109
TRIP BLANK	J0802436-011	101	93	96	111
Method Blank	JWG0802030-4	105	98	103	115
MW-17AMS	JWG0802030-1	103	95	96	107
MW-17ADMS	JWG0802030-2	103	93	98	108
Lab Control Sample	JWG0802030-3	107	98	104	114

**Surrogate Recovery Control Limits (%)**

Sur1 = 1,2-Dichloroethane-d4	71-122
Sur2 = 4-Bromofluorobenzene	75-120
Sur3 = Dibromofluoromethane	82-116
Sur4 = Toluene-d8	88-117

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Extracted:** 05/29/2008  
**Date Analyzed:** 05/30/2008

**Matrix Spike/Duplicate Matrix Spike Summary**  
**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-17A  
**Lab Code:** J0802436-004  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0802030

Analyte Name	Sample Result	MW-17AMS JWG0802030-1 Matrix Spike			MW-17ADMS JWG0802030-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
1,1,1,2-Tetrachloroethane	ND	19.1	20.0	96	20.0	20.0	100	82-118	5	30
1,1,1-Trichloroethane (TCA)	ND	21.8	20.0	109	23.5	20.0	118	76-130	7	30
1,1,2,2-Tetrachloroethane	ND	21.0	20.0	105	21.7	20.0	109	72-127	3	30
1,1,2-Trichloroethane	ND	20.3	20.0	102	21.4	20.0	107	77-124	5	30
1,1-Dichloroethane	ND	21.3	20.0	107	22.1	20.0	110	78-125	3	30
1,1-Dichloroethene	ND	22.8	20.0	114	23.0	20.0	115	79-133	1	30
1,2,3-Trichloropropane	ND	21.5	20.0	108	21.3	20.0	106	76-123	1	30
1,2-Dibromo-3-chloropropane (DBCP)	ND	19.4	20.0	97	19.9	20.0	99	54-120	3	30
1,2-Dibromoethane (EDB)	ND	20.9	20.0	104	21.6	20.0	108	81-119	3	30
1,2-Dichlorobenzene	ND	18.9	20.0	95	19.8	20.0	99	77-116	5	30
1,2-Dichloroethane (EDC)	ND	21.5	20.0	107	21.9	20.0	109	74-126	2	30
1,2-Dichloropropane	ND	21.1	20.0	106	22.1	20.0	110	77-122	4	30
1,4-Dichlorobenzene	ND	19.3	20.0	97	20.2	20.0	101	75-115	4	30
2-Butanone (MEK)	ND	112	100	112	113	100	113	63-134	0	30
2-Hexanone	ND	115	100	115	113	100	113	63-142	2	30
4-Methyl-2-pentanone (MIBK)	ND	115	100	115	113	100	113	65-138	1	30
Acetone	ND	114	100	114	114	100	114	56-139	0	30
Acrylonitrile	ND	107	100	107	106	100	106	68-131	1	30
Benzene	ND	20.4	20.0	102	21.5	20.0	107	78-123	5	30
Bromochloromethane	ND	21.0	20.0	105	22.1	20.0	111	80-124	5	30
Bromodichloromethane	ND	20.9	20.0	104	21.6	20.0	108	79-125	3	30
Bromoform	ND	18.9	20.0	94	19.2	20.0	96	70-129	2	30
Bromomethane	ND	19.9	20.0	99	22.5	20.0	113	78-129	12	30
Carbon Disulfide	ND	97.2	100	97	104	100	104	71-146	7	30
Carbon Tetrachloride	ND	21.6	20.0	108	23.1	20.0	115	76-131	7	30
Chlorobenzene	ND	19.3	20.0	97	20.6	20.0	103	81-120	6	30
Chloroethane	ND	21.2	20.0	106	23.4	20.0	117	76-129	10	30
Chloroform	ND	21.7	20.0	109	22.9	20.0	115	81-124	5	30
Chloromethane	ND	24.5	20.0	122	26.6	20.0	133	73-139	8	30
cis-1,2-Dichloroethene	ND	21.2	20.0	106	22.3	20.0	111	75-127	5	30
cis-1,3-Dichloropropene	ND	19.6	20.0	98	20.7	20.0	103	77-117	5	30
Dibromochloromethane	ND	19.9	20.0	100	20.6	20.0	103	78-124	3	30
Dibromomethane	ND	22.2	20.0	111	22.8	20.0	114	78-124	3	30
Ethylbenzene	ND	20.2	20.0	101	21.8	20.0	109	87-122	7	30

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802436  
 Date Extracted: 05/29/2008  
 Date Analyzed: 05/30/2008

Matrix Spike/Duplicate Matrix Spike Summary  
 Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-17A  
 Lab Code: J0802436-004  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0802030

Analyte Name	Sample Result	MW-17AMS JWG0802030-1 Matrix Spike			MW-17ADMS JWG0802030-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Iodomethane (Methyl Iodide)	ND	84.3	100	84	88.5	100	88	74-134	5	30
m,p-Xylenes	ND	38.9	40.0	97	41.5	40.0	104	82-120	7	30
Methylene Chloride	ND	18.8	20.0	94	20.1	20.0	101	75-123	7	30
o-Xylene	ND	20.0	20.0	100	21.1	20.0	106	85-119	5	30
Styrene	ND	19.1	20.0	95	20.1	20.0	100	84-126	5	30
Tetrachloroethene (PCE)	ND	20.7	20.0	103	22.1	20.0	111	79-123	7	30
Toluene	ND	20.7	20.0	103	21.8	20.0	109	86-119	5	30
trans-1,2-Dichloroethene	ND	21.4	20.0	107	22.6	20.0	113	76-125	5	30
trans-1,3-Dichloropropene	ND	19.5	20.0	98	20.7	20.0	104	75-120	6	30
trans-1,4-Dichloro-2-butene	ND	19.1	20.0	95	18.6	20.0	93	22-135	3	30
Trichloroethene (TCE)	ND	19.7	20.0	99	21.4	20.0	107	77-128	8	30
Trichlorofluoromethane	ND	22.5	20.0	112	24.6	20.0	123	81-133	9	30
Vinyl Acetate	ND	72.2	100	72	73.5	100	73	43-163	2	30
Vinyl Chloride	ND	26.0	20.0	130	28.4	20.0	142 *	78-141	9	30

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoSyntec Consultants  
 Project: JED Disposal Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802436  
 Date Extracted: 05/29/2008  
 Date Analyzed: 05/29/2008

Lab Control Spike Summary  
 Appendix I Volatile Organic Compounds by GC/MS

Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0802030

Lab Control Sample  
 JWG0802030-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	20.3	20.0	102	85-117
1,1,1-Trichloroethane (TCA)	21.7	20.0	109	79-124
1,1,2,2-Tetrachloroethane	20.6	20.0	103	83-120
1,1,2-Trichloroethane	21.1	20.0	106	86-114
1,1-Dichloroethane	20.6	20.0	103	80-128
1,1-Dichloroethene	20.3	20.0	102	78-130
1,2,3-Trichloropropane	21.5	20.0	108	83-123
1,2-Dibromo-3-chloropropane (DBCP)	20.5	20.0	103	62-123
1,2-Dibromoethane (EDB)	21.3	20.0	107	88-117
1,2-Dichlorobenzene	19.8	20.0	99	84-115
1,2-Dichloroethane (EDC)	20.9	20.0	105	80-124
1,2-Dichloropropane	20.5	20.0	102	79-123
1,4-Dichlorobenzene	20.2	20.0	101	83-113
2-Butanone (MEK)	102	100	102	73-127
2-Hexanone	101	100	101	71-138
4-Methyl-2-pentanone (MIBK)	102	100	102	72-136
Acetone	95.0	100	95	67-133
Acrylonitrile	96.7	100	97	77-127
Benzene	19.8	20.0	99	79-119
Bromochloromethane	21.9	20.0	110	79-129
Bromodichloromethane	20.3	20.0	101	81-123
Bromoform	19.6	20.0	98	68-129
Bromomethane	20.4	20.0	102	79-130
Carbon Disulfide	92.9	100	93	76-138
Carbon Tetrachloride	21.5	20.0	108	81-125
Chlorobenzene	20.1	20.0	101	86-113
Chloroethane	19.8	20.0	99	74-126
Chloroform	21.9	20.0	109	83-124
Chloromethane	22.2	20.0	111	67-135
cis-1,2-Dichloroethene	21.1	20.0	105	80-126
cis-1,3-Dichloropropene	20.9	20.0	105	86-123
Dibromochloromethane	20.6	20.0	103	82-121
Dibromomethane	22.3	20.0	111	83-123
Ethylbenzene	20.8	20.0	104	90-118
Iodomethane (Methyl Iodide)	85.9	100	86	68-134
m,p-Xylenes	40.3	40.0	101	86-121

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Extracted:** 05/29/2008  
**Date Analyzed:** 05/29/2008

**Lab Control Spike Summary**  
**Appendix I Volatile Organic Compounds by GC/MS**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0802030

Lab Control Sample  
JWG0802030-3  
Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Methylene Chloride	19.0	20.0	95	72-124
o-Xylene	20.4	20.0	102	89-119
Styrene	20.1	20.0	100	89-122
Tetrachloroethene (PCE)	22.1	20.0	110	80-121
Toluene	20.7	20.0	104	86-117
trans-1,2-Dichloroethene	20.6	20.0	103	77-124
trans-1,3-Dichloropropene	20.8	20.0	104	83-124
trans-1,4-Dichloro-2-butene	20.3	20.0	101	53-143
Trichloroethene (TCE)	20.7	20.0	104	76-124
Trichlorofluoromethane	21.7	20.0	108	74-134
Vinyl Acetate	87.7	100	88	61-148
Vinyl Chloride	22.8	20.0	114	78-132

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436

**Surrogate Recovery Summary**  
**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** PERCENT  
**Level:** Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
MW-16A	J0802436-001	115
MW-16B	J0802436-002	114
MW-16C	J0802436-003	115
MW-17A	J0802436-004	114
MW-17B	J0802436-005	118
MW-17C	J0802436-006	115
MW-18A	J0802436-007	118
MW-18B	J0802436-008	116
MW-18C	J0802436-009	116
DUP-2	J0802436-010	119
Method Blank	JWG0801944-3	131
Method Blank	JWG0801945-3	127
Lab Control Sample	JWG0801944-1	127
Duplicate Lab Control Sample	JWG0801944-2	126
Lab Control Sample	JWG0801945-1	125
Duplicate Lab Control Sample	JWG0801945-2	123

**Surrogate Recovery Control Limits (%)**

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Sur1 = 1,1,1,2-Tetrachloroethane 77-150

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Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Extracted:** 05/23/2008  
**Date Analyzed:** 05/28/2008

**Lab Control Spike/Duplicate Lab Control Spike Summary**  
**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0801944

Analyte Name	Lab Control Sample JWG0801944-1 Lab Control Spike			Duplicate Lab Control Sample JWG0801944-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Expected	%Rec	Result	Expected	%Rec			
1,2-Dibromoethane (EDB)	0.302	0.250	121	0.299	0.250	120	70-130	1	20
1,2-Dibromo-3-chloropropane (DBCP)	0.294	0.250	118	0.297	0.250	119	70-130	1	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



**Client:** GeoSyntec Consultants  
**Project:** JED Disposal Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802436  
**Date Extracted:** 05/23/2008  
**Date Analyzed:** 05/28/2008

**Lab Control Spike/Duplicate Lab Control Spike Summary**  
**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Extraction Method:** METHOD  
**Analysis Method:** 8011

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0801945

Analyte Name	Lab Control Sample JWG0801945-1 Lab Control Spike			Duplicate Lab Control Sample JWG0801945-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Expected	%Rec	Result	Expected	%Rec			
1,2-Dibromoethane (EDB)	0.305	0.250	122	0.296	0.250	118	70-130	3	20
1,2-Dibromo-3-chloropropane (DBCP)	0.291	0.250	116	0.290	0.250	116	70-130	0	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

## COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

Client: GeoSyntec Consultants  
 Project Name: JED Disposal Facility  
 Project Number: FQ1512-01  
 Matrix: WATER

Service Request: J0802436  
 Date Collected: 05/21/2008  
 Date Received: 05/22/2008  
 Date Extracted: 05/23/2008  
 Date Analyzed: 06/08/2008

Matrix Spike/Matrix Spike Duplicate Summary  
 Total Metals

Sample Name: MW-16A  
 Lab Code: J0802436-001

J0802436-001S

Units: ug/L  
 Basis: N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec	Result Notes
				MS	DMS		MS	DMS	MS	DMS	RPD	Acceptance Limits	
Antimony	EPA 3020	6020	2.0	50.0	50.0	0.5	50.5	50.1	100	99	1	75 - 125	
Arsenic	EPA 3020	6020	0.5	50.0	50.0	0.6	46.6	46.1	92	91	1	75 - 125	
Barium	EPA 3020	6020	2.0	50.0	50.0	19.2	66.8	68.4	95	98	2	75 - 125	
Beryllium	EPA 3020	6020	1.0	50.0	50.0	U	48.2	48.6	96	97	1	75 - 125	
Cadmium	EPA 3020	6020	0.5	50.0	50.0	0.2	47.5	48.0	95	96	1	75 - 125	
Chromium	EPA 3020	6020	2.0	50.0	50.0	2.3	50.8	51.4	97	98	1	75 - 125	
Cobalt	EPA 3020	6020	1.0	50.0	50.0	0.5	49.2	49.2	97	97	<1	75 - 125	
Copper	EPA 3020	6020	2.0	50.0	50.0	0.6	48.1	49.9	95	99	4	75 - 125	
Lead	EPA 3020	6020	1.0	50.0	50.0	1.1	50.8	52.3	99	102	3	75 - 125	
Nickel	EPA 3020	6020	2.0	50.0	50.0	1.1	49.9	50.9	98	100	2	75 - 125	
Selenium	EPA 3020	6020	2.0	50.0	50.0	U	42.8	44.2	86	88	3	75 - 125	
Silver	EPA 3020	6020	0.5	50.0	50.0	U	51.4	51.8	103	104	1	75 - 125	
Thallium	EPA 3020	6020	1.0	50.0	50.0	U	49.7	50.6	99	101	2	75 - 125	
Vanadium	EPA 3020	6020	5.0	50.0	50.0	5.2	53.9	54.3	97	98	1	75 - 125	
Zinc	EPA 3020	6020	10.0	100	100	U	92.6	93.3	93	93	1	75 - 125	

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** 05/21/2008  
**Date Received:** 05/22/2008  
**Date Extracted:** 05/23/2008  
**Date Analyzed:** 05/27/2008

### Matrix Spike/Matrix Spike Duplicate Summary Total Metals

**Sample Name:** MW-16B  
**Lab Code:** J0802436-002

J0802436-002S

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec Acceptance		Result Notes
				MS	DMS		MS	DMS	MS	DMS	RPD	Limits		
Iron	EPA 3010	6010B	50	2000	2000	3800	6930	6930	156	156	<1	75 - 125		N

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** N/A  
**Date Received:** N/A  
**Date Extracted:** 05/23/2008  
**Date Analyzed:** 06/08/2008

### Laboratory Control Sample Summary Total Metals

**Sample Name:** Lab Control Sample  
**Lab Code:** LCS2-0523

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	True Value	Results	Percent Recovery	CAS Percent	Result Notes
						Recovery Acceptance Limits	
Antimony	EPA 3020A	6020	50.0	49.0	98	80 - 120	
Arsenic	EPA 3020A	6020	50.0	45.9	92	80 - 120	
Barium	EPA 3020A	6020	50.0	48.3	97	80 - 120	
Beryllium	EPA 3020A	6020	50.0	47.7	95	80 - 120	
Cadmium	EPA 3020A	6020	50.0	47.2	94	80 - 120	
Chromium	EPA 3020A	6020	50.0	50.1	100	80 - 120	
Cobalt	EPA 3020A	6020	50.0	48.5	97	80 - 120	
Copper	EPA 3020A	6020	50.0	50.0	100	80 - 120	
Iron	EPA 3010A	6010B	2000	2050	102	80 - 120	
Lead	EPA 3020A	6020	50.0	50.2	100	80 - 120	
Mercury	METHOD	7470A	5.00	4.67	93	80 - 120	
Nickel	EPA 3020A	6020	50.0	50.0	100	80 - 120	
Selenium	EPA 3020A	6020	50.0	43.1	86	80 - 120	
Silver	EPA 3020A	6020	50.0	51.7	103	80 - 120	
Thallium	EPA 3020A	6020	50.0	49.7	99	80 - 120	
Vanadium	EPA 3020A	6020	50.0	49.9	100	80 - 120	
Zinc	EPA 3020A	6020	100	89.4	89	80 - 120	

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** 05/21/2008  
**Date Received:** 05/22/2008  
**Date Extracted:** 05/23/2008  
**Date Analyzed:** 05/27/2008

### Matrix Spike/Matrix Spike Duplicate Summary Total Metals

**Sample Name:** 02436-002  
**Lab Code:** 02436-002

02436-002S

**Units:** mg/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec Acceptance		Result Notes
				MS	DMS		MS	DMS	MS	DMS	RPD	Limits		
Sodium	EPA 3010	6010B	0.5	10.0	10.0	8.7	18.1	18.4	94	97	2	75 - 125		

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** N/A  
**Date Received:** N/A  
**Date Extracted:** 05/23/2008  
**Date Analyzed:** 05/27/2008

### Laboratory Control Sample Summary Total Metals

**Sample Name:** Lab Control Sample  
**Lab Code:** LCS4-0523

**Units:** mg/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	True Value	Results	Percent Recovery	CAS Percent	Result Notes
						Recovery Acceptance Limits	
Sodium	EPA 3010A	6010B	10.0	9.9	99	80 - 120	

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:**  
**Date Received:**  
**Date Extracted:** 05/23/2008  
**Date Analyzed:** 06/08/2008

### Matrix Spike/Matrix Spike Duplicate Summary Dissolved Metals

**Sample Name:** MW-16B  
**Lab Code:** J0802436-002

J0802436-002S

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery			% Rec	Result Notes
				MS	DMS		MS	DMS	MS	DMS	RPD	Acceptance Limits	
Antimony	EPA 3005	6020	2.0	50.0	50.0	U	53.1	52.9	106	106	<1	75 - 125	
Arsenic	EPA 3005	6020	0.5	50.0	50.0	0.4	52.8	53.4	105	106	1	75 - 125	
Barium	EPA 3005	6020	2.0	50.0	50.0	13.4	64.9	66.4	103	106	2	75 - 125	
Beryllium	EPA 3005	6020	1.0	50.0	50.0	U	49.5	49.9	99	100	1	75 - 125	
Cadmium	EPA 3005	6020	0.5	50.0	50.0	U	51.8	51.4	104	103	1	75 - 125	
Chromium	EPA 3005	6020	2.0	50.0	50.0	1.3	51.1	50.9	100	99	<1	75 - 125	
Cobalt	EPA 3005	6020	1.0	50.0	50.0	U	49.7	49.7	99	99	<1	75 - 125	
Copper	EPA 3005	6020	2.0	50.0	50.0	0.3	50.0	87.3	99	174	54	75 - 125	N
Lead	EPA 3005	6020	1.0	50.0	50.0	U	50.8	52.7	102	105	4	75 - 125	
Nickel	EPA 3005	6020	2.0	50.0	50.0	U	50.4	50.4	100	100	<1	75 - 125	
Selenium	EPA 3005	6020	2.0	50.0	50.0	U	49.5	49.9	99	100	1	75 - 125	
Silver	EPA 3005	6020	0.5	50.0	50.0	U	54.2	53.3	108	107	2	75 - 125	
Thallium	EPA 3005	6020	1.0	50.0	50.0	U	49.9	49.1	100	98	2	75 - 125	
Vanadium	EPA 3005	6020	5.0	50.0	50.0	U	51.9	51.3	104	103	1	75 - 125	
Zinc	EPA 3005	6020	10.0	100	100	U	107.0	132.0	107	132	21	75 - 125	N

# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** N/A  
**Date Received:** N/A  
**Date Extracted:** 05/23/2008  
**Date Analyzed:** 06/08/2008

### Laboratory Control Sample Summary Dissolved Metals

**Sample Name:** Lab Control Sample  
**Lab Code:** LCS-50523

**Units:** ug/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	True Value	Results	Percent Recovery	CAS Percent	Result Notes
						Recovery Acceptance Limits	
Antimony	EPA 3005A	6020	50.0	53.2	106	80 - 120	
Arsenic	EPA 3005A	6020	50.0	52.8	106	80 - 120	
Barium	EPA 3005A	6020	50.0	47.4	95	80 - 120	
Beryllium	EPA 3005A	6020	50.0	48.9	98	80 - 120	
Cadmium	EPA 3005A	6020	50.0	50.8	102	80 - 120	
Chromium	EPA 3005A	6020	50.0	49.6	99	80 - 120	
Cobalt	EPA 3005A	6020	50.0	50.3	101	80 - 120	
Copper	EPA 3005A	6020	50.0	52.5	105	80 - 120	
Iron	EPA 3005A	6010B	2000	2050	102	85 - 115	
Lead	EPA 3005A	6020	50.0	50.1	100	80 - 120	
Mercury	METHOD	7470A	5.00	5.47	109	80 - 120	
Nickel	EPA 3005A	6020	50.0	51.0	102	80 - 120	
Selenium	EPA 3005A	6020	50.0	52.1	104	80 - 120	
Silver	EPA 3005A	6020	50.0	54.0	108	80 - 120	
Thallium	EPA 3005A	6020	50.0	49.7	99	80 - 120	
Vanadium	EPA 3005A	6020	50.0	49.5	99	80 - 120	
Zinc	EPA 3005A	6020	100	99.0	99	80 - 120	



# COLUMBIA ANALYTICAL SERVICES, INC

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project Name:** JED Disposal Facility  
**Project Number:** FQ1512-01  
**Matrix:** WATER

**Service Request:** J0802436  
**Date Collected:** N/A  
**Date Received:** N/A  
**Date Extracted:** 05/27/2008  
**Date Analyzed:** 05/27/2008

### Laboratory Control Sample Summary Dissolved Metals

**Sample Name:** Lab Control Sample  
**Lab Code:** LCS5-0527

**Units:** mg/L  
**Basis:** N/A

Analyte	Prep Method	Analysis Method	True Value	Results	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Sodium	EPA 3005A	6010B	10.0	10.0	100	80 - 120	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802436  
**Date Collected :** 05/21/08  
**Date Received :** 05/22/08  
**Date Extracted :** NA  
**Date Analyzed :** 05/28/08

### Duplicate Summary Inorganic Parameters

**Sample Name :** MW-16A  
**Lab Code :** J0802436-001DUP  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</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	mg/L (ppm)	350.1	0.05	0.46	0.46	0.46	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : GeoSyntec Consultants  
Project Name : JED Disposal Facility  
Project Number : FQ1512-01  
Sample Matrix : WATER

Service Request : J0802436  
Date Collected : 05/21/08  
Date Received : 05/22/08  
Date Extracted : NA  
Date Analyzed : 05/28/08

Matrix Spike Summary  
Inorganic Parameters

Sample Name : MW-16A  
Lab Code : J0802436-001MS  
Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
								Percent Recovery Acceptance Limits	
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	5.00	0.46	5.20	95	90-110	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802436  
**Date Collected :** 05/21/08  
**Date Received :** 05/22/08  
**Date Extracted :** NA  
**Date Analyzed :** 05/22/08

### Duplicate Summary Inorganic Parameters

**Sample Name :** MW-18B  
**Lab Code :** J0802436-008DUP  
**Test Notes :**

Basis : NA

Analyte	Units	Analysis Method	MRL	Sample Result	Duplicate Sample		Relative Percent Difference	Result Notes
					Result	Average		
Chloride	mg/L (ppm)	300.0	0.2	27	27	27	<1	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	U	U	U	-	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802436  
**Date Collected :** 05/21/08  
**Date Received :** 05/22/08  
**Date Extracted :** NA  
**Date Analyzed :** 05/22/08

## Matrix Spike Summary Inorganic Parameters

**Sample Name :** MW-18B  
**Lab Code :** J0802436-008MS  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
								Percent Recovery Acceptance Limits	
Chloride	mg/L (ppm)	300.0	0.2	50.0	27	77.1	100	90-110	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	10	U	10.1	101	90-110	

# COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED Disposal Facility  
**Project Number :** FQ1512-01  
**Sample Matrix :** WATER

**Service Request :** J0802436  
**Date Collected :** NA  
**Date Received :** NA  
**Date Extracted :** NA  
**Date Analyzed :** 05/22-28/08

### Laboratory Control Sample Summary Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** J0802436-LCS  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	True Value	Result	Percent Recovery	CAS	Result Notes
						Percent Recovery Acceptance Limits	
Ammonia as Nitrogen	mg/L (ppm)	350.1	5.00	5.17	103	90-110	
Chloride	mg/L (ppm)	300.0	50.0	49.9	100	90-110	
Nitrate as Nitrogen	mg/L (ppm)	300.0	10	9.88	99	90-110	
Solids, Total Dissolved (TDS)	mg/L (ppm)	160.1	300	290	97	85-115	

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

Client: Geosyntec Service Request # 0802436  
 Project: JED Disposal Facility  
 Cooler received on 5-22-08 and opened on 5-22-08 by MLK  
 COURIER: CAS UPS FEDEX DHL CLIENT Tracking # 72081508970

- |    |   |            |    |     |
|----|---|------------|----|-----|
| 1  | Were custody seals on outside of cooler?                                      | <u>Yes</u> | No | N/A |
| 2  | Were seals intact, signed and dated?  | <u>Yes</u> | No | N/A |
| 3  | Were custody papers properly filled out?                                      | <u>Yes</u> | No | N/A |
| 4  | Temperature of cooler(s) upon receipt (Should be 4 +/- 2 degrees C)           | <u>2-7</u> |    |     |
| 5  | Correct Temperature?  | <u>Yes</u> | No | N/A |
| 6  | Were Ice or Ice Packs present   | <u>Yes</u> | No | N/A |
| 7  | Did all bottles arrive in good condition (unbroken, etc....)?                 | <u>Yes</u> | No | N/A |
| 8  | Were all bottle labels complete (sample ID, preservation, etc....)?           | <u>Yes</u> | No | N/A |
| 9  | Did all bottle labels and tags agree with custody papers?                     | <u>Yes</u> | No | N/A |
| 10 | Were the correct bottles used for the tests indicated?                        | <u>Yes</u> | No | N/A |
| 11 | Were all of the preserved bottles received with the appropriate preservative? | <u>Yes</u> | No | N/A |

HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2  
 Preservative additions noted below

- |    |   |            |        |     |
|----|---|------------|--------|-----|
| 12 | Were all samples received within analysis holding times?                  | <u>Yes</u> | No     | N/A |
| 13 | Were VOA vials checked for absence of air bubbles? If present, note below | <u>Yes</u> | No     | N/A |
| 14 | Where did the bottles originate?  | <u>CAS</u> | Client |     |

Sample ID	Reagent	Manuf. Lot # or CAS Chem ID	ml added	Initials


Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted:

Date: 6-2

Initials:

82-26-5



Bottle Code

The image contains two hand-drawn diagrams of DNA replication on a grid background. The top diagram illustrates a replication fork where two replication bubbles meet. Two solid lines with arrows at their ends represent the original DNA strands, and two dashed lines with arrows represent the newly synthesized strands. The bottom diagram shows a single replication bubble with two replication forks moving in opposite directions. Two solid lines with arrows represent the original DNA strands, and two dashed lines with arrows represent the newly synthesized strands.





SR # 5082436 CAS Contact

PAGE 1 OF 2

PAGE

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[illegible]

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

JSCOC-01/29/08

JSCOC-01/29/08



SR# 200436 CAS Contact

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Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client	JSCOC-01/29/08
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June 10, 2008

Service Request No: J0802713

Kirk Wills  
GeoSyntec Consultants  
14055 Riveredge Drive  
Suite 300  
Tampa, FL 33637

**RE: JED Waste Facility/FQ1512-01**

Dear Kirk:

Enclosed are the results of the sample(s) submitted to our laboratory on June 5, 2008. For your reference, these analyses have been assigned our service request number **J0802713**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP 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. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please call if you have any questions. My extension is 4409. You may also contact me via email at [CMyers@caslab.com](mailto:CMyers@caslab.com).

Respectfully submitted,

**Columbia Analytical Services, Inc.**



Craig Myers  
Project Chemist

Page 1 of 16

*Laboratory Manager: Greg Jordan*

*Quality Assurance Officer: Kathy Brungard*

*CAS Jacksonville is NELAC-accredited by the State of Florida, #E82502 valid through 6/30/08. Other state accreditations include: Arkansas, #88-0600 valid through 1/12/06; Georgia, #958 valid through 6/30/08; Louisiana, #02086 valid through 6/30/08; Texas, #T104704197-06-TX valid through 5/31/08; North Carolina, #527 valid through 12/31/07; South Carolina, #96021001 valid through 6/30/08.*

## Florida DEP Data Qualifiers

B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
H	Value based on field kit determination; results may not be accurate.
i	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J	Estimated value (one of the following reasons is discussed in the project case narrative). <ol style="list-style-type: none"><li>1. The result may be inaccurate because the surrogate recovery limits have been exceeded.</li><li>2. No known quality control criteria exists for the component.</li><li>3. The reported value failed to meet the established quality control criteria for either precision or accuracy.</li><li>4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).</li><li>5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).</li></ol>
K	Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
L	Off scale high. The analyte is above the upper limit of the linear calibration range.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
N	Presumptive evidence of the analyte. Confirmation was not performed.
Q	Sample held beyond the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	The laboratory analysis was from an improperly preserved sample.
Z	Too many colonies were present (TNTC). The numeric value represents the filtration volume.

## 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.

**Client:** GeoSyntec Consultants  
**Project:** JED Waste Facility/FQ1512-01

**Service Request:** J0802713

**SAMPLE CROSS-REFERENCE**

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J0802713-001	MW-11A (P)	06/04/08	07:15
J0802713-002	MW-11A (U)	06/04/08	07:15

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Waste Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802713  
**Date Collected:** 06/04/2008  
**Date Received:** 06/05/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-11A (P)  
**Lab Code:** J0802713-001  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.17	1	06/09/08	06/09/08	JWG0802134	
<b>Vinyl Chloride</b>	<b>1.7</b>		1.0	0.25	1	06/09/08	06/09/08	JWG0802134	
Bromomethane	ND	U	1.0	0.14	1	06/09/08	06/09/08	JWG0802134	
Chloroethane	ND	U	1.0	0.19	1	06/09/08	06/09/08	JWG0802134	
Trichlorofluoromethane	ND	U	1.0	0.25	1	06/09/08	06/09/08	JWG0802134	
1,1-Dichloroethene	ND	U	1.0	0.16	1	06/09/08	06/09/08	JWG0802134	
<b>Acetone</b>	<b>4.2</b>	<b>I</b>	50	2.4	1	06/09/08	06/09/08	JWG0802134	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	06/09/08	06/09/08	JWG0802134	
Carbon Disulfide	ND	U	10	0.84	1	06/09/08	06/09/08	JWG0802134	
Methylene Chloride	ND	U	5.0	0.72	1	06/09/08	06/09/08	JWG0802134	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	06/09/08	06/09/08	JWG0802134	
Acrylonitrile	ND	U	10	0.59	1	06/09/08	06/09/08	JWG0802134	
1,1-Dichloroethane	ND	U	1.0	0.56	1	06/09/08	06/09/08	JWG0802134	
Vinyl Acetate	ND	U	10	0.60	1	06/09/08	06/09/08	JWG0802134	
<b>cis-1,2-Dichloroethene</b>	<b>0.84</b>	<b>I</b>	1.0	0.12	1	06/09/08	06/09/08	JWG0802134	
2-Butanone (MEK)	ND	U	10	0.56	1	06/09/08	06/09/08	JWG0802134	
Bromochloromethane	ND	U	1.0	0.14	1	06/09/08	06/09/08	JWG0802134	
Chloroform	ND	U	1.0	0.10	1	06/09/08	06/09/08	JWG0802134	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	06/09/08	06/09/08	JWG0802134	
Carbon Tetrachloride	ND	U	1.0	0.18	1	06/09/08	06/09/08	JWG0802134	
<b>Benzene</b>	<b>3.3</b>		1.0	0.52	1	06/09/08	06/09/08	JWG0802134	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	06/09/08	06/09/08	JWG0802134	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	06/09/08	06/09/08	JWG0802134	
1,2-Dichloropropane	ND	U	1.0	0.057	1	06/09/08	06/09/08	JWG0802134	
Dibromomethane	ND	U	1.0	0.12	1	06/09/08	06/09/08	JWG0802134	
Bromodichloromethane	ND	U	1.0	0.10	1	06/09/08	06/09/08	JWG0802134	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	06/09/08	06/09/08	JWG0802134	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	06/09/08	06/09/08	JWG0802134	
<b>Toluene</b>	<b>1.2</b>		1.0	0.52	1	06/09/08	06/09/08	JWG0802134	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	06/09/08	06/09/08	JWG0802134	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	06/09/08	06/09/08	JWG0802134	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	06/09/08	06/09/08	JWG0802134	
2-Hexanone	ND	U	25	0.36	1	06/09/08	06/09/08	JWG0802134	
Dibromochloromethane	ND	U	1.0	0.11	1	06/09/08	06/09/08	JWG0802134	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED Waste Facility/FQ1512-01  
 Sample Matrix: Water

Service Request: J0802713  
 Date Collected: 06/04/2008  
 Date Received: 06/05/2008

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-11A (P)  
 Lab Code: J0802713-001  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	1.0	0.18	1	06/09/08	06/09/08	JWG0802134	
Chlorobenzene	ND	U	1.0	0.15	1	06/09/08	06/09/08	JWG0802134	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	06/09/08	06/09/08	JWG0802134	
Ethylbenzene	3.8		1.0	0.10	1	06/09/08	06/09/08	JWG0802134	
m,p-Xylenes	3.0		2.0	0.22	1	06/09/08	06/09/08	JWG0802134	
o-Xylene	0.99	I	1.0	0.10	1	06/09/08	06/09/08	JWG0802134	
Styrene	ND	U	1.0	0.051	1	06/09/08	06/09/08	JWG0802134	
Bromoform	ND	U	1.0	0.12	1	06/09/08	06/09/08	JWG0802134	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	06/09/08	06/09/08	JWG0802134	
1,2,3-Trichloropropane	ND	U	1.0	0.16	1	06/09/08	06/09/08	JWG0802134	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	06/09/08	06/09/08	JWG0802134	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	06/09/08	06/09/08	JWG0802134	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	06/09/08	06/09/08	JWG0802134	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.26	1	06/09/08	06/09/08	JWG0802134	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	76	71-122	06/09/08	Acceptable
4-Bromofluorobenzene	108	75-120	06/09/08	Acceptable
Dibromofluoromethane	88	82-116	06/09/08	Acceptable
Toluene-d8	104	88-117	06/09/08	Acceptable

Comments:



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Waste Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802713  
**Date Collected:** 06/04/2008  
**Date Received:** 06/05/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-11A (U)  
**Lab Code:** J0802713-002  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.17	1	06/10/08	06/10/08	JWG0802134	
<b>Vinyl Chloride</b>	<b>1.5</b>		1.0	0.25	1	06/10/08	06/10/08	JWG0802134	
Bromomethane	ND	U	1.0	0.14	1	06/10/08	06/10/08	JWG0802134	
Chloroethane	ND	U	1.0	0.19	1	06/10/08	06/10/08	JWG0802134	
Trichlorofluoromethane	ND	U	1.0	0.25	1	06/10/08	06/10/08	JWG0802134	
1,1-Dichloroethene	ND	U	1.0	0.16	1	06/10/08	06/10/08	JWG0802134	
<b>Acetone</b>	<b>6.5</b>	I	50	2.4	1	06/10/08	06/10/08	JWG0802134	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	06/10/08	06/10/08	JWG0802134	
Carbon Disulfide	ND	U	10	0.84	1	06/10/08	06/10/08	JWG0802134	
Methylene Chloride	ND	U	5.0	0.72	1	06/10/08	06/10/08	JWG0802134	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	06/10/08	06/10/08	JWG0802134	
Acrylonitrile	ND	U	10	0.59	1	06/10/08	06/10/08	JWG0802134	
1,1-Dichloroethane	ND	U	1.0	0.56	1	06/10/08	06/10/08	JWG0802134	
Vinyl Acetate	ND	U	10	0.60	1	06/10/08	06/10/08	JWG0802134	
<b>cis-1,2-Dichloroethene</b>	<b>0.85</b>	I	1.0	0.12	1	06/10/08	06/10/08	JWG0802134	
2-Butanone (MEK)	ND	U	10	0.56	1	06/10/08	06/10/08	JWG0802134	
Bromochloromethane	ND	U	1.0	0.14	1	06/10/08	06/10/08	JWG0802134	
Chloroform	ND	U	1.0	0.10	1	06/10/08	06/10/08	JWG0802134	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	06/10/08	06/10/08	JWG0802134	
Carbon Tetrachloride	ND	U	1.0	0.18	1	06/10/08	06/10/08	JWG0802134	
<b>Benzene</b>	<b>3.0</b>		1.0	0.52	1	06/10/08	06/10/08	JWG0802134	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	06/10/08	06/10/08	JWG0802134	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	06/10/08	06/10/08	JWG0802134	
1,2-Dichloropropane	ND	U	1.0	0.057	1	06/10/08	06/10/08	JWG0802134	
Dibromomethane	ND	U	1.0	0.12	1	06/10/08	06/10/08	JWG0802134	
Bromodichloromethane	ND	U	1.0	0.10	1	06/10/08	06/10/08	JWG0802134	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	06/10/08	06/10/08	JWG0802134	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	06/10/08	06/10/08	JWG0802134	
<b>Toluene</b>	<b>1.3</b>		1.0	0.52	1	06/10/08	06/10/08	JWG0802134	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	06/10/08	06/10/08	JWG0802134	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	06/10/08	06/10/08	JWG0802134	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	06/10/08	06/10/08	JWG0802134	
2-Hexanone	ND	U	25	0.36	1	06/10/08	06/10/08	JWG0802134	
Dibromochloromethane	ND	U	1.0	0.11	1	06/10/08	06/10/08	JWG0802134	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Waste Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802713  
**Date Collected:** 06/04/2008  
**Date Received:** 06/05/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-11A (U)  
**Lab Code:** J0802713-002  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	1.0	0.18	1	06/10/08	06/10/08	JWG0802134	
Chlorobenzene	ND	U	1.0	0.15	1	06/10/08	06/10/08	JWG0802134	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	06/10/08	06/10/08	JWG0802134	
Ethylbenzene	3.6		1.0	0.10	1	06/10/08	06/10/08	JWG0802134	
m,p-Xylenes	2.9		2.0	0.22	1	06/10/08	06/10/08	JWG0802134	
o-Xylene	0.93	I	1.0	0.10	1	06/10/08	06/10/08	JWG0802134	
Styrene	ND	U	1.0	0.051	1	06/10/08	06/10/08	JWG0802134	
Bromoform	ND	U	1.0	0.12	1	06/10/08	06/10/08	JWG0802134	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	06/10/08	06/10/08	JWG0802134	
1,2,3-Trichloropropane	ND	U	1.0	0.16	1	06/10/08	06/10/08	JWG0802134	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	06/10/08	06/10/08	JWG0802134	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	06/10/08	06/10/08	JWG0802134	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	06/10/08	06/10/08	JWG0802134	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.26	1	06/10/08	06/10/08	JWG0802134	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	79	71-122	06/10/08	Acceptable
4-Bromofluorobenzene	105	75-120	06/10/08	Acceptable
Dibromofluoromethane	88	82-116	06/10/08	Acceptable
Toluene-d8	106	88-117	06/10/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Waste Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802713  
**Date Collected:** NA  
**Date Received:** NA

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank  
**Lab Code:** JWG0802134-4  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.17	1	06/09/08	06/09/08	JWG0802134	
Vinyl Chloride	ND	U	1.0	0.25	1	06/09/08	06/09/08	JWG0802134	
Bromomethane	ND	U	1.0	0.14	1	06/09/08	06/09/08	JWG0802134	
Chloroethane	ND	U	1.0	0.19	1	06/09/08	06/09/08	JWG0802134	
Trichlorofluoromethane	ND	U	1.0	0.25	1	06/09/08	06/09/08	JWG0802134	
1,1-Dichloroethene	ND	U	1.0	0.16	1	06/09/08	06/09/08	JWG0802134	
Acetone	ND	U	50	2.4	1	06/09/08	06/09/08	JWG0802134	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	06/09/08	06/09/08	JWG0802134	
Carbon Disulfide	ND	U	10	0.84	1	06/09/08	06/09/08	JWG0802134	
Methylene Chloride	ND	U	5.0	0.72	1	06/09/08	06/09/08	JWG0802134	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	06/09/08	06/09/08	JWG0802134	
Acrylonitrile	ND	U	10	0.59	1	06/09/08	06/09/08	JWG0802134	
1,1-Dichloroethane	ND	U	1.0	0.56	1	06/09/08	06/09/08	JWG0802134	
Vinyl Acetate	ND	U	10	0.60	1	06/09/08	06/09/08	JWG0802134	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	06/09/08	06/09/08	JWG0802134	
2-Butanone (MEK)	ND	U	10	0.56	1	06/09/08	06/09/08	JWG0802134	
Bromochloromethane	ND	U	1.0	0.14	1	06/09/08	06/09/08	JWG0802134	
Chloroform	ND	U	1.0	0.10	1	06/09/08	06/09/08	JWG0802134	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	06/09/08	06/09/08	JWG0802134	
Carbon Tetrachloride	ND	U	1.0	0.18	1	06/09/08	06/09/08	JWG0802134	
Benzene	ND	U	1.0	0.52	1	06/09/08	06/09/08	JWG0802134	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	06/09/08	06/09/08	JWG0802134	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	06/09/08	06/09/08	JWG0802134	
1,2-Dichloropropane	ND	U	1.0	0.057	1	06/09/08	06/09/08	JWG0802134	
Dibromomethane	ND	U	1.0	0.12	1	06/09/08	06/09/08	JWG0802134	
Bromodichloromethane	ND	U	1.0	0.10	1	06/09/08	06/09/08	JWG0802134	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	06/09/08	06/09/08	JWG0802134	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	06/09/08	06/09/08	JWG0802134	
Toluene	ND	U	1.0	0.52	1	06/09/08	06/09/08	JWG0802134	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	06/09/08	06/09/08	JWG0802134	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	06/09/08	06/09/08	JWG0802134	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	06/09/08	06/09/08	JWG0802134	
2-Hexanone	ND	U	25	0.36	1	06/09/08	06/09/08	JWG0802134	
Dibromochloromethane	ND	U	1.0	0.11	1	06/09/08	06/09/08	JWG0802134	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Waste Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802713  
**Date Collected:** NA  
**Date Received:** NA

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank  
**Lab Code:** JWG0802134-4  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	1.0	0.18	1	06/09/08	06/09/08	JWG0802134	
Chlorobenzene	ND	U	1.0	0.15	1	06/09/08	06/09/08	JWG0802134	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	06/09/08	06/09/08	JWG0802134	
Ethylbenzene	ND	U	1.0	0.10	1	06/09/08	06/09/08	JWG0802134	
m,p-Xylenes	ND	U	2.0	0.22	1	06/09/08	06/09/08	JWG0802134	
o-Xylene	ND	U	1.0	0.10	1	06/09/08	06/09/08	JWG0802134	
Styrene	ND	U	1.0	0.051	1	06/09/08	06/09/08	JWG0802134	
Bromoform	ND	U	1.0	0.12	1	06/09/08	06/09/08	JWG0802134	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	06/09/08	06/09/08	JWG0802134	
1,2,3-Trichloropropane	ND	U	1.0	0.16	1	06/09/08	06/09/08	JWG0802134	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	06/09/08	06/09/08	JWG0802134	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	06/09/08	06/09/08	JWG0802134	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	06/09/08	06/09/08	JWG0802134	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.26	1	06/09/08	06/09/08	JWG0802134	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	72	71-122	06/09/08	Acceptable
4-Bromofluorobenzene	106	75-120	06/09/08	Acceptable
Dibromofluoromethane	83	82-116	06/09/08	Acceptable
Toluene-d8	102	88-117	06/09/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED Waste Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802713

**Surrogate Recovery Summary**  
**Appendix I Volatile Organic Compounds by GC/MS**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** PERCENT  
**Level:** Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>	<u>Sur4</u>
MW-11A (P)	J0802713-001	76	108	88	104
MW-11A (U)	J0802713-002	79	105	88	106
Method Blank	JWG0802134-4	72	106	83	102
Lab Control Sample	JWG0802134-3	72	109	83	104

**Surrogate Recovery Control Limits (%)**

Sur1 = 1,2-Dichloroethane-d4	71-122
Sur2 = 4-Bromofluorobenzene	75-120
Sur3 = Dibromofluoromethane	82-116
Sur4 = Toluene-d8	88-117

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED Waste Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802713  
**Date Extracted:** 06/09/2008  
**Date Analyzed:** 06/09/2008

**Lab Control Spike Summary**  
**Appendix I Volatile Organic Compounds by GC/MS**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0802134

Lab Control Sample  
 JWG0802134-3

**Lab Control Spike**

Analyte Name	Result	Expected	%Rec	%Rec Limits
Chloromethane	20.2	20.0	101	67-135
Vinyl Chloride	22.5	20.0	112	78-132
Bromomethane	18.1	20.0	90	79-130
Chloroethane	21.3	20.0	106	74-126
Trichlorofluoromethane	19.1	20.0	96	74-134
1,1-Dichloroethene	21.0	20.0	105	78-130
Acetone	97.5	100	97	67-133
Iodomethane (Methyl Iodide)	103	100	103	68-134
Carbon Disulfide	117	100	117	76-138
Methylene Chloride	21.3	20.0	107	72-124
trans-1,2-Dichloroethene	19.4	20.0	97	77-124
Acrylonitrile	109	100	109	77-127
1,1-Dichloroethane	20.0	20.0	100	80-128
Vinyl Acetate	88.6	100	89	61-148
cis-1,2-Dichloroethene	19.4	20.0	97	80-126
2-Butanone (MEK)	97.4	100	97	73-127
Bromochloromethane	21.7	20.0	108	79-129
Chloroform	19.0	20.0	95	83-124
1,1,1-Trichloroethane (TCA)	17.8	20.0	89	79-124
Carbon Tetrachloride	17.9	20.0	89	81-125
Benzene	19.8	20.0	99	79-119
1,2-Dichloroethane (EDC)	16.2	20.0	81	80-124
Trichloroethene (TCE)	18.2	20.0	91	76-124
1,2-Dichloropropane	20.6	20.0	103	79-123
Dibromomethane	19.8	20.0	99	83-123
Bromodichloromethane	17.2	20.0	86	81-123
cis-1,3-Dichloropropene	20.3	20.0	102	86-123
4-Methyl-2-pentanone (MIBK)	97.3	100	97	72-136
Toluene	21.3	20.0	106	86-117
trans-1,3-Dichloropropene	19.1	20.0	96	83-124
1,1,2-Trichloroethane	19.9	20.0	100	86-114
Tetrachloroethene (PCE)	20.9	20.0	104	80-121
2-Hexanone	100	100	100	71-138
Dibromochloromethane	17.0	20.0	85	82-121
1,2-Dibromoethane (EDB)	19.6	20.0	98	88-117
Chlorobenzene	20.9	20.0	104	86-113

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED Waste Facility/FQ1512-01  
**Sample Matrix:** Water

**Service Request:** J0802713  
**Date Extracted:** 06/09/2008  
**Date Analyzed:** 06/09/2008

**Lab Control Spike Summary**  
**Appendix I Volatile Organic Compounds by GC/MS**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0802134

Analyte Name	Lab Control Sample JWG0802134-3 Lab Control Spike			%Rec Limits
	Result	Expected	%Rec	
1,1,1,2-Tetrachloroethane	18.1	20.0	91	85-117
Ethylbenzene	21.6	20.0	108	90-118
m,p-Xylenes	44.1	40.0	110	86-121
o-Xylene	21.3	20.0	106	89-119
Styrene	21.5	20.0	107	89-122
Bromoform	17.3	20.0	86	68-129
1,1,2,2-Tetrachloroethane	20.3	20.0	102	83-120
1,2,3-Trichloropropane	20.0	20.0	100	83-123
1,4-Dichlorobenzene	20.6	20.0	103	83-113
trans-1,4-Dichloro-2-butene	20.8	20.0	104	53-143
1,2-Dichlorobenzene	21.2	20.0	106	84-115
1,2-Dibromo-3-chloropropane (DBCP)	22.3	20.0	111	62-123

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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

Client: Geosyntec Service Request # J0802713  
 Project: JED Disposal Facility  
 Cooler received on 6/5/08 and opened on 6/5/08 by DMK  
 COURIER: CAS UPS FEDEX DHL CLIENT Tracking # J2081508998

- |    |   |            |        |     |
|----|---|------------|--------|-----|
| 1  | Were custody seals on outside of cooler?                                      | <u>Yes</u> | No     | N/A |
| 2  | Were seals intact, signed and dated?  | <u>Yes</u> | No     | N/A |
| 3  | Were custody papers properly filled out?                                      | <u>Yes</u> | No     | N/A |
| 4  | Temperature of cooler(s) upon receipt (Should be 4 +/- 2 degrees C)           | <u>2.7</u> |        |     |
| 5  | Correct Temperature?  | <u>Yes</u> | No     | N/A |
| 6  | Were Ice or Ice Packs present   | <u>Yes</u> | No     | N/A |
| 7  | Did all bottles arrive in good condition (unbroken, etc....)?                 | <u>Yes</u> | No     | N/A |
| 8  | Were all bottle labels complete (sample ID, preservation, etc....)?           | <u>Yes</u> | No     | N/A |
| 9  | Did all bottle labels and tags agree with custody papers?                     | <u>Yes</u> | No     | N/A |
| 10 | Were the correct bottles used for the tests indicated?                        | <u>Yes</u> | No     | N/A |
| 11 | Were all of the preserved bottles received with the appropriate preservative? | <u>Yes</u> | No     | N/A |
|    | HNO3 pH<2    H2SO4 pH<2    ZnAc2/NaOH pH>9    NaOH pH>12 <u>HCl pH&lt;2</u>   |            |        |     |
|    | Preservative additions noted below  |            |        |     |
| 12 | Were all samples received within analysis holding times?                      | <u>Yes</u> | No     | N/A |
| 13 | Were VOA vials checked for absence of air bubbles? If present, note below     | <u>Yes</u> | No     | N/A |
| 14 | Where did the bottles originate?  | <u>CAS</u> | Client |     |

Sample ID	Reagent	Manuf. Lot # or CAS Chem ID	ml added	Initials

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted:

Date: 4



SR #: 10802213

Date: 6/5/08

Initials: DWL

Note that pH is checked and meets the required pH criterion listed in the column heading unless otherwise noted on cooler receipt form.

			Bottle Code																														
Container	Pres.	Req. pH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
			40mL	40mL	40mL	40mL	125mL	125mL	125mL	125mL	250mL	250mL	250mL	250mL	250mL	250mL	250mL	500mL	500mL	500mL	500mL	1L	1L	1L	1L	1L	2oz	4oz	8oz	16oz	5g	100mL	Misc.
			G	G	G	G	P	P	P	P	P	P	P	P	P	P	G	G	P	P	P	P	G	G	G	G	G	G	G	ENC	P	Misc.	



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

PAGE 1 OF 1

SR #

30802913

CAS Contact

Project Name <b>IED Disposal Facility</b>		Project Number <b>FQ1512-01</b>		ANALYSIS REQUESTED (Include Method Number and Container Preservative)															
Project Manager <b>Kirk Wills</b>		Email Address <b>kwills@geosynta.com</b>		PRESERVATIVE		[Redacted]													
Company/Address <b>Geosynta</b>				NUMBER OF CONTAINERS		0970													
14055 R. V.edy Dr. Ste. 300																			
Tampa, FL 33637																			
Phone # <b>813-558-0990</b>		FAX# <b>813-558-9726</b>																	
Sampler's Signature <b>Joe Terry</b>		Sampler's Printed Name <b>Joe Terry</b>																	
CLIENT SAMPLE ID <b>MW-11A</b>		LAB ID		SAMPLING DATE <b>6-4-08</b>		TIME <b>0715</b>		MATRIX <b>GW</b>		6 X									
<div>See QAPP <input type="checkbox"/></div> <div>↑</div> <p>SPECIAL INSTRUCTIONS/COMMENTS I collected 6-40ml vials, 3 preserved w/ HCl and 3 unpreserved. If there is a problem w/ preserved samples after vesicering please analyze the unpreserved also</p>														REPORT REQUIREMENTS I. Results Only <input checked="" type="checkbox"/> II. Results + QC Summaries (LCS, DUP, MS/MSD as required) III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data V. Specialized Forms / Custom Report Edata Yes No		INVOICE INFORMATION PO# BILL TO:			
														TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) STANDARD REQUESTED FAX DATE REQUESTED REPORT DATE		RELINQUISHED BY Signature Printed Name Firm Date/Time			
														CUSTODY SEALS: Y N		RECEIVED BY			
														RELINQUISHED BY		RECEIVED BY			
														Signature		Signature			
														Printed Name		Printed Name			
														Firm		Firm			
														Date/Time		Date/Time			
														Date/Time		Date/Time			
														Date/Time		Date/Time			

June 20, 2008

Service Request No: J0802877

Kirk Wills  
GeoSyntec Consultants  
14055 Riveredge Drive  
Suite 300  
Tampa, FL 33637

**RE: JED Facility/FQ1512**

Dear Kirk:

Enclosed are the results of the sample(s) submitted to our laboratory on June 14, 2008. For your reference, these analyses have been assigned our service request number **J0802877**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP 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. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please call if you have any questions. My extension is 4409. You may also contact me via email at [CMyers@caslab.com](mailto:CMyers@caslab.com).

Respectfully submitted,

**Columbia Analytical Services, Inc.**



Craig Myers  
Project Chemist

Page 1 of 14

*Laboratory Manager: Greg Jordan  
Quality Assurance Officer: Kathy Brungard*

*CAS Jacksonville is NELAC-accredited by the State of Florida, #E82502 valid through 6/30/08. Other state accreditations include: Arkansas, #88-0600 valid through 1/12/06; Georgia, #958 valid through 6/30/08; Louisiana, #02086 valid through 6/30/08; Texas, #T104704197-06-TX valid through 5/31/08; North Carolina, #527 valid through 12/31/07; South Carolina, #96021001 valid through 6/30/08.*

## Florida DEP Data Qualifiers

- B Results based upon colony counts outside the acceptable range.
- D Measurement was made in the field.
- H Value based on field kit determination; results may not be accurate.
- i The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J Estimated value (one of the following reasons is discussed in the project case narrative).
1. The result may be inaccurate because the surrogate recovery limits have been exceeded.
  2. No known quality control criteria exists for the component.
  3. The reported value failed to meet the established quality control criteria for either precision or accuracy.
  4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).
  5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).
- K Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).
- L Off scale high. The analyte is above the upper limit of the linear calibration range.
- M The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.
- N Presumptive evidence of the analyte. Confirmation was not performed.
- Q Sample held beyond the accepted holding time.
- T Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.
- U Indicates that the compound was analyzed for but not detected.
- V Indicates that the analyte was detected in both the sample and the associated method blank.
- Y The laboratory analysis was from an improperly preserved sample.
- Z Too many colonies were present (TNTC). The numeric value represents the filtration volume.

## **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.

**Client:** GeoSyntec Consultants  
**Project:** JED Facility/FQ1512

**Service Request:** J0802877

### SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J0802877-001	MW-16C	06/13/08	13:50

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Facility/FQ1512  
**Sample Matrix:** Water

**Service Request:** J0802877  
**Date Collected:** 06/13/2008  
**Date Received:** 06/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-16C  
**Lab Code:** J0802877-001  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	0.26	I	1.0	0.17	1	06/19/08	06/19/08	JWG0802244	
Vinyl Chloride	ND	U	1.0	0.25	1	06/19/08	06/19/08	JWG0802244	
Bromomethane	ND	U	1.0	0.14	1	06/19/08	06/19/08	JWG0802244	
Chloroethane	ND	U	1.0	0.19	1	06/19/08	06/19/08	JWG0802244	
Trichlorofluoromethane	ND	U	1.0	0.25	1	06/19/08	06/19/08	JWG0802244	
1,1-Dichloroethene	ND	U	1.0	0.16	1	06/19/08	06/19/08	JWG0802244	
Acetone	ND	U	50	2.4	1	06/19/08	06/19/08	JWG0802244	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	06/19/08	06/19/08	JWG0802244	
Carbon Disulfide	ND	U	10	0.84	1	06/19/08	06/19/08	JWG0802244	
Methylene Chloride	ND	U	5.0	0.72	1	06/19/08	06/19/08	JWG0802244	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	06/19/08	06/19/08	JWG0802244	
Acrylonitrile	ND	U	10	0.59	1	06/19/08	06/19/08	JWG0802244	
1,1-Dichloroethane	ND	U	1.0	0.56	1	06/19/08	06/19/08	JWG0802244	
Vinyl Acetate	ND	U	10	0.60	1	06/19/08	06/19/08	JWG0802244	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	06/19/08	06/19/08	JWG0802244	
2-Butanone (MEK)	ND	U	10	0.56	1	06/19/08	06/19/08	JWG0802244	
Bromochloromethane	ND	U	1.0	0.14	1	06/19/08	06/19/08	JWG0802244	
Chloroform	ND	U	1.0	0.10	1	06/19/08	06/19/08	JWG0802244	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	06/19/08	06/19/08	JWG0802244	
Carbon Tetrachloride	ND	U	1.0	0.18	1	06/19/08	06/19/08	JWG0802244	
Benzene	ND	U	1.0	0.52	1	06/19/08	06/19/08	JWG0802244	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	06/19/08	06/19/08	JWG0802244	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	06/19/08	06/19/08	JWG0802244	
1,2-Dichloropropane	ND	U	1.0	0.057	1	06/19/08	06/19/08	JWG0802244	
Dibromomethane	ND	U	1.0	0.12	1	06/19/08	06/19/08	JWG0802244	
Bromodichloromethane	ND	U	1.0	0.10	1	06/19/08	06/19/08	JWG0802244	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	06/19/08	06/19/08	JWG0802244	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	06/19/08	06/19/08	JWG0802244	
<b>Toluene</b>	<b>10</b>		1.0	0.52	1	06/19/08	06/19/08	JWG0802244	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	06/19/08	06/19/08	JWG0802244	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	06/19/08	06/19/08	JWG0802244	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	06/19/08	06/19/08	JWG0802244	
2-Hexanone	ND	U	25	0.36	1	06/19/08	06/19/08	JWG0802244	
Dibromochloromethane	ND	U	1.0	0.11	1	06/19/08	06/19/08	JWG0802244	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Facility/FQ1512  
**Sample Matrix:** Water

**Service Request:** J0802877  
**Date Collected:** 06/13/2008  
**Date Received:** 06/14/2008

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** MW-16C  
**Lab Code:** J0802877-001  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	1.0	0.18	1	06/19/08	06/19/08	JWG0802244	
Chlorobenzene	ND	U	1.0	0.15	1	06/19/08	06/19/08	JWG0802244	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	06/19/08	06/19/08	JWG0802244	
Ethylbenzene	0.15	I	1.0	0.10	1	06/19/08	06/19/08	JWG0802244	
m,p-Xylenes	0.94	I	2.0	0.22	1	06/19/08	06/19/08	JWG0802244	
o-Xylene	0.58	I	1.0	0.10	1	06/19/08	06/19/08	JWG0802244	
Styrene	ND	U	1.0	0.051	1	06/19/08	06/19/08	JWG0802244	
Bromoform	ND	U	1.0	0.12	1	06/19/08	06/19/08	JWG0802244	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	06/19/08	06/19/08	JWG0802244	
1,2,3-Trichloropropane	ND	U	1.0	0.16	1	06/19/08	06/19/08	JWG0802244	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	06/19/08	06/19/08	JWG0802244	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	06/19/08	06/19/08	JWG0802244	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	06/19/08	06/19/08	JWG0802244	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.26	1	06/19/08	06/19/08	JWG0802244	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	79	71-122	06/19/08	Acceptable
4-Bromofluorobenzene	100	75-120	06/19/08	Acceptable
Dibromofluoromethane	85	82-116	06/19/08	Acceptable
Toluene-d8	103	88-117	06/19/08	Acceptable

Comments: \_\_\_\_\_



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Facility/FQ1512  
**Sample Matrix:** Water

**Service Request:** J0802877  
**Date Collected:** NA  
**Date Received:** NA

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank  
**Lab Code:** JWG0802244-4  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	1.0	0.17	1	06/18/08	06/18/08	JWG0802244	
Vinyl Chloride	ND	U	1.0	0.25	1	06/18/08	06/18/08	JWG0802244	
Bromomethane	ND	U	1.0	0.14	1	06/18/08	06/18/08	JWG0802244	
Chloroethane	ND	U	1.0	0.19	1	06/18/08	06/18/08	JWG0802244	
Trichlorofluoromethane	ND	U	1.0	0.25	1	06/18/08	06/18/08	JWG0802244	
1,1-Dichloroethene	ND	U	1.0	0.16	1	06/18/08	06/18/08	JWG0802244	
Acetone	ND	U	50	2.4	1	06/18/08	06/18/08	JWG0802244	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	06/18/08	06/18/08	JWG0802244	
Carbon Disulfide	ND	U	10	0.84	1	06/18/08	06/18/08	JWG0802244	
Methylene Chloride	ND	U	5.0	0.72	1	06/18/08	06/18/08	JWG0802244	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	06/18/08	06/18/08	JWG0802244	
Acrylonitrile	ND	U	10	0.59	1	06/18/08	06/18/08	JWG0802244	
1,1-Dichloroethane	ND	U	1.0	0.56	1	06/18/08	06/18/08	JWG0802244	
Vinyl Acetate	ND	U	10	0.60	1	06/18/08	06/18/08	JWG0802244	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	06/18/08	06/18/08	JWG0802244	
2-Butanone (MEK)	ND	U	10	0.56	1	06/18/08	06/18/08	JWG0802244	
Bromochloromethane	ND	U	1.0	0.14	1	06/18/08	06/18/08	JWG0802244	
Chloroform	ND	U	1.0	0.10	1	06/18/08	06/18/08	JWG0802244	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	06/18/08	06/18/08	JWG0802244	
Carbon Tetrachloride	ND	U	1.0	0.18	1	06/18/08	06/18/08	JWG0802244	
Benzene	ND	U	1.0	0.52	1	06/18/08	06/18/08	JWG0802244	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	06/18/08	06/18/08	JWG0802244	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	06/18/08	06/18/08	JWG0802244	
1,2-Dichloropropane	ND	U	1.0	0.057	1	06/18/08	06/18/08	JWG0802244	
Dibromomethane	ND	U	1.0	0.12	1	06/18/08	06/18/08	JWG0802244	
Bromodichloromethane	ND	U	1.0	0.10	1	06/18/08	06/18/08	JWG0802244	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	06/18/08	06/18/08	JWG0802244	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	06/18/08	06/18/08	JWG0802244	
Toluene	ND	U	1.0	0.52	1	06/18/08	06/18/08	JWG0802244	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	06/18/08	06/18/08	JWG0802244	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	06/18/08	06/18/08	JWG0802244	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	06/18/08	06/18/08	JWG0802244	
2-Hexanone	ND	U	25	0.36	1	06/18/08	06/18/08	JWG0802244	
Dibromochloromethane	ND	U	1.0	0.11	1	06/18/08	06/18/08	JWG0802244	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED Facility/FQ1512  
**Sample Matrix:** Water

**Service Request:** J0802877  
**Date Collected:** NA  
**Date Received:** NA

## Appendix I Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank  
**Lab Code:** JWG0802244-4  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	1.0	0.18	1	06/18/08	06/18/08	JWG0802244	
Chlorobenzene	ND	U	1.0	0.15	1	06/18/08	06/18/08	JWG0802244	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	06/18/08	06/18/08	JWG0802244	
Ethylbenzene	ND	U	1.0	0.10	1	06/18/08	06/18/08	JWG0802244	
m,p-Xylenes	ND	U	2.0	0.22	1	06/18/08	06/18/08	JWG0802244	
o-Xylene	ND	U	1.0	0.10	1	06/18/08	06/18/08	JWG0802244	
Styrene	ND	U	1.0	0.051	1	06/18/08	06/18/08	JWG0802244	
Bromoform	ND	U	1.0	0.12	1	06/18/08	06/18/08	JWG0802244	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	06/18/08	06/18/08	JWG0802244	
1,2,3-Trichloropropane	ND	U	1.0	0.16	1	06/18/08	06/18/08	JWG0802244	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	06/18/08	06/18/08	JWG0802244	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	06/18/08	06/18/08	JWG0802244	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	06/18/08	06/18/08	JWG0802244	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.26	1	06/18/08	06/18/08	JWG0802244	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	78	71-122	06/18/08	Acceptable
4-Bromofluorobenzene	102	75-120	06/18/08	Acceptable
Dibromofluoromethane	88	82-116	06/18/08	Acceptable
Toluene-d8	100	88-117	06/18/08	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED Facility/FQ1512  
**Sample Matrix:** Water

**Service Request:** J0802877

**Surrogate Recovery Summary**  
**Appendix I Volatile Organic Compounds by GC/MS**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** PERCENT  
**Level:** Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>	<u>Sur4</u>
MW-16C	J0802877-001	79	100	85	103
Method Blank	JWG0802244-4	78	102	88	100
Lab Control Sample	JWG0802244-3	73	118	85	107

**Surrogate Recovery Control Limits (%)**

Sur1 = 1,2-Dichloroethane-d4	71-122
Sur2 = 4-Bromofluorobenzene	75-120
Sur3 = Dibromofluoromethane	82-116
Sur4 = Toluene-d8	88-117

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

**Client:** GeoSyntec Consultants  
**Project:** JED Facility/FQ1512  
**Sample Matrix:** Water

**Service Request:** J0802877  
**Date Extracted:** 06/18/2008  
**Date Analyzed:** 06/18/2008

**Lab Control Spike Summary**  
**Appendix I Volatile Organic Compounds by GC/MS**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0802244

Lab Control Sample  
JWG0802244-3

**Lab Control Spike**

Analyte Name	Result	Expected	%Rec	%Rec Limits
Chloromethane	20.8	20.0	104	67-135
Vinyl Chloride	21.8	20.0	109	78-132
Bromomethane	18.3	20.0	92	79-130
Chloroethane	20.2	20.0	101	74-126
Trichlorofluoromethane	17.6	20.0	88	74-134
1,1-Dichloroethene	20.1	20.0	101	78-130
Acetone	89.2	100	89	67-133
Iodomethane (Methyl Iodide)	93.9	100	94	68-134
Carbon Disulfide	106	100	106	76-138
Methylene Chloride	20.8	20.0	104	72-124
trans-1,2-Dichloroethene	18.9	20.0	94	77-124
Acrylonitrile	107	100	107	77-127
1,1-Dichloroethane	19.4	20.0	97	80-128
Vinyl Acetate	97.8	100	98	61-148
cis-1,2-Dichloroethene	18.6	20.0	93	80-126
2-Butanone (MEK)	94.9	100	95	73-127
Bromochloromethane	21.5	20.0	108	79-129
Chloroform	17.8	20.0	89	83-124
1,1,1-Trichloroethane (TCA)	17.5	20.0	88	79-124
Carbon Tetrachloride	17.1	20.0	85	81-125
Benzene	19.2	20.0	96	79-119
1,2-Dichloroethane (EDC)	16.3	20.0	81	80-124
Trichloroethene (TCE)	16.1	20.0	81	76-124
1,2-Dichloropropane	19.1	20.0	96	79-123
Dibromomethane	18.7	20.0	93	83-123
Bromodichloromethane	16.9	20.0	84	81-123
cis-1,3-Dichloropropene	20.5	20.0	103	86-123
4-Methyl-2-pentanone (MIBK)	102	100	102	72-136
Toluene	20.4	20.0	102	86-117
trans-1,3-Dichloropropene	19.4	20.0	97	83-124
1,1,2-Trichloroethane	20.3	20.0	102	86-114
Tetrachloroethene (PCE)	19.0	20.0	95	80-121
2-Hexanone	113	100	113	71-138
Dibromochloromethane	16.8	20.0	84	82-121
1,2-Dibromoethane (EDB)	19.3	20.0	96	88-117
Chlorobenzene	20.9	20.0	104	86-113

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED Facility/FQ1512  
**Sample Matrix:** Water

**Service Request:** J0802877  
**Date Extracted:** 06/18/2008  
**Date Analyzed:** 06/18/2008

**Lab Control Spike Summary**  
**Appendix I Volatile Organic Compounds by GC/MS**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0802244

Lab Control Sample  
JWG0802244-3

**Lab Control Spike**

Analyte Name	Result	Expected	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	17.7	20.0	88	85-117
Ethylbenzene	21.2	20.0	106	90-118
m,p-Xylenes	41.9	40.0	105	86-121
o-Xylene	20.6	20.0	103	89-119
Styrene	21.0	20.0	105	89-122
Bromoform	18.5	20.0	93	68-129
1,1,2,2-Tetrachloroethane	22.6	20.0	113	83-120
1,2,3-Trichloropropane	18.5	20.0	93	83-123
1,4-Dichlorobenzene	21.1	20.0	106	83-113
trans-1,4-Dichloro-2-butene	19.6	20.0	98	53-143
1,2-Dichlorobenzene	22.2	20.0	111	84-115
1,2-Dibromo-3-chloropropane (DBCP)	19.8	20.0	99	62-123

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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

Client: Geosyntec  
Project: SED Facility

Service Request # 50802877

Cooler received on 6-14-08 and opened on 6-16-08 by SL

COURIER: CAS UPS FEDX DHL CLIENT Tracking # 8645 5852 6320

- |    |   |            |    |     |
|----|---|------------|----|-----|
| 1  | Were custody seals on outside of cooler?                                      | <u>Yes</u> | No | N/A |
| 2  | Were seals intact, signed and dated?  | <u>Yes</u> | No | N/A |
| 3  | Were custody papers properly filled out?                                      | <u>Yes</u> | No | N/A |
| 4  | Temperature of cooler(s) upon receipt (Should be 4 +/- 2 degrees C)           | <u>1.0</u> |    |     |
| 5  | Correct Temperature?  | <u>Yes</u> | No | N/A |
| 6  | Were Ice or Ice Packs present   | <u>Yes</u> | No | N/A |
| 7  | Did all bottles arrive in good condition (unbroken, etc....)?                 | <u>Yes</u> | No | N/A |
| 8  | Were all bottle labels complete (sample ID, preservation, etc....)?           | <u>Yes</u> | No | N/A |
| 9  | Did all bottle labels and tags agree with custody papers?                     | <u>Yes</u> | No | N/A |
| 10 | Were the correct bottles used for the tests indicated?                        | <u>Yes</u> | No | N/A |
| 11 | Were all of the preserved bottles received with the appropriate preservative? | <u>Yes</u> | No | N/A |

HNO3 pH<2    H2SO4 pH<2    ZnAc2/NaOH pH>9    NaOH pH>12

HCl pH<2

Preservative additions noted below

- |    |   |            |               |     |
|----|---|------------|---------------|-----|
| 12 | Were all samples received within analysis holding times?                  | <u>Yes</u> | No            | N/A |
| 13 | Were VOA vials checked for absence of air bubbles? If present, note below | <u>Yes</u> | No            | N/A |
| 14 | Where did the bottles originate?  | CAS        | <u>Client</u> |     |

Sample ID	Reagent	Manuf. Lot # or CAS Chem ID	ml added	Initials

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted:

Date: 2





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SR #

CAS Contact

[illegible]

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

COOLTEMP-1.100

JSCOC-01/29/08



## **APPENDIX F**

### **PHOTOGRAPHIC LOG FOR MONITORING WELL REHABILITATION WORK**

GEOSYNTEC CONSULTANTS  
Photographic Record

Client: Waste Services, Inc.

Project Number: FQ1513

Project Name: J.E.D. Solid Waste Management Facility

Project Location: Osceola County, Florida

Photograph 1

Date: 30 June 2008

Direction: north

Comments: Monitoring well cluster 9, showing original protective casings, and concrete pad and walls.



Photograph 2

Date: 30 June 2008

Direction: N/A

Comments: MW-9B prior to rehabilitation work.





GEOSYNTEC CONSULTANTS  
Photographic Record

Client: Waste Services, Inc.

Project Number: FQ1513

Project Name: J.E.D. Solid Waste Management Facility

Project Location: Osceola County, Florida

Photograph 3

Date: 30 June 2008

Direction: N/A

Comments: The original protective casing lid and hinge were removed and discarded. The lock hasps were bent over or removed to accommodate the new casing.



Photograph 4

Date: 30 June 2008

Direction: N/A

Comments: Small screws were drilled into the sides to help hold the grout between the old and new casings.





GEOSYNTEC CONSULTANTS  
Photographic Record

Client: Waste Services, Inc.

Project Number: FQ1513

Project Name: J.E.D. Solid Waste Management Facility

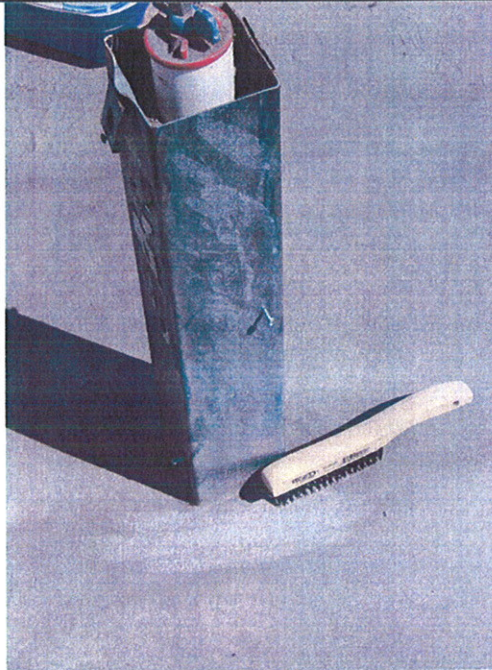
Project Location: Osceola County, Florida

Photograph 5

Date: 30 June 2008

Direction: N/A

Comments: The concrete pad at the base was cleaned with a wire brush and water.



Photograph 6

Date: 30 June 2008

Direction: N/A

Comments: A layer of fast setting concrete was placed around the base and the new casing set into the concrete.





GEOSYNTEC CONSULTANTS  
Photographic Record

Client: Waste Services, Inc.

Project Number: FQ1513

Project Name: J.E.D. Solid Waste Management Facility

Project Location: Osceola County, Florida

Photograph 7

Date: 30 June 2008

Direction: N/A

Comments: Portland Type I grout was poured between the old and new casings. Note: A PVC slip cap was placed over well casing when the grout was poured.



Photograph 8

Date: 30 June 2008

Direction: east

Comments: Monitoring well cluster 4 after completion of rehabilitation work.





GEOSYNTEC CONSULTANTS  
Photographic Record

Client: Waste Services, Inc.

Project Number: FQ1513

Project Name: J.E.D. Solid Waste Management Facility

Project Location: Osceola County, Florida

Photograph 9

Date: 30 June 2008

Direction: east

Comments: The well cluster pad walls were raised to 1-foot above the grade of the perimeter access road.



Photograph 10

Date: 30 June 2008

Direction: east

Comments: Well cluster 8 after completion of rehabilitation work.





GEOSYNTEC CONSULTANTS  
Photographic Record

Client: Waste Services, Inc.

Project Number: FQ1513

Project Name: J.E.D. Solid Waste Management Facility

Project Location: Osceola County, Florida

Photograph 11

Date: 30 June 2008

Direction: east

Comments: Monitoring  
well cluster 5 after  
completion of  
rehabilitation work.



Photograph 12

Date: 30 June 2008

Direction: south

Comments: Monitoring  
well cluster 6 after  
completion of  
rehabilitation work.





GEOSYNTEC CONSULTANTS  
Photographic Record

Client: Waste Services, Inc.

Project Number: FQ1513

Project Name: J.E.D. Solid Waste Management Facility

Project Location: Osceola County, Florida

Photograph 13

Date: 1 July 2008

Direction: south

Comments: Monitoring  
well cluster 7 after  
completion of  
rehabilitation work...



Photograph 14

Date: 1 July 2008

Direction: south

Comments: Monitoring  
well cluster 8 after  
completion of  
rehabilitation work...





GEOSYNTEC CONSULTANTS  
Photographic Record

Client: Waste Services, Inc.

Project Number: FQ1513

Project Name: J.E.D. Solid Waste Management Facility

Project Location: Osceola County, Florida

Photograph 15

Date: 1 July 2008

Direction: west

Comments: Monitoring  
well cluster 9 after  
completion of  
rehabilitation work.

