

12 February 2010

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: 11th Semi-Annual Water Quality Monitoring Report  
J.E.D. Solid Waste Management Facility, Osceola County, Florida  
Permit No. SC49-0199726-004 and SO49-0199726-005  
WACS Facility ID 89544

Dear Mr. Lubozynski:

Submitted herewith is the subject report documenting the 11<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 the Monitoring Plan Implementation Schedule (MPIS) for the above referenced permit. In accordance with the permit conditions, this semi-annual water quality monitoring event was performed in November 2009. This report is being submitted within the sixty day period after receipt of final electronic analytical data from the laboratory. This report satisfies the semi-annual water quality monitoring compliance requirements as described in the permit and the "Requirement for Submitting Electronic Water Quality Data to the FDEP Central District Solid Waste Program" memorandum, dated 8 June 2009.

As noted in the revised MPIS, two electronic copies of the report on CDs are being submitted to FDEP. One copy is attached to this transmittal letter. The second CD was sent to the FDEP Solid Waste Section located in Tallahassee, Florida. 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  
FDEP Solid Waste Section, Tallahassee, FL  
Matthew Wissler, Geosyntec

*Prepared for:*



**Waste Services, Inc.**  
2893 Executive Park Drive, Suite 305  
Weston, Florida 33331

**11<sup>th</sup> SEMI-ANNUAL  
WATER QUALITY MONITORING REPORT  
J.E.D. SOLID WASTE MANAGEMENT  
FACILITY  
OSCEOLA COUNTY, FLORIDA**

*Prepared by:*

**Geosyntec**   
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Tampa, FL 33637  
(813) 558-0990

Project No: FQ1512A

February 2010





*Submitted to:*

Florida Department of  
Environmental Protection

## 11<sup>th</sup> SEMI-ANNUAL WATER QUALITY MONITORING REPORT

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

*Prepared for:*



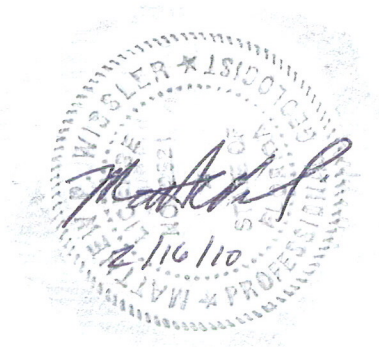
Waste Services, Inc.  
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14055 Riveredge Drive, Suite 300  
Tampa, Florida 33637

Project No. FQ1512A  
February 2010





Florida Department of Environmental Protection  
 Bob Martinez Center • 2600 Blair Stone Road • Tallahassee, FL 32399-2400

DEP Form # 62-701.900(31)
Form Title <u>Water Quality Monitoring Certification</u>
Effective Date _____
Incorporated in Rule 62-701.510(9) _____

STATE OF FLORIDA  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION

WATER QUALITY MONITORING CERTIFICATION

PART I GENERAL INFORMATION

- (1) Facility Name J.E.D. Solid Waste Management Facility  
 Address 1501 Omni Way  
 City Saint Cloud Zip Florida County Osceola  
 Telephone Number ( 407 ) 891-3720
- (2) WACS Facility ID 89544
- (3) DEP Permit Number SC49-0199726-004 & SO49-0199726-005
- (4) Authorized Representative's Name Mike Kaiser Title VP Engineering  
 Address 1501 Omni Way  
 City Saint Cloud Zip Florida County Osceola  
 Telephone Number ( 904 ) 891-3720

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.

1/30/2010 (Date)                      Mike Kaiser (Owner or Authorized Representative's Signature)

PART II QUALITY ASSURANCE REQUIREMENTS

Sampling Organization Geosyntec Consultants  
 Analytical Lab NELAC / HRS Certification # E82502  
 Lab Name Columbia Analytical Services (CAS)  
 Address 9143 Philips Highway, Suite 200 Jacksonville, Florida 32256  
 Phone Number ( 904 ) 739-2277

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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 Management (JED) facility. The Plan was prepared as a part of the JED facility permit applications. The requirements for executing the Plan are presented in the Monitoring Plan Implementation Schedule (MPIS) of the current permit (Permit Numbers SC49-0199726-004 and SO49-0199726-005) 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. The MPIS was revised to include electronic data reporting on 22 June 2009. This report presents the results for the 11th semi-annual water quality (groundwater, surface water, and leachate) monitoring event conducted between 3 November 2009 and 11 November 2009.

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. Kirk E. Wills of Geosyntec Consultants (Geosyntec). In accordance with Geosyntec's peer review procedures, Mr. Matthew Wissler, P.G. reviewed this report.

### **1.2 Overview**

The Plan and the MPIS 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 11th 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 and leachate 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 Phases 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 Phases 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 MPIS was revised on 6 April 2009, updating the sample locations and sampling schedule. The MPIS was revised again on 22 June 2009 to include electronic data reporting requirements. 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 (ft), and the spacing between background well clusters (MW-22 and MW-23) was approximately 800 ft. 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 zone (“A” wells) on Figure 1. 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 ft 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 ft 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 ft 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-inch 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 nephelometric turbidity unit (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 Phases 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 metals 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 current MPIS (revised 22 June 2009), twenty-six (26) monitoring wells installed as part of the Phase 1 development and seven (7) of the 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, one sample duplicate 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) groundwater monitoring wells. A stainless steel submersible pump was used to purge and sample the remainder of the B-zone (intermediate) and the one C-zone (deep) groundwater well (MW-16C). 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 from 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.

Groundwater samples were analyzed by Columbia for total ammonia as nitrogen (N), chlorides, nitrate, total dissolved solids (TDS), iron, mercury, sodium, and the 40 Code of Federal Regulations (CFR) Part 258 Appendix I parameters. Other required parameters (i.e., pH; temperature; conductivity; turbidity; oxidation reduction potential [ORP]; 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 this groundwater sampling event have been transferred to a compact disc (CD) and are included in Appendix D. Analytical results have been summarized in Table 3 to show all parameters where a constituent concentration was reported above the applicable FDEP Groundwater Cleanup Target Level (GCTL). Any parameter exceeding GCTLs has been highlighted orange. The following discussion regarding groundwater quality is limited to those parameters where the GCTL was exceeded in at least one groundwater monitoring well and has been organized by analytical method.

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

Arsenic was detected (above the method reporting limit [MRL]) in fourteen (14) monitoring wells in concentrations ranging between 0.56 and 16.4 micrograms per liter (ug/L). All reported concentrations are less than the GCTL for arsenic of 10 ug/L except for MW-11A and 13A, where the reported concentrations were 11 and 16.4 ug/L, respectively. As discussed in the second biennial water quality monitoring report (September 2008), 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. The arsenic concentrations for MW-11A and MW-13A reported for the 11<sup>th</sup> semi-annual event are typical of previous monitoring events and are summarized in Figure 2.

Iron was detected (above the MRL) in all thirty-three (33) monitoring wells sampled in concentrations ranging between 131 and 16,400 µg/L, and all but one (1) well (MW-16A) exceeded the GCTL of 300 µg/L. 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 11<sup>th</sup> semi-annual event are typical of previous monitoring events.

*Ammonia-N (Method 350.1)*

Ammonia-N was detected in all thirty-three (33) monitoring wells sampled in concentrations ranging between 0.04 mg/L and 11 mg/L. All reported concentrations are less than the GCTL for ammonia-N of 2.8 mg/L except for MW-3A, 4A, 5A, 7A, 8A, 9A, 10A, 11A, and 19A, where the reported concentrations ranged between 3.5 and 11 mg/L. Ammonia-N has historically exceeded the GCTL in these wells at the site for the previous monitoring events since the 1<sup>st</sup> and 2<sup>nd</sup> semi-annual water quality events including the baseline event for MW-5A and MW-19A. Of the locations where ammonia exceeded the GCTL during the 11<sup>th</sup> semi-annual event, monitoring wells MW-3A, MW-4A, MW-9A, and MW-11A indicated an increase when compared to the 10<sup>th</sup> semi-annual event (Figure 3). Monitoring wells MW-5A, MW-10A, and MW-19A indicated a decrease when compared to the 10<sup>th</sup> semi-annual event (Figure 3). The highest ammonia concentration detected in a baseline monitoring event was 16 mg/L in MW-19A. The ammonia concentrations detected in the 11<sup>th</sup> semi-annual event are all below this concentration.

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

Benzene was originally detected (above the MRL) in four (4) monitoring wells (MW-8A, MW-9A, 10A, and 11A) at concentrations of ranging between 1.3 and 9.1 µg/L, which are all above the GCTL of 1.0 µg/L.

Vinyl Chloride was detected in two (2) wells (MW-9A and MW-11A) at concentrations of 1.2 µg/L and 1.1 µg/L, respectively, which are both above the GCTL of 1.0 µg/L.

The GCTL for benzene was exceeded in MW-8A, 9A, 10A, and 11A. The GCTL for vinyl chloride was exceeded in MW-9A and MW-11A. 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 FDEP is to be notified within 14 days after the receipt of the laboratory data of any GCTL exceedances. The notification also informed the FDEP if any confirmational samples will be collected from any of the wells or if the data will be accepted as indicative of groundwater conditions. Confirmational samples are to be collected within thirty (30) days of receipt of data from the laboratory. On behalf of WSI, Geosyntec notified Mr. Thomas Lubozynski (FDEP) in a letter dated 11 December 2009 of all the GCTL exceedances for which certified data was received by Geosyntec on 30 November 2009. The letter also notified the FDEP that confirmational VOC samples would be collected from MW-8A and MW-9A. These two wells were selected based on the fact that it was the first time that benzene was detected in MW-8A and due to the

elevated concentration of benzene in MW-9A. The other data was accepted as representative of current groundwater conditions.

Before this 11<sup>th</sup> semi-annual event, benzene had not been detected in MW-8A. A confirmational sample was collected from MW-8A on 22 December 2008 for the Appendix I list of volatile organic compounds (VOCs). The confirmational sampling was performed within 30 days of receipt of data for the initial sampling event. The analytical results for the confirmational sampling event showed that benzene was not detected above the method detection limit of 0.52µg/L, which is different than that of the initial sample.

Benzene has been detected above the GCTL of 1.0 µg/L in MW-9A since the 6<sup>th</sup> semi-annual monitoring event. Prior to the 11<sup>th</sup> semi-annual event, the benzene concentrations have ranged between 1.4 and 7.7 µg/L. Based on the elevated benzene result of 9.6 µg/L for this 11<sup>th</sup> semi-annual event, a confirmational sample was collected from MW-9A on 22 December 2008 for the Appendix I list of volatile organic compounds (VOCs). The confirmational sampling was performed within 30 days of receipt of data for the initial sampling event. The analytical results for the confirmational sampling event showed that benzene was detected at a concentration of 9.1µg/L, which is consistent with the results of the initial sample. Vinyl chloride was also detected at a concentration (1.4 µg/L) similar to that of the initial sample (1.2 µg/L).

As reported in the 6<sup>th</sup> semi-annual water quality monitoring report, the cause of the exceedances (benzene and vinyl chloride) appeared to be related to storm water issues associated with the landfill. As part of the Phase I partial closure project completed in November 2009, the landfill side slopes between elevation 180 ft and the landfill perimeter berm (approximately elevation 96 ft) for the Phase 1 area (Cells 1-4) were covered with a geomembrane and vegetated soil cap. This closure system will significantly reduce or prevent soil run-off from the active landfill area.

### **4.3 Data Validation**

All analyses were performed within the method specified holding times.

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

One blind field duplicate was collected: Dup-01 was a blind duplicate of sample MW-9A. 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 NTUs in twenty-nine (29) of the thirty-three (33) wells sampled. A review of the analytical results for these four wells (MW-4C, MW-16B, MW-19A, and MW-19C) shows no significant difference between the dissolved and total metals concentrations. Historical data shows that the turbidity levels for the wells has improved over the course of the semi-annual water quality monitoring events and the need to continue collection of dissolved metal samples may not be necessary.

## 5. GROUNDWATER LEVEL MEASUREMENTS AND FLOW DIRECTION

### 5.1 Field Measurements

Groundwater level measurements were obtained on 3 November 2009 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 4.

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 map prepared from groundwater level measurements for the upper surficial aquifer zone (i.e., A-zone) is presented in Figure 1.

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 the Phase 1 and 2 development areas centered near the MW-23 well cluster. Groundwater flow along the western property boundary is predominantly west towards the dewatering area. The groundwater level elevation data collected from the remainder of the A-zone monitoring well network indicate 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 ( $1E^{-3}$  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 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.

At the time of the 11<sup>th</sup> semi-annual water quality monitoring event, no flow was observed in Bull Creek at either the upstream monitoring station (SW-4) or the downstream monitoring location (SW-3). Since there was no flow, no surface water samples were collected as part of this 11<sup>th</sup> semi-annual event.



## **7 LEACHATE SAMPLING**

### **7.1 Sampling Location and Procedures**

In accordance with the permit requirements, a leachate sample is to be collected from each disposal cell on an annual basis. To date, Cells 1 through 6 have been constructed and have received waste. Therefore, leachate samples for this 11<sup>th</sup> semi-annual sampling event were collected from primary leachate sump risers for Cells 1 through 6 only. These leachate samples collected as part of the 11<sup>th</sup> semi-annual sampling event fulfills the leachate sampling requirement for the year 2009.

The leachate samples were collected from sampling ports that are connected with each primary leachate sump riser. An YSI 556 water quality meter was used to measure field parameters including temperature, pH, dissolved oxygen, conductivity, ORP, and turbidity. The leachate samples were collected in accordance with the applicable FDEP SOPs.

### **7.2 Sample Analyses**

The leachate sample was analyzed by Columbia in accordance with the NELAC standards for total ammonia-N, bicarbonate, chlorides, nitrate, total dissolved solids (TDS), iron, mercury, sodium and the 40 CFR, Part 258 Appendix II parameters. Other required parameters (i.e., pH; temperature; conductivity; turbidity; ORP and dissolved oxygen) were field measured during collection of the leachate samples.

### **7.3 Field Measurements and Analytical Results**

Table 5 provides a summary of the field parameter values and field data measured for the leachate samples.

The analytical results for the leachate samples are presented on a CD in Appendix D. Analytical results have been summarized in Table 5 to show all parameters where a constituent concentration was reported above the method detection limit. No constituents tested exceeded the regulatory levels listed in 40 CFR Part 261.24. It should be noted that the leachate from the JED facility is removed from the site for treatment at the City of St. Cloud waste water treatment facility or re-circulated within the active disposal area.

## 8 CONCLUSIONS AND RECOMMENDATIONS

### 8.1 Sampling Location and Procedures

The existing monitoring well network is adequate for monitoring purposes and no changes are recommended.

### 8.2 Sample Analyses

The detections of ammonia, iron, and arsenic above the GCTLs in specific groundwater monitoring wells have been discussed in detail in the 1<sup>st</sup> and 2<sup>nd</sup> Biennial Technical Reports on Water Quality (November 2006 and September 2008). Figures 2 and 3 show the data plots for the groundwater monitoring wells which have exceeded the GCTL for arsenic and ammonia, respectively. A figure has not been prepared for iron since almost every well has exceeded the GCTL for iron in every monitoring event. We believe that the iron, arsenic and ammonia are naturally occurring and are not related to landfill operations. Our recommendation is to continue to monitor these constituents as part of the current MPIS.

Figure 4 shows the detected concentrations for benzene in MW-9A, MW-10A, and MW-11A. As shown in Figure 4, the benzene concentrations are higher than that for the previous monitoring event. A trend may be developing showing higher concentrations detected in the November monitoring events as compared to the concentrations detected in the May monitoring events.

Figure 5 shows detections of vinyl chloride in MW-9A and MW-11A. As shown, the vinyl chloride detections are higher than that for the previous monitoring event, but still only just above the GCTL of 1 µg/L.

Now that the partial closure project is complete, our recommendation is to continue semi-annual monitoring of these constituents as part of the current MPIS.

## Tables

Table 1 (1 of 3)

**SUMMARY OF MONITORING WELL CONSTRUCTION DETAILS  
11th 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  
11th 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  
11th 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-22C	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-23C	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  
11th SEMI-ANNUAL WATER QUALITY MONITORING EVENT  
J.E.D. SOLID WASTE MANAGEMENT FACILITY**

Monitoring Well	Temperature (°C) <sup>1</sup>	pH (Standard Units)	Specific Conductance (uS/cm) <sup>2</sup>	Turbidity (NTUs) <sup>3</sup>	Oxidation-Reduction Potential (mV) <sup>4</sup>	DO (mg/L) <sup>5</sup>	Purging Method
MW-1A	26.9	4.5	154.0	0.5	-35.6	0.6	Peristaltic Pump
MW-2A	28.1	4.5	206.0	3.0	74.3	0.7	Peristaltic Pump
MW-3A	27.1	4.8	727.0	0.4	-94.1	0.5	Peristaltic Pump
MW-4A	26.8	4.7	294.0	2.1	-52.4	0.6	Peristaltic Pump
MW-5A	26.6	4.5	274.0	12.0	-54.0	0.4	Peristaltic Pump
MW-6A	26.7	4.7	288.0	0.4	-31.9	0.4	Peristaltic Pump
MW-7A	25.7	4.8	185.0	0.0	-61.2	0.4	Peristaltic Pump
MW-8A	25.5	4.3	333.0	1.1	3.5	0.5	Peristaltic Pump
MW-9A	28.4	4.8	221.0	8.9	22.4	0.7	Peristaltic Pump
MW-10A	27.3	4.6	143.0	19.0	-91.5	0.5	Peristaltic Pump
MW-11A	28.7	5.1	441.0	9.8	-10.1	0.5	Peristaltic Pump
MW-12A	27.2	4.2	125.0	0.1	-6.2	0.5	Peristaltic Pump
MW-13A	26.6	5.1	132.0	3.6	-46.5	0.3	Peristaltic Pump
MW-16A	27.4	4.9	72.0	6.1	4.2	1.6	Peristaltic Pump
MW-19A	27.5	5.4	275.0	55.0	-61.2	0.6	Peristaltic Pump
MW-23A	26.5	4.6	218.0	1.8	-9.6	0.6	Peristaltic Pump
MW-1C	23.9	4.9	68.0	6.0	-102.4	0.5	Submersible Pump
MW-2C	26.2	4.8	49.0	0.6	-43.9	0.3	Peristaltic Pump
MW-3C	26.2	4.7	60.0	1.8	-36.0	0.3	Peristaltic Pump
MW-4C	24.5	5.3	128.0	41.0	-91.3	0.3	Submersible Pump
MW-5C	24.9	5.1	97.0	2.7	-31.9	0.6	Peristaltic Pump
MW-6C	25.9	4.8	50.0	2.7	36.4	0.4	Peristaltic Pump
MW-7C	25.0	5.1	67.0	1.2	3.8	0.5	Peristaltic Pump
MW-8C	24.5	4.8	62.0	1.6	25.9	0.4	Peristaltic Pump
MW-9C	26.8	5.9	196.0	8.8	-124.7	0.3	Peristaltic Pump
MW-10C	26.7	4.7	64.0	14.2	55.8	0.6	Peristaltic Pump
MW-11C	26.8	5.2	114.0	1.0	-69.5	0.3	Peristaltic Pump
MW-12C	25.9	4.8	61.0	0.6	48.4	0.5	Peristaltic Pump
MW-13C	24.8	4.7	69.0	3.1	-11.3	0.4	Peristaltic Pump
MW-16C	24.1	5.0	109.0	13.7	41.2	0.6	Submersible Pump
MW-19C	26.5	5.3	121.0	70.8	21.4	0.5	Submersible Pump
MW-23C	24.2	5.1	105.0	17.7	-108.0	0.5	Submersible Pump
MW-16B	24.8	4.8	80.0	70.8	4.5	0.5	Submersible Pump

Notes:

- <sup>1</sup> °C = degrees Celsius
- <sup>2</sup> uS/cm = micro Siemens per centimeter
- <sup>3</sup> NTU = Nephelometric Turbidity Units
- <sup>4</sup> mV = millivolts
- <sup>5</sup> mg/L = milligram per liter

**Table 3**  
**J.E.D. Solid Waste Management Facility**  
 Summary of Analytical Data for 11th Semi-Annual WQ Monitoring Event

Well ID	Vinyl Chloride	Benzene	Arsenic	Iron	Ammonia
	GCTL (ug/L)	GCTL (ug/L)	GCTL (ug/L)	GCTL (ug/L)	GCTL (mg/L)
	<b>1</b>	<b>1</b>	<b>10</b>	<b>300</b>	<b>2.8</b>
MW-1A	ND	0.56 i	1.25	1,870	1.2
MW-1C	ND	ND	0.28 i	412	0.065
MW-2A	ND	ND	1.14	16,400	0.87
MW-2C	ND	ND	ND	489	0.055
MW-3A	ND	0.75 i	2.26	4,400	8.7
MW-3C	ND	ND	0.42 i	683	0.053
MW-4A	ND	ND	1.56	1,850	10
MW-4C	ND	ND	0.26 i	984	0.089
MW-5A	ND	ND	1.76	334	9.6
MW-5C	ND	ND	0.26 i	834	0.064
MW-6A	ND	0.58 i	0.68	10,200	1.6
MW-6C	ND	ND	0.21 i	479	0.09
MW-7A	ND	ND	1.68	7,800	3.5
MW-7C	ND	ND	0.33 i	624	0.06
MW-8A	ND	1.3	1.12	2,510	4.9
MW-8A (Conf)	ND	ND	NA	NA	NA
MW-8C	ND	ND	0.24 i	745	0.08
MW-9A	1.2	9.1	1.51	650	11
MW-9A (Conf)	1.4	9.6	NA	NA	NA
MW-9C	ND	ND	0.27 i	690	0.3
MW-10A	ND	2.9	1.81	676	7.1
MW-10C	ND	ND	0.63	845	0.09
MW-11A	1.1	2.9	11	13,300	6.6
MW-11C	ND	ND	0.29 i	496	0.04 i
MW-12A	ND	ND	1.97	1,240	0.31
MW-12C	ND	ND	ND	617	0.06
MW-13A	ND	0.9 i	16.4	14,100	1.2
MW-13C	ND	ND	0.29 i	533	0.08
MW-16A	ND	ND	ND	131	0.05
MW-16B	ND	ND	0.37 i	1,450	0.2
MW-16C	ND	ND	0.56	1,420	0.1
MW-19A	ND	ND	2.61	4,330	4.6
MW-19C	ND	ND	0.36 i	1,110	0.05
MW-23A	ND	ND	0.49 i	2,950	1.4
MW-23C	ND	ND	0.27 i	495	0.074

Notes:

Estimated value - reported between MDL and MRL

Detect

Exceeds GCTL

ND = Non Detect  
 NA = Not Analyzed



**Table 4**  
(1 of 3)

**GROUNDWATER LEVEL MEASUREMENTS**  
**11th SEMI-ANNUAL WATER QUALITY MONITORING EVENT**  
**J.E.D. SOLID WASTE MANAGEMENT FACILITY**

<b>Site Name:</b> JED Solid Waste Management Facility			<b>Sampling Personnel:</b> Joe Terry, Tom Wissler			
<b>Location:</b> Osceola County, Florida			<b>Field Conditions:</b> mostly cloudy, ~75°F, slight breeze			
<b>Date:</b> 3-Nov-2009						
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	11:03	82.0	5.82	18.6	76.15	
DP-15	11:03	82.0	5.78	53.7	76.20	protective casing lid broken
DP-16	10:32	82.6	5.48	18.5	77.09	protective casing hinge rusted
DP-17	10:32	82.6	5.52	53.7	77.06	protective casing hinge rusted
DP-18	11:40	84.4	6.27	52.9	78.11	protective casing rusted, lid broken
DP-19	11:40	84.3	6.22	18.4	78.12	protective casing lid broken
DP-20	11:57	83.1	3.92	18.4	79.15	protective casing lid broken
DP-21	11:58	83.0	4.25	53.7	78.75	
DP-22	10:52	81.0	5.50	18.6	75.50	protective casing lid broken
DP-23	10:51	81.3	5.15	53.8	76.12	
DP-24	10:37	82.2	5.45	18.6	76.77	protective casing lid broken
SZ-1						Piezometer Abandoned 10 July 2007
SZ-2	11:58	83.2	6.57	75.4	76.59	protective casing lid broken
SZ-3	10:53	81.3	5.40	78.9	75.87	protective casing lid broken
MW-1A	12:53	95.1	20.27	23.0	74.85	
MW-1B	12:53	95.0	20.17	47.9	74.83	
MW-1C	12:53	95.2	20.33	74.4	74.85	
MW-2A	12:49	95.2	19.47	22.6	75.74	
MW-2B	12:49	95.2	19.45	48.1	75.72	
MW-2C	12:49	95.3	19.58	68.4	75.74	
MW-3A	12:46	94.6	18.03	22.8	76.61	
MW-3B	12:46	94.7	18.05	47.7	76.63	
MW-3C	12:46	94.7	18.08	68.8	76.58	

**Table 4**  
(2 of 3)

**GROUNDWATER LEVEL MEASUREMENTS**  
**11th SEMI-ANNUAL WATER QUALITY MONITORING EVENT**  
**J.E.D. SOLID WASTE MANAGEMENT FACILITY**

<b>Site Name:</b> JED Solid Waste Management Facility			<b>Sampling Personnel:</b> Joe Terry, Tom Wissler			
<b>Location:</b> Osceola County, Florida			<b>Field Conditions:</b> mostly cloudy, ~75°F, slight breeze			
<b>Date:</b> 3-Nov-2009						
<b>Well ID</b>	<b>Time</b>	<b>TOC Elevation</b>	<b>Depth to Water (ft)</b>	<b>Well Depth (ft)</b>	<b>GW Elevation</b>	<b>Field Observations</b>
MW-4A	12:42	95.5	18.07	23.1	77.41	
MW-4B	12:42	95.2	17.81	47.4	77.37	
MW-4C	12:42	95.4	18.09	72.6	77.30	
MW-5A	12:38	95.3	16.99	22.5	78.33	
MW-5B	12:38	95.3	17.51	47.1	77.79	
MW-5C	12:38	95.4	17.95	73.0	77.44	
MW-6A	12:33	94.7	17.37	22.6	77.35	
MW-6B	12:33	94.6	17.22	47.5	77.38	
MW-6C	12:33	94.6	17.36	73.1	77.22	
MW-7A	12:30	95.5	17.58	23.3	77.90	
MW-7B	12:30	95.3	17.38	48.0	77.89	
MW-7C	12:30	94.9	17.38	73.4	77.55	
MW-8A	12:28	94.7	16.56	22.5	78.11	
MW-8B	12:28	94.6	16.53	49.3	78.05	
MW-8C	12:28	94.5	16.77	73.8	77.73	
MW-9A	12:25	94.7	16.48	22.4	78.18	
MW-9B	12:25	94.6	16.57	49.1	78.06	
MW-9C	12:25	94.5	16.96	74.7	77.58	
MW-10A	12:23	96.3	18.64	22.1	77.61	
MW-10B	12:23	96.2	18.66	48.3	77.57	
MW-10C	12:23	96.4	19.02	74.9	77.34	
MW-11A	12:20	93.6	16.28	22.8	77.28	
MW-11B	12:20	93.6	16.38	47.9	77.21	
MW-11C	12:20	93.7	16.47	73.6	77.18	
MW-12A	12:15	95.1	17.58	23.0	77.52	
MW-12B	12:15	95.0	17.65	49.0	77.36	
MW-12C	12:15	95.1	17.77	73.6	77.33	
MW-13A	12:12	95.2	17.39	22.5	77.80	
MW-13B	12:12	95.1	17.34	47.3	77.78	
MW-13C	12:12	95.0	17.34	73.0	77.70	
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 4  
(3 of 3)

**GROUNDWATER LEVEL MEASUREMENTS  
11th SEMI-ANNUAL WATER QUALITY MONITORING EVENT  
J.E.D. SOLID WASTE MANAGEMENT FACILITY**

<b>Site Name:</b> JED Solid Waste Management Facility			<b>Sampling Personnel:</b> Joe Terry, Tom Wissler			
<b>Location:</b> Osceola County, Florida			<b>Field Conditions:</b> mostly cloudy, ~75°F, slight breeze			
<b>Date:</b> 3-Nov-2009						
Well ID	Time	TOC Elevation	Depth to Water (ft)	Well Depth (ft)	GW Elevation	Field Observations
MW-16A	12:10	88.69	9.11	18.63	79.58	
MW-16B	12:10	88.73	9.99	38.09	78.74	
MW-16C	12:10	88.77	10.36	67.65	78.41	
MW-17A	12:06	88.86	9.31	19.88	79.55	
MW-17B	12:06	88.79	9.73	40.18	79.06	
MW-17C	12:06	88.85	10.13	67.33	78.72	
MW-18A	11:10	87.56	9.87	17.70	77.69	
MW-18B	11:10	87.43	9.79	37.80	77.64	
MW-18C	11:10	87.42	9.78	67.15	77.64	
MW-19A	11:15	87.54	9.75	17.65	77.79	
MW-19B	11:15	87.64	9.83	37.73	77.81	
MW-19C	11:15	87.44	9.68	66.70	77.76	
MW-20A	11:47	87.12	8.65	17.93	78.47	
MW-20B	11:49	87.27	8.99	37.76	78.28	
MW-20C	11:45	87.35	9.20	66.75	78.15	
MW-21A	11:42	87.20	9.28	18.04	77.92	
MW-21B	11:40	87.23	9.32	37.63	77.91	
MW-21C	11:38	87.13	9.24	62.57	77.89	
MW-22A	11:46	87.71	10.92	18.00	76.79	
MW-22B	11:46	87.69	10.95	37.96	76.74	
MW-22C	11:46	87.55	10.78	67.25	76.77	
MW-23A	12:55	97.90	23.83	27.75	74.07	
MW-23B	12:55	97.91	23.83	42.75	74.08	
MW-23C	12:55	97.93	23.87	67.05	74.06	

Table 5

**SUMMARY OF FIELD MEASUREMENTS AND ANALYTICAL RESULTS FOR LEACHATE SAMPLES  
11th SEMI-ANNUAL WATER QUALITY MONITORING EVENT**

Parameter	Units	Regulatory Level <sup>1</sup>	Monitoring Locations					
			L-1	L-2	L-3	L-4	L-5	L-6
<b>FIELD MEASUREMENTS</b>								
Temperature	°C		31.23	29.98	31.03	38.86	39.09	31.70
pH	Std Units		7.2	6.6	6.6	6.8	6.4	6.4
Conductivity	mS/cm		23.4	13.4	12.0	17.3	9.8	7.8
Turbidity	NTU		0.8	1.6	37.0	0.9	22.8	68.8
ORP	mV		-34.7	-260.6	-168.5	-255.8	-161.7	-238.3
Dissolved Oxygen	mg/L		2.2	0.17	0.56	0.13	0.33	0.4
<b>ANALYTICAL RESULTS</b>								
1,4-Dichlorobenzene	UG/L		9.3 i	7.6 i	7.1 i	5 i	6.9 i	3.7 i
1,2-Dichloroethane (EDC)	UG/L		ND	ND	ND	ND	ND	4.8 i
3,3'-Dichlorobenzidine	UG/L		5 i	ND	3.3 i	ND	4.2 i	ND
2-Butanone (MEK)	UG/L	200,000	210	ND	ND	72 i	190	12000
4-methyl-2-pentanone (MIBK)	UG/L		ND	ND	ND	ND	ND	98 i
4-Methylphenol	UG/L		ND	ND	ND	53	ND	3200
Acetone	UG/L		190 i	ND	ND	78 i	83 i	6400
Alkalinity, Total (as CaCO <sub>3</sub> )	MG/L		3900	1800	1800	3300	1300	1900
AMMONIA-N	MG/L		1200	680	440	1200	330	400
Antimony	UG/L		30	23	11 i	54	10 i	12 i
Arsenic	UG/L	5,000	56.4	71.2	27.7	71.2	21.9	40.4
Barium	UG/L	100,000	472	341	180	332	142	203
Benzene	UG/L	500	5.6 i	8.8 i	11	7.1 i	9 i	8.4 i
Beryllium	UG/L		4 i	6 i	ND	3 i	ND	ND
bis(2-chloroethoxy)methane	UG/L		ND	ND	ND	ND	ND	9.9 i
Cadmium	UG/L	1,000	5.1	ND	ND	4.7 i	ND	ND
Chloride	MG/L		4700	2900	2400	2600	1600	1500
Chromium	UG/L	5,000	483	340	95	700	106	71
Cobalt	UG/L		38	9 i	16	40	15	12
Copper	UG/L		75	13 i	8 i	29	10 i	23
Cyanide, Total	MG/L		19	6.9 i	5.7 i	9 i	9.7 i	6 i
Ethylbenzene	UG/L		34	34	48	35	41	30
Ethylene dichloride	UG/L		ND	ND	ND	ND	ND	ND
2-Hexanone	UG/L		ND	ND	ND	ND	ND	21 i
Iron	UG/L		7340	4230	3220	1920	3900	6010
Lead	UG/L	5,000	33	10 i	6 i	26	7 i	11
m&p-Xylenes	UG/L		37	44	58	34	53	46
Napthalene	UG/L		4.8 i	ND	ND	5.2 i	ND	ND
Nickel	UG/L		440	97	134	219	124	244
o-Xylene	UG/L		18	25	25	18	26	19
Phenol	UG/L		18	ND	ND	ND	ND	3200
Selenium	UG/L	1,000	72	28	31	153	33	29
Sodium	MG/L		2470	1220	1270	1420	897	892
Styrene	UG/L		0.65 i	ND	3.3 i	1.3 i	2.4 i	5.5 i
Sulfide	MG/L		ND	ND	ND	ND	ND	5.3 i
Tin	UG/L		ND	ND	ND	ND	ND	ND
Toluene	UG/L		13	13	23	29	21	350
Total Dissolved Solids	MG/L		9700	6800	5700	11000	4400	5600
Vanadium	UG/L		596	514	231	847	225	242
Zinc	UG/L		ND	ND	ND	ND	ND	380

**Notes:**

<sup>1</sup> Maximum concentration of contaminants for the toxicity characteristic listed in 40 CFR 261.24.

ND = Not detected at MDL

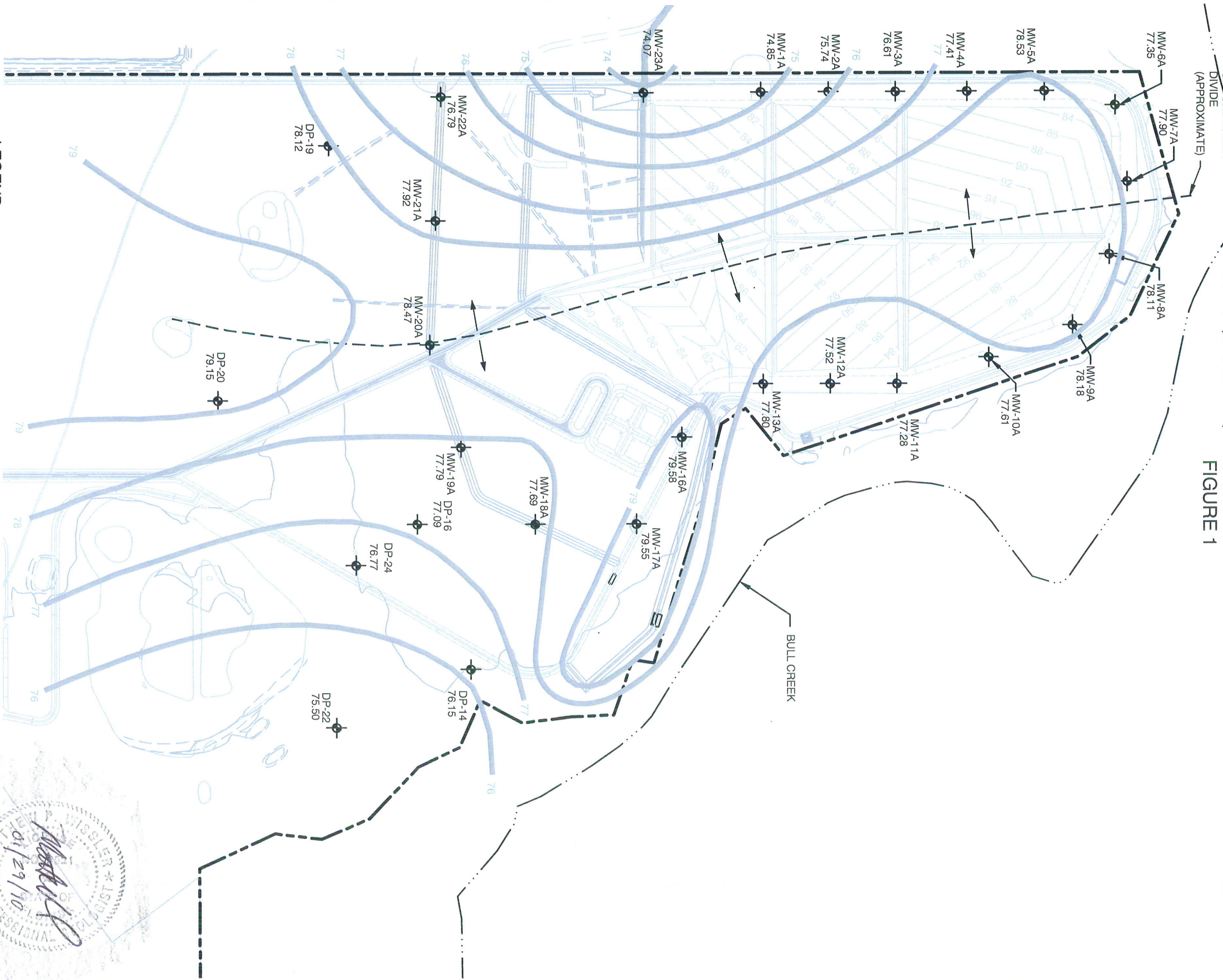
i = Value is estimated to be between method detection limit and practical quantitation limit.

Only parameters with detections above the Method Reporting Limit are shown.

## Figures

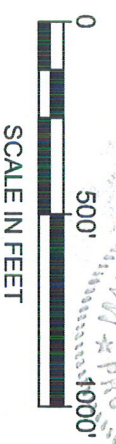


11th MONITORING ( NOVEMBER 2009 )  
 J.E.D. SOLID WASTE MANAGEMENT FACILITY  
 WACS FACILITY ID 89455  
 "A"-ZONE (SHALLOW) WELLS - WATER LEVEL CONTOURS  
 FIGURE 1



LEGEND

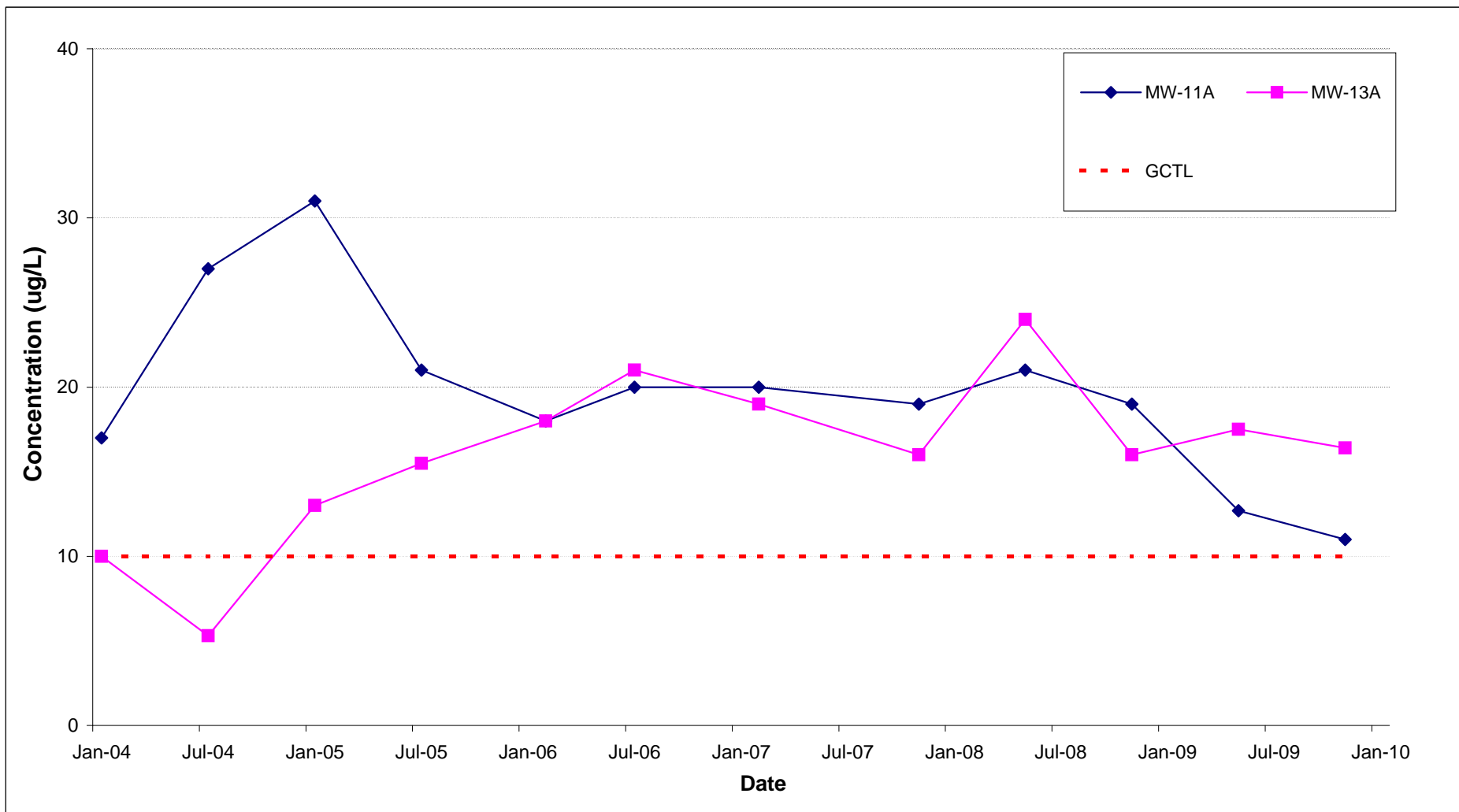
- 77.90 MONITORING WELL
  - MW-7A GROUNDWATER ELEVATION\*
  - 77.09 PIEZOMETER GROUNDWATER ELEVATION\*
  - DP-16
  - 80 GROUNDWATER CONTOUR
- \* WATER LEVEL MEASUREMENTS FROM 3 NOVEMBER 2009 SITE WIDE SURVEY



**Geosyntec** consultants  
 TAMPA, FL

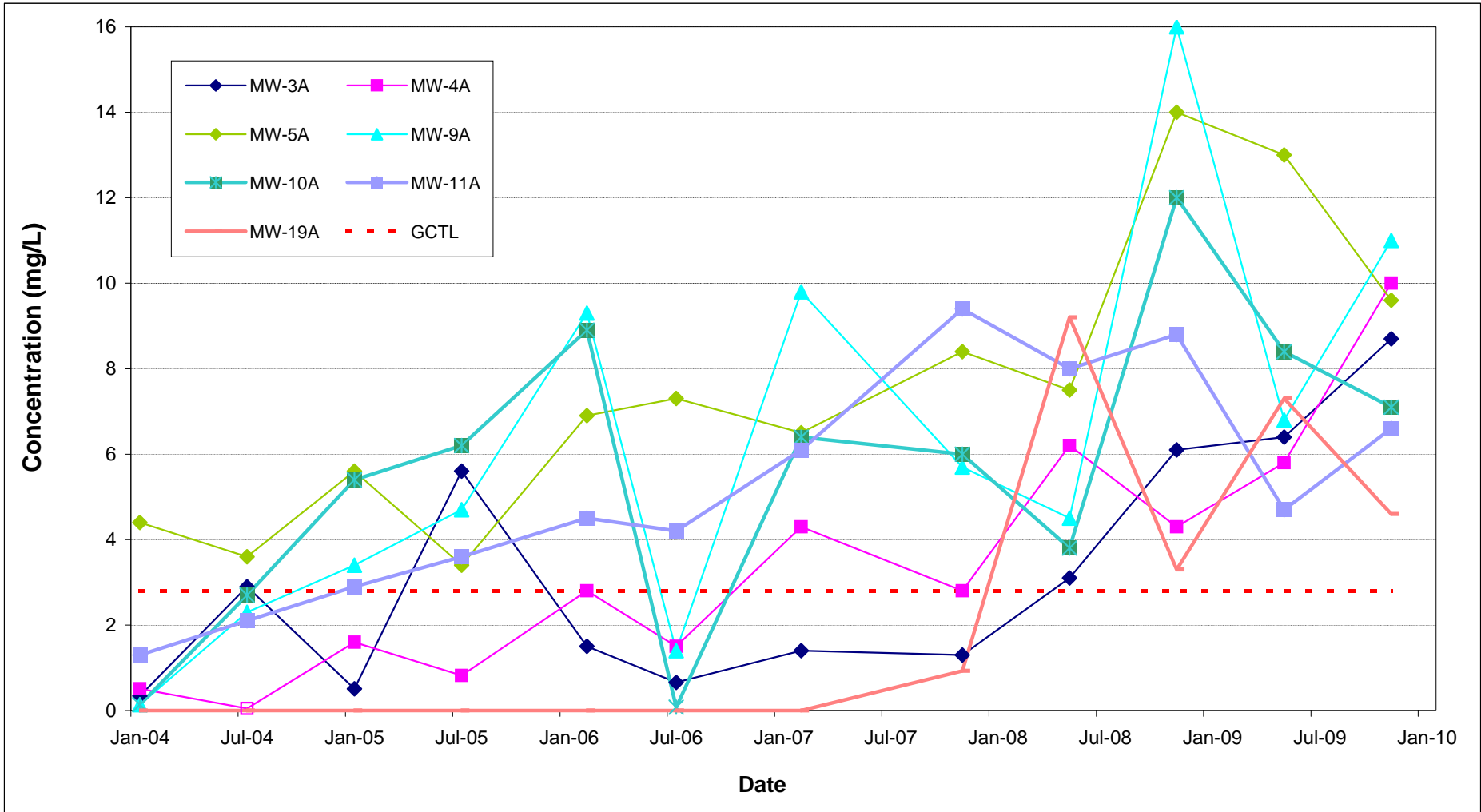
DATE: DECEMBER 2009	FILE NO. FQ1512A.02F01
PROJECT NO. FQ1512A	FIGURE NO. 1

**Figure 2**  
**Groundwater Trends - Arsenic**  
**11th Semi-Annual Water Quality Monitoring Report**  
**J.E.D. Solid Waste Management Facility**



Notes:  
 GCTL = Groundwater Cleanup Target Level (10 ug/L)  
 Open symbols indicate non-detects and closed symbols indicate detections.

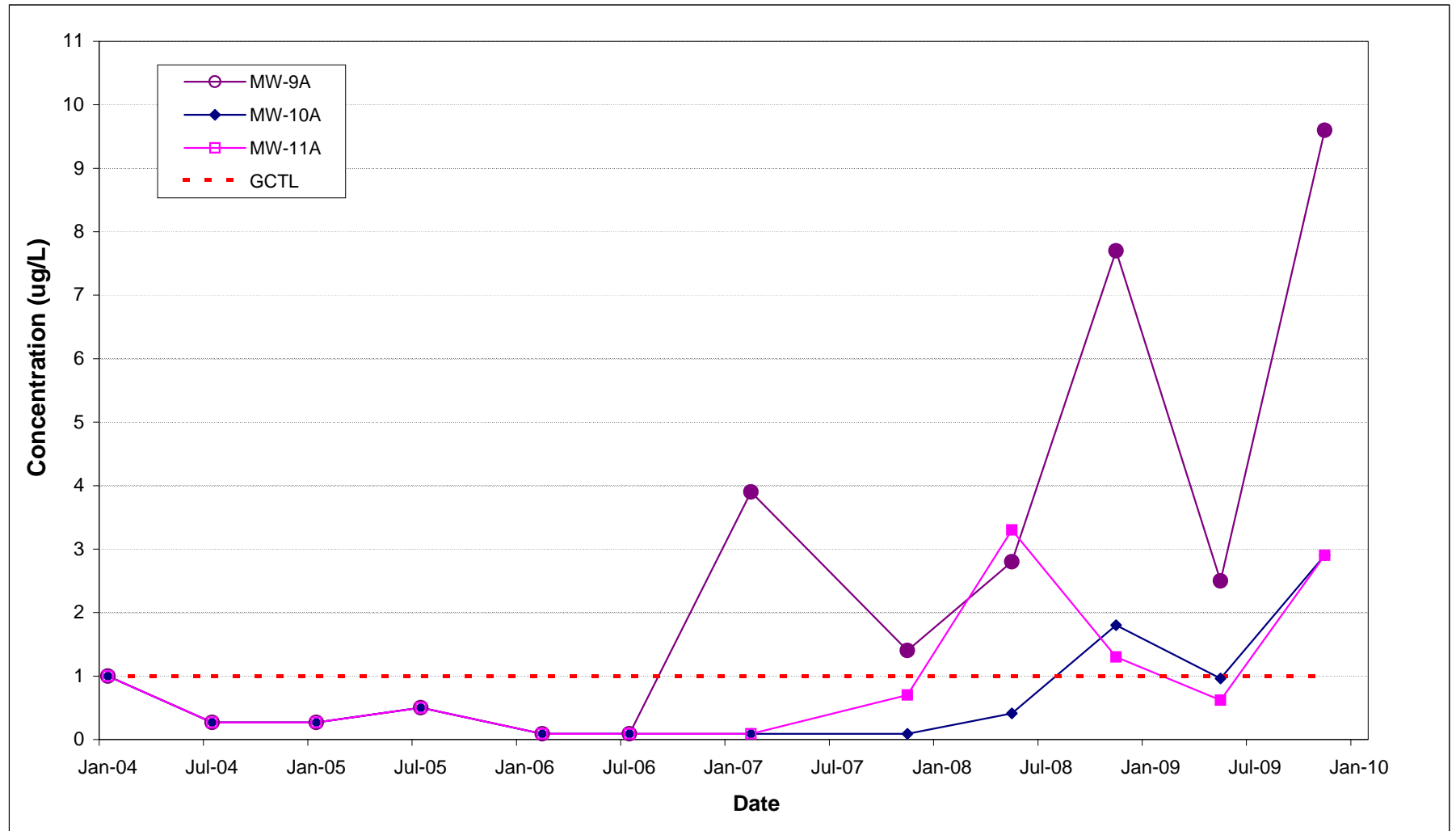
**Figure 3**  
**Groundwater Trends - Ammonia-N**  
**11th Semi-Annual Water Quality Monitoring Report**  
**J.E.D. Solid Waste Management Facility**



Notes:  
 GCTL = Groundwater Cleanup Target Level (2.8 mg/L)  
 Open symbols indicate non-detects and closed symbols indicate detections.



Figure 4  
Groundwater Trends - Benzene  
11th Semi-Annual Water Quality Monitoring Report  
J.E.D. Solid Waste Management Facility

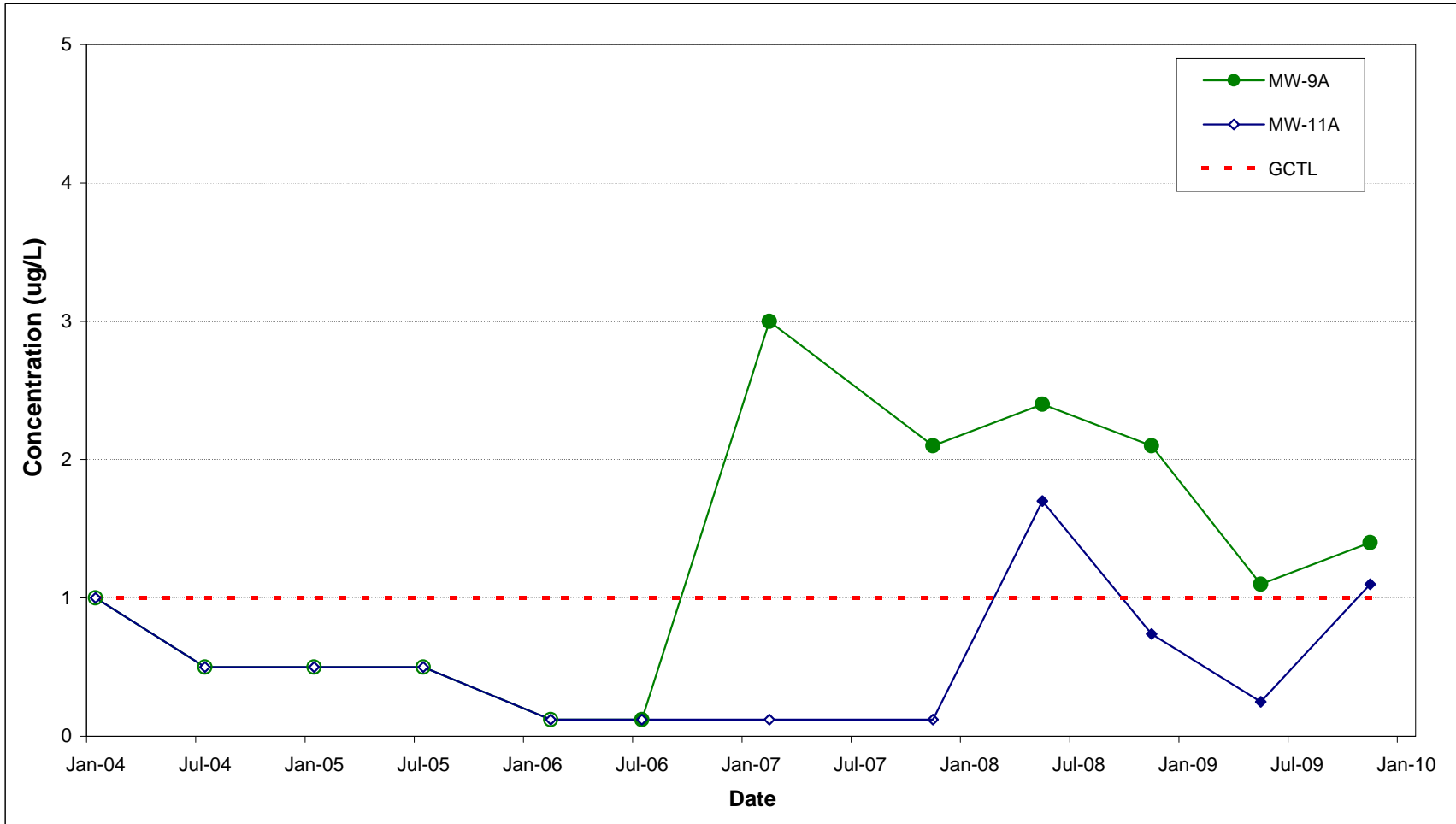


Notes:

GCTL = Groundwater Cleanup Target Level (1 ug/L)

Open symbols indicate non-detects and closed symbols indicate detections.

Figure 5  
Groundwater Trends - Vinyl Chloride  
11th Semi-Annual Water Quality Monitoring Report  
J.E.D. Solid Waste Management Facility



Notes:

GCTL = Groundwater Cleanup Target Level (1 ug/L)

Open symbols indicate non-detects and closed symbols indicate detections.

Appendix A  
Field Sampling Forms

# Form FD 9000-24 GROUNDWATER SAMPLING LOG

SITE NAME: J.E.D. SWMF (WACS Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, FL 34773	
WELL NO: MW-1A	SAMPLE ID: MW-1A	DATE: 11/9/09	

## PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 13 feet to 23 feet	STATIC DEPTH TO WATER (feet): 20.43	PURGE PUMP TYPE OR BAILER: PERISTALTIC							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (23 feet - 20.43 feet) X 0.16 gallons/foot = 0.4 gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 0.0 gallons + (0.0006 gallons/foot X 29.75 feet) + 0.25 gallons = 0.3 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 22	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 23	PURGING INITIATED AT: 1500	PURGING ENDED AT: 1525	TOTAL VOLUME PURGED (gallons): 0.75							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1515	0.45	0.45	0.03	20.65	4.54	27.04	155	2.57	1.9	CLEAR	-35.3
1520	0.15	0.60	0.03	20.67	4.49	26.95	153	0.58	0.49	CLEAR	-33.2
1525	0.15	0.75	0.03	20.68	4.53	26.90	154	2.56	0.48	CLEAR	-35.4
WELL CAPACITY (Gallons Per Foot): 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 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

## SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tom W. S. / Geosyntec				SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>				SAMPLING INITIATED AT: 1530		SAMPLING ENDED AT: 1543	
PUMP OR TUBING DEPTH IN WELL (feet): 23				TUBING MATERIAL CODE: PE				FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		Filteration Equipment Type: _____ μm	
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> TUBING Y <input checked="" type="checkbox"/> (replaced)				DUPLICATE: Y <input type="checkbox"/> N <input checked="" type="checkbox"/>							
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-1A	3	CG	40ml	HCL	Prefilled by lab		VOCs	REPP	100		
	3	CG	40ml	None	None		8011	APP	100		
	1	PE	125ml	HNO3	Prefilled by lab		Metals	APP	100		
	1	PE	125ml	H2SO4	Prefilled by lab		NH3	APP	100		
MW-1A	1	PE	250ml	None	None		TDS, CL, NO3	APP	100		
REMARKS:											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

- NOTES:** 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.  
 2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)  
 pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

**Form FD 9000-24  
GROUNDWATER SAMPLING LOG**

SITE NAME: J.E.D. SWMF (WACS Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, FL 34773	
WELL NO: <i>MW-1C</i>	SAMPLE ID: <i>MW-1C</i>	DATE: <i>9 Nov 2009</i>	

**PURGING DATA**

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): <i>0.315</i>	WELL SCREEN INTERVAL DEPTH: <i>64.4</i> feet to <i>74.4</i> feet	STATIC DEPTH TO WATER (feet): <i>20.51</i>	PURGE PUMP TYPE OR BAILER: <i>ESP</i>
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)				

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME  
(only fill out if applicable)

= 0.0 gallons + ( *0.006* gallons/foot X *80* feet ) + 0.25 gallons = *0.73* gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <i>70</i>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <i>70</i>	PURGING INITIATED AT: <i>1455</i>	PURGING ENDED AT: <i>1539</i>	TOTAL VOLUME PURGED (gallons): <i>26.4</i>
--	--	-----------------------------------	-------------------------------	--

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
<i>1520</i>	<i>15.00</i>	<i>15.00</i>	<i>0.60</i>	<i>22.00</i>	<i>5.14</i>	<i>24.02</i>	<i>70</i>	<i>1.20</i>	<i>17.7</i>	<i>clear</i>	<i>-96.0</i>
<i>1525</i>	<i>3.00</i>	<i>18.00</i>	<i>0.60</i>	<i>23.20</i>	<i>5.07</i>	<i>23.99</i>	<i>70</i>	<i>0.92</i>	<i>10.1</i>	<i>clear</i>	<i>-96.6</i>
<i>1530</i>	<i>3.00</i>	<i>21.00</i>	<i>0.60</i>	<i>23.10</i>	<i>4.88</i>	<i>23.98</i>	<i>70</i>	<i>0.56</i>	<i>8.5</i>	<i>clear</i>	<i>-97.4</i>
				<i>23.31</i>							
<i>1536</i>	<i>3.60</i>	<i>24.60</i>	<i>0.60</i>	<i>23.31</i>	<i>4.86</i>	<i>23.92</i>	<i>68</i>	<i>0.46</i>	<i>6.5</i>	<i>clear</i>	<i>-102.0</i>
<i>1539</i>	<i>1.80</i>	<i>26.40</i>	<i>0.60</i>	<i>23.31</i>	<i>4.86</i>	<i>23.92</i>	<i>68</i>	<i>0.48</i>	<i>6.0</i>	<i>clear</i>	<i>-102.4</i>

WELL CAPACITY (Gallons Per Foot): 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  
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016  
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

**SAMPLING DATA**

SAMPLED BY (PRINT) / AFFILIATION: <i>Joe Terry / Geosyntec</i>	SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>	SAMPLING INITIATED AT: <i>1540</i>	SAMPLING ENDED AT: <i>1545</i>
PUMP OR TUBING DEPTH IN WELL (feet): <i>70</i>	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y <input checked="" type="checkbox"/> (N)	FILTER SIZE: _____ μm
FIELD DECONTAMINATION: PUMP <input checked="" type="checkbox"/> (Y) N TUBING Y <input checked="" type="checkbox"/> (N) (replaced)		DUPLICATE: Y <input checked="" type="checkbox"/> (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
<i>MW-1C</i>	<i>3</i>	<i>CG</i>	<i>40ml</i>	<i>HCL</i>	<i>Prefilled by lab</i>		<i>VOCs</i>	<i>ESP</i>	<i>100</i>
<i>MW-1C</i>	<i>3</i>	<i>CG</i>	<i>40ml</i>	<i>None</i>	<i>None</i>		<i>8011</i>	<i>ESP</i>	<i>100</i>
<i>MW-1C</i>	<i>1</i>	<i>PE</i>	<i>125ml</i>	<i>HNO3</i>	<i>Prefilled by lab</i>		<i>Metals</i>	<i>ESP</i>	<i>250</i>
<i>MW-1C</i>	<i>1</i>	<i>PE</i>	<i>125ml</i>	<i>H2SO4</i>	<i>Prefilled by lab</i>		<i>NH3</i>	<i>ESP</i>	<i>250</i>
<i>MW-1C</i>	<i>1</i>	<i>PE</i>	<i>250ml</i>	<i>None</i>	<i>None</i>		<i>TDS, CL, NO3</i>	<i>ESP</i>	<i>250</i>

REMARKS:  
*weather: m. cloudy, ~82°F, ~10mph wind w/ blowing sand*

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.  
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)  
pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)











**Form FD 9000-24  
GROUNDWATER SAMPLING LOG**

SITE NAME: J.E.D. SWMF (WACS Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, FL 34773	
WELL NO: <i>MW-4A</i>	SAMPLE ID: <i>MW-4A</i>	DATE: <i>9 Nov 2009</i>	

**PURGING DATA**

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): <i>0.25</i>	WELL SCREEN INTERVAL DEPTH: feet to <i>23.1</i> feet	STATIC DEPTH TO WATER (feet): <i>18.39</i>	PURGE PUMP TYPE OR BAILER: <i>peristaltic</i>							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = ( <i>23.1</i> feet - <i>18.39</i> feet ) X 0.16 gallons/foot = <i>0.75</i> gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 0.0 gallons + (                      gallons/foot X                      feet ) + 0.25 gallons =                      gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <i>21</i>	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT: <i>1012</i>	PURGING ENDED AT: <i>1050</i>	TOTAL VOLUME PURGED (gallons): <i>1.90</i>							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) $\mu$ mhos/cm or $\mu$ S/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
<i>1040</i>	<i>1.4</i>	<i>1.4</i>	<i>0.05</i>	<i>18.51</i>	<i>4.71</i>	<i>26.67</i>	<i>294</i>	<i>0.67</i>	<i>3.1</i>	<i>clear</i>	<i>-40.8</i>
<i>1045</i>	<i>0.25</i>	<i>1.65</i>	<i>0.05</i>	<i>18.51</i>	<i>4.69</i>	<i>26.79</i>	<i>294</i>	<i>0.58</i>	<i>2.9</i>	<i>clear</i>	<i>-52.8</i>
<i>1050</i>	<i>0.25</i>	<i>1.90</i>	<i>0.05</i>	<i>18.51</i>	<i>4.68</i>	<i>26.80</i>	<i>294</i>	<i>0.58</i>	<i>2.1</i>	<i>clear</i>	<i>-52.4</i>
WELL CAPACITY (Gallons Per Foot): 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 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

**SAMPLING DATA**

SAMPLED BY (PRINT) / AFFILIATION: <i>Joe Test / Geosyntec</i>				SAMPLER(S) SIGNATURE(S): <i>Joe Test</i>				SAMPLING INITIATED AT: <i>1055</i>		SAMPLING ENDED AT: <i>1059</i>		
PUMP OR TUBING DEPTH IN WELL (feet):				TUBING MATERIAL CODE: PE				FIELD-FILTERED: Y <input checked="" type="checkbox"/> N		FILTER SIZE: _____ $\mu$ m		
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> N				TUBING Y <input checked="" type="checkbox"/> N (replaced)				DUPLICATE: Y <input checked="" type="checkbox"/> N				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH						
<i>MW-4A</i>	<i>3</i>	<i>CG</i>	<i>40ml</i>	<i>HCL</i>	<i>Prefilled by lab</i>		<i>VOCs</i>		<i>RFPP</i>		<i>&lt;100</i>	
<i>MW-4A</i>	<i>3</i>	<i>CG</i>	<i>40ml</i>	<i>None</i>	<i>None</i>		<i>8011</i>		<i>RFPP</i>		<i>&lt;100</i>	
<i>MW-4A</i>	<i>1</i>	<i>PE</i>	<i>125ml</i>	<i>HNO3</i>	<i>Prefilled by lab</i>		<i>Metals</i>		<i>APP</i>		<i>200</i>	
<i>MW-4A</i>	<i>1</i>	<i>PE</i>	<i>125ml</i>	<i>H2SO4</i>	<i>Prefilled by lab</i>		<i>NH3</i>		<i>APP</i>		<i>200</i>	
<i>MW-4A</i>	<i>1</i>	<i>PE</i>	<i>250ml</i>	<i>None</i>	<i>None</i>		<i>TDS, CL, NO3</i>		<i>APP</i>		<i>200</i>	
REMARKS: <i>Sulfur-like odor</i> <i>weather p. cloudy, ~78°F, ~10mph breeze w/ blowing sand/dust</i>												
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)												
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)												

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.  
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)  
pH:  $\pm 0.2$  units Temperature:  $\pm 0.2$  °C Specific Conductance:  $\pm 5\%$  Dissolved Oxygen: all readings  $\leq 20\%$  saturation (see Table FS 2200-2); optionally,  $\pm 0.2$  mg/L or  $\pm 10\%$  (whichever is greater) Turbidity: all readings  $\leq 20$  NTU; optionally  $\pm 5$  NTU or  $\pm 10\%$  (whichever is greater)

Revision Date: February 12, 2009



**Form FD 9000-24  
GROUNDWATER SAMPLING LOG**

SITE NAME: J.E.D. SWMF (WACS Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, FL 34773	
WELL NO: MW-5A	SAMPLE ID: MW-5A	DATE: 9 Nov 2009	

**PURGING DATA**

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: 12.5 feet to 22.5 feet	STATIC DEPTH TO WATER (feet): 17.27	PURGE PUMP TYPE OR BAILER: Peristaltic							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = ( 22.5 feet - 17.27 feet ) X 0.16 gallons/foot = 0.84 gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 0.0 gallons + ( 0.0026 gallons/foot X 30 feet ) + 0.25 gallons = 0.33 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 20	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 20	PURGING INITIATED AT: 0715	PURGING ENDED AT: 0930	TOTAL VOLUME PURGED (gallons): 7.35							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/l or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mv)
0920	6.65	6.65	0.07	17.73	4.48	26.51	273	0.51	12.3	Amber	-52.9
0925	0.35	7.00	0.07	17.75	4.52	26.58	274	0.44	12.3	Amber	-53.9
0930	0.35	7.35	0.07	17.75	4.52	26.58	274	0.41	12.0	Amber	-54.0
WELL CAPACITY (Gallons Per Foot): 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 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

**SAMPLING DATA**

SAMPLED BY (PRINT) / AFFILIATION: Joe Terry / Geosyntec				SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>				SAMPLING INITIATED AT: 0932		SAMPLING ENDED AT: 0937	
PUMP OR TUBING DEPTH IN WELL (feet): 20				TUBING MATERIAL CODE: PE				FIELD-FILTERED: Y (N)		FILTER SIZE: _____ μm	
FIELD DECONTAMINATION: PUMP Y (N)				TUBING Y (N) (replaced)				DUPLICATE: Y (N)			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-5A	3	CG	40ml	HCL	Prefilled by lab		VOCs	RFPP	<100		
	3	CG	40ml	None	None		8011	RFPP	<100		
	1	PE	125ml	HNO3	Prefilled by lab		Metals	APP	250		
	1	PE	125ml	H2SO4	Prefilled by lab		NH3	APP	250		
MW-5A	1	PE	250ml	None	None		TDS, CL, NO3	APP	250		
REMARKS: w/entle; ~75°F, overcast occasional clouds, ~10 mph wind											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

**NOTES:** 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.  
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)  
pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)







**Form FD 9000-24  
GROUNDWATER SAMPLING LOG**

SITE NAME: J.E.D. SWMF (WACS Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, FL 34773	
WELL NO: <i>MW-7A</i>	SAMPLE ID: <i>MW-7A</i>	DATE: <i>5 Feb 2009</i>	

**PURGING DATA**

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to 23 feet	STATIC DEPTH TO WATER (feet): <i>17.73</i>	PURGE PUMP TYPE OR BAILER: <i>peristaltic</i>
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) $= (233 \text{ feet} - 17.73 \text{ feet}) \times 0.16 \text{ gallons/foot} = 0.9 \text{ gallons}$				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) $= 0.0 \text{ gallons} + (\text{gallons/foot} \times \text{feet}) + 0.25 \text{ gallons} = \text{gallons}$				

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <i>20.5</i>		FINAL PUMP OR TUBING DEPTH IN WELL (feet): <i>20.5</i>		PURGING INITIATED AT: <i>1122</i>		PURGING ENDED AT: <i>1328</i>		TOTAL VOLUME PURGED (gallons): <i>5.04</i>			
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) $\mu\text{mhos/cm}$ or $\mu\text{S/cm}$	DISSOLVED OXYGEN (circle units) $\text{mg/L}$ or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
<i>1318</i>	<i>2.64</i>	<i>4.64</i>	<i>0.04</i>	<i>17.75</i>	<i>4.77</i>	<i>25.86</i>	<i>184</i>	<i>0.40</i>	<i>0.0</i>	<i>clear</i>	<i>-625</i>
<i>1323</i>	<i>0.20</i>	<i>4.84</i>	<i>0.04</i>	<i>17.75</i>	<i>4.75</i>	<i>25.72</i>	<i>184</i>	<i>0.38</i>	<i>0.0</i>	<i>clear</i>	<i>-625</i>
<i>1328</i>	<i>0.20</i>	<i>5.04</i>	<i>0.04</i>	<i>17.75</i>	<i>4.75</i>	<i>25.74</i>	<i>185</i>	<i>0.40</i>	<i>0.0</i>	<i>clear</i>	<i>-612</i>

WELL CAPACITY (Gallons Per Foot): 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  
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016  
 PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

**SAMPLING DATA**

SAMPLED BY (PRINT) / AFFILIATION: <i>Joe Terry / Geosyntec</i>		SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>		SAMPLING INITIATED AT: <i>1330</i>	SAMPLING ENDED AT: <i>1336</i>
PUMP OR TUBING DEPTH IN WELL (feet): <i>20.5</i>		TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y <input checked="" type="checkbox"/>	FILTER SIZE: _____ $\mu\text{m}$	
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/>		TUBING Y <input checked="" type="checkbox"/> (replaced)		DUPLICATE: Y <input checked="" type="checkbox"/>	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
<i>MW-7A</i>	<i>3</i>	<i>CG</i>	<i>40ml</i>	<i>HCL</i>	<i>Prefilled by lab</i>		<i>VOCs</i>	<i>RFPP</i>	<i>&lt;100</i>
<i>MW-7A</i>	<i>3</i>	<i>CG</i>	<i>40ml</i>	<i>None</i>	<i>None</i>		<i>8011</i>	<i>RFPP</i>	<i>&lt;100</i>
<i>MW-7A</i>	<i>1</i>	<i>PE</i>	<i>125ml</i>	<i>HNO3</i>	<i>Prefilled by lab</i>		<i>Metals</i>	<i>APP</i>	<i>150</i>
<i>MW-7A</i>	<i>1</i>	<i>PE</i>	<i>125ml</i>	<i>H2SO4</i>	<i>Prefilled by lab</i>		<i>NH3</i>	<i>APP</i>	<i>150</i>
<i>MW-7A</i>	<i>1</i>	<i>PE</i>	<i>250ml</i>	<i>None</i>	<i>None</i>		<i>TDS, CL, NO3</i>	<i>APP</i>	<i>150</i>

REMARKS: *soil - 1. to order*  
*weather: B. sunny, ~82°F (at 1323), sl. breeze*

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.  
 2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)  
 pH:  $\pm 0.2$  units Temperature:  $\pm 0.2$  °C Specific Conductance:  $\pm 5\%$  Dissolved Oxygen: all readings  $\leq 20\%$  saturation (see Table FS 2200-2); optionally,  $\pm 0.2$  mg/L or  $\pm 10\%$  (whichever is greater) Turbidity: all readings  $\leq 20$  NTU; optionally  $\pm 5$  NTU or  $\pm 10\%$  (whichever is greater)









**Form FD 9000-24  
GROUNDWATER SAMPLING LOG**

SITE NAME: J.E.D. SWMF (WACS Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, FL 34773	
WELL NO: <i>mw-9A</i>	SAMPLE ID: <i>mw-9A</i>	DATE: <i>4 Nov 2009</i>	

**PURGING DATA**

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): <i>3.25</i>	WELL SCREEN INTERVAL DEPTH: feet to <i>22.4</i> feet	STATIC DEPTH TO WATER (feet): <i>16.61</i>	PURGE PUMP TYPE OR BAILER: <i>peristaltic</i>							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = ( <i>22.4</i> feet - <i>16.61</i> feet) X 0.16 gallons/foot = <i>1.0</i> gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 0.0 gallons + (                      gallons/foot X                      feet) + 0.25 gallons =                      gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <i>20</i>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <i>20</i>	PURGING INITIATED AT: <i>1140</i>	PURGING ENDED AT: <i>1211</i>	TOTAL VOLUME PURGED (gallons): <i>1.7</i>							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) $\mu$ mhos/cm or $\mu$ S/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
<i>1202</i>	<i>1.10</i>	<i>1.10</i>	<i>0.05</i>	<i>16.77</i>	<i>4.76</i>	<i>28.30</i>	<i>223</i>	<i>0.91</i>	<i>9.1</i>	<i>Amber</i>	<i>245</i>
<i>1210</i>	<i>6.46</i>	<i>1.56</i>	<i>6.05</i>	<i>16.77</i>	<i>4.78</i>	<i>28.32</i>	<i>221</i>	<i>0.73</i>	<i>9.2</i>	<i>Amber</i>	<i>23.3</i>
<i>1211</i>	<i>0.20</i>	<i>1.70</i>	<i>6.05</i>	<i>16.77</i>	<i>4.78</i>	<i>28.35</i>	<i>221</i>	<i>0.68</i>	<i>8.9</i>	<i>Amber</i>	<i>22.4</i>
WELL CAPACITY (Gallons Per Foot): 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 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

**SAMPLING DATA**

SAMPLED BY (PRINT) / AFFILIATION: <i>Joe Terry / Geosyntec</i>				SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>				SAMPLING INITIATED AT: <i>1215</i>		SAMPLING ENDED AT: <i>1228</i>			
PUMP OR TUBING DEPTH IN WELL (feet): <i>20</i>				TUBING MATERIAL CODE: PE		FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		FILTER SIZE: _____ $\mu$ m					
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				TUBING Y <input checked="" type="checkbox"/> N <input type="checkbox"/> (replaced)				DUPLICATE: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>					
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL per minute)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH							
<i>mw-9A</i>	<i>3</i>	<i>CG</i>	<i>40ml</i>	<i>HCL</i>	<i>Prefilled by lab</i>		<i>VOCs</i>		<i>RFPP</i>		<i>&lt;100</i>		
<i>mw-9A</i>	<i>3</i>	<i>CG</i>	<i>40ml</i>	<i>None</i>	<i>None</i>		<i>8011</i>		<i>RFPP</i>		<i>&lt;100</i>		
<i>mw-9A</i>	<i>1</i>	<i>PE</i>	<i>125ml</i>	<i>HNO3</i>	<i>Prefilled by lab</i>		<i>Metals</i>		<i>APP</i>		<i>200</i>		
<i>mw-9A</i>	<i>1</i>	<i>PE</i>	<i>125ml</i>	<i>H2SO4</i>	<i>Prefilled by lab</i>		<i>NH3</i>		<i>APP</i>		<i>200</i>		
<i>mw-9A</i>	<i>1</i>	<i>PE</i>	<i>250ml</i>	<i>None</i>	<i>None</i>		<i>TDS, CL, NO3</i>		<i>APP</i>		<i>200</i>		
REMARKS: <i>sun/w/sou-like odor</i> <i>Collected blind duplicate. Duplicate ID: DUP-1 collected</i> <i>weather: overcast, ~80°F, sl. breeze for same parameter analysis as mw-9A</i>													
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)													
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)													

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.  
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)  
pH:  $\pm 0.2$  units    Temperature:  $\pm 0.2$  °C    Specific Conductance:  $\pm 5\%$     Dissolved Oxygen: all readings  $\leq 20\%$  saturation (see Table FS 2200-2); optionally,  $\pm 0.2$  mg/L or  $\pm 10\%$  (whichever is greater)    Turbidity: all readings  $\leq 20$  NTU; optionally  $\pm 5$  NTU or  $\pm 10\%$  (whichever is greater)





**Form FD 9000-24  
GROUNDWATER SAMPLING LOG**

SITE NAME: J.E.D. SWMF (WACS Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, FL 34773	
WELL NO: <i>MW-10C</i>	SAMPLE ID: <i>MW-10C</i>	DATE: <i>11/4/09</i>	

**PURGING DATA**

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): <i>1/4</i>	WELL SCREEN INTERVAL DEPTH: <i>61.9</i> feet to <i>94.9</i> feet	STATIC DEPTH TO WATER (feet): <i>19.13</i>	PURGE PUMP TYPE OR BAILER: <i>PERISTALTIC</i>
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = ( <i>94.9</i> feet - <i>19.13</i> feet) X 0.16 gallons/foot = <i>5.9</i> gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 0.0 gallons + ( <i>0.0026</i> gallons/foot X <i>92</i> feet) + 0.25 gallons = <i>0.4</i> gallons				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <i>70</i>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <i>70</i>	PURGING INITIATED AT: <i>1242</i>	PURGING ENDED AT: <i>1321</i>	TOTAL VOLUME PURGED (gallons): <i>2.15</i>

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
<i>1315</i>	<i>1.65</i>	<i>1.65</i>	<i>0.05</i>	<i>19.13</i>	<i>4.68</i>	<i>26.63</i>	<i>64</i>	<i>0.67</i>	<i>16.7</i>	<i>CLEAR</i>	<i>62.2</i>
<i>1320</i>	<i>0.25</i>	<i>1.90</i>	<i>0.05</i>	<i>19.19</i>	<i>4.88</i>	<i>26.69</i>	<i>65</i>	<i>0.63</i>	<i>15.9</i>	<i>CLEAR</i>	<i>54.5</i>
<i>1325</i>	<i>0.25</i>	<i>2.15</i>	<i>0.05</i>	<i>19.19</i>	<i>4.93</i>	<i>26.68</i>	<i>64</i>	<i>0.64</i>	<i>14.2</i>	<i>CLEAR</i>	<i>55.8</i>

WELL CAPACITY (Gallons Per Foot): 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  
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016  
 PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

**SAMPLING DATA**

SAMPLED BY (PRINT) / AFFILIATION: <i>Tom M... Geosyntec</i>	SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>	SAMPLING INITIATED AT: <i>1330</i>	SAMPLING ENDED AT: <i>1344</i>
PUMP OR TUBING DEPTH IN WELL (feet): <i>70</i>	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	FILTER SIZE: _____ μm
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	TUBING Y <input checked="" type="checkbox"/> N (replaced) <input type="checkbox"/>	DUPLICATE: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
<i>MW-10C</i>	3	CG	40ml	HCL	Prefilled by lab		VOCs	<i>RFPP</i>	<i>&lt;100</i>
	3	CG	40ml	None	None		8011	<i>RFPP</i>	<i>&lt;100</i>
	1	PE	125ml	HNO3	Prefilled by lab		Metals	<i>APP</i>	<i>200</i>
	1	PE	125ml	H2SO4	Prefilled by lab		NH3	<i>APP</i>	<i>200</i>
<i>MW-10C</i>	1	PE	250ml	None	None		TDS, CL, NO3	<i>APP</i>	<i>200</i>

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.  
 2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)  
 pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009





**Form FD 9000-24  
GROUNDWATER SAMPLING LOG**

SITE NAME: J.E.D. SWMF (WACS Facility ID: 89544)	SITE LOCATION: 1501 Omni Way, St. Cloud, FL 34773
WELL NO: <i>MW-11C</i>	SAMPLE ID: <i>MW-11C</i>
DATE: <i>11/10/09</i>	

**PURGING DATA**

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): <i>1/4</i>	WELL SCREEN INTERVAL DEPTH: feet to <i>13.6</i> feet	STATIC DEPTH TO WATER (feet): <i>16.56</i>	PURGE PUMP TYPE OR BAILER: <i>PERISTALTIC</i>							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (                      feet -                      feet) X 0.16 gallons/foot =                      gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 0.0 gallons + ( <i>0.024</i> gallons/foot X <i>68</i> feet) + 0.25 gallons = <i>0.4</i> gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <i>68</i>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <i>68</i>	PURGING INITIATED AT: <i>1035</i>	PURGING ENDED AT: <i>1100</i>	TOTAL VOLUME PURGED (gallons): <i>1.60</i>							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
<i>1050</i>	<i>0.90</i>	<i>0.90</i>	<i>0.06</i>	<i>16.67</i>	<i>5.10</i>	<i>26.69</i>	<i>115</i>	<i>0.44</i>	<i>1.60</i>	<i>CLEAR</i>	<i>-60.1</i>
<i>1055</i>	<i>0.35</i>	<i>1.25</i>	<i>0.06</i>	<i>16.71</i>	<i>5.19</i>	<i>26.78</i>	<i>115</i>	<i>0.35</i>	<i>1.02</i>	<i>CLEAR</i>	<i>-68.1</i>
<i>1100</i>	<i>0.35</i>	<i>1.60</i>	<i>0.06</i>	<i>16.77</i>	<i>5.23</i>	<i>26.81</i>	<i>114</i>	<i>0.32</i>	<i>0.95</i>	<i>CLEAR</i>	<i>-64.5</i>
WELL CAPACITY (Gallons Per Foot): 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 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

**SAMPLING DATA**

SAMPLED BY (PRINT) / AFFILIATION: <i>Tom Wislizenus</i> / Geosyntec				SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>				SAMPLING INITIATED AT: <i>1105</i>		SAMPLING ENDED AT: <i>1114</i>		
PUMP OR TUBING DEPTH IN WELL (feet): <i>68</i>				TUBING MATERIAL CODE: PE				FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		FILTER SIZE: _____ µm		
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				TUBING Y <input checked="" type="checkbox"/> N (replaced) <input type="checkbox"/>				DUPLICATE: Y <input type="checkbox"/> N <input checked="" type="checkbox"/>				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH						
<i>MW-11C</i>	3	CG	40ml	HCL	Prefilled by lab		VOCs		<i>RFPP</i>		<i>110</i>	
	3	CG	40ml	None	None		8011		<i>RFPP</i>		<i>110</i>	
	1	PE	125ml	HNO3	Prefilled by lab		Metals		<i>APP</i>		<i>110</i>	
	1	PE	125ml	H2SO4	Prefilled by lab		NH3		<i>APP</i>		<i>110</i>	
<i>MW-11C</i>	1	PE	250ml	None	None		TDS, CL, NO3		<i>APP</i>		<i>110</i>	
REMARKS:												
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)												
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)												

**NOTES:** 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.  
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)  
pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

**Form FD 9000-24  
GROUNDWATER SAMPLING LOG**

SITE NAME: J.E.D. SWMF (WACS Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, FL 34773	
WELL NO: <i>MW-12A</i>	SAMPLE ID: <i>MW-12A</i>	DATE: <i>1/24/09</i>	

**PURGING DATA**

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: <i>13</i> feet to <i>23</i> feet	STATIC DEPTH TO WATER (feet): <i>17.68</i>	PURGE PUMP TYPE OR BAILER: <i>PERISTALTIC</i>
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = <i>10</i> feet - <i>17.68</i> feet X 0.16 gallons/foot = <i>0.9</i> gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 0.0 gallons + ( <i>0.0036</i> gallons/foot X <i>20</i> feet) + 0.25 gallons = <i>0.3</i> gallons				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <i>15.20</i>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <i>15.20</i>	PURGING INITIATED AT: <i>0933</i>	PURGING ENDED AT: <i>1000</i>	TOTAL VOLUME PURGED (gallons): <i>1.89</i>

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mv)
<i>0950</i>	<i>1.19</i>	<i>1.19</i>	<i>0.07</i>	<i>18.00</i>	<i>4.32</i>	<i>27.34</i>	<i>126</i>	<i>0.57</i>	<i>0.68</i>	<i>CLEAR</i>	<i>-2.6</i>
<i>0955</i>	<i>0.35</i>	<i>1.54</i>	<i>0.07</i>	<i>18.02</i>	<i>4.25</i>	<i>27.23</i>	<i>125</i>	<i>0.47</i>	<i>0.43</i>	<i>CLEAR</i>	<i>-4.4</i>
<i>1000</i>	<i>0.35</i>	<i>1.89</i>	<i>0.07</i>	<i>18.05</i>	<i>4.23</i>	<i>27.15</i>	<i>125</i>	<i>0.45</i>	<i>0.12</i>	<i>CLEAR</i>	<i>-6.2</i>

WELL CAPACITY (Gallons Per Foot): 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  
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016  
 PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

**SAMPLING DATA**

SAMPLED BY (PRINT) / AFFILIATION: <i>Tom Wessie / Geosyntec</i>	SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>	SAMPLING INITIATED AT: <i>1005</i>	SAMPLING ENDED AT: <i>1014</i>
PUMP OR TUBING DEPTH IN WELL (feet): <i>15</i>	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	FILTER SIZE: _____ μm
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> N <input type="checkbox"/> TUBING Y <input checked="" type="checkbox"/> N (replaced) <input type="checkbox"/>	DUPLICATE: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
<i>MW-12A</i>	3	CG	40ml	HCL	Prefilled by lab		VOCs	<i>RFPP</i>	<i>110</i>
	3	CG	40ml	None	None		8011	<i>RFPP</i>	<i>110</i>
	1	PE	125ml	HNO3	Prefilled by lab		Metals	<i>APP</i>	<i>110</i>
	1	PE	125ml	H2SO4	Prefilled by lab		NH3	<i>APP</i>	<i>110</i>
<i>MW-12A</i>	1	PE	250ml	None	None		TDS, CL, NO3	<i>APP</i>	<i>110</i>

REMARKS: *SAMPLE LINE DOWN 98° SWINDY 15 MPIT BREEZE*

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.  
 2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)  
 pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009





**Form FD 9000-24  
GROUNDWATER SAMPLING LOG**

SITE NAME: J.E.D. SWMF (WACS Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, FL 34773	
WELL NO: <i>MW-13C</i>	SAMPLE ID: <i>MW 13C</i>	DATE: <i>4 Nov 2009</i>	

**PURGING DATA**

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): <i>0.25</i>	WELL SCREEN INTERVAL DEPTH: <i>63</i> feet to <i>73</i> feet	STATIC DEPTH TO WATER (feet): <i>17.37</i>	PURGE PUMP TYPE OR BAILER: <i>peristaltic</i>							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = ( <i>63</i> feet - <i>17.37</i> feet ) X <i>0.16</i> gallons/foot = <i>8.5</i> gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = <i>0.0</i> gallons + ( <i>0.0006</i> gallons/foot X <i>73</i> feet) + <i>0.25</i> gallons = <i>0.5</i> gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <i>68</i>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <i>68</i>	PURGING INITIATED AT: <i>0840</i>	PURGING ENDED AT: <i>0840</i>	TOTAL VOLUME PURGED (gallons): <i>1.8</i>							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) (mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
<i>0825</i>	<i>0.40</i>	<i>0.40</i>	<i>0.06</i>	<i>17.48</i>	<i>4.62</i>	<i>24.77</i>	<i>64</i>	<i>0.55</i>	<i>1.9</i>	<i>clear</i>	<i>-9.2</i>
<i>0834</i>	<i>0.54</i>	<i>1.44</i>	<i>0.06</i>	<i>17.48</i>	<i>4.68</i>	<i>24.80</i>	<i>64</i>	<i>0.39</i>	<i>3.0</i>	<i>clear</i>	<i>-12.6</i>
<i>0840</i>	<i>0.36</i>	<i>1.80</i>	<i>0.06</i>	<i>17.48</i>	<i>4.70</i>	<i>24.82</i>	<i>64</i>	<i>0.37</i>	<i>3.1</i>	<i>clear</i>	<i>-11.3</i>
WELL CAPACITY (Gallons Per Foot): 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 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

**SAMPLING DATA**

SAMPLED BY (PRINT) / AFFILIATION: <i>Joe Terry / Geosyntec</i>				SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>				SAMPLING INITIATED AT: <i>0842</i>		SAMPLING ENDED AT: <i>0848</i>		
PUMP OR TUBING DEPTH IN WELL (feet): <i>68</i>				TUBING MATERIAL CODE: PE		FIELD-FILTERED: Y <input checked="" type="checkbox"/>			FILTER SIZE: _____ µm			
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> TUBING Y <input checked="" type="checkbox"/> (replaced)				DUPLICATE: Y <input checked="" type="checkbox"/>								
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH						
	3	CG	40ml	HCL	Prefilled by lab		VOCs	RFPP	< 100			
	3	CG	40ml	None	None		8011	RFPP	< 100			
	1	PE	125ml	HNO3	Prefilled by lab		Metals	APP	240			
	1	PE	125ml	H2SO4	Prefilled by lab		NH3	APP	240			
	1	PE	250ml	None	None		TDS, CL, NO3	APP	240			
REMARKS: <i>Weather: B. sunny, 27.8°C, S1 breeze</i>												
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)												
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)												

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.  
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)  
pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009



Form FD 9000-24  
**GROUNDWATER SAMPLING LOG**

SITE NAME: J.E.D. SWMF (WACS Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, FL 34773	
WELL NO: MW-16B	SAMPLE ID: MW-16B	DATE: 1/3/09	

**PURGING DATA**

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/8	WELL SCREEN INTERVAL DEPTH: 26 feet to 38 feet	STATIC DEPTH TO WATER (feet): 9.99	PURGE PUMP TYPE OR BAILER: SUBMERSIBLE
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY = (38.09 feet - 9.99 feet) X 0.16 gallons/foot = 4.50 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = 0.0 gallons + (1.26 gallons/foot X 33 feet) + 0.25 gallons = 41.5 gallons				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 33	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 33	PURGING INITIATED AT: 1503	PURGING ENDED AT: 1626	TOTAL VOLUME PURGED (gallons): 38.5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) (mg/l) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1610	33.5	33.5	0.50	11.35	4.82	24.85	80	0.50	71.20	Hazy	1.1
1615	2.5	36.0	0.50	11.35	4.82	24.79	80	0.55	70.15	Hazy	3.0
1626	2.5	38.5	0.50	11.35	4.80	24.80	80	0.53	70.80	Hazy	4.5

WELL CAPACITY (Gallons Per Foot): 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  
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016  
 PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

**SAMPLING DATA**

SAMPLED BY (PRINT) / AFFILIATION: Tom Wisler / Geosyntec	SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>	SAMPLING INITIATED AT: 1625	SAMPLING ENDED AT: 1635
PUMP OR TUBING DEPTH IN WELL (feet): 33	TUBING MATERIAL CODE: PE	FIELD-FILTERED: <input checked="" type="checkbox"/> <del>Y</del>	FILTER SIZE: 1 µm
FIELD DECONTAMINATION: PUMP <input checked="" type="checkbox"/> N	TUBING Y <input checked="" type="checkbox"/> N (replaced)	DUPLICATE: Y <input checked="" type="checkbox"/> N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-16B	3	CG	40ml	HCL	Prefilled by lab		VOCs	ESP	<100
MW-16B	3	CG	40ml	None	None		8011	ESP	<100
	1	PE	125ml	HNO3	Prefilled by lab		Metals	ESP	250
	1	PE	125ml	H2SO4	Prefilled by lab		NH3	ESP	250
MW-16B	1	PE	250ml	None	None		TDS, CL, NO3	ESP	250
MW-16B	1	PE	125ml	HNO3	Prefilled by lab		Dissolved Metals	ESP	250

REMARKS: INITIAL TURBIDITY 2899. TURBIDITY 1500. 1/3/09

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.  
 2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)  
 pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)





**Form FD 9000-24  
GROUNDWATER SAMPLING LOG**

SITE NAME: J.E.D. SWMF (WACS Facility ID: 89544)		SITE LOCATION: 1501 Omni Way, St. Cloud, FL 34773	
WELL NO: MW-19A	SAMPLE ID: MW-19A	DATE: 3 Nov 2009	

**PURGING DATA**

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 5.25	WELL SCREEN INTERVAL DEPTH: 7.65 feet to 17.65 feet	STATIC DEPTH TO WATER (feet): 9.75	PURGE PUMP TYPE OR BAILER: peristaltic
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (17.65 feet - 9.75 feet) X 0.16 gallons/foot = 1.3 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 0.0 gallons + (gallons/foot X feet) + 0.25 gallons = gallons				

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 14		FINAL PUMP OR TUBING DEPTH IN WELL (feet): 14		PURGING INITIATED AT: 1330		PURGING ENDED AT: 1418		TOTAL VOLUME PURGED (gallons): 4.06			
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) (mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
1347	1.09	1.09	0.07	10.09	5.45	27.24	280	0.64	50.9	Amber	-68.5
1406	1.33	3.22	0.07	10.12	5.43	27.57	282	0.55	53.6	Amber	-64.8
1413	0.54	3.71	0.07	10.12	5.43	27.52	273	0.45	53.8	Amber	-65.1
1418	0.35	4.06	0.07	10.12	5.38	27.54	275	0.56	53.0	Amber	-61.2

WELL CAPACITY (Gallons Per Foot): 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  
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016  
 PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

**SAMPLING DATA**

SAMPLED BY (PRINT) / AFFILIATION: Joe Tracy / Geosyntec			SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>			SAMPLING INITIATED AT: 1420		SAMPLING ENDED AT: 1425	
PUMP OR TUBING DEPTH IN WELL (feet): 14			TUBING MATERIAL CODE: PE			FIELD-FILTERED: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N		FILTER SIZE: 1 μm	
FIELD DECONTAMINATION: PUMP <input type="checkbox"/> Y <input checked="" type="checkbox"/> N			TUBING <input type="checkbox"/> Y <input checked="" type="checkbox"/> N (replaced)			DUPLICATE: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-19A	3	CG	40ml	HCL	Prefilled by lab		VOCs	RFP	<100
	3	CG	40ml	None	None		8011	RFP	<100
	1	PE	125ml	HNO3	Prefilled by lab		Metals	APP	280
	1	PE	125ml	H2SO4	Prefilled by lab		NH3	APP	280
MW-19A	1	PE	250ml	None	None		TDS, CL, NO3	APP	280
MW-19A	1	PE	125ml	HNO3	Prefilled by lab		Dissolved metals	APP	280
REMARKS: sulfur like odor. Turbidity after f. l. e. = 6.5 NTU initial turbidity: 20.7 NTU weather overcast, ~73°F, -5 mph S wind									
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)									
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)									

**NOTES:** 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.  
 2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)  
 pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)







**Form FD 9000-24  
GROUNDWATER SAMPLING LOG**

SITE NAME: J.E.D. SWMF (WACS Facility ID: 89544)	SITE LOCATION: 1501 Omni Way, St. Cloud, FL 34773
WELL NO: <i>MW-9A</i>	SAMPLE ID: <i>MW-9A</i>
DATE: <i>22 Dec 2009</i>	

**PURGING DATA**

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): <i>0.25</i>	WELL SCREEN INTERVAL DEPTH: <i>12.4</i> feet to <i>22.4</i> feet	STATIC DEPTH TO WATER (feet): <i>16.03</i>	PURGE PUMP TYPE OR BAILER: <i>peristaltic</i>							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = ( <i>22.4</i> feet - <i>16.03</i> feet ) X 0.16 gallons/foot = <i>1.02</i> gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 0.0 gallons + (                      gallons/foot X                      feet ) + 0.25 gallons =                      gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <i>20</i>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <i>20</i>	PURGING INITIATED AT: <i>1138</i>	PURGING ENDED AT: <i>1230</i>	TOTAL VOLUME PURGED (gallons): <i>3.12</i>							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
<i>1219</i>	<i>2.46</i>	<i>2.46</i>	<i>0.06</i>	<i>16.20</i>	<i>4.65</i>	<i>26.03</i>	<i>203</i>	<i>0.49</i>	<i>2.0</i>	<i>yellowish</i>	<i>-74.3</i>
<i>1225</i>	<i>0.36</i>	<i>2.82</i>	<i>0.06</i>	<i>16.20</i>	<i>4.72</i>	<i>26.09</i>	<i>203</i>	<i>0.49</i>	<i>1.7</i>	<i>" "</i>	<i>-77.9</i>
<i>1230</i>	<i>0.30</i>	<i>3.12</i>	<i>0.06</i>	<i>16.20</i>	<i>4.71</i>	<i>26.01</i>	<i>203</i>	<i>0.47</i>	<i>1.5</i>	<i>" "</i>	<i>-81.3</i>
WELL CAPACITY (Gallons Per Foot): 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 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

**SAMPLING DATA**

SAMPLED BY (PRINT) / AFFILIATION: <i>Joe Terry / Geosyntec</i>				SAMPLER(S) SIGNATURE(S): <i>Joe Terry</i>				SAMPLING INITIATED AT: <i>1232</i>		SAMPLING ENDED AT: <i>1235</i>		
PUMP OR TUBING DEPTH IN WELL (feet): <i>20</i>				TUBING MATERIAL CODE: PE				FIELD-FILTERED: Y <input checked="" type="checkbox"/> (N)		FILTER SIZE: _____ µm		
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> (N)				TUBING Y <input checked="" type="checkbox"/> (replaced)				DUPLICATE: Y <input checked="" type="checkbox"/> (N)				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH						
<i>MW-9A</i>	<i>3</i>	<i>CG</i>	<i>40ml</i>	<i>HCL</i>	<i>Prefilled by lab</i>		<i>VOCs</i>		<i>RFPP</i>		<i>&lt;100</i>	
REMARKS: <i>subw. like odor</i>												
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)												
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)												

**NOTES:** 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.  
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)  
pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

**Form FD 9000-24  
GROUNDWATER SAMPLING LOG**

SITE NAME: J.E.D. SWMF (WACS Facility ID: 89544)	SITE LOCATION: 1501 Omni Way, St. Cloud, FL 34773
WELL NO: <u>MW-8A</u>	SAMPLE ID: <u>MW-8A</u>
DATE: <u>22 Dec 2009</u>	

**PURGING DATA**

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): <u>0.25</u>	WELL SCREEN INTERVAL DEPTH: <u>12.5</u> feet to <u>22.5</u> feet	STATIC DEPTH TO WATER (feet): <u>15.96</u>	PURGE PUMP TYPE OR BAILER: <u>peristaltic</u>							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = ( <u>22.5</u> feet - <u>15.96</u> feet ) X 0.16 gallons/foot = <u>1.05</u> gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = 0.0 gallons + ( <u>                    </u> gallons/foot X <u>                    </u> feet ) + 0.25 gallons = <u>                    </u> gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <u>20</u>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <u>20</u>	PURGING INITIATED AT: <u>1155</u>	PURGING ENDED AT: <u>1240</u>	TOTAL VOLUME PURGED (gallons): <u>2.25</u>							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) (mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ORP (mV)
<u>1225</u>	<u>1.5</u>	<u>1.5</u>	<u>0.05</u>	<u>16.51</u>	<u>4.25</u>	<u>24.0</u>	<u>338</u>	<u>0.37</u>	<u>0.9</u>	<u>CLEAR</u>	<u>-62.0</u>
<u>1230</u>	<u>0.25</u>	<u>1.75</u>	<u>0.05</u>	<u>16.53</u>	<u>4.25</u>	<u>24.1</u>	<u>336</u>	<u>0.33</u>	<u>0.3</u>	<u>CLEAR</u>	<u>-62.2</u>
<u>1235</u>	<u>0.25</u>	<u>2.0</u>	<u>0.05</u>	<u>16.54</u>	<u>4.25</u>	<u>24.0</u>	<u>332</u>	<u>0.36</u>	<u>0.4</u>	<u>CLEAR</u>	<u>-66.8</u>
<u>1240</u>	<u>0.25</u>	<u>2.25</u>	<u>0.05</u>	<u>16.54</u>	<u>4.25</u>	<u>24.0</u>	<u>334</u>	<u>0.35</u>	<u>0.3</u>	<u>CLEAR</u>	<u>-67.1</u>
WELL CAPACITY (Gallons Per Foot): 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 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

**SAMPLING DATA**

SAMPLED BY (PRINT) / AFFILIATION: <u>Joe Terry / Geosyntec</u>				SAMPLER(S) SIGNATURE(S): <u>Joe Terry</u>				SAMPLING INITIATED AT: <u>1245</u>		SAMPLING ENDED AT:	
PUMP OR TUBING DEPTH IN WELL (feet): <u>20</u>				TUBING MATERIAL CODE: PE				FIELD-FILTERED: Y (N)		FILTER SIZE: _____ μm	
FIELD DECONTAMINATION: PUMP Y (N)				TUBING Y (N(replaced))				DUPLICATE: Y (N)			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
<u>MW-8A</u>	<u>3</u>	<u>CG</u>	<u>40ml</u>	<u>HCL</u>	<u>Prefilled by lab</u>		<u>VOCs</u>	<u>RFP</u>	<u>&lt; 100</u>		
REMARKS:											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

*1.3 gal*



# Leachate Sampling

Site: J.E.D. Solid Waste Disposal Facility Project No.: FQ1512A Task: 02 Date: 10 November 2009 Sampled By: Joe Terry, Tom Wissler

Station: Cell 2 per very strong #2 Tank Number: NA Sample Port: 4 PVC pipe with ball valve (filled 3 gallon glass vessel and then decanted into sample bottles) CA

Sample Rate: NA ml/min Sample Rate (VOC's): NA ml/min Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173AL

Sampling Method:  Bailer  Peristaltic Pump  Submersible Pump 11-10-09 Pump (Make & Model): NA Group II

Time	Temp (°C)	PH	Conductivity (mS/cm)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Color	Comments
<u>1350</u>			<u>13364</u> <i>(145/cm)</i>					
<u>1352-29.98</u>		<u>6.62</u>	<u>13364</u>	<u>1.57</u>	<u>-260.6</u>	<u>0.17</u>	<u>DARK BROWN</u>	

Field Conditions/Observations: overcast, ~62°F, ~single breeze

Detectable Odor:  Yes  No Describe: soften-like Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

# CONTAINERS	SAMPLE CONTAINER SPECIFICATION		PRESERVATIVE USED	SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD
	MATERIAL	VOLUME (ml)		TOTAL VOL ADDED IN FIELD (mL)		
3	Clear glass	40	HCL	Pre-filled by Lab	8260	Metals
1	HDPE	125	HNO3	Pre-filled by Lab		NH <sub>3</sub>
1	HDPE	250	H2SO4	Pre-filled by Lab		Cyanide
1	HDPE	250	NaOH	Pre-filled by Lab		Sulfide
1	HDPE	250	NaOH + ZnAc	Pre-filled by lab		8270, 8081, 8082, 8151
6	Amber Glass	1000	None	None		TDS, Cl, NO <sub>3</sub> , ALK
1	HDPE	500	None	None		8011
3	Clear Glass	40	None	None		

Sample ID: L-2 Sample Time: 1351 Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment:  Courier  UPS (Airbill No. 9T 4-10-09)  Other ( )

Notes: leachate effervesces when contacts acid preserved vials, had to rinse vials out of HCl to avoid head space (rinsed by leachate)



# Leachate Sampling

Site: J.E.D. Solid Waste Disposal Facility Project No.: FQ1512A Task: 02 Date: 10 November 2009 Sampled By: Joe Terry, Tom Wissler  
 Station: Cell 3 at My Sup V-1 Tank Number: NA Sample Port: 1" PVC pipe with ball valve (filled 3 gallon glass vessel and then decanted into sample bottles)  
 Sample Rate: NA ml/min Sample Rate (VOC's): NA ml/min Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173AL  
 Sampling Method: Peristaltic Pump Bailer Submersible Pump  Other Pump (Make & Model): NA

Time	Temp (°C)	PH	Conductivity (µS/cm)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Color	Comments
1455	31.03	6.62	1201 <i>(circled)</i>	37	-168.5	0.56	Dark Brown	

Field Conditions/Observations: overcast, blue, sample bottle Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.  
 Detectable Odor:  Yes  No Describe: Smoke-like, acid

SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
# CONTAINERS	MATERIAL	VOLUME (ml)	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (ml)	
3	Clear glass	40	HCL	Pre-filled by Lab	8260
1	HDPE	125	HNO3	Pre-filled by Lab	Metals
1	HDPE	250	H2SO4	Pre-filled by Lab	NH <sub>3</sub>
1	HDPE	250	NaOH	Pre-filled by Lab	Cyanide
1	HDPE	250	NaOH + ZnAc	Pre-filled by lab	Sulfide
6	Amber Glass	1000	None	None	8270, 8081, 8082, 8151
1	HDPE	500	None	None	TDS, Cl, NO <sub>3</sub> , ALK
3	Clear Glass	40	None	None	8011

Sample ID: L-3 Sample Time: 1500 Laboratory Performing Analysis: Columbia Analytical Services  
 Method of Shipment:  Courier  UPS (Airbill No. 11-10-09)  Other ( )  
 Notes: leachate effervesces when contacts acid preserved bottles, rinsed vial w/ leachate to remove HCl to avoid headspace

## Leachate Sampling

Site: J.E.D. Solid Waste Disposal Facility Project No.: FQ1512A Task: 02 Date: 10 November 2009 Sampled By: Joe Terry, Tom Wissler  
 Station: Cell #1 primary separator Tank Number: NA Sample Port: I PVC pipe with ball valve (filled 3 gallon glass vessel and then decanted into sample bottles)  
 Sample Rate: NA ml/min Sample Rate (VOC's): NA ml/min Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173AL  
 Sampling Method: Bailer Peristaltic Pump Submersible Pump  Other Pump (Make & Model): NA

Time	Temp (°C)	PH	Conductivity (mS/cm)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Color	Comments
1235	30.86	6.81	17.348	0.9	-255.0	0.13	dark brown	

Field Conditions/Observations: overcast, ~80°F, ~5 mph breeze

Detectable Odor:  Yes  No Describe: sulfur-like Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

# CONTAINERS	SAMPLE CONTAINER SPECIFICATION		PRESERVATIVE USED	SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD
	MATERIAL	VOLUME (ml)		TOTAL VOL. ADDED IN FIELD (mL)		
3	Clear glass	40	HCL	Pre-filled by Lab	8260	Metals
1	HDPE	<del>250</del> 110 ml	HNO3	Pre-filled by Lab		NH <sub>3</sub>
1	HDPE	250	H2SO4	Pre-filled by Lab		Cyanide
1	HDPE	250	NaOH	Pre-filled by Lab		Sulfide
1	HDPE	250	NaOH + ZnAc	Pre-filled by lab		8270, 8081, 8082, 8151
1	Amber Glass	1000	None	None		TDS, Cl, NO <sub>3</sub> , ALK
1	HDPE	500	None	None		8011
3	Clear Glass	40	None	None		Cation/anion scan

Sample ID: L-4 Sample Time: 1240 Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment:  Courier  UPS (Airbill No. 9T11-11-09)  Other ( )

Notes: Cation/anion scan is sampled from various preserved bottles depending on which cation/anion it being analyzed. Leachate ebbersies when contacts acid preserved bottles, rinsed with vials w/leachate to remove HCL to avoid head space.

### Leachate Sampling

Site: J.E.D. Solid Waste Disposal Facility Project No.: FQ1512A Task: 02 Date: 10 November 2009 Sampled By: Joe Terry, Tom Wissler  
 Station: Cell 5 primary sump No. 1 Tank Number: NA Sample Port: 1" PVC pipe with ball valve (filled 3 gallon glass vessel and then decanted into sample bottles)  
 Sample Rate: NA ml/min Sample Rate (VOC's): NA ml/min Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173A L  
 Sampling Method:    Bailer    Peristaltic Pump    Submersible Pump X Other    Pump (Make & Model): NA

Time	Temp (°C)	PH	Conductivity (mS/cm)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Color	Comments
1115	39.09	6.41	9.842	22.0	-161.7	0.33	yellow/amber	

Field Conditions/Observations: on east, ~80°F, ~10 mph wind w/ blowing sand

Detectable Odor: X Yes    No Describe: 5 or fewer - 1 ke Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

# CONTAINERS	SAMPLE CONTAINER SPECIFICATION		PRESERVATIVE USED	SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
	MATERIAL	VOLUME (ml)		TOTAL VOL ADDED IN FIELD (mL)			
3	Clear glass	40	HCL	Pre-filled by Lab	8260	Metals	
1	HDPE	125	HNO3	Pre-filled by Lab		NH <sub>4</sub>	
1	HDPE	250	H2SO4	Pre-filled by Lab		Cyanide	
1	HDPE	250	NaOH	Pre-filled by Lab		Sulfide	
1	HDPE	250	NaOH + ZnAc	Pre-filled by lab			
6	Amber Glass	1000	None	None	8270, 8081, 8082, 8151		
1	HDPE	500	None	None		TDS, Cl, NO <sub>3</sub> , ALK	
3	Clear Glass	40	None	None	8011		

Sample ID: L-5 Sample Time: 1120 Laboratory Performing Analysis: Columbia Analytical Services

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

Notes: Leachate effluents when contacts acid preserved bottles, rinsed via vials of HCl so we could avoid headspace (Rinsed w/leachate)

### Leachate Sampling

Site: J.E.D. Solid Waste Disposal Facility Project No.: FQ1512A Task: 02 Date: 10 November 2009 Sampled By: Joe Terry, Tom Wissler  
 Station: Cell 6 primary sump #1.1 Tank Number: NA Sample Port: 1" PVC pipe with ball valve (filled 3 gallon glass vessel and then decanted into sample bottles)  
 Sample Rate: NA ml/min Sample Rate (VOC's): NA ml/min Water Quality Meter (Make & Model): YSI 556 S/N or ID: 06A2173A  
 Sampling Method:    Bailer    Peristaltic Pump    Submersible Pump X Other    Pump (Make & Model): NA

Time	Temp (°C)	PH	Conductivity (mS/cm)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Color	Comments
1525	31.70	6.41	7.012	60.8	-238.3	0.40	dark brown	

Field Conditions/Observations: Overcast, ~80°F, ~5mph wind w/ blowing sand

Detectable Odor:  Yes  No Describe: Smoke-like, acid Free Product Thickness (if applicable): NA ft. OVM/PID Reading (if applicable): NA ppm.

SAMPLE CONTAINER SPECIFICATION		PRESERVATIVE USED		SAMPLE PRESERVATION		INTENDED ANALYSIS AND/OR METHOD	
# CONTAINERS	MATERIAL	VOLUME (ml)	USED	TOTAL VOL ADDED IN FIELD (ml)			
3	Clear glass	40	HCL	Pre-filled by Lab	8260	Metals	
1	HDPE	125	HNO3	Pre-filled by Lab		NH <sub>3</sub>	
1	HDPE	250	H2SO4	Pre-filled by Lab		Cyanide	
1	HDPE	250	NaOH	Pre-filled by Lab		Sulfide	
1	HDPE	250	NaOH + ZnAc	Pre-filled by lab			
6	Amber Glass	1000	None	None	8270, 8081, 8082, 8151		
1	HDPE	500	None	None		TDS, Cl, NO <sub>3</sub> , ALK	
3	Clear Glass	40	None	None	8011		

Sample ID: L-6 Sample Time: 1530 Laboratory Performing Analysis: Columbia Analytical Services

Method of Shipment:  Courier  UPS (Airbill No. DT 11-0-09)  Other (    )

Notes: Leachate effervesces when contacts acid preserved bottles, rinsed vial vials w/ leachate to remove HCl to avoid head space.

## Appendix B

### Water Quality Instrument Calibration Forms

# Field Instrument Calibration Record

Project Name: J.E.D. SWDF Project No.: FQ1512A Task: 2 Date: 2 November 2009

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: ME10404

Time: 1730

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						
6913	Mar 2010	pH = 4.00	4.00	0.00	0.2	Y	I	PT
6918	Mar 2010	pH = 7.00	7.00	0.00	0.2	Y	I	PT
7150	Feb 2010	pH = 10.00	10.00	0.00	0.2	Y	I	PT
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P891234	Feb 2010	Turbidity = 10 NTU	10.00	0.00	10%	Y	I	PT
		Turbidity = 50 NTU			6.5%			
		Conductivity = 0.084 mS/cm			5%			
6895	Feb 2010	Conductivity = 1,000 mS/cm	1000	0.00	5%	Y	I	PT
	Per Table →	D.O. = 7.47 mg/L @ 26.7°C	8.01	0.543	0.2 mg/l	Y	I	PT

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

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						
6913	Mar 2010	pH = 4.00	4.00	0.00	0.2	Y	I	PT
6918	Mar 2010	pH = 7.00	7.00	0.00	0.2	Y	I	PT
7150	Feb 2010	pH = 10.00	10.00	0.00	0.2	Y	I	PT
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P891234	Feb 2010	Turbidity = 10 NTU	9.94	0.1	10%	Y	I	PT
		Turbidity = 50 NTU			6.5%			
		Conductivity = 0.084 mS/cm			5%			
6895	Feb 2010	Conductivity = 1,000 mS/cm	1000	0.00	5%	Y	I	PT
	Per Table →	D.O. = 8.55 mg/L @ 26.7°C	8.00	0.55	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. SWDF Project No.: FQ1512A Task: 2 Date: 3 November 2009

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: ME10404

Time: 4:15

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						
6913	Mar 2010	pH = 4.00	4.02	0.02	0.2	Y	C	PT
6918	Mar 2010	pH = 7.00	6.99	0.01	0.2	Y	C	PT
7150	Feb 2010	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P891234	Feb 2010	Turbidity = 10 NTU	9.95	1.5	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
		Conductivity = 0.084 mS/cm			5%			
6895	Feb 2010	Conductivity = 1.000 mS/cm	1.02	1.2	5%	Y	C	PT
	Per Table →	D.O. = 6.12 mg/L @ 35.4 °C	6.12	0.02	0.2 mg/l	Y	E	PT

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

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						
6913	Mar 2010	pH = 4.00	4.06	0.06	0.2	Y	C	PT
6918	Mar 2010	pH = 7.00	7.07	0.07	0.2	Y	C	PT
7150	Feb 2010	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P891234	Feb 2010	Turbidity = 10 NTU	10.12	1.2	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
		Conductivity = 0.084 mS/cm			5%			
6895	Feb 2010	Conductivity = 1.000 mS/cm	0.948	0.2	5%	Y	C	PT
	Per Table →	D.O. = 6.14 mg/L @ 36.0 °C	6.14	0.06	0.2 mg/l	Y	E	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. SWDF Project No.: FQ1512A Task: 2 Date: 4 November 2009

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: ME10404

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						
6913	Mar 2010	pH = 4.00	4.31	6.0%	0.2	Y	C	PT
6918	Mar 2010	pH = 7.00	7.66	6.6%	0.2	Y	C	PT
7150	Feb 2010	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P891234	Feb 2010	Turbidity = 10 NTU	9.91	6.9%	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
		Conductivity = 0.084 mS/cm			5%			
6895	Feb 2010	Conductivity = 1.000 mS/cm	1.485	1.2%	5%	Y	C	PT
	Per Table →	D.O. = 7.41 mg/L @ 26.6°C	7.91	6.0%	0.2 mg/l	Y	C	PT

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

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						
6913	Mar 2010	pH = 4.00	4.68	6.6%	0.2	Y	C	PT
6918	Mar 2010	pH = 7.00	6.91	6.6%	0.2	Y	C	PT
7150	Feb 2010	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P891234	Feb 2010	Turbidity = 10 NTU	10.51	6.7%	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
		Conductivity = 0.084 mS/cm			5%			
6895	Feb 2010	Conductivity = 1.000 mS/cm	1.496	6.7%	5%	Y	C	PT
	Per Table →	D.O. = 7.45 mg/L @ 27.1°C	8.02	6.6%	0.2 mg/l	Y	E	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. SWDF Project No.: FQ1512A Task: 2 Date: 2 November 2009

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: ME10404  
 Time: 1530

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						
6913	Mar 2010	pH = 4.00	4.00	0.00	0.2	Y	C	PT
6918	Mar 2010	pH = 7.00	6.96	0.02	0.2	Y	C	PT
7150	Feb 2010	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P891234	Feb 2010	Turbidity = 10 NTU	10.15	1.5	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
		Conductivity = 0.084 mS/cm			5%			
6895	Feb 2010	Conductivity = 1.000 mS/cm	0.984	1.1	5%	Y	C	PT
	Per Table →	D.O. = 8.356 mg/L @ 24.1 °C	8.40	0.044	0.2 mg/l	Y	F	PT

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

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						
6913	Mar 2010	pH = 4.00	4.11	0.11	0.2	Y	C	PT
6918	Mar 2010	pH = 7.00	6.99	0.01	0.2	Y	C	PT
7150	Feb 2010	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P891234	Feb 2010	Turbidity = 10 NTU	9.93	0.07	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
		Conductivity = 0.084 mS/cm			5%			
6895	Feb 2010	Conductivity = 1.000 mS/cm	0.994	0.06	5%	Y	C	PT
	Per Table →	D.O. = 8.356 mg/L @ 24.1 °C	8.39	0.034	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. SWDF Project No.: FQ1512A Task: 2 Date: 9 November 2009

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: ME10404

Time: 1950

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						
6913	Mar 2010	pH = 4.00	4.07	0.07	0.2	Y	C	PT
6918	Mar 2010	pH = 7.00	7.04	0.04	0.2	Y	C	PT
7150	Feb 2010	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P891234	Feb 2010	Turbidity = 10 NTU	10.20	2.0	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
		Conductivity = 0.084 mS/cm			5%			
6895	Feb 2010	Conductivity = 1,000 mS/cm	0.943	0.7	5%	Y	C	PT
	Per Table →	D.O. = 8.05 mg/L @ 20.2 °C	8.09	0.000	0.2 mg/l	Y	I	PT

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

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						
6913	Mar 2010	pH = 4.00	4.10	0.10	0.2	Y	C	PT
6918	Mar 2010	pH = 7.00	6.97	0.03	0.2	Y	C	PT
7150	Feb 2010	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P891234	Feb 2010	Turbidity = 10 NTU	9.98	0.2	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
		Conductivity = 0.084 mS/cm			5%			
6895	Feb 2010	Conductivity = 1,000 mS/cm	1.011	1.1	5%	Y	C	PT
	Per Table →	D.O. = 8.02 mg/L @ 20.7 °C	8.01	0.002	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. SWDF Project No.: FQ1512A Task: 2 Date: 10 November 2009

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: ME10404

Time: 2000

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						
6913	Mar 2010	pH = 4.00	4.10	0.10	0.2	Y	C	PT
6918	Mar 2010	pH = 7.00	7.02	0.02	0.2	Y	C	PT
7150	Feb 2010	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P891234	Feb 2010	Turbidity = 10 NTU	10.17	1.7	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
		Conductivity = 0.084 mS/cm			5%			
6895	Feb 2010	Conductivity = 1,000 mS/cm	1,004	0.4	5%	Y	C	PT
	Per Table →	D.O. = 8.10 mg/L @ 25.4 °C	8.10	0.020	0.2 mg/l	Y	C	PT

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

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						
6913	Mar 2010	pH = 4.00	3.94	0.06	0.2	Y	C	PT
6918	Mar 2010	pH = 7.00	7.01	0.01	0.2	Y	C	PT
7150	Feb 2010	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P891234	Feb 2010	Turbidity = 10 NTU	10.11	1.1	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
		Conductivity = 0.084 mS/cm			5%			
6895	Feb 2010	Conductivity = 1,000 mS/cm	1,004	0.4	5%	Y	C	PT
	Per Table →	D.O. = 8.04 mg/L @ 21.1 °C	8.10	0.06	0.2 mg/l	Y	C	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: Asgrow      Project No.: FRI1702      Task: 03      Date: 22 December 2009  
 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: ME10404  
 Time: 0600

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						
6913	Mar 2010	pH = 4.00	4.07	0.07	0.2	Y	C	PT
6918	Mar 2010	pH = 7.00	7.08	0.08	0.2	Y	C	PT
7150	Feb 2010	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P891234	Feb 2010	Turbidity = 10 NTU	10.15	1.5	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
		Conductivity = 0.084 mS/cm			5%			
6895	Feb 2010	Conductivity = 1.000 mS/cm	1.000	0.00	5%	Y	I	PT
	Per Table →	D.O. = 4.03 mg/L @ 20.5°C	4.08	0.05	0.2 mg/l	Y	I	PT

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

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						
6913	Mar 2010	pH = 4.00	4.03	0.03	0.2	Y	C	PT
6918	Mar 2010	pH = 7.00	7.08	0.08	0.2	Y	C	PT
7150	Feb 2010	pH = 10.00			0.2			
		Turbidity = 0.0 NTU						
		Turbidity = 1.0 NTU			10%			
P891234	Feb 2010	Turbidity = 10 NTU	10.02	0.2	10%	Y	C	PT
		Turbidity = 50 NTU			6.5%			
		Conductivity = 0.084 mS/cm			5%			
6895	Feb 2010	Conductivity = 1.000 mS/cm	1.023	2.3	5%	Y	C	PT
	Per Table →	D.O. = 4.03 mg/L @ 20.5°C	4.04	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

## Appendix C

### Chain-of-Custody Forms



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SR #

CAS Contact

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www.caslab.com

Project Name		Project Number		ANALYSIS REQUESTED (Include Method Number and Container Preservative)		PRESERVATIVE	NUMBER OF CONTAINERS	REMARKS/ ALTERNATE DESCRIPTION	
Client Sample ID		LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX				
JED SWDE		EQ1512A.02						Preservative Key 0. NONE 1. HCL 2. HNO3 3. H2SO4 4. NaOH 5. Zn Acetate 6. MeOH 7. NaHSO4 8. Other _____	
Kirk Wills		Kwills@geosyntec.com							
Geosyntec		14055 Rivaledge Dr. Ste 300							
Tampa, FL 33637		FAX# 613-558-9726							
SAMPLER'S SIGNATURE Joe Terry		SAMPLER'S PRINTED NAME Joe Terry							
MW-19A			11-3-04	1430	GW	10	3		
MW-19C			11-3-04	1410	GW	10	3		
MW-16A			11-3-04	1600	GW	9	3		
MW-16B			11-3-04	1625	GW	10	3		
Trip Blank			10-28-04	1100	W	2	2		
SPECIAL INSTRUCTIONS/COMMENTS		COOLER ID: 09307-USED-1							
SEE QAPP <input type="checkbox"/>									
SAMPLE RECEIPT: CONDITION/COOLER TEMP:		CUSTODY SEALS: Y N							
RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY		INVOICE INFORMATION	
Signature		Signature		Signature		Signature		P-O#	
Printed Name		Printed Name		Printed Name		Printed Name		BILL TO:	
Firm		Firm		Firm		Firm			
Date/Time		Date/Time		Date/Time		Date/Time			
11-3-04/1700									





# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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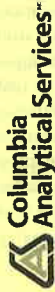
SR #

CAS Contact

www.caslab.com

Project Name <b>SED SWDF</b>		Project Number <b>PO1512A.02</b>		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
Project Manager <b>Kirk Wills</b>		Email Address <b>K.wills@geosyntec.com</b>		PRESERVATIVE	<b>10320</b>
Company/Address <b>Geosyntec</b>		14055 Riveredge Dr. Ste 300		Preservative Key 0. NONE 1. HCL 2. HNO <sub>3</sub> 3. H <sub>2</sub> SO <sub>4</sub> 4. NaOH 5. Zn. Acetate 6. MeOH 7. NaHSO <sub>4</sub> 8. Other _____	
Phone # <b>813-558-0940</b>		FAX# <b>813-558-9726</b>		REMARKS/ ALTERNATE DESCRIPTION	
Sampler's Signature <i>Joe Terry</i>		Sampler's Printed Name <b>Joe Terry</b>			
CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS
MW-11A		11-4-09	1115	GW	9
MW-11C			1105		9
MW-12A			1005		9
MW-12C			1005		9
MW-13A			0910		9
MW-13C			0812		9
MW-16C			0810		9
Trip Blank		10-29-09	1100	D <sub>5</sub> H <sub>2</sub> O	1
SPECIAL INSTRUCTIONS/COMMENTS <b>09300-IED-I</b> See QAPP <input type="checkbox"/>					
TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) <input checked="" type="checkbox"/> STANDARD		REPORT REQUIREMENTS I. Results Only <input type="checkbox"/> II. Results + QC Summaries (LCS, DUP, MS/MSD as required) <input checked="" 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		INVOICE INFORMATION PO# BILL TO:	
REQUESTED FAX DATE		REQUESTED REPORT DATE		RELINQUISHED BY Signature Printed Name Firm Date/Time	
RECEIVED BY Signature Printed Name Firm Date/Time		RECEIVED BY Signature Printed Name Firm Date/Time		RECEIVED BY Signature Printed Name Firm Date/Time	
CUSTODY SEALS: Y N		RELINQUISHED BY		RELINQUISHED BY	
SAMPLE RECEIPT: CONDITION/COOLER TEMP:		RELINQUISHED BY		RELINQUISHED BY	





# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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CAS Contact

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Project Name: SED SWDF  
 Project Manager: Kirk Wills  
 Company/Address: Geosyntec  
14055 Riwelwy Dr. Ste 300  
Tampa, FL 33637  
 Phone #: 813-558-0990  
 Sampler's Signature: Joe Terry  
 Project Number: FG1512A.02  
 Email Address: Kwills@geosyntec.com  
 FAX#: 813-558-9726  
 Sampler's Printed Name: Joe Terry

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE	10320
8760	
NH <sub>4</sub>	
Metals	
TDS @ 100°	

NUMBER OF CONTAINERS

- Preservative Key
- NONE
  - HCL
  - HNO<sub>3</sub>
  - H<sub>2</sub>SO<sub>4</sub>
  - NaOH
  - Zn Acetate
  - MeOH
  - NaHSO<sub>4</sub>
  - Other

REMARKS/  
ALTERNATE DESCRIPTION

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX
MW-9A		11-4-09	1215	GW
MW-9C		11-4-09	1210	GW
MW-10A		11-4-09	1352	GW
MW-10C		11-4-09	1330	GW
DUP-1		11-4-09	-	GW
Trip Blank		10-28-09	1100	D <sup>F</sup> H <sub>2</sub> O

SPECIAL INSTRUCTIONS/COMMENTS  
cooler ID: 09308-JED-2

See QAPP

SAMPLE RECEIPT: CONDITION/COOLER TEMP: \_\_\_\_\_

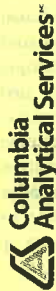
RECEIVED BY	RELINQUISHED BY	CUSTODY SEALS: Y N
Signature: _____	Signature: _____	RELINQUISHED BY
Printed Name: <u>Joe Terry</u>	Printed Name: _____	Signature: _____
Firm: <u>Geosyntec</u>	Firm: _____	Printed Name: _____
Date/Time: <u>11-4-09/1500</u>	Date/Time: _____	Firm: _____
		Date/Time: _____

TURNAROUND REQUIREMENTS  
 RUSH (SURCHARGES APPLY)  
 STANDARD  
 REQUESTED FAX DATE \_\_\_\_\_  
 REQUESTED REPORT DATE \_\_\_\_\_

REPORT REQUIREMENTS  
 I. Results Only  
 II. Results + QC Summaries (LCS, DUP, MSMSD 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: \_\_\_\_\_





# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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SR #

CAS Contact

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Project Name		Project Number		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
SED SWDF		F01512A.02		PRESERVATIVE	1 0 3 2 0
Project Manager		Email Address		NUMBER OF CONTAINERS	
Kirk Wills		Kwillse@geosyntec.com		8260	
Company/Address		Project Address		REMARKS/ ALTERNATE DESCRIPTION	
Geosyntec		14055 Riverway Dr. Ste 300		Preservative Key 0. NONE 1. HCL 2. HNO3 3. H2SO4 4. NaOH 5. Zn. Acetate 6. MeOH 7. NaHSO4 8. Other	
Phone #		FAX#			
813-558-0490		813-558-4726			
Sampler's Signature		Sampler's Printed Name			
Joe Terry		Joe Terry			
CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	
MW-6A		11-5-04	1525	GW	
MW-6C			1458		
MW-7A			1330		
MW-7C			1255		
MW-8A			0912		
MW-8C			0945		
Trip Blank		10-28-04	1100	GW	
SPECIAL INSTRUCTIONS/COMMENTS 04304-SED-1					
TURNAROUND REQUIREMENTS		RUSH (SURCHARGES APPLY)		REPORT REQUIREMENTS	
<input checked="" type="checkbox"/> STANDARD		<input type="checkbox"/> RUSH		<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	
REQUESTED FAX DATE		REQUESTED REPORT DATE		PO#	
RECEIVED BY		RECEIVED BY		BILL TO:	
Signature	Signature	Signature	Signature		
Printed Name	Printed Name	Printed Name	Printed Name		
Firm	Firm	Firm	Firm		
Date/Time	Date/Time	Date/Time	Date/Time		
11-5-04/1630					





# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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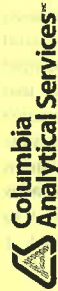
www.caslab.com

Project Name: <b>SED SWBF</b>		Project Number: <b>FQ1512A.02</b>		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
Project Manager: <b>Pirk Wills</b>		Email Address: <b>rwills@geosystem.com</b>		PRESERVATIVE: <b>1 0 3 2 0 2</b>	
Company/Address: <b>Geosystem</b>		14055 Riveredge Dr. Ste 300		PREPARATION: <b>Boil</b>	
Tampa, FL 33637		FAX#: <b>913-558-9726</b>		NUMBER OF CONTAINERS: <b>9</b>	
Phone #: <b>913-558-0990</b>		Sampler's Printed Name: <b>Joe Terry, Tom Wills</b>		PRESERVATIVE KEY: 0. NONE 1. HCl 2. HNO3 3. H2SO4 4. NaOH 5. Zn Acetate 6. MeOH 7. NaHSO4 8. Other	
CLIENT SAMPLE ID		LAB ID		REMARKS/ALTERNATE DESCRIPTION	
MW-1A	11-9-04 1530	GW	9 3 3 1 1 1		
MW-1C	1540		9		
MW-2A	1415		9		
MW-2C	1420		9		
MW-3A	1235		9		
MW-3C	1235		9		
MW-4A	1055		9		
MW-4C	1120		10		
MW-5A	0932		9		
MW-5C	0900		9		
SPECIAL INSTRUCTIONS/COMMENTS: <b>See container for B260 analysis date for 11-9-04 10:20 on time 11:00 cooler ID: 09313-SED-01</b>		TURNAROUND REQUIREMENTS: <b>RUSH (SURCHARGES APPLY)</b>		REPORT REQUIREMENTS: <input checked="" type="checkbox"/> I. Results Only <input 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 <input type="checkbox"/> Yes <input type="checkbox"/> No	
See OAPP <input type="checkbox"/>		REQUESTED FAX DATE		FO#	
SAMPLE RECEIPT: CONDITION/COOLER TEMP:		REQUESTED REPORT DATE		BILL TO:	
RELINQUISHED BY: <b>Joe Terry</b>		RECEIVED BY: <b>Joe Terry</b>		INVOICE INFORMATION	
Signature: <b>Joe Terry</b>		Signature: <b>Joe Terry</b>		RELINQUISHED BY	
Printed Name: <b>Joe Terry</b>		Printed Name: <b>Joe Terry</b>		Signature	
Firm: <b>Geosystem</b>		Firm: <b>Geosystem</b>		Printed Name	
Date/Time: <b>11-9-04/1630</b>		Date/Time: <b>11-9-04/1630</b>		Firm	
				Date/Time	









# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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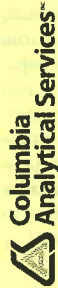
SR #

CAS Contact

www.caslab.com

Project Name		Project Number		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
SED SWDF		F01512A.02			
Project Manager		Email Address		PRESERVATIVE	
Rick Willis		rwillis@geosynthecon		1 0 3 2 0	
Company/Address				NUMBER OF CONTAINERS	
Geosynthecon				8260	
141055 Riverchase Dr.		Ste 300		N/A	
Tampa, FL 33637				Metals	
Phone #		FAX #		TDS & NO <sub>3</sub>	
813-558-0990		813-558-9726			
Sampler's Signature		Sampler's Printed Name		REMARKS/ ALTERNATE DESCRIPTION	
<i>[Signature]</i>		Joe Perry, Tom Wigger			
CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	
MW-23A		11-10-09	08:45	GW	
MW-23C		11-10-09	09:25	GW	
TRIP Blank		10-28-09	11:00	H <sub>2</sub> O	
SPECIAL INSTRUCTIONS/COMMENTS					
Cooler ID: 09315-SED-8 9/11/09					
See QAPP <input type="checkbox"/>					
SAMPLE RECEIPT: CONDITION/COOLER TEMP:		RECEIVED BY:		CUSTODY SEALS: Y N	
RELINQUISHED BY:		RELINQUISHED BY:		RELINQUISHED BY:	
<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>	
Printed Name		Printed Name		Printed Name	
Tom Wigger		Robert Nicholas		Tom Wigger	
Firm		Firm		Firm	
Geosynthecon		CAS		Geosynthecon	
Date/Time		Date/Time		Date/Time	
11-11-09		11/10/09 12:50		11-11-09	
TURNAROUND REQUIREMENTS		RUSH (SURCHARGES APPLY)		REPORT REQUIREMENTS	
RUSH <input checked="" type="checkbox"/> STANDARD		RUSH <input checked="" type="checkbox"/> STANDARD		I. Results Only	
REQUESTED FAX DATE		REQUESTED FAX DATE		II. Results + QC Summaries (LCS, DUP, MSMSD as required)	
				III. Results + CC and Calibration Summaries	
REQUESTED REPORT DATE		REQUESTED REPORT DATE		IV. Data Validation Report with Raw Data	
				V. Specialized Forms / Custom Report	
				Edata <input type="checkbox"/> Yes <input type="checkbox"/> No	
INVOICE INFORMATION:		PO#		RECEIVED BY:	
				<i>[Signature]</i>	
BILL TO:				Printed Name	
				Firm	
				Date/Time	





# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

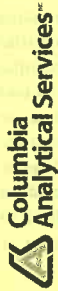
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SR #

CAS Contact

Project Name		Project Number		ANALYSIS REQUESTED (Include Method Number and Container Preservative)										PRESERVATIVE		NUMBER OF CONTAINERS		REMARKS/ ALTERNATE DESCRIPTION	
Project Manager		Email Address		LAB ID		SAMPLING DATE		SAMPLING TIME		MATRIX		PRESERVATIVE		NUMBER OF CONTAINERS		REMARKS/ ALTERNATE DESCRIPTION			
JED SWDF		EQ1512A.02		8260		11-10-09		1400		Leachate		X		17		8260			
Rick Willis		rwillis@geosyntec.com		8081		11-10-09		1355		Leachate		X		17		8081			
Geosyntec		14055 R. wedge Dr. Ste 300		8082		11-10-09		1500		Leachate		X		17		8082			
Tampa, FL 33637		813-558-0990		8083		11-10-09		1240		Leachate		X		18		8083			
813-558-0990		813-558-4726		8084		11-10-09		1120		Leachate		X		17		8084			
Tom Willis		Tom Willis		8085		11-10-09		1530		Leachate		X		17		8085			
Joe Terry		Joe Terry		8086		11-10-09		1100		Leachate		X		3		8086			
Trip Block		Trip Block		8087		11-10-09		1100		Leachate		X		3		8087			
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813-558-0990		813-558-4726		8166		11-10-09		1100		Leachate		X		3		8166			
813-558-0990																			





# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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SR #

CAS Contact

Project Name		Project Number		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
SED SWDF		FQ1512A.03		PRESERVATIVE	
Project Manager		Email Address		PRESERVATIVE	
Kick Willis		kwillis@geosyntec.com		PRESERVATIVE	
Company/Address		Geosyntec		PRESERVATIVE	
141055 Riverside Dr.		Ste 300		PRESERVATIVE	
Tampa, FL 33637				PRESERVATIVE	
Phone #		FAX#		PRESERVATIVE	
813-558-0990		813-558-9726		PRESERVATIVE	
Sampler's Signature		Sampler's Printed Name		PRESERVATIVE	
Joe Terry		Joe Terry		PRESERVATIVE	
CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS
MW-8A		12-22-09	1245	GW	3
MW-9A		12-22-09	1232	GW	3
Trip Blank		12-17-09	1000	170	2
REMARKS/ALTERNATE DESCRIPTION					
0928					
PRESERVATIVE KEY					
0. NONE					
1. HCL					
2. HNO3					
3. H2SO4					
4. NaOH					
5. Zn. Acetate					
6. MeOH					
7. NaHSO4					
8. Other					
SPECIAL INSTRUCTIONS/COMMENTS					
See QAPP <input type="checkbox"/>					
SAMPLE RECEIPT: CONDITION/COOLER TEMP:		RECEIVED BY		CUSTODY SEALS: Y N	
RELINQUISHED BY		RELINQUISHED BY		RELINQUISHED BY	
Signature	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	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time
12-22-09/1530					
TURNAROUND REQUIREMENTS		REPORT REQUIREMENTS		INVOICE INFORMATION	
RUSH (SURCHARGES APPLY)		I. Results Only		FO#	
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			

## Appendix D

CD Containing the Electronic Laboratory Reports  
and Electronic ADaPT Data Files

## Appendix D

CD Containing the Electronic Laboratory Reports  
and Electronic ADaPT Data Files



November 18, 2009

Service Request No: J0905440

Kirk Wills  
GeoSyntec Consultants  
14055 Riveredge Drive  
Suite 300  
Tampa, FL 33637

**Laboratory Results for: JED SWDF/FQ1512A.02**

Dear Kirk:

Enclosed are the results of the sample(s) submitted to our laboratory on November 4, 2009. For your reference, these analyses have been assigned our service request number **J0905440**.

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.

Please contact me 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 Manager

Page 1 of 51

COLUMBIA ANALYTICAL SERVICES, INC.

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request No.:** J0905440  
**Date Received:** 11/4/09

**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**

Four water samples and one trip blank were received for analysis at Columbia Analytical Services on 11/4/09. 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.

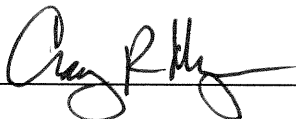
**Batch QC Notes and Discussion**

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 and Dissolved Metals using EPA Methods 6020/6010B/7470A. No problems were observed.

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



Date \_\_\_\_\_

11/18/09

Batch QC Notes and Discussion

Some 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.

Batch QC Notes and Discussion

Quality control samples for Ammonia (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 \_\_\_\_\_

11/15/09

## 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 SWDF/FQ1512A.02

**Service Request:** J0905440

**SAMPLE CROSS-REFERENCE**

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J0905440-001	MW-19A	11/3/09	14:20
J0905440-002	MW-19C	11/3/09	14:40
J0905440-003	MW-16A	11/3/09	16:00
J0905440-004	MW-16B	11/3/09	16:25
J0905440-005	Trip Blank	11/3/09	00:00

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905440  
**Date Collected:** 11/03/2009  
**Date Received:** 11/04/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-19A  
**Lab Code:** J0905440-001  
**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	11/04/09	11/04/09	JWG0903673	
Vinyl Chloride	ND	U	1.0	0.25	1	11/04/09	11/04/09	JWG0903673	
Bromomethane	ND	U	1.0	0.14	1	11/04/09	11/04/09	JWG0903673	
Chloroethane	ND	U	5.0	0.19	1	11/04/09	11/04/09	JWG0903673	
Trichlorofluoromethane	ND	U	20	0.25	1	11/04/09	11/04/09	JWG0903673	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/04/09	11/04/09	JWG0903673	
Acetone	ND	U	50	2.4	1	11/04/09	11/04/09	JWG0903673	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/04/09	11/04/09	JWG0903673	
Carbon Disulfide	ND	U	10	0.84	1	11/04/09	11/04/09	JWG0903673	
Methylene Chloride	ND	U	5.0	0.72	1	11/04/09	11/04/09	JWG0903673	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/04/09	11/04/09	JWG0903673	
Acrylonitrile	ND	U	10	0.59	1	11/04/09	11/04/09	JWG0903673	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/04/09	11/04/09	JWG0903673	
Vinyl Acetate	ND	U	10	0.60	1	11/04/09	11/04/09	JWG0903673	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/04/09	11/04/09	JWG0903673	
2-Butanone (MEK)	ND	U	10	0.56	1	11/04/09	11/04/09	JWG0903673	
Bromochloromethane	ND	U	5.0	0.14	1	11/04/09	11/04/09	JWG0903673	
Chloroform	ND	U	1.0	0.10	1	11/04/09	11/04/09	JWG0903673	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/04/09	11/04/09	JWG0903673	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/04/09	11/04/09	JWG0903673	
Benzene	ND	U	1.0	0.52	1	11/04/09	11/04/09	JWG0903673	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/04/09	11/04/09	JWG0903673	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/04/09	11/04/09	JWG0903673	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/04/09	11/04/09	JWG0903673	
Dibromomethane	ND	U	5.0	0.12	1	11/04/09	11/04/09	JWG0903673	
Bromodichloromethane	ND	U	1.0	0.10	1	11/04/09	11/04/09	JWG0903673	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/04/09	11/04/09	JWG0903673	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/04/09	11/04/09	JWG0903673	
Toluene	ND	U	1.0	0.52	1	11/04/09	11/04/09	JWG0903673	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/04/09	11/04/09	JWG0903673	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/04/09	11/04/09	JWG0903673	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/04/09	11/04/09	JWG0903673	
2-Hexanone	ND	U	25	0.36	1	11/04/09	11/04/09	JWG0903673	
Dibromochloromethane	ND	U	1.0	0.11	1	11/04/09	11/04/09	JWG0903673	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905440  
**Date Collected:** 11/03/2009  
**Date Received:** 11/04/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-19A  
**Lab Code:** J0905440-001  
**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	11/04/09	11/04/09	JWG0903673	
Chlorobenzene	ND	U	1.0	0.15	1	11/04/09	11/04/09	JWG0903673	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/04/09	11/04/09	JWG0903673	
Ethylbenzene	ND	U	1.0	0.10	1	11/04/09	11/04/09	JWG0903673	
m,p-Xylenes	ND	U	2.0	0.22	1	11/04/09	11/04/09	JWG0903673	
o-Xylene	ND	U	1.0	0.10	1	11/04/09	11/04/09	JWG0903673	
Styrene	ND	U	1.0	0.051	1	11/04/09	11/04/09	JWG0903673	
Bromoform	ND	U	2.0	0.12	1	11/04/09	11/04/09	JWG0903673	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/04/09	11/04/09	JWG0903673	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/04/09	11/04/09	JWG0903673	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/04/09	11/04/09	JWG0903673	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/04/09	11/04/09	JWG0903673	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/04/09	11/04/09	JWG0903673	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/04/09	11/04/09	JWG0903673	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	92	71-122	11/04/09	Acceptable
4-Bromofluorobenzene	97	75-120	11/04/09	Acceptable
Dibromofluoromethane	106	82-116	11/04/09	Acceptable
Toluene-d8	111	88-117	11/04/09	Acceptable

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



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905440  
 Date Collected: 11/03/2009  
 Date Received: 11/04/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-19C  
 Lab Code: J0905440-002  
 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	11/05/09	11/05/09	JWG0903673	
Vinyl Chloride	ND	U	1.0	0.25	1	11/05/09	11/05/09	JWG0903673	
Bromomethane	ND	U	1.0	0.14	1	11/05/09	11/05/09	JWG0903673	
Chloroethane	ND	U	5.0	0.19	1	11/05/09	11/05/09	JWG0903673	
Trichlorofluoromethane	ND	U	20	0.25	1	11/05/09	11/05/09	JWG0903673	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/05/09	11/05/09	JWG0903673	
Acetone	ND	U	50	2.4	1	11/05/09	11/05/09	JWG0903673	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/05/09	11/05/09	JWG0903673	
Carbon Disulfide	ND	U	10	0.84	1	11/05/09	11/05/09	JWG0903673	
Methylene Chloride	ND	U	5.0	0.72	1	11/05/09	11/05/09	JWG0903673	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/05/09	11/05/09	JWG0903673	
Acrylonitrile	ND	U	10	0.59	1	11/05/09	11/05/09	JWG0903673	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/05/09	11/05/09	JWG0903673	
Vinyl Acetate	ND	U	10	0.60	1	11/05/09	11/05/09	JWG0903673	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/05/09	11/05/09	JWG0903673	
2-Butanone (MEK)	ND	U	10	0.56	1	11/05/09	11/05/09	JWG0903673	
Bromochloromethane	ND	U	5.0	0.14	1	11/05/09	11/05/09	JWG0903673	
Chloroform	ND	U	1.0	0.10	1	11/05/09	11/05/09	JWG0903673	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/05/09	11/05/09	JWG0903673	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/05/09	11/05/09	JWG0903673	
Benzene	ND	U	1.0	0.52	1	11/05/09	11/05/09	JWG0903673	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/05/09	11/05/09	JWG0903673	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/05/09	11/05/09	JWG0903673	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/05/09	11/05/09	JWG0903673	
Dibromomethane	ND	U	5.0	0.12	1	11/05/09	11/05/09	JWG0903673	
Bromodichloromethane	ND	U	1.0	0.10	1	11/05/09	11/05/09	JWG0903673	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/05/09	11/05/09	JWG0903673	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/05/09	11/05/09	JWG0903673	
Toluene	ND	U	1.0	0.52	1	11/05/09	11/05/09	JWG0903673	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/05/09	11/05/09	JWG0903673	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/05/09	11/05/09	JWG0903673	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/05/09	11/05/09	JWG0903673	
2-Hexanone	ND	U	25	0.36	1	11/05/09	11/05/09	JWG0903673	
Dibromochloromethane	ND	U	1.0	0.11	1	11/05/09	11/05/09	JWG0903673	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905440  
**Date Collected:** 11/03/2009  
**Date Received:** 11/04/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-19C  
**Lab Code:** J0905440-002  
**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	11/05/09	11/05/09	JWG0903673	
Chlorobenzene	ND	U	1.0	0.15	1	11/05/09	11/05/09	JWG0903673	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/05/09	11/05/09	JWG0903673	
Ethylbenzene	ND	U	1.0	0.10	1	11/05/09	11/05/09	JWG0903673	
m,p-Xylenes	ND	U	2.0	0.22	1	11/05/09	11/05/09	JWG0903673	
o-Xylene	ND	U	1.0	0.10	1	11/05/09	11/05/09	JWG0903673	
Styrene	ND	U	1.0	0.051	1	11/05/09	11/05/09	JWG0903673	
Bromoform	ND	U	2.0	0.12	1	11/05/09	11/05/09	JWG0903673	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/05/09	11/05/09	JWG0903673	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/05/09	11/05/09	JWG0903673	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/05/09	11/05/09	JWG0903673	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/05/09	11/05/09	JWG0903673	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/05/09	11/05/09	JWG0903673	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/05/09	11/05/09	JWG0903673	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	89	71-122	11/05/09	Acceptable
4-Bromofluorobenzene	97	75-120	11/05/09	Acceptable
Dibromofluoromethane	106	82-116	11/05/09	Acceptable
Toluene-d8	111	88-117	11/05/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905440  
**Date Collected:** 11/03/2009  
**Date Received:** 11/04/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-16A  
**Lab Code:** J0905440-003  
**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	0.17	1	11/05/09	11/05/09	JWG0903673	
Vinyl Chloride	ND	U	1.0	0.25	1	11/05/09	11/05/09	JWG0903673	
Bromomethane	ND	U	1.0	0.14	1	11/05/09	11/05/09	JWG0903673	
Chloroethane	ND	U	5.0	0.19	1	11/05/09	11/05/09	JWG0903673	
Trichlorofluoromethane	ND	U	20	0.25	1	11/05/09	11/05/09	JWG0903673	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/05/09	11/05/09	JWG0903673	
Acetone	ND	U	50	2.4	1	11/05/09	11/05/09	JWG0903673	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/05/09	11/05/09	JWG0903673	
Carbon Disulfide	ND	U	10	0.84	1	11/05/09	11/05/09	JWG0903673	
Methylene Chloride	ND	U	5.0	0.72	1	11/05/09	11/05/09	JWG0903673	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/05/09	11/05/09	JWG0903673	
Acrylonitrile	ND	U	10	0.59	1	11/05/09	11/05/09	JWG0903673	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/05/09	11/05/09	JWG0903673	
Vinyl Acetate	ND	U	10	0.60	1	11/05/09	11/05/09	JWG0903673	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/05/09	11/05/09	JWG0903673	
2-Butanone (MEK)	ND	U	10	0.56	1	11/05/09	11/05/09	JWG0903673	
Bromochloromethane	ND	U	5.0	0.14	1	11/05/09	11/05/09	JWG0903673	
Chloroform	ND	U	1.0	0.10	1	11/05/09	11/05/09	JWG0903673	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/05/09	11/05/09	JWG0903673	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/05/09	11/05/09	JWG0903673	
Benzene	ND	U	1.0	0.52	1	11/05/09	11/05/09	JWG0903673	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/05/09	11/05/09	JWG0903673	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/05/09	11/05/09	JWG0903673	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/05/09	11/05/09	JWG0903673	
Dibromomethane	ND	U	5.0	0.12	1	11/05/09	11/05/09	JWG0903673	
Bromodichloromethane	ND	U	1.0	0.10	1	11/05/09	11/05/09	JWG0903673	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/05/09	11/05/09	JWG0903673	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/05/09	11/05/09	JWG0903673	
Toluene	ND	U	1.0	0.52	1	11/05/09	11/05/09	JWG0903673	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/05/09	11/05/09	JWG0903673	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/05/09	11/05/09	JWG0903673	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/05/09	11/05/09	JWG0903673	
2-Hexanone	ND	U	25	0.36	1	11/05/09	11/05/09	JWG0903673	
Dibromochloromethane	ND	U	1.0	0.11	1	11/05/09	11/05/09	JWG0903673	

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905440  
**Date Collected:** 11/03/2009  
**Date Received:** 11/04/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-16A  
**Lab Code:** J0905440-003  
**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	0.18	1	11/05/09	11/05/09	JWG0903673	
Chlorobenzene	ND	U	1.0	0.15	1	11/05/09	11/05/09	JWG0903673	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/05/09	11/05/09	JWG0903673	
Ethylbenzene	ND	U	1.0	0.10	1	11/05/09	11/05/09	JWG0903673	
m,p-Xylenes	ND	U	2.0	0.22	1	11/05/09	11/05/09	JWG0903673	
o-Xylene	ND	U	1.0	0.10	1	11/05/09	11/05/09	JWG0903673	
Styrene	ND	U	1.0	0.051	1	11/05/09	11/05/09	JWG0903673	
Bromoform	ND	U	2.0	0.12	1	11/05/09	11/05/09	JWG0903673	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/05/09	11/05/09	JWG0903673	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/05/09	11/05/09	JWG0903673	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/05/09	11/05/09	JWG0903673	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/05/09	11/05/09	JWG0903673	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/05/09	11/05/09	JWG0903673	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/05/09	11/05/09	JWG0903673	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	91	71-122	11/05/09	Acceptable
4-Bromofluorobenzene	99	75-120	11/05/09	Acceptable
Dibromofluoromethane	107	82-116	11/05/09	Acceptable
Toluene-d8	111	88-117	11/05/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905440  
**Date Collected:** 11/03/2009  
**Date Received:** 11/04/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-16B  
**Lab Code:** J0905440-004  
**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	0.17	1	11/05/09	11/05/09	JWG0903673	
Vinyl Chloride	ND	U	1.0	0.25	1	11/05/09	11/05/09	JWG0903673	
Bromomethane	ND	U	1.0	0.14	1	11/05/09	11/05/09	JWG0903673	
Chloroethane	ND	U	5.0	0.19	1	11/05/09	11/05/09	JWG0903673	
Trichlorofluoromethane	ND	U	20	0.25	1	11/05/09	11/05/09	JWG0903673	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/05/09	11/05/09	JWG0903673	
Acetone	ND	U	50	2.4	1	11/05/09	11/05/09	JWG0903673	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/05/09	11/05/09	JWG0903673	
Carbon Disulfide	ND	U	10	0.84	1	11/05/09	11/05/09	JWG0903673	
Methylene Chloride	ND	U	5.0	0.72	1	11/05/09	11/05/09	JWG0903673	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/05/09	11/05/09	JWG0903673	
Acrylonitrile	ND	U	10	0.59	1	11/05/09	11/05/09	JWG0903673	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/05/09	11/05/09	JWG0903673	
Vinyl Acetate	ND	U	10	0.60	1	11/05/09	11/05/09	JWG0903673	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/05/09	11/05/09	JWG0903673	
2-Butanone (MEK)	ND	U	10	0.56	1	11/05/09	11/05/09	JWG0903673	
Bromochloromethane	ND	U	5.0	0.14	1	11/05/09	11/05/09	JWG0903673	
Chloroform	ND	U	1.0	0.10	1	11/05/09	11/05/09	JWG0903673	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/05/09	11/05/09	JWG0903673	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/05/09	11/05/09	JWG0903673	
Benzene	ND	U	1.0	0.52	1	11/05/09	11/05/09	JWG0903673	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/05/09	11/05/09	JWG0903673	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/05/09	11/05/09	JWG0903673	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/05/09	11/05/09	JWG0903673	
Dibromomethane	ND	U	5.0	0.12	1	11/05/09	11/05/09	JWG0903673	
Bromodichloromethane	ND	U	1.0	0.10	1	11/05/09	11/05/09	JWG0903673	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/05/09	11/05/09	JWG0903673	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/05/09	11/05/09	JWG0903673	
Toluene	ND	U	1.0	0.52	1	11/05/09	11/05/09	JWG0903673	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/05/09	11/05/09	JWG0903673	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/05/09	11/05/09	JWG0903673	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/05/09	11/05/09	JWG0903673	
2-Hexanone	ND	U	25	0.36	1	11/05/09	11/05/09	JWG0903673	
Dibromochloromethane	ND	U	1.0	0.11	1	11/05/09	11/05/09	JWG0903673	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905440  
**Date Collected:** 11/03/2009  
**Date Received:** 11/04/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-16B  
**Lab Code:** J0905440-004  
**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	0.18	1	11/05/09	11/05/09	JWG0903673	
Chlorobenzene	ND	U	1.0	0.15	1	11/05/09	11/05/09	JWG0903673	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/05/09	11/05/09	JWG0903673	
Ethylbenzene	ND	U	1.0	0.10	1	11/05/09	11/05/09	JWG0903673	
m,p-Xylenes	ND	U	2.0	0.22	1	11/05/09	11/05/09	JWG0903673	
o-Xylene	ND	U	1.0	0.10	1	11/05/09	11/05/09	JWG0903673	
Styrene	ND	U	1.0	0.051	1	11/05/09	11/05/09	JWG0903673	
Bromoform	ND	U	2.0	0.12	1	11/05/09	11/05/09	JWG0903673	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/05/09	11/05/09	JWG0903673	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/05/09	11/05/09	JWG0903673	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/05/09	11/05/09	JWG0903673	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/05/09	11/05/09	JWG0903673	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/05/09	11/05/09	JWG0903673	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/05/09	11/05/09	JWG0903673	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	90	71-122	11/05/09	Acceptable
4-Bromofluorobenzene	97	75-120	11/05/09	Acceptable
Dibromofluoromethane	106	82-116	11/05/09	Acceptable
Toluene-d8	111	88-117	11/05/09	Acceptable

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

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905440  
 Date Collected: 11/03/2009  
 Date Received: 11/04/2009

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Trip Blank  
 Lab Code: J0905440-005  
 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	0.17	1	11/06/09	11/06/09	JWG0903705	
Vinyl Chloride	ND	U	1.0	0.25	1	11/06/09	11/06/09	JWG0903705	
Bromomethane	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903705	
Chloroethane	ND	U	5.0	0.19	1	11/06/09	11/06/09	JWG0903705	
Trichlorofluoromethane	ND	U	20	0.25	1	11/06/09	11/06/09	JWG0903705	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/06/09	11/06/09	JWG0903705	
Acetone	ND	U	50	2.4	1	11/06/09	11/06/09	JWG0903705	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/06/09	11/06/09	JWG0903705	
Carbon Disulfide	ND	U	10	0.84	1	11/06/09	11/06/09	JWG0903705	
Methylene Chloride	ND	U	5.0	0.72	1	11/06/09	11/06/09	JWG0903705	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/06/09	11/06/09	JWG0903705	
Acrylonitrile	ND	U	10	0.59	1	11/06/09	11/06/09	JWG0903705	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/06/09	11/06/09	JWG0903705	
Vinyl Acetate	ND	U	10	0.60	1	11/06/09	11/06/09	JWG0903705	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903705	
2-Butanone (MEK)	ND	U	10	0.56	1	11/06/09	11/06/09	JWG0903705	
Bromochloromethane	ND	U	5.0	0.14	1	11/06/09	11/06/09	JWG0903705	
Chloroform	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903705	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903705	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/06/09	11/06/09	JWG0903705	
Benzene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903705	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903705	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903705	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/06/09	11/06/09	JWG0903705	
Dibromomethane	ND	U	5.0	0.12	1	11/06/09	11/06/09	JWG0903705	
Bromodichloromethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903705	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903705	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/06/09	11/06/09	JWG0903705	
Toluene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903705	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903705	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903705	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/06/09	11/06/09	JWG0903705	
2-Hexanone	ND	U	25	0.36	1	11/06/09	11/06/09	JWG0903705	
Dibromochloromethane	ND	U	1.0	0.11	1	11/06/09	11/06/09	JWG0903705	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905440  
**Date Collected:** 11/03/2009  
**Date Received:** 11/04/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** Trip Blank  
**Lab Code:** J0905440-005  
**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	0.18	1	11/06/09	11/06/09	JWG0903705	
Chlorobenzene	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903705	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903705	
Ethylbenzene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903705	
m,p-Xylenes	ND	U	2.0	0.22	1	11/06/09	11/06/09	JWG0903705	
o-Xylene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903705	
Styrene	ND	U	1.0	0.051	1	11/06/09	11/06/09	JWG0903705	
Bromoform	ND	U	2.0	0.12	1	11/06/09	11/06/09	JWG0903705	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903705	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/06/09	11/06/09	JWG0903705	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903705	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/06/09	11/06/09	JWG0903705	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/06/09	11/06/09	JWG0903705	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/06/09	11/06/09	JWG0903705	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	95	71-122	11/06/09	Acceptable
4-Bromofluorobenzene	118	75-120	11/06/09	Acceptable
Dibromofluoromethane	98	82-116	11/06/09	Acceptable
Toluene-d8	106	88-117	11/06/09	Acceptable

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



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905440  
 Date Collected: NA  
 Date Received: NA

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Method Blank  
 Lab Code: JWG0903673-4  
 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	11/04/09	11/04/09	JWG0903673	
Vinyl Chloride	ND	U	1.0	0.25	1	11/04/09	11/04/09	JWG0903673	
Bromomethane	ND	U	1.0	0.14	1	11/04/09	11/04/09	JWG0903673	
Chloroethane	ND	U	5.0	0.19	1	11/04/09	11/04/09	JWG0903673	
Trichlorofluoromethane	ND	U	20	0.25	1	11/04/09	11/04/09	JWG0903673	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/04/09	11/04/09	JWG0903673	
Acetone	ND	U	50	2.4	1	11/04/09	11/04/09	JWG0903673	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/04/09	11/04/09	JWG0903673	
Carbon Disulfide	ND	U	10	0.84	1	11/04/09	11/04/09	JWG0903673	
Methylene Chloride	ND	U	5.0	0.72	1	11/04/09	11/04/09	JWG0903673	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/04/09	11/04/09	JWG0903673	
Acrylonitrile	ND	U	10	0.59	1	11/04/09	11/04/09	JWG0903673	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/04/09	11/04/09	JWG0903673	
Vinyl Acetate	ND	U	10	0.60	1	11/04/09	11/04/09	JWG0903673	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/04/09	11/04/09	JWG0903673	
2-Butanone (MEK)	ND	U	10	0.56	1	11/04/09	11/04/09	JWG0903673	
Bromochloromethane	ND	U	5.0	0.14	1	11/04/09	11/04/09	JWG0903673	
Chloroform	ND	U	1.0	0.10	1	11/04/09	11/04/09	JWG0903673	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/04/09	11/04/09	JWG0903673	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/04/09	11/04/09	JWG0903673	
Benzene	ND	U	1.0	0.52	1	11/04/09	11/04/09	JWG0903673	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/04/09	11/04/09	JWG0903673	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/04/09	11/04/09	JWG0903673	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/04/09	11/04/09	JWG0903673	
Dibromomethane	ND	U	5.0	0.12	1	11/04/09	11/04/09	JWG0903673	
Bromodichloromethane	ND	U	1.0	0.10	1	11/04/09	11/04/09	JWG0903673	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/04/09	11/04/09	JWG0903673	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/04/09	11/04/09	JWG0903673	
Toluene	ND	U	1.0	0.52	1	11/04/09	11/04/09	JWG0903673	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/04/09	11/04/09	JWG0903673	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/04/09	11/04/09	JWG0903673	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/04/09	11/04/09	JWG0903673	
2-Hexanone	ND	U	25	0.36	1	11/04/09	11/04/09	JWG0903673	
Dibromochloromethane	ND	U	1.0	0.11	1	11/04/09	11/04/09	JWG0903673	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905440  
**Date Collected:** NA  
**Date Received:** NA

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** Method Blank  
**Lab Code:** JWG0903673-4  
**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	11/04/09	11/04/09	JWG0903673	
Chlorobenzene	ND	U	1.0	0.15	1	11/04/09	11/04/09	JWG0903673	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/04/09	11/04/09	JWG0903673	
Ethylbenzene	ND	U	1.0	0.10	1	11/04/09	11/04/09	JWG0903673	
m,p-Xylenes	ND	U	2.0	0.22	1	11/04/09	11/04/09	JWG0903673	
o-Xylene	ND	U	1.0	0.10	1	11/04/09	11/04/09	JWG0903673	
Styrene	ND	U	1.0	0.051	1	11/04/09	11/04/09	JWG0903673	
Bromoform	ND	U	2.0	0.12	1	11/04/09	11/04/09	JWG0903673	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/04/09	11/04/09	JWG0903673	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/04/09	11/04/09	JWG0903673	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/04/09	11/04/09	JWG0903673	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/04/09	11/04/09	JWG0903673	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/04/09	11/04/09	JWG0903673	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/04/09	11/04/09	JWG0903673	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	88	71-122	11/04/09	Acceptable
4-Bromofluorobenzene	97	75-120	11/04/09	Acceptable
Dibromofluoromethane	105	82-116	11/04/09	Acceptable
Toluene-d8	110	88-117	11/04/09	Acceptable

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

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905440  
 Date Collected: NA  
 Date Received: NA

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Method Blank  
 Lab Code: JWG0903705-4  
 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	11/06/09	11/06/09	JWG0903705	
Vinyl Chloride	ND	U	1.0	0.25	1	11/06/09	11/06/09	JWG0903705	
Bromomethane	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903705	
Chloroethane	ND	U	5.0	0.19	1	11/06/09	11/06/09	JWG0903705	
Trichlorofluoromethane	ND	U	20	0.25	1	11/06/09	11/06/09	JWG0903705	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/06/09	11/06/09	JWG0903705	
Acetone	ND	U	50	2.4	1	11/06/09	11/06/09	JWG0903705	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/06/09	11/06/09	JWG0903705	
Carbon Disulfide	ND	U	10	0.84	1	11/06/09	11/06/09	JWG0903705	
Methylene Chloride	ND	U	5.0	0.72	1	11/06/09	11/06/09	JWG0903705	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/06/09	11/06/09	JWG0903705	
Acrylonitrile	ND	U	10	0.59	1	11/06/09	11/06/09	JWG0903705	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/06/09	11/06/09	JWG0903705	
Vinyl Acetate	ND	U	10	0.60	1	11/06/09	11/06/09	JWG0903705	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903705	
2-Butanone (MEK)	ND	U	10	0.56	1	11/06/09	11/06/09	JWG0903705	
Bromochloromethane	ND	U	5.0	0.14	1	11/06/09	11/06/09	JWG0903705	
Chloroform	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903705	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903705	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/06/09	11/06/09	JWG0903705	
Benzene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903705	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903705	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903705	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/06/09	11/06/09	JWG0903705	
Dibromomethane	ND	U	5.0	0.12	1	11/06/09	11/06/09	JWG0903705	
Bromodichloromethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903705	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903705	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/06/09	11/06/09	JWG0903705	
Toluene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903705	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903705	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903705	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/06/09	11/06/09	JWG0903705	
2-Hexanone	ND	U	25	0.36	1	11/06/09	11/06/09	JWG0903705	
Dibromochloromethane	ND	U	1.0	0.11	1	11/06/09	11/06/09	JWG0903705	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905440  
**Date Collected:** NA  
**Date Received:** NA

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** Method Blank  
**Lab Code:** JWG0903705-4  
**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	11/06/09	11/06/09	JWG0903705	
Chlorobenzene	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903705	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903705	
Ethylbenzene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903705	
m,p-Xylenes	ND	U	2.0	0.22	1	11/06/09	11/06/09	JWG0903705	
o-Xylene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903705	
Styrene	ND	U	1.0	0.051	1	11/06/09	11/06/09	JWG0903705	
Bromoform	ND	U	2.0	0.12	1	11/06/09	11/06/09	JWG0903705	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903705	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/06/09	11/06/09	JWG0903705	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903705	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/06/09	11/06/09	JWG0903705	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/06/09	11/06/09	JWG0903705	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/06/09	11/06/09	JWG0903705	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	90	71-122	11/06/09	Acceptable
4-Bromofluorobenzene	114	75-120	11/06/09	Acceptable
Dibromofluoromethane	97	82-116	11/06/09	Acceptable
Toluene-d8	109	88-117	11/06/09	Acceptable

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

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905440  
**Date Collected:** 11/03/2009  
**Date Received:** 11/04/2009

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-19A  
**Lab Code:** J0905440-001  
**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	11/06/09	11/09/09	JWG0903692	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	0.020	0.0057	1	11/06/09	11/09/09	JWG0903692	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	127	77-150	11/09/09	Acceptable

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

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905440  
**Date Collected:** 11/03/2009  
**Date Received:** 11/04/2009

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** MW-19C  
**Lab Code:** J0905440-002  
**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	11/06/09	11/09/09	JWG0903692	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	0.020	0.0057	1	11/06/09	11/09/09	JWG0903692	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	131	77-150	11/09/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905440  
**Date Collected:** 11/03/2009  
**Date Received:** 11/04/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-16A  
**Lab Code:** J0905440-003  
**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	11/06/09	11/09/09	JWG0903692	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/06/09	11/09/09	JWG0903692	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	123	77-150	11/09/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905440  
**Date Collected:** 11/03/2009  
**Date Received:** 11/04/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-16B  
**Lab Code:** J0905440-004  
**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	11/06/09	11/09/09	JWG0903692	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/06/09	11/09/09	JWG0903692	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	128	77-150	11/09/09	Acceptable

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



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905440  
**Date Collected:** NA  
**Date Received:** NA

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** Method Blank  
**Lab Code:** JWG0903692-4  
**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	11/06/09	11/09/09	JWG0903692	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/06/09	11/09/09	JWG0903692	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	118	77-150	11/09/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-19A  
**Lab Code:** J0905440-001

**Service Request:** J0905440  
**Date Collected:** 11/ 3/09 14:20  
**Date Received:** 11/ 4/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Dissolved	6020	ND U	µg/L	2.0	0.4	1	11/10/09	11/12/09 04:17
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/ 5/09	11/13/09 14:06
Arsenic, Dissolved	6020	<b>2.78</b>	µg/L	0.50	0.20	1	11/10/09	11/12/09 04:17
Arsenic, Total	6020	<b>2.61</b>	µg/L	0.50	0.20	1	11/ 5/09	11/13/09 14:06
Barium, Dissolved	6020	<b>24.4</b>	µg/L	2.0	0.5	1	11/10/09	11/12/09 04:17
Barium, Total	6020	<b>29.4</b>	µg/L	2.0	0.5	1	11/ 5/09	11/13/09 14:06
Beryllium, Dissolved	6020	<b>0.3</b> I	µg/L	1.0	0.2	1	11/10/09	11/12/09 04:17
Beryllium, Total	6020	<b>0.4</b> I	µg/L	1.0	0.2	1	11/ 5/09	11/13/09 14:06
Cadmium, Dissolved	6020	<b>0.18</b> I	µg/L	0.50	0.12	1	11/10/09	11/12/09 04:17
Cadmium, Total	6020	<b>0.14</b> I	µg/L	0.50	0.12	1	11/ 5/09	11/13/09 14:06
Chromium, Dissolved	6020	<b>9.0</b>	µg/L	2.0	0.8	1	11/10/09	11/12/09 04:17
Chromium, Total	6020	<b>14.1</b>	µg/L	2.0	0.8	1	11/ 5/09	11/13/09 14:06
Cobalt, Dissolved	6020	<b>0.5</b> I	µg/L	1.0	0.2	1	11/10/09	11/12/09 04:17
Cobalt, Total	6020	<b>0.6</b> I	µg/L	1.0	0.2	1	11/ 5/09	11/13/09 14:06
Copper, Dissolved	6020	ND U	µg/L	2.0	0.3	1	11/10/09	11/12/09 04:17
Copper, Total	6020	<b>1.1</b> I	µg/L	2.0	0.3	1	11/ 5/09	11/13/09 14:06
Iron, Dissolved	6010B	<b>3350</b>	µg/L	50	4	1	11/ 9/09	11/11/09 19:43
Iron, Total	6010B	<b>4330</b>	µg/L	50	4	1	11/ 5/09	11/6/09 13:01
Lead, Dissolved	6020	<b>1.5</b>	µg/L	1.0	0.2	1	11/10/09	11/12/09 04:17
Lead, Total	6020	<b>3.7</b>	µg/L	1.0	0.2	1	11/ 5/09	11/13/09 14:06
Mercury, Dissolved	7470A	ND U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 15:10
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 15:09
Nickel, Dissolved	6020	<b>1.8</b> I	µg/L	2.0	0.3	1	11/10/09	11/12/09 04:17
Nickel, Total	6020	<b>3.0</b>	µg/L	2.0	0.3	1	11/ 5/09	11/13/09 14:06
Selenium, Dissolved	6020	<b>1.8</b> I	µg/L	2.0	0.8	1	11/10/09	11/12/09 04:17
Selenium, Total	6020	<b>2.1</b>	µg/L	2.0	0.8	1	11/ 5/09	11/13/09 14:06
Silver, Dissolved	6020	ND U	µg/L	0.50	0.08	1	11/10/09	11/12/09 04:17
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/ 5/09	11/13/09 14:06
Sodium, Dissolved	6010B	<b>11.4</b>	mg/L	0.50	0.02	1	11/ 9/09	11/11/09 19:42
Sodium, Total	6010B	<b>10.9</b>	mg/L	0.50	0.02	1	11/ 5/09	11/6/09 13:00
Thallium, Dissolved	6020	ND U	µg/L	1.0	0.2	1	11/10/09	11/12/09 04:17
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 5/09	11/13/09 14:06
Vanadium, Dissolved	6020	<b>12.9</b>	µg/L	5.0	1.2	1	11/10/09	11/12/09 04:17
Vanadium, Total	6020	<b>15.3</b>	µg/L	5.0	1.2	1	11/ 5/09	11/13/09 14:06
Zinc, Dissolved	6020	ND U	µg/L	10	4	1	11/10/09	11/12/09 04:17
Zinc, Total	6020	ND U	µg/L	10	4	1	11/ 5/09	11/13/09 14:06

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-19C  
**Lab Code:** J0905440-002

**Service Request:** J0905440  
**Date Collected:** 11/ 3/09 1440  
**Date Received:** 11/ 4/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Dissolved	6020	ND U	µg/L	2.0	0.4	1	11/10/09	11/12/09 04:22
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/ 5/09	11/13/09 14:11
Arsenic, Dissolved	6020	<b>0.32</b> I	µg/L	0.50	0.20	1	11/10/09	11/12/09 04:22
Arsenic, Total	6020	<b>0.36</b> I	µg/L	0.50	0.20	1	11/ 5/09	11/13/09 14:11
Barium, Dissolved	6020	<b>28.4</b>	µg/L	2.0	0.5	1	11/10/09	11/12/09 04:22
Barium, Total	6020	<b>52.6</b>	µg/L	2.0	0.5	1	11/ 5/09	11/13/09 14:11
Beryllium, Dissolved	6020	ND U	µg/L	1.0	0.2	1	11/10/09	11/12/09 04:22
Beryllium, Total	6020	<b>0.3</b> I	µg/L	1.0	0.2	1	11/ 5/09	11/13/09 14:11
Cadmium, Dissolved	6020	ND U	µg/L	0.50	0.12	1	11/10/09	11/12/09 04:22
Cadmium, Total	6020	<b>0.23</b> I	µg/L	0.50	0.12	1	11/ 5/09	11/13/09 14:11
Chromium, Dissolved	6020	ND U	µg/L	2.0	0.8	1	11/10/09	11/12/09 04:22
Chromium, Total	6020	<b>4.5</b>	µg/L	2.0	0.8	1	11/ 5/09	11/13/09 14:11
Cobalt, Dissolved	6020	ND U	µg/L	1.0	0.2	1	11/10/09	11/12/09 04:22
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 5/09	11/13/09 14:11
Copper, Dissolved	6020	ND U	µg/L	2.0	0.3	1	11/10/09	11/12/09 04:22
Copper, Total	6020	<b>0.4</b> I	µg/L	2.0	0.3	1	11/ 5/09	11/13/09 14:11
Iron, Dissolved	6010B	<b>616</b>	µg/L	50	4	1	11/ 9/09	11/11/09 19:47
Iron, Total	6010B	<b>1110</b>	µg/L	50	4	1	11/ 5/09	11/6/09 13:04
Lead, Dissolved	6020	ND U	µg/L	1.0	0.2	1	11/10/09	11/12/09 04:22
Lead, Total	6020	<b>0.7</b> I	µg/L	1.0	0.2	1	11/ 5/09	11/13/09 14:11
Mercury, Dissolved	7470A	ND U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 15:13
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 15:12
Nickel, Dissolved	6020	<b>0.6</b> I	µg/L	2.0	0.3	1	11/10/09	11/12/09 04:22
Nickel, Total	6020	<b>1.3</b> I	µg/L	2.0	0.3	1	11/ 5/09	11/13/09 14:11
Selenium, Dissolved	6020	ND U	µg/L	2.0	0.8	1	11/10/09	11/12/09 04:22
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/ 5/09	11/13/09 14:11
Silver, Dissolved	6020	ND U	µg/L	0.50	0.08	1	11/10/09	11/12/09 04:22
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/ 5/09	11/13/09 14:11
Sodium, Dissolved	6010B	<b>9.43</b>	mg/L	0.50	0.02	1	11/ 9/09	11/11/09 19:46
Sodium, Total	6010B	<b>8.97</b>	mg/L	0.50	0.02	1	11/ 5/09	11/6/09 13:03
Thallium, Dissolved	6020	ND U	µg/L	1.0	0.2	1	11/10/09	11/12/09 04:22
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 5/09	11/13/09 14:11
Vanadium, Dissolved	6020	ND U	µg/L	5.0	1.2	1	11/10/09	11/12/09 04:22
Vanadium, Total	6020	<b>4.0</b> I	µg/L	5.0	1.2	1	11/ 5/09	11/13/09 14:11
Zinc, Dissolved	6020	ND U	µg/L	10	4	1	11/10/09	11/12/09 04:22
Zinc, Total	6020	ND U	µg/L	10	4	1	11/ 5/09	11/13/09 14:11

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-16A  
**Lab Code:** J0905440-003

**Service Request:** J0905440  
**Date Collected:** 11/ 3/09 1600  
**Date Received:** 11/ 4/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	0.5 I	µg/L	2.0	0.4	1	11/ 5/09	11/13/09 14:16
Arsenic, Total	6020	ND U	µg/L	0.50	0.20	1	11/ 5/09	11/13/09 14:16
Barium, Total	6020	12.3	µg/L	2.0	0.5	1	11/ 5/09	11/13/09 14:16
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 5/09	11/13/09 14:16
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/ 5/09	11/13/09 14:16
Chromium, Total	6020	1.1 I	µg/L	2.0	0.8	1	11/ 5/09	11/13/09 14:16
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 5/09	11/13/09 14:16
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/ 5/09	11/13/09 14:16
Iron, Total	6010B	131	µg/L	50	4	1	11/ 5/09	11/6/09 13:14
Lead, Total	6020	0.5 I	µg/L	1.0	0.2	1	11/ 5/09	11/13/09 14:16
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 15:18
Nickel, Total	6020	0.6 I	µg/L	2.0	0.3	1	11/ 5/09	11/13/09 14:16
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/ 5/09	11/13/09 14:16
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/ 5/09	11/13/09 14:16
Sodium, Total	6010B	1.49	mg/L	0.50	0.02	1	11/ 5/09	11/6/09 13:14
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 5/09	11/13/09 14:16
Vanadium, Total	6020	7.0	µg/L	5.0	1.2	1	11/ 5/09	11/13/09 14:16
Zinc, Total	6020	ND U	µg/L	10	4	1	11/ 5/09	11/13/09 14:16

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-16B  
**Lab Code:** J0905440-004

**Service Request:** J0905440  
**Date Collected:** 11/ 3/09 1625  
**Date Received:** 11/ 4/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Dissolved	6020	ND	U	µg/L	2.0	0.4	1	11/10/09	11/12/09 04:27
Antimony, Total	6020	0.5	I	µg/L	2.0	0.4	1	11/ 5/09	11/13/09 14:20
Arsenic, Dissolved	6020	0.37	I	µg/L	0.50	0.20	1	11/10/09	11/12/09 04:27
Arsenic, Total	6020	0.40	I	µg/L	0.50	0.20	1	11/ 5/09	11/13/09 14:20
Barium, Dissolved	6020	17.0		µg/L	2.0	0.5	1	11/10/09	11/12/09 04:27
Barium, Total	6020	33.7		µg/L	2.0	0.5	1	11/ 5/09	11/13/09 14:20
Beryllium, Dissolved	6020	ND	U	µg/L	1.0	0.2	1	11/10/09	11/12/09 04:27
Beryllium, Total	6020	ND	U	µg/L	1.0	0.2	1	11/ 5/09	11/13/09 14:20
Cadmium, Dissolved	6020	ND	U	µg/L	0.50	0.12	1	11/10/09	11/12/09 04:27
Cadmium, Total	6020	ND	U	µg/L	0.50	0.12	1	11/ 5/09	11/13/09 14:20
Chromium, Dissolved	6020	ND	U	µg/L	2.0	0.8	1	11/10/09	11/12/09 04:27
Chromium, Total	6020	2.2		µg/L	2.0	0.8	1	11/ 5/09	11/13/09 14:20
Cobalt, Dissolved	6020	0.3	I	µg/L	1.0	0.2	1	11/10/09	11/12/09 04:27
Cobalt, Total	6020	0.3	I	µg/L	1.0	0.2	1	11/ 5/09	11/13/09 14:20
Copper, Dissolved	6020	ND	U	µg/L	2.0	0.3	1	11/10/09	11/12/09 04:27
Copper, Total	6020	0.3	I	µg/L	2.0	0.3	1	11/ 5/09	11/13/09 14:20
Iron, Dissolved	6010B	1180		µg/L	50	4	1	11/ 9/09	11/11/09 20:11
Iron, Total	6010B	1450		µg/L	50	4	1	11/ 5/09	11/6/09 13:18
Lead, Dissolved	6020	ND	U	µg/L	1.0	0.2	1	11/10/09	11/12/09 04:27
Lead, Total	6020	2.4		µg/L	1.0	0.2	1	11/ 5/09	11/13/09 14:20
Mercury, Dissolved	7470A	ND	U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 15:20
Mercury, Total	7470A	ND	U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 15:19
Nickel, Dissolved	6020	ND	U	µg/L	2.0	0.3	1	11/10/09	11/12/09 04:27
Nickel, Total	6020	0.7	I	µg/L	2.0	0.3	1	11/ 5/09	11/13/09 14:20
Selenium, Dissolved	6020	ND	U	µg/L	2.0	0.8	1	11/10/09	11/12/09 04:27
Selenium, Total	6020	ND	U	µg/L	2.0	0.8	1	11/ 5/09	11/13/09 14:20
Silver, Dissolved	6020	ND	U	µg/L	0.50	0.08	1	11/10/09	11/12/09 04:27
Silver, Total	6020	ND	U	µg/L	0.50	0.08	1	11/ 5/09	11/13/09 14:20
Sodium, Dissolved	6010B	8.01		mg/L	0.50	0.02	1	11/ 9/09	11/11/09 20:10
Sodium, Total	6010B	7.90		mg/L	0.50	0.02	1	11/ 5/09	11/6/09 13:17
Thallium, Dissolved	6020	ND	U	µg/L	1.0	0.2	1	11/10/09	11/12/09 04:27
Thallium, Total	6020	ND	U	µg/L	1.0	0.2	1	11/ 5/09	11/13/09 14:20
Vanadium, Dissolved	6020	ND	U	µg/L	5.0	1.2	1	11/10/09	11/12/09 04:27
Vanadium, Total	6020	1.8	I	µg/L	5.0	1.2	1	11/ 5/09	11/13/09 14:20
Zinc, Dissolved	6020	ND	U	µg/L	10	4	1	11/10/09	11/12/09 04:27
Zinc, Total	6020	ND	U	µg/L	10	4	1	11/ 5/09	11/13/09 14:20

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** J0905440-MB

**Service Request:** J0905440  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Dissolved	6020	ND U	µg/L	2.0	0.4	1	11/10/09	11/12/09 03:19
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/ 5/09	11/9/09 20:10
Arsenic, Dissolved	6020	<b>0.20</b> I	µg/L	0.50	0.20	1	11/10/09	11/12/09 03:19
Arsenic, Total	6020	ND U	µg/L	0.50	0.20	1	11/ 5/09	11/9/09 20:10
Barium, Dissolved	6020	ND U	µg/L	2.0	0.5	1	11/10/09	11/12/09 03:19
Barium, Total	6020	ND U	µg/L	2.0	0.5	1	11/ 5/09	11/9/09 20:10
Beryllium, Dissolved	6020	ND U	µg/L	1.0	0.2	1	11/10/09	11/12/09 03:19
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 5/09	11/9/09 20:10
Cadmium, Dissolved	6020	ND U	µg/L	0.50	0.12	1	11/10/09	11/12/09 03:19
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/ 5/09	11/9/09 20:10
Chromium, Dissolved	6020	ND U	µg/L	2.0	0.8	1	11/10/09	11/12/09 03:19
Chromium, Total	6020	ND U	µg/L	2.0	0.8	1	11/ 5/09	11/9/09 20:10
Cobalt, Dissolved	6020	ND U	µg/L	1.0	0.2	1	11/10/09	11/12/09 03:19
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 5/09	11/9/09 20:10
Copper, Dissolved	6020	ND U	µg/L	2.0	0.3	1	11/10/09	11/12/09 03:19
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/ 5/09	11/9/09 20:10
Iron, Dissolved	6010B	ND U	µg/L	50	4	1	11/ 9/09	11/11/09 19:36
Iron, Total	6010B	ND U	µg/L	50	4	1	11/ 5/09	11/6/09 11:57
Lead, Dissolved	6020	ND U	µg/L	1.0	0.2	1	11/10/09	11/12/09 03:19
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 5/09	11/9/09 20:10
Mercury, Dissolved	7470A	ND U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 15:03
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 15:03
Nickel, Dissolved	6020	ND U	µg/L	2.0	0.3	1	11/10/09	11/12/09 03:19
Nickel, Total	6020	ND U	µg/L	2.0	0.3	1	11/ 5/09	11/9/09 20:10
Selenium, Dissolved	6020	ND U	µg/L	2.0	0.8	1	11/10/09	11/12/09 03:19
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/ 5/09	11/9/09 20:10
Silver, Dissolved	6020	ND U	µg/L	0.50	0.08	1	11/10/09	11/12/09 03:19
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/ 5/09	11/9/09 20:10
Sodium, Dissolved	6010B	<b>0.14</b> I	mg/L	0.50	0.02	1	11/ 9/09	11/11/09 19:35
Sodium, Total	6010B	ND U	mg/L	0.50	0.02	1	11/ 5/09	11/6/09 11:56
Thallium, Dissolved	6020	ND U	µg/L	1.0	0.2	1	11/10/09	11/12/09 03:19
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 5/09	11/9/09 20:10
Vanadium, Dissolved	6020	ND U	µg/L	5.0	1.2	1	11/10/09	11/12/09 03:19
Vanadium, Total	6020	ND U	µg/L	5.0	1.2	1	11/ 5/09	11/9/09 20:10
Zinc, Dissolved	6020	ND U	µg/L	10	4	1	11/10/09	11/12/09 03:19
Zinc, Total	6020	ND U	µg/L	10	4	1	11/ 5/09	11/9/09 20:10

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905440  
**Date Collected :** 11/03/09  
**Date Received :** 11/04/09

Inorganic Parameters

**Sample Name :** MW-19A  
**Lab Code :** J0905440-001  
**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	0.01	1	11/10/09 13:15	4.6	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/04/09 16:41	12	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/04/09 18:12	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/09/09 15:15	350	



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905440  
**Date Collected :** 11/03/09  
**Date Received :** 11/04/09

Inorganic Parameters

**Sample Name :** MW-19C  
**Lab Code :** J0905440-002  
**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	0.01	1	11/10/09 13:15	0.050	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/04/09 16:41	18	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/04/09 18:42	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/09/09 15:15	82	

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905440  
**Date Collected :** 11/03/09  
**Date Received :** 11/04/09

Inorganic Parameters

**Sample Name :** MW-16A  
**Lab Code :** J0905440-003  
**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	0.01	1	11/10/09 13:15	0.050	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/04/09 16:41	2.2	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/04/09 18:57	0.17	i
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/09/09 15:15	47	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905440  
**Date Collected :** 11/03/09  
**Date Received :** 11/04/09

Inorganic Parameters

**Sample Name :** MW-16B  
**Lab Code :** J0905440-004  
**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	0.01	1	11/10/09 13:15	0.20	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/04/09 16:41	14	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/04/09 19:57	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/09/09 15:15	59	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905440  
**Date Collected :** NA  
**Date Received :** NA

Inorganic Parameters

**Sample Name :** Method Blank  
**Lab Code :** J0905440-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	0.01	1	11/10/09 13:15	U	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/04/09 16:41	U	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/04/09 16:41	U	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/04/09 16:41	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/09/09 15:15	U	

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905440

**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	J0905440-001	92	97	106	111
MW-19C	J0905440-002	89	97	106	111
MW-16A	J0905440-003	91	99	107	111
MW-16B	J0905440-004	90	97	106	111
Trip Blank	J0905440-005	95	118	98	106
Method Blank	JWG0903673-4	88	97	105	110
Method Blank	JWG0903705-4	90	114	97	109
Lab Control Sample	JWG0903673-3	89	96	104	108
Lab Control Sample	JWG0903705-3	92	108	99	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

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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905440  
 Date Extracted: 11/04/2009  
 Date Analyzed: 11/04/2009

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: JWG0903673

Lab Control Sample  
 JWG0903673-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Chloromethane	13.6	20.0	68	67-135
Vinyl Chloride	16.6	20.0	83	78-132
Bromomethane	18.8	20.0	94	79-130
Chloroethane	16.0	20.0	80	74-126
Trichlorofluoromethane	17.9	20.0	90	74-134
1,1-Dichloroethene	17.9	20.0	90	78-130
Acetone	81.4	100	81	67-133
Iodomethane (Methyl Iodide)	109	100	109	68-134
Carbon Disulfide	92.4	100	92	76-138
Methylene Chloride	20.0	20.0	100	72-124
trans-1,2-Dichloroethene	18.4	20.0	92	77-124
Acrylonitrile	86.1	100	86	77-127
1,1-Dichloroethane	18.2	20.0	91	80-128
Vinyl Acetate	74.8	100	75	61-148
cis-1,2-Dichloroethene	21.1	20.0	106	80-126
2-Butanone (MEK)	96.0	100	96	73-127
Bromochloromethane	23.6	20.0	118	79-129
Chloroform	20.1	20.0	100	83-124
1,1,1-Trichloroethane (TCA)	19.8	20.0	99	79-124
Carbon Tetrachloride	20.2	20.0	101	81-125
Benzene	19.5	20.0	98	79-119
1,2-Dichloroethane (EDC)	20.2	20.0	101	80-124
Trichloroethene (TCE)	22.6	20.0	113	76-124
1,2-Dichloropropane	18.4	20.0	92	79-123
Dibromomethane	20.7	20.0	104	83-123
Bromodichloromethane	20.3	20.0	102	81-123
cis-1,3-Dichloropropene	20.4	20.0	102	86-123
4-Methyl-2-pentanone (MIBK)	86.1	100	86	72-136
Toluene	20.5	20.0	103	86-117
trans-1,3-Dichloropropene	20.9	20.0	105	83-124
1,1,2-Trichloroethane	21.0	20.0	105	86-114
Tetrachloroethene (PCE)	23.3	20.0	116	80-121
2-Hexanone	87.2	100	87	71-138
Dibromochloromethane	22.3	20.0	111	82-121
1,2-Dibromoethane (EDB)	22.0	20.0	110	88-117
Chlorobenzene	21.5	20.0	108	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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905440  
 Date Extracted: 11/04/2009  
 Date Analyzed: 11/04/2009

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: JWG0903673

Analyte Name	Lab Control Sample JWG0903673-3 Lab Control Spike			%Rec Limits
	Result	Expected	%Rec	
1,1,1,2-Tetrachloroethane	22.7	20.0	113	85-117
Ethylbenzene	20.4	20.0	102	90-118
m,p-Xylenes	42.2	40.0	106	86-121
o-Xylene	20.5	20.0	103	89-119
Styrene	21.3	20.0	107	89-122
Bromoform	22.9	20.0	115	68-129
1,1,2,2-Tetrachloroethane	20.7	20.0	103	83-120
1,2,3-Trichloropropane	22.1	20.0	110	83-123
1,4-Dichlorobenzene	20.0	20.0	100	83-113
trans-1,4-Dichloro-2-butene	12.2	20.0	61	53-143
1,2-Dichlorobenzene	19.8	20.0	99	84-115
1,2-Dibromo-3-chloropropane (DBCP)	20.3	20.0	101	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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905440  
 Date Extracted: 11/06/2009  
 Date Analyzed: 11/06/2009

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: JWG0903705

Lab Control Sample  
 JWG0903705-3

Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Chloromethane	21.1	20.0	106	67-135
Vinyl Chloride	19.6	20.0	98	78-132
Bromomethane	20.0	20.0	100	79-130
Chloroethane	20.4	20.0	102	74-126
Trichlorofluoromethane	19.2	20.0	96	74-134
1,1-Dichloroethene	20.4	20.0	102	78-130
Acetone	102	100	102	67-133
Iodomethane (Methyl Iodide)	104	100	104	68-134
Carbon Disulfide	91.9	100	92	76-138
Methylene Chloride	20.2	20.0	101	72-124
trans-1,2-Dichloroethene	20.7	20.0	103	77-124
Acrylonitrile	104	100	104	77-127
1,1-Dichloroethane	19.5	20.0	97	80-128
Vinyl Acetate	130	100	130	61-148
cis-1,2-Dichloroethene	20.9	20.0	104	80-126
2-Butanone (MEK)	112	100	112	73-127
Bromochloromethane	21.5	20.0	107	79-129
Chloroform	19.5	20.0	97	83-124
1,1,1-Trichloroethane (TCA)	19.1	20.0	96	79-124
Carbon Tetrachloride	20.2	20.0	101	81-125
Benzene	20.2	20.0	101	79-119
1,2-Dichloroethane (EDC)	20.5	20.0	102	80-124
Trichloroethene (TCE)	19.6	20.0	98	76-124
1,2-Dichloropropane	21.6	20.0	108	79-123
Dibromomethane	19.9	20.0	100	83-123
Bromodichloromethane	20.0	20.0	100	81-123
cis-1,3-Dichloropropene	21.6	20.0	108	86-123
4-Methyl-2-pentanone (MIBK)	108	100	108	72-136
Toluene	20.8	20.0	104	86-117
trans-1,3-Dichloropropene	22.7	20.0	113	83-124
1,1,2-Trichloroethane	20.9	20.0	104	86-114
Tetrachloroethene (PCE)	21.9	20.0	110	80-121
2-Hexanone	108	100	108	71-138
Dibromochloromethane	20.5	20.0	102	82-121
1,2-Dibromoethane (EDB)	21.8	20.0	109	88-117
Chlorobenzene	20.4	20.0	102	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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905440  
 Date Extracted: 11/06/2009  
 Date Analyzed: 11/06/2009

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: JWG0903705

Analyte Name	Lab Control Sample JWG0903705-3 Lab Control Spike			%Rec Limits
	Result	Expected	%Rec	
1,1,1,2-Tetrachloroethane	21.1	20.0	105	85-117
Ethylbenzene	20.7	20.0	103	90-118
m,p-Xylenes	41.6	40.0	104	86-121
o-Xylene	20.3	20.0	102	89-119
Styrene	20.7	20.0	103	89-122
Bromoform	21.2	20.0	106	68-129
1,1,2,2-Tetrachloroethane	21.0	20.0	105	83-120
1,2,3-Trichloropropane	20.7	20.0	104	83-123
1,4-Dichlorobenzene	19.4	20.0	97	83-113
trans-1,4-Dichloro-2-butene	22.5	20.0	113	53-143
1,2-Dichlorobenzene	18.7	20.0	94	84-115
1,2-Dibromo-3-chloropropane (DBCP)	20.6	20.0	103	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 SWDF/FQ1512A.02  
Sample Matrix: Water

Service Request: J0905440

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	J0905440-001	127
MW-19C	J0905440-002	131
MW-16A	J0905440-003	123
MW-16B	J0905440-004	128
Method Blank	JWG0903692-4	118
Lab Control Sample	JWG0903692-3	121

---

**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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905440  
 Date Extracted: 11/06/2009  
 Date Analyzed: 11/09/2009

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: JWG0903692

Analyte Name	Lab Control Sample JWG0903692-3 Lab Control Spike			%Rec Limits
	Result	Expected	%Rec	
1,2-Dibromoethane (EDB)	0.284	0.250	114	70-130
1,2-Dibromo-3-chloropropane (DBCP)	0.297	0.250	119	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:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905440  
**Date Collected:** 11/3/09  
**Date Received:** 11/4/09  
**Date Analyzed:** 11/11/09

**Matrix Spike Summary  
 Inorganic Parameters**

**Sample Name:** MW-19C  
**Lab Code:** J0905440-002

**Units:** µg/L  
**Basis:** NA

**Analytical Method:** 6010B  
**Prep Method:** EPA 3005A

Analyte Name	Sample Result	Matrix Spike J0905440-MS			Duplicate Matrix Spike J0905440-DMS			% Rec Limits	RPD	RPD Limit
		Result	Amount	% Rec	Result	Amount	% Rec			
Iron, Dissolved	616	2460	2000	92	2470	2000	93	75 - 125	1	20

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905440  
**Date Collected:** 11/3/09  
**Date Received:** 11/4/09  
**Date Analyzed:** 11/11/09

**Matrix Spike Summary  
 Inorganic Parameters**

**Sample Name:** MW-19C  
**Lab Code:** J0905440-002

**Units:** mg/L  
**Basis:** NA

**Analytical Method:** 6010B  
**Prep Method:** EPA 3005A

Analyte Name	Sample Result	Matrix Spike J0905440-MS			Duplicate Matrix Spike J0905440-DMS			% Rec Limits	RPD	RPD Limit
		Result	Amount	% Rec	Result	Amount	% Rec			
Sodium, Dissolved	9.43	19.2	10.0	98	19.3	10.0	98	75 - 125	0	20

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905440  
**Date Analyzed:** 11/ 6/09 -  
 11/12/09

**Lab Control Sample Summary  
 Inorganic Parameters**

**Units:** µg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample J0905440-LCS			% Rec Limits
		Result	Expected	% Rec	
Antimony, Dissolved	6020	48.9	50.0	98	80 - 120
Antimony, Total	6020	49.3	50.0	99	80 - 120
Arsenic, Dissolved	6020	50.0	50.0	100	80 - 120
Arsenic, Total	6020	49.9	50.0	100	80 - 120
Barium, Dissolved	6020	47.5	50.0	95	80 - 120
Barium, Total	6020	51.9	50.0	104	80 - 120
Beryllium, Dissolved	6020	50.6	50.0	101	80 - 120
Beryllium, Total	6020	50.3	50.0	101	80 - 120
Cadmium, Dissolved	6020	49.0	50.0	98	80 - 120
Cadmium, Total	6020	48.6	50.0	97	80 - 120
Chromium, Dissolved	6020	48.2	50.0	96	80 - 120
Chromium, Total	6020	53.0	50.0	106	80 - 120
Cobalt, Dissolved	6020	47.8	50.0	96	80 - 120
Cobalt, Total	6020	51.8	50.0	104	80 - 120
Copper, Dissolved	6020	49.1	50.0	98	80 - 120
Copper, Total	6020	51.9	50.0	104	80 - 120
Iron, Dissolved	6010B	1850	2000	92	80 - 120
Iron, Total	6010B	1870	2000	93	80 - 120
Lead, Dissolved	6020	48.9	50.0	98	80 - 120
Lead, Total	6020	52.2	50.0	104	80 - 120
Mercury, Dissolved	7470A	4.94	5.00	99	80 - 120
Mercury, Total	7470A	4.94	5.00	99	80 - 120
Nickel, Dissolved	6020	48.4	50.0	97	80 - 120
Nickel, Total	6020	52.1	50.0	104	80 - 120
Selenium, Dissolved	6020	48.6	50.0	97	80 - 120
Selenium, Total	6020	47.0	50.0	94	80 - 120
Silver, Dissolved	6020	53.3	50.0	107	80 - 120
Silver, Total	6020	52.3	50.0	105	80 - 120
Thallium, Dissolved	6020	49.2	50.0	98	80 - 120
Thallium, Total	6020	51.8	50.0	104	80 - 120
Vanadium, Dissolved	6020	49.5	50.0	99	80 - 120
Vanadium, Total	6020	53.3	50.0	107	80 - 120
Zinc, Dissolved	6020	101	100	101	80 - 120
Zinc, Total	6020	97.5	100	97	80 - 120

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

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoSyntec Consultants  
Project: JED SWDF/FQ1512A.02  
Sample Matrix: Water

Service Request: J0905440  
Date Analyzed: 11/ 6/09 -  
11/11/09

Lab Control Sample Summary  
Inorganic Parameters

Units: mg/L  
Basis: NA

Analyte Name	Method	Lab Control Sample J0905440-LCS			% Rec Limits
		Result	Expected	% Rec	
Sodium, Dissolved	6010B	10.2	10.0	102	80 - 120
Sodium, Total	6010B	10.0	10.0	100	80 - 120

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905440  
**Date Collected :** 11/03/09  
**Date Received :** 11/04/09  
**Date Extracted :** NA  
**Date Analyzed :** 11/04-09/09

Duplicate Summary  
 Inorganic Parameters

**Sample Name :** MW-19A  
**Lab Code :** J0905440-001DUP  
**Test Notes :**

Basis : NA

Analyte	Units	Analysis Method	MRL	Sample Result	Duplicate		Average	Relative Percent Difference	Result Notes
					Sample Result	Sample Result			
Chloride	mg/L (ppm)	300.0	0.2	12	12	12	<1		
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	U	U	U	-		
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	350	370	360	6		

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905440  
**Date Collected :** NA  
**Date Received :** NA  
**Date Extracted :** NA  
**Date Analyzed :** 11/04-10/09

Laboratory Control Sample Summary  
 Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** J0905440-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	4.93	99	90-110	
Chloride	mg/L (ppm)	300.0	5.00	5.11	102	90-110	
Chloride	mg/L (ppm)	300.0	100	105	105	90-110	
Nitrate as Nitrogen	mg/L (ppm)	300.0	5.0	5.16	103	90-110	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	300	297	99	85-115	

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

Client: Glosyntec Service Request # 30905440  
 Project: SED SWDF  
 Cooler received on 11/4/09 and opened on 11/4/09 by SL  
 COURIER: CAS  UPS FEDEX DHL CLIENT Tracking # J2081512486

- |    |   |                                      |        |     |
|----|---|--------------------------------------|--------|-----|
| 1  | Were custody seals on outside of cooler?  | <input checked="" type="radio"/> Yes | No     | N/A |
| 2  | Were seals intact, signed and dated?  | <input checked="" type="radio"/> Yes | No     | N/A |
| 3  | Were custody papers properly filled out?  | <input checked="" type="radio"/> Yes | No     | N/A |
| 4  | Temperature of cooler(s) upon receipt (Should be 4 +/- 2 degrees C)   | <u>1.9</u>                           |        |     |
| 5  | Correct Temperature?  | <input checked="" type="radio"/> Yes | No     | N/A |
| 6  | Were Ice or Ice Packs present   | <input checked="" type="radio"/> Yes | No     | N/A |
| 7  | Did all bottles arrive in good condition (unbroken, etc....)?   | <input checked="" type="radio"/> Yes | No     | N/A |
| 8  | Were all bottle labels complete (sample ID, preservation, etc....)?   | <input checked="" type="radio"/> Yes | No     | N/A |
| 9  | Did all bottle labels and tags agree with custody papers?   | <input checked="" type="radio"/> Yes | No     | N/A |
| 10 | Were the correct bottles used for the tests indicated?  | <input checked="" type="radio"/> Yes | No     | N/A |
| 11 | Were all of the preserved bottles received with the appropriate preservative?   | <input checked="" type="radio"/> Yes | No     | N/A |
|    | <u>HNO3</u> pH<2 <u>H2SO4</u> pH<2    ZnAc2/NaOH pH>9    NaOH pH>12    HCl pH<2<br>Preservative additions noted below |                                      |        |     |
| 12 | Were all samples received within analysis holding times?  | <input checked="" type="radio"/> Yes | No     | N/A |
| 13 | Were VOA vials checked for absence of air bubbles? If present, note below   | <input checked="" type="radio"/> Yes | No     | N/A |
| 14 | Where did the bottles originate?  | <input checked="" type="radio"/> CAS | 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: 40

SR #: J 0905440

Date: 1/14/09

Initials: SC

Note that pH is checked and meets the required pH criterion listed in the column heading unless otherwise noted on cooler receipt form.

Sample #	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	250ml	250ml	250ml	250ml	250ml	250ml	250ml	500ml	500ml	500ml	1L	1L	1L	1L	1L	1L	2oz	4oz	8oz	16oz	5g	100ml	Misc.	
Pres.	HCl	HCl	Sodium Thiosulfate	H2SO4	HCl	H2SO4	HNO3	HNO3	H2SO4	H2SO4	HNO3	ZnAcetate	NaOH	NaOH	HNO3	H2SO4	H2SO4	HNO3	HNO3	HNO3	HNO3	HCl	H2SO4	N/A	N/A	N/A	N/A	N/A	N/A	Sodium Thiosulfate	Misc.	
Req. pH	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	>9	>12	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	
-001	3	3					+	2																								
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-040																																

Project Name <b>SED SWDF</b>	Project Number <b>EQ1512A.02</b>	ANALYSIS REQUESTED (Include Method Number and Preservative)	
Project Manager <b>Kirk Wills</b>	Email Address <b>k.wills@geosyntec.com</b>	PRESERVATIVE	<b>1 0 2 3 0 2</b>
Company Address <b>Geosyntec</b>	<b>14055 Riveredge Dr. Ste 300</b>	NUMBER OF CONTAINERS	
<b>Tampa, FL 33637</b>	<b>813-558-0990</b>	<b>B260</b>	
Phone #	FAX#	<b>B011</b>	
Sampler's Signature <i>Joe Terry</i>	Sampler's Printed Name <b>Joe Terry</b>	<b>Metals</b>	
		<b>NH3</b>	
		<b>Cl, NO3, TDS</b>	
		<b>Dissolved Metals</b>	

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	REMARKS/ ALTERNATE DESCRIPTION
MW-19A		11-3-09	1420	GW	
MW-19C		11-3-09	1440	GW	
MW-16A		11-3-09	1600	GW	
MW-16B		11-3-09	1625	GW	
Trip Blank		10-28-09	1100	W	

SPECIAL INSTRUCTIONS/COMMENTS <b>cooler ID: 09307 - SED - 1</b>	TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) <input checked="" type="checkbox"/> STANDARD	REPORT REQUIREMENTS <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	INVOICE INFORMATION PO# BILL TO:
	REQUESTED FAX DATE REQUESTED REPORT DATE	Edata <input type="checkbox"/> Yes <input type="checkbox"/> No	RECEIVED BY
See QAPP <input type="checkbox"/>	CUSTODY SEALS: Y N	RELINQUISHED BY	RECEIVED BY
SAMPLE RECEIPT: CONDITION/COOLER TEMP:	RELINQUISHED BY	RELINQUISHED BY	RECEIVED BY
<b>51</b>	Signature <i>Joe Terry</i>	Signature <i>Sham Lyght</i>	Signature
Printed Name <b>Joe Terry</b>	Printed Name <b>Sham Lyght</b>	Printed Name <b>Sham Lyght</b>	Printed Name
Firm <b>Geosyntec</b>	Firm <b>Geosyntec</b>	Firm <b>Geosyntec</b>	Firm
Date/Time <b>11-3-09/1700</b>	Date/Time <b>11/4/09 0915</b>	Date/Time	Date/Time

November 19, 2009

Service Request No: J0905474

Kirk Wills  
GeoSyntec Consultants  
14055 Riveredge Drive  
Suite 300  
Tampa, FL 33637

**Laboratory Results for: JED SWDF/FQ1512A.02**

Dear Kirk:

Enclosed are the results of the sample(s) submitted to our laboratory on November 5, 2009. For your reference, these analyses have been assigned our service request number **J0905474**.

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.

Please contact me 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 Manager

Page 1 of 96

**COLUMBIA ANALYTICAL SERVICES, INC.**

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request No.:** J0905474  
**Date Received:** 11/5/09

**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**

Twelve water samples and two trip blanks were received for analysis at Columbia Analytical Services on 11/5/09. 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.

**EDB and DBCP by GC-ECD**

The samples were analyzed for EDB and DBCP using EPA Method 8011. 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) JWG0903692-1 and Matrix Spike Duplicate (MSD) JWG0903692-2: 1,2-Dibromoethane (EDB). 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 is not significantly affected. No further corrective action was appropriate.

The upper control criterion was exceeded for the following analyte in Matrix Spike Duplicate (MSD) JWG0903692-2: 1,2-Dibromo-3-chloropropane (DBCP). 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.

**Metals by ICP-MS/ICP-OES/CVAA**

The samples were analyzed for Total and Dissolved Metals using EPA Methods 6020/6010B/7470A. No problems were observed.

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



Date \_\_\_\_\_

11/19/09

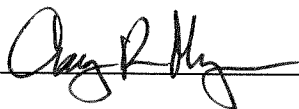
Batch QC Notes and Discussion

Some 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.

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



Date \_\_\_\_\_

11/19/09



## 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 SWDF/FQ1512A.02

**Service Request:** J0905474

**SAMPLE CROSS-REFERENCE**

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J0905474-001	MW-11A	11/4/09	11:15
J0905474-002	MW-11C	11/4/09	11:05
J0905474-003	MW-12A	11/4/09	10:05
J0905474-004	MW-12C	11/4/09	10:05
J0905474-005	MW-13A	11/4/09	09:10
J0905474-006	MW-13C	11/4/09	08:42
J0905474-007	MW-16C	11/4/09	08:40
J0905474-008	Trip Blank	11/4/09	00:00
J0905474-009	MW-9A	11/4/09	12:15
J0905474-010	MW-9C	11/4/09	12:10
J0905474-011	MW-10A	11/4/09	13:52
J0905474-012	MW-10C	11/4/09	13:30
J0905474-013	DUP-1	11/4/09	00:00
J0905474-014	Trip Blank	11/4/09	00:00

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-11A  
 Lab Code: J0905474-001  
 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	11/06/09	11/06/09	JWG0903700	
Vinyl Chloride	1.1		1.0	0.25	1	11/06/09	11/06/09	JWG0903700	
Bromomethane	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroethane	ND	U	5.0	0.19	1	11/06/09	11/06/09	JWG0903700	
Trichlorofluoromethane	ND	U	20	0.25	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/06/09	11/06/09	JWG0903700	
Acetone	ND	U	50	2.4	1	11/06/09	11/06/09	JWG0903700	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/06/09	11/06/09	JWG0903700	
Carbon Disulfide	ND	U	10	0.84	1	11/06/09	11/06/09	JWG0903700	
Methylene Chloride	ND	U	5.0	0.72	1	11/06/09	11/06/09	JWG0903700	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/06/09	11/06/09	JWG0903700	
Acrylonitrile	ND	U	10	0.59	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/06/09	11/06/09	JWG0903700	
Vinyl Acetate	ND	U	10	0.60	1	11/06/09	11/06/09	JWG0903700	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
2-Butanone (MEK)	ND	U	10	0.56	1	11/06/09	11/06/09	JWG0903700	
Bromochloromethane	ND	U	5.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroform	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/06/09	11/06/09	JWG0903700	
<b>Benzene</b>	<b>2.9</b>		1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
<b>1,2-Dichloroethane (EDC)</b>	<b>1.3</b>		1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/06/09	11/06/09	JWG0903700	
Dibromomethane	ND	U	5.0	0.12	1	11/06/09	11/06/09	JWG0903700	
Bromodichloromethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/06/09	11/06/09	JWG0903700	
Toluene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/06/09	11/06/09	JWG0903700	
2-Hexanone	ND	U	25	0.36	1	11/06/09	11/06/09	JWG0903700	
Dibromochloromethane	ND	U	1.0	0.11	1	11/06/09	11/06/09	JWG0903700	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905474  
**Date Collected:** 11/04/2009  
**Date Received:** 11/05/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-11A  
**Lab Code:** J0905474-001  
**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	11/06/09	11/06/09	JWG0903700	
Chlorobenzene	ND U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,1,1,2-Tetrachloroethane	ND U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Ethylbenzene	ND U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
m,p-Xylenes	ND U	2.0	0.22	1	11/06/09	11/06/09	JWG0903700	
o-Xylene	ND U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Styrene	ND U	1.0	0.051	1	11/06/09	11/06/09	JWG0903700	
Bromoform	ND U	2.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2,3-Trichloropropane	ND U	2.0	0.16	1	11/06/09	11/06/09	JWG0903700	
1,4-Dichlorobenzene	ND U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
trans-1,4-Dichloro-2-butene	ND U	20	1.1	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichlorobenzene	ND U	1.0	0.17	1	11/06/09	11/06/09	JWG0903700	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	5.0	0.26	1	11/06/09	11/06/09	JWG0903700	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	94	71-122	11/06/09	Acceptable
4-Bromofluorobenzene	100	75-120	11/06/09	Acceptable
Dibromofluoromethane	91	82-116	11/06/09	Acceptable
Toluene-d8	91	88-117	11/06/09	Acceptable

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

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-11C  
 Lab Code: J0905474-002  
 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	11/06/09	11/06/09	JWG0903700	
Vinyl Chloride	ND	U	1.0	0.25	1	11/06/09	11/06/09	JWG0903700	
Bromomethane	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroethane	ND	U	5.0	0.19	1	11/06/09	11/06/09	JWG0903700	
Trichlorofluoromethane	ND	U	20	0.25	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/06/09	11/06/09	JWG0903700	
Acetone	ND	U	50	2.4	1	11/06/09	11/06/09	JWG0903700	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/06/09	11/06/09	JWG0903700	
Carbon Disulfide	ND	U	10	0.84	1	11/06/09	11/06/09	JWG0903700	
Methylene Chloride	ND	U	5.0	0.72	1	11/06/09	11/06/09	JWG0903700	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/06/09	11/06/09	JWG0903700	
Acrylonitrile	ND	U	10	0.59	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/06/09	11/06/09	JWG0903700	
Vinyl Acetate	ND	U	10	0.60	1	11/06/09	11/06/09	JWG0903700	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
2-Butanone (MEK)	ND	U	10	0.56	1	11/06/09	11/06/09	JWG0903700	
Bromochloromethane	ND	U	5.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroform	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/06/09	11/06/09	JWG0903700	
Benzene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/06/09	11/06/09	JWG0903700	
Dibromomethane	ND	U	5.0	0.12	1	11/06/09	11/06/09	JWG0903700	
Bromodichloromethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/06/09	11/06/09	JWG0903700	
Toluene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/06/09	11/06/09	JWG0903700	
2-Hexanone	ND	U	25	0.36	1	11/06/09	11/06/09	JWG0903700	
Dibromochloromethane	ND	U	1.0	0.11	1	11/06/09	11/06/09	JWG0903700	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905474  
**Date Collected:** 11/04/2009  
**Date Received:** 11/05/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-11C  
**Lab Code:** J0905474-002  
**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	11/06/09	11/06/09	JWG0903700	
Chlorobenzene	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Ethylbenzene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
m,p-Xylenes	ND	U	2.0	0.22	1	11/06/09	11/06/09	JWG0903700	
o-Xylene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Styrene	ND	U	1.0	0.051	1	11/06/09	11/06/09	JWG0903700	
Bromoform	ND	U	2.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/06/09	11/06/09	JWG0903700	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/06/09	11/06/09	JWG0903700	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/06/09	11/06/09	JWG0903700	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	93	71-122	11/06/09	Acceptable
4-Bromofluorobenzene	98	75-120	11/06/09	Acceptable
Dibromofluoromethane	92	82-116	11/06/09	Acceptable
Toluene-d8	96	88-117	11/06/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905474  
**Date Collected:** 11/04/2009  
**Date Received:** 11/05/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-12A  
**Lab Code:** J0905474-003  
**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	0.17	1	11/06/09	11/06/09	JWG0903700	
Vinyl Chloride	ND	U	1.0	0.25	1	11/06/09	11/06/09	JWG0903700	
Bromomethane	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroethane	ND	U	5.0	0.19	1	11/06/09	11/06/09	JWG0903700	
Trichlorofluoromethane	ND	U	20	0.25	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/06/09	11/06/09	JWG0903700	
Acetone	ND	U	50	2.4	1	11/06/09	11/06/09	JWG0903700	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/06/09	11/06/09	JWG0903700	
Carbon Disulfide	ND	U	10	0.84	1	11/06/09	11/06/09	JWG0903700	
Methylene Chloride	ND	U	5.0	0.72	1	11/06/09	11/06/09	JWG0903700	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/06/09	11/06/09	JWG0903700	
Acrylonitrile	ND	U	10	0.59	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/06/09	11/06/09	JWG0903700	
Vinyl Acetate	ND	U	10	0.60	1	11/06/09	11/06/09	JWG0903700	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
2-Butanone (MEK)	ND	U	10	0.56	1	11/06/09	11/06/09	JWG0903700	
Bromochloromethane	ND	U	5.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroform	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/06/09	11/06/09	JWG0903700	
Benzene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/06/09	11/06/09	JWG0903700	
Dibromomethane	ND	U	5.0	0.12	1	11/06/09	11/06/09	JWG0903700	
Bromodichloromethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/06/09	11/06/09	JWG0903700	
Toluene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/06/09	11/06/09	JWG0903700	
2-Hexanone	ND	U	25	0.36	1	11/06/09	11/06/09	JWG0903700	
Dibromochloromethane	ND	U	1.0	0.11	1	11/06/09	11/06/09	JWG0903700	

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



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905474  
**Date Collected:** 11/04/2009  
**Date Received:** 11/05/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-12A  
**Lab Code:** J0905474-003  
**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	0.18	1	11/06/09	11/06/09	JWG0903700	
Chlorobenzene	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Ethylbenzene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
m,p-Xylenes	ND	U	2.0	0.22	1	11/06/09	11/06/09	JWG0903700	
o-Xylene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Styrene	ND	U	1.0	0.051	1	11/06/09	11/06/09	JWG0903700	
Bromoform	ND	U	2.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/06/09	11/06/09	JWG0903700	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/06/09	11/06/09	JWG0903700	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/06/09	11/06/09	JWG0903700	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	96	71-122	11/06/09	Acceptable
4-Bromofluorobenzene	100	75-120	11/06/09	Acceptable
Dibromofluoromethane	95	82-116	11/06/09	Acceptable
Toluene-d8	95	88-117	11/06/09	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-12C  
 Lab Code: J0905474-004  
 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	0.17	1	11/06/09	11/06/09	JWG0903700	
Vinyl Chloride	ND	U	1.0	0.25	1	11/06/09	11/06/09	JWG0903700	
Bromomethane	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroethane	ND	U	5.0	0.19	1	11/06/09	11/06/09	JWG0903700	
Trichlorofluoromethane	ND	U	20	0.25	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/06/09	11/06/09	JWG0903700	
Acetone	ND	U	50	2.4	1	11/06/09	11/06/09	JWG0903700	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/06/09	11/06/09	JWG0903700	
Carbon Disulfide	ND	U	10	0.84	1	11/06/09	11/06/09	JWG0903700	
Methylene Chloride	ND	U	5.0	0.72	1	11/06/09	11/06/09	JWG0903700	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/06/09	11/06/09	JWG0903700	
Acrylonitrile	ND	U	10	0.59	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/06/09	11/06/09	JWG0903700	
Vinyl Acetate	ND	U	10	0.60	1	11/06/09	11/06/09	JWG0903700	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
2-Butanone (MEK)	ND	U	10	0.56	1	11/06/09	11/06/09	JWG0903700	
Bromochloromethane	ND	U	5.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroform	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/06/09	11/06/09	JWG0903700	
Benzene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/06/09	11/06/09	JWG0903700	
Dibromomethane	ND	U	5.0	0.12	1	11/06/09	11/06/09	JWG0903700	
Bromodichloromethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/06/09	11/06/09	JWG0903700	
Toluene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/06/09	11/06/09	JWG0903700	
2-Hexanone	ND	U	25	0.36	1	11/06/09	11/06/09	JWG0903700	
Dibromochloromethane	ND	U	1.0	0.11	1	11/06/09	11/06/09	JWG0903700	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-12C  
 Lab Code: J0905474-004  
 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	0.18	1	11/06/09	11/06/09	JWG0903700	
Chlorobenzene	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Ethylbenzene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
m,p-Xylenes	ND	U	2.0	0.22	1	11/06/09	11/06/09	JWG0903700	
o-Xylene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Styrene	ND	U	1.0	0.051	1	11/06/09	11/06/09	JWG0903700	
Bromoform	ND	U	2.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/06/09	11/06/09	JWG0903700	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/06/09	11/06/09	JWG0903700	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/06/09	11/06/09	JWG0903700	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	96	71-122	11/06/09	Acceptable
4-Bromofluorobenzene	98	75-120	11/06/09	Acceptable
Dibromofluoromethane	95	82-116	11/06/09	Acceptable
Toluene-d8	96	88-117	11/06/09	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-13A  
 Lab Code: J0905474-005  
 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	0.17	1	11/06/09	11/06/09	JWG0903700	
Vinyl Chloride	ND	U	1.0	0.25	1	11/06/09	11/06/09	JWG0903700	
Bromomethane	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroethane	ND	U	5.0	0.19	1	11/06/09	11/06/09	JWG0903700	
Trichlorofluoromethane	ND	U	20	0.25	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/06/09	11/06/09	JWG0903700	
Acetone	ND	U	50	2.4	1	11/06/09	11/06/09	JWG0903700	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/06/09	11/06/09	JWG0903700	
Carbon Disulfide	ND	U	10	0.84	1	11/06/09	11/06/09	JWG0903700	
Methylene Chloride	ND	U	5.0	0.72	1	11/06/09	11/06/09	JWG0903700	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/06/09	11/06/09	JWG0903700	
Acrylonitrile	ND	U	10	0.59	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/06/09	11/06/09	JWG0903700	
Vinyl Acetate	ND	U	10	0.60	1	11/06/09	11/06/09	JWG0903700	
<b>cis-1,2-Dichloroethene</b>	<b>0.32</b>	<b>I</b>	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
2-Butanone (MEK)	ND	U	10	0.56	1	11/06/09	11/06/09	JWG0903700	
Bromochloromethane	ND	U	5.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroform	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/06/09	11/06/09	JWG0903700	
<b>Benzene</b>	<b>0.90</b>	<b>I</b>	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/06/09	11/06/09	JWG0903700	
Dibromomethane	ND	U	5.0	0.12	1	11/06/09	11/06/09	JWG0903700	
Bromodichloromethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/06/09	11/06/09	JWG0903700	
Toluene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/06/09	11/06/09	JWG0903700	
2-Hexanone	ND	U	25	0.36	1	11/06/09	11/06/09	JWG0903700	
Dibromochloromethane	ND	U	1.0	0.11	1	11/06/09	11/06/09	JWG0903700	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-13A  
 Lab Code: J0905474-005  
 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	0.18	1	11/06/09	11/06/09	JWG0903700	
Chlorobenzene	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Ethylbenzene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
m,p-Xylenes	ND	U	2.0	0.22	1	11/06/09	11/06/09	JWG0903700	
o-Xylene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Styrene	ND	U	1.0	0.051	1	11/06/09	11/06/09	JWG0903700	
Bromoform	ND	U	2.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/06/09	11/06/09	JWG0903700	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/06/09	11/06/09	JWG0903700	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/06/09	11/06/09	JWG0903700	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	96	71-122	11/06/09	Acceptable
4-Bromofluorobenzene	98	75-120	11/06/09	Acceptable
Dibromofluoromethane	94	82-116	11/06/09	Acceptable
Toluene-d8	96	88-117	11/06/09	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-13C  
 Lab Code: J0905474-006  
 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	0.17	1	11/06/09	11/06/09	JWG0903700	
Vinyl Chloride	ND	U	1.0	0.25	1	11/06/09	11/06/09	JWG0903700	
Bromomethane	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroethane	ND	U	5.0	0.19	1	11/06/09	11/06/09	JWG0903700	
Trichlorofluoromethane	ND	U	20	0.25	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/06/09	11/06/09	JWG0903700	
Acetone	ND	U	50	2.4	1	11/06/09	11/06/09	JWG0903700	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/06/09	11/06/09	JWG0903700	
Carbon Disulfide	ND	U	10	0.84	1	11/06/09	11/06/09	JWG0903700	
Methylene Chloride	ND	U	5.0	0.72	1	11/06/09	11/06/09	JWG0903700	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/06/09	11/06/09	JWG0903700	
Acrylonitrile	ND	U	10	0.59	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/06/09	11/06/09	JWG0903700	
Vinyl Acetate	ND	U	10	0.60	1	11/06/09	11/06/09	JWG0903700	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
2-Butanone (MEK)	ND	U	10	0.56	1	11/06/09	11/06/09	JWG0903700	
Bromochloromethane	ND	U	5.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroform	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/06/09	11/06/09	JWG0903700	
Benzene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/06/09	11/06/09	JWG0903700	
Dibromomethane	ND	U	5.0	0.12	1	11/06/09	11/06/09	JWG0903700	
Bromodichloromethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/06/09	11/06/09	JWG0903700	
Toluene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/06/09	11/06/09	JWG0903700	
2-Hexanone	ND	U	25	0.36	1	11/06/09	11/06/09	JWG0903700	
Dibromochloromethane	ND	U	1.0	0.11	1	11/06/09	11/06/09	JWG0903700	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-13C  
 Lab Code: J0905474-006  
 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	0.18	1	11/06/09	11/06/09	JWG0903700	
Chlorobenzene	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Ethylbenzene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
m,p-Xylenes	ND	U	2.0	0.22	1	11/06/09	11/06/09	JWG0903700	
o-Xylene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Styrene	ND	U	1.0	0.051	1	11/06/09	11/06/09	JWG0903700	
Bromoform	ND	U	2.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/06/09	11/06/09	JWG0903700	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/06/09	11/06/09	JWG0903700	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/06/09	11/06/09	JWG0903700	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	99	71-122	11/06/09	Acceptable
4-Bromofluorobenzene	107	75-120	11/06/09	Acceptable
Dibromofluoromethane	95	82-116	11/06/09	Acceptable
Toluene-d8	99	88-117	11/06/09	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-16C  
 Lab Code: J0905474-007  
 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	0.17	1	11/06/09	11/06/09	JWG0903700	
Vinyl Chloride	ND	U	1.0	0.25	1	11/06/09	11/06/09	JWG0903700	
Bromomethane	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroethane	ND	U	5.0	0.19	1	11/06/09	11/06/09	JWG0903700	
Trichlorofluoromethane	ND	U	20	0.25	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/06/09	11/06/09	JWG0903700	
Acetone	ND	U	50	2.4	1	11/06/09	11/06/09	JWG0903700	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/06/09	11/06/09	JWG0903700	
Carbon Disulfide	ND	U	10	0.84	1	11/06/09	11/06/09	JWG0903700	
Methylene Chloride	ND	U	5.0	0.72	1	11/06/09	11/06/09	JWG0903700	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/06/09	11/06/09	JWG0903700	
Acrylonitrile	ND	U	10	0.59	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/06/09	11/06/09	JWG0903700	
Vinyl Acetate	ND	U	10	0.60	1	11/06/09	11/06/09	JWG0903700	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
2-Butanone (MEK)	ND	U	10	0.56	1	11/06/09	11/06/09	JWG0903700	
Bromochloromethane	ND	U	5.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroform	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/06/09	11/06/09	JWG0903700	
Benzene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/06/09	11/06/09	JWG0903700	
Dibromomethane	ND	U	5.0	0.12	1	11/06/09	11/06/09	JWG0903700	
Bromodichloromethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/06/09	11/06/09	JWG0903700	
<b>Toluene</b>	<b>0.81</b>	<b>I</b>	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/06/09	11/06/09	JWG0903700	
2-Hexanone	ND	U	25	0.36	1	11/06/09	11/06/09	JWG0903700	
Dibromochloromethane	ND	U	1.0	0.11	1	11/06/09	11/06/09	JWG0903700	

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



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-16C  
 Lab Code: J0905474-007  
 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	0.18	1	11/06/09	11/06/09	JWG0903700	
Chlorobenzene	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Ethylbenzene	0.44	I	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
m,p-Xylenes	ND	U	2.0	0.22	1	11/06/09	11/06/09	JWG0903700	
o-Xylene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Styrene	ND	U	1.0	0.051	1	11/06/09	11/06/09	JWG0903700	
Bromoform	ND	U	2.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/06/09	11/06/09	JWG0903700	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/06/09	11/06/09	JWG0903700	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/06/09	11/06/09	JWG0903700	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	92	71-122	11/06/09	Acceptable
4-Bromofluorobenzene	99	75-120	11/06/09	Acceptable
Dibromofluoromethane	91	82-116	11/06/09	Acceptable
Toluene-d8	98	88-117	11/06/09	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Trip Blank  
 Lab Code: J0905474-008  
 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	0.17	1	11/06/09	11/06/09	JWG0903700	
Vinyl Chloride	ND	U	1.0	0.25	1	11/06/09	11/06/09	JWG0903700	
Bromomethane	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroethane	ND	U	5.0	0.19	1	11/06/09	11/06/09	JWG0903700	
Trichlorofluoromethane	ND	U	20	0.25	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/06/09	11/06/09	JWG0903700	
Acetone	ND	U	50	2.4	1	11/06/09	11/06/09	JWG0903700	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/06/09	11/06/09	JWG0903700	
Carbon Disulfide	ND	U	10	0.84	1	11/06/09	11/06/09	JWG0903700	
Methylene Chloride	ND	U	5.0	0.72	1	11/06/09	11/06/09	JWG0903700	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/06/09	11/06/09	JWG0903700	
Acrylonitrile	ND	U	10	0.59	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/06/09	11/06/09	JWG0903700	
Vinyl Acetate	ND	U	10	0.60	1	11/06/09	11/06/09	JWG0903700	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
2-Butanone (MEK)	ND	U	10	0.56	1	11/06/09	11/06/09	JWG0903700	
Bromochloromethane	ND	U	5.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroform	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/06/09	11/06/09	JWG0903700	
Benzene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/06/09	11/06/09	JWG0903700	
Dibromomethane	ND	U	5.0	0.12	1	11/06/09	11/06/09	JWG0903700	
Bromodichloromethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/06/09	11/06/09	JWG0903700	
Toluene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/06/09	11/06/09	JWG0903700	
2-Hexanone	ND	U	25	0.36	1	11/06/09	11/06/09	JWG0903700	
Dibromochloromethane	ND	U	1.0	0.11	1	11/06/09	11/06/09	JWG0903700	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905474  
**Date Collected:** 11/04/2009  
**Date Received:** 11/05/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** Trip Blank  
**Lab Code:** J0905474-008  
**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	0.18	1	11/06/09	11/06/09	JWG0903700	
Chlorobenzene	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Ethylbenzene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
m,p-Xylenes	ND	U	2.0	0.22	1	11/06/09	11/06/09	JWG0903700	
o-Xylene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Styrene	ND	U	1.0	0.051	1	11/06/09	11/06/09	JWG0903700	
Bromoform	ND	U	2.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/06/09	11/06/09	JWG0903700	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/06/09	11/06/09	JWG0903700	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/06/09	11/06/09	JWG0903700	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	102	71-122	11/06/09	Acceptable
4-Bromofluorobenzene	101	75-120	11/06/09	Acceptable
Dibromofluoromethane	101	82-116	11/06/09	Acceptable
Toluene-d8	100	88-117	11/06/09	Acceptable

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-9A  
 Lab Code: J0905474-009  
 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	0.17	1	11/06/09	11/06/09	JWG0903700	
<b>Vinyl Chloride</b>	<b>1.2</b>		1.0	0.25	1	11/06/09	11/06/09	JWG0903700	
Bromomethane	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroethane	ND	U	5.0	0.19	1	11/06/09	11/06/09	JWG0903700	
Trichlorofluoromethane	ND	U	20	0.25	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/06/09	11/06/09	JWG0903700	
Acetone	ND	U	50	2.4	1	11/06/09	11/06/09	JWG0903700	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/06/09	11/06/09	JWG0903700	
Carbon Disulfide	ND	U	10	0.84	1	11/06/09	11/06/09	JWG0903700	
Methylene Chloride	ND	U	5.0	0.72	1	11/06/09	11/06/09	JWG0903700	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/06/09	11/06/09	JWG0903700	
Acrylonitrile	ND	U	10	0.59	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/06/09	11/06/09	JWG0903700	
Vinyl Acetate	ND	U	10	0.60	1	11/06/09	11/06/09	JWG0903700	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
2-Butanone (MEK)	ND	U	10	0.56	1	11/06/09	11/06/09	JWG0903700	
Bromochloromethane	ND	U	5.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroform	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/06/09	11/06/09	JWG0903700	
<b>Benzene</b>	<b>9.1</b>		1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/06/09	11/06/09	JWG0903700	
Dibromomethane	ND	U	5.0	0.12	1	11/06/09	11/06/09	JWG0903700	
Bromodichloromethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/06/09	11/06/09	JWG0903700	
<b>Toluene</b>	<b>1.4</b>		1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/06/09	11/06/09	JWG0903700	
2-Hexanone	ND	U	25	0.36	1	11/06/09	11/06/09	JWG0903700	
Dibromochloromethane	ND	U	1.0	0.11	1	11/06/09	11/06/09	JWG0903700	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-9A  
 Lab Code: J0905474-009  
 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	0.18	1	11/06/09	11/06/09	JWG0903700	
Chlorobenzene	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Ethylbenzene	1.3		1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
m,p-Xylenes	5.4		2.0	0.22	1	11/06/09	11/06/09	JWG0903700	
o-Xylene	2.5		1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Styrene	ND	U	1.0	0.051	1	11/06/09	11/06/09	JWG0903700	
Bromoform	ND	U	2.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/06/09	11/06/09	JWG0903700	
1,4-Dichlorobenzene	0.54	I	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/06/09	11/06/09	JWG0903700	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/06/09	11/06/09	JWG0903700	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	102	71-122	11/06/09	Acceptable
4-Bromofluorobenzene	100	75-120	11/06/09	Acceptable
Dibromofluoromethane	97	82-116	11/06/09	Acceptable
Toluene-d8	95	88-117	11/06/09	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-9C  
 Lab Code: J0905474-010  
 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	0.17	1	11/06/09	11/06/09	JWG0903700	
Vinyl Chloride	ND	U	1.0	0.25	1	11/06/09	11/06/09	JWG0903700	
Bromomethane	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroethane	ND	U	5.0	0.19	1	11/06/09	11/06/09	JWG0903700	
Trichlorofluoromethane	ND	U	20	0.25	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/06/09	11/06/09	JWG0903700	
Acetone	ND	U	50	2.4	1	11/06/09	11/06/09	JWG0903700	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/06/09	11/06/09	JWG0903700	
Carbon Disulfide	ND	U	10	0.84	1	11/06/09	11/06/09	JWG0903700	
Methylene Chloride	ND	U	5.0	0.72	1	11/06/09	11/06/09	JWG0903700	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/06/09	11/06/09	JWG0903700	
Acrylonitrile	ND	U	10	0.59	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/06/09	11/06/09	JWG0903700	
Vinyl Acetate	ND	U	10	0.60	1	11/06/09	11/06/09	JWG0903700	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
2-Butanone (MEK)	ND	U	10	0.56	1	11/06/09	11/06/09	JWG0903700	
Bromochloromethane	ND	U	5.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroform	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/06/09	11/06/09	JWG0903700	
Benzene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/06/09	11/06/09	JWG0903700	
Dibromomethane	ND	U	5.0	0.12	1	11/06/09	11/06/09	JWG0903700	
Bromodichloromethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/06/09	11/06/09	JWG0903700	
Toluene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/06/09	11/06/09	JWG0903700	
2-Hexanone	ND	U	25	0.36	1	11/06/09	11/06/09	JWG0903700	
Dibromochloromethane	ND	U	1.0	0.11	1	11/06/09	11/06/09	JWG0903700	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-9C  
 Lab Code: J0905474-010  
 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	0.18	1	11/06/09	11/06/09	JWG0903700	
Chlorobenzene	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Ethylbenzene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
m,p-Xylenes	ND	U	2.0	0.22	1	11/06/09	11/06/09	JWG0903700	
o-Xylene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Styrene	ND	U	1.0	0.051	1	11/06/09	11/06/09	JWG0903700	
Bromoform	ND	U	2.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/06/09	11/06/09	JWG0903700	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/06/09	11/06/09	JWG0903700	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/06/09	11/06/09	JWG0903700	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	96	71-122	11/06/09	Acceptable
4-Bromofluorobenzene	97	75-120	11/06/09	Acceptable
Dibromofluoromethane	96	82-116	11/06/09	Acceptable
Toluene-d8	91	88-117	11/06/09	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-10A  
 Lab Code: J0905474-011  
 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	0.17	1	11/06/09	11/06/09	JWG0903700	
Vinyl Chloride	ND	U	1.0	0.25	1	11/06/09	11/06/09	JWG0903700	
Bromomethane	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroethane	ND	U	5.0	0.19	1	11/06/09	11/06/09	JWG0903700	
Trichlorofluoromethane	ND	U	20	0.25	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/06/09	11/06/09	JWG0903700	
Acetone	ND	U	50	2.4	1	11/06/09	11/06/09	JWG0903700	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/06/09	11/06/09	JWG0903700	
Carbon Disulfide	ND	U	10	0.84	1	11/06/09	11/06/09	JWG0903700	
Methylene Chloride	ND	U	5.0	0.72	1	11/06/09	11/06/09	JWG0903700	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/06/09	11/06/09	JWG0903700	
Acrylonitrile	ND	U	10	0.59	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/06/09	11/06/09	JWG0903700	
Vinyl Acetate	ND	U	10	0.60	1	11/06/09	11/06/09	JWG0903700	
<b>cis-1,2-Dichloroethene</b>	<b>1.1</b>		1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
2-Butanone (MEK)	ND	U	10	0.56	1	11/06/09	11/06/09	JWG0903700	
Bromochloromethane	ND	U	5.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroform	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/06/09	11/06/09	JWG0903700	
<b>Benzene</b>	<b>2.9</b>		1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/06/09	11/06/09	JWG0903700	
Dibromomethane	ND	U	5.0	0.12	1	11/06/09	11/06/09	JWG0903700	
Bromodichloromethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/06/09	11/06/09	JWG0903700	
<b>Toluene</b>	<b>1.3</b>		1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/06/09	11/06/09	JWG0903700	
2-Hexanone	ND	U	25	0.36	1	11/06/09	11/06/09	JWG0903700	
Dibromochloromethane	ND	U	1.0	0.11	1	11/06/09	11/06/09	JWG0903700	

Comments:



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905474  
**Date Collected:** 11/04/2009  
**Date Received:** 11/05/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-10A  
**Lab Code:** J0905474-011  
**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	0.18	1	11/06/09	11/06/09	JWG0903700	
Chlorobenzene	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Ethylbenzene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
<b>m,p-Xylenes</b>	<b>0.95</b>	<b>I</b>	2.0	0.22	1	11/06/09	11/06/09	JWG0903700	
o-Xylene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Styrene	ND	U	1.0	0.051	1	11/06/09	11/06/09	JWG0903700	
Bromoform	ND	U	2.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/06/09	11/06/09	JWG0903700	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/06/09	11/06/09	JWG0903700	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/06/09	11/06/09	JWG0903700	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	100	71-122	11/06/09	Acceptable
4-Bromofluorobenzene	99	75-120	11/06/09	Acceptable
Dibromofluoromethane	96	82-116	11/06/09	Acceptable
Toluene-d8	91	88-117	11/06/09	Acceptable

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

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-10C  
 Lab Code: J0905474-012  
 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	0.17	1	11/06/09	11/06/09	JWG0903700	
Vinyl Chloride	ND	U	1.0	0.25	1	11/06/09	11/06/09	JWG0903700	
Bromomethane	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroethane	ND	U	5.0	0.19	1	11/06/09	11/06/09	JWG0903700	
Trichlorofluoromethane	ND	U	20	0.25	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/06/09	11/06/09	JWG0903700	
Acetone	ND	U	50	2.4	1	11/06/09	11/06/09	JWG0903700	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/06/09	11/06/09	JWG0903700	
Carbon Disulfide	ND	U	10	0.84	1	11/06/09	11/06/09	JWG0903700	
Methylene Chloride	ND	U	5.0	0.72	1	11/06/09	11/06/09	JWG0903700	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/06/09	11/06/09	JWG0903700	
Acrylonitrile	ND	U	10	0.59	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/06/09	11/06/09	JWG0903700	
Vinyl Acetate	ND	U	10	0.60	1	11/06/09	11/06/09	JWG0903700	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
2-Butanone (MEK)	ND	U	10	0.56	1	11/06/09	11/06/09	JWG0903700	
Bromochloromethane	ND	U	5.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroform	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/06/09	11/06/09	JWG0903700	
Benzene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/06/09	11/06/09	JWG0903700	
Dibromomethane	ND	U	5.0	0.12	1	11/06/09	11/06/09	JWG0903700	
Bromodichloromethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/06/09	11/06/09	JWG0903700	
Toluene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/06/09	11/06/09	JWG0903700	
2-Hexanone	ND	U	25	0.36	1	11/06/09	11/06/09	JWG0903700	
Dibromochloromethane	ND	U	1.0	0.11	1	11/06/09	11/06/09	JWG0903700	

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-10C  
 Lab Code: J0905474-012  
 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	0.18	1	11/06/09	11/06/09	JWG0903700	
Chlorobenzene	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Ethylbenzene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
m,p-Xylenes	ND	U	2.0	0.22	1	11/06/09	11/06/09	JWG0903700	
o-Xylene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Styrene	ND	U	1.0	0.051	1	11/06/09	11/06/09	JWG0903700	
Bromoform	ND	U	2.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/06/09	11/06/09	JWG0903700	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/06/09	11/06/09	JWG0903700	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/06/09	11/06/09	JWG0903700	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	98	71-122	11/06/09	Acceptable
4-Bromofluorobenzene	94	75-120	11/06/09	Acceptable
Dibromofluoromethane	92	82-116	11/06/09	Acceptable
Toluene-d8	98	88-117	11/06/09	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: DUP-1  
 Lab Code: J0905474-013  
 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	0.17	1	11/06/09	11/06/09	JWG0903700	
<b>Vinyl Chloride</b>	<b>1.2</b>		1.0	0.25	1	11/06/09	11/06/09	JWG0903700	
Bromomethane	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroethane	ND	U	5.0	0.19	1	11/06/09	11/06/09	JWG0903700	
Trichlorofluoromethane	ND	U	20	0.25	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/06/09	11/06/09	JWG0903700	
Acetone	ND	U	50	2.4	1	11/06/09	11/06/09	JWG0903700	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/06/09	11/06/09	JWG0903700	
Carbon Disulfide	ND	U	10	0.84	1	11/06/09	11/06/09	JWG0903700	
Methylene Chloride	ND	U	5.0	0.72	1	11/06/09	11/06/09	JWG0903700	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/06/09	11/06/09	JWG0903700	
Acrylonitrile	ND	U	10	0.59	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/06/09	11/06/09	JWG0903700	
Vinyl Acetate	ND	U	10	0.60	1	11/06/09	11/06/09	JWG0903700	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
2-Butanone (MEK)	ND	U	10	0.56	1	11/06/09	11/06/09	JWG0903700	
Bromochloromethane	ND	U	5.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroform	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/06/09	11/06/09	JWG0903700	
<b>Benzene</b>	<b>9.2</b>		1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
<b>1,2-Dichloropropane</b>	<b>0.23</b>	<b>I</b>	1.0	0.057	1	11/06/09	11/06/09	JWG0903700	
Dibromomethane	ND	U	5.0	0.12	1	11/06/09	11/06/09	JWG0903700	
Bromodichloromethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/06/09	11/06/09	JWG0903700	
<b>Toluene</b>	<b>1.4</b>		1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/06/09	11/06/09	JWG0903700	
2-Hexanone	ND	U	25	0.36	1	11/06/09	11/06/09	JWG0903700	
Dibromochloromethane	ND	U	1.0	0.11	1	11/06/09	11/06/09	JWG0903700	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: DUP-1  
 Lab Code: J0905474-013  
 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	0.18	1	11/06/09	11/06/09	JWG0903700	
Chlorobenzene	ND U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,1,1,2-Tetrachloroethane	ND U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Ethylbenzene	1.5	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
m,p-Xylenes	5.7	2.0	0.22	1	11/06/09	11/06/09	JWG0903700	
o-Xylene	2.5	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Styrene	ND U	1.0	0.051	1	11/06/09	11/06/09	JWG0903700	
Bromoform	ND U	2.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2,3-Trichloropropane	ND U	2.0	0.16	1	11/06/09	11/06/09	JWG0903700	
1,4-Dichlorobenzene	0.53 I	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
trans-1,4-Dichloro-2-butene	ND U	20	1.1	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichlorobenzene	ND U	1.0	0.17	1	11/06/09	11/06/09	JWG0903700	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	5.0	0.26	1	11/06/09	11/06/09	JWG0903700	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	100	71-122	11/06/09	Acceptable
4-Bromofluorobenzene	97	75-120	11/06/09	Acceptable
Dibromofluoromethane	96	82-116	11/06/09	Acceptable
Toluene-d8	96	88-117	11/06/09	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Trip Blank  
 Lab Code: J0905474-014  
 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	0.17	1	11/06/09	11/06/09	JWG0903700	
Vinyl Chloride	ND	U	1.0	0.25	1	11/06/09	11/06/09	JWG0903700	
Bromomethane	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroethane	ND	U	5.0	0.19	1	11/06/09	11/06/09	JWG0903700	
Trichlorofluoromethane	ND	U	20	0.25	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/06/09	11/06/09	JWG0903700	
Acetone	ND	U	50	2.4	1	11/06/09	11/06/09	JWG0903700	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/06/09	11/06/09	JWG0903700	
Carbon Disulfide	ND	U	10	0.84	1	11/06/09	11/06/09	JWG0903700	
Methylene Chloride	ND	U	5.0	0.72	1	11/06/09	11/06/09	JWG0903700	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/06/09	11/06/09	JWG0903700	
Acrylonitrile	ND	U	10	0.59	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/06/09	11/06/09	JWG0903700	
Vinyl Acetate	ND	U	10	0.60	1	11/06/09	11/06/09	JWG0903700	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
2-Butanone (MEK)	ND	U	10	0.56	1	11/06/09	11/06/09	JWG0903700	
Bromochloromethane	ND	U	5.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroform	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/06/09	11/06/09	JWG0903700	
Benzene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/06/09	11/06/09	JWG0903700	
Dibromomethane	ND	U	5.0	0.12	1	11/06/09	11/06/09	JWG0903700	
Bromodichloromethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/06/09	11/06/09	JWG0903700	
Toluene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/06/09	11/06/09	JWG0903700	
2-Hexanone	ND	U	25	0.36	1	11/06/09	11/06/09	JWG0903700	
Dibromochloromethane	ND	U	1.0	0.11	1	11/06/09	11/06/09	JWG0903700	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Trip Blank  
 Lab Code: J0905474-014  
 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	0.18	1	11/06/09	11/06/09	JWG0903700	
Chlorobenzene	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Ethylbenzene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
m,p-Xylenes	ND	U	2.0	0.22	1	11/06/09	11/06/09	JWG0903700	
o-Xylene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Styrene	ND	U	1.0	0.051	1	11/06/09	11/06/09	JWG0903700	
Bromoform	ND	U	2.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/06/09	11/06/09	JWG0903700	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/06/09	11/06/09	JWG0903700	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/06/09	11/06/09	JWG0903700	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	100	71-122	11/06/09	Acceptable
4-Bromofluorobenzene	102	75-120	11/06/09	Acceptable
Dibromofluoromethane	99	82-116	11/06/09	Acceptable
Toluene-d8	96	88-117	11/06/09	Acceptable

Comments:

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: NA  
 Date Received: NA

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Method Blank  
 Lab Code: JWG0903700-4  
 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	11/06/09	11/06/09	JWG0903700	
Vinyl Chloride	ND	U	1.0	0.25	1	11/06/09	11/06/09	JWG0903700	
Bromomethane	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroethane	ND	U	5.0	0.19	1	11/06/09	11/06/09	JWG0903700	
Trichlorofluoromethane	ND	U	20	0.25	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/06/09	11/06/09	JWG0903700	
Acetone	ND	U	50	2.4	1	11/06/09	11/06/09	JWG0903700	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/06/09	11/06/09	JWG0903700	
Carbon Disulfide	ND	U	10	0.84	1	11/06/09	11/06/09	JWG0903700	
Methylene Chloride	ND	U	5.0	0.72	1	11/06/09	11/06/09	JWG0903700	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/06/09	11/06/09	JWG0903700	
Acrylonitrile	ND	U	10	0.59	1	11/06/09	11/06/09	JWG0903700	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/06/09	11/06/09	JWG0903700	
Vinyl Acetate	ND	U	10	0.60	1	11/06/09	11/06/09	JWG0903700	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
2-Butanone (MEK)	ND	U	10	0.56	1	11/06/09	11/06/09	JWG0903700	
Bromochloromethane	ND	U	5.0	0.14	1	11/06/09	11/06/09	JWG0903700	
Chloroform	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/06/09	11/06/09	JWG0903700	
Benzene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/06/09	11/06/09	JWG0903700	
Dibromomethane	ND	U	5.0	0.12	1	11/06/09	11/06/09	JWG0903700	
Bromodichloromethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/06/09	11/06/09	JWG0903700	
Toluene	ND	U	1.0	0.52	1	11/06/09	11/06/09	JWG0903700	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/06/09	11/06/09	JWG0903700	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/06/09	11/06/09	JWG0903700	
2-Hexanone	ND	U	25	0.36	1	11/06/09	11/06/09	JWG0903700	
Dibromochloromethane	ND	U	1.0	0.11	1	11/06/09	11/06/09	JWG0903700	

Comments:



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: NA  
 Date Received: NA

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Method Blank  
 Lab Code: JWG0903700-4  
 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	11/06/09	11/06/09	JWG0903700	
Chlorobenzene	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Ethylbenzene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
m,p-Xylenes	ND	U	2.0	0.22	1	11/06/09	11/06/09	JWG0903700	
o-Xylene	ND	U	1.0	0.10	1	11/06/09	11/06/09	JWG0903700	
Styrene	ND	U	1.0	0.051	1	11/06/09	11/06/09	JWG0903700	
Bromoform	ND	U	2.0	0.12	1	11/06/09	11/06/09	JWG0903700	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/06/09	11/06/09	JWG0903700	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/06/09	11/06/09	JWG0903700	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/06/09	11/06/09	JWG0903700	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/06/09	11/06/09	JWG0903700	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/06/09	11/06/09	JWG0903700	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/06/09	11/06/09	JWG0903700	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	94	71-122	11/06/09	Acceptable
4-Bromofluorobenzene	96	75-120	11/06/09	Acceptable
Dibromofluoromethane	92	82-116	11/06/09	Acceptable
Toluene-d8	94	88-117	11/06/09	Acceptable

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905474  
**Date Collected:** 11/04/2009  
**Date Received:** 11/05/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-11A  
**Lab Code:** J0905474-001  
**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	11/06/09	11/10/09	JWG0903692	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/06/09	11/10/09	JWG0903692	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	147	77-150	11/10/09	Acceptable

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

Sample Name: MW-11C  
 Lab Code: J0905474-002  
 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	11/06/09	11/10/09	JWG0903692	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/06/09	11/10/09	JWG0903692	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	144	77-150	11/10/09	Acceptable

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

Sample Name: MW-12A  
 Lab Code: J0905474-003  
 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	11/06/09	11/10/09	JWG0903692	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/06/09	11/10/09	JWG0903692	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	145	77-150	11/10/09	Acceptable

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

Sample Name: MW-12C  
 Lab Code: J0905474-004  
 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	11/06/09	11/10/09	JWG0903692	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	0.020	0.0057	1	11/06/09	11/10/09	JWG0903692	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	146	77-150	11/10/09	Acceptable

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

Sample Name: MW-13A  
 Lab Code: J0905474-005  
 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	11/06/09	11/09/09	JWG0903692	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	0.020	0.0057	1	11/06/09	11/09/09	JWG0903692	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	138	77-150	11/09/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905474  
**Date Collected:** 11/04/2009  
**Date Received:** 11/05/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-13C  
**Lab Code:** J0905474-006  
**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	11/06/09	11/09/09	JWG0903692	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/06/09	11/09/09	JWG0903692	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	136	77-150	11/09/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905474  
**Date Collected:** 11/04/2009  
**Date Received:** 11/05/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-16C  
**Lab Code:** J0905474-007  
**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	11/06/09	11/09/09	JWG0903692	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/06/09	11/09/09	JWG0903692	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	125	77-150	11/09/09	Acceptable

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



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

Sample Name: MW-9A  
 Lab Code: J0905474-009  
 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	11/06/09	11/09/09	JWG0903692	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/06/09	11/09/09	JWG0903692	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	115	77-150	11/09/09	Acceptable

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905474  
**Date Collected:** 11/04/2009  
**Date Received:** 11/05/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-9C  
**Lab Code:** J0905474-010  
**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	11/06/09	11/09/09	JWG0903692	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/06/09	11/09/09	JWG0903692	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	124	77-150	11/09/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905474  
**Date Collected:** 11/04/2009  
**Date Received:** 11/05/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-10A  
**Lab Code:** J0905474-011  
**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	11/06/09	11/09/09	JWG0903692	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/06/09	11/09/09	JWG0903692	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	112	77-150	11/09/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905474  
**Date Collected:** 11/04/2009  
**Date Received:** 11/05/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-10C  
**Lab Code:** J0905474-012  
**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	11/06/09	11/09/09	JWG0903692	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/06/09	11/09/09	JWG0903692	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	120	77-150	11/09/09	Acceptable

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Collected: 11/04/2009  
 Date Received: 11/05/2009

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

Sample Name: DUP-1  
 Lab Code: J0905474-013  
 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	11/06/09	11/09/09	JWG0903692	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/06/09	11/09/09	JWG0903692	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	112	77-150	11/09/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905474  
**Date Collected:** NA  
**Date Received:** NA

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** Method Blank  
**Lab Code:** JWG0903692-4  
**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	11/06/09	11/09/09	JWG0903692	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/06/09	11/09/09	JWG0903692	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	118	77-150	11/09/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-11A  
**Lab Code:** J0905474-001

**Service Request:** J0905474  
**Date Collected:** 11/ 4/09 1115  
**Date Received:** 11/ 5/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/ 6/09	11/12/09 07:28
Arsenic, Total	6020	<b>11.0</b>	µg/L	0.50	0.20	1	11/ 6/09	11/16/09 21:37
Barium, Total	6020	<b>25.5</b>	µg/L	2.0	0.5	1	11/ 6/09	11/12/09 07:28
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:28
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/ 6/09	11/12/09 07:28
Chromium, Total	6020	<b>2.2</b>	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 07:28
Cobalt, Total	6020	<b>1.5</b>	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:28
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 07:28
Iron, Total	6010B	<b>13300</b>	µg/L	50	4	1	11/11/09	11/16/09 14:28
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:28
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 16:12
Nickel, Total	6020	<b>2.7</b>	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 07:28
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 07:28
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/ 6/09	11/12/09 07:28
Sodium, Total	6010B	<b>35.3</b>	mg/L	0.50	0.02	1	11/11/09	11/16/09 14:27
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:28
Vanadium, Total	6020	<b>2.1</b> I	µg/L	5.0	1.2	1	11/ 6/09	11/12/09 07:28
Zinc, Total	6020	ND U	µg/L	10	4	1	11/ 6/09	11/12/09 07:28

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-11C  
**Lab Code:** J0905474-002

**Service Request:** J0905474  
**Date Collected:** 11/ 4/09 1105  
**Date Received:** 11/ 5/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/ 6/09	11/12/09 07:33
Arsenic, Total	6020	<b>0.29</b> I	µg/L	0.50	0.20	1	11/ 6/09	11/16/09 21:42
Barium, Total	6020	<b>13.5</b>	µg/L	2.0	0.5	1	11/ 6/09	11/12/09 07:33
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:33
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/ 6/09	11/12/09 07:33
Chromium, Total	6020	<b>0.9</b> I	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 07:33
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:33
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 07:33
Iron, Total	6010B	<b>496</b>	µg/L	50	4	1	11/11/09	11/16/09 14:31
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:33
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 16:24
Nickel, Total	6020	<b>0.5</b> I	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 07:33
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 07:33
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/ 6/09	11/12/09 07:33
Sodium, Total	6010B	<b>11.4</b>	mg/L	0.50	0.02	1	11/11/09	11/16/09 14:31
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:33
Vanadium, Total	6020	ND U	µg/L	5.0	1.2	1	11/ 6/09	11/12/09 07:33
Zinc, Total	6020	ND U	µg/L	10	4	1	11/ 6/09	11/12/09 07:33

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-12A  
**Lab Code:** J0905474-003

**Service Request:** J0905474  
**Date Collected:** 11/ 4/09 1005  
**Date Received:** 11/ 5/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/ 6/09	11/12/09 07:38
Arsenic, Total	6020	<b>1.97</b>	µg/L	0.50	0.20	1	11/ 6/09	11/16/09 21:47
Barium, Total	6020	<b>12.0</b>	µg/L	2.0	0.5	1	11/ 6/09	11/12/09 07:38
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:38
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/ 6/09	11/12/09 07:38
Chromium, Total	6020	<b>1.4 I</b>	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 07:38
Cobalt, Total	6020	<b>0.9 I</b>	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:38
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 07:38
Iron, Total	6010B	<b>1240</b>	µg/L	50	4	1	11/11/09	11/16/09 14:54
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:38
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 16:25
Nickel, Total	6020	<b>2.0 I</b>	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 07:38
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 07:38
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/ 6/09	11/12/09 07:38
Sodium, Total	6010B	<b>10.2</b>	mg/L	0.50	0.02	1	11/11/09	11/16/09 14:54
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:38
Vanadium, Total	6020	<b>2.0 I</b>	µg/L	5.0	1.2	1	11/ 6/09	11/12/09 07:38
Zinc, Total	6020	ND U	µg/L	10	4	1	11/ 6/09	11/12/09 07:38

Comments:

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water  
 Sample Name: MW-12C  
 Lab Code: J0905474-004

Service Request: J0905474  
 Date Collected: 11/ 4/09 1005  
 Date Received: 11/ 5/09

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/ 6/09	11/12/09 07:43
Arsenic, Total	6020	ND U	µg/L	0.50	0.20	1	11/ 6/09	11/16/09 21:52
Barium, Total	6020	17.0	µg/L	2.0	0.5	1	11/ 6/09	11/12/09 07:43
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:43
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/ 6/09	11/12/09 07:43
Chromium, Total	6020	ND U	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 07:43
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:43
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 07:43
Iron, Total	6010B	617	µg/L	50	4	1	11/11/09	11/16/09 14:58
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:43
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 16:27
Nickel, Total	6020	ND U	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 07:43
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 07:43
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/ 6/09	11/12/09 07:43
Sodium, Total	6010B	5.49	mg/L	0.50	0.02	1	11/11/09	11/16/09 14:58
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:43
Vanadium, Total	6020	ND U	µg/L	5.0	1.2	1	11/ 6/09	11/12/09 07:43
Zinc, Total	6020	ND U	µg/L	10	4	1	11/ 6/09	11/12/09 07:43

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-13A  
**Lab Code:** J0905474-005

**Service Request:** J0905474  
**Date Collected:** 11/ 4/09 0910  
**Date Received:** 11/ 5/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/ 6/09	11/12/09 07:48
Arsenic, Total	6020	16.4	µg/L	0.50	0.20	1	11/ 6/09	11/16/09 21:57
Barium, Total	6020	8.1	µg/L	2.0	0.5	1	11/ 6/09	11/12/09 07:48
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:48
Cadmium, Total	6020	0.25 I	µg/L	0.50	0.12	1	11/ 6/09	11/12/09 07:48
Chromium, Total	6020	3.2	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 07:48
Cobalt, Total	6020	0.6 I	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:48
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 07:48
Iron, Total	6010B	14100	µg/L	50	4	1	11/11/09	11/16/09 15:01
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:48
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 16:28
Nickel, Total	6020	0.6 I	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 07:48
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 07:48
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/ 6/09	11/12/09 07:48
Sodium, Total	6010B	7.42	mg/L	0.50	0.02	1	11/11/09	11/16/09 15:01
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:48
Vanadium, Total	6020	3.0 I	µg/L	5.0	1.2	1	11/ 6/09	11/12/09 07:48
Zinc, Total	6020	30	µg/L	10	4	1	11/ 6/09	11/12/09 07:48

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-13C  
**Lab Code:** J0905474-006

**Service Request:** J0905474  
**Date Collected:** 11/ 4/09 0842  
**Date Received:** 11/ 5/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/ 6/09	11/12/09 07:53
Arsenic, Total	6020	0.29 I	µg/L	0.50	0.20	1	11/ 6/09	11/16/09 22:02
Barium, Total	6020	18.5	µg/L	2.0	0.5	1	11/ 6/09	11/12/09 07:53
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:53
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/ 6/09	11/12/09 07:53
Chromium, Total	6020	ND U	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 07:53
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:53
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 07:53
Iron, Total	6010B	533	µg/L	50	4	1	11/11/09	11/16/09 15:05
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:53
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 16:30
Nickel, Total	6020	ND U	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 07:53
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 07:53
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/ 6/09	11/12/09 07:53
Sodium, Total	6010B	7.76	mg/L	0.50	0.02	1	11/11/09	11/16/09 15:05
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 07:53
Vanadium, Total	6020	ND U	µg/L	5.0	1.2	1	11/ 6/09	11/12/09 07:53
Zinc, Total	6020	ND U	µg/L	10	4	1	11/ 6/09	11/12/09 07:53

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-16C  
**Lab Code:** J0905474-007

**Service Request:** J0905474  
**Date Collected:** 11/ 4/09 0840  
**Date Received:** 11/ 5/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/ 6/09	11/12/09 08:07
Arsenic, Total	6020	<b>0.56</b>	µg/L	0.50	0.20	1	11/ 6/09	11/16/09 22:16
Barium, Total	6020	<b>23.6</b>	µg/L	2.0	0.5	1	11/ 6/09	11/12/09 08:07
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:07
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/ 6/09	11/12/09 08:07
Chromium, Total	6020	<b>1.2 I</b>	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 08:07
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:07
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 08:07
Iron, Total	6010B	<b>1420</b>	µg/L	50	4	1	11/11/09	11/16/09 15:09
Lead, Total	6020	<b>0.4 I</b>	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:07
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 16:31
Nickel, Total	6020	<b>0.6 I</b>	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 08:07
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 08:07
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/ 6/09	11/12/09 08:07
Sodium, Total	6010B	<b>11.4</b>	mg/L	0.50	0.02	1	11/11/09	11/16/09 15:09
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:07
Vanadium, Total	6020	ND U	µg/L	5.0	1.2	1	11/ 6/09	11/12/09 08:07
Zinc, Total	6020	ND U	µg/L	10	4	1	11/ 6/09	11/12/09 08:07

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-9A  
**Lab Code:** J0905474-009

**Service Request:** J0905474  
**Date Collected:** 11/ 4/09 12:15  
**Date Received:** 11/ 5/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/ 6/09	11/12/09 08:12
Arsenic, Total	6020	<b>1.51</b>	µg/L	0.50	0.20	1	11/ 6/09	11/16/09 22:21
Barium, Total	6020	<b>2.4</b>	µg/L	2.0	0.5	1	11/ 6/09	11/12/09 08:12
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:12
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/ 6/09	11/12/09 08:12
Chromium, Total	6020	<b>2.0 I</b>	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 08:12
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:12
Copper, Total	6020	<b>0.4 I</b>	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 08:12
Iron, Total	6010B	<b>650</b>	µg/L	50	4	1	11/11/09	11/16/09 15:13
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:12
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 16:33
Nickel, Total	6020	<b>0.8 I</b>	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 08:12
Selenium, Total	6020	<b>1.4 I</b>	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 08:12
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/ 6/09	11/12/09 08:12
Sodium, Total	6010B	<b>13.2</b>	mg/L	0.50	0.02	1	11/11/09	11/16/09 15:12
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:12
Vanadium, Total	6020	<b>1.4 I</b>	µg/L	5.0	1.2	1	11/ 6/09	11/12/09 08:12
Zinc, Total	6020	ND U	µg/L	10	4	1	11/ 6/09	11/12/09 08:12

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-9C  
**Lab Code:** J0905474-010

**Service Request:** J0905474  
**Date Collected:** 11/ 4/09 1210  
**Date Received:** 11/ 5/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/ 6/09	11/12/09 08:17
Arsenic, Total	6020	0.27 I	µg/L	0.50	0.20	1	11/ 6/09	11/16/09 22:26
Barium, Total	6020	45.7	µg/L	2.0	0.5	1	11/ 6/09	11/12/09 08:17
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:17
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/ 6/09	11/12/09 08:17
Chromium, Total	6020	1.3 I	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 08:17
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:17
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 08:17
Iron, Total	6010B	690	µg/L	50	4	1	11/11/09	11/16/09 15:17
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:17
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 16:37
Nickel, Total	6020	7.6	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 08:17
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 08:17
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/ 6/09	11/12/09 08:17
Sodium, Total	6010B	6.54	mg/L	0.50	0.02	1	11/11/09	11/16/09 15:17
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:17
Vanadium, Total	6020	2.8 I	µg/L	5.0	1.2	1	11/ 6/09	11/12/09 08:17
Zinc, Total	6020	ND U	µg/L	10	4	1	11/ 6/09	11/12/09 08:17

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-10A  
**Lab Code:** J0905474-011

**Service Request:** J0905474  
**Date Collected:** 11/ 4/09 1352  
**Date Received:** 11/ 5/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/ 6/09	11/12/09 08:22
Arsenic, Total	6020	<b>1.81</b>	µg/L	0.50	0.20	1	11/ 6/09	11/16/09 22:31
Barium, Total	6020	<b>4.0</b>	µg/L	2.0	0.5	1	11/ 6/09	11/12/09 08:22
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:22
Cadmium, Total	6020	<b>0.15</b> I	µg/L	0.50	0.12	1	11/ 6/09	11/12/09 08:22
Chromium, Total	6020	<b>4.2</b>	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 08:22
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:22
Copper, Total	6020	<b>1.1</b> I	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 08:22
Iron, Total	6010B	<b>676</b>	µg/L	50	4	1	11/11/09	11/16/09 15:21
Lead, Total	6020	<b>0.8</b> I	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:22
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 16:38
Nickel, Total	6020	<b>1.2</b> I	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 08:22
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 08:22
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/ 6/09	11/12/09 08:22
Sodium, Total	6010B	<b>8.72</b>	mg/L	0.50	0.02	1	11/11/09	11/16/09 15:20
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:22
Vanadium, Total	6020	<b>2.4</b> I	µg/L	5.0	1.2	1	11/ 6/09	11/12/09 08:22
Zinc, Total	6020	ND U	µg/L	10	4	1	11/ 6/09	11/12/09 08:22

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-10C  
**Lab Code:** J0905474-012

**Service Request:** J0905474  
**Date Collected:** 11/ 4/09 1330  
**Date Received:** 11/ 5/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/ 6/09	11/12/09 08:27
Arsenic, Total	6020	<b>0.63</b>	µg/L	0.50	0.20	1	11/ 6/09	11/16/09 22:36
Barium, Total	6020	<b>21.4</b>	µg/L	2.0	0.5	1	11/ 6/09	11/12/09 08:27
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:27
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/ 6/09	11/12/09 08:27
Chromium, Total	6020	<b>1.5 I</b>	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 08:27
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:27
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 08:27
Iron, Total	6010B	<b>845</b>	µg/L	50	4	1	11/11/09	11/16/09 15:26
Lead, Total	6020	<b>0.3 I</b>	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:27
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 16:40
Nickel, Total	6020	<b>0.5 I</b>	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 08:27
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 08:27
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/ 6/09	11/12/09 08:27
Sodium, Total	6010B	<b>6.56</b>	mg/L	0.50	0.02	1	11/11/09	11/16/09 15:25
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:27
Vanadium, Total	6020	<b>2.2 I</b>	µg/L	5.0	1.2	1	11/ 6/09	11/12/09 08:27
Zinc, Total	6020	ND U	µg/L	10	4	1	11/ 6/09	11/12/09 08:27

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** DUP-1  
**Lab Code:** J0905474-013

**Service Request:** J0905474  
**Date Collected:** 11/ 4/09 0000  
**Date Received:** 11/ 5/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/ 6/09	11/12/09 08:32
Arsenic, Total	6020	<b>1.50</b>	µg/L	0.50	0.20	1	11/ 6/09	11/16/09 22:41
Barium, Total	6020	<b>2.3</b>	µg/L	2.0	0.5	1	11/ 6/09	11/12/09 08:32
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:32
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/ 6/09	11/12/09 08:32
Chromium, Total	6020	<b>2.1</b>	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 08:32
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:32
Copper, Total	6020	<b>0.4</b> I	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 08:32
Iron, Total	6010B	<b>647</b>	µg/L	50	4	1	11/11/09	11/16/09 15:29
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:32
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 16:41
Nickel, Total	6020	<b>0.8</b> I	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 08:32
Selenium, Total	6020	<b>1.2</b> I	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 08:32
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/ 6/09	11/12/09 08:32
Sodium, Total	6010B	<b>13.5</b>	mg/L	0.50	0.02	1	11/11/09	11/16/09 15:29
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 08:32
Vanadium, Total	6020	ND U	µg/L	5.0	1.2	1	11/ 6/09	11/12/09 08:32
Zinc, Total	6020	ND U	µg/L	10	4	1	11/ 6/09	11/12/09 08:32

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** J0905474-MB

**Service Request:** J0905474  
**Date Collected:** NA  
**Date Received:** NA  
  
**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/ 6/09	11/12/09 06:10
Arsenic, Total	6020	ND U	µg/L	0.50	0.20	1	11/ 6/09	11/16/09 20:18
Barium, Total	6020	ND U	µg/L	2.0	0.5	1	11/ 6/09	11/12/09 06:10
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 06:10
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/ 6/09	11/12/09 06:10
Chromium, Total	6020	ND U	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 06:10
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 06:10
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 06:10
Iron, Total	6010B	ND U	µg/L	50	4	1	11/11/09	11/16/09 14:21
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 06:10
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/ 9/09	11/10/09 15:52
Nickel, Total	6020	ND U	µg/L	2.0	0.3	1	11/ 6/09	11/12/09 06:10
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/ 6/09	11/12/09 06:10
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/ 6/09	11/12/09 06:10
Sodium, Total	6010B	ND U	mg/L	0.50	0.02	1	11/11/09	11/16/09 14:20
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/ 6/09	11/12/09 06:10
Vanadium, Total	6020	ND U	µg/L	5.0	1.2	1	11/ 6/09	11/12/09 06:10
Zinc, Total	6020	ND U	µg/L	10	4	1	11/ 6/09	11/12/09 06:10

**Comments:**

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : GeoSyntec Consultants  
Project Name : JED SWDF  
Project Number : FQ1512A.02  
Sample Matrix : WATER

Service Request : J0905474  
Date Collected : 11/04/09  
Date Received : 11/05/09

Inorganic Parameters

Sample Name : MW-11A  
Lab Code : J0905474-001  
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	0.01	1	11/10/09 13:15	6.6	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/05/09 11:53	79	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/05/09 15:10	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	20	9.6	2.5	11/09/09 15:15	210	

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905474  
**Date Collected :** 11/04/09  
**Date Received :** 11/05/09

Inorganic Parameters

**Sample Name :** MW-11C  
**Lab Code :** J0905474-002  
**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	0.01	1	11/10/09 13:55	0.040	i
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/05/09 11:53	18	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/05/09 15:25	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/09/09 15:15	62	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905474  
**Date Collected :** 11/04/09  
**Date Received :** 11/05/09

Inorganic Parameters

**Sample Name :** MW-12A  
**Lab Code :** J0905474-003  
**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	0.01	1	11/10/09 13:55	0.31	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/05/09 11:53	13	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/05/09 15:40	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/09/09 15:15	72	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905474  
**Date Collected :** 11/04/09  
**Date Received :** 11/05/09

Inorganic Parameters

**Sample Name :** MW-12C  
**Lab Code :** J0905474-004  
**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	0.01	1	11/10/09 13:55	0.060	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/05/09 11:53	9.1	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/05/09 15:55	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/09/09 15:15	33	

Analytical Report

Client : GeoSyntec Consultants  
 Project Name : JED SWDF  
 Project Number : FQ1512A.02  
 Sample Matrix : WATER

Service Request : J0905474  
 Date Collected : 11/04/09  
 Date Received : 11/05/09

Inorganic Parameters

Sample Name : MW-13A  
 Lab Code : J0905474-005  
 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	0.01	1	11/10/09 13:55	1.2	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/05/09 11:53	9.8	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/05/09 16:10	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/09/09 15:15	110	



Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905474  
**Date Collected :** 11/04/09  
**Date Received :** 11/05/09

Inorganic Parameters

**Sample Name :** MW-13C  
**Lab Code :** J0905474-006  
**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	0.01	1	11/10/09 13:55	0.080	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/05/09 11:53	13	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/05/09 16:25	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/09/09 15:15	40	

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905474  
**Date Collected :** 11/04/09  
**Date Received :** 11/05/09

Inorganic Parameters

**Sample Name :** MW-16C  
**Lab Code :** J0905474-007  
**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	0.01	1	11/10/09 13:55	0.10	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/05/09 11:53	22	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/05/09 16:40	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/09/09 15:15	71	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905474  
**Date Collected :** 11/04/09  
**Date Received :** 11/05/09

Inorganic Parameters

**Sample Name :** MW-9A  
**Lab Code :** J0905474-009  
**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	0.5	0.1	10	11/10/09 13:55	11	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/05/09 11:53	30	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/05/09 16:55	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/10/09 15:10	140	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905474  
**Date Collected :** 11/04/09  
**Date Received :** 11/05/09

Inorganic Parameters

**Sample Name :** MW-9C  
**Lab Code :** J0905474-010  
**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	0.01	1	11/10/09 13:55	0.30	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/05/09 11:53	13	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/05/09 17:10	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/10/09 15:10	93	

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905474  
**Date Collected :** 11/04/09  
**Date Received :** 11/05/09

Inorganic Parameters

**Sample Name :** MW-10A  
**Lab Code :** J0905474-011  
**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	0.01	1	11/10/09 13:55	7.1	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/05/09 11:53	8.2	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/05/09 17:25	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/10/09 15:10	130	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905474  
**Date Collected :** 11/04/09  
**Date Received :** 11/05/09

Inorganic Parameters

**Sample Name :** MW-10C  
**Lab Code :** J0905474-012  
**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	0.01	1	11/10/09 13:55	0.090	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/05/09 11:53	8.2	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/05/09 18:26	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/10/09 15:10	43	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905474  
**Date Collected :** 11/04/09  
**Date Received :** 11/05/09

Inorganic Parameters

**Sample Name :** DUP-1  
**Lab Code :** J0905474-013  
**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	0.5	0.1	10	11/10/09 13:55	11	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/05/09 11:53	30	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/05/09 18:41	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/10/09 15:10	140	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905474  
**Date Collected :** NA  
**Date Received :** NA

Inorganic Parameters

**Sample Name :** Method Blank  
**Lab Code :** J0905474-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	0.01	1	11/10/09 13:15	U	
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.01	1	11/10/09 13:55	U	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/05/09 11:53	U	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/05/09 11:53	U	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/05/09 11:53	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/10/09 15:10	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/09/09 15:15	U	



COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474

Surrogate Recovery Summary  
 Appendix I Volatile Organic Compounds by GC/MS

Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: PERCENT  
 Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	Sur4
MW-11A	J0905474-001	94	100	91	91
MW-11C	J0905474-002	93	98	92	96
MW-12A	J0905474-003	96	100	95	95
MW-12C	J0905474-004	96	98	95	96
MW-13A	J0905474-005	96	98	94	96
MW-13C	J0905474-006	99	107	95	99
MW-16C	J0905474-007	92	99	91	98
Trip Blank	J0905474-008	102	101	101	100
MW-9A	J0905474-009	102	100	97	95
MW-9C	J0905474-010	96	97	96	91
MW-10A	J0905474-011	100	99	96	91
MW-10C	J0905474-012	98	94	92	98
DUP-1	J0905474-013	100	97	96	96
Trip Blank	J0905474-014	100	102	99	96
Method Blank	JWG0903700-4	94	96	92	94
MW-11CMS	JWG0903700-1	96	96	92	95
MW-11CDMS	JWG0903700-2	95	98	92	97
Lab Control Sample	JWG0903700-3	96	98	95	97

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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Extracted: 11/07/2009  
 Date Analyzed: 11/07/2009

Matrix Spike/Duplicate Matrix Spike Summary  
 Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-11C  
 Lab Code: J0905474-002  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0903700

Analyte Name	Sample Result	MW-11CMS JWG0903700-1 Matrix Spike			MW-11CDMS JWG0903700-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Chloromethane	ND	20.5	20.0	102	20.3	20.0	102	73-139	1	30
Vinyl Chloride	ND	20.5	20.0	103	20.6	20.0	103	78-141	0	30
Bromomethane	ND	16.6	20.0	83	17.4	20.0	87	78-129	5	30
Chloroethane	ND	23.3	20.0	117	24.1	20.0	120	76-129	3	30
Trichlorofluoromethane	ND	22.8	20.0	114	22.7	20.0	114	81-133	0	30
1,1-Dichloroethene	ND	21.8	20.0	109	22.3	20.0	111	79-133	2	30
Acetone	ND	98.2	100	98	101	100	101	56-139	3	30
Iodomethane (Methyl Iodide)	ND	112	100	112	118	100	118	74-134	6	30
Carbon Disulfide	ND	100	100	100	104	100	104	71-146	4	30
Methylene Chloride	ND	19.9	20.0	100	20.3	20.0	101	75-123	2	30
trans-1,2-Dichloroethene	ND	21.3	20.0	107	20.8	20.0	104	76-125	2	30
Acrylonitrile	ND	105	100	105	105	100	105	68-131	0	30
1,1-Dichloroethane	ND	21.4	20.0	107	20.9	20.0	105	78-125	2	30
Vinyl Acetate	ND	96.7	100	97	94.3	100	94	43-163	3	30
cis-1,2-Dichloroethene	ND	19.6	20.0	98	20.1	20.0	100	75-127	3	30
2-Butanone (MEK)	ND	99.9	100	100	101	100	101	63-134	1	30
Bromochloromethane	ND	21.7	20.0	108	21.3	20.0	106	80-124	2	30
Chloroform	ND	21.3	20.0	106	21.2	20.0	106	81-124	0	30
1,1,1-Trichloroethane (TCA)	ND	21.5	20.0	108	21.8	20.0	109	76-130	2	30
Carbon Tetrachloride	ND	20.8	20.0	104	22.1	20.0	110	76-131	6	30
Benzene	ND	20.2	20.0	101	20.3	20.0	102	78-123	0	30
1,2-Dichloroethane (EDC)	ND	20.3	20.0	101	20.9	20.0	104	74-126	3	30
Trichloroethene (TCE)	ND	20.0	20.0	100	20.4	20.0	102	77-128	2	30
1,2-Dichloropropane	ND	19.6	20.0	98	20.8	20.0	104	77-122	6	30
Dibromomethane	ND	21.6	20.0	108	21.4	20.0	107	78-124	1	30
Bromodichloromethane	ND	19.6	20.0	98	19.0	20.0	95	79-125	3	30
cis-1,3-Dichloropropene	ND	18.5	20.0	93	19.0	20.0	95	77-117	3	30
4-Methyl-2-pentanone (MIBK)	ND	99.3	100	99	94.0	100	94	65-138	5	30
Toluene	ND	20.1	20.0	101	19.5	20.0	98	86-119	3	30
trans-1,3-Dichloropropene	ND	18.0	20.0	90	19.2	20.0	96	75-120	6	30
1,1,2-Trichloroethane	ND	19.8	20.0	99	18.8	20.0	94	77-124	5	30
Tetrachloroethene (PCE)	ND	19.0	20.0	95	19.7	20.0	98	79-123	4	30
2-Hexanone	ND	94.1	100	94	101	100	101	63-142	7	30
Dibromochloromethane	ND	19.4	20.0	97	18.7	20.0	93	78-124	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.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Extracted: 11/07/2009  
 Date Analyzed: 11/07/2009

Matrix Spike/Duplicate Matrix Spike Summary  
 Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-11C  
 Lab Code: J0905474-002  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0903700

Analyte Name	Sample Result	MW-11CMS JWG0903700-1 Matrix Spike			MW-11CDMS JWG0903700-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
1,2-Dibromoethane (EDB)	ND	20.5	20.0	102	20.9	20.0	104	81-119	2	30
Chlorobenzene	ND	18.7	20.0	93	19.5	20.0	97	81-120	4	30
1,1,1,2-Tetrachloroethane	ND	19.2	20.0	96	19.7	20.0	98	82-118	2	30
Ethylbenzene	ND	20.3	20.0	102	20.3	20.0	102	87-122	0	30
m,p-Xylenes	ND	39.7	40.0	99	40.9	40.0	102	82-120	3	30
o-Xylene	ND	20.0	20.0	100	19.9	20.0	99	85-119	1	30
Styrene	ND	19.7	20.0	99	19.0	20.0	95	84-126	4	30
Bromoform	ND	17.2	20.0	86	17.8	20.0	89	70-129	4	30
1,1,2,2-Tetrachloroethane	ND	18.4	20.0	92	18.8	20.0	94	72-127	2	30
1,2,3-Trichloropropane	ND	19.9	20.0	99	18.9	20.0	94	76-123	5	30
1,4-Dichlorobenzene	ND	18.8	20.0	94	18.8	20.0	94	75-115	0	30
trans-1,4-Dichloro-2-butene	ND	17.1	20.0	85	18.1	20.0	91	22-135	6	30
1,2-Dichlorobenzene	ND	19.0	20.0	95	20.2	20.0	101	77-116	6	30
1,2-Dibromo-3-chloropropane (DBCP)	ND	18.2	20.0	91	20.4	20.0	102	54-120	11	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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Extracted: 11/06/2009  
 Date Analyzed: 11/06/2009

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: JWG0903700

Lab Control Sample  
 JWG0903700-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Chloromethane	20.0	20.0	100	67-135
Vinyl Chloride	20.5	20.0	102	78-132
Bromomethane	21.9	20.0	110	79-130
Chloroethane	22.9	20.0	114	74-126
Trichlorofluoromethane	21.5	20.0	108	74-134
1,1-Dichloroethene	20.9	20.0	105	78-130
Acetone	98.5	100	99	67-133
Iodomethane (Methyl Iodide)	116	100	116	68-134
Carbon Disulfide	101	100	101	76-138
Methylene Chloride	20.6	20.0	103	72-124
trans-1,2-Dichloroethene	21.0	20.0	105	77-124
Acrylonitrile	101	100	101	77-127
1,1-Dichloroethane	20.7	20.0	104	80-128
Vinyl Acetate	112	100	112	61-148
cis-1,2-Dichloroethene	20.5	20.0	102	80-126
2-Butanone (MEK)	97.5	100	98	73-127
Bromochloromethane	21.1	20.0	105	79-129
Chloroform	20.9	20.0	104	83-124
1,1,1-Trichloroethane (TCA)	21.1	20.0	106	79-124
Carbon Tetrachloride	21.3	20.0	107	81-125
Benzene	20.3	20.0	102	79-119
1,2-Dichloroethane (EDC)	20.6	20.0	103	80-124
Trichloroethene (TCE)	20.7	20.0	104	76-124
1,2-Dichloropropane	20.2	20.0	101	79-123
Dibromomethane	21.2	20.0	106	83-123
Bromodichloromethane	20.2	20.0	101	81-123
cis-1,3-Dichloropropene	19.4	20.0	97	86-123
4-Methyl-2-pentanone (MIBK)	91.5	100	92	72-136
Toluene	20.3	20.0	102	86-117
trans-1,3-Dichloropropene	19.3	20.0	96	83-124
1,1,2-Trichloroethane	19.4	20.0	97	86-114
Tetrachloroethene (PCE)	20.3	20.0	101	80-121
2-Hexanone	93.7	100	94	71-138
Dibromochloromethane	19.8	20.0	99	82-121
1,2-Dibromoethane (EDB)	19.9	20.0	99	88-117
Chlorobenzene	19.6	20.0	98	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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Extracted: 11/06/2009  
 Date Analyzed: 11/06/2009

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: JWG0903700

Lab Control Sample  
 JWG0903700-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	20.1	20.0	101	85-117
Ethylbenzene	20.2	20.0	101	90-118
m,p-Xylenes	40.4	40.0	101	86-121
o-Xylene	20.1	20.0	101	89-119
Styrene	19.8	20.0	99	89-122
Bromoform	17.8	20.0	89	68-129
1,1,2,2-Tetrachloroethane	18.5	20.0	92	83-120
1,2,3-Trichloropropane	18.6	20.0	93	83-123
1,4-Dichlorobenzene	18.9	20.0	95	83-113
trans-1,4-Dichloro-2-butene	18.6	20.0	93	53-143
1,2-Dichlorobenzene	19.5	20.0	97	84-115
1,2-Dibromo-3-chloropropane (DBCP)	19.2	20.0	96	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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474

**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	J0905474-001	147
MW-11C	J0905474-002	144
MW-12A	J0905474-003	145
MW-12C	J0905474-004	146
MW-13A	J0905474-005	138
MW-13C	J0905474-006	136
MW-16C	J0905474-007	125
MW-9A	J0905474-009	115
MW-9C	J0905474-010	124
MW-10A	J0905474-011	112
MW-10C	J0905474-012	120
DUP-1	J0905474-013	112
Method Blank	JWG0903692-4	118
MW-11AMS	JWG0903692-1	150
MW-11ADMS	JWG0903692-2	151 *
Lab Control Sample	JWG0903692-3	121

**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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Extracted: 11/06/2009  
 Date Analyzed: 11/10/2009

Matrix Spike/Duplicate Matrix Spike Summary  
 1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

Sample Name: MW-11A  
 Lab Code: J0905474-001  
 Extraction Method: METHOD  
 Analysis Method: 8011

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0903692

Analyte Name	Sample Result	MW-11AMS JWG0903692-1 Matrix Spike			MW-11ADMS JWG0903692-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
1,2-Dibromoethane (EDB)	ND	0.386	0.250	154 *	0.372	0.250	149 *	65-135	4	20
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.333	0.250	133	0.339	0.250	136 *	65-135	2	20

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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905474  
 Date Extracted: 11/06/2009  
 Date Analyzed: 11/09/2009

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: JWG0903692

Lab Control Sample  
 JWG0903692-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
1,2-Dibromoethane (EDB)	0.284	0.250	114	70-130
1,2-Dibromo-3-chloropropane (DBCP)	0.297	0.250	119	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:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905474  
**Date Collected:** 11/4/09  
**Date Received:** 11/5/09  
**Date Analyzed:** 11/10/09

**Matrix Spike Summary**  
**Mercury, Total in Liquid Waste (Manual Cold-Vapor Technique)**

**Sample Name:** MW-11A  
**Lab Code:** J0905474-001

**Units:** µg/L  
**Basis:** NA

**Analytical Method:** 7470A  
**Prep Method:** Method

Analyte Name	Sample Result	Matrix Spike J0905474-MS1			Duplicate Matrix Spike J0905474-DMS1			% Rec Limits	RPD	RPD Limit
		Result	Amount	% Rec	Result	Amount	% Rec			
Mercury, Total	ND	4.33	5.00	87	4.21	5.00	84	75 - 125	3	20

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905474  
**Date Collected:** 11/4/09  
**Date Received:** 11/5/09  
**Date Analyzed:** 11/16/09

**Matrix Spike Summary  
 Inorganic Parameters**

**Sample Name:** MW-11C  
**Lab Code:** J0905474-002

**Units:** µg/L  
**Basis:** NA

**Analytical Method:** 6010B  
**Prep Method:** EPA 3010A

Analyte Name	Sample Result	Matrix Spike J0905474-MS2			Duplicate Matrix Spike J0905474-DMS2			% Rec Limits	RPD	RPD Limit
		Result	Amount	% Rec	Result	Amount	% Rec			
Iron, Total	496	2380	2000	94	2370	2000	94	75 - 125	1	20

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905474  
**Date Collected:** 11/4/09  
**Date Received:** 11/5/09  
**Date Analyzed:** 11/16/09

**Matrix Spike Summary  
 Inorganic Parameters**

**Sample Name:** MW-11C  
**Lab Code:** J0905474-002

**Units:** mg/L  
**Basis:** NA

**Analytical Method:** 6010B  
**Prep Method:** EPA 3010A

Analyte Name	Sample Result	Matrix Spike J0905474-MS2			Duplicate Matrix Spike J0905474-DMS2			% Rec Limits	RPD	RPD Limit
		Result	Amount	% Rec	Result	Amount	% Rec			
Sodium, Total	11.4	20.9	10.0	95	20.8	10.0	94	75 - 125	0	20

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905474  
**Date Analyzed:** 11/10/09 -  
 11/16/09

**Lab Control Sample Summary  
 Inorganic Parameters**

**Units:** µg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample J0905474-LCS			% Rec Limits
		Result	Expected	% Rec	
Antimony, Total	6020	50.2	50.0	100	80 - 120
Arsenic, Total	6020	49.8	50.0	100	80 - 120
Barium, Total	6020	53.1	50.0	106	80 - 120
Beryllium, Total	6020	49.5	50.0	99	80 - 120
Cadmium, Total	6020	49.6	50.0	99	80 - 120
Chromium, Total	6020	54.3	50.0	109	80 - 120
Cobalt, Total	6020	52.9	50.0	106	80 - 120
Copper, Total	6020	52.0	50.0	104	80 - 120
Iron, Total	6010B	1910	2000	95	80 - 120
Lead, Total	6020	54.4	50.0	109	80 - 120
Mercury, Total	7470A	5.08	5.00	102	80 - 120
Nickel, Total	6020	53.6	50.0	107	80 - 120
Selenium, Total	6020	45.8	50.0	92	80 - 120
Silver, Total	6020	52.9	50.0	106	80 - 120
Thallium, Total	6020	53.5	50.0	107	80 - 120
Vanadium, Total	6020	53.2	50.0	106	80 - 120
Zinc, Total	6020	96.6	100	97	80 - 120

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

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905474  
**Date Analyzed:** 11/16/09

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:** mg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample			% Rec Limits
		Result	Expected	% Rec	
Sodium, Total	6010B	9.65	10.0	97	80 - 120

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

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905474  
**Date Collected :** 11/04/09  
**Date Received :** 11/05/09  
**Date Extracted :** NA  
**Date Analyzed :** 11/10/09

Duplicate Summary  
Inorganic Parameters

**Sample Name :** MW-11C  
**Lab Code :** J0905474-002DUP  
**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	0.040	0.038	0.039	5	i

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905474  
**Date Collected :** 11/04/09  
**Date Received :** 11/05/09  
**Date Extracted :** NA  
**Date Analyzed :** 11/10/09

Matrix Spike Summary  
 Inorganic Parameters

**Sample Name :** MW-11C  
**Lab Code :** J0905474-002MS  
**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	0.040	5.25	104	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : GeoSyntec Consultants  
Project Name : JED SWDF  
Project Number : FQ1512A.02  
Sample Matrix : WATER

Service Request : J0905474  
Date Collected : 11/04/09  
Date Received : 11/05/09  
Date Extracted : NA  
Date Analyzed : 11/09/09

Duplicate Summary  
Inorganic Parameters

Sample Name : MW-13C  
Lab Code : J0905474-006DUP  
Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	40	44	42	10	



**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905474  
**Date Collected :** NA  
**Date Received :** NA  
**Date Extracted :** NA  
**Date Analyzed :** 11/05-10/09

Laboratory Control Sample Summary  
 Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** J0905474-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	4.93	99	90-110	
Ammonia as Nitrogen	mg/L (ppm)	350.1	5.00	4.97	99	90-110	
Chloride	mg/L (ppm)	300.0	5.00	5.20	104	90-110	
Chloride	mg/L (ppm)	300.0	100	104	104	90-110	
Nitrate as Nitrogen	mg/L (ppm)	300.0	5.0	5.11	102	90-110	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	300	297	99	85-115	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	300	287	96	85-115	

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

Client: Geosyntec Service Request # J0905474  
 Project: JED SWDF  
 Cooler received on 11/5/09 and opened on 11/5/09 by SL  
 COURIER: CAS  UPS FEDEX DHL CLIENT Tracking # J2081512429

- |    |   |                                      |            |     |
|----|---|--------------------------------------|------------|-----|
| 1  | Were custody seals on outside of cooler?  | <input checked="" type="radio"/> Yes | No         | N/A |
| 2  | Were seals intact, signed and dated?  | <input checked="" type="radio"/> Yes | No         | N/A |
| 3  | Were custody papers properly filled out?  | <input checked="" type="radio"/> Yes | No         | N/A |
| 4  | Temperature of cooler(s) upon receipt (Should be 4 +/- 2 degrees C)   | <u>3.1</u>                           | <u>2.6</u> |     |
| 5  | Correct Temperature?  | <input checked="" type="radio"/> Yes | No         | N/A |
| 6  | Were Ice or Ice Packs present   | <input checked="" type="radio"/> Yes | No         | N/A |
| 7  | Did all bottles arrive in good condition (unbroken, etc....)?   | <input checked="" type="radio"/> Yes | No         | N/A |
| 8  | Were all bottle labels complete (sample ID, preservation, etc....)?   | <input checked="" type="radio"/> Yes | No         | N/A |
| 9  | Did all bottle labels and tags agree with custody papers?   | <input checked="" type="radio"/> Yes | No         | N/A |
| 10 | Were the correct bottles used for the tests indicated?  | <input checked="" type="radio"/> Yes | No         | N/A |
| 11 | Were all of the preserved bottles received with the appropriate preservative?   | <input checked="" type="radio"/> Yes | No         | N/A |
|    | <input checked="" type="radio"/> HNO3 pH<2 <input checked="" type="radio"/> H2SO4 pH<2    ZnAc2/NaOH pH>9    NaOH pH>12 <input checked="" type="radio"/> HCl pH<2 |                                      |            |     |
|    | <small>Preservative additions noted below</small>   |                                      |            |     |
| 12 | Were all samples received within analysis holding times?  | <input checked="" type="radio"/> Yes | No         | N/A |
| 13 | Were VOA vials checked for absence of air bubbles? If present, note below   | <input checked="" type="radio"/> Yes | No         | N/A |
| 14 | Where did the bottles originate?  | <input checked="" type="radio"/> CAS | 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: 03

SR #: J 0905474

Date: 11/5/09

Initials: SL

Note that pH is checked and meets the required pH criterion listed in the column heading unless otherwise noted on cooler receipt form.

Container	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	
40ml	40ml	40ml	40ml	125ml	125ml	125ml	125ml	250ml	250ml	250ml	250ml	250ml	250ml	250ml	250ml	500ml	500ml	500ml	1L	1L	1L	1L	1L	2oz	4oz	8oz	16oz	5g	100ml	Misc.	
Req pH	N/A	<2	<2	N/A	<2	HCl	H2SO4	H2SO4	HNO3	ZnAcetate	NaOH	>12	N/A	<2	HNO3	N/A	H2SO4	HNO3	N/A	<2	HNO3	HCl	H2SO4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Sample #	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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Project Name <b>SED SWDF</b>		Project Number <b>F01512A.02</b>		ANALYSIS REQUESTED (Include Method Number)	
Project Manager <b>Kirk Wills</b>		Email Address <b>K.wills@geosyntec.com</b>		PRESERVATIVE <b>1 0 3 2 0</b>	
Company/Address <b>Geosyntec</b>		<b>14055 Riveredge Dr. Ste 300</b>		NUMBER OF CONTAINERS <b>8260</b>	
<b>Tampa, FL 33637</b>		<b>FAX# 813-558-9726</b>		<b>8011</b>	
Phone # <b>813-558-0990</b>		Sampler's Printed Name <b>Joe Terry</b>		<b>NH3</b>	
Sampler's Signature <i>Joe Terry</i>		LAB ID		<b>Metals</b>	
CLIENT SAMPLE ID		SAMPLING DATE		<b>TSS, Cl, NO3</b>	
<b>MW-11A</b>	<b>11-4-09 1115</b>	<b>GW</b>			
<b>MW-11C</b>	<b>1105</b>				
<b>MW-12A</b>	<b>1005</b>				
<b>MW-12C</b>	<b>1005</b>				
<b>MW-13A</b>	<b>0910</b>				
<b>MW-13C</b>	<b>0812</b>				
<b>MW-16C</b>	<b>0840</b>				
<b>Trip Blank</b>	<b>10-28-09 1100</b>	<b>DS 420</b>			
SPECIAL INSTRUCTIONS/COMMENTS <b>COOL-DR: 09300 - SED - 1</b>		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 + OC Summaries (LCS, DUP, MS/MSD as required) <input type="checkbox"/> III. Results + OC 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		CUSTODY SEALS: Y N		BILL TO:	
SAMPLE RECEIPT: CONDITION/COOLER TEMP:		RECEIVED BY		INVOICE INFORMATION	
RELINQUISHED BY		RELINQUISHED BY		RECEIVED BY	
Signature: <i>Joe Terry</i>		Signature: <i>Shawn Lightsey</i>		Signature	
Printed Name: <b>Joe Terry</b>		Printed Name: <b>Shawn Lightsey</b>		Printed Name	
Firm: <b>Geosyntec</b>		Firm: <b>Geo</b>		Firm	
Date/Time: <b>11-4-09 1500</b>		Date/Time: <b>11/5/09 0920</b>		Date/Time	



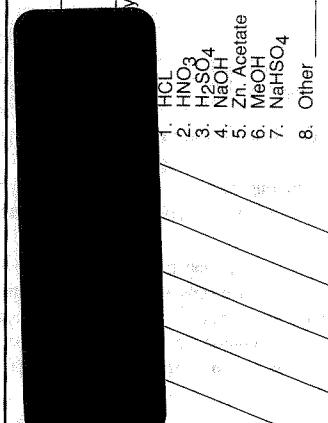
# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

9143 Phillips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

PAGE 1 OF 1

SR # 50905474  
CAS Contact

Project Name <b>JED SWDF</b>		Project Number <b>FQ1512A.02</b>		ANALYSIS REQUESTED (Include Method Number)	
Project Manager <b>Kirk Wills</b>		Email Address <b>Kwills@geosyntek.com</b>		PRESERVATIVE <b>1 0 3 2 0</b>	
Company/Address <b>Geosyntek</b>		14055 Riverchase Dr. Ste 300		NUMBER OF CONTAINERS	
Tampa, FL 33637		FAX#		B011	
Phone # <b>813-558-0990</b>		Sampler's Printed Name <b>Joe Terry</b>		B260	
Sampler's Signature <i>Joe Terry</i>		Sampler's Printed Name <b>Joe Terry</b>		Metals	
CLIENT SAMPLE ID		LAB ID		TSS & Metals	
MW-9A		11-1-09	1215	9	3
MW-9C		11-1-09	1210	9	3
MW-10A		11-4-09	1352	9	3
MW-10C		11-4-09	1330	9	3
DUP-I		11-4-09	-	9	3
Trip Blank		10-28-09	1100	1	1
SPECIAL INSTRUCTIONS/COMMENTS <b>cooler ID: 09308 - JED-2</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 _____	
See QAPP <input type="checkbox"/>		CUSTODY SEALS: Y N		INVOICE INFORMATION PO# _____ BILL TO: _____	
SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____		RECEIVED BY <b>96</b>		RECEIVED BY	
RELINQUISHED BY <i>Joe Terry</i>		RELINQUISHED BY <i>Shawn Lybby</i>		RECEIVED BY	
Signature <i>Joe Terry</i>		Signature <i>Shawn Lybby</i>		Signature	
Printed Name <b>Joe Terry</b>		Printed Name <b>Shawn Lybby</b>		Printed Name	
Firm <b>Geosyntek</b>		Firm <b>Geosyntek</b>		Firm	
Date/Time <b>11-1-09/1500</b>		Date/Time <b>11/5/09 0920</b>		Date/Time	



- HCL
- HNO3
- H2SO4
- NaOH
- Zn Acetate
- MeOH
- NaHSO4
- Other \_\_\_\_\_

REMARKS/  
ALTERNATE DESCRIPTION

November 24, 2009

Service Request No: J0905509

Kirk Wills  
GeoSyntec Consultants  
14055 Riveredge Drive  
Suite 300  
Tampa, FL 33637

**Laboratory Results for: JED SWDF/FQ1512A.02**

Dear Kirk:

Enclosed are the results of the sample(s) submitted to our laboratory on November 6, 2009. For your reference, these analyses have been assigned our service request number **J0905509**.

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.

Please contact me 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 Manager

Page 1 of 57

**COLUMBIA ANALYTICAL SERVICES, INC.**

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request No.:** J0905509  
**Date Received:** 11/6/09

**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**

Six water samples and one trip blank were received for analysis at Columbia Analytical Services on 11/6/09. 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. The following observations were made regarding this delivery group.

**Method Blank Exceptions**

Due to an inadvertent analyst error, the spiking mixture was added to Method Blank JWG0903759-4. No target analytes were detected in the associated field samples. It is the opinion of CAS that the data is not significantly affected and no further corrective action was necessary.

**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 \_\_\_\_\_

11/24/09

Matrix Spike Recovery Exceptions

The matrix spike recoveries of Selenium for sample MW-6A 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 low bias in this matrix. No further corrective action was appropriate.

The matrix spike recoveries of Mercury for sample MW-7A 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 low bias in this matrix. No further corrective action was appropriate.

Batch QC Notes and Discussion

Some 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.

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 \_\_\_\_\_

11/24/09



## 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 SWDF/FQ1512A.02

**Service Request:** J0905509

**SAMPLE CROSS-REFERENCE**

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J0905509-001	MW-6A	11/5/09	15:25
J0905509-002	MW-6C	11/5/09	14:58
J0905509-003	MW-7A	11/5/09	13:30
J0905509-004	MW-7C	11/5/09	12:55
J0905509-005	MW-8A	11/5/09	09:12
J0905509-006	MW-8C	11/5/09	09:45
J0905509-007	Trip Blank	11/5/09	00:00

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** 11/05/2009  
**Date Received:** 11/06/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-6A  
**Lab Code:** J0905509-001  
**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	11/14/09	11/14/09	JWG0903813	
Vinyl Chloride	ND	U	1.0	0.25	1	11/14/09	11/14/09	JWG0903813	
Bromomethane	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903813	
Chloroethane	ND	U	5.0	0.19	1	11/14/09	11/14/09	JWG0903813	
Trichlorofluoromethane	ND	U	20	0.25	1	11/14/09	11/14/09	JWG0903813	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/14/09	11/14/09	JWG0903813	
Acetone	ND	U	50	2.4	1	11/14/09	11/14/09	JWG0903813	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/14/09	11/14/09	JWG0903813	
Carbon Disulfide	ND	U	10	0.84	1	11/14/09	11/14/09	JWG0903813	
Methylene Chloride	ND	U	5.0	0.72	1	11/14/09	11/14/09	JWG0903813	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/14/09	11/14/09	JWG0903813	
Acrylonitrile	ND	U	10	0.59	1	11/14/09	11/14/09	JWG0903813	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/14/09	11/14/09	JWG0903813	
Vinyl Acetate	ND	U	10	0.60	1	11/14/09	11/14/09	JWG0903813	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903813	
2-Butanone (MEK)	ND	U	10	0.56	1	11/14/09	11/14/09	JWG0903813	
Bromochloromethane	ND	U	5.0	0.14	1	11/14/09	11/14/09	JWG0903813	
Chloroform	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903813	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/14/09	11/14/09	JWG0903813	
<b>Benzene</b>	<b>0.58</b>	<b>I</b>	1.0	0.52	1	11/14/09	11/14/09	JWG0903813	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/14/09	11/14/09	JWG0903813	
Dibromomethane	ND	U	5.0	0.12	1	11/14/09	11/14/09	JWG0903813	
Bromodichloromethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903813	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/14/09	11/14/09	JWG0903813	
Toluene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903813	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903813	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903813	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/14/09	11/14/09	JWG0903813	
2-Hexanone	ND	U	25	0.36	1	11/14/09	11/14/09	JWG0903813	
Dibromochloromethane	ND	U	1.0	0.11	1	11/14/09	11/14/09	JWG0903813	

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** 11/05/2009  
**Date Received:** 11/06/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-6A  
**Lab Code:** J0905509-001  
**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	11/14/09	11/14/09	JWG0903813	
Chlorobenzene	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
Ethylbenzene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
m,p-Xylenes	ND	U	2.0	0.22	1	11/14/09	11/14/09	JWG0903813	
o-Xylene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
Styrene	ND	U	1.0	0.051	1	11/14/09	11/14/09	JWG0903813	
Bromoform	ND	U	2.0	0.12	1	11/14/09	11/14/09	JWG0903813	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/14/09	11/14/09	JWG0903813	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903813	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/14/09	11/14/09	JWG0903813	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/14/09	11/14/09	JWG0903813	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/14/09	11/14/09	JWG0903813	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	91	71-122	11/14/09	Acceptable
4-Bromofluorobenzene	113	75-120	11/14/09	Acceptable
Dibromofluoromethane	94	82-116	11/14/09	Acceptable
Toluene-d8	106	88-117	11/14/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** 11/05/2009  
**Date Received:** 11/06/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-6C  
**Lab Code:** J0905509-002  
**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	11/14/09	11/14/09	JWG0903813	
Vinyl Chloride	ND	U	1.0	0.25	1	11/14/09	11/14/09	JWG0903813	
Bromomethane	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903813	
Chloroethane	ND	U	5.0	0.19	1	11/14/09	11/14/09	JWG0903813	
Trichlorofluoromethane	ND	U	20	0.25	1	11/14/09	11/14/09	JWG0903813	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/14/09	11/14/09	JWG0903813	
Acetone	ND	U	50	2.4	1	11/14/09	11/14/09	JWG0903813	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/14/09	11/14/09	JWG0903813	
Carbon Disulfide	ND	U	10	0.84	1	11/14/09	11/14/09	JWG0903813	
Methylene Chloride	ND	U	5.0	0.72	1	11/14/09	11/14/09	JWG0903813	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/14/09	11/14/09	JWG0903813	
Acrylonitrile	ND	U	10	0.59	1	11/14/09	11/14/09	JWG0903813	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/14/09	11/14/09	JWG0903813	
Vinyl Acetate	ND	U	10	0.60	1	11/14/09	11/14/09	JWG0903813	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903813	
2-Butanone (MEK)	ND	U	10	0.56	1	11/14/09	11/14/09	JWG0903813	
Bromochloromethane	ND	U	5.0	0.14	1	11/14/09	11/14/09	JWG0903813	
Chloroform	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903813	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/14/09	11/14/09	JWG0903813	
Benzene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903813	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/14/09	11/14/09	JWG0903813	
Dibromomethane	ND	U	5.0	0.12	1	11/14/09	11/14/09	JWG0903813	
Bromodichloromethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903813	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/14/09	11/14/09	JWG0903813	
Toluene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903813	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903813	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903813	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/14/09	11/14/09	JWG0903813	
2-Hexanone	ND	U	25	0.36	1	11/14/09	11/14/09	JWG0903813	
Dibromochloromethane	ND	U	1.0	0.11	1	11/14/09	11/14/09	JWG0903813	

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** 11/05/2009  
**Date Received:** 11/06/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-6C  
**Lab Code:** J0905509-002  
**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	11/14/09	11/14/09	JWG0903813	
Chlorobenzene	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
Ethylbenzene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
m,p-Xylenes	ND	U	2.0	0.22	1	11/14/09	11/14/09	JWG0903813	
o-Xylene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
Styrene	ND	U	1.0	0.051	1	11/14/09	11/14/09	JWG0903813	
Bromoform	ND	U	2.0	0.12	1	11/14/09	11/14/09	JWG0903813	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/14/09	11/14/09	JWG0903813	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903813	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/14/09	11/14/09	JWG0903813	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/14/09	11/14/09	JWG0903813	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/14/09	11/14/09	JWG0903813	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	91	71-122	11/14/09	Acceptable
4-Bromofluorobenzene	118	75-120	11/14/09	Acceptable
Dibromofluoromethane	94	82-116	11/14/09	Acceptable
Toluene-d8	104	88-117	11/14/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** 11/05/2009  
**Date Received:** 11/06/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-7A  
**Lab Code:** J0905509-003  
**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	0.17	1	11/14/09	11/14/09	JWG0903813	
Vinyl Chloride	ND	U	1.0	0.25	1	11/14/09	11/14/09	JWG0903813	
Bromomethane	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903813	
Chloroethane	ND	U	5.0	0.19	1	11/14/09	11/14/09	JWG0903813	
Trichlorofluoromethane	ND	U	20	0.25	1	11/14/09	11/14/09	JWG0903813	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/14/09	11/14/09	JWG0903813	
Acetone	ND	U	50	2.4	1	11/14/09	11/14/09	JWG0903813	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/14/09	11/14/09	JWG0903813	
Carbon Disulfide	ND	U	10	0.84	1	11/14/09	11/14/09	JWG0903813	
Methylene Chloride	ND	U	5.0	0.72	1	11/14/09	11/14/09	JWG0903813	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/14/09	11/14/09	JWG0903813	
Acrylonitrile	ND	U	10	0.59	1	11/14/09	11/14/09	JWG0903813	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/14/09	11/14/09	JWG0903813	
Vinyl Acetate	ND	U	10	0.60	1	11/14/09	11/14/09	JWG0903813	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903813	
2-Butanone (MEK)	ND	U	10	0.56	1	11/14/09	11/14/09	JWG0903813	
Bromochloromethane	ND	U	5.0	0.14	1	11/14/09	11/14/09	JWG0903813	
Chloroform	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903813	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/14/09	11/14/09	JWG0903813	
Benzene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903813	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/14/09	11/14/09	JWG0903813	
Dibromomethane	ND	U	5.0	0.12	1	11/14/09	11/14/09	JWG0903813	
Bromodichloromethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903813	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/14/09	11/14/09	JWG0903813	
Toluene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903813	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903813	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903813	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/14/09	11/14/09	JWG0903813	
2-Hexanone	ND	U	25	0.36	1	11/14/09	11/14/09	JWG0903813	
Dibromochloromethane	ND	U	1.0	0.11	1	11/14/09	11/14/09	JWG0903813	

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



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** 11/05/2009  
**Date Received:** 11/06/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-7A  
**Lab Code:** J0905509-003  
**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	0.18	1	11/14/09	11/14/09	JWG0903813	
Chlorobenzene	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
Ethylbenzene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
m,p-Xylenes	ND	U	2.0	0.22	1	11/14/09	11/14/09	JWG0903813	
o-Xylene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
Styrene	ND	U	1.0	0.051	1	11/14/09	11/14/09	JWG0903813	
Bromoform	ND	U	2.0	0.12	1	11/14/09	11/14/09	JWG0903813	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/14/09	11/14/09	JWG0903813	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903813	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/14/09	11/14/09	JWG0903813	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/14/09	11/14/09	JWG0903813	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/14/09	11/14/09	JWG0903813	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	89	71-122	11/14/09	Acceptable
4-Bromofluorobenzene	115	75-120	11/14/09	Acceptable
Dibromofluoromethane	91	82-116	11/14/09	Acceptable
Toluene-d8	103	88-117	11/14/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** 11/05/2009  
**Date Received:** 11/06/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-7C  
**Lab Code:** J0905509-004  
**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	0.17	1	11/14/09	11/14/09	JWG0903813	
Vinyl Chloride	ND	U	1.0	0.25	1	11/14/09	11/14/09	JWG0903813	
Bromomethane	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903813	
Chloroethane	ND	U	5.0	0.19	1	11/14/09	11/14/09	JWG0903813	
Trichlorofluoromethane	ND	U	20	0.25	1	11/14/09	11/14/09	JWG0903813	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/14/09	11/14/09	JWG0903813	
Acetone	ND	U	50	2.4	1	11/14/09	11/14/09	JWG0903813	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/14/09	11/14/09	JWG0903813	
Carbon Disulfide	ND	U	10	0.84	1	11/14/09	11/14/09	JWG0903813	
Methylene Chloride	ND	U	5.0	0.72	1	11/14/09	11/14/09	JWG0903813	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/14/09	11/14/09	JWG0903813	
Acrylonitrile	ND	U	10	0.59	1	11/14/09	11/14/09	JWG0903813	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/14/09	11/14/09	JWG0903813	
Vinyl Acetate	ND	U	10	0.60	1	11/14/09	11/14/09	JWG0903813	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903813	
2-Butanone (MEK)	ND	U	10	0.56	1	11/14/09	11/14/09	JWG0903813	
Bromochloromethane	ND	U	5.0	0.14	1	11/14/09	11/14/09	JWG0903813	
Chloroform	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903813	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/14/09	11/14/09	JWG0903813	
Benzene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903813	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/14/09	11/14/09	JWG0903813	
Dibromomethane	ND	U	5.0	0.12	1	11/14/09	11/14/09	JWG0903813	
Bromodichloromethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903813	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/14/09	11/14/09	JWG0903813	
Toluene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903813	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903813	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903813	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/14/09	11/14/09	JWG0903813	
2-Hexanone	ND	U	25	0.36	1	11/14/09	11/14/09	JWG0903813	
Dibromochloromethane	ND	U	1.0	0.11	1	11/14/09	11/14/09	JWG0903813	

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** 11/05/2009  
**Date Received:** 11/06/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-7C  
**Lab Code:** J0905509-004  
**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	0.18	1	11/14/09	11/14/09	JWG0903813	
Chlorobenzene	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
Ethylbenzene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
m,p-Xylenes	ND	U	2.0	0.22	1	11/14/09	11/14/09	JWG0903813	
o-Xylene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
Styrene	ND	U	1.0	0.051	1	11/14/09	11/14/09	JWG0903813	
Bromoform	ND	U	2.0	0.12	1	11/14/09	11/14/09	JWG0903813	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/14/09	11/14/09	JWG0903813	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903813	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/14/09	11/14/09	JWG0903813	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/14/09	11/14/09	JWG0903813	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/14/09	11/14/09	JWG0903813	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	89	71-122	11/14/09	Acceptable
4-Bromofluorobenzene	117	75-120	11/14/09	Acceptable
Dibromofluoromethane	94	82-116	11/14/09	Acceptable
Toluene-d8	102	88-117	11/14/09	Acceptable

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905509  
 Date Collected: 11/05/2009  
 Date Received: 11/06/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-8A  
 Lab Code: J0905509-005  
 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	0.17	1	11/14/09	11/14/09	JWG0903813	
Vinyl Chloride	ND	U	1.0	0.25	1	11/14/09	11/14/09	JWG0903813	
Bromomethane	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903813	
Chloroethane	ND	U	5.0	0.19	1	11/14/09	11/14/09	JWG0903813	
Trichlorofluoromethane	ND	U	20	0.25	1	11/14/09	11/14/09	JWG0903813	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/14/09	11/14/09	JWG0903813	
Acetone	ND	U	50	2.4	1	11/14/09	11/14/09	JWG0903813	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/14/09	11/14/09	JWG0903813	
Carbon Disulfide	ND	U	10	0.84	1	11/14/09	11/14/09	JWG0903813	
Methylene Chloride	ND	U	5.0	0.72	1	11/14/09	11/14/09	JWG0903813	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/14/09	11/14/09	JWG0903813	
Acrylonitrile	ND	U	10	0.59	1	11/14/09	11/14/09	JWG0903813	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/14/09	11/14/09	JWG0903813	
Vinyl Acetate	ND	U	10	0.60	1	11/14/09	11/14/09	JWG0903813	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903813	
2-Butanone (MEK)	ND	U	10	0.56	1	11/14/09	11/14/09	JWG0903813	
Bromochloromethane	ND	U	5.0	0.14	1	11/14/09	11/14/09	JWG0903813	
Chloroform	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903813	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/14/09	11/14/09	JWG0903813	
<b>Benzene</b>	<b>1.3</b>		1.0	0.52	1	11/14/09	11/14/09	JWG0903813	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/14/09	11/14/09	JWG0903813	
Dibromomethane	ND	U	5.0	0.12	1	11/14/09	11/14/09	JWG0903813	
Bromodichloromethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903813	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/14/09	11/14/09	JWG0903813	
Toluene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903813	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903813	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903813	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/14/09	11/14/09	JWG0903813	
2-Hexanone	ND	U	25	0.36	1	11/14/09	11/14/09	JWG0903813	
Dibromochloromethane	ND	U	1.0	0.11	1	11/14/09	11/14/09	JWG0903813	

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** 11/05/2009  
**Date Received:** 11/06/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-8A  
**Lab Code:** J0905509-005  
**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	0.18	1	11/14/09	11/14/09	JWG0903813	
Chlorobenzene	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
Ethylbenzene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
m,p-Xylenes	ND	U	2.0	0.22	1	11/14/09	11/14/09	JWG0903813	
<b>o-Xylene</b>	<b>0.33</b>	<b>I</b>	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
Styrene	ND	U	1.0	0.051	1	11/14/09	11/14/09	JWG0903813	
Bromoform	ND	U	2.0	0.12	1	11/14/09	11/14/09	JWG0903813	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/14/09	11/14/09	JWG0903813	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903813	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/14/09	11/14/09	JWG0903813	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/14/09	11/14/09	JWG0903813	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/14/09	11/14/09	JWG0903813	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	89	71-122	11/14/09	Acceptable
4-Bromofluorobenzene	115	75-120	11/14/09	Acceptable
Dibromofluoromethane	93	82-116	11/14/09	Acceptable
Toluene-d8	107	88-117	11/14/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** 11/05/2009  
**Date Received:** 11/06/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-8C  
**Lab Code:** J0905509-006  
**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	0.17	1	11/14/09	11/14/09	JWG0903813	
Vinyl Chloride	ND	U	1.0	0.25	1	11/14/09	11/14/09	JWG0903813	
Bromomethane	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903813	
Chloroethane	ND	U	5.0	0.19	1	11/14/09	11/14/09	JWG0903813	
Trichlorofluoromethane	ND	U	20	0.25	1	11/14/09	11/14/09	JWG0903813	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/14/09	11/14/09	JWG0903813	
Acetone	ND	U	50	2.4	1	11/14/09	11/14/09	JWG0903813	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/14/09	11/14/09	JWG0903813	
Carbon Disulfide	ND	U	10	0.84	1	11/14/09	11/14/09	JWG0903813	
Methylene Chloride	ND	U	5.0	0.72	1	11/14/09	11/14/09	JWG0903813	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/14/09	11/14/09	JWG0903813	
Acrylonitrile	ND	U	10	0.59	1	11/14/09	11/14/09	JWG0903813	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/14/09	11/14/09	JWG0903813	
Vinyl Acetate	ND	U	10	0.60	1	11/14/09	11/14/09	JWG0903813	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903813	
2-Butanone (MEK)	ND	U	10	0.56	1	11/14/09	11/14/09	JWG0903813	
Bromochloromethane	ND	U	5.0	0.14	1	11/14/09	11/14/09	JWG0903813	
Chloroform	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903813	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/14/09	11/14/09	JWG0903813	
Benzene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903813	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/14/09	11/14/09	JWG0903813	
Dibromomethane	ND	U	5.0	0.12	1	11/14/09	11/14/09	JWG0903813	
Bromodichloromethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903813	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/14/09	11/14/09	JWG0903813	
Toluene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903813	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903813	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903813	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/14/09	11/14/09	JWG0903813	
2-Hexanone	ND	U	25	0.36	1	11/14/09	11/14/09	JWG0903813	
Dibromochloromethane	ND	U	1.0	0.11	1	11/14/09	11/14/09	JWG0903813	

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** 11/05/2009  
**Date Received:** 11/06/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-8C  
**Lab Code:** J0905509-006  
**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	0.18	1	11/14/09	11/14/09	JWG0903813	
Chlorobenzene	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
Ethylbenzene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
m,p-Xylenes	ND	U	2.0	0.22	1	11/14/09	11/14/09	JWG0903813	
o-Xylene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
Styrene	ND	U	1.0	0.051	1	11/14/09	11/14/09	JWG0903813	
Bromoform	ND	U	2.0	0.12	1	11/14/09	11/14/09	JWG0903813	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/14/09	11/14/09	JWG0903813	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903813	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/14/09	11/14/09	JWG0903813	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/14/09	11/14/09	JWG0903813	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/14/09	11/14/09	JWG0903813	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	87	71-122	11/14/09	Acceptable
4-Bromofluorobenzene	116	75-120	11/14/09	Acceptable
Dibromofluoromethane	96	82-116	11/14/09	Acceptable
Toluene-d8	105	88-117	11/14/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** 11/05/2009  
**Date Received:** 11/06/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** Trip Blank  
**Lab Code:** J0905509-007  
**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	0.17	1	11/14/09	11/14/09	JWG0903813	
Vinyl Chloride	ND	U	1.0	0.25	1	11/14/09	11/14/09	JWG0903813	
Bromomethane	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903813	
Chloroethane	ND	U	5.0	0.19	1	11/14/09	11/14/09	JWG0903813	
Trichlorofluoromethane	ND	U	20	0.25	1	11/14/09	11/14/09	JWG0903813	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/14/09	11/14/09	JWG0903813	
Acetone	ND	U	50	2.4	1	11/14/09	11/14/09	JWG0903813	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/14/09	11/14/09	JWG0903813	
Carbon Disulfide	ND	U	10	0.84	1	11/14/09	11/14/09	JWG0903813	
Methylene Chloride	ND	U	5.0	0.72	1	11/14/09	11/14/09	JWG0903813	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/14/09	11/14/09	JWG0903813	
Acrylonitrile	ND	U	10	0.59	1	11/14/09	11/14/09	JWG0903813	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/14/09	11/14/09	JWG0903813	
Vinyl Acetate	ND	U	10	0.60	1	11/14/09	11/14/09	JWG0903813	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903813	
2-Butanone (MEK)	ND	U	10	0.56	1	11/14/09	11/14/09	JWG0903813	
Bromochloromethane	ND	U	5.0	0.14	1	11/14/09	11/14/09	JWG0903813	
Chloroform	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903813	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/14/09	11/14/09	JWG0903813	
Benzene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903813	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/14/09	11/14/09	JWG0903813	
Dibromomethane	ND	U	5.0	0.12	1	11/14/09	11/14/09	JWG0903813	
Bromodichloromethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903813	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/14/09	11/14/09	JWG0903813	
Toluene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903813	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903813	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903813	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/14/09	11/14/09	JWG0903813	
2-Hexanone	ND	U	25	0.36	1	11/14/09	11/14/09	JWG0903813	
Dibromochloromethane	ND	U	1.0	0.11	1	11/14/09	11/14/09	JWG0903813	

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



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** 11/05/2009  
**Date Received:** 11/06/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** Trip Blank  
**Lab Code:** J0905509-007  
**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	0.18	1	11/14/09	11/14/09	JWG0903813	
Chlorobenzene	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
Ethylbenzene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
m,p-Xylenes	ND	U	2.0	0.22	1	11/14/09	11/14/09	JWG0903813	
o-Xylene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903813	
Styrene	ND	U	1.0	0.051	1	11/14/09	11/14/09	JWG0903813	
Bromoform	ND	U	2.0	0.12	1	11/14/09	11/14/09	JWG0903813	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903813	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/14/09	11/14/09	JWG0903813	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903813	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/14/09	11/14/09	JWG0903813	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/14/09	11/14/09	JWG0903813	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/14/09	11/14/09	JWG0903813	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	91	71-122	11/14/09	Acceptable
4-Bromofluorobenzene	116	75-120	11/14/09	Acceptable
Dibromofluoromethane	93	82-116	11/14/09	Acceptable
Toluene-d8	102	88-117	11/14/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** NA  
**Date Received:** NA

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** Method Blank  
**Lab Code:** JWG0903813-4  
**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	11/13/09	11/13/09	JWG0903813	
Vinyl Chloride	ND	U	1.0	0.25	1	11/13/09	11/13/09	JWG0903813	
Bromomethane	ND	U	1.0	0.14	1	11/13/09	11/13/09	JWG0903813	
Chloroethane	ND	U	5.0	0.19	1	11/13/09	11/13/09	JWG0903813	
Trichlorofluoromethane	ND	U	20	0.25	1	11/13/09	11/13/09	JWG0903813	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/13/09	11/13/09	JWG0903813	
Acetone	ND	U	50	2.4	1	11/13/09	11/13/09	JWG0903813	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/13/09	11/13/09	JWG0903813	
Carbon Disulfide	ND	U	10	0.84	1	11/13/09	11/13/09	JWG0903813	
Methylene Chloride	ND	U	5.0	0.72	1	11/13/09	11/13/09	JWG0903813	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/13/09	11/13/09	JWG0903813	
Acrylonitrile	ND	U	10	0.59	1	11/13/09	11/13/09	JWG0903813	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/13/09	11/13/09	JWG0903813	
Vinyl Acetate	ND	U	10	0.60	1	11/13/09	11/13/09	JWG0903813	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/13/09	11/13/09	JWG0903813	
2-Butanone (MEK)	ND	U	10	0.56	1	11/13/09	11/13/09	JWG0903813	
Bromochloromethane	ND	U	5.0	0.14	1	11/13/09	11/13/09	JWG0903813	
Chloroform	ND	U	1.0	0.10	1	11/13/09	11/13/09	JWG0903813	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/13/09	11/13/09	JWG0903813	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/13/09	11/13/09	JWG0903813	
Benzene	ND	U	1.0	0.52	1	11/13/09	11/13/09	JWG0903813	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/13/09	11/13/09	JWG0903813	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/13/09	11/13/09	JWG0903813	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/13/09	11/13/09	JWG0903813	
Dibromomethane	ND	U	5.0	0.12	1	11/13/09	11/13/09	JWG0903813	
Bromodichloromethane	ND	U	1.0	0.10	1	11/13/09	11/13/09	JWG0903813	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/13/09	11/13/09	JWG0903813	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/13/09	11/13/09	JWG0903813	
Toluene	ND	U	1.0	0.52	1	11/13/09	11/13/09	JWG0903813	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/13/09	11/13/09	JWG0903813	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/13/09	11/13/09	JWG0903813	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/13/09	11/13/09	JWG0903813	
2-Hexanone	ND	U	25	0.36	1	11/13/09	11/13/09	JWG0903813	
Dibromochloromethane	ND	U	1.0	0.11	1	11/13/09	11/13/09	JWG0903813	

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** NA  
**Date Received:** NA

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** Method Blank  
**Lab Code:** JWG0903813-4  
**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	11/13/09	11/13/09	JWG0903813	
Chlorobenzene	ND	U	1.0	0.15	1	11/13/09	11/13/09	JWG0903813	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/13/09	11/13/09	JWG0903813	
Ethylbenzene	ND	U	1.0	0.10	1	11/13/09	11/13/09	JWG0903813	
m,p-Xylenes	ND	U	2.0	0.22	1	11/13/09	11/13/09	JWG0903813	
o-Xylene	ND	U	1.0	0.10	1	11/13/09	11/13/09	JWG0903813	
Styrene	ND	U	1.0	0.051	1	11/13/09	11/13/09	JWG0903813	
Bromoform	ND	U	2.0	0.12	1	11/13/09	11/13/09	JWG0903813	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/13/09	11/13/09	JWG0903813	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/13/09	11/13/09	JWG0903813	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/13/09	11/13/09	JWG0903813	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/13/09	11/13/09	JWG0903813	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/13/09	11/13/09	JWG0903813	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/13/09	11/13/09	JWG0903813	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	87	71-122	11/13/09	Acceptable
4-Bromofluorobenzene	116	75-120	11/13/09	Acceptable
Dibromofluoromethane	95	82-116	11/13/09	Acceptable
Toluene-d8	105	88-117	11/13/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** 11/05/2009  
**Date Received:** 11/06/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-6A  
**Lab Code:** J0905509-001  
**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	11/11/09	11/12/09	JWG0903759	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/11/09	11/12/09	JWG0903759	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	113	77-150	11/12/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** 11/05/2009  
**Date Received:** 11/06/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-6C  
**Lab Code:** J0905509-002  
**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	11/11/09	11/12/09	JWG0903759	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/11/09	11/12/09	JWG0903759	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	109	77-150	11/12/09	Acceptable

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

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905509  
 Date Collected: 11/05/2009  
 Date Received: 11/06/2009

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

Sample Name: MW-7A  
 Lab Code: J0905509-003  
 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	11/11/09	11/12/09	JWG0903759	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/11/09	11/12/09	JWG0903759	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	111	77-150	11/12/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** 11/05/2009  
**Date Received:** 11/06/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-7C  
**Lab Code:** J0905509-004  
**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	11/11/09	11/12/09	JWG0903759	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/11/09	11/12/09	JWG0903759	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	104	77-150	11/12/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** 11/05/2009  
**Date Received:** 11/06/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-8A  
**Lab Code:** J0905509-005  
**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	11/11/09	11/12/09	JWG0903759	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/11/09	11/12/09	JWG0903759	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	112	77-150	11/12/09	Acceptable

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



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** 11/05/2009  
**Date Received:** 11/06/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-8C  
**Lab Code:** J0905509-006  
**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	11/11/09	11/12/09	JWG0903759	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/11/09	11/12/09	JWG0903759	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	108	77-150	11/12/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** NA  
**Date Received:** NA

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** Method Blank  
**Lab Code:** JWG0903759-4  
**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)	0.29		0.020	0.0070	1	11/11/09	11/12/09	JWG0903759	
1,2-Dibromo-3-chloropropane (DBC)	0.28		0.020	0.0057	1	11/11/09	11/12/09	JWG0903759	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	117	77-150	11/12/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-6A  
**Lab Code:** J0905509-001

**Service Request:** J0905509  
**Date Collected:** 11/ 5/09 1525  
**Date Received:** 11/ 6/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/12/09	11/16/09 16:14
Arsenic, Total	6020	<b>0.68</b>	µg/L	0.50	0.20	1	11/12/09	11/16/09 16:14
Barium, Total	6020	<b>14.8</b>	µg/L	2.0	0.5	1	11/17/09	11/19/09 01:09
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 16:14
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/12/09	11/16/09 16:14
Chromium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/16/09 16:14
Cobalt, Total	6020	<b>0.9</b> I	µg/L	1.0	0.2	1	11/12/09	11/16/09 16:14
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/12/09	11/16/09 16:14
Iron, Total	6010B	<b>10200</b>	µg/L	50	4	1	11/11/09	11/16/09 15:40
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 16:14
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/17/09	11/18/09 16:15
Nickel, Total	6020	<b>1.3</b> I	µg/L	2.0	0.3	1	11/12/09	11/16/09 16:14
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/16/09 16:14
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/12/09	11/16/09 16:14
Sodium, Total	6010B	<b>23.3</b>	mg/L	0.50	0.02	1	11/11/09	11/16/09 15:39
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 16:14
Vanadium, Total	6020	<b>1.3</b> I	µg/L	5.0	1.2	1	11/12/09	11/16/09 16:14
Zinc, Total	6020	ND U	µg/L	10	4	1	11/12/09	11/16/09 16:14

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-6C  
**Lab Code:** J0905509-002

**Service Request:** J0905509  
**Date Collected:** 11/ 5/09 1458  
**Date Received:** 11/ 6/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/12/09	11/16/09 16:49
Arsenic, Total	6020	0.21 I	µg/L	0.50	0.20	1	11/12/09	11/16/09 16:49
Barium, Total	6020	21.0	µg/L	2.0	0.5	1	11/17/09	11/19/09 01:15
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 16:49
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/12/09	11/16/09 16:49
Chromium, Total	6020	1 I	µg/L	2.0	0.8	1	11/12/09	11/16/09 16:49
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 16:49
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/12/09	11/16/09 16:49
Iron, Total	6010B	479	µg/L	50	4	1	11/11/09	11/16/09 15:45
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 16:49
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/17/09	11/18/09 16:17
Nickel, Total	6020	0.3 I	µg/L	2.0	0.3	1	11/12/09	11/16/09 16:49
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/16/09 16:49
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/12/09	11/16/09 16:49
Sodium, Total	6010B	4.71	mg/L	0.50	0.02	1	11/11/09	11/16/09 15:44
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 16:49
Vanadium, Total	6020	ND U	µg/L	5.0	1.2	1	11/12/09	11/16/09 16:49
Zinc, Total	6020	ND U	µg/L	10	4	1	11/12/09	11/16/09 16:49

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-7A  
**Lab Code:** J0905509-003

**Service Request:** J0905509  
**Date Collected:** 11/ 5/09 1330  
**Date Received:** 11/ 6/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/12/09	11/16/09 16:54
Arsenic, Total	6020	<b>1.68</b>	µg/L	0.50	0.20	1	11/12/09	11/16/09 16:54
Barium, Total	6020	<b>15.4</b>	µg/L	2.0	0.5	1	11/17/09	11/19/09 01:20
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 16:54
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/12/09	11/16/09 16:54
Chromium, Total	6020	<b>1.3</b> I	µg/L	2.0	0.8	1	11/12/09	11/16/09 16:54
Cobalt, Total	6020	<b>1.8</b>	µg/L	1.0	0.2	1	11/12/09	11/16/09 16:54
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/12/09	11/16/09 16:54
Iron, Total	6010B	<b>7800</b>	µg/L	50	4	1	11/11/09	11/16/09 15:49
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 16:54
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/17/09	11/18/09 16:18
Nickel, Total	6020	<b>0.8</b> I	µg/L	2.0	0.3	1	11/12/09	11/16/09 16:54
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/16/09 16:54
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/12/09	11/16/09 16:54
Sodium, Total	6010B	<b>11.0</b>	mg/L	0.50	0.02	1	11/11/09	11/16/09 15:48
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 16:54
Vanadium, Total	6020	<b>1.5</b> I	µg/L	5.0	1.2	1	11/12/09	11/16/09 16:54
Zinc, Total	6020	ND U	µg/L	10	4	1	11/12/09	11/16/09 16:54

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-7C  
**Lab Code:** J0905509-004

**Service Request:** J0905509  
**Date Collected:** 11/ 5/09 1255  
**Date Received:** 11/ 6/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/12/09	11/16/09 16:59
Arsenic, Total	6020	0.33 I	µg/L	0.50	0.20	1	11/12/09	11/16/09 16:59
Barium, Total	6020	26.0	µg/L	2.0	0.5	1	11/17/09	11/19/09 01:25
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 16:59
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/12/09	11/16/09 16:59
Chromium, Total	6020	0.8 I	µg/L	2.0	0.8	1	11/12/09	11/16/09 16:59
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 16:59
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/12/09	11/16/09 16:59
Iron, Total	6010B	624	µg/L	50	4	1	11/11/09	11/16/09 15:53
Lead, Total	6020	0.4 I	µg/L	1.0	0.2	1	11/12/09	11/16/09 16:59
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/17/09	11/18/09 16:33
Nickel, Total	6020	0.4 I	µg/L	2.0	0.3	1	11/12/09	11/16/09 16:59
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/16/09 16:59
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/12/09	11/16/09 16:59
Sodium, Total	6010B	5.93	mg/L	0.50	0.02	1	11/11/09	11/16/09 15:52
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 16:59
Vanadium, Total	6020	ND U	µg/L	5.0	1.2	1	11/12/09	11/16/09 16:59
Zinc, Total	6020	ND U	µg/L	10	4	1	11/12/09	11/16/09 16:59

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-8A  
**Lab Code:** J0905509-005

**Service Request:** J0905509  
**Date Collected:** 11/ 5/09 0912  
**Date Received:** 11/ 6/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/12/09	11/16/09 17:04
Arsenic, Total	6020	<b>1.12</b>	µg/L	0.50	0.20	1	11/12/09	11/16/09 17:04
Barium, Total	6020	<b>49.3</b>	µg/L	2.0	0.5	1	11/17/09	11/19/09 01:30
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 17:04
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/12/09	11/16/09 17:04
Chromium, Total	6020	<b>5.2</b>	µg/L	2.0	0.8	1	11/12/09	11/16/09 17:04
Cobalt, Total	6020	<b>1.5</b>	µg/L	1.0	0.2	1	11/12/09	11/16/09 17:04
Copper, Total	6020	<b>3.9</b>	µg/L	2.0	0.3	1	11/12/09	11/16/09 17:04
Iron, Total	6010B	<b>2510</b>	µg/L	50	4	1	11/11/09	11/16/09 15:57
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 17:04
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/17/09	11/18/09 16:34
Nickel, Total	6020	<b>3.6</b>	µg/L	2.0	0.3	1	11/12/09	11/16/09 17:04
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/16/09 17:04
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/12/09	11/16/09 17:04
Sodium, Total	6010B	<b>26.0</b>	mg/L	0.50	0.02	1	11/11/09	11/16/09 15:57
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 17:04
Vanadium, Total	6020	<b>2.4</b> I	µg/L	5.0	1.2	1	11/12/09	11/16/09 17:04
Zinc, Total	6020	ND U	µg/L	10	4	1	11/12/09	11/16/09 17:04

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-8C  
**Lab Code:** J0905509-006

**Service Request:** J0905509  
**Date Collected:** 11/ 5/09 0945  
**Date Received:** 11/ 6/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/12/09	11/16/09 17:09
Arsenic, Total	6020	0.24 I	µg/L	0.50	0.20	1	11/12/09	11/16/09 17:09
Barium, Total	6020	13.9	µg/L	2.0	0.5	1	11/17/09	11/19/09 01:35
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 17:09
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/12/09	11/16/09 17:09
Chromium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/16/09 17:09
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 17:09
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/12/09	11/16/09 17:09
Iron, Total	6010B	745	µg/L	50	4	1	11/11/09	11/16/09 16:01
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 17:09
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/17/09	11/18/09 16:36
Nickel, Total	6020	ND U	µg/L	2.0	0.3	1	11/12/09	11/16/09 17:09
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/16/09 17:09
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/12/09	11/16/09 17:09
Sodium, Total	6010B	5.59	mg/L	0.50	0.02	1	11/11/09	11/16/09 16:00
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 17:09
Vanadium, Total	6020	1.4 I	µg/L	5.0	1.2	1	11/12/09	11/16/09 17:09
Zinc, Total	6020	ND U	µg/L	10	4	1	11/12/09	11/16/09 17:09

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** J0905509-MB

**Service Request:** J0905509  
**Date Collected:** NA  
**Date Received:** NA  
  
**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/12/09	11/16/09 15:30
Arsenic, Total	6020	0.40 I	µg/L	0.50	0.20	1	11/12/09	11/16/09 15:30
Barium, Total	6020	ND U	µg/L	2.0	0.5	1	11/17/09	11/19/09 00:49
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 15:30
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/12/09	11/16/09 15:30
Chromium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/16/09 15:30
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 15:30
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/12/09	11/16/09 15:30
Iron, Total	6010B	ND U	µg/L	50	4	1	11/11/09	11/16/09 14:21
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 15:30
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/17/09	11/18/09 16:08
Nickel, Total	6020	ND U	µg/L	2.0	0.3	1	11/12/09	11/16/09 15:30
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/16/09 15:30
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/12/09	11/16/09 15:30
Sodium, Total	6010B	ND U	mg/L	0.50	0.02	1	11/11/09	11/16/09 14:20
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/16/09 15:30
Vanadium, Total	6020	ND U	µg/L	5.0	1.2	1	11/12/09	11/16/09 15:30
Zinc, Total	6020	ND U	µg/L	10	4	1	11/12/09	11/16/09 15:30

**Comments:**

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Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905509  
**Date Collected :** 11/05/09  
**Date Received :** 11/06/09

Inorganic Parameters

**Sample Name :** MW-6A  
**Lab Code :** J0905509-001  
**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	0.01	1	11/10/09 13:55	1.6	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/06/09 06:57	62	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/06/09 14:18	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/10/09 15:15	110	

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905509  
**Date Collected :** 11/05/09  
**Date Received :** 11/06/09

Inorganic Parameters

**Sample Name :** MW-6C  
**Lab Code :** J0905509-002  
**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	0.01	1	11/10/09 13:55	0.090	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/06/09 06:57	6.3	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/06/09 14:33	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/10/09 15:15	34	

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905509  
**Date Collected :** 11/05/09  
**Date Received :** 11/06/09

Inorganic Parameters

**Sample Name :** MW-7A  
**Lab Code :** J0905509-003  
**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	0.01	1	11/10/09 13:55	3.5	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/06/09 06:57	31	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/06/09 14:48	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/10/09 15:15	58	

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905509  
**Date Collected :** 11/05/09  
**Date Received :** 11/06/09

Inorganic Parameters

**Sample Name :** MW-7C  
**Lab Code :** J0905509-004  
**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	0.01	1	11/10/09 13:55	0.060	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/06/09 06:57	8.8	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/06/09 15:03	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/10/09 15:15	37	

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905509  
**Date Collected :** 11/05/09  
**Date Received :** 11/06/09

Inorganic Parameters

**Sample Name :** MW-8A  
**Lab Code :** J0905509-005  
**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	0.01	1	11/10/09 13:55	4.9	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/06/09 06:57	63	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/06/09 15:18	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/10/09 15:15	150	

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905509  
**Date Collected :** 11/05/09  
**Date Received :** 11/06/09

Inorganic Parameters

**Sample Name :** MW-8C  
**Lab Code :** J0905509-006  
**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	0.01	1	11/10/09 13:55	0.080	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/06/09 06:57	8.5	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/06/09 15:33	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/10/09 15:15	35	

Analytical Report

Client : GeoSyntec Consultants  
 Project Name : JED SWDF  
 Project Number : FQ1512A.02  
 Sample Matrix : WATER

Service Request : J0905509  
 Date Collected : NA  
 Date Received : NA

Inorganic Parameters

Sample Name : Method Blank  
 Lab Code : J0905509-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	0.01	1	11/10/09 13:55	U	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/06/09 06:57	U	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/06/09 06:57	U	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/06/09 06:57	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/10/09 15:15	U	



**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509

**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-6A	J0905509-001	91	113	94	106
MW-6C	J0905509-002	91	118	94	104
MW-7A	J0905509-003	89	115	91	103
MW-7C	J0905509-004	89	117	94	102
MW-8A	J0905509-005	89	115	93	107
MW-8C	J0905509-006	87	116	96	105
Trip Blank	J0905509-007	91	116	93	102
Method Blank	JWG0903813-4	87	116	95	105
Lab Control Sample	JWG0903813-3	91	113	97	103

**Surrogate Recovery Control Limits (%)**

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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.

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Extracted:** 11/13/2009  
**Date Analyzed:** 11/13/2009

**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:** JWG0903813

Analyte Name	Lab Control Sample JWG0903813-3 Lab Control Spike			%Rec Limits
	Result	Expected	%Rec	
Chloromethane	18.6	20.0	93	67-135
Vinyl Chloride	18.4	20.0	92	78-132
Bromomethane	17.9	20.0	90	79-130
Chloroethane	18.6	20.0	93	74-126
Trichlorofluoromethane	20.6	20.0	103	74-134
1,1-Dichloroethene	21.4	20.0	107	78-130
Acetone	91.7	100	92	67-133
Iodomethane (Methyl Iodide)	99.2	100	99	68-134
Carbon Disulfide	94.6	100	95	76-138
Methylene Chloride	20.1	20.0	100	72-124
trans-1,2-Dichloroethene	21.1	20.0	106	77-124
Acrylonitrile	95.1	100	95	77-127
1,1-Dichloroethane	20.2	20.0	101	80-128
Vinyl Acetate	114	100	114	61-148
cis-1,2-Dichloroethene	20.3	20.0	101	80-126
2-Butanone (MEK)	88.1	100	88	73-127
Bromochloromethane	19.1	20.0	96	79-129
Chloroform	20.0	20.0	100	83-124
1,1,1-Trichloroethane (TCA)	19.6	20.0	98	79-124
Carbon Tetrachloride	19.9	20.0	100	81-125
Benzene	19.8	20.0	99	79-119
1,2-Dichloroethane (EDC)	19.9	20.0	99	80-124
Trichloroethene (TCE)	20.0	20.0	100	76-124
1,2-Dichloropropane	20.0	20.0	100	79-123
Dibromomethane	18.9	20.0	94	83-123
Bromodichloromethane	19.0	20.0	95	81-123
cis-1,3-Dichloropropene	19.7	20.0	98	86-123
4-Methyl-2-pentanone (MIBK)	90.3	100	90	72-136
Toluene	19.9	20.0	100	86-117
trans-1,3-Dichloropropene	18.8	20.0	94	83-124
1,1,2-Trichloroethane	19.8	20.0	99	86-114
Tetrachloroethene (PCE)	21.0	20.0	105	80-121
2-Hexanone	93.2	100	93	71-138
Dibromochloromethane	18.6	20.0	93	82-121
1,2-Dibromoethane (EDB)	18.7	20.0	94	88-117
Chlorobenzene	19.1	20.0	95	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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905509  
 Date Extracted: 11/13/2009  
 Date Analyzed: 11/13/2009

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: JWG0903813

Analyte Name	Lab Control Sample JWG0903813-3 Lab Control Spike			%Rec Limits
	Result	Expected	%Rec	
1,1,1,2-Tetrachloroethane	17.8	20.0	89	85-117
Ethylbenzene	19.8	20.0	99	90-118
m,p-Xylenes	39.5	40.0	99	86-121
o-Xylene	19.2	20.0	96	89-119
Styrene	18.9	20.0	95	89-122
Bromoform	15.4	20.0	77	68-129
1,1,2,2-Tetrachloroethane	18.6	20.0	93	83-120
1,2,3-Trichloropropane	17.5	20.0	88	83-123
1,4-Dichlorobenzene	19.8	20.0	99	83-113
trans-1,4-Dichloro-2-butene	16.6	20.0	83	53-143
1,2-Dichlorobenzene	19.2	20.0	96	84-115
1,2-Dibromo-3-chloropropane (DBCP)	15.2	20.0	76	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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905509

**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-6A	J0905509-001	113
MW-6C	J0905509-002	109
MW-7A	J0905509-003	111
MW-7C	J0905509-004	104
MW-8A	J0905509-005	112
MW-8C	J0905509-006	108
Method Blank	JWG0903759-4	117
MW-6AMS	JWG0903759-1	115
MW-6ADMS	JWG0903759-2	117
Lab Control Sample	JWG0903759-3	113

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**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.

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905509  
 Date Extracted: 11/11/2009  
 Date Analyzed: 11/12/2009

**Matrix Spike/Duplicate Matrix Spike Summary**  
**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

Sample Name: MW-6A  
 Lab Code: J0905509-001  
 Extraction Method: METHOD  
 Analysis Method: 8011

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0903759

Analyte Name	Sample Result	MW-6AMS JWG0903759-1 Matrix Spike			MW-6ADMS JWG0903759-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
1,2-Dibromoethane (EDB)	ND	0.275	0.250	110	0.278	0.250	111	65-135	1	20
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.270	0.250	108	0.278	0.250	111	65-135	3	20

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 SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Extracted:** 11/11/2009  
**Date Analyzed:** 11/12/2009

**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:** JWG0903759

Lab Control Sample  
 JWG0903759-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
1,2-Dibromoethane (EDB)	0.279	0.250	112	70-130
1,2-Dibromo-3-chloropropane (DBCP)	0.274	0.250	110	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:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** 11/5/09  
**Date Received:** 11/6/09  
**Date Analyzed:** 11/16/09

**Matrix Spike Summary  
 Inorganic Parameters**

**Sample Name:** MW-6A  
**Lab Code:** J0905509-001

**Units:** µg/L  
**Basis:** NA

**Analytical Method:** 6020  
**Prep Method:** EPA 3020A

Analyte Name	Sample Result	Matrix Spike J0905509-MS1			Duplicate Matrix Spike J0905509-DMS1			% Rec Limits	RPD	RPD Limit
		Result	Amount	% Rec	Result	Amount	% Rec			
Antimony, Total	ND	49.3	50.0	99	51.1	50.0	102	75 - 125	4	20
Arsenic, Total	0.68	47.2	50.0	93	49.0	50.0	97	75 - 125	4	20
Beryllium, Total	ND	46.5	50.0	93	48.1	50.0	96	75 - 125	3	20
Cadmium, Total	ND	47.2	50.0	94	49.3	50.0	99	75 - 125	4	20
Chromium, Total	ND	48.2	50.0	96	50.2	50.0	100	75 - 125	4	20
Cobalt, Total	0.9	48.5	50.0	95	50.4	50.0	99	75 - 125	4	20
Copper, Total	ND	45.1	50.0	90	47.2	50.0	94	75 - 125	4	20
Lead, Total	ND	50.9	50.0	102	53.1	50.0	106	75 - 125	4	20
Nickel, Total	1.3	47.6	50.0	93	48.7	50.0	95	75 - 125	2	20
Selenium, Total	ND	32.9	50.0	66 *	33.0	50.0	66 *	75 - 125	0	20
Silver, Total	ND	49.1	50.0	98	49.8	50.0	100	75 - 125	1	20
Thallium, Total	ND	50.5	50.0	101	52.3	50.0	105	75 - 125	3	20
Vanadium, Total	1.3	49.8	50.0	97	52.5	50.0	102	75 - 125	5	20
Zinc, Total	ND	87.6	100	88	92.1	100	92	75 - 125	5	20

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Collected:** 11/5/09  
**Date Received:** 11/6/09  
**Date Analyzed:** 11/18/09

**Matrix Spike Summary**  
**Mercury, Total in Liquid Waste (Manual Cold-Vapor Technique)**

**Sample Name:** MW-7A  
**Lab Code:** J0905509-003

**Units:** µg/L  
**Basis:** NA

**Analytical Method:** 7470A  
**Prep Method:** Method

Analyte Name	Sample Result	Matrix Spike J0905509-MS2			Duplicate Matrix Spike J0905509-DMS2			% Rec Limits	RPD	RPD Limit
		Result	Amount	% Rec	Result	Amount	% Rec			
Mercury, Total	ND	2.16	5.00	43 *	2.19	5.00	44 *	75 - 125	1	20

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



**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Analyzed:** 11/16/09 -  
 11/19/09

**Lab Control Sample Summary  
 Inorganic Parameters**

**Units:** µg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample J0905509-LCS			% Rec Limits
		Result	Expected	% Rec	
Antimony, Total	6020	49.1	50.0	98	80 - 120
Arsenic, Total	6020	48.3	50.0	97	80 - 120
Barium, Total	6020	49.9	50.0	100	80 - 120
Beryllium, Total	6020	48.0	50.0	96	80 - 120
Cadmium, Total	6020	48.0	50.0	96	80 - 120
Chromium, Total	6020	50.1	50.0	100	80 - 120
Cobalt, Total	6020	50.3	50.0	101	80 - 120
Copper, Total	6020	49.2	50.0	98	80 - 120
Iron, Total	6010B	1910	2000	95	80 - 120
Lead, Total	6020	51.3	50.0	103	80 - 120
Mercury, Total	7470A	5.52	5.00	110	80 - 120
Nickel, Total	6020	49.7	50.0	99	80 - 120
Selenium, Total	6020	43.7	50.0	87	80 - 120
Silver, Total	6020	51.7	50.0	103	80 - 120
Thallium, Total	6020	50.7	50.0	101	80 - 120
Vanadium, Total	6020	50.6	50.0	101	80 - 120
Zinc, Total	6020	90.9	100	91	80 - 120

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

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905509  
**Date Analyzed:** 11/16/09

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:** mg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample			% Rec Limits
		Result	Expected	% Rec	
Sodium, Total	6010B	9.65	10.0	97	80 - 120

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

QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905509  
**Date Collected :** NA  
**Date Received :** NA  
**Date Extracted :** NA  
**Date Analyzed :** 11/06-10/09

Laboratory Control Sample Summary  
 Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** J0905509-LCS  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Ammonia as Nitrogen	mg/L (ppm)	350.1	5.00	4.97	99	90-110	
Chloride	mg/L (ppm)	300.0	100	104	104	90-110	
Chloride	mg/L (ppm)	300.0	5.00	5.16	103	90-110	
Nitrate as Nitrogen	mg/L (ppm)	300.0	5.0	5.17	103	90-110	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	300	283	94	85-115	

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

Client: Geosyntec Service Request # J0905509  
 Project: JED SWDF  
 Cooler received on 11/6/09 and opened on 11/6/09 by SC  
 COURIER: CAS  UPS FEDEX DHL CLIENT Tracking # J2081512527

- |    |   |                                      |        |     |
|----|---|--------------------------------------|--------|-----|
| 1  | Were custody seals on outside of cooler?  | <input checked="" type="radio"/> Yes | No     | N/A |
| 2  | Were seals intact, signed and dated?  | <input checked="" type="radio"/> Yes | No     | N/A |
| 3  | Were custody papers properly filled out?  | <input checked="" type="radio"/> Yes | No     | N/A |
| 4  | Temperature of cooler(s) upon receipt (Should be 4 +/- 2 degrees C)   | <u>1.8</u>                           |        |     |
| 5  | Correct Temperature?  | <input checked="" type="radio"/> Yes | No     | N/A |
| 6  | Were Ice or Ice Packs present   | <input checked="" type="radio"/> Yes | No     | N/A |
| 7  | Did all bottles arrive in good condition (unbroken, etc....)?   | <input checked="" type="radio"/> Yes | No     | N/A |
| 8  | Were all bottle labels complete (sample ID, preservation, etc....)?   | <input checked="" type="radio"/> Yes | No     | N/A |
| 9  | Did all bottle labels and tags agree with custody papers?   | <input checked="" type="radio"/> Yes | No     | N/A |
| 10 | Were the correct bottles used for the tests indicated?  | <input checked="" type="radio"/> Yes | No     | N/A |
| 11 | Were all of the preserved bottles received with the appropriate preservative?   | <input checked="" type="radio"/> Yes | No     | N/A |
|    | <input checked="" type="radio"/> HNO <sub>3</sub> pH<2 <input checked="" type="radio"/> H <sub>2</sub> SO <sub>4</sub> pH<2    ZnAc <sub>2</sub> /NaOH pH>9    NaOH pH>12 <input checked="" type="radio"/> HCl pH<2 |                                      |        |     |
|    | Preservative additions noted below  |                                      |        |     |
| 12 | Were all samples received within analysis holding times?  | <input checked="" type="radio"/> Yes | No     | N/A |
| 13 | Were VOA vials checked for absence of air bubbles? If present, note below   | <input checked="" type="radio"/> Yes | No     | N/A |
| 14 | Where did the bottles originate?  | <input checked="" type="radio"/> CAS | 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: 55





# 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 # J0905509  
CAS Contact

Project Name <b>SED SWDF</b>		Project Number <b>FQ1512A.02</b>		ANALYSIS REQUESTED (Include Method Number)	
Project Manager <b>Kirk Wills</b>		Email Address <b>kwillsegeosyntec.com</b>		PRESERVATIVE <b>1 0 3 2 0</b>	
Company/Address <b>Geosyntec</b>		141055 Riveredge Dr. Tampa, FL 33637		NUMBER OF CONTAINERS <b>8260</b>	
Phone # <b>813-558-0990</b>		FAX # <b>813-558-4726</b>		<b>NH3</b>	
Sampler's Signature <i>Joe Terry</i>		Sampler's Printed Name <b>Joe Terry</b>		<b>Metals</b>	
CLIENT SAMPLE ID		LAB ID	SAMPLING DATE	TIME	MATRIX
MW-6A			11-5-09	1525	GW
MW-6C				1458	
MW-7A				1330	
MW-7C				1255	
MW-8A				0912	
MW-8C				0945	
Trip Blank			10-28-09	1100	Blank
REMARKS/ALTERNATE DESCRIPTION					
1. HCL 2. HNO3 3. H2SO4 4. NaOH 5. Zn Acetate 6. MeOH 7. NaHSO4 8. Other					
SPECIAL INSTRUCTIONS/COMMENTS <b>09309 - SED-1</b>					
TURNAROUND REQUIREMENTS <input checked="" type="checkbox"/> RUSH (SURCHARGES APPLY) <input checked="" type="checkbox"/> STANDARD		REPORT REQUIREMENTS <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 + OC and Calibration Summaries <input type="checkbox"/> IV. Data Validation Report with Raw Data <input type="checkbox"/> V. Specialized Forms / Custom Report		INVOICE INFORMATION PO# BILL TO:	
REQUESTED FAX DATE		REQUESTED REPORT DATE		Edata <input type="checkbox"/> Yes <input type="checkbox"/> No	
RECEIVED BY Signature Printed Name Firm Date/Time		RECEIVED BY Signature Printed Name Firm Date/Time		RECEIVED BY Signature Printed Name Firm Date/Time	
SAMPLE RECEIPT: CONDITION/COOLER TEMP: RELINQUISHED BY		CUSTODY SEALS: Y N RELINQUISHED BY		RELINQUISHED BY	
57 Signature <i>Joe Terry</i> Printed Name <b>Joe Terry</b> Firm <b>Geosyntec</b> Date/Time <b>11-5-09/1630</b>		Signature <i>Sham Lyth</i> Printed Name <b>Sham Lyth</b> Firm <b>ATS</b> Date/Time <b>11/6/09 0925</b>		Signature <i>Joe Terry</i> Printed Name <b>Joe Terry</b> Firm <b>Geosyntec</b> Date/Time <b>11-5-09/1630</b>	

November 30, 2009

Service Request No: J0905564

Kirk Wills  
GeoSyntec Consultants  
14055 Riveredge Drive  
Suite 300  
Tampa, FL 33637

**Laboratory Results for: JED SWDF**

Dear Kirk:

Enclosed are the results of the sample(s) submitted to our laboratory on November 10, 2009. For your reference, these analyses have been assigned our service request number **J0905564**.

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.

Please contact me 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 Manager

Page 1 of 89

COLUMBIA ANALYTICAL SERVICES, INC.

Client: GeoSyntec Consultants  
Project: JED SWDF  
Sample Matrix: Water

Service Request No.: J0905564  
Date Received: 11/10/09

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

Eleven water samples and one trip blank were received for analysis at Columbia Analytical Services on 11/10/09. 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. No problems were observed.

EDB and DBCP by GC-ECD

The samples were analyzed for EDB and DBCP using EPA Method 8011. The following observations were made regarding this delivery group.

Method Blank Exceptions

Due to an inadvertent analyst error, the spiking mixture was added to Method Blank JWG0903759-4. No target analytes were detected in the associated field samples. It is the opinion of CAS that the data is not significantly affected and no further corrective action was necessary.

Metals by ICP-MS/ICP-OES/CVAA

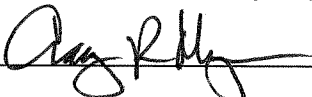
The samples were analyzed for Total and Dissolved Metals using EPA Methods 6020/6010B/7470A. No problems were observed.

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 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

Approved by  Date 11/30/09





## 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 SWDF

Service Request: J0905564

### SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J0905564-001	MW-1A	11/9/09	15:30
J0905564-002	MW-1C	11/9/09	15:40
J0905564-003	MW-2A	11/9/09	14:15
J0905564-004	MW-2C	11/9/09	14:20
J0905564-005	MW-3A	11/9/09	12:35
J0905564-006	MW-3C	11/9/09	12:35
J0905564-007	MW-4A	11/9/09	10:55
J0905564-008	MW-4C	11/9/09	11:20
J0905564-009	MW-5A	11/9/09	09:32
J0905564-010	MW-5C	11/9/09	09:00
J0905564-011	EB	11/9/09	11:40
J0905564-012	Trip Blank	11/9/09	00:00

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF  
 Sample Matrix: Water

Service Request: J0905564  
 Date Collected: 11/09/2009  
 Date Received: 11/10/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-1A  
 Lab Code: J0905564-001  
 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	11/15/09	11/15/09	JWG0903834	
Vinyl Chloride	ND	U	1.0	0.25	1	11/15/09	11/15/09	JWG0903834	
Bromomethane	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroethane	ND	U	5.0	0.19	1	11/15/09	11/15/09	JWG0903834	
Trichlorofluoromethane	ND	U	20	0.25	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/15/09	11/15/09	JWG0903834	
Acetone	ND	U	50	2.4	1	11/15/09	11/15/09	JWG0903834	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/15/09	11/15/09	JWG0903834	
Carbon Disulfide	ND	U	10	0.84	1	11/15/09	11/15/09	JWG0903834	
Methylene Chloride	ND	U	5.0	0.72	1	11/15/09	11/15/09	JWG0903834	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/15/09	11/15/09	JWG0903834	
Acrylonitrile	ND	U	10	0.59	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/15/09	11/15/09	JWG0903834	
Vinyl Acetate	ND	U	10	0.60	1	11/15/09	11/15/09	JWG0903834	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
2-Butanone (MEK)	ND	U	10	0.56	1	11/15/09	11/15/09	JWG0903834	
Bromochloromethane	ND	U	5.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroform	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/15/09	11/15/09	JWG0903834	
<b>Benzene</b>	<b>0.56</b>	<b>I</b>	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/15/09	11/15/09	JWG0903834	
Dibromomethane	ND	U	5.0	0.12	1	11/15/09	11/15/09	JWG0903834	
Bromodichloromethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/15/09	11/15/09	JWG0903834	
Toluene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/15/09	11/15/09	JWG0903834	
2-Hexanone	ND	U	25	0.36	1	11/15/09	11/15/09	JWG0903834	
Dibromochloromethane	ND	U	1.0	0.11	1	11/15/09	11/15/09	JWG0903834	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-1A  
**Lab Code:** J0905564-001  
**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	11/15/09	11/15/09	JWG0903834	
Chlorobenzene	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Ethylbenzene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
m,p-Xylenes	ND	U	2.0	0.22	1	11/15/09	11/15/09	JWG0903834	
o-Xylene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Styrene	ND	U	1.0	0.051	1	11/15/09	11/15/09	JWG0903834	
Bromoform	ND	U	2.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/15/09	11/15/09	JWG0903834	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/15/09	11/15/09	JWG0903834	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/15/09	11/15/09	JWG0903834	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	109	71-122	11/15/09	Acceptable
4-Bromofluorobenzene	107	75-120	11/15/09	Acceptable
Dibromofluoromethane	98	82-116	11/15/09	Acceptable
Toluene-d8	99	88-117	11/15/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-1C  
**Lab Code:** J0905564-002  
**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	11/15/09	11/15/09	JWG0903834	
Vinyl Chloride	ND	U	1.0	0.25	1	11/15/09	11/15/09	JWG0903834	
Bromomethane	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroethane	ND	U	5.0	0.19	1	11/15/09	11/15/09	JWG0903834	
Trichlorofluoromethane	ND	U	20	0.25	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/15/09	11/15/09	JWG0903834	
Acetone	ND	U	50	2.4	1	11/15/09	11/15/09	JWG0903834	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/15/09	11/15/09	JWG0903834	
Carbon Disulfide	ND	U	10	0.84	1	11/15/09	11/15/09	JWG0903834	
Methylene Chloride	ND	U	5.0	0.72	1	11/15/09	11/15/09	JWG0903834	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/15/09	11/15/09	JWG0903834	
Acrylonitrile	ND	U	10	0.59	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/15/09	11/15/09	JWG0903834	
Vinyl Acetate	ND	U	10	0.60	1	11/15/09	11/15/09	JWG0903834	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
2-Butanone (MEK)	ND	U	10	0.56	1	11/15/09	11/15/09	JWG0903834	
Bromochloromethane	ND	U	5.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroform	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/15/09	11/15/09	JWG0903834	
Benzene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/15/09	11/15/09	JWG0903834	
Dibromomethane	ND	U	5.0	0.12	1	11/15/09	11/15/09	JWG0903834	
Bromodichloromethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/15/09	11/15/09	JWG0903834	
Toluene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/15/09	11/15/09	JWG0903834	
2-Hexanone	ND	U	25	0.36	1	11/15/09	11/15/09	JWG0903834	
Dibromochloromethane	ND	U	1.0	0.11	1	11/15/09	11/15/09	JWG0903834	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-1C  
**Lab Code:** J0905564-002  
**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	11/15/09	11/15/09	JWG0903834	
Chlorobenzene	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Ethylbenzene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
m,p-Xylenes	ND	U	2.0	0.22	1	11/15/09	11/15/09	JWG0903834	
o-Xylene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Styrene	ND	U	1.0	0.051	1	11/15/09	11/15/09	JWG0903834	
Bromoform	ND	U	2.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/15/09	11/15/09	JWG0903834	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/15/09	11/15/09	JWG0903834	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/15/09	11/15/09	JWG0903834	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	110	71-122	11/15/09	Acceptable
4-Bromofluorobenzene	109	75-120	11/15/09	Acceptable
Dibromofluoromethane	103	82-116	11/15/09	Acceptable
Toluene-d8	99	88-117	11/15/09	Acceptable

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



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF  
 Sample Matrix: Water

Service Request: J0905564  
 Date Collected: 11/09/2009  
 Date Received: 11/10/2009

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-2A  
 Lab Code: J0905564-003  
 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	0.17	1	11/15/09	11/15/09	JWG0903834	
Vinyl Chloride	ND	U	1.0	0.25	1	11/15/09	11/15/09	JWG0903834	
Bromomethane	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroethane	ND	U	5.0	0.19	1	11/15/09	11/15/09	JWG0903834	
Trichlorofluoromethane	ND	U	20	0.25	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/15/09	11/15/09	JWG0903834	
Acetone	ND	U	50	2.4	1	11/15/09	11/15/09	JWG0903834	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/15/09	11/15/09	JWG0903834	
Carbon Disulfide	ND	U	10	0.84	1	11/15/09	11/15/09	JWG0903834	
Methylene Chloride	ND	U	5.0	0.72	1	11/15/09	11/15/09	JWG0903834	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/15/09	11/15/09	JWG0903834	
Acrylonitrile	ND	U	10	0.59	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/15/09	11/15/09	JWG0903834	
Vinyl Acetate	ND	U	10	0.60	1	11/15/09	11/15/09	JWG0903834	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
2-Butanone (MEK)	ND	U	10	0.56	1	11/15/09	11/15/09	JWG0903834	
Bromochloromethane	ND	U	5.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroform	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/15/09	11/15/09	JWG0903834	
Benzene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/15/09	11/15/09	JWG0903834	
Dibromomethane	ND	U	5.0	0.12	1	11/15/09	11/15/09	JWG0903834	
Bromodichloromethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/15/09	11/15/09	JWG0903834	
Toluene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/15/09	11/15/09	JWG0903834	
2-Hexanone	ND	U	25	0.36	1	11/15/09	11/15/09	JWG0903834	
Dibromochloromethane	ND	U	1.0	0.11	1	11/15/09	11/15/09	JWG0903834	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-2A  
**Lab Code:** J0905564-003  
**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	0.18	1	11/15/09	11/15/09	JWG0903834	
Chlorobenzene	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Ethylbenzene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
m,p-Xylenes	ND	U	2.0	0.22	1	11/15/09	11/15/09	JWG0903834	
o-Xylene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Styrene	ND	U	1.0	0.051	1	11/15/09	11/15/09	JWG0903834	
Bromoform	ND	U	2.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/15/09	11/15/09	JWG0903834	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/15/09	11/15/09	JWG0903834	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/15/09	11/15/09	JWG0903834	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	106	71-122	11/15/09	Acceptable
4-Bromofluorobenzene	104	75-120	11/15/09	Acceptable
Dibromofluoromethane	101	82-116	11/15/09	Acceptable
Toluene-d8	93	88-117	11/15/09	Acceptable

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-2C  
**Lab Code:** J0905564-004  
**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	0.17	1	11/15/09	11/15/09	JWG0903834	
Vinyl Chloride	ND	U	1.0	0.25	1	11/15/09	11/15/09	JWG0903834	
Bromomethane	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroethane	ND	U	5.0	0.19	1	11/15/09	11/15/09	JWG0903834	
Trichlorofluoromethane	ND	U	20	0.25	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/15/09	11/15/09	JWG0903834	
Acetone	ND	U	50	2.4	1	11/15/09	11/15/09	JWG0903834	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/15/09	11/15/09	JWG0903834	
Carbon Disulfide	ND	U	10	0.84	1	11/15/09	11/15/09	JWG0903834	
Methylene Chloride	ND	U	5.0	0.72	1	11/15/09	11/15/09	JWG0903834	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/15/09	11/15/09	JWG0903834	
Acrylonitrile	ND	U	10	0.59	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/15/09	11/15/09	JWG0903834	
Vinyl Acetate	ND	U	10	0.60	1	11/15/09	11/15/09	JWG0903834	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
2-Butanone (MEK)	ND	U	10	0.56	1	11/15/09	11/15/09	JWG0903834	
Bromochloromethane	ND	U	5.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroform	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/15/09	11/15/09	JWG0903834	
Benzene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/15/09	11/15/09	JWG0903834	
Dibromomethane	ND	U	5.0	0.12	1	11/15/09	11/15/09	JWG0903834	
Bromodichloromethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/15/09	11/15/09	JWG0903834	
Toluene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/15/09	11/15/09	JWG0903834	
2-Hexanone	ND	U	25	0.36	1	11/15/09	11/15/09	JWG0903834	
Dibromochloromethane	ND	U	1.0	0.11	1	11/15/09	11/15/09	JWG0903834	

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-2C  
**Lab Code:** J0905564-004  
**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	0.18	1	11/15/09	11/15/09	JWG0903834	
Chlorobenzene	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Ethylbenzene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
m,p-Xylenes	ND	U	2.0	0.22	1	11/15/09	11/15/09	JWG0903834	
o-Xylene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Styrene	ND	U	1.0	0.051	1	11/15/09	11/15/09	JWG0903834	
Bromoform	ND	U	2.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/15/09	11/15/09	JWG0903834	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/15/09	11/15/09	JWG0903834	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/15/09	11/15/09	JWG0903834	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	109	71-122	11/15/09	Acceptable
4-Bromofluorobenzene	104	75-120	11/15/09	Acceptable
Dibromofluoromethane	97	82-116	11/15/09	Acceptable
Toluene-d8	97	88-117	11/15/09	Acceptable

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF  
 Sample Matrix: Water

Service Request: J0905564  
 Date Collected: 11/09/2009  
 Date Received: 11/10/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-3A  
 Lab Code: J0905564-005  
 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	0.17	1	11/15/09	11/15/09	JWG0903834	
Vinyl Chloride	ND	U	1.0	0.25	1	11/15/09	11/15/09	JWG0903834	
Bromomethane	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroethane	ND	U	5.0	0.19	1	11/15/09	11/15/09	JWG0903834	
Trichlorofluoromethane	ND	U	20	0.25	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/15/09	11/15/09	JWG0903834	
Acetone	ND	U	50	2.4	1	11/15/09	11/15/09	JWG0903834	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/15/09	11/15/09	JWG0903834	
Carbon Disulfide	ND	U	10	0.84	1	11/15/09	11/15/09	JWG0903834	
Methylene Chloride	ND	U	5.0	0.72	1	11/15/09	11/15/09	JWG0903834	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/15/09	11/15/09	JWG0903834	
Acrylonitrile	ND	U	10	0.59	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/15/09	11/15/09	JWG0903834	
Vinyl Acetate	ND	U	10	0.60	1	11/15/09	11/15/09	JWG0903834	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
2-Butanone (MEK)	ND	U	10	0.56	1	11/15/09	11/15/09	JWG0903834	
Bromochloromethane	ND	U	5.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroform	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/15/09	11/15/09	JWG0903834	
<b>Benzene</b>	<b>0.75</b>	<b>I</b>	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/15/09	11/15/09	JWG0903834	
Dibromomethane	ND	U	5.0	0.12	1	11/15/09	11/15/09	JWG0903834	
Bromodichloromethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/15/09	11/15/09	JWG0903834	
Toluene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/15/09	11/15/09	JWG0903834	
2-Hexanone	ND	U	25	0.36	1	11/15/09	11/15/09	JWG0903834	
Dibromochloromethane	ND	U	1.0	0.11	1	11/15/09	11/15/09	JWG0903834	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-3A  
**Lab Code:** J0905564-005  
**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	0.18	1	11/15/09	11/15/09	JWG0903834	
Chlorobenzene	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Ethylbenzene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
m,p-Xylenes	ND	U	2.0	0.22	1	11/15/09	11/15/09	JWG0903834	
o-Xylene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Styrene	ND	U	1.0	0.051	1	11/15/09	11/15/09	JWG0903834	
Bromoform	ND	U	2.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/15/09	11/15/09	JWG0903834	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/15/09	11/15/09	JWG0903834	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/15/09	11/15/09	JWG0903834	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	106	71-122	11/15/09	Acceptable
4-Bromofluorobenzene	105	75-120	11/15/09	Acceptable
Dibromofluoromethane	96	82-116	11/15/09	Acceptable
Toluene-d8	96	88-117	11/15/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-3C  
**Lab Code:** J0905564-006  
**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	0.17	1	11/15/09	11/15/09	JWG0903834	
Vinyl Chloride	ND	U	1.0	0.25	1	11/15/09	11/15/09	JWG0903834	
Bromomethane	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroethane	ND	U	5.0	0.19	1	11/15/09	11/15/09	JWG0903834	
Trichlorofluoromethane	ND	U	20	0.25	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/15/09	11/15/09	JWG0903834	
Acetone	ND	U	50	2.4	1	11/15/09	11/15/09	JWG0903834	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/15/09	11/15/09	JWG0903834	
Carbon Disulfide	ND	U	10	0.84	1	11/15/09	11/15/09	JWG0903834	
Methylene Chloride	ND	U	5.0	0.72	1	11/15/09	11/15/09	JWG0903834	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/15/09	11/15/09	JWG0903834	
Acrylonitrile	ND	U	10	0.59	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/15/09	11/15/09	JWG0903834	
Vinyl Acetate	ND	U	10	0.60	1	11/15/09	11/15/09	JWG0903834	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
2-Butanone (MEK)	ND	U	10	0.56	1	11/15/09	11/15/09	JWG0903834	
Bromochloromethane	ND	U	5.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroform	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/15/09	11/15/09	JWG0903834	
Benzene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/15/09	11/15/09	JWG0903834	
Dibromomethane	ND	U	5.0	0.12	1	11/15/09	11/15/09	JWG0903834	
Bromodichloromethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/15/09	11/15/09	JWG0903834	
Toluene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/15/09	11/15/09	JWG0903834	
2-Hexanone	ND	U	25	0.36	1	11/15/09	11/15/09	JWG0903834	
Dibromochloromethane	ND	U	1.0	0.11	1	11/15/09	11/15/09	JWG0903834	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF  
 Sample Matrix: Water

Service Request: J0905564  
 Date Collected: 11/09/2009  
 Date Received: 11/10/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-3C  
 Lab Code: J0905564-006  
 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	0.18	1	11/15/09	11/15/09	JWG0903834	
Chlorobenzene	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Ethylbenzene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
m,p-Xylenes	ND	U	2.0	0.22	1	11/15/09	11/15/09	JWG0903834	
o-Xylene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Styrene	ND	U	1.0	0.051	1	11/15/09	11/15/09	JWG0903834	
Bromoform	ND	U	2.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/15/09	11/15/09	JWG0903834	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/15/09	11/15/09	JWG0903834	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/15/09	11/15/09	JWG0903834	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	113	71-122	11/15/09	Acceptable
4-Bromofluorobenzene	103	75-120	11/15/09	Acceptable
Dibromofluoromethane	104	82-116	11/15/09	Acceptable
Toluene-d8	101	88-117	11/15/09	Acceptable

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



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF  
 Sample Matrix: Water

Service Request: J0905564  
 Date Collected: 11/09/2009  
 Date Received: 11/10/2009

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-4A  
 Lab Code: J0905564-007  
 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	0.17	1	11/15/09	11/15/09	JWG0903834	
Vinyl Chloride	ND	U	1.0	0.25	1	11/15/09	11/15/09	JWG0903834	
Bromomethane	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroethane	ND	U	5.0	0.19	1	11/15/09	11/15/09	JWG0903834	
Trichlorofluoromethane	ND	U	20	0.25	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/15/09	11/15/09	JWG0903834	
Acetone	ND	U	50	2.4	1	11/15/09	11/15/09	JWG0903834	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/15/09	11/15/09	JWG0903834	
Carbon Disulfide	ND	U	10	0.84	1	11/15/09	11/15/09	JWG0903834	
Methylene Chloride	ND	U	5.0	0.72	1	11/15/09	11/15/09	JWG0903834	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/15/09	11/15/09	JWG0903834	
Acrylonitrile	ND	U	10	0.59	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/15/09	11/15/09	JWG0903834	
Vinyl Acetate	ND	U	10	0.60	1	11/15/09	11/15/09	JWG0903834	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
2-Butanone (MEK)	ND	U	10	0.56	1	11/15/09	11/15/09	JWG0903834	
Bromochloromethane	ND	U	5.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroform	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/15/09	11/15/09	JWG0903834	
Benzene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/15/09	11/15/09	JWG0903834	
Dibromomethane	ND	U	5.0	0.12	1	11/15/09	11/15/09	JWG0903834	
Bromodichloromethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/15/09	11/15/09	JWG0903834	
Toluene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/15/09	11/15/09	JWG0903834	
2-Hexanone	ND	U	25	0.36	1	11/15/09	11/15/09	JWG0903834	
Dibromochloromethane	ND	U	1.0	0.11	1	11/15/09	11/15/09	JWG0903834	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-4A  
**Lab Code:** J0905564-007  
**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	0.18	1	11/15/09	11/15/09	JWG0903834	
Chlorobenzene	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
<b>Ethylbenzene</b>	<b>0.19</b>	<b>I</b>	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
m,p-Xylenes	ND	U	2.0	0.22	1	11/15/09	11/15/09	JWG0903834	
o-Xylene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Styrene	ND	U	1.0	0.051	1	11/15/09	11/15/09	JWG0903834	
Bromoform	ND	U	2.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/15/09	11/15/09	JWG0903834	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/15/09	11/15/09	JWG0903834	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/15/09	11/15/09	JWG0903834	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	107	71-122	11/15/09	Acceptable
4-Bromofluorobenzene	101	75-120	11/15/09	Acceptable
Dibromofluoromethane	98	82-116	11/15/09	Acceptable
Toluene-d8	96	88-117	11/15/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-4C  
**Lab Code:** J0905564-008  
**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	0.17	1	11/15/09	11/15/09	JWG0903834	
Vinyl Chloride	ND	U	1.0	0.25	1	11/15/09	11/15/09	JWG0903834	
Bromomethane	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroethane	ND	U	5.0	0.19	1	11/15/09	11/15/09	JWG0903834	
Trichlorofluoromethane	ND	U	20	0.25	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/15/09	11/15/09	JWG0903834	
Acetone	ND	U	50	2.4	1	11/15/09	11/15/09	JWG0903834	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/15/09	11/15/09	JWG0903834	
Carbon Disulfide	ND	U	10	0.84	1	11/15/09	11/15/09	JWG0903834	
Methylene Chloride	ND	U	5.0	0.72	1	11/15/09	11/15/09	JWG0903834	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/15/09	11/15/09	JWG0903834	
Acrylonitrile	ND	U	10	0.59	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/15/09	11/15/09	JWG0903834	
Vinyl Acetate	ND	U	10	0.60	1	11/15/09	11/15/09	JWG0903834	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
2-Butanone (MEK)	ND	U	10	0.56	1	11/15/09	11/15/09	JWG0903834	
Bromochloromethane	ND	U	5.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroform	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/15/09	11/15/09	JWG0903834	
Benzene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/15/09	11/15/09	JWG0903834	
Dibromomethane	ND	U	5.0	0.12	1	11/15/09	11/15/09	JWG0903834	
Bromodichloromethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/15/09	11/15/09	JWG0903834	
Toluene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/15/09	11/15/09	JWG0903834	
2-Hexanone	ND	U	25	0.36	1	11/15/09	11/15/09	JWG0903834	
Dibromochloromethane	ND	U	1.0	0.11	1	11/15/09	11/15/09	JWG0903834	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-4C  
**Lab Code:** J0905564-008  
**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	0.18	1	11/15/09	11/15/09	JWG0903834	
Chlorobenzene	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Ethylbenzene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
m,p-Xylenes	ND	U	2.0	0.22	1	11/15/09	11/15/09	JWG0903834	
o-Xylene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Styrene	ND	U	1.0	0.051	1	11/15/09	11/15/09	JWG0903834	
Bromoform	ND	U	2.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/15/09	11/15/09	JWG0903834	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/15/09	11/15/09	JWG0903834	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/15/09	11/15/09	JWG0903834	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	108	71-122	11/15/09	Acceptable
4-Bromofluorobenzene	105	75-120	11/15/09	Acceptable
Dibromofluoromethane	99	82-116	11/15/09	Acceptable
Toluene-d8	95	88-117	11/15/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-5A  
**Lab Code:** J0905564-009  
**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	0.17	1	11/15/09	11/15/09	JWG0903834	
Vinyl Chloride	ND	U	1.0	0.25	1	11/15/09	11/15/09	JWG0903834	
Bromomethane	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroethane	ND	U	5.0	0.19	1	11/15/09	11/15/09	JWG0903834	
Trichlorofluoromethane	ND	U	20	0.25	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/15/09	11/15/09	JWG0903834	
Acetone	ND	U	50	2.4	1	11/15/09	11/15/09	JWG0903834	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/15/09	11/15/09	JWG0903834	
Carbon Disulfide	ND	U	10	0.84	1	11/15/09	11/15/09	JWG0903834	
Methylene Chloride	ND	U	5.0	0.72	1	11/15/09	11/15/09	JWG0903834	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/15/09	11/15/09	JWG0903834	
Acrylonitrile	ND	U	10	0.59	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/15/09	11/15/09	JWG0903834	
Vinyl Acetate	ND	U	10	0.60	1	11/15/09	11/15/09	JWG0903834	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
2-Butanone (MEK)	ND	U	10	0.56	1	11/15/09	11/15/09	JWG0903834	
Bromochloromethane	ND	U	5.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroform	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/15/09	11/15/09	JWG0903834	
Benzene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/15/09	11/15/09	JWG0903834	
Dibromomethane	ND	U	5.0	0.12	1	11/15/09	11/15/09	JWG0903834	
Bromodichloromethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/15/09	11/15/09	JWG0903834	
Toluene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/15/09	11/15/09	JWG0903834	
2-Hexanone	ND	U	25	0.36	1	11/15/09	11/15/09	JWG0903834	
Dibromochloromethane	ND	U	1.0	0.11	1	11/15/09	11/15/09	JWG0903834	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-5A  
**Lab Code:** J0905564-009  
**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	0.18	1	11/15/09	11/15/09	JWG0903834	
Chlorobenzene	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Ethylbenzene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
m,p-Xylenes	ND	U	2.0	0.22	1	11/15/09	11/15/09	JWG0903834	
o-Xylene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Styrene	ND	U	1.0	0.051	1	11/15/09	11/15/09	JWG0903834	
Bromoform	ND	U	2.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/15/09	11/15/09	JWG0903834	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/15/09	11/15/09	JWG0903834	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/15/09	11/15/09	JWG0903834	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	106	71-122	11/15/09	Acceptable
4-Bromofluorobenzene	103	75-120	11/15/09	Acceptable
Dibromofluoromethane	98	82-116	11/15/09	Acceptable
Toluene-d8	95	88-117	11/15/09	Acceptable

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

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF  
 Sample Matrix: Water

Service Request: J0905564  
 Date Collected: 11/09/2009  
 Date Received: 11/10/2009

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-5C  
 Lab Code: J0905564-010  
 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	0.17	1	11/15/09	11/15/09	JWG0903834	
Vinyl Chloride	ND	U	1.0	0.25	1	11/15/09	11/15/09	JWG0903834	
Bromomethane	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroethane	ND	U	5.0	0.19	1	11/15/09	11/15/09	JWG0903834	
Trichlorofluoromethane	ND	U	20	0.25	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/15/09	11/15/09	JWG0903834	
Acetone	ND	U	50	2.4	1	11/15/09	11/15/09	JWG0903834	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/15/09	11/15/09	JWG0903834	
Carbon Disulfide	ND	U	10	0.84	1	11/15/09	11/15/09	JWG0903834	
Methylene Chloride	ND	U	5.0	0.72	1	11/15/09	11/15/09	JWG0903834	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/15/09	11/15/09	JWG0903834	
Acrylonitrile	ND	U	10	0.59	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/15/09	11/15/09	JWG0903834	
Vinyl Acetate	ND	U	10	0.60	1	11/15/09	11/15/09	JWG0903834	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
2-Butanone (MEK)	ND	U	10	0.56	1	11/15/09	11/15/09	JWG0903834	
Bromochloromethane	ND	U	5.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroform	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/15/09	11/15/09	JWG0903834	
Benzene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/15/09	11/15/09	JWG0903834	
Dibromomethane	ND	U	5.0	0.12	1	11/15/09	11/15/09	JWG0903834	
Bromodichloromethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/15/09	11/15/09	JWG0903834	
Toluene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/15/09	11/15/09	JWG0903834	
2-Hexanone	ND	U	25	0.36	1	11/15/09	11/15/09	JWG0903834	
Dibromochloromethane	ND	U	1.0	0.11	1	11/15/09	11/15/09	JWG0903834	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-5C  
**Lab Code:** J0905564-010  
**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	0.18	1	11/15/09	11/15/09	JWG0903834	
Chlorobenzene	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Ethylbenzene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
m,p-Xylenes	ND	U	2.0	0.22	1	11/15/09	11/15/09	JWG0903834	
o-Xylene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Styrene	ND	U	1.0	0.051	1	11/15/09	11/15/09	JWG0903834	
Bromoform	ND	U	2.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/15/09	11/15/09	JWG0903834	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/15/09	11/15/09	JWG0903834	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/15/09	11/15/09	JWG0903834	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	106	71-122	11/15/09	Acceptable
4-Bromofluorobenzene	104	75-120	11/15/09	Acceptable
Dibromofluoromethane	97	82-116	11/15/09	Acceptable
Toluene-d8	96	88-117	11/15/09	Acceptable

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



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF  
 Sample Matrix: Water

Service Request: J0905564  
 Date Collected: 11/09/2009  
 Date Received: 11/10/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: EB  
 Lab Code: J0905564-011  
 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	0.17	1	11/15/09	11/15/09	JWG0903834	
Vinyl Chloride	ND	U	1.0	0.25	1	11/15/09	11/15/09	JWG0903834	
Bromomethane	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroethane	ND	U	5.0	0.19	1	11/15/09	11/15/09	JWG0903834	
Trichlorofluoromethane	ND	U	20	0.25	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/15/09	11/15/09	JWG0903834	
Acetone	ND	U	50	2.4	1	11/15/09	11/15/09	JWG0903834	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/15/09	11/15/09	JWG0903834	
Carbon Disulfide	ND	U	10	0.84	1	11/15/09	11/15/09	JWG0903834	
Methylene Chloride	ND	U	5.0	0.72	1	11/15/09	11/15/09	JWG0903834	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/15/09	11/15/09	JWG0903834	
Acrylonitrile	ND	U	10	0.59	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/15/09	11/15/09	JWG0903834	
Vinyl Acetate	ND	U	10	0.60	1	11/15/09	11/15/09	JWG0903834	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
2-Butanone (MEK)	ND	U	10	0.56	1	11/15/09	11/15/09	JWG0903834	
Bromochloromethane	ND	U	5.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroform	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/15/09	11/15/09	JWG0903834	
Benzene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/15/09	11/15/09	JWG0903834	
Dibromomethane	ND	U	5.0	0.12	1	11/15/09	11/15/09	JWG0903834	
Bromodichloromethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/15/09	11/15/09	JWG0903834	
Toluene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/15/09	11/15/09	JWG0903834	
2-Hexanone	ND	U	25	0.36	1	11/15/09	11/15/09	JWG0903834	
Dibromochloromethane	ND	U	1.0	0.11	1	11/15/09	11/15/09	JWG0903834	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** EB  
**Lab Code:** J0905564-011  
**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	0.18	1	11/15/09	11/15/09	JWG0903834	
Chlorobenzene	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Ethylbenzene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
m,p-Xylenes	ND	U	2.0	0.22	1	11/15/09	11/15/09	JWG0903834	
o-Xylene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Styrene	ND	U	1.0	0.051	1	11/15/09	11/15/09	JWG0903834	
Bromoform	ND	U	2.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/15/09	11/15/09	JWG0903834	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/15/09	11/15/09	JWG0903834	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/15/09	11/15/09	JWG0903834	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	104	71-122	11/15/09	Acceptable
4-Bromofluorobenzene	107	75-120	11/15/09	Acceptable
Dibromofluoromethane	96	82-116	11/15/09	Acceptable
Toluene-d8	93	88-117	11/15/09	Acceptable

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

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF  
 Sample Matrix: Water

Service Request: J0905564  
 Date Collected: 11/09/2009  
 Date Received: 11/10/2009

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Trip Blank  
 Lab Code: J0905564-012  
 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	0.17	1	11/15/09	11/15/09	JWG0903834	
Vinyl Chloride	ND	U	1.0	0.25	1	11/15/09	11/15/09	JWG0903834	
Bromomethane	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroethane	ND	U	5.0	0.19	1	11/15/09	11/15/09	JWG0903834	
Trichlorofluoromethane	ND	U	20	0.25	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/15/09	11/15/09	JWG0903834	
Acetone	ND	U	50	2.4	1	11/15/09	11/15/09	JWG0903834	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/15/09	11/15/09	JWG0903834	
Carbon Disulfide	ND	U	10	0.84	1	11/15/09	11/15/09	JWG0903834	
Methylene Chloride	ND	U	5.0	0.72	1	11/15/09	11/15/09	JWG0903834	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/15/09	11/15/09	JWG0903834	
Acrylonitrile	ND	U	10	0.59	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/15/09	11/15/09	JWG0903834	
Vinyl Acetate	ND	U	10	0.60	1	11/15/09	11/15/09	JWG0903834	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
2-Butanone (MEK)	ND	U	10	0.56	1	11/15/09	11/15/09	JWG0903834	
Bromochloromethane	ND	U	5.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroform	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/15/09	11/15/09	JWG0903834	
Benzene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/15/09	11/15/09	JWG0903834	
Dibromomethane	ND	U	5.0	0.12	1	11/15/09	11/15/09	JWG0903834	
Bromodichloromethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/15/09	11/15/09	JWG0903834	
Toluene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/15/09	11/15/09	JWG0903834	
2-Hexanone	ND	U	25	0.36	1	11/15/09	11/15/09	JWG0903834	
Dibromochloromethane	ND	U	1.0	0.11	1	11/15/09	11/15/09	JWG0903834	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** Trip Blank  
**Lab Code:** J0905564-012  
**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	0.18	1	11/15/09	11/15/09	JWG0903834	
Chlorobenzene	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Ethylbenzene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
m,p-Xylenes	ND	U	2.0	0.22	1	11/15/09	11/15/09	JWG0903834	
o-Xylene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Styrene	ND	U	1.0	0.051	1	11/15/09	11/15/09	JWG0903834	
Bromoform	ND	U	2.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/15/09	11/15/09	JWG0903834	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/15/09	11/15/09	JWG0903834	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/15/09	11/15/09	JWG0903834	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	105	71-122	11/15/09	Acceptable
4-Bromofluorobenzene	103	75-120	11/15/09	Acceptable
Dibromofluoromethane	96	82-116	11/15/09	Acceptable
Toluene-d8	95	88-117	11/15/09	Acceptable

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF  
 Sample Matrix: Water

Service Request: J0905564  
 Date Collected: NA  
 Date Received: NA

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Method Blank  
 Lab Code: JWG0903834-4  
 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	11/15/09	11/15/09	JWG0903834	
Vinyl Chloride	ND	U	1.0	0.25	1	11/15/09	11/15/09	JWG0903834	
Bromomethane	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroethane	ND	U	5.0	0.19	1	11/15/09	11/15/09	JWG0903834	
Trichlorofluoromethane	ND	U	20	0.25	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/15/09	11/15/09	JWG0903834	
Acetone	ND	U	50	2.4	1	11/15/09	11/15/09	JWG0903834	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/15/09	11/15/09	JWG0903834	
Carbon Disulfide	ND	U	10	0.84	1	11/15/09	11/15/09	JWG0903834	
Methylene Chloride	ND	U	5.0	0.72	1	11/15/09	11/15/09	JWG0903834	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/15/09	11/15/09	JWG0903834	
Acrylonitrile	ND	U	10	0.59	1	11/15/09	11/15/09	JWG0903834	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/15/09	11/15/09	JWG0903834	
Vinyl Acetate	ND	U	10	0.60	1	11/15/09	11/15/09	JWG0903834	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
2-Butanone (MEK)	ND	U	10	0.56	1	11/15/09	11/15/09	JWG0903834	
Bromochloromethane	ND	U	5.0	0.14	1	11/15/09	11/15/09	JWG0903834	
Chloroform	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/15/09	11/15/09	JWG0903834	
Benzene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/15/09	11/15/09	JWG0903834	
Dibromomethane	ND	U	5.0	0.12	1	11/15/09	11/15/09	JWG0903834	
Bromodichloromethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/15/09	11/15/09	JWG0903834	
Toluene	ND	U	1.0	0.52	1	11/15/09	11/15/09	JWG0903834	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/15/09	11/15/09	JWG0903834	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/15/09	11/15/09	JWG0903834	
2-Hexanone	ND	U	25	0.36	1	11/15/09	11/15/09	JWG0903834	
Dibromochloromethane	ND	U	1.0	0.11	1	11/15/09	11/15/09	JWG0903834	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** NA  
**Date Received:** NA

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** Method Blank  
**Lab Code:** JWG0903834-4  
**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	11/15/09	11/15/09	JWG0903834	
Chlorobenzene	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Ethylbenzene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
m,p-Xylenes	ND	U	2.0	0.22	1	11/15/09	11/15/09	JWG0903834	
o-Xylene	ND	U	1.0	0.10	1	11/15/09	11/15/09	JWG0903834	
Styrene	ND	U	1.0	0.051	1	11/15/09	11/15/09	JWG0903834	
Bromoform	ND	U	2.0	0.12	1	11/15/09	11/15/09	JWG0903834	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/15/09	11/15/09	JWG0903834	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/15/09	11/15/09	JWG0903834	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/15/09	11/15/09	JWG0903834	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/15/09	11/15/09	JWG0903834	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/15/09	11/15/09	JWG0903834	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/15/09	11/15/09	JWG0903834	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	107	71-122	11/15/09	Acceptable
4-Bromofluorobenzene	110	75-120	11/15/09	Acceptable
Dibromofluoromethane	101	82-116	11/15/09	Acceptable
Toluene-d8	102	88-117	11/15/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-1A  
**Lab Code:** J0905564-001  
**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	11/11/09	11/13/09	JWG0903759	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	0.020	0.0057	1	11/11/09	11/13/09	JWG0903759	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	114	77-150	11/13/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-1C  
**Lab Code:** J0905564-002  
**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	11/11/09	11/13/09	JWG0903759	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	0.020	0.0057	1	11/11/09	11/13/09	JWG0903759	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	111	77-150	11/13/09	Acceptable

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



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-2A  
**Lab Code:** J0905564-003  
**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	11/11/09	11/13/09	JWG0903759	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/11/09	11/13/09	JWG0903759	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	112	77-150	11/13/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-2C **Units:** ug/L  
**Lab Code:** J0905564-004 **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	11/11/09	11/13/09	JWG0903759	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/11/09	11/13/09	JWG0903759	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	109	77-150	11/13/09	Acceptable

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF  
 Sample Matrix: Water

Service Request: J0905564  
 Date Collected: 11/09/2009  
 Date Received: 11/10/2009

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

Sample Name: MW-3A  
 Lab Code: J0905564-005  
 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	11/11/09	11/13/09	JWG0903759	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/11/09	11/13/09	JWG0903759	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	108	77-150	11/13/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-3C  
**Lab Code:** J0905564-006  
**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	11/11/09	11/13/09	JWG0903759	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/11/09	11/13/09	JWG0903759	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	108	77-150	11/13/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-4A  
**Lab Code:** J0905564-007  
**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	11/11/09	11/13/09	JWG0903759	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	0.020	0.0057	1	11/11/09	11/13/09	JWG0903759	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	106	77-150	11/13/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-4C  
**Lab Code:** J0905564-008  
**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	11/11/09	11/13/09	JWG0903759	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/11/09	11/13/09	JWG0903759	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	111	77-150	11/13/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-5A  
**Lab Code:** J0905564-009  
**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	11/11/09	11/13/09	JWG0903759	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	0.020	0.0057	1	11/11/09	11/13/09	JWG0903759	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	110	77-150	11/13/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-5C  
**Lab Code:** J0905564-010  
**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	11/11/09	11/13/09	JWG0903759	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/11/09	11/13/09	JWG0903759	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	107	77-150	11/13/09	Acceptable

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



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/09/2009  
**Date Received:** 11/10/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** EB  
**Lab Code:** J0905564-011  
**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	11/11/09	11/13/09	JWG0903759	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	0.020	0.0057	1	11/11/09	11/13/09	JWG0903759	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	110	77-150	11/13/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** NA  
**Date Received:** NA

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** Method Blank  
**Lab Code:** JWG0903759-4  
**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)	0.29	0.020	0.0070	1	11/11/09	11/12/09	JWG0903759	
1,2-Dibromo-3-chloropropane (DBC)	0.28	0.020	0.0057	1	11/11/09	11/12/09	JWG0903759	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	117	77-150	11/12/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water  
**Sample Name:** MW-1A  
**Lab Code:** J0905564-001

**Service Request:** J0905564  
**Date Collected:** 11/9/09 1530  
**Date Received:** 11/10/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/12/09	11/24/09 01:30
Arsenic, Total	6020	<b>1.25</b>	µg/L	0.50	0.20	1	11/12/09	11/24/09 01:30
Barium, Total	6020	<b>9.7</b>	µg/L	2.0	0.5	1	11/12/09	11/24/09 01:30
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 01:30
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/12/09	11/24/09 01:30
Chromium, Total	6020	<b>2.3</b>	µg/L	2.0	0.8	1	11/12/09	11/24/09 01:30
Cobalt, Total	6020	<b>0.4 I</b>	µg/L	1.0	0.2	1	11/12/09	11/24/09 01:30
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/12/09	11/24/09 01:30
Iron, Total	6010B	<b>1870</b>	µg/L	50	4	1	11/12/09	11/12/09 19:46
Lead, Total	6020	<b>0.4 I</b>	µg/L	1.0	0.2	1	11/12/09	11/24/09 01:30
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/23/09	11/23/09 17:09
Nickel, Total	6020	<b>0.6 I</b>	µg/L	2.0	0.3	1	11/12/09	11/24/09 01:30
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/24/09 01:30
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/12/09	11/24/09 01:30
Sodium, Total	6010B	<b>15.9</b>	mg/L	0.50	0.02	1	11/12/09	11/12/09 19:45
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 01:30
Vanadium, Total	6020	<b>1.9 I</b>	µg/L	5.0	1.2	1	11/12/09	11/24/09 01:30
Zinc, Total	6020	ND U	µg/L	10	4	1	11/12/09	11/24/09 01:30

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water  
**Sample Name:** MW-1C  
**Lab Code:** J0905564-002

**Service Request:** J0905564  
**Date Collected:** 11/ 9/09 1540  
**Date Received:** 11/10/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/12/09	11/24/09 01:35
Arsenic, Total	6020	0.28 I	µg/L	0.50	0.20	1	11/12/09	11/24/09 01:35
Barium, Total	6020	13.1	µg/L	2.0	0.5	1	11/12/09	11/24/09 01:35
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 01:35
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/12/09	11/24/09 01:35
Chromium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/24/09 01:35
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 01:35
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/12/09	11/24/09 01:35
Iron, Total	6010B	412	µg/L	50	4	1	11/12/09	11/12/09 20:01
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 01:35
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/23/09	11/23/09 17:11
Nickel, Total	6020	0.5 I	µg/L	2.0	0.3	1	11/12/09	11/24/09 01:35
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/24/09 01:35
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/12/09	11/24/09 01:35
Sodium, Total	6010B	4.59	mg/L	0.50	0.02	1	11/12/09	11/12/09 20:00
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 01:35
Vanadium, Total	6020	2.2 I	µg/L	5.0	1.2	1	11/12/09	11/24/09 01:35
Zinc, Total	6020	ND U	µg/L	10	4	1	11/12/09	11/24/09 01:35

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water  
**Sample Name:** MW-2A  
**Lab Code:** J0905564-003

**Service Request:** J0905564  
**Date Collected:** 11/ 9/09 1415  
**Date Received:** 11/10/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/12/09	11/24/09 01:39
Arsenic, Total	6020	<b>1.14</b>	µg/L	0.50	0.20	1	11/12/09	11/24/09 01:39
Barium, Total	6020	<b>31.9</b>	µg/L	2.0	0.5	1	11/12/09	11/24/09 01:39
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 01:39
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/12/09	11/24/09 01:39
Chromium, Total	6020	<b>4.5</b>	µg/L	2.0	0.8	1	11/12/09	11/24/09 01:39
Cobalt, Total	6020	<b>5.3</b>	µg/L	1.0	0.2	1	11/12/09	11/24/09 01:39
Copper, Total	6020	<b>0.4</b> I	µg/L	2.0	0.3	1	11/12/09	11/24/09 01:39
Iron, Total	6010B	<b>16400</b>	µg/L	50	4	1	11/12/09	11/12/09 20:04
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 01:39
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/23/09	11/23/09 17:12
Nickel, Total	6020	<b>2.6</b>	µg/L	2.0	0.3	1	11/12/09	11/24/09 01:39
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/24/09 01:39
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/12/09	11/24/09 01:39
Sodium, Total	6010B	<b>11.9</b>	mg/L	0.50	0.02	1	11/12/09	11/12/09 20:04
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 01:39
Vanadium, Total	6020	<b>1.6</b> I	µg/L	5.0	1.2	1	11/12/09	11/24/09 01:39
Zinc, Total	6020	<b>7</b> I	µg/L	10	4	1	11/12/09	11/24/09 01:39

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water  
**Sample Name:** MW-2C  
**Lab Code:** J0905564-004

**Service Request:** J0905564  
**Date Collected:** 11/ 9/09 1420  
**Date Received:** 11/10/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/12/09	11/24/09 02:19
Arsenic, Total	6020	ND U	µg/L	0.50	0.20	1	11/12/09	11/24/09 02:19
Barium, Total	6020	<b>12.2</b>	µg/L	2.0	0.5	1	11/12/09	11/24/09 02:19
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:19
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/12/09	11/24/09 02:19
Chromium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/24/09 02:19
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:19
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/12/09	11/24/09 02:19
Iron, Total	6010B	<b>489</b>	µg/L	50	4	1	11/12/09	11/12/09 20:08
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:19
Mercury, Total	7470A	<b>0.08</b> I	µg/L	0.50	0.08	1	11/23/09	11/23/09 17:14
Nickel, Total	6020	ND U	µg/L	2.0	0.3	1	11/12/09	11/24/09 02:19
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/24/09 02:19
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/12/09	11/24/09 02:19
Sodium, Total	6010B	<b>4.84</b>	mg/L	0.50	0.02	1	11/12/09	11/12/09 20:07
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:19
Vanadium, Total	6020	<b>1.5</b> I	µg/L	5.0	1.2	1	11/12/09	11/24/09 02:19
Zinc, Total	6020	ND U	µg/L	10	4	1	11/12/09	11/24/09 02:19

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water  
**Sample Name:** MW-3A  
**Lab Code:** J0905564-005

**Service Request:** J0905564  
**Date Collected:** 11/ 9/09 1235  
**Date Received:** 11/10/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/12/09	11/24/09 02:24
Arsenic, Total	6020	<b>2.26</b>	µg/L	0.50	0.20	1	11/12/09	11/24/09 02:24
Barium, Total	6020	<b>65.6</b>	µg/L	2.0	0.5	1	11/12/09	11/24/09 02:24
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:24
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/12/09	11/24/09 02:24
Chromium, Total	6020	<b>1.0 I</b>	µg/L	2.0	0.8	1	11/12/09	11/24/09 02:24
Cobalt, Total	6020	<b>1.2</b>	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:24
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/12/09	11/24/09 02:24
Iron, Total	6010B	<b>4400</b>	µg/L	50	4	1	11/12/09	11/12/09 20:17
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:24
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/23/09	11/23/09 17:26
Nickel, Total	6020	<b>2.3</b>	µg/L	2.0	0.3	1	11/12/09	11/24/09 02:24
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/24/09 02:24
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/12/09	11/24/09 02:24
Sodium, Total	6010B	<b>42.3</b>	mg/L	0.50	0.02	1	11/12/09	11/12/09 20:16
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:24
Vanadium, Total	6020	<b>2.3 I</b>	µg/L	5.0	1.2	1	11/12/09	11/24/09 02:24
Zinc, Total	6020	ND U	µg/L	10	4	1	11/12/09	11/24/09 02:24

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water  
**Sample Name:** MW-3C  
**Lab Code:** J0905564-006

**Service Request:** J0905564  
**Date Collected:** 11/ 9/09 1235  
**Date Received:** 11/10/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/12/09	11/24/09 02:28
Arsenic, Total	6020	0.42 I	µg/L	0.50	0.20	1	11/12/09	11/24/09 02:28
Barium, Total	6020	11.5	µg/L	2.0	0.5	1	11/12/09	11/24/09 02:28
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:28
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/12/09	11/24/09 02:28
Chromium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/24/09 02:28
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:28
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/12/09	11/24/09 02:28
Iron, Total	6010B	683	µg/L	50	4	1	11/12/09	11/12/09 20:21
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:28
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/23/09	11/23/09 17:27
Nickel, Total	6020	ND U	µg/L	2.0	0.3	1	11/12/09	11/24/09 02:28
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/24/09 02:28
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/12/09	11/24/09 02:28
Sodium, Total	6010B	5.09	mg/L	0.50	0.02	1	11/12/09	11/12/09 20:20
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:28
Vanadium, Total	6020	1.8 I	µg/L	5.0	1.2	1	11/12/09	11/24/09 02:28
Zinc, Total	6020	ND U	µg/L	10	4	1	11/12/09	11/24/09 02:28

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water  
**Sample Name:** MW-4A  
**Lab Code:** J0905564-007

**Service Request:** J0905564  
**Date Collected:** 11/ 9/09 1055  
**Date Received:** 11/10/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/12/09	11/24/09 02:33
Arsenic, Total	6020	<b>1.56</b>	µg/L	0.50	0.20	1	11/12/09	11/24/09 02:33
Barium, Total	6020	<b>25.2</b>	µg/L	2.0	0.5	1	11/12/09	11/24/09 02:33
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:33
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/12/09	11/24/09 02:33
Chromium, Total	6020	<b>2.4</b>	µg/L	2.0	0.8	1	11/12/09	11/24/09 02:33
Cobalt, Total	6020	<b>0.4</b> I	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:33
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/12/09	11/24/09 02:33
Iron, Total	6010B	<b>1850</b>	µg/L	50	4	5	11/12/09	11/12/09 20:24
Lead, Total	6020	<b>0.3</b> I	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:33
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/23/09	11/23/09 17:28
Nickel, Total	6020	<b>1.1</b> I	µg/L	2.0	0.3	1	11/12/09	11/24/09 02:33
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/24/09 02:33
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/12/09	11/24/09 02:33
Sodium, Total	6010B	<b>15.7</b>	mg/L	0.50	0.02	5	11/12/09	11/12/09 20:23
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:33
Vanadium, Total	6020	<b>3.0</b> I	µg/L	5.0	1.2	1	11/12/09	11/24/09 02:33
Zinc, Total	6020	ND U	µg/L	10	4	1	11/12/09	11/24/09 02:33

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water  
**Sample Name:** MW-4C  
**Lab Code:** J0905564-008

**Service Request:** J0905564  
**Date Collected:** 11/ 9/09 1120  
**Date Received:** 11/10/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Dissolved	6020	ND U	µg/L	2.0	0.4	1	11/16/09	11/18/09 23:00
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/12/09	11/24/09 02:38
Arsenic, Dissolved	6020	ND U	µg/L	0.50	0.20	1	11/16/09	11/18/09 23:00
Arsenic, Total	6020	<b>0.26</b> I	µg/L	0.50	0.20	1	11/12/09	11/24/09 02:38
Barium, Dissolved	6020	<b>8.4</b>	µg/L	2.0	0.5	1	11/16/09	11/18/09 23:00
Barium, Total	6020	<b>17.9</b>	µg/L	2.0	0.5	1	11/12/09	11/24/09 02:38
Beryllium, Dissolved	6020	ND U	µg/L	1.0	0.2	1	11/16/09	11/18/09 23:00
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:38
Cadmium, Dissolved	6020	ND U	µg/L	0.50	0.12	1	11/16/09	11/18/09 23:00
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/12/09	11/24/09 02:38
Chromium, Dissolved	6020	<b>0.9</b> I	µg/L	2.0	0.8	1	11/16/09	11/18/09 23:00
Chromium, Total	6020	<b>2.6</b>	µg/L	2.0	0.8	1	11/12/09	11/24/09 02:38
Cobalt, Dissolved	6020	ND U	µg/L	1.0	0.2	1	11/16/09	11/25/09 06:46
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:38
Copper, Dissolved	6020	<b>1.6</b> I	µg/L	2.0	0.3	1	11/16/09	11/18/09 23:00
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/12/09	11/24/09 02:38
Iron, Dissolved	6010B	<b>698</b>	µg/L	50	4	1	11/18/09	11/19/09 16:37
Iron, Total	6010B	<b>984</b>	µg/L	50	4	1	11/12/09	11/12/09 20:27
Lead, Dissolved	6020	ND U	µg/L	1.0	0.2	1	11/16/09	11/18/09 23:00
Lead, Total	6020	<b>0.3</b> I	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:38
Mercury, Dissolved	7470A	ND U	µg/L	0.50	0.08	1	11/23/09	11/23/09 17:31
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/23/09	11/23/09 17:30
Nickel, Dissolved	6020	<b>1.7</b> I	µg/L	2.0	0.3	1	11/16/09	11/18/09 23:00
Nickel, Total	6020	<b>1.9</b> I	µg/L	2.0	0.3	1	11/12/09	11/24/09 02:38
Selenium, Dissolved	6020	<b>0.9</b> I	µg/L	2.0	0.8	1	11/16/09	11/18/09 23:00
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/24/09 02:38
Silver, Dissolved	6020	ND U	µg/L	0.50	0.08	1	11/16/09	11/18/09 23:00
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/12/09	11/24/09 02:38
Sodium, Dissolved	6010B	<b>8.38</b>	mg/L	0.50	0.02	1	11/18/09	11/19/09 16:36
Sodium, Total	6010B	<b>8.75</b>	mg/L	0.50	0.02	1	11/12/09	11/12/09 20:27
Thallium, Dissolved	6020	ND U	µg/L	1.0	0.2	1	11/16/09	11/18/09 23:00
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:38
Vanadium, Dissolved	6020	<b>1.6</b> I	µg/L	5.0	1.2	1	11/16/09	11/18/09 23:00
Vanadium, Total	6020	<b>2.5</b> I	µg/L	5.0	1.2	1	11/12/09	11/24/09 02:38
Zinc, Dissolved	6020	ND U	µg/L	10	4	1	11/16/09	11/18/09 23:00
Zinc, Total	6020	ND U	µg/L	10	4	1	11/12/09	11/24/09 02:38

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water  
**Sample Name:** MW-5A  
**Lab Code:** J0905564-009

**Service Request:** J0905564  
**Date Collected:** 11/ 9/09 0932  
**Date Received:** 11/10/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/12/09	11/24/09 02:43
Arsenic, Total	6020	1.76	µg/L	0.50	0.20	1	11/12/09	11/24/09 02:43
Barium, Total	6020	2.0	µg/L	2.0	0.5	1	11/12/09	11/24/09 02:43
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:43
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/12/09	11/24/09 02:43
Chromium, Total	6020	4.6	µg/L	2.0	0.8	1	11/12/09	11/24/09 02:43
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:43
Copper, Total	6020	0.8 I	µg/L	2.0	0.3	1	11/12/09	11/24/09 02:43
Iron, Total	6010B	334	µg/L	50	4	1	11/12/09	11/12/09 20:31
Lead, Total	6020	2.1	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:43
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/23/09	11/23/09 17:33
Nickel, Total	6020	3.4	µg/L	2.0	0.3	1	11/12/09	11/24/09 02:43
Selenium, Total	6020	1.0 I	µg/L	2.0	0.8	1	11/12/09	11/24/09 02:43
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/12/09	11/24/09 02:43
Sodium, Total	6010B	26.5	mg/L	0.50	0.02	1	11/12/09	11/12/09 20:30
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:43
Vanadium, Total	6020	5.1	µg/L	5.0	1.2	1	11/12/09	11/24/09 02:43
Zinc, Total	6020	ND U	µg/L	10	4	1	11/12/09	11/24/09 02:43

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water  
**Sample Name:** MW-5C  
**Lab Code:** J0905564-010

**Service Request:** J0905564  
**Date Collected:** 11/ 9/09 0900  
**Date Received:** 11/10/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/12/09	11/24/09 02:48
Arsenic, Total	6020	0.26 I	µg/L	0.50	0.20	1	11/12/09	11/24/09 02:48
Barium, Total	6020	21.7	µg/L	2.0	0.5	1	11/12/09	11/24/09 02:48
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:48
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/12/09	11/24/09 02:48
Chromium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/24/09 02:48
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:48
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/12/09	11/24/09 02:48
Iron, Total	6010B	834	µg/L	50	4	1	11/12/09	11/12/09 20:34
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:48
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/23/09	11/23/09 17:34
Nickel, Total	6020	ND U	µg/L	2.0	0.3	1	11/12/09	11/24/09 02:48
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/24/09 02:48
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/12/09	11/24/09 02:48
Sodium, Total	6010B	8.53	mg/L	0.50	0.02	1	11/12/09	11/12/09 20:34
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:48
Vanadium, Total	6020	1.9 I	µg/L	5.0	1.2	1	11/12/09	11/24/09 02:48
Zinc, Total	6020	ND U	µg/L	10	4	1	11/12/09	11/24/09 02:48

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water  
**Sample Name:** EB  
**Lab Code:** J0905564-011

**Service Request:** J0905564  
**Date Collected:** 11/ 9/09 1140  
**Date Received:** 11/10/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/12/09	11/24/09 02:53
Arsenic, Total	6020	0.25 I	µg/L	0.50	0.20	1	11/12/09	11/24/09 02:53
Barium, Total	6020	3.4	µg/L	2.0	0.5	1	11/12/09	11/24/09 02:53
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:53
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/12/09	11/24/09 02:53
Chromium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/24/09 02:53
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:53
Copper, Total	6020	1.1 I	µg/L	2.0	0.3	1	11/12/09	11/24/09 02:53
Iron, Total	6010B	82	µg/L	50	4	5	11/12/09	11/12/09 20:38
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:53
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/23/09	11/23/09 17:36
Nickel, Total	6020	2.2	µg/L	2.0	0.3	1	11/12/09	11/24/09 02:53
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/24/09 02:53
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/12/09	11/24/09 02:53
Sodium, Total	6010B	1.72	mg/L	0.50	0.02	5	11/12/09	11/12/09 20:37
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 02:53
Vanadium, Total	6020	ND U	µg/L	5.0	1.2	1	11/12/09	11/24/09 02:53
Zinc, Total	6020	ND U	µg/L	10	4	1	11/12/09	11/24/09 02:53

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** J0905564-MB

**Service Request:** J0905564  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Dissolved	6020	ND U	µg/L	2.0	0.4	1	11/16/09	11/18/09 21:01
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/12/09	11/24/09 00:21
Arsenic, Dissolved	6020	<b>0.30</b> I	µg/L	0.50	0.20	1	11/16/09	11/17/09 00:24
Arsenic, Total	6020	<b>0.33</b> I	µg/L	0.50	0.20	1	11/12/09	11/24/09 00:21
Barium, Dissolved	6020	ND U	µg/L	2.0	0.5	1	11/16/09	11/17/09 00:24
Barium, Total	6020	<b>1.3</b> I	µg/L	2.0	0.5	1	11/12/09	11/24/09 00:21
Beryllium, Dissolved	6020	ND U	µg/L	1.0	0.2	1	11/16/09	11/18/09 21:01
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 00:21
Cadmium, Dissolved	6020	ND U	µg/L	0.50	0.12	1	11/16/09	11/17/09 00:24
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/12/09	11/24/09 00:21
Chromium, Dissolved	6020	ND U	µg/L	2.0	0.8	1	11/16/09	11/17/09 00:24
Chromium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/24/09 00:21
Cobalt, Dissolved	6020	ND U	µg/L	1.0	0.2	1	11/16/09	11/18/09 21:01
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 00:21
Copper, Dissolved	6020	ND U	µg/L	2.0	0.3	1	11/16/09	11/18/09 21:01
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/12/09	11/24/09 00:21
Iron, Dissolved	6010B	ND U	µg/L	50	4	1	11/18/09	11/19/09 16:10
Iron, Total	6010B	<b>6</b> I	µg/L	50	4	1	11/12/09	11/12/09 19:31
Lead, Dissolved	6020	ND U	µg/L	1.0	0.2	1	11/16/09	11/17/09 00:24
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 00:21
Mercury, Dissolved	7470A	ND U	µg/L	0.50	0.08	1	11/23/09	11/23/09 16:47
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/23/09	11/23/09 16:47
Nickel, Dissolved	6020	ND U	µg/L	2.0	0.3	1	11/16/09	11/18/09 21:01
Nickel, Total	6020	ND U	µg/L	2.0	0.3	1	11/12/09	11/24/09 00:21
Selenium, Dissolved	6020	ND U	µg/L	2.0	0.8	1	11/16/09	11/17/09 00:24
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/12/09	11/24/09 00:21
Silver, Dissolved	6020	ND U	µg/L	0.50	0.08	1	11/16/09	11/17/09 00:24
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/12/09	11/24/09 00:21
Sodium, Dissolved	6010B	<b>0.06</b> I	mg/L	0.50	0.02	1	11/18/09	11/19/09 16:09
Sodium, Total	6010B	<b>0.03</b> I	mg/L	0.50	0.02	1	11/12/09	11/12/09 19:30
Thallium, Dissolved	6020	ND U	µg/L	1.0	0.2	1	11/16/09	11/18/09 21:01
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/12/09	11/24/09 00:21
Vanadium, Dissolved	6020	ND U	µg/L	5.0	1.2	1	11/16/09	11/18/09 21:01
Vanadium, Total	6020	<b>1.3</b> I	µg/L	5.0	1.2	1	11/12/09	11/24/09 00:21
Zinc, Dissolved	6020	ND U	µg/L	10	4	1	11/16/09	11/18/09 21:01
Zinc, Total	6020	ND U	µg/L	10	4	1	11/12/09	11/24/09 00:21

**Comments:**

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : GeoSyntec Consultants  
Project Name : JED SWDF  
Project Number : NA  
Sample Matrix : WATER

Service Request : J0905564  
Date Collected : 11/09/09  
Date Received : 11/10/09

Inorganic Parameters

Sample Name : MW-1A  
Lab Code : J0905564-001  
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	0.01	1	11/18/09 09:49	1.2	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/10/09 22:33	31	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/10/09 23:19	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/16/09 17:30	66	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : GeoSyntec Consultants  
Project Name : JED SWDF  
Project Number : NA  
Sample Matrix : WATER

Service Request : J0905564  
Date Collected : 11/09/09  
Date Received : 11/10/09

Inorganic Parameters

Sample Name : MW-1C  
Lab Code : J0905564-002  
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	0.01	1	11/18/09 09:49	0.065	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/10/09 22:33	7.6	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/11/09 00:04	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/16/09 17:30	45	



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** NA  
**Sample Matrix :** WATER

**Service Request :** J0905564  
**Date Collected :** 11/09/09  
**Date Received :** 11/10/09

Inorganic Parameters

**Sample Name :** MW-2A  
**Lab Code :** J0905564-003  
**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	0.01	1	11/18/09 09:49	0.87	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/10/09 22:33	46	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/11/09 00:18	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/16/09 17:30	87	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : GeoSyntec Consultants  
Project Name : JED SWDF  
Project Number : NA  
Sample Matrix : WATER

Service Request : J0905564  
Date Collected : 11/09/09  
Date Received : 11/10/09

Inorganic Parameters

Sample Name : MW-2C  
Lab Code : J0905564-004  
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	0.01	1	11/18/09 09:49	0.055	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/10/09 22:33	7.5	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/11/09 00:33	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/16/09 17:30	31	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** NA  
**Sample Matrix :** WATER

**Service Request :** J0905564  
**Date Collected :** 11/09/09  
**Date Received :** 11/10/09

Inorganic Parameters

**Sample Name :** MW-3A  
**Lab Code :** J0905564-005  
**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	0.01	1	11/18/09 09:49	8.7	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/10/09 22:33	69	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/11/09 00:48	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/16/09 17:30	380	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : GeoSyntec Consultants  
Project Name : JED SWDF  
Project Number : NA  
Sample Matrix : WATER

Service Request : J0905564  
Date Collected : 11/09/09  
Date Received : 11/10/09

Inorganic Parameters

Sample Name : MW-3C  
Lab Code : J0905564-006  
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	0.01	1	11/18/09 09:49	0.053	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/10/09 22:33	8.3	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/11/09 01:48	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/16/09 17:30	37	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** NA  
**Sample Matrix :** WATER

**Service Request :** J0905564  
**Date Collected :** 11/09/09  
**Date Received :** 11/10/09

Inorganic Parameters

**Sample Name :** MW-4A  
**Lab Code :** J0905564-007  
**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	0.01	1	11/18/09 09:49	10	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/10/09 22:33	55	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/11/09 02:03	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/16/09 17:30	140	

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** NA  
**Sample Matrix :** WATER

**Service Request :** J0905564  
**Date Collected :** 11/09/09  
**Date Received :** 11/10/09

Inorganic Parameters

**Sample Name :** MW-4C  
**Lab Code :** J0905564-008  
**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	0.01	1	11/18/09 09:49	0.089	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/10/09 22:33	13	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/11/09 02:18	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/16/09 17:30	88	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : GeoSyntec Consultants  
Project Name : JED SWDF  
Project Number : NA  
Sample Matrix : WATER

Service Request : J0905564  
Date Collected : 11/09/09  
Date Received : 11/10/09

Inorganic Parameters

Sample Name : MW-5A  
Lab Code : J0905564-009  
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	0.01	1	11/18/09 09:49	9.6	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/10/09 22:33	45	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/11/09 02:33	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/16/09 17:30	290	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** NA  
**Sample Matrix :** WATER

**Service Request :** J0905564  
**Date Collected :** 11/09/09  
**Date Received :** 11/10/09

Inorganic Parameters

**Sample Name :** MW-5C  
**Lab Code :** J0905564-010  
**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	0.01	1	11/18/09 09:49	0.064	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/10/09 22:33	16	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/11/09 02:48	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/16/09 17:30	55	



Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** NA  
**Sample Matrix :** WATER

**Service Request :** J0905564  
**Date Collected :** 11/09/09  
**Date Received :** 11/10/09

Inorganic Parameters

**Sample Name :** EB  
**Lab Code :** J0905564-011  
**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	0.01	1	11/18/09 09:49	U	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/10/09 22:33	0.21	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/11/09 03:03	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/16/09 17:30	U	

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** NA  
**Sample Matrix :** WATER

**Service Request :** J0905564  
**Date Collected :** NA  
**Date Received :** NA

Inorganic Parameters

**Sample Name :** Method Blank  
**Lab Code :** J0905564-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	0.01	1	11/18/09 09:49	U	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/10/09 22:33	U	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/10/09 22:33	U	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/10/09 22:33	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/16/09 17:30	U	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoSyntec Consultants  
 Project: JED SWDF  
 Sample Matrix: Water

Service Request: J0905564

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-1A	J0905564-001	109	107	98	99
MW-1C	J0905564-002	110	109	103	99
MW-2A	J0905564-003	106	104	101	93
MW-2C	J0905564-004	109	104	97	97
MW-3A	J0905564-005	106	105	96	96
MW-3C	J0905564-006	113	103	104	101
MW-4A	J0905564-007	107	101	98	96
MW-4C	J0905564-008	108	105	99	95
MW-5A	J0905564-009	106	103	98	95
MW-5C	J0905564-010	106	104	97	96
EB	J0905564-011	104	107	96	93
Trip Blank	J0905564-012	105	103	96	95
Method Blank	JWG0903834-4	107	110	101	102
MW-1AMS	JWG0903834-1	112	110	103	101
MW-1ADMS	JWG0903834-2	107	104	97	96
Lab Control Sample	JWG0903834-3	104	104	98	94

Surrogate Recovery Control Limits (%)

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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 SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Extracted:** 11/15/2009  
**Date Analyzed:** 11/15/2009

**Matrix Spike/Duplicate Matrix Spike Summary  
Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-1A  
**Lab Code:** J0905564-001  
**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0903834

Analyte Name	Sample Result	MW-1AMS JWG0903834-1 Matrix Spike			MW-1ADMS JWG0903834-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Chloromethane	ND	20.1	20.0	101	19.8	20.0	99	73-139	2	30
Vinyl Chloride	ND	22.6	20.0	113	21.9	20.0	109	78-141	3	30
Bromomethane	ND	16.7	20.0	84	16.4	20.0	82	78-129	2	30
Chloroethane	ND	25.7	20.0	129	23.2	20.0	116	76-129	10	30
Trichlorofluoromethane	ND	23.2	20.0	116	22.5	20.0	113	81-133	3	30
1,1-Dichloroethene	ND	22.7	20.0	113	22.0	20.0	110	79-133	3	30
Acetone	ND	120	100	120	108	100	108	56-139	10	30
Iodomethane (Methyl Iodide)	ND	114	100	114	120	100	120	74-134	6	30
Carbon Disulfide	ND	104	100	104	101	100	101	71-146	3	30
Methylene Chloride	ND	20.1	20.0	101	19.5	20.0	97	75-123	3	30
trans-1,2-Dichloroethene	ND	22.1	20.0	110	21.8	20.0	109	76-125	1	30
Acrylonitrile	ND	104	100	104	101	100	101	68-131	3	30
1,1-Dichloroethane	ND	22.1	20.0	110	21.7	20.0	109	78-125	2	30
Vinyl Acetate	ND	69.6	100	70	66.9	100	67	43-163	4	30
cis-1,2-Dichloroethene	ND	20.6	20.0	103	20.0	20.0	100	75-127	3	30
2-Butanone (MEK)	ND	105	100	105	106	100	106	63-134	0	30
Bromochloromethane	ND	22.7	20.0	113	21.8	20.0	109	80-124	4	30
Chloroform	ND	22.6	20.0	113	21.8	20.0	109	81-124	3	30
1,1,1-Trichloroethane (TCA)	ND	22.5	20.0	113	21.9	20.0	109	76-130	3	30
Carbon Tetrachloride	ND	22.1	20.0	110	21.9	20.0	109	76-131	1	30
Benzene	0.56	21.7	20.0	106	21.3	20.0	103	78-123	2	30
1,2-Dichloroethane (EDC)	ND	22.5	20.0	113	22.0	20.0	110	74-126	3	30
Trichloroethene (TCE)	ND	20.4	20.0	102	20.1	20.0	101	77-128	1	30
1,2-Dichloropropane	ND	21.2	20.0	106	20.7	20.0	104	77-122	2	30
Dibromomethane	ND	21.9	20.0	110	20.7	20.0	103	78-124	6	30
Bromodichloromethane	ND	20.2	20.0	101	20.4	20.0	102	79-125	1	30
cis-1,3-Dichloropropene	ND	18.4	20.0	92	18.0	20.0	90	77-117	2	30
4-Methyl-2-pentanone (MIBK)	ND	98.3	100	98	97.0	100	97	65-138	1	30
Toluene	ND	19.8	20.0	99	19.4	20.0	97	86-119	2	30
trans-1,3-Dichloropropene	ND	18.2	20.0	91	17.9	20.0	89	75-120	2	30
1,1,2-Trichloroethane	ND	18.8	20.0	94	18.3	20.0	92	77-124	2	30
Tetrachloroethene (PCE)	ND	19.2	20.0	96	18.9	20.0	95	79-123	2	30
2-Hexanone	ND	99.2	100	99	96.3	100	96	63-142	3	30
Dibromochloromethane	ND	18.6	20.0	93	18.0	20.0	90	78-124	3	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 SWDF  
 Sample Matrix: Water

Service Request: J0905564  
 Date Extracted: 11/15/2009  
 Date Analyzed: 11/15/2009

Matrix Spike/Duplicate Matrix Spike Summary  
 Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-1A  
 Lab Code: J0905564-001  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0903834

Analyte Name	Sample Result	MW-1AMS JWG0903834-1 Matrix Spike			MW-1ADMS JWG0903834-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
1,2-Dibromoethane (EDB)	ND	20.5	20.0	103	20.1	20.0	101	81-119	2	30
Chlorobenzene	ND	18.7	20.0	93	18.4	20.0	92	81-120	2	30
1,1,1,2-Tetrachloroethane	ND	19.4	20.0	97	18.9	20.0	95	82-118	2	30
Ethylbenzene	ND	20.2	20.0	101	20.0	20.0	100	87-122	1	30
m,p-Xylenes	ND	39.1	40.0	98	38.5	40.0	96	82-120	2	30
o-Xylene	ND	20.0	20.0	100	19.5	20.0	97	85-119	3	30
Styrene	ND	18.9	20.0	94	18.4	20.0	92	84-126	2	30
Bromoform	ND	16.6	20.0	83	16.4	20.0	82	70-129	1	30
1,1,2,2-Tetrachloroethane	ND	18.2	20.0	91	17.8	20.0	89	72-127	2	30
1,2,3-Trichloropropane	ND	18.7	20.0	93	17.8	20.0	89	76-123	5	30
1,4-Dichlorobenzene	ND	18.6	20.0	93	18.4	20.0	92	75-115	1	30
trans-1,4-Dichloro-2-butene	ND	15.7	20.0	78	17.1	20.0	86	22-135	9	30
1,2-Dichlorobenzene	ND	18.5	20.0	92	18.8	20.0	94	77-116	2	30
1,2-Dibromo-3-chloropropane (DBCP)	ND	16.9	20.0	84	18.1	20.0	90	54-120	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 SWDF  
 Sample Matrix: Water

Service Request: J0905564  
 Date Extracted: 11/15/2009  
 Date Analyzed: 11/15/2009

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: JWG0903834

Lab Control Sample  
 JWG0903834-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Chloromethane	20.3	20.0	102	67-135
Vinyl Chloride	21.1	20.0	106	78-132
Bromomethane	17.6	20.0	88	79-130
Chloroethane	22.4	20.0	112	74-126
Trichlorofluoromethane	20.5	20.0	102	74-134
1,1-Dichloroethene	20.7	20.0	104	78-130
Acetone	114	100	114	67-133
Iodomethane (Methyl Iodide)	115	100	115	68-134
Carbon Disulfide	92.6	100	93	76-138
Methylene Chloride	20.4	20.0	102	72-124
trans-1,2-Dichloroethene	20.2	20.0	101	77-124
Acrylonitrile	101	100	101	77-127
1,1-Dichloroethane	20.2	20.0	101	80-128
Vinyl Acetate	111	100	111	61-148
cis-1,2-Dichloroethene	19.0	20.0	95	80-126
2-Butanone (MEK)	102	100	102	73-127
Bromochloromethane	20.7	20.0	103	79-129
Chloroform	20.2	20.0	101	83-124
1,1,1-Trichloroethane (TCA)	20.7	20.0	104	79-124
Carbon Tetrachloride	19.9	20.0	100	81-125
Benzene	19.6	20.0	98	79-119
1,2-Dichloroethane (EDC)	20.2	20.0	101	80-124
Trichloroethene (TCE)	19.0	20.0	95	76-124
1,2-Dichloropropane	19.1	20.0	96	79-123
Dibromomethane	20.3	20.0	102	83-123
Bromodichloromethane	18.9	20.0	95	81-123
cis-1,3-Dichloropropene	18.3	20.0	92	86-123
4-Methyl-2-pentanone (MIBK)	93.4	100	93	72-136
Toluene	18.0	20.0	90	86-117
trans-1,3-Dichloropropene	18.1	20.0	90	83-124
1,1,2-Trichloroethane	18.1	20.0	90	86-114
Tetrachloroethene (PCE)	18.2	20.0	91	80-121
2-Hexanone	97.7	100	98	71-138
Dibromochloromethane	18.4	20.0	92	82-121
1,2-Dibromoethane (EDB)	19.0	20.0	95	88-117
Chlorobenzene	18.4	20.0	92	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 SWDF  
 Sample Matrix: Water

Service Request: J0905564  
 Date Extracted: 11/15/2009  
 Date Analyzed: 11/15/2009

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: JWG0903834

Lab Control Sample  
 JWG0903834-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	17.9	20.0	90	85-117
Ethylbenzene	20.1	20.0	100	90-118
m,p-Xylenes	37.3	40.0	93	86-121
o-Xylene	19.3	20.0	96	89-119
Styrene	18.1	20.0	91	89-122
Bromoform	17.1	20.0	86	68-129
1,1,2,2-Tetrachloroethane	17.0	20.0	85	83-120
1,2,3-Trichloropropane	18.1	20.0	90	83-123
1,4-Dichlorobenzene	18.4	20.0	92	83-113
trans-1,4-Dichloro-2-butene	17.4	20.0	87	53-143
1,2-Dichlorobenzene	18.9	20.0	95	84-115
1,2-Dibromo-3-chloropropane (DBCP)	18.2	20.0	91	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.

QA/QC Report

Client: GeoSyntec Consultants  
 Project: JED SWDF  
 Sample Matrix: Water

Service Request: J0905564

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-1A	J0905564-001	114
MW-1C	J0905564-002	111
MW-2A	J0905564-003	112
MW-2C	J0905564-004	109
MW-3A	J0905564-005	108
MW-3C	J0905564-006	108
MW-4A	J0905564-007	106
MW-4C	J0905564-008	111
MW-5A	J0905564-009	110
MW-5C	J0905564-010	107
EB	J0905564-011	110
Method Blank	JWG0903759-4	117
Lab Control Sample	JWG0903759-3	113

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.



COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoSyntec Consultants  
 Project: JED SWDF  
 Sample Matrix: Water

Service Request: J0905564  
 Date Extracted: 11/11/2009  
 Date Analyzed: 11/12/2009

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: JWG0903759

Lab Control Sample  
 JWG0903759-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
1,2-Dibromoethane (EDB)	0.279	0.250	112	70-130
1,2-Dibromo-3-chloropropane (DBCP)	0.274	0.250	110	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:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/9/09  
**Date Received:** 11/10/09  
**Date Analyzed:** 11/12/09

**Matrix Spike Summary  
 Inorganic Parameters**

**Sample Name:** MW-1A  
**Lab Code:** J0905564-001

**Units:** µg/L  
**Basis:** NA

**Analytical Method:** 6010B  
**Prep Method:** EPA 3010A

Analyte Name	Sample Result	Matrix Spike J0905564-MS1			Duplicate Matrix Spike J0905564-DMS1			% Rec Limits	RPD	RPD Limit
		Result	Amount	% Rec	Result	Amount	% Rec			
Iron, Total	1870	3800	2000	97	3810	2000	97	75 - 125	0	20

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/9/09  
**Date Received:** 11/10/09  
**Date Analyzed:** 11/12/09

**Matrix Spike Summary  
 Inorganic Parameters**

**Sample Name:** MW-1A  
**Lab Code:** J0905564-001

**Units:** mg/L  
**Basis:** NA

**Analytical Method:** 6010B  
**Prep Method:** EPA 3010A

Analyte Name	Sample Result	Matrix Spike J0905564-MS1			Duplicate Matrix Spike J0905564-DMS1			% Rec Limits	RPD	RPD Limit
		Result	Amount	% Rec	Result	Amount	% Rec			
Sodium, Total	15.9	25.9	10.0	100	25.9	10.0	100	75 - 125	0	20

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/9/09  
**Date Received:** 11/10/09  
**Date Analyzed:** 11/24/09

**Matrix Spike Summary  
 Inorganic Parameters**

**Sample Name:** MW-2A  
**Lab Code:** J0905564-003

**Units:** µg/L  
**Basis:** NA

**Analytical Method:** 6020  
**Prep Method:** EPA 3020A

Analyte Name	Sample Result	Matrix Spike J0905564-MS2			Duplicate Matrix Spike J0905564-DMS2			% Rec Limits	RPD	RPD Limit
		Result	Amount	% Rec	Result	Amount	% Rec			
Antimony, Total	ND	50.4	50.0	101	49.3	50.0	99	75 - 125	2	20
Arsenic, Total	1.14	48.3	50.0	94	48.1	50.0	94	75 - 125	1	20
Barium, Total	31.9	84.7	50.0	106	82.2	50.0	100	75 - 125	3	20
Beryllium, Total	ND	48.2	50.0	96	45.6	50.0	91	75 - 125	5	20
Cadmium, Total	ND	49.0	50.0	98	48.1	50.0	96	75 - 125	2	20
Chromium, Total	4.5	52.6	50.0	96	54.0	50.0	99	75 - 125	3	20
Cobalt, Total	5.3	54.7	50.0	99	56.2	50.0	102	75 - 125	3	20
Copper, Total	0.4	47.8	50.0	95	48.9	50.0	97	75 - 125	2	20
Lead, Total	ND	53.3	50.0	107	52.5	50.0	105	75 - 125	1	20
Nickel, Total	2.6	48.9	50.0	93	50.7	50.0	96	75 - 125	4	20
Selenium, Total	ND	43.9	50.0	88	43.8	50.0	88	75 - 125	0	20
Silver, Total	ND	51.7	50.0	103	49.4	50.0	99	75 - 125	4	20
Thallium, Total	ND	52.1	50.0	104	51.9	50.0	104	75 - 125	0	20
Vanadium, Total	1.6	52.9	50.0	103	52.2	50.0	101	75 - 125	1	20
Zinc, Total	7	97.4	100	91	97.5	100	91	75 - 125	0	20

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Collected:** 11/9/09  
**Date Received:** 11/10/09  
**Date Analyzed:** 11/23/09

**Matrix Spike Summary**  
**Mercury, Total in Liquid Waste (Manual Cold-Vapor Technique)**

**Sample Name:** MW-2C  
**Lab Code:** J0905564-004

**Units:** µg/L  
**Basis:** NA

**Analytical Method:** 7470A  
**Prep Method:** Method

Analyte Name	Sample Result	Matrix Spike J0905564-MS3			Duplicate Matrix Spike J0905564-DMS3			% Rec Limits	RPD	RPD Limit
		Result	Amount	% Rec	Result	Amount	% Rec			
Mercury, Total	0.08	5.22	5.00	103	5.15	5.00	101	75 - 125	1	20

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Analyzed:** 11/12/09 -  
 11/24/09

**Lab Control Sample Summary  
 Inorganic Parameters**

**Units:** µg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample J0905564-LCS			% Rec Limits
		Result	Expected	% Rec	
Antimony, Dissolved	6020	51.8	50.0	104	80 - 120
Antimony, Total	6020	50.0	50.0	100	80 - 120
Arsenic, Dissolved	6020	51.6	50.0	103	80 - 120
Arsenic, Total	6020	47.7	50.0	95	80 - 120
Barium, Dissolved	6020	47.3	50.0	95	80 - 120
Barium, Total	6020	52.6	50.0	105	80 - 120
Beryllium, Dissolved	6020	50.9	50.0	102	80 - 120
Beryllium, Total	6020	53.0	50.0	106	80 - 120
Cadmium, Dissolved	6020	51.0	50.0	102	80 - 120
Cadmium, Total	6020	49.6	50.0	99	80 - 120
Chromium, Dissolved	6020	48.6	50.0	97	80 - 120
Chromium, Total	6020	52.1	50.0	104	80 - 120
Cobalt, Dissolved	6020	49.6	50.0	99	80 - 120
Cobalt, Total	6020	51.0	50.0	102	80 - 120
Copper, Dissolved	6020	50.6	50.0	101	80 - 120
Copper, Total	6020	49.6	50.0	99	80 - 120
Iron, Dissolved	6010B	1920	2000	96	80 - 120
Iron, Total	6010B	1960	2000	98	80 - 120
Lead, Dissolved	6020	49.4	50.0	99	80 - 120
Lead, Total	6020	52.8	50.0	106	80 - 120
Mercury, Dissolved	7470A	5.25	5.00	105	80 - 120
Mercury, Total	7470A	5.25	5.00	105	80 - 120
Nickel, Dissolved	6020	49.8	50.0	100	80 - 120
Nickel, Total	6020	50.2	50.0	100	80 - 120
Selenium, Dissolved	6020	51.2	50.0	102	80 - 120
Selenium, Total	6020	45.2	50.0	90	80 - 120
Silver, Dissolved	6020	52.5	50.0	105	80 - 120
Silver, Total	6020	53.5	50.0	107	80 - 120
Thallium, Dissolved	6020	48.7	50.0	97	80 - 120
Thallium, Total	6020	51.1	50.0	102	80 - 120
Vanadium, Dissolved	6020	46.9	50.0	94	80 - 120
Vanadium, Total	6020	52.6	50.0	105	80 - 120
Zinc, Dissolved	6020	105	100	105	80 - 120
Zinc, Total	6020	95.6	100	96	80 - 120

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

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request:** J0905564  
**Date Analyzed:** 11/12/09 -  
11/19/09

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:** mg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample			% Rec Limits
		Result	Expected	% Rec	
Sodium, Dissolved	6010B	10.2	10.0	102	80 - 120
Sodium, Total	6010B	10.3	10.0	103	80 - 120

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

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : GeoSyntec Consultants  
Project Name : JED SWDF  
Project Number : NA  
Sample Matrix : WATER

Service Request : J0905564  
Date Collected : 11/09/09  
Date Received : 11/10/09  
Date Extracted : NA  
Date Analyzed : 11/10-16/09

Duplicate Summary  
Inorganic Parameters

Sample Name : MW-1A  
Lab Code : J0905564-001DUP  
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	31	31	31	<1	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	U	U	U	-	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	66	74	70	11	



**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** NA  
**Sample Matrix :** WATER

**Service Request :** J0905564  
**Date Collected :** 11/09/09  
**Date Received :** 11/10/09  
**Date Extracted :** NA  
**Date Analyzed :** 11/10/09

Matrix Spike Summary  
 Inorganic Parameters

**Sample Name :** MW-1A  
**Lab Code :** J0905564-001MS  
**Test Notes :**

Basis : NA

Analyte	Units	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
								Percent Recovery	
Chloride	mg/L (ppm)	300.0	0.2	100	31	132	101	90-110	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	5.0	U	5.11	102	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** NA  
**Sample Matrix :** WATER

**Service Request :** J0905564  
**Date Collected :** 11/09/09  
**Date Received :** 11/10/09  
**Date Extracted :** NA  
**Date Analyzed :** 11/16/09

Duplicate Summary  
Inorganic Parameters

**Sample Name :** MW-5C  
**Lab Code :** J0905564-010DUP  
**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>
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	55	55	55	<1	

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** NA  
**Sample Matrix :** WATER

**Service Request :** J0905564  
**Date Collected :** NA  
**Date Received :** NA  
**Date Extracted :** NA  
**Date Analyzed :** 11/10-18/09

Laboratory Control Sample Summary  
 Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** J0905564-LCS  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>True Value</b>	<b>Result</b>	<b>Percent Recovery</b>	<b>CAS Percent Recovery Acceptance Limits</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	1.00	1.03	103	90-110	
Chloride	mg/L (ppm)	300.0	5.00	5.14	103	90-110	
Chloride	mg/L (ppm)	300.0	100	102	102	90-110	
Nitrate as Nitrogen	mg/L (ppm)	300.0	5.0	5.06	101	90-110	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	300	291	97	85-115	

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

Client: Geosyntec Service Request # J0903564

Project: JED SWDF

Cooler received on 11/10/09 and opened on 11/10/09 by 840

COURIER: CAS  UPS FEDEX DHL CLIENT Tracking # J2061512618

- |    |   |                                      |        |     |
|----|---|--------------------------------------|--------|-----|
| 1  | Were custody seals on outside of cooler?                                      | <input checked="" type="radio"/> Yes | No     | N/A |
| 2  | Were seals intact, signed and dated?  | <input checked="" type="radio"/> Yes | No     | N/A |
| 3  | Were custody papers properly filled out?                                      | <input checked="" type="radio"/> Yes | No     | N/A |
| 4  | Temperature of cooler(s) upon receipt (Should be 4 +/- 2 degrees C)           | <u>4.0</u>                           |        |     |
| 5  | Correct Temperature?  | <input checked="" type="radio"/> Yes | No     | N/A |
| 6  | Were Ice or Ice Packs present   | <input checked="" type="radio"/> Yes | No     | N/A |
| 7  | Did all bottles arrive in good condition (unbroken, etc....)?                 | <input checked="" type="radio"/> Yes | No     | N/A |
| 8  | Were all bottle labels complete (sample ID, preservation, etc....)?           | <input checked="" type="radio"/> Yes | No     | N/A |
| 9  | Did all bottle labels and tags agree with custody papers?                     | <input checked="" type="radio"/> Yes | No     | N/A |
| 10 | Were the correct bottles used for the tests indicated?                        | <input checked="" type="radio"/> Yes | No     | N/A |
| 11 | Were all of the preserved bottles received with the appropriate preservative? | <input checked="" type="radio"/> Yes | 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  |                                      |        |     |
|    | <small>Preservative additions noted below</small>                             |                                      |        |     |
| 12 | Were all samples received within analysis holding times?                      | <input checked="" type="radio"/> Yes | No     | N/A |
| 13 | Were VOA vials checked for absence of air bubbles? If present, note below     | <input checked="" type="radio"/> Yes | No     | N/A |
| 14 | Where did the bottles originate?  | <input checked="" type="radio"/> CAS | 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: 86

SR #: J0905564

Date: 11/10/09

Initials: 

Note that pH is checked and meets the required pH criterion listed in the column heading unless otherwise noted on cooler receipt form.

Container	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		
40mL	40mL	40mL	40mL	125mL	125mL	125mL	125mL	125mL	250mL	250mL	250mL	250mL	250mL	250mL	250mL	500mL	500mL	500mL	1L	1L	1L	1L	2oz	4oz	8oz	16oz	5g	100mL	Misc.	Misc.		
Req pH	HCl	Sodium	H2SO4	HCl	H2SO4	HNO3	H2SO4	HNO3	H2SO4	HNO3	ZnAcetate	NaOH	NaOH	NaOH	HNO3	H2SO4	HNO3	HNO3	HNO3	HCl	HCl	H2SO4	H2SO4	H2SO4	H2SO4	H2SO4	H2SO4	H2SO4	H2SO4	H2SO4		
Sample #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	>9	>12	N/A	<2	<2	<2	<2	<2	<2	N/A	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2		
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# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

9143 Phillips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011 PAGE 1 OF 1

SR #

30905564

CAS Contact

Project Name: SED SWDF Project Number: EQ1512A.02

Project Manager: Kirk Wills Email Address: k.wills@geosyntec.com

Company Address: Geosyntec

14055 Riveredge Dr. Ste 300

Tampa, FL 33637 FAX#

Phone # 813-558-0990 FAX# 813-558-9726

Sampler's Signature: [Signature] Sampler's Printed Name: Joe Terry, Tom Wissler

### ANALYSIS REQUESTED (Include Method Number and Preservative)

ANALYSIS REQUESTED	PRESERVATIVE	NUMBER OF CONTAINERS	REMARKS/ALTERNATE DESCRIPTION
	1	0	
	3	2	
	2	0	
	0	2	
			<u>8260</u>
			<u>NH<sub>3</sub></u>
			<u>Metals</u>
			<u>TSS, CL, NO<sub>3</sub></u>
			<u>Dissolved Metals</u>

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	TIME	MATRIX
MW-1A		11-9-04	1530	GW
MW-1C			1540	
MW-2A			1415	
MW-2C			1420	
MW-3A			1235	
MW-3C			1235	
MW-4A			1055	
MW-4C			1120	
MW-5A			0932	
MW-5C			0900	

SPECIAL INSTRUCTIONS/COMMENTS: Trip Blank 2 - Containers for 8260 analysis due for TB, 10-26-05 time 11:00

COOL DR: 09313-SED-01

TURNAROUND REQUIREMENTS  
 RUSH (SURCHARGES APPLY)  
 STANDARD

REPORT REQUIREMENTS  
 I. Results Only  
 II. Results + OC Summaries (LCS, DUP, MS/MSD as required)  
 III. Results + OC and Calibration Summaries  
 IV. Data Validation Report with Raw Data  
 V. Specialized Forms / Custom Report

Requested Report Date: \_\_\_\_\_

Requested Fax Date: \_\_\_\_\_

INVOICE INFORMATION

PO# \_\_\_\_\_

BILL TO: \_\_\_\_\_

See QAPP

SAMPLE RECEIPT: CONDITION/COOLER TEMP: \_\_\_\_\_

RELINQUISHED BY	RECEIVED BY	CUSTODY SEALS: Y N
RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY
Signature: <u>[Signature]</u>	Signature: <u>[Signature]</u>	RELINQUISHED BY
Printed Name: <u>Joe Terry</u>	Printed Name: <u>Summer Oster</u>	RELINQUISHED BY
Firm: <u>Geosyntec</u>	Firm: <u>CAS</u>	RELINQUISHED BY
Date/Time: <u>11-9-04/1630</u>	Date/Time: <u>11/10/09 0920</u>	RELINQUISHED BY



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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PAGE 2 OF 2

SR #

50955864

CAS Contact

Project Name <b>SED SWDF</b>		Project Number <b>EA1512A.02</b>		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
Project Manager <b>Kirk Willis</b>		Email Address		PRESERVATIVE	1 0 3 2 0
Company/Address <b>Geosynther - Tampa</b>		FAX#		B260 NHS Metals THS CO, NO3	
Phone #		Sampler's Printed Name		Preservative Key 0. NONE 1. HCL 2. HNO3 3. H2SO4 4. NaOH 5. Zn Acetate 6. MeOH 7. NaHSO4 8. Other	
CLIENT SAMPLE ID <b>EB</b>		LAB ID	SAMPLING DATE	TIME	MATRIX
			<b>11-9-09</b>	<b>1140</b>	<b>B260</b>
SPECIAL INSTRUCTIONS/COMMENTS <b>Craig, I accidentally forgot to add the analysis for the equipment blank (sample to EB) to the chain for the cooler shipped yesterday (11-4-09) under workbill J2081512018. Please add this page to the chain received with the cooler. Thank you Joe Terry 10 Nov 2009</b>		TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) <input checked="" type="checkbox"/> 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	
SAMPLE RECEIPT: CONDITION/COOLER TEMP: RELINQUISHED BY		CUSTODY SEALS: Y N RELINQUISHED BY		INVOICE INFORMATION PO# BILL TO:	
Signature <b>Joe Terry</b>	Signature <b>Joe Terry</b>	Signature <b>Joe Terry</b>	Signature <b>Joe Terry</b>	Signature	Signature
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	Printed Name
Firm <b>Geosynther</b>	Firm <b>Geosynther</b>	Firm <b>Geosynther</b>	Firm <b>Geosynther</b>	Firm	Firm
Date/Time	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

November 30, 2009

Service Request No: J0905604

Kirk Wills  
GeoSyntec Consultants  
14055 Riveredge Drive  
Suite 300  
Tampa, FL 33637

**Laboratory Results for: JED SWDF/FQ1512A.02**

Dear Kirk:

Enclosed are the results of the sample(s) submitted to our laboratory on November 11, 2009. For your reference, these analyses have been assigned our service request number **J0905604**.

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.

Please contact me 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 Manager

Page 1 of 37

*CAS Jacksonville is NELAC-accredited by the State of Florida, #E82502. Other state accreditations include: Georgia, #958; Kentucky, #63; Louisiana, #02086; North Carolina, #527; South Carolina, #96021001; Texas, #T104704197-09-TX.*



COLUMBIA ANALYTICAL SERVICES, INC.

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF  
**Sample Matrix:** Water

**Service Request No.:** J0905604  
**Date Received:** 11/11/09

**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 11/11/09. 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.

**Continuing Calibration Verification Exceptions**

The primary evaluation criterion was exceeded for the following analyte in Continuing Calibration Verification (CCV) JWG0903815-2: trans-1,4-Dichloro-2-butene. The analyte in question was not detected in the associated field samples. Since the analyte was detected in the MRL check standard, instrument sensitivity was documented. The data quality was not significantly affected and no further corrective action was taken.

**Matrix Spike Recovery Exceptions**

The matrix spike recoveries of Vinyl Chloride, Bromomethane, Bromoform and trans-1,4-Dichloro-2-butene for sample MW-23A were outside the lower control criterion. The analytes in question were not detected in the associated field samples. Since the analytes were detected in the MRL check standard, instrument sensitivity was documented. The data quality was not significantly affected and no further corrective action was taken.

**Lab Control Sample Exceptions**

The spike recoveries of Bromoform and trans-1,4-Dichloro-2-butene for Laboratory Control Sample (LCS) JWG0903816-3 were outside the lower control criterion. The analytes in question were not detected in the associated field samples. Since the analytes were detected in the MRL check standard, instrument sensitivity was documented. The data quality was not significantly affected and no further corrective action was taken.

**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 \_\_\_\_\_

11/30/09

**Metals by ICP-MS/ICP-OES/CVAA**

The samples were analyzed for Total Metals using EPA Methods 6020/6010B/7470A. No problems were observed.

**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.

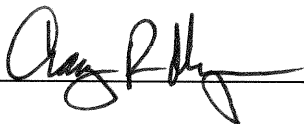
**General Chemistry Parameters**

The samples were analyzed for Inorganic Parameters using various EPA and Standard Methods. No problems were observed.

**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 \_\_\_\_\_

11/30/07

## 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 SWDF/FQ1512A.02

**Service Request:** J0905604

**SAMPLE CROSS-REFERENCE**

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J0905604-001	MW-23A	11/10/09	08:45
J0905604-002	MW-23C	11/10/09	09:25
J0905604-003	Trip Blank	11/10/09	00:00

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905604  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-23A  
 Lab Code: J0905604-001  
 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	11/14/09	11/14/09	JWG0903816	
Vinyl Chloride	ND	U	1.0	0.25	1	11/14/09	11/14/09	JWG0903816	
Bromomethane	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903816	
Chloroethane	ND	U	5.0	0.19	1	11/14/09	11/14/09	JWG0903816	
Trichlorofluoromethane	ND	U	20	0.25	1	11/14/09	11/14/09	JWG0903816	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/14/09	11/14/09	JWG0903816	
Acetone	ND	U	50	2.4	1	11/14/09	11/14/09	JWG0903816	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/14/09	11/14/09	JWG0903816	
Carbon Disulfide	ND	U	10	0.84	1	11/14/09	11/14/09	JWG0903816	
Methylene Chloride	ND	U	5.0	0.72	1	11/14/09	11/14/09	JWG0903816	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/14/09	11/14/09	JWG0903816	
Acrylonitrile	ND	U	10	0.59	1	11/14/09	11/14/09	JWG0903816	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/14/09	11/14/09	JWG0903816	
Vinyl Acetate	ND	U	10	0.60	1	11/14/09	11/14/09	JWG0903816	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903816	
2-Butanone (MEK)	ND	U	10	0.56	1	11/14/09	11/14/09	JWG0903816	
Bromochloromethane	ND	U	5.0	0.14	1	11/14/09	11/14/09	JWG0903816	
Chloroform	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903816	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903816	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/14/09	11/14/09	JWG0903816	
Benzene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903816	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903816	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903816	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/14/09	11/14/09	JWG0903816	
Dibromomethane	ND	U	5.0	0.12	1	11/14/09	11/14/09	JWG0903816	
Bromodichloromethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903816	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903816	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/14/09	11/14/09	JWG0903816	
Toluene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903816	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903816	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903816	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/14/09	11/14/09	JWG0903816	
2-Hexanone	ND	U	25	0.36	1	11/14/09	11/14/09	JWG0903816	
Dibromochloromethane	ND	U	1.0	0.11	1	11/14/09	11/14/09	JWG0903816	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905604  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-23A  
**Lab Code:** J0905604-001  
**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	11/14/09	11/14/09	JWG0903816	
Chlorobenzene	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903816	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903816	
Ethylbenzene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903816	
m,p-Xylenes	ND	U	2.0	0.22	1	11/14/09	11/14/09	JWG0903816	
o-Xylene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903816	
Styrene	ND	U	1.0	0.051	1	11/14/09	11/14/09	JWG0903816	
Bromoform	ND	UJ	2.0	0.12	1	11/14/09	11/14/09	JWG0903816	J(3)
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903816	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/14/09	11/14/09	JWG0903816	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903816	
trans-1,4-Dichloro-2-butene	ND	UJ	20	1.1	1	11/14/09	11/14/09	JWG0903816	J(3)
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/14/09	11/14/09	JWG0903816	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/14/09	11/14/09	JWG0903816	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	90	71-122	11/14/09	Acceptable
4-Bromofluorobenzene	117	75-120	11/14/09	Acceptable
Dibromofluoromethane	97	82-116	11/14/09	Acceptable
Toluene-d8	102	88-117	11/14/09	Acceptable

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

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905604  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-23C  
 Lab Code: J0905604-002  
 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	11/14/09	11/14/09	JWG0903816	
Vinyl Chloride	ND	U	1.0	0.25	1	11/14/09	11/14/09	JWG0903816	
Bromomethane	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903816	
Chloroethane	ND	U	5.0	0.19	1	11/14/09	11/14/09	JWG0903816	
Trichlorofluoromethane	ND	U	20	0.25	1	11/14/09	11/14/09	JWG0903816	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/14/09	11/14/09	JWG0903816	
Acetone	ND	U	50	2.4	1	11/14/09	11/14/09	JWG0903816	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/14/09	11/14/09	JWG0903816	
Carbon Disulfide	ND	U	10	0.84	1	11/14/09	11/14/09	JWG0903816	
Methylene Chloride	ND	U	5.0	0.72	1	11/14/09	11/14/09	JWG0903816	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/14/09	11/14/09	JWG0903816	
Acrylonitrile	ND	U	10	0.59	1	11/14/09	11/14/09	JWG0903816	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/14/09	11/14/09	JWG0903816	
Vinyl Acetate	ND	U	10	0.60	1	11/14/09	11/14/09	JWG0903816	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903816	
2-Butanone (MEK)	ND	U	10	0.56	1	11/14/09	11/14/09	JWG0903816	
Bromochloromethane	ND	U	5.0	0.14	1	11/14/09	11/14/09	JWG0903816	
Chloroform	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903816	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903816	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/14/09	11/14/09	JWG0903816	
Benzene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903816	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903816	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903816	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/14/09	11/14/09	JWG0903816	
Dibromomethane	ND	U	5.0	0.12	1	11/14/09	11/14/09	JWG0903816	
Bromodichloromethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903816	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903816	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/14/09	11/14/09	JWG0903816	
Toluene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903816	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903816	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903816	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/14/09	11/14/09	JWG0903816	
2-Hexanone	ND	U	25	0.36	1	11/14/09	11/14/09	JWG0903816	
Dibromochloromethane	ND	U	1.0	0.11	1	11/14/09	11/14/09	JWG0903816	

Comments:



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905604  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** MW-23C  
**Lab Code:** J0905604-002  
**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	11/14/09	11/14/09	JWG0903816	
Chlorobenzene	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903816	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903816	
Ethylbenzene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903816	
m,p-Xylenes	ND	U	2.0	0.22	1	11/14/09	11/14/09	JWG0903816	
o-Xylene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903816	
Styrene	ND	U	1.0	0.051	1	11/14/09	11/14/09	JWG0903816	
Bromoform	ND	UJ	2.0	0.12	1	11/14/09	11/14/09	JWG0903816	J(3)
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903816	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/14/09	11/14/09	JWG0903816	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903816	
trans-1,4-Dichloro-2-butene	ND	UJ	20	1.1	1	11/14/09	11/14/09	JWG0903816	J(3)
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/14/09	11/14/09	JWG0903816	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/14/09	11/14/09	JWG0903816	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	87	71-122	11/14/09	Acceptable
4-Bromofluorobenzene	119	75-120	11/14/09	Acceptable
Dibromofluoromethane	95	82-116	11/14/09	Acceptable
Toluene-d8	103	88-117	11/14/09	Acceptable

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

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905604  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Trip Blank  
 Lab Code: J0905604-003  
 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	0.17	1	11/14/09	11/14/09	JWG0903816	
Vinyl Chloride	ND	U	1.0	0.25	1	11/14/09	11/14/09	JWG0903816	
Bromomethane	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903816	
Chloroethane	ND	U	5.0	0.19	1	11/14/09	11/14/09	JWG0903816	
Trichlorofluoromethane	ND	U	20	0.25	1	11/14/09	11/14/09	JWG0903816	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/14/09	11/14/09	JWG0903816	
Acetone	ND	U	50	2.4	1	11/14/09	11/14/09	JWG0903816	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/14/09	11/14/09	JWG0903816	
Carbon Disulfide	ND	U	10	0.84	1	11/14/09	11/14/09	JWG0903816	
Methylene Chloride	ND	U	5.0	0.72	1	11/14/09	11/14/09	JWG0903816	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/14/09	11/14/09	JWG0903816	
Acrylonitrile	ND	U	10	0.59	1	11/14/09	11/14/09	JWG0903816	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/14/09	11/14/09	JWG0903816	
Vinyl Acetate	ND	U	10	0.60	1	11/14/09	11/14/09	JWG0903816	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903816	
2-Butanone (MEK)	ND	U	10	0.56	1	11/14/09	11/14/09	JWG0903816	
Bromochloromethane	ND	U	5.0	0.14	1	11/14/09	11/14/09	JWG0903816	
Chloroform	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903816	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903816	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/14/09	11/14/09	JWG0903816	
Benzene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903816	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903816	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903816	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/14/09	11/14/09	JWG0903816	
Dibromomethane	ND	U	5.0	0.12	1	11/14/09	11/14/09	JWG0903816	
Bromodichloromethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903816	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903816	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/14/09	11/14/09	JWG0903816	
Toluene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903816	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903816	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903816	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/14/09	11/14/09	JWG0903816	
2-Hexanone	ND	U	25	0.36	1	11/14/09	11/14/09	JWG0903816	
Dibromochloromethane	ND	U	1.0	0.11	1	11/14/09	11/14/09	JWG0903816	

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905604  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**Appendix I Volatile Organic Compounds by GC/MS**

**Sample Name:** Trip Blank  
**Lab Code:** J0905604-003  
**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	0.18	1	11/14/09	11/14/09	JWG0903816	
Chlorobenzene	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903816	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903816	
Ethylbenzene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903816	
m,p-Xylenes	ND	U	2.0	0.22	1	11/14/09	11/14/09	JWG0903816	
o-Xylene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903816	
Styrene	ND	U	1.0	0.051	1	11/14/09	11/14/09	JWG0903816	
Bromoform	ND	UJ	2.0	0.12	1	11/14/09	11/14/09	JWG0903816	J(3)
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903816	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/14/09	11/14/09	JWG0903816	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903816	
trans-1,4-Dichloro-2-butene	ND	UJ	20	1.1	1	11/14/09	11/14/09	JWG0903816	J(3)
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/14/09	11/14/09	JWG0903816	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/14/09	11/14/09	JWG0903816	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	90	71-122	11/14/09	Acceptable
4-Bromofluorobenzene	119	75-120	11/14/09	Acceptable
Dibromofluoromethane	96	82-116	11/14/09	Acceptable
Toluene-d8	104	88-117	11/14/09	Acceptable

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

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905604  
 Date Collected: NA  
 Date Received: NA

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Method Blank  
 Lab Code: JWG0903816-4  
 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	11/14/09	11/14/09	JWG0903816	
Vinyl Chloride	ND	U	1.0	0.25	1	11/14/09	11/14/09	JWG0903816	
Bromomethane	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903816	
Chloroethane	ND	U	5.0	0.19	1	11/14/09	11/14/09	JWG0903816	
Trichlorofluoromethane	ND	U	20	0.25	1	11/14/09	11/14/09	JWG0903816	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/14/09	11/14/09	JWG0903816	
Acetone	ND	U	50	2.4	1	11/14/09	11/14/09	JWG0903816	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/14/09	11/14/09	JWG0903816	
Carbon Disulfide	ND	U	10	0.84	1	11/14/09	11/14/09	JWG0903816	
Methylene Chloride	ND	U	5.0	0.72	1	11/14/09	11/14/09	JWG0903816	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/14/09	11/14/09	JWG0903816	
Acrylonitrile	ND	U	10	0.59	1	11/14/09	11/14/09	JWG0903816	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/14/09	11/14/09	JWG0903816	
Vinyl Acetate	ND	U	10	0.60	1	11/14/09	11/14/09	JWG0903816	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903816	
2-Butanone (MEK)	ND	U	10	0.56	1	11/14/09	11/14/09	JWG0903816	
Bromochloromethane	ND	U	5.0	0.14	1	11/14/09	11/14/09	JWG0903816	
Chloroform	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903816	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903816	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/14/09	11/14/09	JWG0903816	
Benzene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903816	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903816	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903816	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/14/09	11/14/09	JWG0903816	
Dibromomethane	ND	U	5.0	0.12	1	11/14/09	11/14/09	JWG0903816	
Bromodichloromethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903816	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903816	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/14/09	11/14/09	JWG0903816	
Toluene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903816	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903816	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903816	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/14/09	11/14/09	JWG0903816	
2-Hexanone	ND	U	25	0.36	1	11/14/09	11/14/09	JWG0903816	
Dibromochloromethane	ND	U	1.0	0.11	1	11/14/09	11/14/09	JWG0903816	

Comments:

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905604  
 Date Collected: NA  
 Date Received: NA

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Method Blank  
 Lab Code: JWG0903816-4  
 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	11/14/09	11/14/09	JWG0903816	
Chlorobenzene	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903816	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903816	
Ethylbenzene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903816	
m,p-Xylenes	ND	U	2.0	0.22	1	11/14/09	11/14/09	JWG0903816	
o-Xylene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903816	
Styrene	ND	U	1.0	0.051	1	11/14/09	11/14/09	JWG0903816	
Bromoform	ND	UJ	2.0	0.12	1	11/14/09	11/14/09	JWG0903816	J(3)
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903816	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/14/09	11/14/09	JWG0903816	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903816	
trans-1,4-Dichloro-2-butene	ND	UJ	20	1.1	1	11/14/09	11/14/09	JWG0903816	J(3)
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/14/09	11/14/09	JWG0903816	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/14/09	11/14/09	JWG0903816	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	88	71-122	11/14/09	Acceptable
4-Bromofluorobenzene	117	75-120	11/14/09	Acceptable
Dibromofluoromethane	94	82-116	11/14/09	Acceptable
Toluene-d8	105	88-117	11/14/09	Acceptable

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

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905604  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

Sample Name: MW-23A  
 Lab Code: J0905604-001  
 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	11/15/09	11/18/09	JWG0903823	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	0.020	0.0057	1	11/15/09	11/18/09	JWG0903823	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	106	77-150	11/18/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905604  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** MW-23C  
**Lab Code:** J0905604-002  
**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	11/15/09	11/18/09	JWG0903823	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	0.020	0.0057	1	11/15/09	11/18/09	JWG0903823	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	108	77-150	11/18/09	Acceptable

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

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905604  
 Date Collected: NA  
 Date Received: NA

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

Sample Name: Method Blank  
 Lab Code: JWG0903823-4  
 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	11/15/09	11/18/09	JWG0903823	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	0.020	0.0057	1	11/15/09	11/18/09	JWG0903823	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	107	77-150	11/18/09	Acceptable

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



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-23A  
**Lab Code:** J0905604-001

**Service Request:** J0905604  
**Date Collected:** 11/10/09 08:45  
**Date Received:** 11/11/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/17/09	11/23/09 16:21
Arsenic, Total	6020	<b>0.49</b> I	µg/L	0.50	0.20	1	11/17/09	11/23/09 16:21
Barium, Total	6020	<b>24.0</b>	µg/L	2.0	0.5	1	11/17/09	11/23/09 16:21
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/17/09	11/24/09 13:25
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/17/09	11/23/09 16:21
Chromium, Total	6020	<b>2.4</b>	µg/L	2.0	0.8	1	11/17/09	11/23/09 16:21
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/17/09	11/23/09 16:21
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/17/09	11/23/09 16:21
Iron, Total	6010B	<b>2950</b>	µg/L	50	4	1	11/12/09	11/12/09 20:41
Lead, Total	6020	ND U	µg/L	1.0	0.2	1	11/17/09	11/24/09 13:25
Mercury, Total	7470A	ND U	µg/L	0.50	0.08	1	11/17/09	11/18/09 16:39
Nickel, Total	6020	ND U	µg/L	2.0	0.3	1	11/17/09	11/23/09 16:21
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/17/09	11/23/09 16:21
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/17/09	11/23/09 16:21
Sodium, Total	6010B	<b>14.8</b>	mg/L	0.50	0.02	1	11/12/09	11/12/09 20:41
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/17/09	11/24/09 13:25
Vanadium, Total	6020	<b>3.1</b> I	µg/L	5.0	1.2	1	11/17/09	11/23/09 16:21
Zinc, Total	6020	ND U	µg/L	10	4	1	11/17/09	11/23/09 16:21

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** MW-23C  
**Lab Code:** J0905604-002

**Service Request:** J0905604  
**Date Collected:** 11/10/09 09:25  
**Date Received:** 11/11/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND U	µg/L	2.0	0.4	1	11/17/09	11/23/09 16:27
Arsenic, Total	6020	0.27 I	µg/L	0.50	0.20	1	11/17/09	11/23/09 16:27
Barium, Total	6020	9.9	µg/L	2.0	0.5	1	11/17/09	11/23/09 16:27
Beryllium, Total	6020	ND U	µg/L	1.0	0.2	1	11/17/09	11/24/09 13:30
Cadmium, Total	6020	ND U	µg/L	0.50	0.12	1	11/17/09	11/23/09 16:27
Chromium, Total	6020	3.3	µg/L	2.0	0.8	1	11/17/09	11/23/09 16:27
Cobalt, Total	6020	ND U	µg/L	1.0	0.2	1	11/17/09	11/23/09 16:27
Copper, Total	6020	ND U	µg/L	2.0	0.3	1	11/17/09	11/23/09 16:27
Iron, Total	6010B	495	µg/L	50	4	1	11/12/09	11/12/09 20:45
Lead, Total	6020	0.3 I	µg/L	1.0	0.2	1	11/17/09	11/24/09 13:30
Mercury, Total	7470A	0.12 I	µg/L	0.50	0.08	1	11/17/09	11/18/09 16:40
Nickel, Total	6020	1.0 I	µg/L	2.0	0.3	1	11/17/09	11/23/09 16:27
Selenium, Total	6020	ND U	µg/L	2.0	0.8	1	11/17/09	11/23/09 16:27
Silver, Total	6020	ND U	µg/L	0.50	0.08	1	11/17/09	11/23/09 16:27
Sodium, Total	6010B	5.04	mg/L	0.50	0.02	1	11/12/09	11/12/09 20:44
Thallium, Total	6020	ND U	µg/L	1.0	0.2	1	11/17/09	11/24/09 13:30
Vanadium, Total	6020	ND U	µg/L	5.0	1.2	1	11/17/09	11/23/09 16:27
Zinc, Total	6020	ND U	µg/L	10	4	1	11/17/09	11/23/09 16:27

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** J0905604-MB

**Service Request:** J0905604  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	ND	U	µg/L	2.0	0.4	1	11/17/09	11/19/09 04:57
Arsenic, Total	6020	<b>0.20</b>	I	µg/L	0.50	0.20	1	11/17/09	11/19/09 04:57
Barium, Total	6020	ND	U	µg/L	2.0	0.5	1	11/17/09	11/19/09 04:57
Beryllium, Total	6020	ND	U	µg/L	1.0	0.2	1	11/17/09	11/19/09 04:57
Cadmium, Total	6020	ND	U	µg/L	0.50	0.12	1	11/17/09	11/19/09 04:57
Chromium, Total	6020	<b>1.7</b>	I	µg/L	2.0	0.8	1	11/17/09	11/23/09 19:30
Cobalt, Total	6020	ND	U	µg/L	1.0	0.2	1	11/17/09	11/19/09 04:57
Copper, Total	6020	ND	U	µg/L	2.0	0.3	1	11/17/09	11/19/09 04:57
Iron, Total	6010B	<b>6</b>	I	µg/L	50	4	1	11/12/09	11/12/09 19:31
Lead, Total	6020	ND	U	µg/L	1.0	0.2	1	11/17/09	11/19/09 04:57
Mercury, Total	7470A	ND	U	µg/L	0.50	0.08	1	11/17/09	11/18/09 16:08
Nickel, Total	6020	ND	U	µg/L	2.0	0.3	1	11/17/09	11/19/09 04:57
Selenium, Total	6020	ND	U	µg/L	2.0	0.8	1	11/17/09	11/19/09 04:57
Silver, Total	6020	ND	U	µg/L	0.50	0.08	1	11/17/09	11/19/09 04:57
Sodium, Total	6010B	<b>0.03</b>	I	mg/L	0.50	0.02	1	11/12/09	11/12/09 19:30
Thallium, Total	6020	ND	U	µg/L	1.0	0.2	1	11/17/09	11/19/09 04:57
Vanadium, Total	6020	<b>1.6</b>	I	µg/L	5.0	1.2	1	11/17/09	11/19/09 04:57
Zinc, Total	6020	ND	U	µg/L	10	4	1	11/17/09	11/19/09 04:57

Comments:

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Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905604  
**Date Collected :** 11/10/09  
**Date Received :** 11/11/09

Inorganic Parameters

**Sample Name :** MW-23A  
**Lab Code :** J0905604-001  
**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	0.01	1	11/18/09 09:49	1.4	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/11/09 15:30	41	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/11/09 20:15	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/16/09 17:30	220	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905604  
**Date Collected :** 11/10/09  
**Date Received :** 11/11/09

Inorganic Parameters

**Sample Name :** MW-23C  
**Lab Code :** J0905604-002  
**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	0.01	1	11/18/09 09:49	0.074	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/11/09 15:30	8.8	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/11/09 20:30	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/16/09 17:30	69	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : GeoSyntec Consultants  
Project Name : JED SWDF  
Project Number : FQ1512A.02  
Sample Matrix : WATER

Service Request : J0905604  
Date Collected : NA  
Date Received : NA

Inorganic Parameters

Sample Name : Method Blank  
Lab Code : J0905604-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	0.01	1	11/18/09 09:49	U	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/11/09 15:30	U	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/11/09 15:30	U	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/11/09 15:30	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/16/09 17:30	U	

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905604

**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-23A	J0905604-001	90	117	97	102
MW-23C	J0905604-002	87	119	95	103
Trip Blank	J0905604-003	90	119	96	104
Method Blank	JWG0903816-4	88	117	94	105
MW-23AMS	JWG0903816-1	91	115	98	101
MW-23ADMS	JWG0903816-2	92	111	93	103
Lab Control Sample	JWG0903816-3	88	112	94	103

**Surrogate Recovery Control Limits (%)**

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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.

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905604  
 Date Extracted: 11/14/2009  
 Date Analyzed: 11/14/2009

Matrix Spike/Duplicate Matrix Spike Summary  
 Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-23A  
 Lab Code: J0905604-001  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0903816

Analyte Name	Sample Result	MW-23AMS JWG0903816-1 Matrix Spike			MW-23ADMS JWG0903816-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Chloromethane	ND	15.6	20.0	78	15.8	20.0	79	73-139	1	30
Vinyl Chloride	ND	15.1	20.0	76 *	15.9	20.0	80	78-141	5	30
Bromomethane	ND	15.2	20.0	76 *	16.2	20.0	81	78-129	6	30
Chloroethane	ND	18.6	20.0	93	17.7	20.0	88	76-129	5	30
Trichlorofluoromethane	ND	16.5	20.0	83	16.3	20.0	82	81-133	1	30
1,1-Dichloroethene	ND	17.6	20.0	88	18.3	20.0	91	79-133	4	30
Acetone	ND	87.0	100	87	87.8	100	88	56-139	1	30
Iodomethane (Methyl Iodide)	ND	99.4	100	99	95.9	100	96	74-134	4	30
Carbon Disulfide	ND	83.7	100	84	85.3	100	85	71-146	2	30
Methylene Chloride	ND	21.0	20.0	105	20.9	20.0	104	75-123	1	30
trans-1,2-Dichloroethene	ND	18.9	20.0	95	19.5	20.0	98	76-125	3	30
Acrylonitrile	ND	89.0	100	89	90.9	100	91	68-131	2	30
1,1-Dichloroethane	ND	19.1	20.0	96	19.8	20.0	99	78-125	4	30
Vinyl Acetate	ND	87.7	100	88	92.1	100	92	43-163	5	30
cis-1,2-Dichloroethene	ND	20.3	20.0	102	20.1	20.0	101	75-127	1	30
2-Butanone (MEK)	ND	87.5	100	88	83.3	100	83	63-134	5	30
Bromochloromethane	ND	21.0	20.0	105	20.2	20.0	101	80-124	4	30
Chloroform	ND	20.3	20.0	102	20.4	20.0	102	81-124	0	30
1,1,1-Trichloroethane (TCA)	ND	18.3	20.0	91	18.3	20.0	91	76-130	0	30
Carbon Tetrachloride	ND	16.4	20.0	82	16.4	20.0	82	76-131	0	30
Benzene	ND	19.6	20.0	98	19.2	20.0	96	78-123	2	30
1,2-Dichloroethane (EDC)	ND	20.5	20.0	103	20.6	20.0	103	74-126	0	30
Trichloroethene (TCE)	ND	18.7	20.0	94	18.8	20.0	94	77-128	0	30
1,2-Dichloropropane	ND	20.6	20.0	103	20.5	20.0	102	77-122	1	30
Dibromomethane	ND	19.6	20.0	98	19.3	20.0	96	78-124	1	30
Bromodichloromethane	ND	19.7	20.0	99	19.4	20.0	97	79-125	2	30
cis-1,3-Dichloropropene	ND	17.8	20.0	89	17.1	20.0	85	77-117	4	30
4-Methyl-2-pentanone (MIBK)	ND	90.0	100	90	92.6	100	93	65-138	3	30
Toluene	ND	19.2	20.0	96	19.4	20.0	97	86-119	1	30
trans-1,3-Dichloropropene	ND	15.3	20.0	76	15.6	20.0	78	75-120	2	30
1,1,2-Trichloroethane	ND	18.4	20.0	92	19.4	20.0	97	77-124	5	30
Tetrachloroethene (PCE)	ND	17.2	20.0	86	17.7	20.0	88	79-123	3	30
2-Hexanone	ND	89.6	100	90	94.9	100	95	63-142	6	30
Dibromochloromethane	ND	16.8	20.0	84	17.9	20.0	89	78-124	6	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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905604  
 Date Extracted: 11/14/2009  
 Date Analyzed: 11/14/2009

Matrix Spike/Duplicate Matrix Spike Summary  
 Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-23A  
 Lab Code: J0905604-001  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0903816

Analyte Name	Sample Result	MW-23AMS JWG0903816-1 Matrix Spike			MW-23ADMS JWG0903816-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
1,2-Dibromoethane (EDB)	ND	18.9	20.0	95	19.0	20.0	95	81-119	0	30
Chlorobenzene	ND	19.2	20.0	96	18.9	20.0	95	81-120	2	30
1,1,1,2-Tetrachloroethane	ND	18.0	20.0	90	18.2	20.0	91	82-118	2	30
Ethylbenzene	ND	18.6	20.0	93	19.2	20.0	96	87-122	3	30
m,p-Xylenes	ND	37.1	40.0	93	38.9	40.0	97	82-120	5	30
o-Xylene	ND	19.2	20.0	96	19.5	20.0	98	85-119	2	30
Styrene	ND	18.7	20.0	93	18.9	20.0	94	84-126	1	30
Bromoform	ND	13.5	20.0	67 *	14.3	20.0	71	70-129	6	30
1,1,2,2-Tetrachloroethane	ND	18.5	20.0	92	18.9	20.0	94	72-127	2	30
1,2,3-Trichloropropane	ND	17.7	20.0	89	17.5	20.0	88	76-123	1	30
1,4-Dichlorobenzene	ND	20.0	20.0	100	19.6	20.0	98	75-115	2	30
trans-1,4-Dichloro-2-butene	ND	ND	20.0	0 *	ND	20.0	0 *	22-135		30
1,2-Dichlorobenzene	ND	19.6	20.0	98	18.7	20.0	93	77-116	5	30
1,2-Dibromo-3-chloropropane (DBCP)	ND	14.5	20.0	73	15.3	20.0	76	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.

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905604  
 Date Extracted: 11/14/2009  
 Date Analyzed: 11/14/2009

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: JWG0903816

Lab Control Sample  
 JWG0903816-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Chloromethane	17.7	20.0	89	67-135
Vinyl Chloride	17.8	20.0	89	78-132
Bromomethane	17.2	20.0	86	79-130
Chloroethane	19.3	20.0	97	74-126
Trichlorofluoromethane	20.6	20.0	103	74-134
1,1-Dichloroethene	20.7	20.0	104	78-130
Acetone	91.0	100	91	67-133
Iodomethane (Methyl Iodide)	99.4	100	99	68-134
Carbon Disulfide	92.5	100	92	76-138
Methylene Chloride	20.5	20.0	102	72-124
trans-1,2-Dichloroethene	20.3	20.0	102	77-124
Acrylonitrile	87.1	100	87	77-127
1,1-Dichloroethane	20.4	20.0	102	80-128
Vinyl Acetate	110	100	110	61-148
cis-1,2-Dichloroethene	20.4	20.0	102	80-126
2-Butanone (MEK)	79.7	100	80	73-127
Bromochloromethane	19.5	20.0	97	79-129
Chloroform	19.7	20.0	99	83-124
1,1,1-Trichloroethane (TCA)	20.3	20.0	102	79-124
Carbon Tetrachloride	19.7	20.0	98	81-125
Benzene	19.8	20.0	99	79-119
1,2-Dichloroethane (EDC)	19.5	20.0	97	80-124
Trichloroethene (TCE)	19.2	20.0	96	76-124
1,2-Dichloropropane	19.5	20.0	97	79-123
Dibromomethane	18.7	20.0	94	83-123
Bromodichloromethane	18.7	20.0	94	81-123
cis-1,3-Dichloropropene	18.8	20.0	94	86-123
4-Methyl-2-pentanone (MIBK)	89.4	100	89	72-136
Toluene	20.1	20.0	100	86-117
trans-1,3-Dichloropropene	17.4	20.0	87	83-124
1,1,2-Trichloroethane	18.5	20.0	93	86-114
Tetrachloroethene (PCE)	18.8	20.0	94	80-121
2-Hexanone	91.5	100	91	71-138
Dibromochloromethane	16.6	20.0	83	82-121
1,2-Dibromoethane (EDB)	18.9	20.0	95	88-117
Chlorobenzene	19.1	20.0	95	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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905604  
 Date Extracted: 11/14/2009  
 Date Analyzed: 11/14/2009

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: JWG0903816

Lab Control Sample  
 JWG0903816-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	18.4	20.0	92	85-117
Ethylbenzene	19.6	20.0	98	90-118
m,p-Xylenes	38.2	40.0	96	86-121
o-Xylene	19.3	20.0	96	89-119
Styrene	18.8	20.0	94	89-122
Bromoform	13.4	20.0	67 *	68-129
1,1,2,2-Tetrachloroethane	17.6	20.0	88	83-120
1,2,3-Trichloropropane	16.9	20.0	84	83-123
1,4-Dichlorobenzene	19.3	20.0	97	83-113
trans-1,4-Dichloro-2-butene	3.00	20.0	15 *	53-143
1,2-Dichlorobenzene	19.6	20.0	98	84-115
1,2-Dibromo-3-chloropropane (DBCP)	15.5	20.0	78	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 SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905604

**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-23A	J0905604-001	106
MW-23C	J0905604-002	108
Method Blank	JWG0903823-4	107
MW-23AMS	JWG0903823-1	107
MW-23ADMS	JWG0903823-2	106
Lab Control Sample	JWG0903823-3	110

**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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905604  
 Date Extracted: 11/15/2009  
 Date Analyzed: 11/18/2009

**Matrix Spike/Duplicate Matrix Spike Summary**  
**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

Sample Name: MW-23A  
 Lab Code: J0905604-001  
 Extraction Method: METHOD  
 Analysis Method: 8011

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0903823

Analyte Name	Sample Result	MW-23AMS JWG0903823-1 Matrix Spike			MW-23ADMS JWG0903823-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
1,2-Dibromoethane (EDB)	ND	0.250	0.250	100	0.249	0.250	100	65-135	0	20
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.262	0.250	105	0.255	0.250	102	65-135	3	20

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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905604  
 Date Extracted: 11/15/2009  
 Date Analyzed: 11/18/2009

**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: JWG0903823

Lab Control Sample  
 JWG0903823-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
1,2-Dibromoethane (EDB)	0.284	0.250	114	70-130
1,2-Dibromo-3-chloropropane (DBCP)	0.265	0.250	106	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:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905604  
**Date Analyzed:** 11/12/09 -  
 11/19/09

**Lab Control Sample Summary  
 Inorganic Parameters**

**Units:** µg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample J0905604-LCS			% Rec Limits
		Result	Expected	% Rec	
Antimony, Total	6020	47.9	50.0	96	80 - 120
Arsenic, Total	6020	49.3	50.0	99	80 - 120
Barium, Total	6020	50.2	50.0	100	80 - 120
Beryllium, Total	6020	44.1	50.0	88	80 - 120
Cadmium, Total	6020	47.3	50.0	95	80 - 120
Chromium, Total	6020	52.2	50.0	104	80 - 120
Cobalt, Total	6020	53.2	50.0	106	80 - 120
Copper, Total	6020	52.7	50.0	105	80 - 120
Iron, Total	6010B	1960	2000	98	80 - 120
Lead, Total	6020	50.8	50.0	102	80 - 120
Mercury, Total	7470A	5.52	5.00	110	80 - 120
Nickel, Total	6020	53.0	50.0	106	80 - 120
Selenium, Total	6020	45.6	50.0	91	80 - 120
Silver, Total	6020	51.2	50.0	102	80 - 120
Thallium, Total	6020	50.4	50.0	101	80 - 120
Vanadium, Total	6020	51.0	50.0	102	80 - 120
Zinc, Total	6020	94.3	100	94	80 - 120

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

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905604  
**Date Analyzed:** 11/12/09

**Lab Control Sample Summary  
Inorganic Parameters**

**Units:** mg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample J0905604-LCS			% Rec Limits
		Result	Expected	% Rec	
Sodium, Total	6010B	10.3	10.0	103	80 - 120

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



**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905604  
**Date Collected :** NA  
**Date Received :** NA  
**Date Extracted :** NA  
**Date Analyzed :** 11/11-18/09

Laboratory Control Sample Summary  
 Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** J0905604-LCS  
**Test Notes :**

**Basis :** NA

<b>Analyte</b>	<b>Units</b>	<b>Analysis Method</b>	<b>True Value</b>	<b>Result</b>	<b>Percent Recovery</b>	<b>CAS Percent Recovery Acceptance Limits</b>	<b>Result Notes</b>
Ammonia as Nitrogen	mg/L (ppm)	350.1	1.00	1.03	103	90-110	
Chloride	mg/L (ppm)	300.0	5.00	5.11	102	90-110	
Chloride	mg/L (ppm)	300.0	100	101	101	90-110	
Nitrate as Nitrogen	mg/L (ppm)	300.0	5.0	5.01	100	90-110	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	300	291	97	85-115	

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

Client: Geosyntec Service Request # 50905604  
 Project: JED SWDF  
 Cooler received on 11/11/09 and opened on 11/11/09 by SC  
 COURIER: CAS UPS FEDEX DHL CLIENT Tracking #

- |    |   |                                      |                                     |                                      |
|----|---|--------------------------------------|-------------------------------------|--------------------------------------|
| 1  | Were custody seals on outside of cooler?  | Yes                                  | <input checked="" type="radio"/> No | N/A                                  |
| 2  | Were seals intact, signed and dated?  | Yes                                  | No                                  | <input checked="" type="radio"/> N/A |
| 3  | Were custody papers properly filled out?  | <input checked="" type="radio"/> Yes | No                                  | N/A                                  |
| 4  | Temperature of cooler(s) upon receipt (Should be 4 +/- 2 degrees C)   | <u>5.6</u>                           |                                     |                                      |
| 5  | Correct Temperature?  | <input checked="" type="radio"/> Yes | No                                  | N/A                                  |
| 6  | Were Ice or Ice Packs present   | <input checked="" type="radio"/> Yes | No                                  | N/A                                  |
| 7  | Did all bottles arrive in good condition (unbroken, etc....)?   | <input checked="" type="radio"/> Yes | No                                  | N/A                                  |
| 8  | Were all bottle labels complete (sample ID, preservation, etc....)?   | <input checked="" type="radio"/> Yes | No                                  | N/A                                  |
| 9  | Did all bottle labels and tags agree with custody papers?   | <input checked="" type="radio"/> Yes | No                                  | N/A                                  |
| 10 | Were the correct bottles used for the tests indicated?  | <input checked="" type="radio"/> Yes | No                                  | N/A                                  |
| 11 | Were all of the preserved bottles received with the appropriate preservative?                                       | <input checked="" type="radio"/> Yes | No                                  | N/A                                  |
|    | <u>HNO3</u> pH<2 <u>H2SO4</u> pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 <u>HCl</u> pH<2<br>Preservative additions noted below |                                      |                                     |                                      |
| 12 | Were all samples received within analysis holding times?  | <input checked="" type="radio"/> Yes | No                                  | N/A                                  |
| 13 | Were VOA vials checked for absence of air bubbles? If present, note below   | Yes                                  | No                                  | <input checked="" type="radio"/> 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 35

SR #: J 0905604

Date: 11/11/09

Initials: SL

Note that pH is checked and meets the required pH criterion listed in the column heading unless otherwise noted on cooler receipt form.

Sample #	Req. pH	Pres.	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	125mL	125mL	125mL	125mL	250mL	250mL	250mL	250mL	250mL	250mL	250mL	500mL	500mL	500mL	500mL	500mL	1L	1L	1L	1L	1L	1L	2oz	4oz	8oz	16oz	5g	100mL	Misc.				
	G	G	G	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	G	G	G	G	G	P	Misc.				
	N/A	<2	N/A	HCl	H2SO4	HNO3	<2	N/A	<2	H2SO4	HNO3	ZnAcetate	NaOH	NaOH	HNO3	H2SO4	HNO3	H2SO4	HNO3	HNO3	<2	N/A	<2	HCl	H2SO4	<2	N/A	N/A	N/A	N/A	N/A	N/A				
-001	3	3																																		
-002	3	3																																		
-003	3	3																																		
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November 30, 2009

Service Request No: J0905605

Kirk Wills  
GeoSyntec Consultants  
14055 Riveredge Drive  
Suite 300  
Tampa, FL 33637

**Laboratory Results for: JED SWDF/FQ1512A.02**

Dear Kirk:

Enclosed are the results of the sample(s) submitted to our laboratory on November 11, 2009. For your reference, these analyses have been assigned our service request number **J0905605**.

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.

Please contact me 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 Manager

Page 1 of 135

COLUMBIA ANALYTICAL SERVICES, INC.

Client: GeoSyntec Consultants  
Project: JED SWDF  
Sample Matrix: Water

Service Request No.: J0905605  
Date Received: 11/11/09

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**

Six water samples and one trip blank were received for analysis at Columbia Analytical Services on 11/11/09. 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.

**Lab Control Sample Exceptions**

The spike recovery of Methacrylonitrile for Laboratory Control Sample (LCS) JWG0903818-3 was outside the lower control criterion. The analyte in question was not detected in the associated field samples. Since the analyte was detected in the MRL check standard, instrument sensitivity was documented. The data quality was not significantly affected and no further corrective action was taken.

**Elevated Method Reporting Limits**

Samples L-1, L-2, L-3, L-4, L-5, and L-6 required dilution due to the presence of elevated levels of target analytes. The reporting limits are adjusted to reflect the dilution.

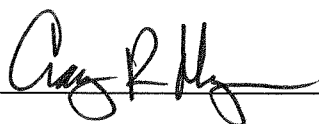
**Batch QC Notes and Discussion**

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.

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



Date \_\_\_\_\_

11/30/09

Batch QC Notes and Discussion

Quality control samples for Matrix Spike and Duplicate Matrix Spike 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.

**Organochlorine Pesticides by GC-ECD**

The samples were analyzed for Organochlorine Pesticides using EPA Method 8081. The following observations were made regarding this delivery group.

Surrogate Exceptions

The control criteria were exceeded for the following surrogates in samples L-1, L-2, L-3, L-4, L-5, and L-6 due to matrix interferences: Tetrachloro-m-xylene and Decachlorobiphenyl. The samples formed a large emulsion during the extraction procedure that may have adversely affected surrogate recovery. 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.

**PCB Aroclors by GC-ECD**

The samples were analyzed for PCB Aroclors using EPA Method 8082. The following observations were made regarding this delivery group.

Surrogate Exceptions

The control criteria were exceeded for the following surrogate in sample L-1, L-2, L-3, L-4, L-5, and L-6 due to matrix interferences: Decachlorobiphenyl. The samples formed a large emulsion during the extraction procedure that may have adversely affected surrogate recovery. 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.

**Semivolatile Organics by GC-MS**

The samples were analyzed for Semivolatile Organics using EPA Method 8270. The following observations were made regarding this delivery group.

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



Date \_\_\_\_\_

11/30/09



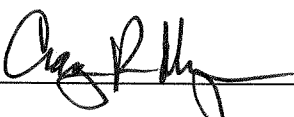


Batch QC Notes and Discussion

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.

Subcontracted Analytical Parameters

The samples were delivered to ENCO Labs in Jacksonville, FL on 11/13/09 for EPA Method 8151 determination. The certified analytical report has been included in its entirety in Appendix A: Subcontracted Analytical Results.

Approved by  Date 11/30/09

## 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 SWDF/FQ1512A.02

**Service Request:** J0905605

**SAMPLE CROSS-REFERENCE**

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J0905605-001	L-1	11/10/09	14:00
J0905605-002	L-2	11/10/09	13:55
J0905605-003	L-3	11/10/09	15:00
J0905605-004	L-4	11/10/09	12:40
J0905605-005	L-5	11/10/09	11:20
J0905605-006	L-6	11/10/09	15:30
J0905605-007	Trip Blank	11/10/09	00:00

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-1  
 Lab Code: J0905605-001  
 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
Dichlorodifluoromethane	ND	U	200	2.3	10	11/14/09	11/14/09	JWG0903818	
Chloromethane	ND	U	10	1.7	10	11/14/09	11/14/09	JWG0903818	
Vinyl Chloride	ND	U	10	2.5	10	11/14/09	11/14/09	JWG0903818	
Bromomethane	ND	U	10	1.4	10	11/14/09	11/14/09	JWG0903818	
Chloroethane	ND	U	50	1.9	10	11/14/09	11/14/09	JWG0903818	
Trichlorofluoromethane	ND	U	200	2.5	10	11/14/09	11/14/09	JWG0903818	
Acrolein	ND	U	500	96	10	11/14/09	11/14/09	JWG0903818	
1,1-Dichloroethene	ND	U	10	1.6	10	11/14/09	11/14/09	JWG0903818	
<b>Acetone</b>	<b>190</b>	<b>I</b>	500	24	10	11/14/09	11/14/09	JWG0903818	
Iodomethane (Methyl Iodide)	ND	U	50	25	10	11/14/09	11/14/09	JWG0903818	
Carbon Disulfide	ND	U	100	8.4	10	11/14/09	11/14/09	JWG0903818	
Acetonitrile	ND	U	250	33	10	11/14/09	11/14/09	JWG0903818	
Allyl Chloride	ND	U	50	1.3	10	11/14/09	11/14/09	JWG0903818	
Methylene Chloride	ND	U	50	7.2	10	11/14/09	11/14/09	JWG0903818	
Acrylonitrile	ND	U	100	5.9	10	11/14/09	11/14/09	JWG0903818	
trans-1,2-Dichloroethene	ND	U	10	1.3	10	11/14/09	11/14/09	JWG0903818	
1,1-Dichloroethane	ND	U	10	5.6	10	11/14/09	11/14/09	JWG0903818	
Vinyl Acetate	ND	U	100	6.0	10	11/14/09	11/14/09	JWG0903818	
Chloroprene	ND	U	10	2.4	10	11/14/09	11/14/09	JWG0903818	
cis-1,2-Dichloroethene	ND	U	10	1.2	10	11/14/09	11/14/09	JWG0903818	
2,2-Dichloropropane	ND	U	10	2.2	10	11/14/09	11/14/09	JWG0903818	
1,1-Dichloropropene	ND	U	50	1.3	10	11/14/09	11/14/09	JWG0903818	
<b>2-Butanone (MEK)</b>	<b>210</b>		100	5.6	10	11/14/09	11/14/09	JWG0903818	
Propionitrile	ND	U	250	8.7	10	11/14/09	11/14/09	JWG0903818	
Bromochloromethane	ND	U	50	1.4	10	11/14/09	11/14/09	JWG0903818	
Methacrylonitrile	ND	UJ	50	2.0	10	11/14/09	11/14/09	JWG0903818	J(3)
Chloroform	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
1,1,1-Trichloroethane (TCA)	ND	U	10	2.1	10	11/14/09	11/14/09	JWG0903818	
Carbon Tetrachloride	ND	U	10	1.8	10	11/14/09	11/14/09	JWG0903818	
<b>Benzene</b>	<b>5.6</b>	<b>I</b>	10	5.2	10	11/14/09	11/14/09	JWG0903818	
1,2-Dichloroethane (EDC)	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
Isobutyl Alcohol	ND	U	1000	46	10	11/14/09	11/14/09	JWG0903818	
Trichloroethene (TCE)	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
1,2-Dichloropropane	ND	U	10	0.57	10	11/14/09	11/14/09	JWG0903818	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-1  
 Lab Code: J0905605-001  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: µg/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromomethane	ND	U	50	1.2	10	11/14/09	11/14/09	JWG0903818	
Methyl Methacrylate	ND	U	20	2.1	10	11/14/09	11/14/09	JWG0903818	
Bromodichloromethane	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
cis-1,3-Dichloropropene	ND	U	10	1.2	10	11/14/09	11/14/09	JWG0903818	
4-Methyl-2-pentanone (MIBK)	ND	U	250	3.7	10	11/14/09	11/14/09	JWG0903818	
<b>Toluene</b>	<b>13</b>		10	5.2	10	11/14/09	11/14/09	JWG0903818	
trans-1,3-Dichloropropene	ND	U	10	1.2	10	11/14/09	11/14/09	JWG0903818	
Ethyl Methacrylate	ND	U	10	1.4	10	11/14/09	11/14/09	JWG0903818	
1,1,2-Trichloroethane	ND	U	10	2.1	10	11/14/09	11/14/09	JWG0903818	
Tetrachloroethene (PCE)	ND	U	10	2.2	10	11/14/09	11/14/09	JWG0903818	
1,3-Dichloropropane	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
2-Hexanone	ND	U	250	3.6	10	11/14/09	11/14/09	JWG0903818	
Dibromochloromethane	ND	U	10	1.1	10	11/14/09	11/14/09	JWG0903818	
1,2-Dibromoethane (EDB)	ND	U	10	1.8	10	11/14/09	11/14/09	JWG0903818	
Chlorobenzene	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
1,1,1,2-Tetrachloroethane	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
<b>Ethylbenzene</b>	<b>34</b>		10	1.0	10	11/14/09	11/14/09	JWG0903818	
<b>m,p-Xylenes</b>	<b>37</b>		20	2.2	10	11/14/09	11/14/09	JWG0903818	
<b>o-Xylene</b>	<b>18</b>		10	1.0	10	11/14/09	11/14/09	JWG0903818	
<b>Styrene</b>	<b>0.65</b>	<b>I</b>	10	0.51	10	11/14/09	11/14/09	JWG0903818	
Bromoform	ND	U	20	1.2	10	11/14/09	11/14/09	JWG0903818	
1,1,2,2-Tetrachloroethane	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
1,2,3-Trichloropropane	ND	U	20	1.6	10	11/14/09	11/14/09	JWG0903818	
trans-1,4-Dichloro-2-butene	ND	U	200	11	10	11/14/09	11/14/09	JWG0903818	
1,3-Dichlorobenzene	ND	U	10	1.4	10	11/14/09	11/14/09	JWG0903818	
<b>1,4-Dichlorobenzene</b>	<b>9.3</b>	<b>I</b>	10	1.4	10	11/14/09	11/14/09	JWG0903818	
1,2-Dichlorobenzene	ND	U	10	1.7	10	11/14/09	11/14/09	JWG0903818	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	50	2.6	10	11/14/09	11/14/09	JWG0903818	
1,2,4-Trichlorobenzene	ND	U	100	3.0	10	11/14/09	11/14/09	JWG0903818	
Hexachlorobutadiene	ND	U	100	6.1	10	11/14/09	11/14/09	JWG0903818	
Naphthalene	ND	U	100	2.5	10	11/14/09	11/14/09	JWG0903818	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**Volatile Organic Compounds by GC/MS (Appendix II)**

**Sample Name:** L-1  
**Lab Code:** J0905605-001

**Units:** ug/L  
**Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	107	71-122	11/14/09	Acceptable
4-Bromofluorobenzene	101	75-120	11/14/09	Acceptable
Dibromofluoromethane	98	82-116	11/14/09	Acceptable
Toluene-d8	101	88-117	11/14/09	Acceptable

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-2  
 Lab Code: J0905605-002  
 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
Dichlorodifluoromethane	ND	U	200	2.3	10	11/14/09	11/14/09	JWG0903818	
Chloromethane	ND	U	10	1.7	10	11/14/09	11/14/09	JWG0903818	
Vinyl Chloride	ND	U	10	2.5	10	11/14/09	11/14/09	JWG0903818	
Bromomethane	ND	U	10	1.4	10	11/14/09	11/14/09	JWG0903818	
Chloroethane	ND	U	50	1.9	10	11/14/09	11/14/09	JWG0903818	
Trichlorofluoromethane	ND	U	200	2.5	10	11/14/09	11/14/09	JWG0903818	
Acrolein	ND	U	500	96	10	11/14/09	11/14/09	JWG0903818	
1,1-Dichloroethene	ND	U	10	1.6	10	11/14/09	11/14/09	JWG0903818	
Acetone	ND	U	500	24	10	11/14/09	11/14/09	JWG0903818	
Iodomethane (Methyl Iodide)	ND	U	50	25	10	11/14/09	11/14/09	JWG0903818	
Carbon Disulfide	ND	U	100	8.4	10	11/14/09	11/14/09	JWG0903818	
Acetonitrile	ND	U	250	33	10	11/14/09	11/14/09	JWG0903818	
Allyl Chloride	ND	U	50	1.3	10	11/14/09	11/14/09	JWG0903818	
Methylene Chloride	ND	U	50	7.2	10	11/14/09	11/14/09	JWG0903818	
Acrylonitrile	ND	U	100	5.9	10	11/14/09	11/14/09	JWG0903818	
trans-1,2-Dichloroethene	ND	U	10	1.3	10	11/14/09	11/14/09	JWG0903818	
1,1-Dichloroethane	ND	U	10	5.6	10	11/14/09	11/14/09	JWG0903818	
Vinyl Acetate	ND	U	100	6.0	10	11/14/09	11/14/09	JWG0903818	
Chloroprene	ND	U	10	2.4	10	11/14/09	11/14/09	JWG0903818	
cis-1,2-Dichloroethene	ND	U	10	1.2	10	11/14/09	11/14/09	JWG0903818	
2,2-Dichloropropane	ND	U	10	2.2	10	11/14/09	11/14/09	JWG0903818	
1,1-Dichloropropene	ND	U	50	1.3	10	11/14/09	11/14/09	JWG0903818	
2-Butanone (MEK)	ND	U	100	5.6	10	11/14/09	11/14/09	JWG0903818	
Propionitrile	ND	U	250	8.7	10	11/14/09	11/14/09	JWG0903818	
Bromochloromethane	ND	U	50	1.4	10	11/14/09	11/14/09	JWG0903818	
Methacrylonitrile	ND	UJ	50	2.0	10	11/14/09	11/14/09	JWG0903818	J(3)
Chloroform	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
1,1,1-Trichloroethane (TCA)	ND	U	10	2.1	10	11/14/09	11/14/09	JWG0903818	
Carbon Tetrachloride	ND	U	10	1.8	10	11/14/09	11/14/09	JWG0903818	
<b>Benzene</b>	<b>8.8</b>	<b>I</b>	10	5.2	10	11/14/09	11/14/09	JWG0903818	
1,2-Dichloroethane (EDC)	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
Isobutyl Alcohol	ND	U	1000	46	10	11/14/09	11/14/09	JWG0903818	
Trichloroethene (TCE)	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
1,2-Dichloropropane	ND	U	10	0.57	10	11/14/09	11/14/09	JWG0903818	

Comments:



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-2  
 Lab Code: J0905605-002  
 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
Dibromomethane	ND	U	50	1.2	10	11/14/09	11/14/09	JWG0903818	
Methyl Methacrylate	ND	U	20	2.1	10	11/14/09	11/14/09	JWG0903818	
Bromodichloromethane	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
cis-1,3-Dichloropropene	ND	U	10	1.2	10	11/14/09	11/14/09	JWG0903818	
4-Methyl-2-pentanone (MIBK)	ND	U	250	3.7	10	11/14/09	11/14/09	JWG0903818	
<b>Toluene</b>	<b>13</b>		10	5.2	10	11/14/09	11/14/09	JWG0903818	
trans-1,3-Dichloropropene	ND	U	10	1.2	10	11/14/09	11/14/09	JWG0903818	
Ethyl Methacrylate	ND	U	10	1.4	10	11/14/09	11/14/09	JWG0903818	
1,1,2-Trichloroethane	ND	U	10	2.1	10	11/14/09	11/14/09	JWG0903818	
Tetrachloroethene (PCE)	ND	U	10	2.2	10	11/14/09	11/14/09	JWG0903818	
1,3-Dichloropropane	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
2-Hexanone	ND	U	250	3.6	10	11/14/09	11/14/09	JWG0903818	
Dibromochloromethane	ND	U	10	1.1	10	11/14/09	11/14/09	JWG0903818	
1,2-Dibromoethane (EDB)	ND	U	10	1.8	10	11/14/09	11/14/09	JWG0903818	
Chlorobenzene	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
1,1,1,2-Tetrachloroethane	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
<b>Ethylbenzene</b>	<b>34</b>		10	1.0	10	11/14/09	11/14/09	JWG0903818	
<b>m,p-Xylenes</b>	<b>44</b>		20	2.2	10	11/14/09	11/14/09	JWG0903818	
<b>o-Xylene</b>	<b>25</b>		10	1.0	10	11/14/09	11/14/09	JWG0903818	
Styrene	ND	U	10	0.51	10	11/14/09	11/14/09	JWG0903818	
Bromoform	ND	U	20	1.2	10	11/14/09	11/14/09	JWG0903818	
1,1,2,2-Tetrachloroethane	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
1,2,3-Trichloropropane	ND	U	20	1.6	10	11/14/09	11/14/09	JWG0903818	
trans-1,4-Dichloro-2-butene	ND	U	200	11	10	11/14/09	11/14/09	JWG0903818	
1,3-Dichlorobenzene	ND	U	10	1.4	10	11/14/09	11/14/09	JWG0903818	
<b>1,4-Dichlorobenzene</b>	<b>7.6</b>	<b>I</b>	10	1.4	10	11/14/09	11/14/09	JWG0903818	
1,2-Dichlorobenzene	ND	U	10	1.7	10	11/14/09	11/14/09	JWG0903818	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	50	2.6	10	11/14/09	11/14/09	JWG0903818	
1,2,4-Trichlorobenzene	ND	U	100	3.0	10	11/14/09	11/14/09	JWG0903818	
Hexachlorobutadiene	ND	U	100	6.1	10	11/14/09	11/14/09	JWG0903818	
Naphthalene	ND	U	100	2.5	10	11/14/09	11/14/09	JWG0903818	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
Project: JED SWDF/FQ1512A.02  
Sample Matrix: Water

Service Request: J0905605  
Date Collected: 11/10/2009  
Date Received: 11/11/2009

Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-2  
Lab Code: J0905605-002

Units: ug/L  
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	105	71-122	11/14/09	Acceptable
4-Bromofluorobenzene	106	75-120	11/14/09	Acceptable
Dibromofluoromethane	93	82-116	11/14/09	Acceptable
Toluene-d8	91	88-117	11/14/09	Acceptable

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

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-3  
 Lab Code: J0905605-003  
 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
Dichlorodifluoromethane	ND	U	200	2.3	10	11/14/09	11/14/09	JWG0903818	
Chloromethane	ND	U	10	1.7	10	11/14/09	11/14/09	JWG0903818	
Vinyl Chloride	ND	U	10	2.5	10	11/14/09	11/14/09	JWG0903818	
Bromomethane	ND	U	10	1.4	10	11/14/09	11/14/09	JWG0903818	
Chloroethane	ND	U	50	1.9	10	11/14/09	11/14/09	JWG0903818	
Trichlorofluoromethane	ND	U	200	2.5	10	11/14/09	11/14/09	JWG0903818	
Acrolein	ND	U	500	96	10	11/14/09	11/14/09	JWG0903818	
1,1-Dichloroethene	ND	U	10	1.6	10	11/14/09	11/14/09	JWG0903818	
Acetone	ND	U	500	24	10	11/14/09	11/14/09	JWG0903818	
Iodomethane (Methyl Iodide)	ND	U	50	25	10	11/14/09	11/14/09	JWG0903818	
Carbon Disulfide	ND	U	100	8.4	10	11/14/09	11/14/09	JWG0903818	
Acetonitrile	ND	U	250	33	10	11/14/09	11/14/09	JWG0903818	
Allyl Chloride	ND	U	50	1.3	10	11/14/09	11/14/09	JWG0903818	
Methylene Chloride	ND	U	50	7.2	10	11/14/09	11/14/09	JWG0903818	
Acrylonitrile	ND	U	100	5.9	10	11/14/09	11/14/09	JWG0903818	
trans-1,2-Dichloroethene	ND	U	10	1.3	10	11/14/09	11/14/09	JWG0903818	
1,1-Dichloroethane	ND	U	10	5.6	10	11/14/09	11/14/09	JWG0903818	
Vinyl Acetate	ND	U	100	6.0	10	11/14/09	11/14/09	JWG0903818	
Chloroprene	ND	U	10	2.4	10	11/14/09	11/14/09	JWG0903818	
cis-1,2-Dichloroethene	ND	U	10	1.2	10	11/14/09	11/14/09	JWG0903818	
2,2-Dichloropropane	ND	U	10	2.2	10	11/14/09	11/14/09	JWG0903818	
1,1-Dichloropropene	ND	U	50	1.3	10	11/14/09	11/14/09	JWG0903818	
2-Butanone (MEK)	ND	U	100	5.6	10	11/14/09	11/14/09	JWG0903818	
Propionitrile	ND	U	250	8.7	10	11/14/09	11/14/09	JWG0903818	
Bromochloromethane	ND	U	50	1.4	10	11/14/09	11/14/09	JWG0903818	
Methacrylonitrile	ND	UJ	50	2.0	10	11/14/09	11/14/09	JWG0903818	J(3)
Chloroform	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
1,1,1-Trichloroethane (TCA)	ND	U	10	2.1	10	11/14/09	11/14/09	JWG0903818	
Carbon Tetrachloride	ND	U	10	1.8	10	11/14/09	11/14/09	JWG0903818	
<b>Benzene</b>	<b>11</b>		10	5.2	10	11/14/09	11/14/09	JWG0903818	
1,2-Dichloroethane (EDC)	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
Isobutyl Alcohol	ND	U	1000	46	10	11/14/09	11/14/09	JWG0903818	
Trichloroethene (TCE)	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
1,2-Dichloropropane	ND	U	10	0.57	10	11/14/09	11/14/09	JWG0903818	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-3  
 Lab Code: J0905605-003  
 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
Dibromomethane	ND	U	50	1.2	10	11/14/09	11/14/09	JWG0903818	
Methyl Methacrylate	ND	U	20	2.1	10	11/14/09	11/14/09	JWG0903818	
Bromodichloromethane	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
cis-1,3-Dichloropropene	ND	U	10	1.2	10	11/14/09	11/14/09	JWG0903818	
4-Methyl-2-pentanone (MIBK)	ND	U	250	3.7	10	11/14/09	11/14/09	JWG0903818	
<b>Toluene</b>	<b>23</b>		10	5.2	10	11/14/09	11/14/09	JWG0903818	
trans-1,3-Dichloropropene	ND	U	10	1.2	10	11/14/09	11/14/09	JWG0903818	
Ethyl Methacrylate	ND	U	10	1.4	10	11/14/09	11/14/09	JWG0903818	
1,1,2-Trichloroethane	ND	U	10	2.1	10	11/14/09	11/14/09	JWG0903818	
Tetrachloroethene (PCE)	ND	U	10	2.2	10	11/14/09	11/14/09	JWG0903818	
1,3-Dichloropropane	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
2-Hexanone	ND	U	250	3.6	10	11/14/09	11/14/09	JWG0903818	
Dibromochloromethane	ND	U	10	1.1	10	11/14/09	11/14/09	JWG0903818	
1,2-Dibromoethane (EDB)	ND	U	10	1.8	10	11/14/09	11/14/09	JWG0903818	
Chlorobenzene	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
1,1,1,2-Tetrachloroethane	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
<b>Ethylbenzene</b>	<b>48</b>		10	1.0	10	11/14/09	11/14/09	JWG0903818	
<b>m,p-Xylenes</b>	<b>58</b>		20	2.2	10	11/14/09	11/14/09	JWG0903818	
<b>o-Xylene</b>	<b>25</b>		10	1.0	10	11/14/09	11/14/09	JWG0903818	
<b>Styrene</b>	<b>3.3</b>	<b>I</b>	10	0.51	10	11/14/09	11/14/09	JWG0903818	
Bromoform	ND	U	20	1.2	10	11/14/09	11/14/09	JWG0903818	
1,1,2,2-Tetrachloroethane	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
1,2,3-Trichloropropane	ND	U	20	1.6	10	11/14/09	11/14/09	JWG0903818	
trans-1,4-Dichloro-2-butene	ND	U	200	11	10	11/14/09	11/14/09	JWG0903818	
1,3-Dichlorobenzene	ND	U	10	1.4	10	11/14/09	11/14/09	JWG0903818	
<b>1,4-Dichlorobenzene</b>	<b>7.1</b>	<b>I</b>	10	1.4	10	11/14/09	11/14/09	JWG0903818	
1,2-Dichlorobenzene	ND	U	10	1.7	10	11/14/09	11/14/09	JWG0903818	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	50	2.6	10	11/14/09	11/14/09	JWG0903818	
1,2,4-Trichlorobenzene	ND	U	100	3.0	10	11/14/09	11/14/09	JWG0903818	
Hexachlorobutadiene	ND	U	100	6.1	10	11/14/09	11/14/09	JWG0903818	
Naphthalene	ND	U	100	2.5	10	11/14/09	11/14/09	JWG0903818	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
Project: JED SWDF/FQ1512A.02  
Sample Matrix: Water

Service Request: J0905605  
Date Collected: 11/10/2009  
Date Received: 11/11/2009

Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-3  
Lab Code: J0905605-003

Units: ug/L  
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	104	71-122	11/14/09	Acceptable
4-Bromofluorobenzene	97	75-120	11/14/09	Acceptable
Dibromofluoromethane	96	82-116	11/14/09	Acceptable
Toluene-d8	97	88-117	11/14/09	Acceptable

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-4  
 Lab Code: J0905605-004  
 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
Dichlorodifluoromethane	ND	U	200	2.3	10	11/14/09	11/14/09	JWG0903818	
Chloromethane	ND	U	10	1.7	10	11/14/09	11/14/09	JWG0903818	
Vinyl Chloride	ND	U	10	2.5	10	11/14/09	11/14/09	JWG0903818	
Bromomethane	ND	U	10	1.4	10	11/14/09	11/14/09	JWG0903818	
Chloroethane	ND	U	50	1.9	10	11/14/09	11/14/09	JWG0903818	
Trichlorofluoromethane	ND	U	200	2.5	10	11/14/09	11/14/09	JWG0903818	
Acrolein	ND	U	500	96	10	11/14/09	11/14/09	JWG0903818	
1,1-Dichloroethene	ND	U	10	1.6	10	11/14/09	11/14/09	JWG0903818	
Acetone	78	I	500	24	10	11/14/09	11/14/09	JWG0903818	
Iodomethane (Methyl Iodide)	ND	U	50	25	10	11/14/09	11/14/09	JWG0903818	
Carbon Disulfide	ND	U	100	8.4	10	11/14/09	11/14/09	JWG0903818	
Acetonitrile	ND	U	250	33	10	11/14/09	11/14/09	JWG0903818	
Allyl Chloride	ND	U	50	1.3	10	11/14/09	11/14/09	JWG0903818	
Methylene Chloride	ND	U	50	7.2	10	11/14/09	11/14/09	JWG0903818	
Acrylonitrile	ND	U	100	5.9	10	11/14/09	11/14/09	JWG0903818	
trans-1,2-Dichloroethene	ND	U	10	1.3	10	11/14/09	11/14/09	JWG0903818	
1,1-Dichloroethane	ND	U	10	5.6	10	11/14/09	11/14/09	JWG0903818	
Vinyl Acetate	ND	U	100	6.0	10	11/14/09	11/14/09	JWG0903818	
Chloroprene	ND	U	10	2.4	10	11/14/09	11/14/09	JWG0903818	
cis-1,2-Dichloroethene	ND	U	10	1.2	10	11/14/09	11/14/09	JWG0903818	
2,2-Dichloropropane	ND	U	10	2.2	10	11/14/09	11/14/09	JWG0903818	
1,1-Dichloropropene	ND	U	50	1.3	10	11/14/09	11/14/09	JWG0903818	
2-Butanone (MEK)	72	I	100	5.6	10	11/14/09	11/14/09	JWG0903818	
Propionitrile	ND	U	250	8.7	10	11/14/09	11/14/09	JWG0903818	
Bromochloromethane	ND	U	50	1.4	10	11/14/09	11/14/09	JWG0903818	
Methacrylonitrile	ND	UJ	50	2.0	10	11/14/09	11/14/09	JWG0903818	J(3)
Chloroform	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
1,1,1-Trichloroethane (TCA)	ND	U	10	2.1	10	11/14/09	11/14/09	JWG0903818	
Carbon Tetrachloride	ND	U	10	1.8	10	11/14/09	11/14/09	JWG0903818	
Benzene	7.1	I	10	5.2	10	11/14/09	11/14/09	JWG0903818	
1,2-Dichloroethane (EDC)	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
Isobutyl Alcohol	ND	U	1000	46	10	11/14/09	11/14/09	JWG0903818	
Trichloroethene (TCE)	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
1,2-Dichloropropane	ND	U	10	0.57	10	11/14/09	11/14/09	JWG0903818	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-4  
 Lab Code: J0905605-004  
 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
Dibromomethane	ND	U	50	1.2	10	11/14/09	11/14/09	JWG0903818	
Methyl Methacrylate	ND	U	20	2.1	10	11/14/09	11/14/09	JWG0903818	
Bromodichloromethane	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
cis-1,3-Dichloropropene	ND	U	10	1.2	10	11/14/09	11/14/09	JWG0903818	
4-Methyl-2-pentanone (MIBK)	ND	U	250	3.7	10	11/14/09	11/14/09	JWG0903818	
<b>Toluene</b>	<b>29</b>		10	5.2	10	11/14/09	11/14/09	JWG0903818	
trans-1,3-Dichloropropene	ND	U	10	1.2	10	11/14/09	11/14/09	JWG0903818	
Ethyl Methacrylate	ND	U	10	1.4	10	11/14/09	11/14/09	JWG0903818	
1,1,2-Trichloroethane	ND	U	10	2.1	10	11/14/09	11/14/09	JWG0903818	
Tetrachloroethene (PCE)	ND	U	10	2.2	10	11/14/09	11/14/09	JWG0903818	
1,3-Dichloropropene	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
2-Hexanone	ND	U	250	3.6	10	11/14/09	11/14/09	JWG0903818	
Dibromochloromethane	ND	U	10	1.1	10	11/14/09	11/14/09	JWG0903818	
1,2-Dibromoethane (EDB)	ND	U	10	1.8	10	11/14/09	11/14/09	JWG0903818	
Chlorobenzene	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
1,1,1,2-Tetrachloroethane	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
<b>Ethylbenzene</b>	<b>35</b>		10	1.0	10	11/14/09	11/14/09	JWG0903818	
<b>m,p-Xylenes</b>	<b>34</b>		20	2.2	10	11/14/09	11/14/09	JWG0903818	
<b>o-Xylene</b>	<b>18</b>		10	1.0	10	11/14/09	11/14/09	JWG0903818	
<b>Styrene</b>	<b>1.3</b>	I	10	0.51	10	11/14/09	11/14/09	JWG0903818	
Bromoform	ND	U	20	1.2	10	11/14/09	11/14/09	JWG0903818	
1,1,2,2-Tetrachloroethane	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
1,2,3-Trichloropropane	ND	U	20	1.6	10	11/14/09	11/14/09	JWG0903818	
trans-1,4-Dichloro-2-butene	ND	U	200	11	10	11/14/09	11/14/09	JWG0903818	
1,3-Dichlorobenzene	ND	U	10	1.4	10	11/14/09	11/14/09	JWG0903818	
<b>1,4-Dichlorobenzene</b>	<b>5.0</b>	I	10	1.4	10	11/14/09	11/14/09	JWG0903818	
1,2-Dichlorobenzene	ND	U	10	1.7	10	11/14/09	11/14/09	JWG0903818	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	50	2.6	10	11/14/09	11/14/09	JWG0903818	
1,2,4-Trichlorobenzene	ND	U	100	3.0	10	11/14/09	11/14/09	JWG0903818	
Hexachlorobutadiene	ND	U	100	6.1	10	11/14/09	11/14/09	JWG0903818	
Naphthalene	ND	U	100	2.5	10	11/14/09	11/14/09	JWG0903818	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
Project: JED SWDF/FQ1512A.02  
Sample Matrix: Water

Service Request: J0905605  
Date Collected: 11/10/2009  
Date Received: 11/11/2009

Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-4  
Lab Code: J0905605-004

Units: ug/L  
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	104	71-122	11/14/09	Acceptable
4-Bromofluorobenzene	101	75-120	11/14/09	Acceptable
Dibromofluoromethane	94	82-116	11/14/09	Acceptable
Toluene-d8	100	88-117	11/14/09	Acceptable

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



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-5  
 Lab Code: J0905605-005  
 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
Dichlorodifluoromethane	ND	U	200	2.3	10	11/14/09	11/14/09	JWG0903818	
Chloromethane	ND	U	10	1.7	10	11/14/09	11/14/09	JWG0903818	
Vinyl Chloride	ND	U	10	2.5	10	11/14/09	11/14/09	JWG0903818	
Bromomethane	ND	U	10	1.4	10	11/14/09	11/14/09	JWG0903818	
Chloroethane	ND	U	50	1.9	10	11/14/09	11/14/09	JWG0903818	
Trichlorofluoromethane	ND	U	200	2.5	10	11/14/09	11/14/09	JWG0903818	
Acrolein	ND	U	500	96	10	11/14/09	11/14/09	JWG0903818	
1,1-Dichloroethene	ND	U	10	1.6	10	11/14/09	11/14/09	JWG0903818	
Acetone	83	I	500	24	10	11/14/09	11/14/09	JWG0903818	
Iodomethane (Methyl Iodide)	ND	U	50	25	10	11/14/09	11/14/09	JWG0903818	
Carbon Disulfide	ND	U	100	8.4	10	11/14/09	11/14/09	JWG0903818	
Acetonitrile	ND	U	250	33	10	11/14/09	11/14/09	JWG0903818	
Allyl Chloride	ND	U	50	1.3	10	11/14/09	11/14/09	JWG0903818	
Methylene Chloride	ND	U	50	7.2	10	11/14/09	11/14/09	JWG0903818	
Acrylonitrile	ND	U	100	5.9	10	11/14/09	11/14/09	JWG0903818	
trans-1,2-Dichloroethene	ND	U	10	1.3	10	11/14/09	11/14/09	JWG0903818	
1,1-Dichloroethane	ND	U	10	5.6	10	11/14/09	11/14/09	JWG0903818	
Vinyl Acetate	ND	U	100	6.0	10	11/14/09	11/14/09	JWG0903818	
Chloroprene	ND	U	10	2.4	10	11/14/09	11/14/09	JWG0903818	
cis-1,2-Dichloroethene	ND	U	10	1.2	10	11/14/09	11/14/09	JWG0903818	
2,2-Dichloropropane	ND	U	10	2.2	10	11/14/09	11/14/09	JWG0903818	
1,1-Dichloropropene	ND	U	50	1.3	10	11/14/09	11/14/09	JWG0903818	
2-Butanone (MEK)	190		100	5.6	10	11/14/09	11/14/09	JWG0903818	
Propionitrile	ND	U	250	8.7	10	11/14/09	11/14/09	JWG0903818	
Bromochloromethane	ND	U	50	1.4	10	11/14/09	11/14/09	JWG0903818	
Methacrylonitrile	ND	UJ	50	2.0	10	11/14/09	11/14/09	JWG0903818	J(3)
Chloroform	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
1,1,1-Trichloroethane (TCA)	ND	U	10	2.1	10	11/14/09	11/14/09	JWG0903818	
Carbon Tetrachloride	ND	U	10	1.8	10	11/14/09	11/14/09	JWG0903818	
Benzene	9.0	I	10	5.2	10	11/14/09	11/14/09	JWG0903818	
1,2-Dichloroethane (EDC)	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
Isobutyl Alcohol	ND	U	1000	46	10	11/14/09	11/14/09	JWG0903818	
Trichloroethene (TCE)	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
1,2-Dichloropropane	ND	U	10	0.57	10	11/14/09	11/14/09	JWG0903818	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-5  
 Lab Code: J0905605-005  
 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
Dibromomethane	ND	U	50	1.2	10	11/14/09	11/14/09	JWG0903818	
Methyl Methacrylate	ND	U	20	2.1	10	11/14/09	11/14/09	JWG0903818	
Bromodichloromethane	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
cis-1,3-Dichloropropene	ND	U	10	1.2	10	11/14/09	11/14/09	JWG0903818	
4-Methyl-2-pentanone (MIBK)	ND	U	250	3.7	10	11/14/09	11/14/09	JWG0903818	
<b>Toluene</b>	<b>21</b>		10	5.2	10	11/14/09	11/14/09	JWG0903818	
trans-1,3-Dichloropropene	ND	U	10	1.2	10	11/14/09	11/14/09	JWG0903818	
Ethyl Methacrylate	ND	U	10	1.4	10	11/14/09	11/14/09	JWG0903818	
1,1,2-Trichloroethane	ND	U	10	2.1	10	11/14/09	11/14/09	JWG0903818	
Tetrachloroethene (PCE)	ND	U	10	2.2	10	11/14/09	11/14/09	JWG0903818	
1,3-Dichloropropane	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
2-Hexanone	ND	U	250	3.6	10	11/14/09	11/14/09	JWG0903818	
Dibromochloromethane	ND	U	10	1.1	10	11/14/09	11/14/09	JWG0903818	
1,2-Dibromoethane (EDB)	ND	U	10	1.8	10	11/14/09	11/14/09	JWG0903818	
Chlorobenzene	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
1,1,1,2-Tetrachloroethane	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
<b>Ethylbenzene</b>	<b>41</b>		10	1.0	10	11/14/09	11/14/09	JWG0903818	
<b>m,p-Xylenes</b>	<b>53</b>		20	2.2	10	11/14/09	11/14/09	JWG0903818	
<b>o-Xylene</b>	<b>26</b>		10	1.0	10	11/14/09	11/14/09	JWG0903818	
<b>Styrene</b>	<b>2.4</b>	<b>I</b>	10	0.51	10	11/14/09	11/14/09	JWG0903818	
Bromoform	ND	U	20	1.2	10	11/14/09	11/14/09	JWG0903818	
1,1,2,2-Tetrachloroethane	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
1,2,3-Trichloropropane	ND	U	20	1.6	10	11/14/09	11/14/09	JWG0903818	
trans-1,4-Dichloro-2-butene	ND	U	200	11	10	11/14/09	11/14/09	JWG0903818	
1,3-Dichlorobenzene	ND	U	10	1.4	10	11/14/09	11/14/09	JWG0903818	
<b>1,4-Dichlorobenzene</b>	<b>6.9</b>	<b>I</b>	10	1.4	10	11/14/09	11/14/09	JWG0903818	
1,2-Dichlorobenzene	ND	U	10	1.7	10	11/14/09	11/14/09	JWG0903818	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	50	2.6	10	11/14/09	11/14/09	JWG0903818	
1,2,4-Trichlorobenzene	ND	U	100	3.0	10	11/14/09	11/14/09	JWG0903818	
Hexachlorobutadiene	ND	U	100	6.1	10	11/14/09	11/14/09	JWG0903818	
Naphthalene	ND	U	100	2.5	10	11/14/09	11/14/09	JWG0903818	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
Project: JED SWDF/FQ1512A.02  
Sample Matrix: Water

Service Request: J0905605  
Date Collected: 11/10/2009  
Date Received: 11/11/2009

Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-5  
Lab Code: J0905605-005

Units: ug/L  
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	112	71-122	11/14/09	Acceptable
4-Bromofluorobenzene	102	75-120	11/14/09	Acceptable
Dibromofluoromethane	102	82-116	11/14/09	Acceptable
Toluene-d8	95	88-117	11/14/09	Acceptable

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

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-6  
 Lab Code: J0905605-006  
 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
Dichlorodifluoromethane	ND	U	200	2.3	10	11/14/09	11/14/09	JWG0903818	
Chloromethane	ND	U	10	1.7	10	11/14/09	11/14/09	JWG0903818	
Vinyl Chloride	ND	U	10	2.5	10	11/14/09	11/14/09	JWG0903818	
Bromomethane	ND	U	10	1.4	10	11/14/09	11/14/09	JWG0903818	
Chloroethane	ND	U	50	1.9	10	11/14/09	11/14/09	JWG0903818	
Trichlorofluoromethane	ND	U	200	2.5	10	11/14/09	11/14/09	JWG0903818	
Acrolein	ND	U	500	96	10	11/14/09	11/14/09	JWG0903818	
1,1-Dichloroethene	ND	U	10	1.6	10	11/14/09	11/14/09	JWG0903818	
<b>Acetone</b>	<b>6400</b>		500	24	10	11/14/09	11/14/09	JWG0903818	
Iodomethane (Methyl Iodide)	ND	U	50	25	10	11/14/09	11/14/09	JWG0903818	
Carbon Disulfide	ND	U	100	8.4	10	11/14/09	11/14/09	JWG0903818	
Acetonitrile	ND	U	250	33	10	11/14/09	11/14/09	JWG0903818	
Allyl Chloride	ND	U	50	1.3	10	11/14/09	11/14/09	JWG0903818	
Methylene Chloride	ND	U	50	7.2	10	11/14/09	11/14/09	JWG0903818	
Acrylonitrile	ND	U	100	5.9	10	11/14/09	11/14/09	JWG0903818	
trans-1,2-Dichloroethene	ND	U	10	1.3	10	11/14/09	11/14/09	JWG0903818	
1,1-Dichloroethane	ND	U	10	5.6	10	11/14/09	11/14/09	JWG0903818	
Vinyl Acetate	ND	U	100	6.0	10	11/14/09	11/14/09	JWG0903818	
Chloroprene	ND	U	10	2.4	10	11/14/09	11/14/09	JWG0903818	
cis-1,2-Dichloroethene	ND	U	10	1.2	10	11/14/09	11/14/09	JWG0903818	
2,2-Dichloropropane	ND	U	10	2.2	10	11/14/09	11/14/09	JWG0903818	
1,1-Dichloropropene	ND	U	50	1.3	10	11/14/09	11/14/09	JWG0903818	
<b>2-Butanone (MEK)</b>	<b>12000</b>		1000	56	100	11/16/09	11/16/09	JWG0903848	
Propionitrile	ND	U	250	8.7	10	11/14/09	11/14/09	JWG0903818	
Bromochloromethane	ND	U	50	1.4	10	11/14/09	11/14/09	JWG0903818	
Methacrylonitrile	ND	UJ	50	2.0	10	11/14/09	11/14/09	JWG0903818	J(3)
Chloroform	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
1,1,1-Trichloroethane (TCA)	ND	U	10	2.1	10	11/14/09	11/14/09	JWG0903818	
Carbon Tetrachloride	ND	U	10	1.8	10	11/14/09	11/14/09	JWG0903818	
<b>Benzene</b>	<b>8.4</b>	I	10	5.2	10	11/14/09	11/14/09	JWG0903818	
<b>1,2-Dichloroethane (EDC)</b>	<b>4.8</b>	I	10	1.5	10	11/14/09	11/14/09	JWG0903818	
Isobutyl Alcohol	ND	U	1000	46	10	11/14/09	11/14/09	JWG0903818	
Trichloroethene (TCE)	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
1,2-Dichloropropane	ND	U	10	0.57	10	11/14/09	11/14/09	JWG0903818	

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-6  
 Lab Code: J0905605-006  
 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
Dibromomethane	ND	U	50	1.2	10	11/14/09	11/14/09	JWG0903818	
Methyl Methacrylate	ND	U	20	2.1	10	11/14/09	11/14/09	JWG0903818	
Bromodichloromethane	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
cis-1,3-Dichloropropene	ND	U	10	1.2	10	11/14/09	11/14/09	JWG0903818	
4-Methyl-2-pentanone (MIBK)	98	I	250	3.7	10	11/14/09	11/14/09	JWG0903818	
<b>Toluene</b>	<b>350</b>		10	5.2	10	11/14/09	11/14/09	JWG0903818	
trans-1,3-Dichloropropene	ND	U	10	1.2	10	11/14/09	11/14/09	JWG0903818	
Ethyl Methacrylate	ND	U	10	1.4	10	11/14/09	11/14/09	JWG0903818	
1,1,2-Trichloroethane	ND	U	10	2.1	10	11/14/09	11/14/09	JWG0903818	
Tetrachloroethene (PCE)	ND	U	10	2.2	10	11/14/09	11/14/09	JWG0903818	
1,3-Dichloropropane	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
<b>2-Hexanone</b>	<b>21</b>	<b>I</b>	250	3.6	10	11/14/09	11/14/09	JWG0903818	
Dibromochloromethane	ND	U	10	1.1	10	11/14/09	11/14/09	JWG0903818	
1,2-Dibromoethane (EDB)	ND	U	10	1.8	10	11/14/09	11/14/09	JWG0903818	
Chlorobenzene	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
1,1,1,2-Tetrachloroethane	ND	U	10	1.0	10	11/14/09	11/14/09	JWG0903818	
<b>Ethylbenzene</b>	<b>30</b>		10	1.0	10	11/14/09	11/14/09	JWG0903818	
<b>m,p-Xylenes</b>	<b>46</b>		20	2.2	10	11/14/09	11/14/09	JWG0903818	
<b>o-Xylene</b>	<b>19</b>		10	1.0	10	11/14/09	11/14/09	JWG0903818	
<b>Styrene</b>	<b>5.5</b>	<b>I</b>	10	0.51	10	11/14/09	11/14/09	JWG0903818	
Bromoform	ND	U	20	1.2	10	11/14/09	11/14/09	JWG0903818	
1,1,2,2-Tetrachloroethane	ND	U	10	1.5	10	11/14/09	11/14/09	JWG0903818	
1,2,3-Trichloropropane	ND	U	20	1.6	10	11/14/09	11/14/09	JWG0903818	
trans-1,4-Dichloro-2-butene	ND	U	200	11	10	11/14/09	11/14/09	JWG0903818	
1,3-Dichlorobenzene	ND	U	10	1.4	10	11/14/09	11/14/09	JWG0903818	
<b>1,4-Dichlorobenzene</b>	<b>3.7</b>	<b>I</b>	10	1.4	10	11/14/09	11/14/09	JWG0903818	
1,2-Dichlorobenzene	ND	U	10	1.7	10	11/14/09	11/14/09	JWG0903818	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	50	2.6	10	11/14/09	11/14/09	JWG0903818	
1,2,4-Trichlorobenzene	ND	U	100	3.0	10	11/14/09	11/14/09	JWG0903818	
Hexachlorobutadiene	ND	U	100	6.1	10	11/14/09	11/14/09	JWG0903818	
Naphthalene	ND	U	100	2.5	10	11/14/09	11/14/09	JWG0903818	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-6  
 Lab Code: J0905605-006

Units: ug/L  
 Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	101	71-122	11/14/09	Acceptable
4-Bromofluorobenzene	104	75-120	11/14/09	Acceptable
Dibromofluoromethane	94	82-116	11/14/09	Acceptable
Toluene-d8	94	88-117	11/14/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**Volatile Organic Compounds by GC/MS (Appendix II)**

**Sample Name:** Trip Blank  
**Lab Code:** J0905605-007  
**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
Dichlorodifluoromethane	ND	U	20	0.23	1	11/14/09	11/14/09	JWG0903818	
Chloromethane	ND	U	1.0	0.17	1	11/14/09	11/14/09	JWG0903818	
Vinyl Chloride	ND	U	1.0	0.25	1	11/14/09	11/14/09	JWG0903818	
Bromomethane	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903818	
Chloroethane	ND	U	5.0	0.19	1	11/14/09	11/14/09	JWG0903818	
Trichlorofluoromethane	ND	U	20	0.25	1	11/14/09	11/14/09	JWG0903818	
Acrolein	ND	U	50	9.6	1	11/14/09	11/14/09	JWG0903818	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/14/09	11/14/09	JWG0903818	
Acetone	ND	U	50	2.4	1	11/14/09	11/14/09	JWG0903818	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/14/09	11/14/09	JWG0903818	
Carbon Disulfide	ND	U	10	0.84	1	11/14/09	11/14/09	JWG0903818	
Acetonitrile	ND	U	25	3.3	1	11/14/09	11/14/09	JWG0903818	
Allyl Chloride	ND	U	5.0	0.13	1	11/14/09	11/14/09	JWG0903818	
Methylene Chloride	ND	U	5.0	0.72	1	11/14/09	11/14/09	JWG0903818	
Acrylonitrile	ND	U	10	0.59	1	11/14/09	11/14/09	JWG0903818	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/14/09	11/14/09	JWG0903818	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/14/09	11/14/09	JWG0903818	
Vinyl Acetate	ND	U	10	0.60	1	11/14/09	11/14/09	JWG0903818	
Chloroprene	ND	U	1.0	0.24	1	11/14/09	11/14/09	JWG0903818	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903818	
2,2-Dichloropropane	ND	U	1.0	0.22	1	11/14/09	11/14/09	JWG0903818	
1,1-Dichloropropene	ND	U	5.0	0.13	1	11/14/09	11/14/09	JWG0903818	
2-Butanone (MEK)	ND	U	10	0.56	1	11/14/09	11/14/09	JWG0903818	
Propionitrile	ND	U	25	0.87	1	11/14/09	11/14/09	JWG0903818	
Bromochloromethane	ND	U	5.0	0.14	1	11/14/09	11/14/09	JWG0903818	
Methacrylonitrile	ND	UJ	5.0	0.20	1	11/14/09	11/14/09	JWG0903818	J(3)
Chloroform	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903818	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903818	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/14/09	11/14/09	JWG0903818	
Benzene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903818	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903818	
Isobutyl Alcohol	ND	U	100	4.6	1	11/14/09	11/14/09	JWG0903818	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903818	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/14/09	11/14/09	JWG0903818	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: Trip Blank  
 Lab Code: J0905605-007  
 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
Dibromomethane	ND	U	5.0	0.12	1	11/14/09	11/14/09	JWG0903818	
Methyl Methacrylate	ND	U	2.0	0.21	1	11/14/09	11/14/09	JWG0903818	
Bromodichloromethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903818	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903818	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/14/09	11/14/09	JWG0903818	
Toluene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903818	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903818	
Ethyl Methacrylate	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903818	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903818	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/14/09	11/14/09	JWG0903818	
1,3-Dichloropropane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903818	
2-Hexanone	ND	U	25	0.36	1	11/14/09	11/14/09	JWG0903818	
Dibromochloromethane	ND	U	1.0	0.11	1	11/14/09	11/14/09	JWG0903818	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.18	1	11/14/09	11/14/09	JWG0903818	
Chlorobenzene	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903818	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903818	
Ethylbenzene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903818	
m,p-Xylenes	ND	U	2.0	0.22	1	11/14/09	11/14/09	JWG0903818	
o-Xylene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903818	
Styrene	ND	U	1.0	0.051	1	11/14/09	11/14/09	JWG0903818	
Bromoform	ND	U	2.0	0.12	1	11/14/09	11/14/09	JWG0903818	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903818	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/14/09	11/14/09	JWG0903818	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/14/09	11/14/09	JWG0903818	
1,3-Dichlorobenzene	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903818	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903818	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/14/09	11/14/09	JWG0903818	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/14/09	11/14/09	JWG0903818	
1,2,4-Trichlorobenzene	ND	U	10	0.30	1	11/14/09	11/14/09	JWG0903818	
Hexachlorobutadiene	ND	U	10	0.61	1	11/14/09	11/14/09	JWG0903818	
Naphthalene	ND	U	10	0.25	1	11/14/09	11/14/09	JWG0903818	

Comments:



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**Volatile Organic Compounds by GC/MS (Appendix II)**

**Sample Name:** Trip Blank  
**Lab Code:** J0905605-007

**Units:** ug/L  
**Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	104	71-122	11/14/09	Acceptable
4-Bromofluorobenzene	100	75-120	11/14/09	Acceptable
Dibromofluoromethane	94	82-116	11/14/09	Acceptable
Toluene-d8	96	88-117	11/14/09	Acceptable

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: NA  
 Date Received: NA

Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: Method Blank  
 Lab Code: JWG0903818-4  
 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
Dichlorodifluoromethane	ND	U	20	0.23	1	11/14/09	11/14/09	JWG0903818	
Chloromethane	ND	U	1.0	0.17	1	11/14/09	11/14/09	JWG0903818	
Vinyl Chloride	ND	U	1.0	0.25	1	11/14/09	11/14/09	JWG0903818	
Bromomethane	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903818	
Chloroethane	ND	U	5.0	0.19	1	11/14/09	11/14/09	JWG0903818	
Trichlorofluoromethane	ND	U	20	0.25	1	11/14/09	11/14/09	JWG0903818	
Acrolein	ND	U	50	9.6	1	11/14/09	11/14/09	JWG0903818	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/14/09	11/14/09	JWG0903818	
Acetone	ND	U	50	2.4	1	11/14/09	11/14/09	JWG0903818	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/14/09	11/14/09	JWG0903818	
Carbon Disulfide	ND	U	10	0.84	1	11/14/09	11/14/09	JWG0903818	
Acetonitrile	ND	U	25	3.3	1	11/14/09	11/14/09	JWG0903818	
Allyl Chloride	ND	U	5.0	0.13	1	11/14/09	11/14/09	JWG0903818	
Methylene Chloride	ND	U	5.0	0.72	1	11/14/09	11/14/09	JWG0903818	
Acrylonitrile	ND	U	10	0.59	1	11/14/09	11/14/09	JWG0903818	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/14/09	11/14/09	JWG0903818	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/14/09	11/14/09	JWG0903818	
Vinyl Acetate	ND	U	10	0.60	1	11/14/09	11/14/09	JWG0903818	
Chloroprene	ND	U	1.0	0.24	1	11/14/09	11/14/09	JWG0903818	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903818	
2,2-Dichloropropane	ND	U	1.0	0.22	1	11/14/09	11/14/09	JWG0903818	
1,1-Dichloropropene	ND	U	5.0	0.13	1	11/14/09	11/14/09	JWG0903818	
2-Butanone (MEK)	ND	U	10	0.56	1	11/14/09	11/14/09	JWG0903818	
Propionitrile	ND	U	25	0.87	1	11/14/09	11/14/09	JWG0903818	
Bromochloromethane	ND	U	5.0	0.14	1	11/14/09	11/14/09	JWG0903818	
Methacrylonitrile	ND	UJ	5.0	0.20	1	11/14/09	11/14/09	JWG0903818	J(3)
Chloroform	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903818	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903818	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/14/09	11/14/09	JWG0903818	
Benzene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903818	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903818	
Isobutyl Alcohol	ND	U	100	4.6	1	11/14/09	11/14/09	JWG0903818	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903818	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/14/09	11/14/09	JWG0903818	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: NA  
 Date Received: NA

## Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: Method Blank  
 Lab Code: JWG0903818-4  
 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
Dibromomethane	ND	U	5.0	0.12	1	11/14/09	11/14/09	JWG0903818	
Methyl Methacrylate	ND	U	2.0	0.21	1	11/14/09	11/14/09	JWG0903818	
Bromodichloromethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903818	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903818	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/14/09	11/14/09	JWG0903818	
Toluene	ND	U	1.0	0.52	1	11/14/09	11/14/09	JWG0903818	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/14/09	11/14/09	JWG0903818	
Ethyl Methacrylate	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903818	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/14/09	11/14/09	JWG0903818	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/14/09	11/14/09	JWG0903818	
1,3-Dichloropropane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903818	
2-Hexanone	ND	U	25	0.36	1	11/14/09	11/14/09	JWG0903818	
Dibromochloromethane	ND	U	1.0	0.11	1	11/14/09	11/14/09	JWG0903818	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.18	1	11/14/09	11/14/09	JWG0903818	
Chlorobenzene	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903818	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903818	
Ethylbenzene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903818	
m,p-Xylenes	ND	U	2.0	0.22	1	11/14/09	11/14/09	JWG0903818	
o-Xylene	ND	U	1.0	0.10	1	11/14/09	11/14/09	JWG0903818	
Styrene	ND	U	1.0	0.051	1	11/14/09	11/14/09	JWG0903818	
Bromoform	ND	U	2.0	0.12	1	11/14/09	11/14/09	JWG0903818	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/14/09	11/14/09	JWG0903818	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/14/09	11/14/09	JWG0903818	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/14/09	11/14/09	JWG0903818	
1,3-Dichlorobenzene	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903818	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/14/09	11/14/09	JWG0903818	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/14/09	11/14/09	JWG0903818	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/14/09	11/14/09	JWG0903818	
1,2,4-Trichlorobenzene	ND	U	10	0.30	1	11/14/09	11/14/09	JWG0903818	
Hexachlorobutadiene	ND	U	10	0.61	1	11/14/09	11/14/09	JWG0903818	
Naphthalene	ND	U	10	0.25	1	11/14/09	11/14/09	JWG0903818	

Comments:

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: NA  
 Date Received: NA

Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: Method Blank  
 Lab Code: JWG0903818-4

Units: ug/L  
 Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	110	71-122	11/14/09	Acceptable
4-Bromofluorobenzene	105	75-120	11/14/09	Acceptable
Dibromofluoromethane	99	82-116	11/14/09	Acceptable
Toluene-d8	97	88-117	11/14/09	Acceptable

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: NA  
 Date Received: NA

Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: Method Blank  
 Lab Code: JWG0903848-4  
 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
Dichlorodifluoromethane	ND	U	20	0.23	1	11/16/09	11/16/09	JWG0903848	
Chloromethane	ND	U	1.0	0.17	1	11/16/09	11/16/09	JWG0903848	
Vinyl Chloride	ND	U	1.0	0.25	1	11/16/09	11/16/09	JWG0903848	
Bromomethane	ND	U	1.0	0.14	1	11/16/09	11/16/09	JWG0903848	
Chloroethane	ND	U	5.0	0.19	1	11/16/09	11/16/09	JWG0903848	
Trichlorofluoromethane	ND	U	20	0.25	1	11/16/09	11/16/09	JWG0903848	
Acrolein	ND	U	50	9.6	1	11/16/09	11/16/09	JWG0903848	
1,1-Dichloroethene	ND	U	1.0	0.16	1	11/16/09	11/16/09	JWG0903848	
Acetone	ND	U	50	2.4	1	11/16/09	11/16/09	JWG0903848	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	11/16/09	11/16/09	JWG0903848	
Carbon Disulfide	ND	U	10	0.84	1	11/16/09	11/16/09	JWG0903848	
Acetonitrile	ND	U	25	3.3	1	11/16/09	11/16/09	JWG0903848	
Allyl Chloride	ND	U	5.0	0.13	1	11/16/09	11/16/09	JWG0903848	
Methylene Chloride	ND	U	5.0	0.72	1	11/16/09	11/16/09	JWG0903848	
Acrylonitrile	ND	U	10	0.59	1	11/16/09	11/16/09	JWG0903848	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	11/16/09	11/16/09	JWG0903848	
1,1-Dichloroethane	ND	U	1.0	0.56	1	11/16/09	11/16/09	JWG0903848	
Vinyl Acetate	ND	U	10	0.60	1	11/16/09	11/16/09	JWG0903848	
Chloroprene	ND	U	1.0	0.24	1	11/16/09	11/16/09	JWG0903848	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	11/16/09	11/16/09	JWG0903848	
2,2-Dichloropropane	ND	U	1.0	0.22	1	11/16/09	11/16/09	JWG0903848	
1,1-Dichloropropene	ND	U	5.0	0.13	1	11/16/09	11/16/09	JWG0903848	
2-Butanone (MEK)	ND	U	10	0.56	1	11/16/09	11/16/09	JWG0903848	
Propionitrile	ND	U	25	0.87	1	11/16/09	11/16/09	JWG0903848	
Bromochloromethane	ND	U	5.0	0.14	1	11/16/09	11/16/09	JWG0903848	
Methacrylonitrile	ND	U	5.0	0.20	1	11/16/09	11/16/09	JWG0903848	
Chloroform	ND	U	1.0	0.10	1	11/16/09	11/16/09	JWG0903848	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	11/16/09	11/16/09	JWG0903848	
Carbon Tetrachloride	ND	U	1.0	0.18	1	11/16/09	11/16/09	JWG0903848	
Benzene	ND	U	1.0	0.52	1	11/16/09	11/16/09	JWG0903848	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	11/16/09	11/16/09	JWG0903848	
Isobutyl Alcohol	ND	U	100	4.6	1	11/16/09	11/16/09	JWG0903848	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	11/16/09	11/16/09	JWG0903848	
1,2-Dichloropropane	ND	U	1.0	0.057	1	11/16/09	11/16/09	JWG0903848	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: NA  
 Date Received: NA

## Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: Method Blank  
 Lab Code: JWG0903848-4  
 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
Dibromomethane	ND	U	5.0	0.12	1	11/16/09	11/16/09	JWG0903848	
Methyl Methacrylate	ND	U	2.0	0.21	1	11/16/09	11/16/09	JWG0903848	
Bromodichloromethane	ND	U	1.0	0.10	1	11/16/09	11/16/09	JWG0903848	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/16/09	11/16/09	JWG0903848	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	11/16/09	11/16/09	JWG0903848	
Toluene	ND	U	1.0	0.52	1	11/16/09	11/16/09	JWG0903848	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	11/16/09	11/16/09	JWG0903848	
Ethyl Methacrylate	ND	U	1.0	0.14	1	11/16/09	11/16/09	JWG0903848	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	11/16/09	11/16/09	JWG0903848	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	11/16/09	11/16/09	JWG0903848	
1,3-Dichloropropene	ND	U	1.0	0.10	1	11/16/09	11/16/09	JWG0903848	
2-Hexanone	ND	U	25	0.36	1	11/16/09	11/16/09	JWG0903848	
Dibromochloromethane	ND	U	1.0	0.11	1	11/16/09	11/16/09	JWG0903848	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.18	1	11/16/09	11/16/09	JWG0903848	
Chlorobenzene	ND	U	1.0	0.15	1	11/16/09	11/16/09	JWG0903848	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	11/16/09	11/16/09	JWG0903848	
Ethylbenzene	ND	U	1.0	0.10	1	11/16/09	11/16/09	JWG0903848	
m,p-Xylenes	ND	U	2.0	0.22	1	11/16/09	11/16/09	JWG0903848	
o-Xylene	ND	U	1.0	0.10	1	11/16/09	11/16/09	JWG0903848	
Styrene	ND	U	1.0	0.051	1	11/16/09	11/16/09	JWG0903848	
Bromoform	ND	U	2.0	0.12	1	11/16/09	11/16/09	JWG0903848	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	11/16/09	11/16/09	JWG0903848	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	11/16/09	11/16/09	JWG0903848	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	11/16/09	11/16/09	JWG0903848	
1,3-Dichlorobenzene	ND	U	1.0	0.14	1	11/16/09	11/16/09	JWG0903848	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	11/16/09	11/16/09	JWG0903848	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	11/16/09	11/16/09	JWG0903848	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	11/16/09	11/16/09	JWG0903848	
1,2,4-Trichlorobenzene	ND	U	10	0.30	1	11/16/09	11/16/09	JWG0903848	
Hexachlorobutadiene	ND	U	10	0.61	1	11/16/09	11/16/09	JWG0903848	
Naphthalene	ND	U	10	0.25	1	11/16/09	11/16/09	JWG0903848	

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** NA  
**Date Received:** NA

**Volatile Organic Compounds by GC/MS (Appendix II)**

**Sample Name:** Method Blank  
**Lab Code:** JWG0903848-4

**Units:** ug/L  
**Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	88	71-122	11/16/09	Acceptable
4-Bromofluorobenzene	120	75-120	11/16/09	Acceptable
Dibromofluoromethane	94	82-116	11/16/09	Acceptable
Toluene-d8	101	88-117	11/16/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** L-1  
**Lab Code:** J0905605-001  
**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	11/15/09	11/18/09	JWG0903823	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/15/09	11/18/09	JWG0903823	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	99	77-150	11/18/09	Acceptable

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



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** L-2  
**Lab Code:** J0905605-002  
**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	11/15/09	11/18/09	JWG0903823	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/15/09	11/18/09	JWG0903823	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	119	77-150	11/18/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** L-3  
**Lab Code:** J0905605-003  
**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	11/15/09	11/18/09	JWG0903823	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/15/09	11/18/09	JWG0903823	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	94	77-150	11/18/09	Acceptable

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

Sample Name: L-4  
 Lab Code: J0905605-004  
 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	11/15/09	11/18/09	JWG0903823	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/15/09	11/18/09	JWG0903823	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	108	77-150	11/18/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD**

**Sample Name:** L-5  
**Lab Code:** J0905605-005  
**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	11/15/09	11/19/09	JWG0903823	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	0.020	0.0057	1	11/15/09	11/19/09	JWG0903823	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	98	77-150	11/19/09	Acceptable

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane by GC-ECD

**Sample Name:** L-6  
**Lab Code:** J0905605-006  
**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	11/15/09	11/19/09	JWG0903823	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/15/09	11/19/09	JWG0903823	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	118	77-150	11/19/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**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:** JWG0903823-4 **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	11/15/09	11/18/09	JWG0903823	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	0.020	0.0057	1	11/15/09	11/18/09	JWG0903823	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,1,1,2-Tetrachloroethane	107	77-150	11/18/09	Acceptable

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

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-1  
 Lab Code: J0905605-001  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	5.5	0.80	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosomethylethylamine	ND	U	5.5	0.90	1	11/12/09	11/21/09	JWG0903787	
Methyl Methanesulfonate	ND	U	5.5	0.61	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosodiethylamine	ND	U	5.5	0.69	1	11/12/09	11/21/09	JWG0903787	
Ethyl Methanesulfonate	ND	U	5.5	0.71	1	11/12/09	11/21/09	JWG0903787	
<b>Phenol</b>	<b>18</b>		5.5	0.46	1	11/12/09	11/21/09	JWG0903787	
Bis(2-chloroethyl) Ether	ND	U	5.5	1.1	1	11/12/09	11/21/09	JWG0903787	
2-Chlorophenol	ND	U	5.5	0.82	1	11/12/09	11/21/09	JWG0903787	
1,3-Dichlorobenzene	ND	U	5.5	0.77	1	11/12/09	11/21/09	JWG0903787	
<b>1,4-Dichlorobenzene</b>	<b>2.7</b>	<b>I</b>	5.5	1.4	1	11/12/09	11/21/09	JWG0903787	
1,2-Dichlorobenzene	ND	U	5.5	0.81	1	11/12/09	11/21/09	JWG0903787	
Bis(2-chloroisopropyl) Ether	ND	U	5.5	0.62	1	11/12/09	11/21/09	JWG0903787	
Benzyl alcohol	ND	U	5.5	0.75	1	11/12/09	11/21/09	JWG0903787	
2-Methylphenol	ND	U	5.5	0.70	1	11/12/09	11/21/09	JWG0903787	
Acetophenone	ND	U	11	1.5	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosopyrrolidine	ND	U	5.5	0.77	1	11/12/09	11/21/09	JWG0903787	
Hexachloroethane	ND	U	5.5	1.0	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosodi-n-propylamine	ND	U	5.5	0.74	1	11/12/09	11/21/09	JWG0903787	
o-Toluidine	ND	U	5.5	0.97	1	11/12/09	11/21/09	JWG0903787	
4-Methylphenol†	ND	U	5.5	0.84	1	11/12/09	11/21/09	JWG0903787	
Nitrobenzene	ND	U	5.5	0.80	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosopiperidine	ND	U	5.5	1.8	1	11/12/09	11/21/09	JWG0903787	
Isophorone	ND	U	5.5	0.87	1	11/12/09	11/21/09	JWG0903787	
2-Nitrophenol	ND	U	22	0.66	1	11/12/09	11/21/09	JWG0903787	
2,4-Dimethylphenol	ND	U	5.5	0.86	1	11/12/09	11/21/09	JWG0903787	
O,O,O-Triethyl Phosphorothioate	ND	U	22	0.57	1	11/12/09	11/21/09	JWG0903787	
bis(2-Chloroethoxy)methane	ND	U	5.5	0.97	1	11/12/09	11/21/09	JWG0903787	
2,4-Dichlorophenol	ND	U	5.5	0.55	1	11/12/09	11/21/09	JWG0903787	
1,2,4-Trichlorobenzene	ND	U	5.5	0.85	1	11/12/09	11/21/09	JWG0903787	
Naphthalene	ND	U	5.5	0.86	1	11/12/09	11/21/09	JWG0903787	
2,6-Dichlorophenol	ND	U	11	0.79	1	11/12/09	11/21/09	JWG0903787	
Hexachloropropene	ND	U	5.5	2.1	1	11/12/09	11/21/09	JWG0903787	
4-Chloroaniline	ND	U	5.5	0.58	1	11/12/09	11/21/09	JWG0903787	
Hexachlorobutadiene	ND	U	5.5	0.67	1	11/12/09	11/21/09	JWG0903787	

Comments:

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-1  
 Lab Code: J0905605-001  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodi-n-butylamine	ND	U	5.5	0.73	1	11/12/09	11/21/09	JWG0903787	
p-Phenylenediamine	ND	UJ	22	1.2	1	11/12/09	11/21/09	JWG0903787	J(3)
4-Chloro-3-methylphenol	ND	U	5.5	0.82	1	11/12/09	11/21/09	JWG0903787	
2-Methylnaphthalene	ND	U	5.5	0.81	1	11/12/09	11/21/09	JWG0903787	
Hexachlorocyclopentadiene	ND	U	5.5	0.45	1	11/12/09	11/21/09	JWG0903787	
1,2,4,5-Tetrachlorobenzene	ND	U	5.5	0.60	1	11/12/09	11/21/09	JWG0903787	
Safrole	ND	U	5.5	0.78	1	11/12/09	11/21/09	JWG0903787	
2,4,6-Trichlorophenol	ND	U	5.5	0.80	1	11/12/09	11/21/09	JWG0903787	
2,4,5-Trichlorophenol	ND	U	5.5	0.71	1	11/12/09	11/21/09	JWG0903787	
Isosafrole	ND	U	5.5	0.82	1	11/12/09	11/21/09	JWG0903787	
2-Chloronaphthalene	ND	U	5.5	0.78	1	11/12/09	11/21/09	JWG0903787	
2-Nitroaniline	ND	U	5.5	0.60	1	11/12/09	11/21/09	JWG0903787	
1,4-Naphthoquinone	ND	UJ	11	1.6	1	11/12/09	11/21/09	JWG0903787	J(3)
1,3-Dinitrobenzene	ND	U	11	1.7	1	11/12/09	11/21/09	JWG0903787	
Acenaphthylene	ND	U	5.5	0.64	1	11/12/09	11/21/09	JWG0903787	
Dimethyl Phthalate	ND	U	5.5	0.83	1	11/12/09	11/21/09	JWG0903787	
2,6-Dinitrotoluene	ND	U	5.5	0.91	1	11/12/09	11/21/09	JWG0903787	
Acenaphthene	ND	U	5.5	1.1	1	11/12/09	11/21/09	JWG0903787	
3-Nitroaniline	ND	U	5.5	0.82	1	11/12/09	11/21/09	JWG0903787	
2,4-Dinitrophenol	ND	U	22	0.59	1	11/12/09	11/21/09	JWG0903787	
Pentachlorobenzene	ND	U	5.5	2.7	1	11/12/09	11/21/09	JWG0903787	
Dibenzofuran	ND	U	5.5	0.86	1	11/12/09	11/21/09	JWG0903787	
4-Nitrophenol	ND	U	22	1.1	1	11/12/09	11/21/09	JWG0903787	
2,4-Dinitrotoluene	ND	U	5.5	4.5	1	11/12/09	11/21/09	JWG0903787	
2-Naphthylamine	ND	U	5.5	1.2	1	11/12/09	11/21/09	JWG0903787	
2,3,4,6-Tetrachlorophenol	ND	U	5.5	1.4	1	11/12/09	11/21/09	JWG0903787	
1-Naphthylamine	ND	U	5.5	1.2	1	11/12/09	11/21/09	JWG0903787	
Fluorene	ND	U	5.5	0.96	1	11/12/09	11/21/09	JWG0903787	
4-Chlorophenyl Phenyl Ether	ND	U	5.5	0.67	1	11/12/09	11/21/09	JWG0903787	
Thionazin	ND	U	11	0.89	1	11/12/09	11/21/09	JWG0903787	
Diethyl Phthalate	ND	U	5.5	4.5	1	11/12/09	11/21/09	JWG0903787	
5-Nitro-o-toluidine	ND	U	5.5	1.1	1	11/12/09	11/21/09	JWG0903787	
4-Nitroaniline	ND	U	5.5	1.0	1	11/12/09	11/21/09	JWG0903787	
2-Methyl-4,6-dinitrophenol	ND	U	22	0.70	1	11/12/09	11/21/09	JWG0903787	

Comments:



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-1  
 Lab Code: J0905605-001  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodiphenylamine†	ND	U	5.5	1.1	1	11/12/09	11/21/09	JWG0903787	
Diallate	ND	U	5.5	1.1	1	11/12/09	11/21/09	JWG0903787	
Phorate	ND	U	5.5	0.96	1	11/12/09	11/21/09	JWG0903787	
1,3,5-Trinitrobenzene	ND	U	5.5	1.2	1	11/12/09	11/21/09	JWG0903787	
4-Bromophenyl Phenyl Ether	ND	U	5.5	0.73	1	11/12/09	11/21/09	JWG0903787	
Phenacetin	ND	U	5.5	0.97	1	11/12/09	11/21/09	JWG0903787	
Hexachlorobenzene	ND	U	5.5	0.69	1	11/12/09	11/21/09	JWG0903787	
Dimethoate	ND	U	5.5	0.98	1	11/12/09	11/21/09	JWG0903787	
4-Aminobiphenyl	ND	U	5.5	1.1	1	11/12/09	11/21/09	JWG0903787	
Pentachlorophenol	ND	U	22	0.73	1	11/12/09	11/21/09	JWG0903787	
Pentachloronitrobenzene	ND	U	5.5	1.7	1	11/12/09	11/21/09	JWG0903787	
Pronamide	ND	U	22	0.93	1	11/12/09	11/21/09	JWG0903787	
Phenanthrene	ND	U	5.5	0.77	1	11/12/09	11/21/09	JWG0903787	
Disulfoton	ND	U	5.5	0.57	1	11/12/09	11/21/09	JWG0903787	
Dinoseb	ND	U	5.5	0.67	1	11/12/09	11/21/09	JWG0903787	
Anthracene	ND	U	5.5	0.78	1	11/12/09	11/21/09	JWG0903787	
Methyl Parathion	ND	U	11	1.2	1	11/12/09	11/21/09	JWG0903787	
Di-n-butyl Phthalate	ND	U	5.5	1.1	1	11/12/09	11/21/09	JWG0903787	
Parathion	ND	U	22	1.1	1	11/12/09	11/21/09	JWG0903787	
Methapyrilene	ND	U	5.5	1.7	1	11/12/09	11/21/09	JWG0903787	
Isodrin	ND	U	11	0.78	1	11/12/09	11/21/09	JWG0903787	
Fluoranthene	ND	U	5.5	0.72	1	11/12/09	11/21/09	JWG0903787	
Pyrene	ND	U	5.5	0.92	1	11/12/09	11/21/09	JWG0903787	
Chlorobenzilate	ND	U	11	0.92	1	11/12/09	11/21/09	JWG0903787	
Famphur	ND	UJ	11	0.75	1	11/12/09	11/21/09	JWG0903787	J(3)
3,3'-Dimethylbenzidine	ND	U	22	2.5	1	11/12/09	11/21/09	JWG0903787	
p-Dimethylaminoazobenzene	ND	U	5.5	0.97	1	11/12/09	11/21/09	JWG0903787	
Butyl Benzyl Phthalate	ND	U	11	1.2	1	11/12/09	11/21/09	JWG0903787	
2-Acetylaminofluorene	ND	U	5.5	0.98	1	11/12/09	11/21/09	JWG0903787	
Kepon	ND	UJ	55	4.6	1	11/12/09	11/21/09	JWG0903787	J(3)
<b>3,3'-Dichlorobenzidine</b>	<b>5.0</b>	<b>I</b>	22	0.97	1	11/12/09	11/21/09	JWG0903787	
Benz(a)anthracene	ND	U	5.5	0.94	1	11/12/09	11/21/09	JWG0903787	
Chrysene	ND	U	5.5	0.95	1	11/12/09	11/21/09	JWG0903787	
Bis(2-ethylhexyl) Phthalate	ND	U	5.5	1.1	1	11/12/09	11/21/09	JWG0903787	

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

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-1  
 Lab Code: J0905605-001  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Di-n-octyl Phthalate	ND	U	5.5	1.1	1	11/12/09	11/21/09	JWG0903787	
Benzo(b)fluoranthene	ND	U	5.5	0.95	1	11/12/09	11/21/09	JWG0903787	
Benzo(k)fluoranthene	ND	U	5.5	0.59	1	11/12/09	11/21/09	JWG0903787	
7,12-Dimethylbenz(a)anthracene	ND	U	5.5	0.95	1	11/12/09	11/21/09	JWG0903787	
Benzo(a)pyrene	ND	U	5.5	0.69	1	11/12/09	11/21/09	JWG0903787	
3-Methylcholanthrene	ND	U	5.5	1.1	1	11/12/09	11/21/09	JWG0903787	
Indeno(1,2,3-cd)pyrene	ND	U	5.5	0.60	1	11/12/09	11/21/09	JWG0903787	
Dibenz(a,h)anthracene	ND	U	5.5	0.68	1	11/12/09	11/21/09	JWG0903787	
Benzo(g,h,i)perylene	ND	U	5.5	0.99	1	11/12/09	11/21/09	JWG0903787	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	23	10-77	11/21/09	Acceptable
Phenol-d6	22	10-51	11/21/09	Acceptable
Nitrobenzene-d5	42	32-106	11/21/09	Acceptable
2-Fluorobiphenyl	45	30-102	11/21/09	Acceptable
2,4,6-Tribromophenol	46	30-143	11/21/09	Acceptable
Terphenyl-d14	18	23-165	11/21/09	Outside Control Limits

## † Analyte Comments

4-Methylphenol This analyte cannot be separated from 3-Methylphenol.  
 N-Nitrosodiphenylamine This analyte can not be separated from Diphenylamine.

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-2  
 Lab Code: J0905605-002  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	5.4	0.78	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosomethylethylamine	ND	U	5.4	0.88	1	11/12/09	11/21/09	JWG0903787	
Methyl Methanesulfonate	ND	U	5.4	0.60	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosodiethylamine	ND	U	5.4	0.68	1	11/12/09	11/21/09	JWG0903787	
Ethyl Methanesulfonate	ND	U	5.4	0.70	1	11/12/09	11/21/09	JWG0903787	
Phenol	ND	U	5.4	0.45	1	11/12/09	11/21/09	JWG0903787	
Bis(2-chloroethyl) Ether	ND	U	5.4	1.1	1	11/12/09	11/21/09	JWG0903787	
2-Chlorophenol	ND	U	5.4	0.80	1	11/12/09	11/21/09	JWG0903787	
1,3-Dichlorobenzene	ND	U	5.4	0.75	1	11/12/09	11/21/09	JWG0903787	
<b>1,4-Dichlorobenzene</b>	<b>3.7</b>	<b>I</b>	5.4	1.3	1	11/12/09	11/21/09	JWG0903787	
1,2-Dichlorobenzene	ND	U	5.4	0.79	1	11/12/09	11/21/09	JWG0903787	
Bis(2-chloroisopropyl) Ether	ND	U	5.4	0.61	1	11/12/09	11/21/09	JWG0903787	
Benzyl alcohol	ND	U	5.4	0.74	1	11/12/09	11/21/09	JWG0903787	
2-Methylphenol	ND	U	5.4	0.69	1	11/12/09	11/21/09	JWG0903787	
Acetophenone	ND	U	11	1.4	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosopyrrolidine	ND	U	5.4	0.75	1	11/12/09	11/21/09	JWG0903787	
Hexachloroethane	ND	U	5.4	0.98	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosodi-n-propylamine	ND	U	5.4	0.73	1	11/12/09	11/21/09	JWG0903787	
o-Toluidine	ND	U	5.4	0.95	1	11/12/09	11/21/09	JWG0903787	
4-Methylphenol†	ND	U	5.4	0.82	1	11/12/09	11/21/09	JWG0903787	
Nitrobenzene	ND	U	5.4	0.78	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosopiperidine	ND	U	5.4	1.8	1	11/12/09	11/21/09	JWG0903787	
Isophorone	ND	U	5.4	0.86	1	11/12/09	11/21/09	JWG0903787	
2-Nitrophenol	ND	U	22	0.64	1	11/12/09	11/21/09	JWG0903787	
2,4-Dimethylphenol	ND	U	5.4	0.85	1	11/12/09	11/21/09	JWG0903787	
O,O,O-Triethyl Phosphorothioate	ND	U	22	0.56	1	11/12/09	11/21/09	JWG0903787	
bis(2-Chloroethoxy)methane	ND	U	5.4	0.95	1	11/12/09	11/21/09	JWG0903787	
2,4-Dichlorophenol	ND	U	5.4	0.54	1	11/12/09	11/21/09	JWG0903787	
1,2,4-Trichlorobenzene	ND	U	5.4	0.83	1	11/12/09	11/21/09	JWG0903787	
<b>Naphthalene</b>	<b>4.8</b>	<b>I</b>	5.4	0.85	1	11/12/09	11/21/09	JWG0903787	
2,6-Dichlorophenol	ND	U	11	0.77	1	11/12/09	11/21/09	JWG0903787	
Hexachloropropene	ND	U	5.4	2.1	1	11/12/09	11/21/09	JWG0903787	
4-Chloroaniline	ND	U	5.4	0.57	1	11/12/09	11/21/09	JWG0903787	
Hexachlorobutadiene	ND	U	5.4	0.65	1	11/12/09	11/21/09	JWG0903787	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-2  
 Lab Code: J0905605-002  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodi-n-butylamine	ND	U	5.4	0.72	1	11/12/09	11/21/09	JWG0903787	
p-Phenylenediamine	ND	UJ	22	1.2	1	11/12/09	11/21/09	JWG0903787	J(3)
4-Chloro-3-methylphenol	ND	U	5.4	0.80	1	11/12/09	11/21/09	JWG0903787	
2-Methylnaphthalene	ND	U	5.4	0.79	1	11/12/09	11/21/09	JWG0903787	
Hexachlorocyclopentadiene	ND	U	5.4	0.44	1	11/12/09	11/21/09	JWG0903787	
1,2,4,5-Tetrachlorobenzene	ND	U	5.4	0.59	1	11/12/09	11/21/09	JWG0903787	
Safrole	ND	U	5.4	0.76	1	11/12/09	11/21/09	JWG0903787	
2,4,6-Trichlorophenol	ND	U	5.4	0.78	1	11/12/09	11/21/09	JWG0903787	
2,4,5-Trichlorophenol	ND	U	5.4	0.70	1	11/12/09	11/21/09	JWG0903787	
Isosafrole	ND	U	5.4	0.80	1	11/12/09	11/21/09	JWG0903787	
2-Chloronaphthalene	ND	U	5.4	0.76	1	11/12/09	11/21/09	JWG0903787	
2-Nitroaniline	ND	U	5.4	0.59	1	11/12/09	11/21/09	JWG0903787	
1,4-Naphthoquinone	ND	UJ	11	1.5	1	11/12/09	11/21/09	JWG0903787	J(3)
1,3-Dinitrobenzene	ND	U	11	1.6	1	11/12/09	11/21/09	JWG0903787	
Acenaphthylene	ND	U	5.4	0.62	1	11/12/09	11/21/09	JWG0903787	
Dimethyl Phthalate	ND	U	5.4	0.81	1	11/12/09	11/21/09	JWG0903787	
2,6-Dinitrotoluene	ND	U	5.4	0.89	1	11/12/09	11/21/09	JWG0903787	
Acenaphthene	ND	U	5.4	1.1	1	11/12/09	11/21/09	JWG0903787	
3-Nitroaniline	ND	U	5.4	0.80	1	11/12/09	11/21/09	JWG0903787	
2,4-Dinitrophenol	ND	U	22	0.58	1	11/12/09	11/21/09	JWG0903787	
Pentachlorobenzene	ND	U	5.4	2.6	1	11/12/09	11/21/09	JWG0903787	
Dibenzofuran	ND	U	5.4	0.85	1	11/12/09	11/21/09	JWG0903787	
4-Nitrophenol	ND	U	22	0.99	1	11/12/09	11/21/09	JWG0903787	
2,4-Dinitrotoluene	ND	U	5.4	4.4	1	11/12/09	11/21/09	JWG0903787	
2-Naphthylamine	ND	U	5.4	1.2	1	11/12/09	11/21/09	JWG0903787	
2,3,4,6-Tetrachlorophenol	ND	U	5.4	1.3	1	11/12/09	11/21/09	JWG0903787	
1-Naphthylamine	ND	U	5.4	1.2	1	11/12/09	11/21/09	JWG0903787	
Fluorene	ND	U	5.4	0.94	1	11/12/09	11/21/09	JWG0903787	
4-Chlorophenyl Phenyl Ether	ND	U	5.4	0.65	1	11/12/09	11/21/09	JWG0903787	
Thionazin	ND	U	11	0.87	1	11/12/09	11/21/09	JWG0903787	
Diethyl Phthalate	ND	U	5.4	4.4	1	11/12/09	11/21/09	JWG0903787	
5-Nitro-o-toluidine	ND	U	5.4	1.1	1	11/12/09	11/21/09	JWG0903787	
4-Nitroaniline	ND	U	5.4	0.98	1	11/12/09	11/21/09	JWG0903787	
2-Methyl-4,6-dinitrophenol	ND	U	22	0.69	1	11/12/09	11/21/09	JWG0903787	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**Semi-Volatile Organic Compounds by GC/MS (Appendix II)**

**Sample Name:** L-2  
**Lab Code:** J0905605-002  
**Extraction Method:** EPA 3510C  
**Analysis Method:** 8270C

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodiphenylamine†	ND	U	5.4	1.1	1	11/12/09	11/21/09	JWG0903787	
Diallate	ND	U	5.4	1.1	1	11/12/09	11/21/09	JWG0903787	
Phorate	ND	U	5.4	0.94	1	11/12/09	11/21/09	JWG0903787	
1,3,5-Trinitrobenzene	ND	U	5.4	1.2	1	11/12/09	11/21/09	JWG0903787	
4-Bromophenyl Phenyl Ether	ND	U	5.4	0.72	1	11/12/09	11/21/09	JWG0903787	
Phenacetin	ND	U	5.4	0.95	1	11/12/09	11/21/09	JWG0903787	
Hexachlorobenzene	ND	U	5.4	0.68	1	11/12/09	11/21/09	JWG0903787	
Dimethoate	ND	U	5.4	0.96	1	11/12/09	11/21/09	JWG0903787	
4-Aminobiphenyl	ND	U	5.4	1.1	1	11/12/09	11/21/09	JWG0903787	
Pentachlorophenol	ND	U	22	0.72	1	11/12/09	11/21/09	JWG0903787	
Pentachloronitrobenzene	ND	U	5.4	1.6	1	11/12/09	11/21/09	JWG0903787	
Pronamide	ND	U	22	0.91	1	11/12/09	11/21/09	JWG0903787	
Phenanthrene	ND	U	5.4	0.75	1	11/12/09	11/21/09	JWG0903787	
Disulfoton	ND	U	5.4	0.56	1	11/12/09	11/21/09	JWG0903787	
Dinoseb	ND	U	5.4	0.65	1	11/12/09	11/21/09	JWG0903787	
Anthracene	ND	U	5.4	0.76	1	11/12/09	11/21/09	JWG0903787	
Methyl Parathion	ND	U	11	1.2	1	11/12/09	11/21/09	JWG0903787	
Di-n-butyl Phthalate	ND	U	5.4	1.1	1	11/12/09	11/21/09	JWG0903787	
Parathion	ND	U	22	0.99	1	11/12/09	11/21/09	JWG0903787	
Methapyrilene	ND	U	5.4	1.6	1	11/12/09	11/21/09	JWG0903787	
Isodrin	ND	U	11	0.76	1	11/12/09	11/21/09	JWG0903787	
Fluoranthene	ND	U	5.4	0.71	1	11/12/09	11/21/09	JWG0903787	
Pyrene	ND	U	5.4	0.90	1	11/12/09	11/21/09	JWG0903787	
Chlorobenzilate	ND	U	11	0.90	1	11/12/09	11/21/09	JWG0903787	
Famphur	ND	UJ	11	0.74	1	11/12/09	11/21/09	JWG0903787	J(3)
3,3'-Dimethylbenzidine	ND	U	22	2.5	1	11/12/09	11/21/09	JWG0903787	
p-Dimethylaminoazobenzene	ND	U	5.4	0.95	1	11/12/09	11/21/09	JWG0903787	
Butyl Benzyl Phthalate	ND	U	11	1.2	1	11/12/09	11/21/09	JWG0903787	
2-Acetylaminofluorene	ND	U	5.4	0.96	1	11/12/09	11/21/09	JWG0903787	
Kepone	ND	UJ	54	4.5	1	11/12/09	11/21/09	JWG0903787	J(3)
3,3'-Dichlorobenzidine	ND	U	22	0.95	1	11/12/09	11/21/09	JWG0903787	
Benz(a)anthracene	ND	U	5.4	0.92	1	11/12/09	11/21/09	JWG0903787	
Chrysene	ND	U	5.4	0.93	1	11/12/09	11/21/09	JWG0903787	
Bis(2-ethylhexyl) Phthalate	ND	U	5.4	1.1	1	11/12/09	11/21/09	JWG0903787	

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

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-2  
 Lab Code: J0905605-002  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Di-n-octyl Phthalate	ND	U	5.4	1.1	1	11/12/09	11/21/09	JWG0903787	
Benzo(b)fluoranthene	ND	U	5.4	0.93	1	11/12/09	11/21/09	JWG0903787	
Benzo(k)fluoranthene	ND	U	5.4	0.58	1	11/12/09	11/21/09	JWG0903787	
7,12-Dimethylbenz(a)anthracene	ND	U	5.4	0.93	1	11/12/09	11/21/09	JWG0903787	
Benzo(a)pyrene	ND	U	5.4	0.68	1	11/12/09	11/21/09	JWG0903787	
3-Methylcholanthrene	ND	U	5.4	1.1	1	11/12/09	11/21/09	JWG0903787	
Indeno(1,2,3-cd)pyrene	ND	U	5.4	0.59	1	11/12/09	11/21/09	JWG0903787	
Dibenz(a,h)anthracene	ND	U	5.4	0.66	1	11/12/09	11/21/09	JWG0903787	
Benzo(g,h,i)perylene	ND	U	5.4	0.97	1	11/12/09	11/21/09	JWG0903787	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	31	10-77	11/21/09	Acceptable
Phenol-d6	25	10-51	11/25/09	Acceptable
Nitrobenzene-d5	64	32-106	11/21/09	Acceptable
2-Fluorobiphenyl	43	30-102	11/21/09	Acceptable
2,4,6-Tribromophenol	48	30-143	11/21/09	Acceptable
Terphenyl-d14	26	23-165	11/21/09	Acceptable

## † Analyte Comments

4-Methylphenol This analyte cannot be separated from 3-Methylphenol.  
 N-Nitrosodiphenylamine This analyte can not be separated from Diphenylamine.

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-3  
 Lab Code: J0905605-003  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	5.4	0.78	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosomethylethylamine	ND	U	5.4	0.88	1	11/12/09	11/21/09	JWG0903787	
Methyl Methanesulfonate	ND	U	5.4	0.60	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosodiethylamine	ND	U	5.4	0.68	1	11/12/09	11/21/09	JWG0903787	
Ethyl Methanesulfonate	ND	U	5.4	0.70	1	11/12/09	11/21/09	JWG0903787	
Phenol	ND	U	5.4	0.45	1	11/12/09	11/21/09	JWG0903787	
Bis(2-chloroethyl) Ether	ND	U	5.4	1.1	1	11/12/09	11/21/09	JWG0903787	
2-Chlorophenol	ND	U	5.4	0.80	1	11/12/09	11/21/09	JWG0903787	
1,3-Dichlorobenzene	ND	U	5.4	0.75	1	11/12/09	11/21/09	JWG0903787	
<b>1,4-Dichlorobenzene</b>	<b>3.8</b>	<b>I</b>	5.4	1.3	1	11/12/09	11/21/09	JWG0903787	
1,2-Dichlorobenzene	ND	U	5.4	0.79	1	11/12/09	11/21/09	JWG0903787	
Bis(2-chloroisopropyl) Ether	ND	U	5.4	0.61	1	11/12/09	11/21/09	JWG0903787	
Benzyl alcohol	ND	U	5.4	0.74	1	11/12/09	11/21/09	JWG0903787	
2-Methylphenol	ND	U	5.4	0.69	1	11/12/09	11/21/09	JWG0903787	
Acetophenone	ND	U	11	1.4	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosopyrrolidine	ND	U	5.4	0.75	1	11/12/09	11/21/09	JWG0903787	
Hexachloroethane	ND	U	5.4	0.98	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosodi-n-propylamine	ND	U	5.4	0.73	1	11/12/09	11/21/09	JWG0903787	
o-Toluidine	ND	U	5.4	0.95	1	11/12/09	11/21/09	JWG0903787	
4-Methylphenol†	ND	U	5.4	0.82	1	11/12/09	11/21/09	JWG0903787	
Nitrobenzene	ND	U	5.4	0.78	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosopiperidine	ND	U	5.4	1.8	1	11/12/09	11/21/09	JWG0903787	
Isophorone	ND	U	5.4	0.86	1	11/12/09	11/21/09	JWG0903787	
2-Nitrophenol	ND	U	22	0.64	1	11/12/09	11/21/09	JWG0903787	
2,4-Dimethylphenol	ND	U	5.4	0.85	1	11/12/09	11/21/09	JWG0903787	
O,O,O-Triethyl Phosphorothioate	ND	U	22	0.56	1	11/12/09	11/21/09	JWG0903787	
bis(2-Chloroethoxy)methane	ND	U	5.4	0.95	1	11/12/09	11/21/09	JWG0903787	
2,4-Dichlorophenol	ND	U	5.4	0.54	1	11/12/09	11/21/09	JWG0903787	
1,2,4-Trichlorobenzene	ND	U	5.4	0.83	1	11/12/09	11/21/09	JWG0903787	
Naphthalene	ND	U	5.4	0.85	1	11/12/09	11/21/09	JWG0903787	
2,6-Dichlorophenol	ND	U	11	0.77	1	11/12/09	11/21/09	JWG0903787	
Hexachloropropene	ND	U	5.4	2.1	1	11/12/09	11/21/09	JWG0903787	
4-Chloroaniline	ND	U	5.4	0.57	1	11/12/09	11/21/09	JWG0903787	
Hexachlorobutadiene	ND	U	5.4	0.65	1	11/12/09	11/21/09	JWG0903787	

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

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-3  
 Lab Code: J0905605-003  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodi-n-butylamine	ND	U	5.4	0.72	1	11/12/09	11/21/09	JWG0903787	
p-Phenylenediamine	ND	UJ	22	1.2	1	11/12/09	11/21/09	JWG0903787	J(3)
4-Chloro-3-methylphenol	ND	U	5.4	0.80	1	11/12/09	11/21/09	JWG0903787	
2-Methylnaphthalene	ND	U	5.4	0.79	1	11/12/09	11/21/09	JWG0903787	
Hexachlorocyclopentadiene	ND	U	5.4	0.44	1	11/12/09	11/21/09	JWG0903787	
1,2,4,5-Tetrachlorobenzene	ND	U	5.4	0.59	1	11/12/09	11/21/09	JWG0903787	
Safrole	ND	U	5.4	0.76	1	11/12/09	11/21/09	JWG0903787	
2,4,6-Trichlorophenol	ND	U	5.4	0.78	1	11/12/09	11/21/09	JWG0903787	
2,4,5-Trichlorophenol	ND	U	5.4	0.70	1	11/12/09	11/21/09	JWG0903787	
Isosafrole	ND	U	5.4	0.80	1	11/12/09	11/21/09	JWG0903787	
2-Chloronaphthalene	ND	U	5.4	0.76	1	11/12/09	11/21/09	JWG0903787	
2-Nitroaniline	ND	U	5.4	0.59	1	11/12/09	11/21/09	JWG0903787	
1,4-Naphthoquinone	ND	UJ	11	1.5	1	11/12/09	11/21/09	JWG0903787	J(3)
1,3-Dinitrobenzene	ND	U	11	1.6	1	11/12/09	11/21/09	JWG0903787	
Acenaphthylene	ND	U	5.4	0.62	1	11/12/09	11/21/09	JWG0903787	
Dimethyl Phthalate	ND	U	5.4	0.81	1	11/12/09	11/21/09	JWG0903787	
2,6-Dinitrotoluene	ND	U	5.4	0.89	1	11/12/09	11/21/09	JWG0903787	
Acenaphthene	ND	U	5.4	1.1	1	11/12/09	11/21/09	JWG0903787	
3-Nitroaniline	ND	U	5.4	0.80	1	11/12/09	11/21/09	JWG0903787	
2,4-Dinitrophenol	ND	U	22	0.58	1	11/12/09	11/21/09	JWG0903787	
Pentachlorobenzene	ND	U	5.4	2.6	1	11/12/09	11/21/09	JWG0903787	
Dibenzofuran	ND	U	5.4	0.85	1	11/12/09	11/21/09	JWG0903787	
4-Nitrophenol	ND	U	22	0.99	1	11/12/09	11/21/09	JWG0903787	
2,4-Dinitrotoluene	ND	U	5.4	4.4	1	11/12/09	11/21/09	JWG0903787	
2-Naphthylamine	ND	U	5.4	1.2	1	11/12/09	11/21/09	JWG0903787	
2,3,4,6-Tetrachlorophenol	ND	U	5.4	1.3	1	11/12/09	11/21/09	JWG0903787	
1-Naphthylamine	ND	U	5.4	1.2	1	11/12/09	11/21/09	JWG0903787	
Fluorene	ND	U	5.4	0.94	1	11/12/09	11/21/09	JWG0903787	
4-Chlorophenyl Phenyl Ether	ND	U	5.4	0.65	1	11/12/09	11/21/09	JWG0903787	
Thionazin	ND	U	11	0.87	1	11/12/09	11/21/09	JWG0903787	
Diethyl Phthalate	ND	U	5.4	4.4	1	11/12/09	11/21/09	JWG0903787	
5-Nitro-o-toluidine	ND	U	5.4	1.1	1	11/12/09	11/21/09	JWG0903787	
4-Nitroaniline	ND	U	5.4	0.98	1	11/12/09	11/21/09	JWG0903787	
2-Methyl-4,6-dinitrophenol	ND	U	22	0.69	1	11/12/09	11/21/09	JWG0903787	

Comments:



## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-3  
 Lab Code: J0905605-003  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodiphenylamine†	ND	U	5.4	1.1	1	11/12/09	11/21/09	JWG0903787	
Diallate	ND	U	5.4	1.1	1	11/12/09	11/21/09	JWG0903787	
Phorate	ND	U	5.4	0.94	1	11/12/09	11/21/09	JWG0903787	
1,3,5-Trinitrobenzene	ND	U	5.4	1.2	1	11/12/09	11/21/09	JWG0903787	
4-Bromophenyl Phenyl Ether	ND	U	5.4	0.72	1	11/12/09	11/21/09	JWG0903787	
Phenacetin	ND	U	5.4	0.95	1	11/12/09	11/21/09	JWG0903787	
Hexachlorobenzene	ND	U	5.4	0.68	1	11/12/09	11/21/09	JWG0903787	
Dimethoate	ND	U	5.4	0.96	1	11/12/09	11/21/09	JWG0903787	
4-Aminobiphenyl	ND	U	5.4	1.1	1	11/12/09	11/21/09	JWG0903787	
Pentachlorophenol	ND	U	22	0.72	1	11/12/09	11/21/09	JWG0903787	
Pentachloronitrobenzene	ND	U	5.4	1.6	1	11/12/09	11/21/09	JWG0903787	
Pronamide	ND	U	22	0.91	1	11/12/09	11/21/09	JWG0903787	
Phenanthrene	ND	U	5.4	0.75	1	11/12/09	11/21/09	JWG0903787	
Disulfoton	ND	U	5.4	0.56	1	11/12/09	11/21/09	JWG0903787	
Dinoseb	ND	U	5.4	0.65	1	11/12/09	11/21/09	JWG0903787	
Anthracene	ND	U	5.4	0.76	1	11/12/09	11/21/09	JWG0903787	
Methyl Parathion	ND	U	11	1.2	1	11/12/09	11/21/09	JWG0903787	
Di-n-butyl Phthalate	ND	U	5.4	1.1	1	11/12/09	11/21/09	JWG0903787	
Parathion	ND	U	22	0.99	1	11/12/09	11/21/09	JWG0903787	
Methapyrilene	ND	U	5.4	1.6	1	11/12/09	11/21/09	JWG0903787	
Isodrin	ND	U	11	0.76	1	11/12/09	11/21/09	JWG0903787	
Fluoranthene	ND	U	5.4	0.71	1	11/12/09	11/21/09	JWG0903787	
Pyrene	ND	U	5.4	0.90	1	11/12/09	11/21/09	JWG0903787	
Chlorobenzilate	ND	U	11	0.90	1	11/12/09	11/21/09	JWG0903787	
Famphur	ND	UJ	11	0.74	1	11/12/09	11/21/09	JWG0903787	J(3)
3,3'-Dimethylbenzidine	ND	U	22	2.5	1	11/12/09	11/21/09	JWG0903787	
p-Dimethylaminoazobenzene	ND	U	5.4	0.95	1	11/12/09	11/21/09	JWG0903787	
Butyl Benzyl Phthalate	ND	U	11	1.2	1	11/12/09	11/21/09	JWG0903787	
2-Acetylaminofluorene	ND	U	5.4	0.96	1	11/12/09	11/21/09	JWG0903787	
Kepone	ND	UJ	54	4.5	1	11/12/09	11/21/09	JWG0903787	J(3)
<b>3,3'-Dichlorobenzidine</b>	<b>3.3</b>	<b>I</b>	22	0.95	1	11/12/09	11/21/09	JWG0903787	
Benz(a)anthracene	ND	U	5.4	0.92	1	11/12/09	11/21/09	JWG0903787	
Chrysene	ND	U	5.4	0.93	1	11/12/09	11/21/09	JWG0903787	
Bis(2-ethylhexyl) Phthalate	ND	U	5.4	1.1	1	11/12/09	11/21/09	JWG0903787	

Comments:

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-3  
 Lab Code: J0905605-003  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Di-n-octyl Phthalate	ND	U	5.4	1.1	1	11/12/09	11/21/09	JWG0903787	
Benzo(b)fluoranthene	ND	U	5.4	0.93	1	11/12/09	11/21/09	JWG0903787	
Benzo(k)fluoranthene	ND	U	5.4	0.58	1	11/12/09	11/21/09	JWG0903787	
7,12-Dimethylbenz(a)anthracene	ND	U	5.4	0.93	1	11/12/09	11/21/09	JWG0903787	
Benzo(a)pyrene	ND	U	5.4	0.68	1	11/12/09	11/21/09	JWG0903787	
3-Methylcholanthrene	ND	U	5.4	1.1	1	11/12/09	11/21/09	JWG0903787	
Indeno(1,2,3-cd)pyrene	ND	U	5.4	0.59	1	11/12/09	11/21/09	JWG0903787	
Dibenz(a,h)anthracene	ND	U	5.4	0.66	1	11/12/09	11/21/09	JWG0903787	
Benzo(g,h,i)perylene	ND	U	5.4	0.97	1	11/12/09	11/21/09	JWG0903787	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	30	10-77	11/21/09	Acceptable
Phenol-d6	19	10-51	11/21/09	Acceptable
Nitrobenzene-d5	56	32-106	11/21/09	Acceptable
2-Fluorobiphenyl	50	30-102	11/21/09	Acceptable
2,4,6-Tribromophenol	58	30-143	11/21/09	Acceptable
Terphenyl-d14	28	23-165	11/21/09	Acceptable

## † Analyte Comments

4-Methylphenol This analyte cannot be separated from 3-Methylphenol.  
 N-Nitrosodiphenylamine This analyte can not be separated from Diphenylamine.

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-4  
 Lab Code: J0905605-004  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	5.5	0.80	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosomethylethylamine	ND	U	5.5	0.90	1	11/12/09	11/21/09	JWG0903787	
Methyl Methanesulfonate	ND	U	5.5	0.61	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosodiethylamine	ND	U	5.5	0.69	1	11/12/09	11/21/09	JWG0903787	
Ethyl Methanesulfonate	ND	U	5.5	0.71	1	11/12/09	11/21/09	JWG0903787	
Phenol	ND	U	5.5	0.46	1	11/12/09	11/21/09	JWG0903787	
Bis(2-chloroethyl) Ether	ND	U	5.5	1.1	1	11/12/09	11/21/09	JWG0903787	
2-Chlorophenol	ND	U	5.5	0.82	1	11/12/09	11/21/09	JWG0903787	
1,3-Dichlorobenzene	ND	U	5.5	0.77	1	11/12/09	11/21/09	JWG0903787	
<b>1,4-Dichlorobenzene</b>	<b>2.0</b>	<b>I</b>	5.5	1.4	1	11/12/09	11/21/09	JWG0903787	
1,2-Dichlorobenzene	ND	U	5.5	0.81	1	11/12/09	11/21/09	JWG0903787	
Bis(2-chloroisopropyl) Ether	ND	U	5.5	0.62	1	11/12/09	11/21/09	JWG0903787	
Benzyl alcohol	ND	U	5.5	0.75	1	11/12/09	11/21/09	JWG0903787	
2-Methylphenol	ND	U	5.5	0.70	1	11/12/09	11/21/09	JWG0903787	
Acetophenone	ND	U	11	1.5	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosopyrrolidine	ND	U	5.5	0.77	1	11/12/09	11/21/09	JWG0903787	
Hexachloroethane	ND	U	5.5	1.0	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosodi-n-propylamine	ND	U	5.5	0.74	1	11/12/09	11/21/09	JWG0903787	
o-Toluidine	ND	U	5.5	0.97	1	11/12/09	11/21/09	JWG0903787	
<b>4-Methylphenol†</b>	<b>53</b>		5.5	0.84	1	11/12/09	11/21/09	JWG0903787	
Nitrobenzene	ND	U	5.5	0.80	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosopiperidine	ND	U	5.5	1.8	1	11/12/09	11/21/09	JWG0903787	
Isophorone	ND	U	5.5	0.87	1	11/12/09	11/21/09	JWG0903787	
2-Nitrophenol	ND	U	22	0.66	1	11/12/09	11/21/09	JWG0903787	
2,4-Dimethylphenol	ND	U	5.5	0.86	1	11/12/09	11/21/09	JWG0903787	
O,O,O-Triethyl Phosphorothioate	ND	U	22	0.57	1	11/12/09	11/21/09	JWG0903787	
bis(2-Chloroethoxy)methane	ND	U	5.5	0.97	1	11/12/09	11/21/09	JWG0903787	
2,4-Dichlorophenol	ND	U	5.5	0.55	1	11/12/09	11/21/09	JWG0903787	
1,2,4-Trichlorobenzene	ND	U	5.5	0.85	1	11/12/09	11/21/09	JWG0903787	
<b>Naphthalene</b>	<b>5.2</b>	<b>I</b>	5.5	0.86	1	11/12/09	11/21/09	JWG0903787	
2,6-Dichlorophenol	ND	U	11	0.79	1	11/12/09	11/21/09	JWG0903787	
Hexachloropropene	ND	U	5.5	2.1	1	11/12/09	11/21/09	JWG0903787	
4-Chloroaniline	ND	U	5.5	0.58	1	11/12/09	11/21/09	JWG0903787	
Hexachlorobutadiene	ND	U	5.5	0.67	1	11/12/09	11/21/09	JWG0903787	

Comments:

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-4  
 Lab Code: J0905605-004  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodi-n-butylamine	ND	U	5.5	0.73	1	11/12/09	11/21/09	JWG0903787	
p-Phenylenediamine	ND	UJ	22	1.2	1	11/12/09	11/21/09	JWG0903787	J(3)
4-Chloro-3-methylphenol	ND	U	5.5	0.82	1	11/12/09	11/21/09	JWG0903787	
2-Methylnaphthalene	ND	U	5.5	0.81	1	11/12/09	11/21/09	JWG0903787	
Hexachlorocyclopentadiene	ND	U	5.5	0.45	1	11/12/09	11/21/09	JWG0903787	
1,2,4,5-Tetrachlorobenzene	ND	U	5.5	0.60	1	11/12/09	11/21/09	JWG0903787	
Safrole	ND	U	5.5	0.78	1	11/12/09	11/21/09	JWG0903787	
2,4,6-Trichlorophenol	ND	U	5.5	0.80	1	11/12/09	11/21/09	JWG0903787	
2,4,5-Trichlorophenol	ND	U	5.5	0.71	1	11/12/09	11/21/09	JWG0903787	
Isosafrole	ND	U	5.5	0.82	1	11/12/09	11/21/09	JWG0903787	
2-Chloronaphthalene	ND	U	5.5	0.78	1	11/12/09	11/21/09	JWG0903787	
2-Nitroaniline	ND	U	5.5	0.60	1	11/12/09	11/21/09	JWG0903787	
1,4-Naphthoquinone	ND	UJ	11	1.6	1	11/12/09	11/21/09	JWG0903787	J(3)
1,3-Dinitrobenzene	ND	U	11	1.7	1	11/12/09	11/21/09	JWG0903787	
Acenaphthylene	ND	U	5.5	0.64	1	11/12/09	11/21/09	JWG0903787	
Dimethyl Phthalate	ND	U	5.5	0.83	1	11/12/09	11/21/09	JWG0903787	
2,6-Dinitrotoluene	ND	U	5.5	0.91	1	11/12/09	11/21/09	JWG0903787	
Acenaphthene	ND	U	5.5	1.1	1	11/12/09	11/21/09	JWG0903787	
3-Nitroaniline	ND	U	5.5	0.82	1	11/12/09	11/21/09	JWG0903787	
2,4-Dinitrophenol	ND	U	22	0.59	1	11/12/09	11/21/09	JWG0903787	
Pentachlorobenzene	ND	U	5.5	2.7	1	11/12/09	11/21/09	JWG0903787	
Dibenzofuran	ND	U	5.5	0.86	1	11/12/09	11/21/09	JWG0903787	
4-Nitrophenol	ND	U	22	1.1	1	11/12/09	11/21/09	JWG0903787	
2,4-Dinitrotoluene	ND	U	5.5	4.5	1	11/12/09	11/21/09	JWG0903787	
2-Naphthylamine	ND	U	5.5	1.2	1	11/12/09	11/21/09	JWG0903787	
2,3,4,6-Tetrachlorophenol	ND	U	5.5	1.4	1	11/12/09	11/21/09	JWG0903787	
1-Naphthylamine	ND	U	5.5	1.2	1	11/12/09	11/21/09	JWG0903787	
Fluorene	ND	U	5.5	0.96	1	11/12/09	11/21/09	JWG0903787	
4-Chlorophenyl Phenyl Ether	ND	U	5.5	0.67	1	11/12/09	11/21/09	JWG0903787	
Thionazin	ND	U	11	0.89	1	11/12/09	11/21/09	JWG0903787	
Diethyl Phthalate	ND	U	5.5	4.5	1	11/12/09	11/21/09	JWG0903787	
5-Nitro-o-toluidine	ND	U	5.5	1.1	1	11/12/09	11/21/09	JWG0903787	
4-Nitroaniline	ND	U	5.5	1.0	1	11/12/09	11/21/09	JWG0903787	
2-Methyl-4,6-dinitrophenol	ND	U	22	0.70	1	11/12/09	11/21/09	JWG0903787	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-4  
 Lab Code: J0905605-004  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodiphenylamine†	ND	U	5.5	1.1	1	11/12/09	11/21/09	JWG0903787	
Diallate	ND	U	5.5	1.1	1	11/12/09	11/21/09	JWG0903787	
Phorate	ND	U	5.5	0.96	1	11/12/09	11/21/09	JWG0903787	
1,3,5-Trinitrobenzene	ND	U	5.5	1.2	1	11/12/09	11/21/09	JWG0903787	
4-Bromophenyl Phenyl Ether	ND	U	5.5	0.73	1	11/12/09	11/21/09	JWG0903787	
Phenacetin	ND	U	5.5	0.97	1	11/12/09	11/21/09	JWG0903787	
Hexachlorobenzene	ND	U	5.5	0.69	1	11/12/09	11/21/09	JWG0903787	
Dimethoate	ND	U	5.5	0.98	1	11/12/09	11/21/09	JWG0903787	
4-Aminobiphenyl	ND	U	5.5	1.1	1	11/12/09	11/21/09	JWG0903787	
Pentachlorophenol	ND	U	22	0.73	1	11/12/09	11/21/09	JWG0903787	
Pentachloronitrobenzene	ND	U	5.5	1.7	1	11/12/09	11/21/09	JWG0903787	
Pronamide	ND	U	22	0.93	1	11/12/09	11/21/09	JWG0903787	
Phenanthrene	ND	U	5.5	0.77	1	11/12/09	11/21/09	JWG0903787	
Disulfoton	ND	U	5.5	0.57	1	11/12/09	11/21/09	JWG0903787	
Dinoseb	ND	U	5.5	0.67	1	11/12/09	11/21/09	JWG0903787	
Anthracene	ND	U	5.5	0.78	1	11/12/09	11/21/09	JWG0903787	
Methyl Parathion	ND	U	11	1.2	1	11/12/09	11/21/09	JWG0903787	
Di-n-butyl Phthalate	ND	U	5.5	1.1	1	11/12/09	11/21/09	JWG0903787	
Parathion	ND	U	22	1.1	1	11/12/09	11/21/09	JWG0903787	
Methapyrilene	ND	U	5.5	1.7	1	11/12/09	11/21/09	JWG0903787	
Isodrin	ND	U	11	0.78	1	11/12/09	11/21/09	JWG0903787	
Fluoranthene	ND	U	5.5	0.72	1	11/12/09	11/21/09	JWG0903787	
Pyrene	ND	U	5.5	0.92	1	11/12/09	11/21/09	JWG0903787	
Chlorobenzilate	ND	U	11	0.92	1	11/12/09	11/21/09	JWG0903787	
Famphur	ND	UJ	11	0.75	1	11/12/09	11/21/09	JWG0903787	J(3)
3,3'-Dimethylbenzidine	ND	U	22	2.5	1	11/12/09	11/21/09	JWG0903787	
p-Dimethylaminoazobenzene	ND	U	5.5	0.97	1	11/12/09	11/21/09	JWG0903787	
Butyl Benzyl Phthalate	ND	U	11	1.2	1	11/12/09	11/21/09	JWG0903787	
2-Acetylaminofluorene	ND	U	5.5	0.98	1	11/12/09	11/21/09	JWG0903787	
Kepone	ND	UJ	55	4.6	1	11/12/09	11/21/09	JWG0903787	J(3)
3,3'-Dichlorobenzidine	ND	U	22	0.97	1	11/12/09	11/21/09	JWG0903787	
Benz(a)anthracene	ND	U	5.5	0.94	1	11/12/09	11/21/09	JWG0903787	
Chrysene	ND	U	5.5	0.95	1	11/12/09	11/21/09	JWG0903787	
Bis(2-ethylhexyl) Phthalate	ND	U	5.5	1.1	1	11/12/09	11/21/09	JWG0903787	

Comments:

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-4  
 Lab Code: J0905605-004  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Di-n-octyl Phthalate	ND	U	5.5	1.1	1	11/12/09	11/21/09	JWG0903787	
Benzo(b)fluoranthene	ND	U	5.5	0.95	1	11/12/09	11/21/09	JWG0903787	
Benzo(k)fluoranthene	ND	U	5.5	0.59	1	11/12/09	11/21/09	JWG0903787	
7,12-Dimethylbenz(a)anthracene	ND	U	5.5	0.95	1	11/12/09	11/21/09	JWG0903787	
Benzo(a)pyrene	ND	U	5.5	0.69	1	11/12/09	11/21/09	JWG0903787	
3-Methylcholanthrene	ND	U	5.5	1.1	1	11/12/09	11/21/09	JWG0903787	
Indeno(1,2,3-cd)pyrene	ND	U	5.5	0.60	1	11/12/09	11/21/09	JWG0903787	
Dibenz(a,h)anthracene	ND	U	5.5	0.68	1	11/12/09	11/21/09	JWG0903787	
Benzo(g,h,i)perylene	ND	U	5.5	0.99	1	11/12/09	11/21/09	JWG0903787	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	26	10-77	11/21/09	Acceptable
Phenol-d6	25	10-51	11/21/09	Acceptable
Nitrobenzene-d5	52	32-106	11/21/09	Acceptable
2-Fluorobiphenyl	38	30-102	11/21/09	Acceptable
2,4,6-Tribromophenol	47	30-143	11/21/09	Acceptable
Terphenyl-d14	26	23-165	11/25/09	Acceptable

## † Analyte Comments

4-Methylphenol This analyte cannot be separated from 3-Methylphenol.  
 N-Nitrosodiphenylamine This analyte can not be separated from Diphenylamine.

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

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-5  
 Lab Code: J0905605-005  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	5.9	0.85	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosomethylethylamine	ND	U	5.9	0.96	1	11/12/09	11/21/09	JWG0903787	
Methyl Methanesulfonate	ND	U	5.9	0.66	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosodiethylamine	ND	U	5.9	0.74	1	11/12/09	11/21/09	JWG0903787	
Ethyl Methanesulfonate	ND	U	5.9	0.76	1	11/12/09	11/21/09	JWG0903787	
Phenol	ND	U	5.9	0.49	1	11/12/09	11/21/09	JWG0903787	
Bis(2-chloroethyl) Ether	ND	U	5.9	1.2	1	11/12/09	11/21/09	JWG0903787	
2-Chlorophenol	ND	U	5.9	0.88	1	11/12/09	11/21/09	JWG0903787	
1,3-Dichlorobenzene	ND	U	5.9	0.82	1	11/12/09	11/21/09	JWG0903787	
<b>1,4-Dichlorobenzene</b>	<b>2.6</b>	<b>I</b>	5.9	1.4	1	11/12/09	11/21/09	JWG0903787	
1,2-Dichlorobenzene	ND	U	5.9	0.87	1	11/12/09	11/21/09	JWG0903787	
Bis(2-chloroisopropyl) Ether	ND	U	5.9	0.67	1	11/12/09	11/21/09	JWG0903787	
Benzyl alcohol	ND	U	5.9	0.81	1	11/12/09	11/21/09	JWG0903787	
2-Methylphenol	ND	U	5.9	0.75	1	11/12/09	11/21/09	JWG0903787	
Acetophenone	ND	U	12	1.6	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosopyrrolidine	ND	U	5.9	0.82	1	11/12/09	11/21/09	JWG0903787	
Hexachloroethane	ND	U	5.9	1.1	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosodi-n-propylamine	ND	U	5.9	0.80	1	11/12/09	11/21/09	JWG0903787	
o-Toluidine	ND	U	5.9	1.1	1	11/12/09	11/21/09	JWG0903787	
4-Methylphenol†	ND	U	5.9	0.90	1	11/12/09	11/21/09	JWG0903787	
Nitrobenzene	ND	U	5.9	0.85	1	11/12/09	11/21/09	JWG0903787	
N-Nitrosopiperidine	ND	U	5.9	1.9	1	11/12/09	11/21/09	JWG0903787	
Isophorone	ND	U	5.9	0.94	1	11/12/09	11/21/09	JWG0903787	
2-Nitrophenol	ND	U	24	0.70	1	11/12/09	11/21/09	JWG0903787	
2,4-Dimethylphenol	ND	U	5.9	0.92	1	11/12/09	11/21/09	JWG0903787	
O,O,O-Triethyl Phosphorothioate	ND	U	24	0.61	1	11/12/09	11/21/09	JWG0903787	
bis(2-Chloroethoxy)methane	ND	U	5.9	1.1	1	11/12/09	11/21/09	JWG0903787	
2,4-Dichlorophenol	ND	U	5.9	0.59	1	11/12/09	11/21/09	JWG0903787	
1,2,4-Trichlorobenzene	ND	U	5.9	0.91	1	11/12/09	11/21/09	JWG0903787	
Naphthalene	ND	U	5.9	0.92	1	11/12/09	11/21/09	JWG0903787	
2,6-Dichlorophenol	ND	U	12	0.84	1	11/12/09	11/21/09	JWG0903787	
Hexachloropropene	ND	U	5.9	2.3	1	11/12/09	11/21/09	JWG0903787	
4-Chloroaniline	ND	U	5.9	0.62	1	11/12/09	11/21/09	JWG0903787	
Hexachlorobutadiene	ND	U	5.9	0.71	1	11/12/09	11/21/09	JWG0903787	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-5  
 Lab Code: J0905605-005  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodi-n-butylamine	ND	U	5.9	0.78	1	11/12/09	11/21/09	JWG0903787	
p-Phenylenediamine	ND	UJ	24	1.3	1	11/12/09	11/21/09	JWG0903787	J(3)
4-Chloro-3-methylphenol	ND	U	5.9	0.88	1	11/12/09	11/21/09	JWG0903787	
2-Methylnaphthalene	ND	U	5.9	0.87	1	11/12/09	11/21/09	JWG0903787	
Hexachlorocyclopentadiene	ND	U	5.9	0.48	1	11/12/09	11/21/09	JWG0903787	
1,2,4,5-Tetrachlorobenzene	ND	U	5.9	0.64	1	11/12/09	11/21/09	JWG0903787	
Safrole	ND	U	5.9	0.83	1	11/12/09	11/21/09	JWG0903787	
2,4,6-Trichlorophenol	ND	U	5.9	0.85	1	11/12/09	11/21/09	JWG0903787	
2,4,5-Trichlorophenol	ND	U	5.9	0.76	1	11/12/09	11/21/09	JWG0903787	
Isosafrole	ND	U	5.9	0.88	1	11/12/09	11/21/09	JWG0903787	
2-Chloronaphthalene	ND	U	5.9	0.83	1	11/12/09	11/21/09	JWG0903787	
2-Nitroaniline	ND	U	5.9	0.64	1	11/12/09	11/21/09	JWG0903787	
1,4-Naphthoquinone	ND	UJ	12	1.7	1	11/12/09	11/21/09	JWG0903787	J(3)
1,3-Dinitrobenzene	ND	U	12	1.8	1	11/12/09	11/21/09	JWG0903787	
Acenaphthylene	ND	U	5.9	0.68	1	11/12/09	11/21/09	JWG0903787	
Dimethyl Phthalate	ND	U	5.9	0.89	1	11/12/09	11/21/09	JWG0903787	
2,6-Dinitrotoluene	ND	U	5.9	0.97	1	11/12/09	11/21/09	JWG0903787	
Acenaphthene	ND	U	5.9	1.2	1	11/12/09	11/21/09	JWG0903787	
3-Nitroaniline	ND	U	5.9	0.88	1	11/12/09	11/21/09	JWG0903787	
2,4-Dinitrophenol	ND	U	24	0.63	1	11/12/09	11/21/09	JWG0903787	
Pentachlorobenzene	ND	U	5.9	2.8	1	11/12/09	11/21/09	JWG0903787	
Dibenzofuran	ND	U	5.9	0.92	1	11/12/09	11/21/09	JWG0903787	
4-Nitrophenol	ND	U	24	1.1	1	11/12/09	11/21/09	JWG0903787	
2,4-Dinitrotoluene	ND	U	5.9	4.8	1	11/12/09	11/21/09	JWG0903787	
2-Naphthylamine	ND	U	5.9	1.3	1	11/12/09	11/21/09	JWG0903787	
2,3,4,6-Tetrachlorophenol	ND	U	5.9	1.4	1	11/12/09	11/21/09	JWG0903787	
1-Naphthylamine	ND	U	5.9	1.3	1	11/12/09	11/21/09	JWG0903787	
Fluorene	ND	U	5.9	1.1	1	11/12/09	11/21/09	JWG0903787	
4-Chlorophenyl Phenyl Ether	ND	U	5.9	0.71	1	11/12/09	11/21/09	JWG0903787	
Thionazin	ND	U	12	0.95	1	11/12/09	11/21/09	JWG0903787	
Diethyl Phthalate	ND	U	5.9	4.8	1	11/12/09	11/21/09	JWG0903787	
5-Nitro-o-toluidine	ND	U	5.9	1.2	1	11/12/09	11/21/09	JWG0903787	
4-Nitroaniline	ND	U	5.9	1.1	1	11/12/09	11/21/09	JWG0903787	
2-Methyl-4,6-dinitrophenol	ND	U	24	0.75	1	11/12/09	11/21/09	JWG0903787	

Comments:



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-5  
 Lab Code: J0905605-005  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodiphenylamine†	ND	U	5.9	1.2	1	11/12/09	11/21/09	JWG0903787	
Diallate	ND	U	5.9	1.2	1	11/12/09	11/21/09	JWG0903787	
Phorate	ND	U	5.9	1.1	1	11/12/09	11/21/09	JWG0903787	
1,3,5-Trinitrobenzene	ND	U	5.9	1.3	1	11/12/09	11/21/09	JWG0903787	
4-Bromophenyl Phenyl Ether	ND	U	5.9	0.78	1	11/12/09	11/21/09	JWG0903787	
Phenacetin	ND	U	5.9	1.1	1	11/12/09	11/21/09	JWG0903787	
Hexachlorobenzene	ND	U	5.9	0.74	1	11/12/09	11/21/09	JWG0903787	
Dimethoate	ND	U	5.9	1.1	1	11/12/09	11/21/09	JWG0903787	
4-Aminobiphenyl	ND	U	5.9	1.2	1	11/12/09	11/21/09	JWG0903787	
Pentachlorophenol	ND	U	24	0.78	1	11/12/09	11/21/09	JWG0903787	
Pentachloronitrobenzene	ND	U	5.9	1.8	1	11/12/09	11/21/09	JWG0903787	
Pronamide	ND	U	24	0.99	1	11/12/09	11/21/09	JWG0903787	
Phenanthrene	ND	U	5.9	0.82	1	11/12/09	11/21/09	JWG0903787	
Disulfoton	ND	U	5.9	0.61	1	11/12/09	11/21/09	JWG0903787	
Dinoseb	ND	U	5.9	0.71	1	11/12/09	11/21/09	JWG0903787	
Anthracene	ND	U	5.9	0.83	1	11/12/09	11/21/09	JWG0903787	
Methyl Parathion	ND	U	12	1.3	1	11/12/09	11/21/09	JWG0903787	
Di-n-butyl Phthalate	ND	U	5.9	1.2	1	11/12/09	11/21/09	JWG0903787	
Parathion	ND	U	24	1.1	1	11/12/09	11/21/09	JWG0903787	
Methapyrilene	ND	U	5.9	1.8	1	11/12/09	11/21/09	JWG0903787	
Isodrin	ND	U	12	0.83	1	11/12/09	11/21/09	JWG0903787	
Fluoranthene	ND	U	5.9	0.77	1	11/12/09	11/21/09	JWG0903787	
Pyrene	ND	U	5.9	0.98	1	11/12/09	11/21/09	JWG0903787	
Chlorobenzilate	ND	U	12	0.98	1	11/12/09	11/21/09	JWG0903787	
Famphur	ND	UJ	12	0.81	1	11/12/09	11/21/09	JWG0903787	J(3)
3,3'-Dimethylbenzidine	ND	U	24	2.7	1	11/12/09	11/21/09	JWG0903787	
p-Dimethylaminoazobenzene	ND	U	5.9	1.1	1	11/12/09	11/21/09	JWG0903787	
Butyl Benzyl Phthalate	ND	U	12	1.3	1	11/12/09	11/21/09	JWG0903787	
2-Acetylaminofluorene	ND	U	5.9	1.1	1	11/12/09	11/21/09	JWG0903787	
Kepone	ND	UJ	59	4.9	1	11/12/09	11/21/09	JWG0903787	J(3)
<b>3,3'-Dichlorobenzidine</b>	<b>4.2</b>	<b>I</b>	24	1.1	1	11/12/09	11/21/09	JWG0903787	
Benz(a)anthracene	ND	U	5.9	1.0	1	11/12/09	11/21/09	JWG0903787	
Chrysene	ND	U	5.9	1.1	1	11/12/09	11/21/09	JWG0903787	
Bis(2-ethylhexyl) Phthalate	ND	U	5.9	1.2	1	11/12/09	11/21/09	JWG0903787	

Comments:

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

**Sample Name:** L-5  
**Lab Code:** J0905605-005  
**Extraction Method:** EPA 3510C  
**Analysis Method:** 8270C

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Di-n-octyl Phthalate	ND	U	5.9	1.2	1	11/12/09	11/21/09	JWG0903787	
Benzo(b)fluoranthene	ND	U	5.9	1.1	1	11/12/09	11/21/09	JWG0903787	
Benzo(k)fluoranthene	ND	U	5.9	0.63	1	11/12/09	11/21/09	JWG0903787	
7,12-Dimethylbenz(a)anthracene	ND	U	5.9	1.1	1	11/12/09	11/21/09	JWG0903787	
Benzo(a)pyrene	ND	U	5.9	0.74	1	11/12/09	11/21/09	JWG0903787	
3-Methylcholanthrene	ND	U	5.9	1.2	1	11/12/09	11/21/09	JWG0903787	
Indeno(1,2,3-cd)pyrene	ND	U	5.9	0.64	1	11/12/09	11/21/09	JWG0903787	
Dibenz(a,h)anthracene	ND	U	5.9	0.73	1	11/12/09	11/21/09	JWG0903787	
Benzo(g,h,i)perylene	ND	U	5.9	1.1	1	11/12/09	11/21/09	JWG0903787	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	26	10-77	11/21/09	Acceptable
Phenol-d6	18	10-51	11/25/09	Acceptable
Nitrobenzene-d5	47	32-106	11/21/09	Acceptable
2-Fluorobiphenyl	41	30-102	11/21/09	Acceptable
2,4,6-Tribromophenol	45	30-143	11/21/09	Acceptable
Terphenyl-d14	24	23-165	11/21/09	Acceptable

## † Analyte Comments

4-Methylphenol This analyte cannot be separated from 3-Methylphenol.  
N-Nitrosodiphenylamine This analyte can not be separated from Diphenylamine.

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

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-6  
 Lab Code: J0905605-006  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	55	8.0	10	11/12/09	11/25/09	JWG0903787	
N-Nitrosomethylethylamine	ND	U	55	9.0	10	11/12/09	11/25/09	JWG0903787	
Methyl Methanesulfonate	ND	U	55	6.1	10	11/12/09	11/25/09	JWG0903787	
N-Nitrosodiethylamine	ND	U	55	6.9	10	11/12/09	11/25/09	JWG0903787	
Ethyl Methanesulfonate	ND	U	55	7.1	10	11/12/09	11/25/09	JWG0903787	
<b>Phenol</b>	<b>290</b>		55	4.6	10	11/12/09	11/25/09	JWG0903787	
Bis(2-chloroethyl) Ether	ND	U	55	11	10	11/12/09	11/25/09	JWG0903787	
2-Chlorophenol	ND	U	55	8.2	10	11/12/09	11/25/09	JWG0903787	
1,3-Dichlorobenzene	ND	U	55	7.7	10	11/12/09	11/25/09	JWG0903787	
1,4-Dichlorobenzene	ND	U	55	14	10	11/12/09	11/25/09	JWG0903787	
1,2-Dichlorobenzene	ND	U	55	8.1	10	11/12/09	11/25/09	JWG0903787	
Bis(2-chloroisopropyl) Ether	ND	U	55	6.2	10	11/12/09	11/25/09	JWG0903787	
Benzyl alcohol	ND	U	55	7.5	10	11/12/09	11/25/09	JWG0903787	
2-Methylphenol	ND	U	55	7.0	10	11/12/09	11/25/09	JWG0903787	
Acetophenone	ND	U	110	15	10	11/12/09	11/25/09	JWG0903787	
N-Nitrosopyrrolidine	ND	U	55	7.7	10	11/12/09	11/25/09	JWG0903787	
Hexachloroethane	ND	U	55	10	10	11/12/09	11/25/09	JWG0903787	
N-Nitrosodi-n-propylamine	ND	U	55	7.4	10	11/12/09	11/25/09	JWG0903787	
o-Toluidine	ND	U	55	9.7	10	11/12/09	11/25/09	JWG0903787	
<b>4-Methylphenol†</b>	<b>3200</b>		280	42	50	11/12/09	11/25/09	JWG0903787	
Nitrobenzene	ND	U	55	8.0	10	11/12/09	11/25/09	JWG0903787	
N-Nitrosopiperidine	ND	U	55	18	10	11/12/09	11/25/09	JWG0903787	
Isophorone	ND	U	55	8.7	10	11/12/09	11/25/09	JWG0903787	
2-Nitrophenol	ND	U	220	6.6	10	11/12/09	11/25/09	JWG0903787	
2,4-Dimethylphenol	ND	U	55	8.6	10	11/12/09	11/25/09	JWG0903787	
O,O,O-Triethyl Phosphorothioate	ND	U	220	5.7	10	11/12/09	11/25/09	JWG0903787	
<b>bis(2-Chloroethoxy)methane</b>	<b>9.9</b>	<b>I</b>	55	9.7	10	11/12/09	11/25/09	JWG0903787	
2,4-Dichlorophenol	ND	U	55	5.5	10	11/12/09	11/25/09	JWG0903787	
1,2,4-Trichlorobenzene	ND	U	55	8.5	10	11/12/09	11/25/09	JWG0903787	
Naphthalene	ND	U	55	8.6	10	11/12/09	11/25/09	JWG0903787	
2,6-Dichlorophenol	ND	U	110	7.9	10	11/12/09	11/25/09	JWG0903787	
Hexachloropropene	ND	U	55	21	10	11/12/09	11/25/09	JWG0903787	
4-Chloroaniline	ND	U	55	5.8	10	11/12/09	11/25/09	JWG0903787	
Hexachlorobutadiene	ND	U	55	6.7	10	11/12/09	11/25/09	JWG0903787	

Comments:

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-6  
 Lab Code: J0905605-006  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodi-n-butylamine	ND	U	55	7.3	10	11/12/09	11/25/09	JWG0903787	
p-Phenylenediamine	ND	U	220	12	10	11/12/09	11/25/09	JWG0903787	
4-Chloro-3-methylphenol	ND	U	55	8.2	10	11/12/09	11/25/09	JWG0903787	
2-Methylnaphthalene	ND	U	55	8.1	10	11/12/09	11/25/09	JWG0903787	
Hexachlorocyclopentadiene	ND	U	55	4.5	10	11/12/09	11/25/09	JWG0903787	
1,2,4,5-Tetrachlorobenzene	ND	U	55	6.0	10	11/12/09	11/25/09	JWG0903787	
Safrole	ND	U	55	7.8	10	11/12/09	11/25/09	JWG0903787	
2,4,6-Trichlorophenol	ND	U	55	8.0	10	11/12/09	11/25/09	JWG0903787	
2,4,5-Trichlorophenol	ND	U	55	7.1	10	11/12/09	11/25/09	JWG0903787	
Isosafrole	ND	U	55	8.2	10	11/12/09	11/25/09	JWG0903787	
2-Chloronaphthalene	ND	U	55	7.8	10	11/12/09	11/25/09	JWG0903787	
2-Nitroaniline	ND	U	55	6.0	10	11/12/09	11/25/09	JWG0903787	
1,4-Naphthoquinone	ND	U	110	16	10	11/12/09	11/25/09	JWG0903787	
1,3-Dinitrobenzene	ND	U	110	17	10	11/12/09	11/25/09	JWG0903787	
Acenaphthylene	ND	U	55	6.4	10	11/12/09	11/25/09	JWG0903787	
Dimethyl Phthalate	ND	U	55	8.3	10	11/12/09	11/25/09	JWG0903787	
2,6-Dinitrotoluene	ND	U	55	9.1	10	11/12/09	11/25/09	JWG0903787	
Acenaphthene	ND	U	55	11	10	11/12/09	11/25/09	JWG0903787	
3-Nitroaniline	ND	U	55	8.2	10	11/12/09	11/25/09	JWG0903787	
2,4-Dinitrophenol	ND	U	220	5.9	10	11/12/09	11/25/09	JWG0903787	
Pentachlorobenzene	ND	U	55	27	10	11/12/09	11/25/09	JWG0903787	
Dibenzofuran	ND	U	55	8.6	10	11/12/09	11/25/09	JWG0903787	
4-Nitrophenol	ND	U	220	11	10	11/12/09	11/25/09	JWG0903787	
2,4-Dinitrotoluene	ND	U	55	45	10	11/12/09	11/25/09	JWG0903787	
2-Naphthylamine	ND	U	55	12	10	11/12/09	11/25/09	JWG0903787	
2,3,4,6-Tetrachlorophenol	ND	U	55	14	10	11/12/09	11/25/09	JWG0903787	
1-Naphthylamine	ND	U	55	12	10	11/12/09	11/25/09	JWG0903787	
Fluorene	ND	U	55	9.6	10	11/12/09	11/25/09	JWG0903787	
4-Chlorophenyl Phenyl Ether	ND	U	55	6.7	10	11/12/09	11/25/09	JWG0903787	
Thionazin	ND	U	110	8.9	10	11/12/09	11/25/09	JWG0903787	
Diethyl Phthalate	ND	U	55	45	10	11/12/09	11/25/09	JWG0903787	
5-Nitro-o-toluidine	ND	U	55	11	10	11/12/09	11/25/09	JWG0903787	
4-Nitroaniline	ND	U	55	10	10	11/12/09	11/25/09	JWG0903787	
2-Methyl-4,6-dinitrophenol	ND	U	220	7.0	10	11/12/09	11/25/09	JWG0903787	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-6  
 Lab Code: J0905605-006  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodiphenylamine†	ND	U	55	11	10	11/12/09	11/25/09	JWG0903787	
Diallate	ND	U	55	11	10	11/12/09	11/25/09	JWG0903787	
Phorate	ND	U	55	9.6	10	11/12/09	11/25/09	JWG0903787	
1,3,5-Trinitrobenzene	ND	U	55	12	10	11/12/09	11/25/09	JWG0903787	
4-Bromophenyl Phenyl Ether	ND	U	55	7.3	10	11/12/09	11/25/09	JWG0903787	
Phenacetin	ND	U	55	9.7	10	11/12/09	11/25/09	JWG0903787	
Hexachlorobenzene	ND	U	55	6.9	10	11/12/09	11/25/09	JWG0903787	
Dimethoate	ND	U	55	9.8	10	11/12/09	11/25/09	JWG0903787	
4-Aminobiphenyl	ND	U	55	11	10	11/12/09	11/25/09	JWG0903787	
Pentachlorophenol	ND	U	220	7.3	10	11/12/09	11/25/09	JWG0903787	
Pentachloronitrobenzene	ND	U	55	17	10	11/12/09	11/25/09	JWG0903787	
Pronamide	ND	U	220	9.3	10	11/12/09	11/25/09	JWG0903787	
Phenanthrene	ND	U	55	7.7	10	11/12/09	11/25/09	JWG0903787	
Disulfoton	ND	U	55	5.7	10	11/12/09	11/25/09	JWG0903787	
Dinoseb	ND	U	55	6.7	10	11/12/09	11/25/09	JWG0903787	
Anthracene	ND	U	55	7.8	10	11/12/09	11/25/09	JWG0903787	
Methyl Parathion	ND	U	110	12	10	11/12/09	11/25/09	JWG0903787	
Di-n-butyl Phthalate	ND	U	55	11	10	11/12/09	11/25/09	JWG0903787	
Parathion	ND	U	220	11	10	11/12/09	11/25/09	JWG0903787	
Methapyrilene	ND	U	55	17	10	11/12/09	11/25/09	JWG0903787	
Isodrin	ND	U	110	7.8	10	11/12/09	11/25/09	JWG0903787	
Fluoranthene	ND	U	55	7.2	10	11/12/09	11/25/09	JWG0903787	
Pyrene	ND	U	55	9.2	10	11/12/09	11/25/09	JWG0903787	
Chlorobenzilate	ND	U	110	9.2	10	11/12/09	11/25/09	JWG0903787	
3,3'-Dimethylbenzidine	ND	U	220	26	10	11/12/09	11/25/09	JWG0903787	
Famphur	ND	U	110	7.5	10	11/12/09	11/25/09	JWG0903787	
p-Dimethylaminoazobenzene	ND	U	55	9.7	10	11/12/09	11/25/09	JWG0903787	
Butyl Benzyl Phthalate	ND	U	110	12	10	11/12/09	11/25/09	JWG0903787	
2-Acetylaminofluorene	ND	U	55	9.8	10	11/12/09	11/25/09	JWG0903787	
Kepone	ND	UJ	550	46	10	11/12/09	11/25/09	JWG0903787	J(3)
3,3'-Dichlorobenzidine	ND	U	220	9.7	10	11/12/09	11/25/09	JWG0903787	
Benz(a)anthracene	ND	U	55	9.4	10	11/12/09	11/25/09	JWG0903787	
Chrysene	ND	U	55	9.5	10	11/12/09	11/25/09	JWG0903787	
Bis(2-ethylhexyl) Phthalate	ND	U	55	11	10	11/12/09	11/25/09	JWG0903787	

Comments:

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: L-6  
 Lab Code: J0905605-006  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Di-n-octyl Phthalate	ND	U	55	11	10	11/12/09	11/25/09	JWG0903787	
Benzo(b)fluoranthene	ND	U	55	9.5	10	11/12/09	11/25/09	JWG0903787	
Benzo(k)fluoranthene	ND	U	55	5.9	10	11/12/09	11/25/09	JWG0903787	
7,12-Dimethylbenz(a)anthracene	ND	U	55	9.5	10	11/12/09	11/25/09	JWG0903787	
Benzo(a)pyrene	ND	U	55	6.9	10	11/12/09	11/25/09	JWG0903787	
3-Methylcholanthrene	ND	U	55	11	10	11/12/09	11/25/09	JWG0903787	
Indeno(1,2,3-cd)pyrene	ND	U	55	6.0	10	11/12/09	11/25/09	JWG0903787	
Dibenz(a,h)anthracene	ND	U	55	6.8	10	11/12/09	11/25/09	JWG0903787	
Benzo(g,h,i)perylene	ND	U	55	9.9	10	11/12/09	11/25/09	JWG0903787	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	31	10-77	11/25/09	Acceptable
Phenol-d6	29	10-51	11/25/09	Acceptable
Nitrobenzene-d5	62	32-106	11/25/09	Acceptable
2-Fluorobiphenyl	52	30-102	11/25/09	Acceptable
2,4,6-Tribromophenol	50	30-143	11/25/09	Acceptable
Terphenyl-d14	34	23-165	11/25/09	Acceptable

## † Analyte Comments

4-Methylphenol This analyte cannot be separated from 3-Methylphenol.  
 N-Nitrosodiphenylamine This analyte can not be separated from Diphenylamine.

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

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: NA  
 Date Received: NA

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: Method Blank  
 Lab Code: JWG0903787-4  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	5.0	0.73	1	11/12/09	11/17/09	JWG0903787	
N-Nitrosomethylethylamine	ND	U	5.0	0.82	1	11/12/09	11/17/09	JWG0903787	
Methyl Methanesulfonate	ND	U	5.0	0.56	1	11/12/09	11/17/09	JWG0903787	
N-Nitrosodiethylamine	ND	U	5.0	0.63	1	11/12/09	11/17/09	JWG0903787	
Ethyl Methanesulfonate	ND	U	5.0	0.65	1	11/12/09	11/17/09	JWG0903787	
Phenol	ND	U	5.0	0.42	1	11/12/09	11/17/09	JWG0903787	
Bis(2-chloroethyl) Ether	ND	U	5.0	0.96	1	11/12/09	11/17/09	JWG0903787	
2-Chlorophenol	ND	U	5.0	0.75	1	11/12/09	11/17/09	JWG0903787	
1,3-Dichlorobenzene	ND	U	5.0	0.70	1	11/12/09	11/17/09	JWG0903787	
1,4-Dichlorobenzene	ND	U	5.0	1.2	1	11/12/09	11/17/09	JWG0903787	
1,2-Dichlorobenzene	ND	U	5.0	0.74	1	11/12/09	11/17/09	JWG0903787	
Bis(2-chloroisopropyl) Ether	ND	U	5.0	0.57	1	11/12/09	11/17/09	JWG0903787	
<b>Benzyl alcohol</b>	<b>0.99</b>	<b>I</b>	5.0	0.69	1	11/12/09	11/17/09	JWG0903787	
2-Methylphenol	ND	U	5.0	0.64	1	11/12/09	11/17/09	JWG0903787	
Acetophenone	ND	U	10	1.3	1	11/12/09	11/17/09	JWG0903787	
N-Nitrosopyrrolidine	ND	U	5.0	0.70	1	11/12/09	11/17/09	JWG0903787	
Hexachloroethane	ND	U	5.0	0.92	1	11/12/09	11/17/09	JWG0903787	
N-Nitrosodi-n-propylamine	ND	U	5.0	0.68	1	11/12/09	11/17/09	JWG0903787	
o-Toluidine	ND	U	5.0	0.89	1	11/12/09	11/17/09	JWG0903787	
4-Methylphenol†	ND	U	5.0	0.77	1	11/12/09	11/17/09	JWG0903787	
Nitrobenzene	ND	U	5.0	0.73	1	11/12/09	11/17/09	JWG0903787	
N-Nitrosopiperidine	ND	U	5.0	1.6	1	11/12/09	11/17/09	JWG0903787	
Isophorone	ND	U	5.0	0.80	1	11/12/09	11/17/09	JWG0903787	
2-Nitrophenol	ND	U	20	0.60	1	11/12/09	11/17/09	JWG0903787	
2,4-Dimethylphenol	ND	U	5.0	0.79	1	11/12/09	11/17/09	JWG0903787	
O,O,O-Triethyl Phosphorothioate	ND	U	20	0.52	1	11/12/09	11/17/09	JWG0903787	
bis(2-Chloroethoxy)methane	ND	U	5.0	0.89	1	11/12/09	11/17/09	JWG0903787	
2,4-Dichlorophenol	ND	U	5.0	0.50	1	11/12/09	11/17/09	JWG0903787	
1,2,4-Trichlorobenzene	ND	U	5.0	0.78	1	11/12/09	11/17/09	JWG0903787	
Naphthalene	ND	U	5.0	0.79	1	11/12/09	11/17/09	JWG0903787	
2,6-Dichlorophenol	ND	U	10	0.72	1	11/12/09	11/17/09	JWG0903787	
Hexachloropropene	ND	U	5.0	1.9	1	11/12/09	11/17/09	JWG0903787	
4-Chloroaniline	ND	U	5.0	0.53	1	11/12/09	11/17/09	JWG0903787	
Hexachlorobutadiene	ND	U	5.0	0.61	1	11/12/09	11/17/09	JWG0903787	

Comments:

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: NA  
 Date Received: NA

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: Method Blank  
 Lab Code: JWG0903787-4  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodi-n-butylamine	ND	U	5.0	0.67	1	11/12/09	11/17/09	JWG0903787	
p-Phenylenediamine	ND	U	20	1.1	1	11/12/09	11/17/09	JWG0903787	
4-Chloro-3-methylphenol	ND	U	5.0	0.75	1	11/12/09	11/17/09	JWG0903787	
2-Methylnaphthalene	ND	U	5.0	0.74	1	11/12/09	11/17/09	JWG0903787	
Hexachlorocyclopentadiene	ND	U	5.0	0.41	1	11/12/09	11/17/09	JWG0903787	
1,2,4,5-Tetrachlorobenzene	ND	U	5.0	0.55	1	11/12/09	11/17/09	JWG0903787	
Safrole	ND	U	5.0	0.71	1	11/12/09	11/17/09	JWG0903787	
2,4,6-Trichlorophenol	ND	U	5.0	0.73	1	11/12/09	11/17/09	JWG0903787	
2,4,5-Trichlorophenol	ND	U	5.0	0.65	1	11/12/09	11/17/09	JWG0903787	
Isosafrole	ND	U	5.0	0.75	1	11/12/09	11/17/09	JWG0903787	
2-Chloronaphthalene	ND	U	5.0	0.71	1	11/12/09	11/17/09	JWG0903787	
2-Nitroaniline	ND	U	5.0	0.55	1	11/12/09	11/17/09	JWG0903787	
1,4-Naphthoquinone	ND	U	10	1.4	1	11/12/09	11/17/09	JWG0903787	
1,3-Dinitrobenzene	ND	U	10	1.5	1	11/12/09	11/17/09	JWG0903787	
Acenaphthylene	ND	U	5.0	0.58	1	11/12/09	11/17/09	JWG0903787	
Dimethyl Phthalate	ND	U	5.0	0.76	1	11/12/09	11/17/09	JWG0903787	
2,6-Dinitrotoluene	ND	U	5.0	0.83	1	11/12/09	11/17/09	JWG0903787	
Acenaphthene	ND	U	5.0	0.99	1	11/12/09	11/17/09	JWG0903787	
3-Nitroaniline	ND	U	5.0	0.75	1	11/12/09	11/17/09	JWG0903787	
2,4-Dinitrophenol	ND	U	20	0.54	1	11/12/09	11/17/09	JWG0903787	
Pentachlorobenzene	ND	U	5.0	2.4	1	11/12/09	11/17/09	JWG0903787	
Dibenzofuran	ND	U	5.0	0.79	1	11/12/09	11/17/09	JWG0903787	
4-Nitrophenol	ND	U	20	0.93	1	11/12/09	11/17/09	JWG0903787	
2,4-Dinitrotoluene	ND	U	5.0	4.1	1	11/12/09	11/17/09	JWG0903787	
2-Naphthylamine	ND	U	5.0	1.1	1	11/12/09	11/17/09	JWG0903787	
2,3,4,6-Tetrachlorophenol	ND	U	5.0	1.2	1	11/12/09	11/17/09	JWG0903787	
1-Naphthylamine	ND	U	5.0	1.1	1	11/12/09	11/17/09	JWG0903787	
Fluorene	ND	U	5.0	0.88	1	11/12/09	11/17/09	JWG0903787	
4-Chlorophenyl Phenyl Ether	ND	U	5.0	0.61	1	11/12/09	11/17/09	JWG0903787	
Thionazin	ND	U	10	0.81	1	11/12/09	11/17/09	JWG0903787	
Diethyl Phthalate	ND	U	5.0	4.1	1	11/12/09	11/17/09	JWG0903787	
5-Nitro-o-toluidine	ND	U	5.0	1.0	1	11/12/09	11/17/09	JWG0903787	
4-Nitroaniline	ND	U	5.0	0.92	1	11/12/09	11/17/09	JWG0903787	
2-Methyl-4,6-dinitrophenol	ND	U	20	0.64	1	11/12/09	11/17/09	JWG0903787	

Comments:



## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: NA  
 Date Received: NA

## Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Sample Name: Method Blank  
 Lab Code: JWG0903787-4  
 Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodiphenylamine†	ND	U	5.0	0.96	1	11/12/09	11/17/09	JWG0903787	
Diallate	ND	U	5.0	1.0	1	11/12/09	11/17/09	JWG0903787	
Phorate	ND	U	5.0	0.88	1	11/12/09	11/17/09	JWG0903787	
1,3,5-Trinitrobenzene	ND	U	5.0	1.1	1	11/12/09	11/17/09	JWG0903787	
4-Bromophenyl Phenyl Ether	ND	U	5.0	0.67	1	11/12/09	11/17/09	JWG0903787	
Phenacetin	ND	U	5.0	0.89	1	11/12/09	11/17/09	JWG0903787	
Hexachlorobenzene	ND	U	5.0	0.63	1	11/12/09	11/17/09	JWG0903787	
Dimethoate	ND	U	5.0	0.90	1	11/12/09	11/17/09	JWG0903787	
4-Aminobiphenyl	ND	U	5.0	0.99	1	11/12/09	11/17/09	JWG0903787	
Pentachlorophenol	ND	U	20	0.67	1	11/12/09	11/17/09	JWG0903787	
Pentachloronitrobenzene	ND	U	5.0	1.5	1	11/12/09	11/17/09	JWG0903787	
Pronamide	ND	U	20	0.85	1	11/12/09	11/17/09	JWG0903787	
Phenanthrene	ND	U	5.0	0.70	1	11/12/09	11/17/09	JWG0903787	
Disulfoton	ND	U	5.0	0.52	1	11/12/09	11/17/09	JWG0903787	
Dinoseb	ND	U	5.0	0.61	1	11/12/09	11/17/09	JWG0903787	
Anthracene	ND	U	5.0	0.71	1	11/12/09	11/17/09	JWG0903787	
Methyl Parathion	ND	U	10	1.1	1	11/12/09	11/17/09	JWG0903787	
Di-n-butyl Phthalate	ND	U	5.0	0.97	1	11/12/09	11/17/09	JWG0903787	
Parathion	ND	U	20	0.93	1	11/12/09	11/17/09	JWG0903787	
Methapyrilene	ND	U	5.0	1.5	1	11/12/09	11/17/09	JWG0903787	
Isodrin	ND	U	10	0.71	1	11/12/09	11/17/09	JWG0903787	
Fluoranthene	ND	U	5.0	0.66	1	11/12/09	11/17/09	JWG0903787	
Pyrene	ND	U	5.0	0.84	1	11/12/09	11/17/09	JWG0903787	
Chlorobenzilate	ND	U	10	0.84	1	11/12/09	11/17/09	JWG0903787	
3,3'-Dimethylbenzidine	ND	UJ	20	2.3	1	11/12/09	11/17/09	JWG0903787	J(3)
Famphur	ND	U	10	0.69	1	11/12/09	11/17/09	JWG0903787	
p-Dimethylaminoazobenzene	ND	U	5.0	0.89	1	11/12/09	11/17/09	JWG0903787	
Butyl Benzyl Phthalate	ND	U	10	1.1	1	11/12/09	11/17/09	JWG0903787	
2-Acetylaminofluorene	ND	U	5.0	0.90	1	11/12/09	11/17/09	JWG0903787	
Kepone	ND	UJ	50	4.2	1	11/12/09	11/17/09	JWG0903787	J(3)
3,3'-Dichlorobenzidine	ND	U	20	0.89	1	11/12/09	11/17/09	JWG0903787	
Benz(a)anthracene	ND	U	5.0	0.86	1	11/12/09	11/17/09	JWG0903787	
Chrysene	ND	U	5.0	0.87	1	11/12/09	11/17/09	JWG0903787	
Bis(2-ethylhexyl) Phthalate	ND	U	5.0	0.98	1	11/12/09	11/17/09	JWG0903787	

Comments:

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** NA  
**Date Received:** NA

Semi-Volatile Organic Compounds by GC/MS (Appendix II)

**Sample Name:** Method Blank  
**Lab Code:** JWG0903787-4  
**Extraction Method:** EPA 3510C  
**Analysis Method:** 8270C

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Di-n-octyl Phthalate	ND	U	5.0	0.95	1	11/12/09	11/17/09	JWG0903787	
Benzo(b)fluoranthene	ND	U	5.0	0.87	1	11/12/09	11/17/09	JWG0903787	
Benzo(k)fluoranthene	ND	U	5.0	0.54	1	11/12/09	11/17/09	JWG0903787	
7,12-Dimethylbenz(a)anthracene	ND	U	5.0	0.87	1	11/12/09	11/17/09	JWG0903787	
Benzo(a)pyrene	ND	U	5.0	0.63	1	11/12/09	11/17/09	JWG0903787	
3-Methylcholanthrene	ND	U	5.0	0.97	1	11/12/09	11/17/09	JWG0903787	
Indeno(1,2,3-cd)pyrene	ND	U	5.0	0.55	1	11/12/09	11/17/09	JWG0903787	
Dibenz(a,h)anthracene	ND	U	5.0	0.62	1	11/12/09	11/17/09	JWG0903787	
Benzo(g,h,i)perylene	ND	U	5.0	0.91	1	11/12/09	11/17/09	JWG0903787	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	34	10-77	11/17/09	Acceptable
Phenol-d6	19	10-51	11/17/09	Acceptable
Nitrobenzene-d5	56	32-106	11/17/09	Acceptable
2-Fluorobiphenyl	63	30-102	11/17/09	Acceptable
2,4,6-Tribromophenol	86	30-143	11/17/09	Acceptable
Terphenyl-d14	86	23-165	11/17/09	Acceptable

† Analyte Comments

4-Methylphenol This analyte cannot be separated from 3-Methylphenol.  
 N-Nitrosodiphenylamine This analyte can not be separated from Diphenylamine.

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**Organochlorine Pesticides by GC-ECD**

**Sample Name:** L-1  
**Lab Code:** J0905605-001  
**Extraction Method:** EPA 3510C  
**Analysis Method:** 8081A

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	0.022	0.0086	1	11/16/09	11/18/09	JWG0903856	
gamma-BHC (Lindane)	ND	U	0.022	0.0090	1	11/16/09	11/18/09	JWG0903856	
beta-BHC	ND	U	0.022	0.0093	1	11/16/09	11/18/09	JWG0903856	
delta-BHC	ND	U	0.022	0.012	1	11/16/09	11/18/09	JWG0903856	
Heptachlor	ND	U	0.022	0.011	1	11/16/09	11/18/09	JWG0903856	
Aldrin	ND	U	0.022	0.0074	1	11/16/09	11/18/09	JWG0903856	
Heptachlor Epoxide	ND	U	0.022	0.0086	1	11/16/09	11/18/09	JWG0903856	
gamma-Chlordane	ND	U	0.022	0.0082	1	11/16/09	11/18/09	JWG0903856	
alpha-Chlordane	ND	U	0.022	0.0072	1	11/16/09	11/18/09	JWG0903856	
4,4'-DDE	ND	U	0.022	0.0092	1	11/16/09	11/18/09	JWG0903856	
Endosulfan I	ND	U	0.022	0.0097	1	11/16/09	11/18/09	JWG0903856	
Dieldrin	ND	U	0.022	0.0080	1	11/16/09	11/18/09	JWG0903856	
Endrin	ND	U	0.022	0.0098	1	11/16/09	11/18/09	JWG0903856	
4,4'-DDD	ND	U	0.022	0.0086	1	11/16/09	11/18/09	JWG0903856	
Endosulfan II	ND	U	0.022	0.0070	1	11/16/09	11/18/09	JWG0903856	
4,4'-DDT	ND	U	0.022	0.015	1	11/16/09	11/18/09	JWG0903856	
Endrin Aldehyde	ND	U	0.022	0.0093	1	11/16/09	11/18/09	JWG0903856	
Methoxychlor	ND	U	0.044	0.012	1	11/16/09	11/18/09	JWG0903856	
Endosulfan Sulfate	ND	U	0.022	0.010	1	11/16/09	11/18/09	JWG0903856	
Endrin Ketone	ND	U	0.022	0.0058	1	11/16/09	11/18/09	JWG0903856	
Toxaphene	ND	U	0.55	0.55	1	11/16/09	11/18/09	JWG0903856	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	28	32-92	11/18/09	Outside Control Limits
Decachlorobiphenyl	8	13-104	11/18/09	Outside Control Limits

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**Organochlorine Pesticides by GC-ECD**

**Sample Name:** L-2  
**Lab Code:** J0905605-002  
**Extraction Method:** EPA 3510C  
**Analysis Method:** 8081A

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	0.022	0.0085	1	11/16/09	11/18/09	JWG0903856	
gamma-BHC (Lindane)	ND	U	0.022	0.0088	1	11/16/09	11/18/09	JWG0903856	
beta-BHC	ND	U	0.022	0.0091	1	11/16/09	11/18/09	JWG0903856	
delta-BHC	ND	U	0.022	0.012	1	11/16/09	11/18/09	JWG0903856	
Heptachlor	ND	U	0.022	0.011	1	11/16/09	11/18/09	JWG0903856	
Aldrin	ND	U	0.022	0.0073	1	11/16/09	11/18/09	JWG0903856	
Heptachlor Epoxide	ND	U	0.022	0.0085	1	11/16/09	11/18/09	JWG0903856	
gamma-Chlordane	ND	U	0.022	0.0080	1	11/16/09	11/18/09	JWG0903856	
alpha-Chlordane	ND	U	0.022	0.0071	1	11/16/09	11/18/09	JWG0903856	
4,4'-DDE	ND	U	0.022	0.0090	1	11/16/09	11/18/09	JWG0903856	
Endosulfan I	ND	U	0.022	0.0095	1	11/16/09	11/18/09	JWG0903856	
Dieldrin	ND	U	0.022	0.0078	1	11/16/09	11/18/09	JWG0903856	
Endrin	ND	U	0.022	0.0096	1	11/16/09	11/18/09	JWG0903856	
4,4'-DDD	ND	U	0.022	0.0085	1	11/16/09	11/18/09	JWG0903856	
Endosulfan II	ND	U	0.022	0.0069	1	11/16/09	11/18/09	JWG0903856	
4,4'-DDT	ND	U	0.022	0.014	1	11/16/09	11/18/09	JWG0903856	
Endrin Aldehyde	ND	U	0.022	0.0091	1	11/16/09	11/18/09	JWG0903856	
Methoxychlor	ND	U	0.043	0.012	1	11/16/09	11/18/09	JWG0903856	
Endosulfan Sulfate	ND	U	0.022	0.0098	1	11/16/09	11/18/09	JWG0903856	
Endrin Ketone	ND	U	0.022	0.0057	1	11/16/09	11/18/09	JWG0903856	
Toxaphene	ND	U	0.54	0.54	1	11/16/09	11/18/09	JWG0903856	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	25	32-92	11/18/09	Outside Control Limits
Decachlorobiphenyl	8	13-104	11/18/09	Outside Control Limits

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**Organochlorine Pesticides by GC-ECD**

**Sample Name:** L-3  
**Lab Code:** J0905605-003  
**Extraction Method:** EPA 3510C  
**Analysis Method:** 8081A

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	0.023	0.0090	1	11/16/09	11/18/09	JWG0903856	
gamma-BHC (Lindane)	ND	U	0.023	0.0094	1	11/16/09	11/18/09	JWG0903856	
beta-BHC	ND	U	0.023	0.0097	1	11/16/09	11/18/09	JWG0903856	
delta-BHC	ND	U	0.023	0.013	1	11/16/09	11/18/09	JWG0903856	
Heptachlor	ND	U	0.023	0.011	1	11/16/09	11/18/09	JWG0903856	
Aldrin	ND	U	0.023	0.0078	1	11/16/09	11/18/09	JWG0903856	
Heptachlor Epoxide	ND	U	0.023	0.0090	1	11/16/09	11/18/09	JWG0903856	
gamma-Chlordane	ND	U	0.023	0.0086	1	11/16/09	11/18/09	JWG0903856	
alpha-Chlordane	ND	U	0.023	0.0075	1	11/16/09	11/18/09	JWG0903856	
4,4'-DDE	ND	U	0.023	0.0096	1	11/16/09	11/18/09	JWG0903856	
Endosulfan I	ND	U	0.023	0.011	1	11/16/09	11/18/09	JWG0903856	
Dieldrin	ND	U	0.023	0.0083	1	11/16/09	11/18/09	JWG0903856	
Endrin	ND	U	0.023	0.011	1	11/16/09	11/18/09	JWG0903856	
4,4'-DDD	ND	U	0.023	0.0090	1	11/16/09	11/18/09	JWG0903856	
Endosulfan II	ND	U	0.023	0.0073	1	11/16/09	11/18/09	JWG0903856	
4,4'-DDT	ND	U	0.023	0.015	1	11/16/09	11/18/09	JWG0903856	
Endrin Aldehyde	ND	U	0.023	0.0097	1	11/16/09	11/18/09	JWG0903856	
Methoxychlor	ND	U	0.046	0.013	1	11/16/09	11/18/09	JWG0903856	
Endosulfan Sulfate	ND	U	0.023	0.011	1	11/16/09	11/18/09	JWG0903856	
Endrin Ketone	ND	U	0.023	0.0061	1	11/16/09	11/18/09	JWG0903856	
Toxaphene	ND	U	0.57	0.57	1	11/16/09	11/18/09	JWG0903856	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	30	32-92	11/18/09	Outside Control Limits
Decachlorobiphenyl	15	13-104	11/18/09	Acceptable

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**Organochlorine Pesticides by GC-ECD**

**Sample Name:** L-4  
**Lab Code:** J0905605-004  
**Extraction Method:** EPA 3510C  
**Analysis Method:** 8081A

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	0.023	0.0088	1	11/16/09	11/18/09	JWG0903856	
gamma-BHC (Lindane)	ND	U	0.023	0.0092	1	11/16/09	11/18/09	JWG0903856	
beta-BHC	ND	U	0.023	0.0095	1	11/16/09	11/18/09	JWG0903856	
delta-BHC	ND	U	0.023	0.013	1	11/16/09	11/18/09	JWG0903856	
Heptachlor	ND	U	0.023	0.011	1	11/16/09	11/18/09	JWG0903856	
Aldrin	ND	U	0.023	0.0076	1	11/16/09	11/18/09	JWG0903856	
Heptachlor Epoxide	ND	U	0.023	0.0088	1	11/16/09	11/18/09	JWG0903856	
gamma-Chlordane	ND	U	0.023	0.0084	1	11/16/09	11/18/09	JWG0903856	
alpha-Chlordane	ND	U	0.023	0.0074	1	11/16/09	11/18/09	JWG0903856	
4,4'-DDE	ND	U	0.023	0.0094	1	11/16/09	11/18/09	JWG0903856	
Endosulfan I	ND	U	0.023	0.0099	1	11/16/09	11/18/09	JWG0903856	
Dieldrin	ND	U	0.023	0.0082	1	11/16/09	11/18/09	JWG0903856	
Endrin	ND	U	0.023	0.010	1	11/16/09	11/18/09	JWG0903856	
4,4'-DDD	ND	U	0.023	0.0088	1	11/16/09	11/18/09	JWG0903856	
Endosulfan II	ND	U	0.023	0.0072	1	11/16/09	11/18/09	JWG0903856	
4,4'-DDT	ND	U	0.023	0.015	1	11/16/09	11/18/09	JWG0903856	
Endrin Aldehyde	ND	U	0.023	0.0095	1	11/16/09	11/18/09	JWG0903856	
Methoxychlor	ND	U	0.045	0.013	1	11/16/09	11/18/09	JWG0903856	
Endosulfan Sulfate	ND	U	0.023	0.011	1	11/16/09	11/18/09	JWG0903856	
Endrin Ketone	ND	U	0.023	0.0059	1	11/16/09	11/18/09	JWG0903856	
Toxaphene	ND	U	0.56	0.56	1	11/16/09	11/18/09	JWG0903856	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	36	32-92	11/18/09	Acceptable
Decachlorobiphenyl	7	13-104	11/18/09	Outside Control Limits

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**Organochlorine Pesticides by GC-ECD**

**Sample Name:** L-5  
**Lab Code:** J0905605-005  
**Extraction Method:** EPA 3510C  
**Analysis Method:** 8081A

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	0.023	0.0088	1	11/16/09	11/18/09	JWG0903856	
gamma-BHC (Lindane)	ND	U	0.023	0.0092	1	11/16/09	11/18/09	JWG0903856	
beta-BHC	ND	U	0.023	0.0095	1	11/16/09	11/18/09	JWG0903856	
delta-BHC	ND	U	0.023	0.013	1	11/16/09	11/18/09	JWG0903856	
Heptachlor	ND	U	0.023	0.011	1	11/16/09	11/18/09	JWG0903856	
Aldrin	ND	U	0.023	0.0076	1	11/16/09	11/18/09	JWG0903856	
Heptachlor Epoxide	ND	U	0.023	0.0088	1	11/16/09	11/18/09	JWG0903856	
gamma-Chlordane	ND	U	0.023	0.0084	1	11/16/09	11/18/09	JWG0903856	
alpha-Chlordane	ND	U	0.023	0.0074	1	11/16/09	11/18/09	JWG0903856	
4,4'-DDE	ND	U	0.023	0.0094	1	11/16/09	11/18/09	JWG0903856	
Endosulfan I	ND	U	0.023	0.0099	1	11/16/09	11/18/09	JWG0903856	
Dieldrin	ND	U	0.023	0.0082	1	11/16/09	11/18/09	JWG0903856	
Endrin	ND	U	0.023	0.010	1	11/16/09	11/18/09	JWG0903856	
4,4'-DDD	ND	U	0.023	0.0088	1	11/16/09	11/18/09	JWG0903856	
Endosulfan II	ND	U	0.023	0.0072	1	11/16/09	11/18/09	JWG0903856	
4,4'-DDT	ND	U	0.023	0.015	1	11/16/09	11/18/09	JWG0903856	
Endrin Aldehyde	ND	U	0.023	0.0095	1	11/16/09	11/18/09	JWG0903856	
Methoxychlor	ND	U	0.045	0.013	1	11/16/09	11/18/09	JWG0903856	
Endosulfan Sulfate	ND	U	0.023	0.011	1	11/16/09	11/18/09	JWG0903856	
Endrin Ketone	ND	U	0.023	0.0059	1	11/16/09	11/18/09	JWG0903856	
Toxaphene	ND	U	0.56	0.56	1	11/16/09	11/18/09	JWG0903856	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	25	32-92	11/18/09	Outside Control Limits
Decachlorobiphenyl	10	13-104	11/18/09	Outside Control Limits

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

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

Organochlorine Pesticides by GC-ECD

Sample Name: L-6  
 Lab Code: J0905605-006  
 Extraction Method: EPA 3510C  
 Analysis Method: 8081A

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	0.023	0.0088	1	11/16/09	11/18/09	JWG0903856	
gamma-BHC (Lindane)	ND	U	0.023	0.0092	1	11/16/09	11/18/09	JWG0903856	
beta-BHC	ND	U	0.023	0.0095	1	11/16/09	11/18/09	JWG0903856	
delta-BHC	ND	U	0.023	0.013	1	11/16/09	11/18/09	JWG0903856	
Heptachlor	ND	U	0.023	0.011	1	11/16/09	11/18/09	JWG0903856	
Aldrin	ND	U	0.023	0.0076	1	11/16/09	11/18/09	JWG0903856	
Heptachlor Epoxide	ND	U	0.023	0.0088	1	11/16/09	11/18/09	JWG0903856	
gamma-Chlordane	ND	U	0.023	0.0084	1	11/16/09	11/18/09	JWG0903856	
alpha-Chlordane	ND	U	0.023	0.0074	1	11/16/09	11/18/09	JWG0903856	
4,4'-DDE	ND	U	0.023	0.0094	1	11/16/09	11/18/09	JWG0903856	
Endosulfan I	ND	U	0.023	0.0099	1	11/16/09	11/18/09	JWG0903856	
Dieldrin	ND	U	0.023	0.0082	1	11/16/09	11/18/09	JWG0903856	
Endrin	ND	U	0.023	0.010	1	11/16/09	11/18/09	JWG0903856	
4,4'-DDD	ND	U	0.023	0.0088	1	11/16/09	11/18/09	JWG0903856	
Endosulfan II	ND	U	0.023	0.0072	1	11/16/09	11/18/09	JWG0903856	
4,4'-DDT	ND	U	0.023	0.015	1	11/16/09	11/18/09	JWG0903856	
Endrin Aldehyde	ND	U	0.023	0.0095	1	11/16/09	11/18/09	JWG0903856	
Methoxychlor	ND	U	0.045	0.013	1	11/16/09	11/18/09	JWG0903856	
Endosulfan Sulfate	ND	U	0.023	0.011	1	11/16/09	11/18/09	JWG0903856	
Endrin Ketone	ND	U	0.023	0.0059	1	11/16/09	11/18/09	JWG0903856	
Toxaphene	ND	U	0.56	0.56	1	11/16/09	11/18/09	JWG0903856	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	29	32-92	11/18/09	Outside Control Limits
Decachlorobiphenyl	9	13-104	11/18/09	Outside Control Limits

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



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** NA  
**Date Received:** NA

**Organochlorine Pesticides by GC-ECD**

**Sample Name:** Method Blank  
**Lab Code:** JWG0903856-2  
**Extraction Method:** EPA 3510C  
**Analysis Method:** 8081A

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	0.020	0.0079	1	11/16/09	11/18/09	JWG0903856	
gamma-BHC (Lindane)	ND	U	0.020	0.0082	1	11/16/09	11/18/09	JWG0903856	
beta-BHC	ND	U	0.020	0.0085	1	11/16/09	11/18/09	JWG0903856	
delta-BHC	ND	U	0.020	0.011	1	11/16/09	11/18/09	JWG0903856	
Heptachlor	ND	U	0.020	0.0096	1	11/16/09	11/18/09	JWG0903856	
Aldrin	ND	U	0.020	0.0068	1	11/16/09	11/18/09	JWG0903856	
Heptachlor Epoxide	ND	U	0.020	0.0079	1	11/16/09	11/18/09	JWG0903856	
gamma-Chlordane	ND	U	0.020	0.0075	1	11/16/09	11/18/09	JWG0903856	
alpha-Chlordane	ND	U	0.020	0.0066	1	11/16/09	11/18/09	JWG0903856	
4,4'-DDE	ND	U	0.020	0.0084	1	11/16/09	11/18/09	JWG0903856	
Endosulfan I	ND	U	0.020	0.0089	1	11/16/09	11/18/09	JWG0903856	
Dieldrin	ND	U	0.020	0.0073	1	11/16/09	11/18/09	JWG0903856	
Endrin	ND	U	0.020	0.0090	1	11/16/09	11/18/09	JWG0903856	
4,4'-DDD	ND	U	0.020	0.0079	1	11/16/09	11/18/09	JWG0903856	
Endosulfan II	ND	U	0.020	0.0064	1	11/16/09	11/18/09	JWG0903856	
4,4'-DDT	ND	U	0.020	0.013	1	11/16/09	11/18/09	JWG0903856	
Endrin Aldehyde	ND	U	0.020	0.0085	1	11/16/09	11/18/09	JWG0903856	
Methoxychlor	ND	U	0.040	0.011	1	11/16/09	11/18/09	JWG0903856	
Endosulfan Sulfate	ND	U	0.020	0.0092	1	11/16/09	11/18/09	JWG0903856	
Endrin Ketone	ND	U	0.020	0.0053	1	11/16/09	11/18/09	JWG0903856	
Toxaphene	ND	U	0.50	0.50	1	11/16/09	11/18/09	JWG0903856	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	55	32-92	11/18/09	Acceptable
Decachlorobiphenyl	79	13-104	11/18/09	Acceptable

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

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Collected: 11/10/2009  
 Date Received: 11/11/2009

Polychlorinated Biphenyls (PCB Aroclors) by GC-ECD

Sample Name: L-1  
 Lab Code: J0905605-001  
 Extraction Method: EPA 3510C  
 Analysis Method: 8082

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.55	0.15	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1221	ND	U	0.55	0.24	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1232	ND	U	0.55	0.25	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1242	ND	U	0.55	0.14	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1248	ND	U	0.55	0.29	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1254	ND	U	0.55	0.41	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1260	ND	U	0.55	0.19	1	11/16/09	11/18/09	JWG0903857	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	9	24-120	11/18/09	Outside Control Limits

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**Polychlorinated Biphenyls (PCB Aroclors) by GC-ECD**

**Sample Name:** L-2  
**Lab Code:** J0905605-002  
**Extraction Method:** EPA 3510C  
**Analysis Method:** 8082

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.54	0.14	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1221	ND	U	0.54	0.24	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1232	ND	U	0.54	0.25	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1242	ND	U	0.54	0.13	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1248	ND	U	0.54	0.28	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1254	ND	U	0.54	0.40	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1260	ND	U	0.54	0.19	1	11/16/09	11/18/09	JWG0903857	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	8	24-120	11/18/09	Outside Control Limits

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**Polychlorinated Biphenyls (PCB Aroclors) by GC-ECD**

**Sample Name:** L-3  
**Lab Code:** J0905605-003  
**Extraction Method:** EPA 3510C  
**Analysis Method:** 8082

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.57	0.15	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1221	ND	U	0.57	0.25	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1232	ND	U	0.57	0.27	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1242	ND	U	0.57	0.14	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1248	ND	U	0.57	0.30	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1254	ND	U	0.57	0.43	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1260	ND	U	0.57	0.20	1	11/16/09	11/18/09	JWG0903857	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	14	24-120	11/18/09	Outside Control Limits

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**Polychlorinated Biphenyls (PCB Aroclors) by GC-ECD**

**Sample Name:** L-4  
**Lab Code:** J0905605-004  
**Extraction Method:** EPA 3510C  
**Analysis Method:** 8082

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.56	0.15	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1221	ND	U	0.56	0.25	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1232	ND	U	0.56	0.26	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1242	ND	U	0.56	0.14	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1248	ND	U	0.56	0.29	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1254	ND	U	0.56	0.42	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1260	ND	U	0.56	0.19	1	11/16/09	11/18/09	JWG0903857	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	7	24-120	11/18/09	Outside Control Limits

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**Polychlorinated Biphenyls (PCB Aroclors) by GC-ECD**

**Sample Name:** L-5  
**Lab Code:** J0905605-005  
**Extraction Method:** EPA 3510C  
**Analysis Method:** 8082

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.56	0.15	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1221	ND	U	0.56	0.25	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1232	ND	U	0.56	0.26	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1242	ND	U	0.56	0.14	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1248	ND	U	0.56	0.29	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1254	ND	U	0.56	0.42	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1260	ND	U	0.56	0.19	1	11/16/09	11/18/09	JWG0903857	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	10	24-120	11/18/09	Outside Control Limits

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** 11/10/2009  
**Date Received:** 11/11/2009

**Polychlorinated Biphenyls (PCB Aroclors) by GC-ECD**

**Sample Name:** L-6  
**Lab Code:** J0905605-006  
**Extraction Method:** EPA 3510C  
**Analysis Method:** 8082

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.56	0.15	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1221	ND	U	0.56	0.25	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1232	ND	U	0.56	0.26	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1242	ND	U	0.56	0.14	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1248	ND	U	0.56	0.29	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1254	ND	U	0.56	0.42	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1260	ND	U	0.56	0.19	1	11/16/09	11/18/09	JWG0903857	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	9	24-120	11/18/09	Outside Control Limits

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Collected:** NA  
**Date Received:** NA

**Polychlorinated Biphenyls (PCB Aroclors) by GC-ECD**

**Sample Name:** Method Blank  
**Lab Code:** JWG0903857-2  
**Extraction Method:** EPA 3510C  
**Analysis Method:** 8082

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.50	0.13	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1221	ND	U	0.50	0.22	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1232	ND	U	0.50	0.23	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1242	ND	U	0.50	0.12	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1248	ND	U	0.50	0.26	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1254	ND	U	0.50	0.37	1	11/16/09	11/18/09	JWG0903857	
Aroclor 1260	ND	U	0.50	0.17	1	11/16/09	11/18/09	JWG0903857	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	79	24-120	11/18/09	Acceptable

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



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** L-1  
**Lab Code:** J0905605-001

**Service Request:** J0905605  
**Date Collected:** 11/10/09 1400  
**Date Received:** 11/11/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	30		µg/L	20	4	10	11/17/09	11/23/09 15:35
Arsenic, Total	6020	56.4		µg/L	5.0	2.0	10	11/17/09	11/23/09 15:35
Barium, Total	6020	472		µg/L	20	5	10	11/17/09	11/23/09 15:35
Beryllium, Total	6020	4	I	µg/L	10	2	10	11/17/09	11/23/09 15:35
Cadmium, Total	6020	5.1		µg/L	5.0	1.2	10	11/17/09	11/23/09 15:35
Chromium, Total	6020	483		µg/L	20	8	10	11/17/09	11/23/09 15:35
Cobalt, Total	6020	38		µg/L	10	2	10	11/17/09	11/23/09 15:35
Copper, Total	6020	75		µg/L	20	3	10	11/17/09	11/23/09 15:35
Iron, Total	6010B	7340		µg/L	250	20	5	11/12/09	11/12/09 20:48
Lead, Total	6020	33		µg/L	10	2	10	11/17/09	11/23/09 15:35
Mercury, Total	7470A	ND	U	µg/L	2.5	0.4	1	11/23/09	11/23/09 17:46
Nickel, Total	6020	440		µg/L	20	3	10	11/17/09	11/23/09 15:35
Selenium, Total	6020	72		µg/L	20	8	10	11/17/09	11/23/09 15:35
Silver, Total	6020	ND	U	µg/L	5.0	0.8	10	11/17/09	11/23/09 15:35
Sodium, Total	6010B	2470		mg/L	2.5	0.1	5	11/12/09	11/12/09 20:47
Thallium, Total	6020	ND	U	µg/L	10	2	10	11/17/09	11/23/09 15:35
Vanadium, Total	6020	596		µg/L	50	12	10	11/17/09	11/23/09 15:35
Zinc, Total	6020	ND	U	µg/L	100	40	10	11/17/09	11/23/09 15:35

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** L-2  
**Lab Code:** J0905605-002

**Service Request:** J0905605  
**Date Collected:** 11/10/09 1355  
**Date Received:** 11/11/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	23	µg/L	20	4	10	11/17/09	11/23/09 15:40
Arsenic, Total	6020	71.2	µg/L	5.0	2.0	10	11/17/09	11/23/09 15:40
Barium, Total	6020	341	µg/L	20	5	10	11/17/09	11/23/09 15:40
Beryllium, Total	6020	6 I	µg/L	10	2	10	11/17/09	11/23/09 15:40
Cadmium, Total	6020	ND U	µg/L	5.0	1.2	10	11/17/09	11/23/09 15:40
Chromium, Total	6020	340	µg/L	20	8	10	11/17/09	11/23/09 15:40
Cobalt, Total	6020	9 I	µg/L	10	2	10	11/17/09	11/23/09 15:40
Copper, Total	6020	13 I	µg/L	20	3	10	11/17/09	11/23/09 15:40
Iron, Total	6010B	4230	µg/L	250	20	5	11/12/09	11/12/09 20:58
Lead, Total	6020	10 I	µg/L	10	2	10	11/17/09	11/23/09 15:40
Mercury, Total	7470A	ND U	µg/L	2.5	0.4	1	11/23/09	11/23/09 17:48
Nickel, Total	6020	97	µg/L	20	3	10	11/17/09	11/23/09 15:40
Selenium, Total	6020	28	µg/L	20	8	10	11/17/09	11/23/09 15:40
Silver, Total	6020	ND U	µg/L	5.0	0.8	10	11/17/09	11/23/09 15:40
Sodium, Total	6010B	1220	mg/L	2.5	0.1	5	11/12/09	11/12/09 20:57
Thallium, Total	6020	ND U	µg/L	10	2	10	11/17/09	11/23/09 15:40
Vanadium, Total	6020	514	µg/L	50	12	10	11/17/09	11/23/09 15:40
Zinc, Total	6020	ND U	µg/L	100	40	10	11/17/09	11/23/09 15:40

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** L-3  
**Lab Code:** J0905605-003

**Service Request:** J0905605  
**Date Collected:** 11/10/09 15:00  
**Date Received:** 11/11/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	11 I	µg/L	20	4	10	11/17/09	11/23/09 15:45
Arsenic, Total	6020	27.7	µg/L	5.0	2.0	10	11/17/09	11/23/09 15:45
Barium, Total	6020	180	µg/L	20	5	10	11/17/09	11/23/09 15:45
Beryllium, Total	6020	ND U	µg/L	10	2	10	11/17/09	11/23/09 15:45
Cadmium, Total	6020	ND U	µg/L	5.0	1.2	10	11/17/09	11/23/09 15:45
Chromium, Total	6020	95	µg/L	20	8	10	11/17/09	11/23/09 15:45
Cobalt, Total	6020	16	µg/L	10	2	10	11/17/09	11/23/09 15:45
Copper, Total	6020	8 I	µg/L	20	3	10	11/17/09	11/23/09 15:45
Iron, Total	6010B	3220	µg/L	250	20	5	11/12/09	11/12/09 21:01
Lead, Total	6020	6 I	µg/L	10	2	10	11/17/09	11/23/09 15:45
Mercury, Total	7470A	ND U	µg/L	2.5	0.4	1	11/23/09	11/23/09 17:49
Nickel, Total	6020	134	µg/L	20	3	10	11/17/09	11/23/09 15:45
Selenium, Total	6020	31	µg/L	20	8	10	11/17/09	11/23/09 15:45
Silver, Total	6020	ND U	µg/L	5.0	0.8	10	11/17/09	11/23/09 15:45
Sodium, Total	6010B	1270	mg/L	2.5	0.1	5	11/12/09	11/12/09 21:00
Thallium, Total	6020	ND U	µg/L	10	2	10	11/17/09	11/23/09 15:45
Vanadium, Total	6020	231	µg/L	50	12	10	11/17/09	11/23/09 15:45
Zinc, Total	6020	ND U	µg/L	100	40	10	11/17/09	11/23/09 15:45

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** L-4  
**Lab Code:** J0905605-004

**Service Request:** J0905605  
**Date Collected:** 11/10/09 12:40  
**Date Received:** 11/11/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Aluminum, Total	6020	225000		µg/L	500	80	10	11/17/09	11/23/09 15:50
Antimony, Total	6020	54		µg/L	20	4	10	11/17/09	11/23/09 15:50
Arsenic, Total	6020	71.2		µg/L	5.0	2.0	10	11/17/09	11/23/09 15:50
Barium, Total	6020	332		µg/L	20	5	10	11/17/09	11/23/09 15:50
Beryllium, Total	6020	3	I	µg/L	10	2	10	11/17/09	11/23/09 15:50
Cadmium, Total	6020	4.7	I	µg/L	5.0	1.2	10	11/17/09	11/23/09 15:50
Calcium, Total	6010B	110		mg/L	2.5	0.1	5	11/12/09	11/12/09 21:04
Chromium, Total	6020	700		µg/L	20	8	10	11/17/09	11/23/09 15:50
Cobalt, Total	6020	40		µg/L	10	2	10	11/17/09	11/23/09 15:50
Copper, Total	6020	29		µg/L	20	3	10	11/17/09	11/23/09 15:50
Iron, Total	6010B	1920		µg/L	250	20	5	11/12/09	11/12/09 21:04
Lead, Total	6020	26		µg/L	10	2	10	11/17/09	11/23/09 15:50
Magnesium, Total	6010B	18.4		mg/L	0.50	0.05	5	11/12/09	11/12/09 21:04
Manganese, Total	6020	189		µg/L	10	2	10	11/17/09	11/24/09 13:35
Mercury, Total	7470A	ND	U	µg/L	2.5	0.4	1	11/23/09	11/23/09 17:50
Nickel, Total	6020	219		µg/L	20	3	10	11/17/09	11/23/09 15:50
Potassium, Total	6010B	629		mg/L	10	1	5	11/12/09	11/12/09 21:04
Selenium, Total	6020	153		µg/L	20	8	10	11/17/09	11/23/09 15:50
Silver, Total	6020	ND	U	µg/L	5.0	0.8	10	11/17/09	11/23/09 15:50
Sodium, Total	6010B	1420		mg/L	2.5	0.1	5	11/12/09	11/12/09 21:04
Thallium, Total	6020	ND	U	µg/L	10	2	10	11/17/09	11/23/09 15:50
Tin, Total	6010B	ND	U	mg/L	0.20	0.02	5	11/12/09	11/12/09 21:05
Vanadium, Total	6020	847		µg/L	50	12	10	11/17/09	11/23/09 15:50
Zinc, Total	6020	ND	U	µg/L	100	40	10	11/17/09	11/23/09 15:50

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** L-5  
**Lab Code:** J0905605-005

**Service Request:** J0905605  
**Date Collected:** 11/10/09 1120  
**Date Received:** 11/11/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	10 I	µg/L	20	4	10	11/17/09	11/23/09 15:56
Arsenic, Total	6020	21.9	µg/L	5.0	2.0	10	11/17/09	11/23/09 15:56
Barium, Total	6020	142	µg/L	20	5	10	11/17/09	11/23/09 15:56
Beryllium, Total	6020	ND U	µg/L	10	2	10	11/17/09	11/23/09 15:56
Cadmium, Total	6020	ND U	µg/L	5.0	1.2	10	11/17/09	11/23/09 15:56
Chromium, Total	6020	106	µg/L	20	8	10	11/17/09	11/23/09 15:56
Cobalt, Total	6020	15	µg/L	10	2	10	11/17/09	11/23/09 15:56
Copper, Total	6020	10 I	µg/L	20	3	10	11/17/09	11/23/09 15:56
Iron, Total	6010B	3900	µg/L	250	20	5	11/12/09	11/12/09 21:08
Lead, Total	6020	7 I	µg/L	10	2	10	11/17/09	11/23/09 15:56
Mercury, Total	7470A	ND U	µg/L	2.5	0.4	1	11/23/09	11/23/09 17:52
Nickel, Total	6020	124	µg/L	20	3	10	11/17/09	11/23/09 15:56
Selenium, Total	6020	33	µg/L	20	8	10	11/17/09	11/23/09 15:56
Silver, Total	6020	ND U	µg/L	5.0	0.8	10	11/17/09	11/23/09 15:56
Sodium, Total	6010B	897	mg/L	2.5	0.1	5	11/12/09	11/12/09 21:07
Thallium, Total	6020	ND U	µg/L	10	2	10	11/17/09	11/23/09 15:56
Vanadium, Total	6020	225	µg/L	50	12	10	11/17/09	11/23/09 15:56
Zinc, Total	6020	ND U	µg/L	100	40	10	11/17/09	11/23/09 15:56

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** L-6  
**Lab Code:** J0905605-006

**Service Request:** J0905605  
**Date Collected:** 11/10/09 1530  
**Date Received:** 11/11/09

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Antimony, Total	6020	12 I	µg/L	20	4	10	11/17/09	11/23/09 16:01
Arsenic, Total	6020	40.4	µg/L	5.0	2.0	10	11/17/09	11/23/09 16:01
Barium, Total	6020	203	µg/L	20	5	10	11/17/09	11/23/09 16:01
Beryllium, Total	6020	ND U	µg/L	10	2	10	11/17/09	11/23/09 16:01
Cadmium, Total	6020	ND U	µg/L	5.0	1.2	10	11/17/09	11/23/09 16:01
Chromium, Total	6020	71	µg/L	20	8	10	11/17/09	11/23/09 16:01
Cobalt, Total	6020	12	µg/L	10	2	10	11/17/09	11/23/09 16:01
Copper, Total	6020	23	µg/L	20	3	10	11/17/09	11/23/09 16:01
Iron, Total	6010B	6010	µg/L	250	20	5	11/12/09	11/12/09 21:11
Lead, Total	6020	11	µg/L	10	2	10	11/17/09	11/23/09 16:01
Mercury, Total	7470A	ND U	µg/L	2.5	0.4	1	11/23/09	11/23/09 17:53
Nickel, Total	6020	244	µg/L	20	3	10	11/17/09	11/23/09 16:01
Selenium, Total	6020	29	µg/L	20	8	10	11/17/09	11/23/09 16:01
Silver, Total	6020	ND U	µg/L	5.0	0.8	10	11/17/09	11/23/09 16:01
Sodium, Total	6010B	892	mg/L	2.5	0.1	5	11/12/09	11/12/09 21:11
Thallium, Total	6020	ND U	µg/L	10	2	10	11/17/09	11/23/09 16:01
Vanadium, Total	6020	242	µg/L	50	12	10	11/17/09	11/23/09 16:01
Zinc, Total	6020	380	µg/L	100	40	10	11/17/09	11/23/09 16:01

**Comments:**

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** J0905605-MB

**Service Request:** J0905605  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed
Aluminum, Total	6020	13	I	µg/L	50	8	1	11/17/09	11/19/09 04:57
Antimony, Total	6020	ND	U	µg/L	2.0	0.4	1	11/17/09	11/19/09 04:57
Arsenic, Total	6020	0.20	I	µg/L	0.50	0.20	1	11/17/09	11/19/09 04:57
Barium, Total	6020	ND	U	µg/L	2.0	0.5	1	11/17/09	11/19/09 04:57
Beryllium, Total	6020	ND	U	µg/L	1.0	0.2	1	11/17/09	11/19/09 04:57
Cadmium, Total	6020	ND	U	µg/L	0.50	0.12	1	11/17/09	11/19/09 04:57
Calcium, Total	6010B	0.05	J	mg/L	0.50	0.02	1	11/12/09	11/12/09 19:31
Chromium, Total	6020	1.7	I	µg/L	2.0	0.8	1	11/17/09	11/23/09 19:30
Cobalt, Total	6020	ND	U	µg/L	1.0	0.2	1	11/17/09	11/19/09 04:57
Copper, Total	6020	ND	U	µg/L	2.0	0.3	1	11/17/09	11/19/09 04:57
Iron, Total	6010B	6	J	µg/L	50	4	1	11/12/09	11/12/09 19:31
Lead, Total	6020	ND	U	µg/L	1.0	0.2	1	11/17/09	11/19/09 04:57
Magnesium, Total	6010B	ND	U	mg/L	0.10	0.01	1	11/12/09	11/12/09 19:31
Manganese, Total	6020	ND	U	µg/L	1.0	0.2	1	11/17/09	11/19/09 04:57
Mercury, Total	7470A	ND	U	µg/L	0.50	0.08	1	11/23/09	11/23/09 17:42
Nickel, Total	6020	ND	U	µg/L	2.0	0.3	1	11/17/09	11/19/09 04:57
Potassium, Total	6010B	ND	U	mg/L	2.0	0.2	1	11/12/09	11/12/09 19:30
Selenium, Total	6020	ND	U	µg/L	2.0	0.8	1	11/17/09	11/19/09 04:57
Silver, Total	6020	ND	U	µg/L	0.50	0.08	1	11/17/09	11/19/09 04:57
Sodium, Total	6010B	0.03	J	mg/L	0.50	0.02	1	11/12/09	11/12/09 19:30
Thallium, Total	6020	ND	U	µg/L	1.0	0.2	1	11/17/09	11/19/09 04:57
Tin, Total	6010B	ND	U	mg/L	0.040	0.003	1	11/12/09	11/12/09 19:31
Vanadium, Total	6020	1.6	I	µg/L	5.0	1.2	1	11/17/09	11/19/09 04:57
Zinc, Total	6020	ND	U	µg/L	10	4	1	11/17/09	11/19/09 04:57

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905605  
**Date Collected :** 11/10/09  
**Date Received :** 11/11/09

Inorganic Parameters

**Sample Name :** L-1  
**Lab Code :** J0905605-001  
**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>
Alkalinity as CaCO <sub>3</sub> , Total	mg/L (ppm)	SM2320 B	125	40	25	11/17/09 13:45	3900	
Ammonia as Nitrogen	mg/L (ppm)	350.1	10	2	200	11/18/09 09:49	1200	
Chloride	mg/L (ppm)	300.0	10	1.55	50	11/12/09 11:23	4700	
Cyanide, Total	ug/L (ppb)	335.4	10	4	1	11/20/09 10:32	19	
Nitrate as Nitrogen	mg/L (ppm)	300.0	2	0.38	10	11/11/09 20:45	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	200	96	20	11/16/09 17:30	9700	
Sulfide	mg/L (ppm)	376.1	80	15	40	11/16/09 14:15	U	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905605  
**Date Collected :** 11/10/09  
**Date Received :** 11/11/09

Inorganic Parameters

**Sample Name :** L-2  
**Lab Code :** J0905605-002  
**Test Notes :**

Basis : NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Alkalinity as CaCO <sub>3</sub> , Total	mg/L (ppm)	SM2320 B	50	16	10	11/17/09 13:45	1800	
Ammonia as Nitrogen	mg/L (ppm)	350.1	5	1	100	11/18/09 10:20	680	
Chloride	mg/L (ppm)	300.0	10	1.55	50	11/12/09 11:23	2900	
Cyanide, Total	ug/L (ppb)	335.4	10	4	1	11/20/09 10:32	6.9	i
Nitrate as Nitrogen	mg/L (ppm)	300.0	2	0.38	10	11/11/09 21:00	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	100	48	10	11/16/09 17:30	6800	
Sulfide	mg/L (ppm)	376.1	80	15	40	11/16/09 14:15	U	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905605  
**Date Collected :** 11/10/09  
**Date Received :** 11/11/09

Inorganic Parameters

**Sample Name :** L-3  
**Lab Code :** J0905605-003  
**Test Notes :**

Basis : NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Alkalinity as CaCO <sub>3</sub> , Total	mg/L (ppm)	SM2320 B	40	12.8	8.3	11/17/09 13:45	1800	
Ammonia as Nitrogen	mg/L (ppm)	350.1	2.5	0.5	50	11/18/09 10:20	440	
Chloride	mg/L (ppm)	300.0	10	1.55	50	11/12/09 11:23	2400	
Cyanide, Total	ug/L (ppb)	335.4	10	4	1	11/20/09 10:32	5.7	i
Nitrate as Nitrogen	mg/L (ppm)	300.0	2	0.38	10	11/11/09 22:00	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	50	24	5	11/16/09 17:30	5700	
Sulfide	mg/L (ppm)	376.1	40	7.6	20	11/16/09 14:15	U	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905605  
**Date Collected :** 11/10/09  
**Date Received :** 11/11/09

Inorganic Parameters

Sample Name : L-4  
 Lab Code : J0905605-004  
 Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Alkalinity as CaCO <sub>3</sub> , Total	mg/L (ppm)	SM2320 B	50	16	10	11/17/09 13:45	3300	
Ammonia as Nitrogen	mg/L (ppm)	350.1	5	1	100	11/18/09 10:20	1200	
Ammonium as Nitrogen	mg/L (ppm)	FDEP	5	1	100	11/24/09 11:30	1200	
Carbonate as CaCO <sub>3</sub>	mg/L (ppm)	SM2320 B	5	1.6	1	11/17/09 13:45	U	
Chloride	mg/L (ppm)	300.0	10	1.55	50	11/12/09 11:23	2600	
Cyanide, Total	ug/L (ppb)	335.4	10	4	1	11/20/09 10:32	9.0	i
Fluoride	mg/L (ppm)	300.0	1	0.22	5	11/12/09 11:23	3.1	
Nitrate as Nitrogen	mg/L (ppm)	300.0	2	0.38	10	11/11/09 22:15	U	
Nitrite as Nitrogen	mg/L (ppm)	300.0	2	0.42	10	11/11/09 22:15	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	100	48	10	11/17/09 10:00	11000	
Sulfate	mg/L (ppm)	300.0	2	0.165	5	11/12/09 11:23	2.2	
Sulfide	mg/L (ppm)	376.1	80	15	40	11/16/09 14:15	U	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905605  
**Date Collected :** 11/10/09  
**Date Received :** 11/11/09

Inorganic Parameters

Sample Name : L-5  
 Lab Code : J0905605-005  
 Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Alkalinity as CaCO <sub>3</sub> , Total	mg/L (ppm)	SM2320 B	50	16	10	11/17/09 13:45	1300	
Ammonia as Nitrogen	mg/L (ppm)	350.1	2.5	0.5	50	11/18/09 10:20	330	
Chloride	mg/L (ppm)	300.0	2	0.31	10	11/11/09 15:30	1600	
Cyanide, Total	ug/L (ppb)	335.4	10	4	1	11/20/09 10:32	9.7	i
Nitrate as Nitrogen	mg/L (ppm)	300.0	2	0.38	10	11/11/09 22:30	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	50	24	5	11/17/09 10:00	4400	
Sulfide	mg/L (ppm)	376.1	40	7.6	20	11/16/09 14:15	U	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : GeoSyntec Consultants  
Project Name : JED SWDF  
Project Number : FQ1512A.02  
Sample Matrix : WATER

Service Request : J0905605  
Date Collected : 11/10/09  
Date Received : 11/11/09

Inorganic Parameters

Sample Name : L-6  
Lab Code : J0905605-006  
Test Notes :

Basis : NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Alkalinity as CaCO3, Total	mg/L (ppm)	SM2320 B	50	16	10	11/17/09 13:45	1900	
Ammonia as Nitrogen	mg/L (ppm)	350.1	2.5	0.5	50	11/18/09 10:20	400	
Chloride	mg/L (ppm)	300.0	2	0.31	10	11/11/09 15:30	1500	
Cyanide, Total	ug/L (ppb)	335.4	10	4	1	11/20/09 10:32	6.0	i
Nitrate as Nitrogen	mg/L (ppm)	300.0	2	0.38	10	11/11/09 22:45	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	50	24	5	11/17/09 10:00	5600	
Sulfide	mg/L (ppm)	376.1	8	1.5	4	11/16/09 14:15	5.3	i

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905605  
**Date Collected :** NA  
**Date Received :** NA

Inorganic Parameters

**Sample Name :** Method Blank  
**Lab Code :** J0905605-MB  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	MRL	MDL	Dilution Factor	Date/Time Analyzed	Result	Result Notes
Alkalinity as CaCO <sub>3</sub> , Total	mg/L (ppm)	SM2320 B	5	1.6	1	11/17/09 13:45	U	
Alkalinity as CaCO <sub>3</sub> , Total	mg/L (ppm)	SM2320 B	5	1.6	1	11/17/09 13:45	U	
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.01	1	11/18/09 10:20	U	
Ammonia as Nitrogen	mg/L (ppm)	350.1	0.05	0.01	1	11/18/09 09:49	U	
Ammonium as Nitrogen	mg/L (ppm)	FDEP	0.05	0.025	1	11/24/09 11:30	U	
Carbonate as CaCO <sub>3</sub>	mg/L (ppm)	SM2320 B	5	1.6	1	11/17/09 13:45	U	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/12/09 11:23	U	
Chloride	mg/L (ppm)	300.0	0.2	0.031	1	11/11/09 15:30	U	
Cyanide, Total	ug/L (ppb)	335.4	10	4	1	11/20/09 10:32	U	
Fluoride	mg/L (ppm)	300.0	0.2	0.044	1	11/12/09 11:23	U	
Nitrate as Nitrogen	mg/L (ppm)	300.0	0.2	0.038	1	11/11/09 15:30	U	
Nitrite as Nitrogen	mg/L (ppm)	300.0	0.2	0.042	1	11/11/09 15:30	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/16/09 17:30	U	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	10	4.8	1	11/17/09 10:00	U	
Sulfate	mg/L (ppm)	300.0	0.4	0.033	1	11/12/09 11:23	U	
Sulfide	mg/L (ppm)	376.1	2	0.38	1	11/16/09 14:15	U	

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605

**Surrogate Recovery Summary**  
**Volatile Organic Compounds by GC/MS (Appendix II)**

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>
L-1	J0905605-001	107	101	98	101
L-2	J0905605-002	105	106	93	91
L-3	J0905605-003	104	97	96	97
L-4	J0905605-004	104	101	94	100
L-5	J0905605-005	112	102	102	95
L-6	J0905605-006	101	104	94	94
Trip Blank	J0905605-007	104	100	94	96
Method Blank	JWG0903818-4	110	105	99	97
Method Blank	JWG0903848-4	88	120	94	101
Lab Control Sample	JWG0903818-3	104	100	96	97
Lab Control Sample	JWG0903848-3	89	111	98	98

**Surrogate Recovery Control Limits (%)**

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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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Extracted: 11/14/2009  
 Date Analyzed: 11/14/2009

Lab Control Spike Summary  
 Volatile Organic Compounds by GC/MS (Appendix II)

Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0903818

Lab Control Sample  
 JWG0903818-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Dichlorodifluoromethane	21.5	20.0	108	69-138
Chloromethane	19.5	20.0	98	67-135
Vinyl Chloride	20.3	20.0	102	78-132
Bromomethane	18.3	20.0	92	79-130
Chloroethane	21.4	20.0	107	74-126
Trichlorofluoromethane	21.2	20.0	106	74-134
Acrolein	84.9	100	85	61-137
1,1-Dichloroethene	20.4	20.0	102	78-130
Acetone	116	100	116	67-133
Iodomethane (Methyl Iodide)	114	100	114	68-134
Carbon Disulfide	94.9	100	95	76-138
Acetonitrile	108	100	108	67-132
Allyl Chloride	20.0	20.0	100	68-128
Methylene Chloride	19.6	20.0	98	72-124
Acrylonitrile	102	100	102	77-127
trans-1,2-Dichloroethene	20.3	20.0	102	77-124
1,1-Dichloroethane	20.2	20.0	101	80-128
Vinyl Acetate	115	100	115	61-148
Chloroprene	20.1	20.0	101	81-132
cis-1,2-Dichloroethene	19.4	20.0	97	80-126
2,2-Dichloropropane	20.2	20.0	101	72-136
1,1-Dichloropropene	19.8	20.0	99	85-124
2-Butanone (MEK)	105	100	105	73-127
Propionitrile	105	100	105	77-131
Bromochloromethane	21.4	20.0	107	79-129
Methacrylonitrile	14.5	20.0	73 *	77-129
Chloroform	20.6	20.0	103	83-124
1,1,1-Trichloroethane (TCA)	20.6	20.0	103	79-124
Carbon Tetrachloride	20.9	20.0	104	81-125
Benzene	19.4	20.0	97	79-119
1,2-Dichloroethane (EDC)	21.0	20.0	105	80-124
Isobutyl Alcohol	453	400	113	62-139
Trichloroethene (TCE)	19.2	20.0	96	76-124
1,2-Dichloropropane	20.2	20.0	101	79-123
Dibromomethane	21.2	20.0	106	83-123
Methyl Methacrylate	19.8	20.0	99	79-128

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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Extracted: 11/14/2009  
 Date Analyzed: 11/14/2009

Lab Control Spike Summary  
 Volatile Organic Compounds by GC/MS (Appendix II)

Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0903818

Lab Control Sample  
 JWG0903818-3

Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Bromodichloromethane	19.7	20.0	98	81-123
cis-1,3-Dichloropropene	18.6	20.0	93	86-123
4-Methyl-2-pentanone (MIBK)	101	100	101	72-136
Toluene	19.0	20.0	95	86-117
trans-1,3-Dichloropropene	19.0	20.0	95	83-124
Ethyl Methacrylate	19.3	20.0	97	78-127
1,1,2-Trichloroethane	18.6	20.0	93	86-114
Tetrachloroethene (PCE)	18.5	20.0	93	80-121
1,3-Dichloropropane	19.1	20.0	95	88-117
2-Hexanone	102	100	102	71-138
Dibromochloromethane	18.9	20.0	95	82-121
1,2-Dibromoethane (EDB)	19.8	20.0	99	88-117
Chlorobenzene	18.0	20.0	90	86-113
1,1,1,2-Tetrachloroethane	19.2	20.0	96	85-117
Ethylbenzene	19.2	20.0	96	90-118
m,p-Xylenes	37.8	40.0	94	86-121
o-Xylene	19.0	20.0	95	89-119
Styrene	18.2	20.0	91	89-122
Bromoform	17.6	20.0	88	68-129
1,1,2,2-Tetrachloroethane	18.1	20.0	91	83-120
1,2,3-Trichloropropane	18.5	20.0	92	83-123
trans-1,4-Dichloro-2-butene	19.5	20.0	97	53-143
1,3-Dichlorobenzene	18.1	20.0	90	83-112
1,4-Dichlorobenzene	18.2	20.0	91	83-113
1,2-Dichlorobenzene	18.3	20.0	92	84-115
1,2-Dibromo-3-chloropropane (DBCP)	17.6	20.0	88	62-123
1,2,4-Trichlorobenzene	19.4	20.0	97	72-123
Hexachlorobutadiene	18.4	20.0	92	73-140
Naphthalene	20.6	20.0	103	59-135

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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Extracted: 11/16/2009  
 Date Analyzed: 11/16/2009

Lab Control Spike Summary  
 Volatile Organic Compounds by GC/MS (Appendix II)

Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0903848

Lab Control Sample  
 JWG0903848-3

Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Dichlorodifluoromethane	20.7	20.0	104	69-138
Chloromethane	23.3	20.0	116	67-135
Vinyl Chloride	21.1	20.0	105	78-132
Bromomethane	20.4	20.0	102	79-130
Chloroethane	21.2	20.0	106	74-126
Trichlorofluoromethane	25.0	20.0	125	74-134
Acrolein	81.4	100	81	61-137
1,1-Dichloroethene	21.7	20.0	108	78-130
Acetone	84.3	100	84	67-133
Iodomethane (Methyl Iodide)	108	100	108	68-134
Carbon Disulfide	100	100	100	76-138
Acetonitrile	81.4	100	81	67-132
Allyl Chloride	22.4	20.0	112	68-128
Methylene Chloride	20.5	20.0	103	72-124
Acrylonitrile	91.7	100	92	77-127
trans-1,2-Dichloroethene	21.5	20.0	108	77-124
1,1-Dichloroethane	22.0	20.0	110	80-128
Vinyl Acetate	124	100	124	61-148
Chloroprene	23.3	20.0	116	81-132
cis-1,2-Dichloroethene	20.9	20.0	105	80-126
2,2-Dichloropropane	26.9	20.0	135	72-136
1,1-Dichloropropene	21.8	20.0	109	85-124
2-Butanone (MEK)	86.5	100	87	73-127
Propionitrile	83.0	100	83	77-131
Bromochloromethane	20.5	20.0	103	79-129
Methacrylonitrile	20.9	20.0	105	77-129
Chloroform	22.2	20.0	111	83-124
1,1,1-Trichloroethane (TCA)	22.6	20.0	113	79-124
Carbon Tetrachloride	22.7	20.0	113	81-125
Benzene	21.0	20.0	105	79-119
1,2-Dichloroethane (EDC)	22.1	20.0	110	80-124
Isobutyl Alcohol	387	400	97	62-139
Trichloroethene (TCE)	21.6	20.0	108	76-124
1,2-Dichloropropane	21.5	20.0	108	79-123
Dibromomethane	18.8	20.0	94	83-123
Methyl Methacrylate	18.3	20.0	92	79-128

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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Extracted: 11/16/2009  
 Date Analyzed: 11/16/2009

Lab Control Spike Summary  
 Volatile Organic Compounds by GC/MS (Appendix II)

Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0903848

Lab Control Sample  
 JWG0903848-3

Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Bromodichloromethane	21.0	20.0	105	81-123
cis-1,3-Dichloropropene	20.4	20.0	102	86-123
4-Methyl-2-pentanone (MIBK)	88.8	100	89	72-136
Toluene	20.6	20.0	103	86-117
trans-1,3-Dichloropropene	19.2	20.0	96	83-124
Ethyl Methacrylate	18.0	20.0	90	78-127
1,1,2-Trichloroethane	19.0	20.0	95	86-114
Tetrachloroethene (PCE)	20.9	20.0	105	80-121
1,3-Dichloropropane	18.7	20.0	94	88-117
2-Hexanone	88.6	100	89	71-138
Dibromochloromethane	18.8	20.0	94	82-121
1,2-Dibromoethane (EDB)	19.8	20.0	99	88-117
Chlorobenzene	19.8	20.0	99	86-113
1,1,1,2-Tetrachloroethane	19.0	20.0	95	85-117
Ethylbenzene	20.4	20.0	102	90-118
m,p-Xylenes	39.7	40.0	99	86-121
o-Xylene	20.7	20.0	104	89-119
Styrene	19.6	20.0	98	89-122
Bromoform	16.2	20.0	81	68-129
1,1,2,2-Tetrachloroethane	18.5	20.0	92	83-120
1,2,3-Trichloropropane	16.5	20.0	83	83-123
trans-1,4-Dichloro-2-butene	11.1	20.0	55	53-143
1,3-Dichlorobenzene	21.8	20.0	109	83-112
1,4-Dichlorobenzene	21.1	20.0	106	83-113
1,2-Dichlorobenzene	20.7	20.0	104	84-115
1,2-Dibromo-3-chloropropane (DBCP)	16.7	20.0	84	62-123
1,2,4-Trichlorobenzene	23.0	20.0	115	72-123
Hexachlorobutadiene	26.3	20.0	131	73-140
Naphthalene	18.4	20.0	92	59-135

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 SWDF/FQ1512A.02  
Sample Matrix: Water

Service Request: J0905605

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>
L-1	J0905605-001	99
L-2	J0905605-002	119
L-3	J0905605-003	94
L-4	J0905605-004	108
L-5	J0905605-005	98
L-6	J0905605-006	118
Method Blank	JWG0903823-4	107
Lab Control Sample	JWG0903823-3	110

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**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.

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Extracted: 11/15/2009  
 Date Analyzed: 11/18/2009

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: JWG0903823

Lab Control Sample  
 JWG0903823-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
1,2-Dibromoethane (EDB)	0.284	0.250	114	70-130
1,2-Dibromo-3-chloropropane (DBCP)	0.265	0.250	106	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.

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605

**Surrogate Recovery Summary**  
**Semi-Volatile Organic Compounds by GC/MS (Appendix II)**

Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: PERCENT  
 Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>	<u>Sur4</u>	<u>Sur5</u>	<u>Sur6</u>
L-1	J0905605-001	23	22	42	45	46	18 #
L-2	J0905605-002	31	25 D	64	43	48	26
L-3	J0905605-003	30	19	56	50	58	28
L-4	J0905605-004	26	25	52	38	47	26 D
L-5	J0905605-005	26	18 D	47	41	45	24
L-6	J0905605-006	31 D	29 D	62 D	52 D	50 D	34 D
Method Blank	JWG0903787-4	34	19	56	63	86	86
Lab Control Sample	JWG0903787-3	42	24	59	68	77	80

**Surrogate Recovery Control Limits (%)**

Sur1 = 2-Fluorophenol	10-77	Sur5 = 2,4,6-Tribromophenol	30-143
Sur2 = Phenol-d6	10-51	Sur6 = Terphenyl-d14	23-165
Sur3 = Nitrobenzene-d5	32-106		
Sur4 = 2-Fluorobiphenyl	30-102		

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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Extracted: 11/12/2009  
 Date Analyzed: 11/17/2009

Lab Control Spike Summary  
 Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0903787

Lab Control Sample  
 JWG0903787-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
N-Nitrosodimethylamine	26.2	50.0	52	27-66
Phenol	19.0	50.0	38	12-54
Bis(2-chloroethyl) Ether	33.0	50.0	66	41-99
2-Chlorophenol	32.4	50.0	65	35-101
1,3-Dichlorobenzene	26.8	50.0	54	30-119
1,4-Dichlorobenzene	24.4	50.0	49	31-119
1,2-Dichlorobenzene	27.5	50.0	55	32-123
Bis(2-chloroisopropyl) Ether	34.7	50.0	69	31-94
Benzyl alcohol	32.0	50.0	64	32-110
2-Methylphenol	32.1	50.0	64	21-100
Hexachloroethane	23.7	50.0	47	19-113
N-Nitrosodi-n-propylamine	39.8	50.0	80	43-103
4-Methylphenol	59.0	75.0	79	15-95
Nitrobenzene	30.0	50.0	60	36-116
Isophorone	34.7	50.0	69	46-106
2-Nitrophenol	31.5	50.0	63	40-120
2,4-Dimethylphenol	30.5	50.0	61	38-110
bis(2-Chloroethoxy)methane	34.9	50.0	70	47-100
2,4-Dichlorophenol	36.0	50.0	72	36-117
1,2,4-Trichlorobenzene	26.7	50.0	53	50-120
Naphthalene	29.6	50.0	59	40-97
4-Chloroaniline	35.5	50.0	71	39-110
Hexachlorobutadiene	20.7	50.0	41	20-110
4-Chloro-3-methylphenol	32.2	50.0	64	36-117
2-Methylnaphthalene	30.1	50.0	60	46-110
Hexachlorocyclopentadiene	20.4	50.0	41	23-115
2,4,6-Trichlorophenol	33.6	50.0	67	41-115
2,4,5-Trichlorophenol	36.9	50.0	74	47-113
2-Chloronaphthalene	29.7	50.0	59	47-106
2-Nitroaniline	31.6	50.0	63	33-94
Acenaphthylene	33.1	50.0	66	45-99
Dimethyl Phthalate	37.5	50.0	75	32-119
2,6-Dinitrotoluene	34.0	50.0	68	55-121
Acenaphthene	32.3	50.0	65	42-106
3-Nitroaniline	34.6	50.0	69	25-91
2,4-Dinitrophenol	33.7	50.0	67	27-128

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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Extracted: 11/12/2009  
 Date Analyzed: 11/17/2009

Lab Control Spike Summary  
 Semi-Volatile Organic Compounds by GC/MS (Appendix II)

Extraction Method: EPA 3510C  
 Analysis Method: 8270C

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0903787

Lab Control Sample  
 JWG0903787-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Dibenzofuran	33.5	50.0	67	49-103
4-Nitrophenol	14.7	50.0	29	10-86
2,4-Dinitrotoluene	35.8	50.0	72	54-121
2,3,4,6-Tetrachlorophenol	43.8	50.0	88	50-150
Fluorene	31.8	50.0	64	54-97
4-Chlorophenyl Phenyl Ether	32.9	50.0	66	53-108
Diethyl Phthalate	39.0	50.0	78	56-108
4-Nitroaniline	31.0	50.0	62	44-102
2-Methyl-4,6-dinitrophenol	38.1	50.0	76	46-117
N-Nitrosodiphenylamine	17.2	50.0	34	30-122
4-Bromophenyl Phenyl Ether	40.4	50.0	81	63-123
Hexachlorobenzene	33.3	50.0	67	55-110
Pentachlorophenol	34.5	50.0	69	35-120
Phenanthrene	33.4	50.0	67	49-110
Anthracene	36.8	50.0	74	50-104
Di-n-butyl Phthalate	38.7	50.0	77	57-118
Fluoranthene	36.9	50.0	74	48-110
Pyrene	41.3	50.0	83	35-110
Butyl Benzyl Phthalate	38.2	50.0	76	40-117
Benz(a)anthracene	37.7	50.0	75	42-114
Chrysene	35.0	50.0	70	50-113
Bis(2-ethylhexyl) Phthalate	37.5	50.0	75	41-127
Di-n-octyl Phthalate	36.0	50.0	72	35-139
Benzo(b)fluoranthene	33.2	50.0	66	56-110
Benzo(k)fluoranthene	43.2	50.0	86	48-110
Benzo(a)pyrene	35.9	50.0	72	46-110
Indeno(1,2,3-cd)pyrene	36.9	50.0	74	54-115
Dibenz(a,h)anthracene	37.2	50.0	74	51-125
Benzo(g,h,i)perylene	36.5	50.0	73	53-116

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 SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605

**Surrogate Recovery Summary  
 Organochlorine Pesticides by GC-ECD**

**Extraction Method:** EPA 3510C  
**Analysis Method:** 8081A

**Units:** PERCENT  
**Level:** Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>
L-1	J0905605-001	28 #	8 #
L-2	J0905605-002	25 #	8 #
L-3	J0905605-003	30 #	15
L-4	J0905605-004	36	7 #
L-5	J0905605-005	25 #	10 #
L-6	J0905605-006	29 #	9 #
Method Blank	JWG0903856-2	55	79
Lab Control Sample	JWG0903856-1	61	65

**Surrogate Recovery Control Limits (%)**

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Sur1 = Tetrachloro-m-xylene	32-92
Sur2 = Decachlorobiphenyl	13-104

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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 SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Extracted:** 11/16/2009  
**Date Analyzed:** 11/18/2009

**Lab Control Spike Summary  
 Organochlorine Pesticides by GC-ECD**

**Extraction Method:** EPA 3510C  
**Analysis Method:** 8081A

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** JWG0903856

Lab Control Sample  
 JWG0903856-1

**Lab Control Spike**

Analyte Name	Result	Expected	%Rec	%Rec Limits
alpha-BHC	0.300	0.400	75	56-104
gamma-BHC (Lindane)	0.291	0.400	73	57-101
beta-BHC	0.303	0.400	76	55-97
delta-BHC	0.317	0.400	79	31-105
Heptachlor	0.286	0.400	72	52-100
Aldrin	0.279	0.400	70	45-108
Heptachlor Epoxide	0.297	0.400	74	59-103
gamma-Chlordane	0.293	0.400	73	53-107
alpha-Chlordane	0.294	0.400	74	54-104
4,4'-DDE	0.293	0.400	73	58-114
Endosulfan I	0.295	0.400	74	61-104
Dieldrin	0.296	0.400	74	57-111
Endrin	0.285	0.400	71	57-117
4,4'-DDD	0.222	0.400	56	56-116
Endosulfan II	0.289	0.400	72	50-106
4,4'-DDT	0.319	0.400	80	41-115
Endrin Aldehyde	0.265	0.400	66	51-108
Methoxychlor	0.294	0.400	74	43-123
Endosulfan Sulfate	0.292	0.400	73	56-107
Endrin Ketone	0.288	0.400	72	46-101

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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605

Surrogate Recovery Summary  
 Polychlorinated Biphenyls (PCB Aroclors) by GC-ECD

Extraction Method: EPA 3510C  
 Analysis Method: 8082

Units: PERCENT  
 Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
L-1	J0905605-001	9 #
L-2	J0905605-002	8 #
L-3	J0905605-003	14 #
L-4	J0905605-004	7 #
L-5	J0905605-005	10 #
L-6	J0905605-006	9 #
Method Blank	JWG0903857-2	79
Lab Control Sample	JWG0903857-1	63

Surrogate Recovery Control Limits (%)

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Sur1 = Decachlorobiphenyl 24-120

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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 SWDF/FQ1512A.02  
 Sample Matrix: Water

Service Request: J0905605  
 Date Extracted: 11/16/2009  
 Date Analyzed: 11/18/2009

Lab Control Spike Summary  
 Polychlorinated Biphenyls (PCB Aroclors) by GC-ECD

Extraction Method: EPA 3510C  
 Analysis Method: 8082

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0903857

Lab Control Sample  
 JWG0903857-1  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Aroclor 1016	3.40	4.00	85	39-116
Aroclor 1260	3.61	4.00	90	41-118

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 SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Analyzed:** 11/12/09 -  
 11/23/09

**Lab Control Sample Summary  
 Inorganic Parameters**

**Units:** µg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample J0905605-LCS			% Rec Limits
		Result	Expected	% Rec	
Aluminum, Total	6020	245	250	98	80 - 120
Antimony, Total	6020	47.9	50.0	96	80 - 120
Arsenic, Total	6020	49.3	50.0	99	80 - 120
Barium, Total	6020	50.2	50.0	100	80 - 120
Beryllium, Total	6020	44.1	50.0	88	80 - 120
Cadmium, Total	6020	47.3	50.0	95	80 - 120
Chromium, Total	6020	52.2	50.0	104	80 - 120
Cobalt, Total	6020	53.2	50.0	106	80 - 120
Copper, Total	6020	52.7	50.0	105	80 - 120
Iron, Total	6010B	1960	2000	98	80 - 120
Lead, Total	6020	50.8	50.0	102	80 - 120
Manganese, Total	6020	53.0	50.0	106	80 - 120
Mercury, Total	7470A	5.23	5.00	105	80 - 120
Nickel, Total	6020	53.0	50.0	106	80 - 120
Selenium, Total	6020	45.6	50.0	91	80 - 120
Silver, Total	6020	51.2	50.0	102	80 - 120
Thallium, Total	6020	50.4	50.0	101	80 - 120
Vanadium, Total	6020	51.0	50.0	102	80 - 120
Zinc, Total	6020	94.3	100	94	80 - 120

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

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** JED SWDF/FQ1512A.02  
**Sample Matrix:** Water

**Service Request:** J0905605  
**Date Analyzed:** 11/12/09

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:** mg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample			% Rec Limits
		Result	Expected	% Rec	
Calcium, Total	6010B	19.9	20.0	100	80 - 120
Magnesium, Total	6010B	9.83	10.0	98	80 - 120
Potassium, Total	6010B	49.9	50.0	100	80 - 120
Sodium, Total	6010B	10.3	10.0	103	80 - 120
Tin, Total	6010B	5.07	5.00	101	80 - 120

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905605  
**Date Collected :** 11/10/09  
**Date Received :** 11/11/09  
**Date Extracted :** NA  
**Date Analyzed :** 11/18/09

Duplicate Summary  
 Inorganic Parameters

**Sample Name :** L-2  
**Lab Code :** J0905605-002DUP  
**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	5	680	690	685	1	

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905605  
**Date Collected :** 11/10/09  
**Date Received :** 11/11/09  
**Date Extracted :** NA  
**Date Analyzed :** 11/18/09

Matrix Spike Summary  
 Inorganic Parameters

**Sample Name :** L-2  
**Lab Code :** J0905605-002MS  
**Test Notes :**

Basis : NA

Analyte	Units	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS	Result Notes
								Percent Recovery	
Ammonia as Nitrogen	mg/L (ppm)	350.1	5	100	680	787	107	90-110	



COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905605  
**Date Collected :** 11/10/09  
**Date Received :** 11/11/09  
**Date Extracted :** NA  
**Date Analyzed :** 11/17/09

Duplicate Summary  
Inorganic Parameters

**Sample Name :** L-4  
**Lab Code :** J0905605-004DUP  
**Test Notes :**

Basis : NA

Analyte	Units	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	100	11000	11000	11000	<1	

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client :** GeoSyntec Consultants  
**Project Name :** JED SWDF  
**Project Number :** FQ1512A.02  
**Sample Matrix :** WATER

**Service Request :** J0905605  
**Date Collected :** NA  
**Date Received :** NA  
**Date Extracted :** NA  
**Date Analyzed :** 11/11-20/09

Laboratory Control Sample Summary  
 Inorganic Parameters

**Sample Name :** Laboratory Control Sample  
**Lab Code :** J0905605-LCS  
**Test Notes :**

**Basis :** NA

Analyte	Units	Analysis Method	True Value	Result	Percent Recovery	CAS	Result Notes
						Percent Recovery Acceptance Limits	
Alkalinity as CaCO <sub>3</sub> , Total	mg/L (ppm)	SM2320 B	250	252	101	85-115	
Ammonia as Nitrogen	mg/L (ppm)	350.1	1.00	1.03	103	90-110	
Ammonia as Nitrogen	mg/L (ppm)	350.1	1.00	1.02	102	90-110	
Chloride	mg/L (ppm)	300.0	100	101	101	90-110	
Chloride	mg/L (ppm)	300.0	100	101	101	90-110	
Cyanide, Total	ug/L (ppb)	335.4	100	109	109	90-110	
Fluoride	mg/L (ppm)	300.0	5.0	5.23	105	90-110	
Nitrate as Nitrogen	mg/L (ppm)	300.0	5.0	5.01	100	90-110	
Nitrite as Nitrogen	mg/L (ppm)	300.0	5.0	5.13	103	90-110	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	300	288	96	85-115	
Solids, Total Dissolved (TDS)	mg/L (ppm)	SM 2540 C	300	291	97	85-115	
Sulfate	mg/L (ppm)	300.0	5.00	5.09	102	90-110	
Sulfide	mg/L (ppm)	376.1	11.1	10.9	98	85-115	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : GeoSyntec Consultants  
Project Name : JED SWDF  
Project Number : FQ1512A.02  
Sample Matrix : WATER

Service Request : J0905605  
Date Collected : NA  
Date Received : NA  
Date Extracted : NA  
Date Analyzed : 11/16/09

Laboratory Control Sample Summary  
Inorganic Parameters

Sample Name : Laboratory Control Sample Duplicate  
Lab Code : J0905605-LCSD  
Test Notes :

Basis : NA

Analyte	Units	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Sulfide	mg/L (ppm)	376.1	11.1	11.1	100	85-115	

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

Client: Geosyntec Service Request # 50905605  
 Project: JED SWDF  
 Cooler received on 11/11/09 and opened on 11/11/09 by SC  
 COURIER: CAS UPS FEDEX DHL CLIENT Tracking #

- |    |   |                                      |                                     |                                      |
|----|---|--------------------------------------|-------------------------------------|--------------------------------------|
| 1  | Were custody seals on outside of cooler?                                      | Yes                                  | <input checked="" type="radio"/> No | N/A                                  |
| 2  | Were seals intact, signed and dated?  | Yes                                  | No                                  | <input checked="" type="radio"/> N/A |
| 3  | Were custody papers properly filled out?                                      | <input checked="" type="radio"/> Yes | No                                  | N/A                                  |
| 4  | Temperature of cooler(s) upon receipt (Should be 4 +/- 2 degrees C)           | <u>4.0</u>                           | <u>3.4</u>                          | <u>2.8</u>                           |
| 5  | Correct Temperature?  | <input checked="" type="radio"/> Yes | No                                  | N/A                                  |
| 6  | Were Ice or Ice Packs present   | <input checked="" type="radio"/> Yes | No                                  | N/A                                  |
| 7  | Did all bottles arrive in good condition (unbroken, etc....)?                 | <input checked="" type="radio"/> Yes | No                                  | N/A                                  |
| 8  | Were all bottle labels complete (sample ID, preservation, etc....)?           | <input checked="" type="radio"/> Yes | No                                  | N/A                                  |
| 9  | Did all bottle labels and tags agree with custody papers?                     | <input checked="" type="radio"/> Yes | No                                  | N/A                                  |
| 10 | Were the correct bottles used for the tests indicated?                        | <input checked="" type="radio"/> Yes | No                                  | N/A                                  |
| 11 | Were all of the preserved bottles received with the appropriate preservative? | Yes                                  | <input checked="" type="radio"/> No | N/A                                  |

HNO<sub>3</sub> pH<2 H<sub>2</sub>SO<sub>4</sub> pH<2 ZnAc<sub>2</sub>/NaOH pH>9 NaOH pH>12 HCl pH<2  
 Preservative additions noted below

- |    |   |                                      |        |     |
|----|---|--------------------------------------|--------|-----|
| 12 | Were all samples received within analysis holding times?                  | <input checked="" type="radio"/> Yes | No     | N/A |
| 13 | Were VOA vials checked for absence of air bubbles? If present, note below | <input checked="" type="radio"/> Yes | No     | N/A |
| 14 | Where did the bottles originate?  | <input checked="" type="radio"/> CAS | Client |     |

Sample ID	Reagent	Manuf. Lot # or CAS Chem ID	ml added	Initials
L-1	<u>HNO<sub>3</sub></u>	<u>5M01-6B</u>	<u>1.0</u>	<u>SC 11/11/09 1695</u>
L-2	↓		<u>1.0</u>	↓
L-3			<u>1.0</u>	
L-4			<u>2.0</u>	
L-5			<u>1.0</u>	
L-6			<u>1.0</u>	
L-1 → L-6		<u>NaOH</u>	<u>5M01-4C</u>	
L-4	<u>ZnAc<sub>2</sub></u>	<u>5M01-6C</u>	<u>1 gram</u>	

Additional comments and/or explanation of all discrepancies noted above:  
L-4 VOA vials contained headspace

Client approval to run samples if discrepancies noted: \_\_\_\_\_ Date: 20

SR #: J 0905605

Date: 11/11/09

Initials: SL

Note that pH is checked and meets the required pH criterion listed in the column heading unless otherwise noted on cooler receipt form.

Container	Boille 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		
40mL 40mL	G	G	G	G	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P		
Pres. Req. pH	N/A	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2		
Sample #	3	3																														
-001																																
-002																																
-003																																
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# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

9143 Phillips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

PAGE 1 OF 1

SR #

50905605

CAS Contact

Project Name: JED SWDF  
 Project Manager: Kvk Willis  
 Company/Address: Geosynxer  
 Project Number: FQ1512A.02  
 Email Address: kwillis@geosynxer.com  
 14055 R. v. redge Dr. Ste 300  
 Tampa, FL 33637  
 Phone #: 813-558-0990  
 Fax #: 813-558-9726  
 Sampler's Signature: Joe Terry  
 Sampler's Printed Name: Joe Terry, Tom Wissler

PRESERVATIVE	ANALYSIS REQUESTED (Include Method Number and C)					NUMBER OF CONTAINERS	REMARKS/ ALTERNATE DESCRIPTION
	0	2	3	4	5		
8260						Metals	
8011						NH <sub>3</sub> Sulfide	
						Cyanide	
						CL, NO <sub>3</sub> , Aik, TDS	
						8081, 8082, 8270, 8151	Soil (carbon/mbn/sc)

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	TIME	MATRIX
L-1		11-10-09	1400	Leachate
L-2			1355	
L-3			1500	
L-4			1240	
L-5			1120	
L-6			1530	
Trip Blank		10-28-09	1100	FF <sub>20</sub>

SPECIAL INSTRUCTIONS/COMMENTS  
 \*Vials for 8260 are unpreserved\*  
 Cooler ID: 09315-JED-21 JT 11-11-09  
 09315-JED-22 11-11-09  
 09315-JED-23  
 09315-JED-24  
 09315-JED-25

See CAPP

SAMPLE RECEIPT: CONDITION/COOLER TEMP: \_\_\_\_\_

TURNAROUND REQUIREMENTS  
 RUSH (SURCHARGES APPLY)  
 STANDARD  
 REQUESTED FAX DATE \_\_\_\_\_  
 REQUESTED REPORT DATE \_\_\_\_\_

REPORT REQUIREMENTS  
 I. Results Only \_\_\_\_\_  
 II. Results + OC Summaries (LCS, DUP, MS/MSD as required)  
 III. Results + OC and Calibration Summaries \_\_\_\_\_  
 IV. Data Validation Report with Raw Data \_\_\_\_\_  
 V. Specialized Forms / Custom Report \_\_\_\_\_  
 Edata Yes \_\_\_\_\_ No \_\_\_\_\_

CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY
Signature: Robert Nicholas Printed Name: Robert Nicholas Firm: Geosynxer Date/Time: 11/10/09 12:30	Signature: Robert Nicholas Printed Name: Robert Nicholas Firm: CAS Date/Time: 11/10/09 2:40

RELINQUISHED BY: \_\_\_\_\_ RECEIVED BY: \_\_\_\_\_

Signature: \_\_\_\_\_ Printed Name: \_\_\_\_\_ Firm: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Signature: \_\_\_\_\_ Printed Name: \_\_\_\_\_ Firm: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Signature: \_\_\_\_\_ Printed Name: \_\_\_\_\_ Firm: \_\_\_\_\_ Date/Time: \_\_\_\_\_

# **Appendix A**

## **Subcontracted Analytical Results**

**Environmental Conservation Laboratories, Inc.**

10775 Central Port Drive

Orlando FL, 32824

Phone: 407.826.5314

FAX: 407.850.6945



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Thursday, November 19, 2009

Columbia Analytical Svcs. (CO009)

Attn: Craig Myers

9143 Philips Highway, Suite 200

Jacksonville, FL 32256

**RE: Laboratory Results for  
Project Number: J0905605, Project Name/Desc: J0905605  
ENCO Workorder: A905639**

Dear Craig Myers,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Friday, November 13, 2009.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Orlando. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "David M. Camacho".

David Camacho For Ronald Wambles

Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 12.





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**SAMPLE SUMMARY/LABORATORY CHRONICLE**

<b>Client ID:</b> J0905605-001 (L-1)	<b>Lab ID:</b> A905639-01	<b>Sampled:</b> 11/10/09 14:00	<b>Received:</b> 11/13/09 08:00
<b>Parameter</b> EPA 8151A	<b>Hold Date/Time(s)</b> 11/17/09	<b>Prep Date/Time(s)</b> 12/23/09	<b>Analysis Date/Time(s)</b> 11/13/09 19:42

<b>Client ID:</b> J0905605-002 (L-2)	<b>Lab ID:</b> A905639-02	<b>Sampled:</b> 11/10/09 13:55	<b>Received:</b> 11/13/09 08:00
<b>Parameter</b> EPA 8151A	<b>Hold Date/Time(s)</b> 11/17/09	<b>Prep Date/Time(s)</b> 12/23/09	<b>Analysis Date/Time(s)</b> 11/13/09 19:42

<b>Client ID:</b> J0905605-003 (L-3)	<b>Lab ID:</b> A905639-03	<b>Sampled:</b> 11/10/09 15:00	<b>Received:</b> 11/13/09 08:00
<b>Parameter</b> EPA 8151A	<b>Hold Date/Time(s)</b> 11/17/09	<b>Prep Date/Time(s)</b> 12/23/09	<b>Analysis Date/Time(s)</b> 11/13/09 19:42

<b>Client ID:</b> J0905605-004 (L-4)	<b>Lab ID:</b> A905639-04	<b>Sampled:</b> 11/10/09 12:40	<b>Received:</b> 11/13/09 08:00
<b>Parameter</b> EPA 8151A	<b>Hold Date/Time(s)</b> 11/17/09	<b>Prep Date/Time(s)</b> 12/23/09	<b>Analysis Date/Time(s)</b> 11/13/09 19:42

<b>Client ID:</b> J0905605-005 (L-5)	<b>Lab ID:</b> A905639-05	<b>Sampled:</b> 11/10/09 11:20	<b>Received:</b> 11/13/09 08:00
<b>Parameter</b> EPA 8151A	<b>Hold Date/Time(s)</b> 11/17/09	<b>Prep Date/Time(s)</b> 12/23/09	<b>Analysis Date/Time(s)</b> 11/13/09 19:42

<b>Client ID:</b> J0905605-006 (L-6)	<b>Lab ID:</b> A905639-06	<b>Sampled:</b> 11/10/09 15:30	<b>Received:</b> 11/13/09 08:00
<b>Parameter</b> EPA 8151A	<b>Hold Date/Time(s)</b> 11/17/09	<b>Prep Date/Time(s)</b> 12/23/09	<b>Analysis Date/Time(s)</b> 11/13/09 19:42



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**SAMPLE DETECTION SUMMARY**

**No positive results detected.**



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### ANALYTICAL RESULTS

Description: J0905605-001 (L-1)

Lab Sample ID: A905639-01

Received: 11/13/09 08:00

Matrix: Water

Sampled: 11/10/09 14:00

Work Order: A905639

Project: J0905605

Sampled By:

#### Chlorinated Herbicides by GC

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
2,4,5-T [93-76-5] ^	0.053	U	ug/L	1	0.053	0.50	9K13029	EPA 8151A	11/17/09 20:19	JJB	
2,4,5-TP (Silvex) [93-72-1] ^	0.056	U	ug/L	1	0.056	0.50	9K13029	EPA 8151A	11/17/09 20:19	JJB	
2,4-D [94-75-7] ^	0.091	U	ug/L	1	0.091	0.50	9K13029	EPA 8151A	11/17/09 20:19	JJB	
Dinoseb [88-85-7] ^	0.28	U	ug/L	1	0.28	0.50	9K13029	EPA 8151A	11/17/09 20:19	JJB	
Pentachlorophenol [87-86-5] ^	0.043	U	ug/L	1	0.043	0.50	9K13029	EPA 8151A	11/17/09 20:19	JJB	
<b>Surrogates</b>	<b>Results</b>	<b>DF</b>	<b>Spike Lvl</b>	<b>% Rec</b>	<b>% Rec Limits</b>	<b>Batch</b>	<b>Method</b>	<b>Analyzed</b>	<b>By</b>	<b>Notes</b>	
2,4-DCAA	2.3	1	2.00	115 %	68-139	9K13029	EPA 8151A	11/17/09 20:19	JJB		

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.



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Description: J0905605-002 (L-2)

Lab Sample ID: A905639-02

Received: 11/13/09 08:00

Matrix: Water

Sampled: 11/10/09 13:55

Work Order: A905639

Project: J0905605

Sampled By:

Chlorinated Herbicides by GC

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
2,4,5-T [93-76-5] ^	0.053	U	ug/L	1	0.053	0.50	9K13029	EPA 8151A	11/17/09 20:43	JJB	
2,4,5-TP (Silvex) [93-72-1] ^	0.056	U	ug/L	1	0.056	0.50	9K13029	EPA 8151A	11/17/09 20:43	JJB	
2,4-D [94-75-7] ^	0.091	U	ug/L	1	0.091	0.50	9K13029	EPA 8151A	11/17/09 20:43	JJB	
Dinoseb [88-85-7] ^	0.28	U	ug/L	1	0.28	0.50	9K13029	EPA 8151A	11/17/09 20:43	JJB	
Pentachlorophenol [87-86-5] ^	0.043	U	ug/L	1	0.043	0.50	9K13029	EPA 8151A	11/17/09 20:43	JJB	

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
2,4-DCAA	1.6	1	2.00	81 %	68-139	9K13029	EPA 8151A	11/17/09 20:43	JJB	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.



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Description: J0905605-003 (L-3)

Lab Sample ID: A905639-03

Received: 11/13/09 08:00

Matrix: Water

Sampled: 11/10/09 15:00

Work Order: A905639

Project: J0905605

Sampled By:

**Chlorinated Herbicides by GC**

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
2,4,5-T [93-76-5] ^	0.053	U	ug/L	1	0.053	0.50	9K13029	EPA 8151A	11/17/09 21:07	JJB	
2,4,5-TP (Silvex) [93-72-1] ^	0.056	U	ug/L	1	0.056	0.50	9K13029	EPA 8151A	11/17/09 21:07	JJB	
2,4-D [94-75-7] ^	0.091	U	ug/L	1	0.091	0.50	9K13029	EPA 8151A	11/17/09 21:07	JJB	
Dinoseb [88-85-7] ^	0.28	U	ug/L	1	0.28	0.50	9K13029	EPA 8151A	11/17/09 21:07	JJB	
Pentachlorophenol [87-86-5] ^	0.043	U	ug/L	1	0.043	0.50	9K13029	EPA 8151A	11/17/09 21:07	JJB	

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
2,4-DCAA	3.0	1	2.00	152 %	68-139	9K13029	EPA 8151A	11/17/09 21:07	JJB	QS-06

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.



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Description: J0905605-004 (L-4)

Lab Sample ID: A905639-04

Received: 11/13/09 08:00

Matrix: Water

Sampled: 11/10/09 12:40

Work Order: A905639

Project: J0905605

Sampled By:

**Chlorinated Herbicides by GC**

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
2,4,5-T [93-76-5] ^	0.053	U	ug/L	1	0.053	0.50	9K13029	EPA 8151A	11/17/09 21:31	JJB	
2,4,5-TP (Silvex) [93-72-1] ^	0.056	U	ug/L	1	0.056	0.50	9K13029	EPA 8151A	11/17/09 21:31	JJB	
2,4-D [94-75-7] ^	0.091	U	ug/L	1	0.091	0.50	9K13029	EPA 8151A	11/17/09 21:31	JJB	
Dinoseb [88-85-7] ^	0.28	U	ug/L	1	0.28	0.50	9K13029	EPA 8151A	11/17/09 21:31	JJB	
Pentachlorophenol [87-86-5] ^	0.043	U	ug/L	1	0.043	0.50	9K13029	EPA 8151A	11/17/09 21:31	JJB	

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
2,4-DCAA	0.0	1	2.00	%	68-139	9K13029	EPA 8151A	11/17/09 21:31	JJB	QS-05

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.



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Description: J0905605-005 (L-5)

Lab Sample ID: A905639-05

Received: 11/13/09 08:00

Matrix: Water

Sampled: 11/10/09 11:20

Work Order: A905639

Project: J0905605

Sampled By:

**Chlorinated Herbicides by GC**

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
2,4,5-T [93-76-5] ^	0.053	U	ug/L	1	0.053	0.50	9K13029	EPA 8151A	11/17/09 21:55	JJB	
2,4,5-TP (Silvex) [93-72-1] ^	0.056	U	ug/L	1	0.056	0.50	9K13029	EPA 8151A	11/17/09 21:55	JJB	
2,4-D [94-75-7] ^	0.091	U	ug/L	1	0.091	0.50	9K13029	EPA 8151A	11/17/09 21:55	JJB	
Dinoseb [88-85-7] ^	0.28	U	ug/L	1	0.28	0.50	9K13029	EPA 8151A	11/17/09 21:55	JJB	
Pentachlorophenol [87-86-5] ^	0.043	U	ug/L	1	0.043	0.50	9K13029	EPA 8151A	11/17/09 21:55	JJB	

Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes
2,4-DCAA	2.4	1	2.00	118 %	68-139	9K13029	EPA 8151A	11/17/09 21:55	JJB	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.



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Description: J0905605-006 (L-6)

Lab Sample ID: A905639-06

Received: 11/13/09 08:00

Matrix: Water

Sampled: 11/10/09 15:30

Work Order: A905639

Project: J0905605

Sampled By:

Chlorinated Herbicides by GC

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
2,4,5-T [93-76-5] ^	0.053	U	ug/L	1	0.053	0.50	9K13029	EPA 8151A	11/17/09 22:19	JJB	
2,4,5-TP (Silvex) [93-72-1] ^	0.056	U	ug/L	1	0.056	0.50	9K13029	EPA 8151A	11/17/09 22:19	JJB	
2,4-D [94-75-7] ^	0.091	U	ug/L	1	0.091	0.50	9K13029	EPA 8151A	11/17/09 22:19	JJB	
Dinoseb [88-85-7] ^	0.28	U	ug/L	1	0.28	0.50	9K13029	EPA 8151A	11/17/09 22:19	JJB	
Pentachlorophenol [87-86-5] ^	0.043	U	ug/L	1	0.043	0.50	9K13029	EPA 8151A	11/17/09 22:19	JJB	
Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes	
2,4-DCAA	2.2	1	2.00	110 %	68-139	9K13029	EPA 8151A	11/17/09 22:19	JJB		

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.





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**QUALITY CONTROL**

**Chlorinated Herbicides by GC - Quality Control**

Batch 9K13029 - EPA 3510C

**Blank (9K13029-BLK1)**

Prepared: 11/13/2009 19:42 Analyzed: 11/17/2009 14:19

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2,4,5-T	0.053	U	0.50	ug/L							
2,4,5-TP (Silvex)	0.056	U	0.50	ug/L							
2,4-D	0.091	U	0.50	ug/L							
Dinoseb	0.28	U	0.50	ug/L							
Pentachlorophenol	0.043	U	0.50	ug/L							
Surrogate: 2,4-DCAA	2.2			ug/L	2.00		109	68-139			

**LCS (9K13029-BS1)**

Prepared: 11/13/2009 19:42 Analyzed: 11/17/2009 15:31

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2,4,5-TP (Silvex)	2.7		0.50	ug/L	2.00		134	38-193			
2,4-D	2.8		0.50	ug/L	2.00		142	62-144			
Surrogate: 2,4-DCAA	2.4			ug/L	2.00		122	68-139			

**Matrix Spike (9K13029-MS1)**

Prepared: 11/13/2009 19:42 Analyzed: 11/17/2009 15:55

Source: A905520-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2,4,5-TP (Silvex)	2.6		0.50	ug/L	2.00	0.056 U	129	38-193			
2,4-D	2.6		0.50	ug/L	2.00	0.091 U	128	62-144			
Surrogate: 2,4-DCAA	2.3			ug/L	2.00		115	68-139			

**Matrix Spike Dup (9K13029-MSD1)**

Prepared: 11/13/2009 19:42 Analyzed: 11/17/2009 16:19

Source: A905520-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2,4,5-TP (Silvex)	2.4		0.50	ug/L	2.00	0.056 U	120	38-193	7	20	
2,4-D	2.4		0.50	ug/L	2.00	0.091 U	118	62-144	8	33	
Surrogate: 2,4-DCAA	2.2			ug/L	2.00		111	68-139			



**FLAGS/NOTES AND DEFINITIONS**

PQL	PQL: Practical Quantitation Limit.
B	Results are based upon membrane filter colony counts that are outside the method indicated ideal range.
I	The reported value is between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL).
J	Estimated value. The associated sample note or project narrative indicate the causative reason.
K	Off-scale low; Actual value is known to be less than the value given.
L	Off-scale high; Actual value is known to be greater than value given.
M	Presence of analyte is verified but not quantified; the actual value is less than the MRL but greater than the MDL.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed.
Q	Sample exceeded the accepted holding time.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only and shall not be used in statistical analysis.
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. The data may not be accurate.
Z	Too many colonies were present (TNTC); the numeric value represents the filtration volume.
?	Data are rejected and should not be used. Some or all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
*	Not reported due to interference.
QS-05	Surrogate recovery biased low and outside control limits due to suspected matrix effects, as evidenced by sample behavior during sample preparation (emulsion formation, excessive foaming).
QS-06	Surrogate recovery exceeded acceptance criteria due to the presence of a coeluting compound. This is a confirmed matrix effect.



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Project Number: 2008605  
Project Manager: Craig Myers

Columbia Analytical Services, Inc. Chain of Custody  
9143 Highway 140, Highway 140, Anderson, SC 29625 • 803-238-2277 • FAX 803-239-2011

CAS Contract: Craig Myers

Lab Code	Sample ID	Ref Count	Matrix	Sample Date	Time	Lab ID
2008605-001	1-1	2	Water	11/10/09	1400	ENCO
2008605-002	1-2		Water	11/10/09	1355	ENCO
2008605-003	1-3		Water	11/10/09	1300	ENCO
2008605-004	1-4		Water	11/10/09	1240	ENCO
2008605-005	1-5		Water	11/10/09	1120	ENCO
2008605-006	1-6		Water	11/10/09	1580	ENCO

Test Comments  
HERD - 8131A

2008605-001, 2, 3, 4, 5, 6

Report Appendix II List  
Send to ENCO Lab

Special Instructions/Comments

PLEASE SEND  
RESULTS TO  
MANDY SULLIVAN

**Turnaround Requirements**

RUSH (charges apply)

PLEASE CIRCLE WORK DAYS  
1 2 3 4 5  
STANDARD

Requested FAX Date: \_\_\_\_\_  
Requested Report Date: 11/23/09

**Report Requirements**

I Results Only

II Results + QC Summaries

III Results + QC and Calibration Summaries

IV Data Validation Report with Raw Data

POI/MIDI: X  
EPO: X

**Invoice Information**

2008605

2008605

ENCO

Requested by: Craig Myers 11/10/09 Received by: Craig Myers 11/10/09

Address: 9143 Highway 140 Anderson SC 29625 Analyst Number: \_\_\_\_\_

CAS 22 LG 61030

December 28, 2009

Service Request No: J0906369

Kirk Wills  
GeoSyntec Consultants  
14055 Riveredge Drive  
Suite 300  
Tampa, FL 33637

**Laboratory Results for: JED SWDF/FQ1512A.03**

Dear Kirk:

Enclosed are the results of the sample(s) submitted to our laboratory on December 23, 2009. For your reference, these analyses have been assigned our service request number **J0906369**.

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.

Please contact me 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 Manager

Page 1 of 21

COLUMBIA ANALYTICAL SERVICES, INC.

Client: GeoSyntec Consultants  
Project: JED SWDF  
Sample Matrix: Water

Service Request No.: J0906369  
Date Received: 12/23/09

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 12/23/09. 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.

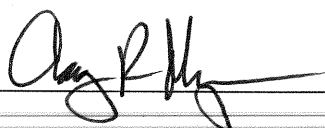
Volatile Organic Compounds by GC-MS

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 cis-1,3-Dichloropropene, trans-1,3-Dichloropropene and Styrene for sample MW-8A 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.

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



Date \_\_\_\_\_

12/28/09

## 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 SWDF/FQ1512A.03

**Service Request:** J0906369

**SAMPLE CROSS-REFERENCE**

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J0906369-001	MW-8A	12/22/09	12:45
J0906369-002	MW-9A	12/22/09	12:32
J0906369-003	Trip Blank	12/22/09	00:00



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.03  
 Sample Matrix: Water

Service Request: J0906369  
 Date Collected: 12/22/2009  
 Date Received: 12/23/2009

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-8A  
 Lab Code: J0906369-001  
 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	12/28/09	12/28/09	JWG0904361	
Vinyl Chloride	ND	U	1.0	0.25	1	12/28/09	12/28/09	JWG0904361	
Bromomethane	ND	U	1.0	0.14	1	12/28/09	12/28/09	JWG0904361	
Chloroethane	ND	U	5.0	0.19	1	12/28/09	12/28/09	JWG0904361	
Trichlorofluoromethane	ND	U	20	0.25	1	12/28/09	12/28/09	JWG0904361	
1,1-Dichloroethene	ND	U	1.0	0.16	1	12/28/09	12/28/09	JWG0904361	
Acetone	ND	U	50	2.4	1	12/28/09	12/28/09	JWG0904361	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	12/28/09	12/28/09	JWG0904361	
Carbon Disulfide	ND	U	10	0.84	1	12/28/09	12/28/09	JWG0904361	
Methylene Chloride	ND	U	5.0	0.72	1	12/28/09	12/28/09	JWG0904361	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	12/28/09	12/28/09	JWG0904361	
Acrylonitrile	ND	U	10	0.59	1	12/28/09	12/28/09	JWG0904361	
1,1-Dichloroethane	ND	U	1.0	0.56	1	12/28/09	12/28/09	JWG0904361	
Vinyl Acetate	ND	U	10	0.60	1	12/28/09	12/28/09	JWG0904361	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	12/28/09	12/28/09	JWG0904361	
2-Butanone (MEK)	ND	U	10	0.56	1	12/28/09	12/28/09	JWG0904361	
Bromochloromethane	ND	U	5.0	0.14	1	12/28/09	12/28/09	JWG0904361	
Chloroform	ND	U	1.0	0.10	1	12/28/09	12/28/09	JWG0904361	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	12/28/09	12/28/09	JWG0904361	
Carbon Tetrachloride	ND	U	1.0	0.18	1	12/28/09	12/28/09	JWG0904361	
Benzene	ND	U	1.0	0.52	1	12/28/09	12/28/09	JWG0904361	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	12/28/09	12/28/09	JWG0904361	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	12/28/09	12/28/09	JWG0904361	
1,2-Dichloropropane	ND	U	1.0	0.057	1	12/28/09	12/28/09	JWG0904361	
Dibromomethane	ND	U	5.0	0.12	1	12/28/09	12/28/09	JWG0904361	
Bromodichloromethane	ND	U	1.0	0.10	1	12/28/09	12/28/09	JWG0904361	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	12/28/09	12/28/09	JWG0904361	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	12/28/09	12/28/09	JWG0904361	
Toluene	ND	U	1.0	0.52	1	12/28/09	12/28/09	JWG0904361	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	12/28/09	12/28/09	JWG0904361	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	12/28/09	12/28/09	JWG0904361	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	12/28/09	12/28/09	JWG0904361	
2-Hexanone	ND	U	25	0.36	1	12/28/09	12/28/09	JWG0904361	
Dibromochloromethane	ND	U	1.0	0.11	1	12/28/09	12/28/09	JWG0904361	

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.03  
 Sample Matrix: Water

Service Request: J0906369  
 Date Collected: 12/22/2009  
 Date Received: 12/23/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-8A  
 Lab Code: J0906369-001  
 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	12/28/09	12/28/09	JWG0904361	
Chlorobenzene	ND	U	1.0	0.15	1	12/28/09	12/28/09	JWG0904361	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	12/28/09	12/28/09	JWG0904361	
Ethylbenzene	ND	U	1.0	0.10	1	12/28/09	12/28/09	JWG0904361	
m,p-Xylenes	ND	U	2.0	0.22	1	12/28/09	12/28/09	JWG0904361	
o-Xylene	ND	U	1.0	0.10	1	12/28/09	12/28/09	JWG0904361	
Styrene	ND	U	1.0	0.051	1	12/28/09	12/28/09	JWG0904361	
Bromoform	ND	U	2.0	0.12	1	12/28/09	12/28/09	JWG0904361	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	12/28/09	12/28/09	JWG0904361	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	12/28/09	12/28/09	JWG0904361	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	12/28/09	12/28/09	JWG0904361	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	12/28/09	12/28/09	JWG0904361	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	12/28/09	12/28/09	JWG0904361	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	12/28/09	12/28/09	JWG0904361	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	100	71-122	12/28/09	Acceptable
4-Bromofluorobenzene	103	75-120	12/28/09	Acceptable
Dibromofluoromethane	94	82-116	12/28/09	Acceptable
Toluene-d8	95	88-117	12/28/09	Acceptable

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

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.03  
 Sample Matrix: Water

Service Request: J0906369  
 Date Collected: 12/22/2009  
 Date Received: 12/23/2009

## Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-9A  
 Lab Code: J0906369-002  
 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	12/28/09	12/28/09	JWG0904361	
<b>Vinyl Chloride</b>	<b>1.4</b>		1.0	0.25	1	12/28/09	12/28/09	JWG0904361	
Bromomethane	ND	U	1.0	0.14	1	12/28/09	12/28/09	JWG0904361	
Chloroethane	ND	U	5.0	0.19	1	12/28/09	12/28/09	JWG0904361	
Trichlorofluoromethane	ND	U	20	0.25	1	12/28/09	12/28/09	JWG0904361	
1,1-Dichloroethene	ND	U	1.0	0.16	1	12/28/09	12/28/09	JWG0904361	
Acetone	ND	U	50	2.4	1	12/28/09	12/28/09	JWG0904361	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	12/28/09	12/28/09	JWG0904361	
Carbon Disulfide	ND	U	10	0.84	1	12/28/09	12/28/09	JWG0904361	
Methylene Chloride	ND	U	5.0	0.72	1	12/28/09	12/28/09	JWG0904361	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	12/28/09	12/28/09	JWG0904361	
Acrylonitrile	ND	U	10	0.59	1	12/28/09	12/28/09	JWG0904361	
1,1-Dichloroethane	ND	U	1.0	0.56	1	12/28/09	12/28/09	JWG0904361	
Vinyl Acetate	ND	U	10	0.60	1	12/28/09	12/28/09	JWG0904361	
<b>cis-1,2-Dichloroethene</b>	<b>1.5</b>		1.0	0.12	1	12/28/09	12/28/09	JWG0904361	
2-Butanone (MEK)	ND	U	10	0.56	1	12/28/09	12/28/09	JWG0904361	
Bromochloromethane	ND	U	5.0	0.14	1	12/28/09	12/28/09	JWG0904361	
Chloroform	ND	U	1.0	0.10	1	12/28/09	12/28/09	JWG0904361	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	12/28/09	12/28/09	JWG0904361	
Carbon Tetrachloride	ND	U	1.0	0.18	1	12/28/09	12/28/09	JWG0904361	
<b>Benzene</b>	<b>9.6</b>		1.0	0.52	1	12/28/09	12/28/09	JWG0904361	
<b>1,2-Dichloroethane (EDC)</b>	<b>0.86</b>	<b>I</b>	1.0	0.15	1	12/28/09	12/28/09	JWG0904361	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	12/28/09	12/28/09	JWG0904361	
1,2-Dichloropropane	ND	U	1.0	0.057	1	12/28/09	12/28/09	JWG0904361	
Dibromomethane	ND	U	5.0	0.12	1	12/28/09	12/28/09	JWG0904361	
Bromodichloromethane	ND	U	1.0	0.10	1	12/28/09	12/28/09	JWG0904361	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	12/28/09	12/28/09	JWG0904361	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	12/28/09	12/28/09	JWG0904361	
<b>Toluene</b>	<b>0.72</b>	<b>I</b>	1.0	0.52	1	12/28/09	12/28/09	JWG0904361	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	12/28/09	12/28/09	JWG0904361	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	12/28/09	12/28/09	JWG0904361	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	12/28/09	12/28/09	JWG0904361	
2-Hexanone	ND	U	25	0.36	1	12/28/09	12/28/09	JWG0904361	
Dibromochloromethane	ND	U	1.0	0.11	1	12/28/09	12/28/09	JWG0904361	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.03  
 Sample Matrix: Water

Service Request: J0906369  
 Date Collected: 12/22/2009  
 Date Received: 12/23/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-9A  
 Lab Code: J0906369-002  
 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	12/28/09	12/28/09	JWG0904361	
Chlorobenzene	ND U	1.0	0.15	1	12/28/09	12/28/09	JWG0904361	
1,1,1,2-Tetrachloroethane	ND U	1.0	0.10	1	12/28/09	12/28/09	JWG0904361	
Ethylbenzene	1.0	1.0	0.10	1	12/28/09	12/28/09	JWG0904361	
m,p-Xylenes	5.1	2.0	0.22	1	12/28/09	12/28/09	JWG0904361	
o-Xylene	2.5	1.0	0.10	1	12/28/09	12/28/09	JWG0904361	
Styrene	ND U	1.0	0.051	1	12/28/09	12/28/09	JWG0904361	
Bromoform	ND U	2.0	0.12	1	12/28/09	12/28/09	JWG0904361	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.15	1	12/28/09	12/28/09	JWG0904361	
1,2,3-Trichloropropane	ND U	2.0	0.16	1	12/28/09	12/28/09	JWG0904361	
1,4-Dichlorobenzene	1.5	1.0	0.14	1	12/28/09	12/28/09	JWG0904361	
trans-1,4-Dichloro-2-butene	ND U	20	1.1	1	12/28/09	12/28/09	JWG0904361	
1,2-Dichlorobenzene	ND U	1.0	0.17	1	12/28/09	12/28/09	JWG0904361	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	5.0	0.26	1	12/28/09	12/28/09	JWG0904361	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	103	71-122	12/28/09	Acceptable
4-Bromofluorobenzene	110	75-120	12/28/09	Acceptable
Dibromofluoromethane	93	82-116	12/28/09	Acceptable
Toluene-d8	94	88-117	12/28/09	Acceptable

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.03  
 Sample Matrix: Water

Service Request: J0906369  
 Date Collected: 12/22/2009  
 Date Received: 12/23/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Trip Blank  
 Lab Code: J0906369-003  
 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	0.17	1	12/28/09	12/28/09	JWG0904361	
Vinyl Chloride	ND	U	1.0	0.25	1	12/28/09	12/28/09	JWG0904361	
Bromomethane	ND	U	1.0	0.14	1	12/28/09	12/28/09	JWG0904361	
Chloroethane	ND	U	5.0	0.19	1	12/28/09	12/28/09	JWG0904361	
Trichlorofluoromethane	ND	U	20	0.25	1	12/28/09	12/28/09	JWG0904361	
1,1-Dichloroethene	ND	U	1.0	0.16	1	12/28/09	12/28/09	JWG0904361	
Acetone	ND	U	50	2.4	1	12/28/09	12/28/09	JWG0904361	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	12/28/09	12/28/09	JWG0904361	
Carbon Disulfide	ND	U	10	0.84	1	12/28/09	12/28/09	JWG0904361	
Methylene Chloride	ND	U	5.0	0.72	1	12/28/09	12/28/09	JWG0904361	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	12/28/09	12/28/09	JWG0904361	
Acrylonitrile	ND	U	10	0.59	1	12/28/09	12/28/09	JWG0904361	
1,1-Dichloroethane	ND	U	1.0	0.56	1	12/28/09	12/28/09	JWG0904361	
Vinyl Acetate	ND	U	10	0.60	1	12/28/09	12/28/09	JWG0904361	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	12/28/09	12/28/09	JWG0904361	
2-Butanone (MEK)	ND	U	10	0.56	1	12/28/09	12/28/09	JWG0904361	
Bromochloromethane	ND	U	5.0	0.14	1	12/28/09	12/28/09	JWG0904361	
Chloroform	ND	U	1.0	0.10	1	12/28/09	12/28/09	JWG0904361	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	12/28/09	12/28/09	JWG0904361	
Carbon Tetrachloride	ND	U	1.0	0.18	1	12/28/09	12/28/09	JWG0904361	
Benzene	ND	U	1.0	0.52	1	12/28/09	12/28/09	JWG0904361	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	12/28/09	12/28/09	JWG0904361	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	12/28/09	12/28/09	JWG0904361	
1,2-Dichloropropane	ND	U	1.0	0.057	1	12/28/09	12/28/09	JWG0904361	
Dibromomethane	ND	U	5.0	0.12	1	12/28/09	12/28/09	JWG0904361	
Bromodichloromethane	ND	U	1.0	0.10	1	12/28/09	12/28/09	JWG0904361	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	12/28/09	12/28/09	JWG0904361	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	12/28/09	12/28/09	JWG0904361	
Toluene	ND	U	1.0	0.52	1	12/28/09	12/28/09	JWG0904361	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	12/28/09	12/28/09	JWG0904361	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	12/28/09	12/28/09	JWG0904361	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	12/28/09	12/28/09	JWG0904361	
2-Hexanone	ND	U	25	0.36	1	12/28/09	12/28/09	JWG0904361	
Dibromochloromethane	ND	U	1.0	0.11	1	12/28/09	12/28/09	JWG0904361	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.03  
 Sample Matrix: Water

Service Request: J0906369  
 Date Collected: 12/22/2009  
 Date Received: 12/23/2009

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Trip Blank  
 Lab Code: J0906369-003  
 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	0.18	1	12/28/09	12/28/09	JWG0904361	
Chlorobenzene	ND	U	1.0	0.15	1	12/28/09	12/28/09	JWG0904361	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	12/28/09	12/28/09	JWG0904361	
Ethylbenzene	ND	U	1.0	0.10	1	12/28/09	12/28/09	JWG0904361	
m,p-Xylenes	ND	U	2.0	0.22	1	12/28/09	12/28/09	JWG0904361	
o-Xylene	ND	U	1.0	0.10	1	12/28/09	12/28/09	JWG0904361	
Styrene	ND	U	1.0	0.051	1	12/28/09	12/28/09	JWG0904361	
Bromoform	ND	U	2.0	0.12	1	12/28/09	12/28/09	JWG0904361	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	12/28/09	12/28/09	JWG0904361	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	12/28/09	12/28/09	JWG0904361	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	12/28/09	12/28/09	JWG0904361	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	12/28/09	12/28/09	JWG0904361	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	12/28/09	12/28/09	JWG0904361	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	12/28/09	12/28/09	JWG0904361	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	106	71-122	12/28/09	Acceptable
4-Bromofluorobenzene	106	75-120	12/28/09	Acceptable
Dibromofluoromethane	94	82-116	12/28/09	Acceptable
Toluene-d8	97	88-117	12/28/09	Acceptable

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.03  
 Sample Matrix: Water

Service Request: J0906369  
 Date Collected: NA  
 Date Received: NA

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Method Blank  
 Lab Code: JWG0904361-4  
 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	12/27/09	12/27/09	JWG0904361	
Vinyl Chloride	ND	U	1.0	0.25	1	12/27/09	12/27/09	JWG0904361	
Bromomethane	ND	U	1.0	0.14	1	12/27/09	12/27/09	JWG0904361	
Chloroethane	ND	U	5.0	0.19	1	12/27/09	12/27/09	JWG0904361	
Trichlorofluoromethane	ND	U	20	0.25	1	12/27/09	12/27/09	JWG0904361	
1,1-Dichloroethene	ND	U	1.0	0.16	1	12/27/09	12/27/09	JWG0904361	
Acetone	ND	U	50	2.4	1	12/27/09	12/27/09	JWG0904361	
Iodomethane (Methyl Iodide)	ND	U	5.0	2.5	1	12/27/09	12/27/09	JWG0904361	
Carbon Disulfide	ND	U	10	0.84	1	12/27/09	12/27/09	JWG0904361	
Methylene Chloride	ND	U	5.0	0.72	1	12/27/09	12/27/09	JWG0904361	
trans-1,2-Dichloroethene	ND	U	1.0	0.13	1	12/27/09	12/27/09	JWG0904361	
Acrylonitrile	ND	U	10	0.59	1	12/27/09	12/27/09	JWG0904361	
1,1-Dichloroethane	ND	U	1.0	0.56	1	12/27/09	12/27/09	JWG0904361	
Vinyl Acetate	ND	U	10	0.60	1	12/27/09	12/27/09	JWG0904361	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	12/27/09	12/27/09	JWG0904361	
2-Butanone (MEK)	ND	U	10	0.56	1	12/27/09	12/27/09	JWG0904361	
Bromochloromethane	ND	U	5.0	0.14	1	12/27/09	12/27/09	JWG0904361	
Chloroform	ND	U	1.0	0.10	1	12/27/09	12/27/09	JWG0904361	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.21	1	12/27/09	12/27/09	JWG0904361	
Carbon Tetrachloride	ND	U	1.0	0.18	1	12/27/09	12/27/09	JWG0904361	
Benzene	ND	U	1.0	0.52	1	12/27/09	12/27/09	JWG0904361	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.15	1	12/27/09	12/27/09	JWG0904361	
Trichloroethene (TCE)	ND	U	1.0	0.15	1	12/27/09	12/27/09	JWG0904361	
1,2-Dichloropropane	ND	U	1.0	0.057	1	12/27/09	12/27/09	JWG0904361	
Dibromomethane	ND	U	5.0	0.12	1	12/27/09	12/27/09	JWG0904361	
Bromodichloromethane	ND	U	1.0	0.10	1	12/27/09	12/27/09	JWG0904361	
cis-1,3-Dichloropropene	ND	U	1.0	0.12	1	12/27/09	12/27/09	JWG0904361	
4-Methyl-2-pentanone (MIBK)	ND	U	25	0.37	1	12/27/09	12/27/09	JWG0904361	
Toluene	ND	U	1.0	0.52	1	12/27/09	12/27/09	JWG0904361	
trans-1,3-Dichloropropene	ND	U	1.0	0.12	1	12/27/09	12/27/09	JWG0904361	
1,1,2-Trichloroethane	ND	U	1.0	0.21	1	12/27/09	12/27/09	JWG0904361	
Tetrachloroethene (PCE)	ND	U	1.0	0.22	1	12/27/09	12/27/09	JWG0904361	
2-Hexanone	ND	U	25	0.36	1	12/27/09	12/27/09	JWG0904361	
Dibromochloromethane	ND	U	1.0	0.11	1	12/27/09	12/27/09	JWG0904361	

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.03  
 Sample Matrix: Water

Service Request: J0906369  
 Date Collected: NA  
 Date Received: NA

Appendix I Volatile Organic Compounds by GC/MS

Sample Name: Method Blank  
 Lab Code: JWG0904361-4  
 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	12/27/09	12/27/09	JWG0904361	
Chlorobenzene	ND	U	1.0	0.15	1	12/27/09	12/27/09	JWG0904361	
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.10	1	12/27/09	12/27/09	JWG0904361	
Ethylbenzene	ND	U	1.0	0.10	1	12/27/09	12/27/09	JWG0904361	
m,p-Xylenes	ND	U	2.0	0.22	1	12/27/09	12/27/09	JWG0904361	
o-Xylene	ND	U	1.0	0.10	1	12/27/09	12/27/09	JWG0904361	
Styrene	ND	U	1.0	0.051	1	12/27/09	12/27/09	JWG0904361	
Bromoform	ND	U	2.0	0.12	1	12/27/09	12/27/09	JWG0904361	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.15	1	12/27/09	12/27/09	JWG0904361	
1,2,3-Trichloropropane	ND	U	2.0	0.16	1	12/27/09	12/27/09	JWG0904361	
1,4-Dichlorobenzene	ND	U	1.0	0.14	1	12/27/09	12/27/09	JWG0904361	
trans-1,4-Dichloro-2-butene	ND	U	20	1.1	1	12/27/09	12/27/09	JWG0904361	
1,2-Dichlorobenzene	ND	U	1.0	0.17	1	12/27/09	12/27/09	JWG0904361	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	5.0	0.26	1	12/27/09	12/27/09	JWG0904361	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,2-Dichloroethane-d4	104	71-122	12/27/09	Acceptable
4-Bromofluorobenzene	110	75-120	12/27/09	Acceptable
Dibromofluoromethane	97	82-116	12/27/09	Acceptable
Toluene-d8	105	88-117	12/27/09	Acceptable

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



COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.03  
 Sample Matrix: Water

Service Request: J0906369

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-8A	J0906369-001	100	103	94	95
MW-9A	J0906369-002	103	110	93	94
Trip Blank	J0906369-003	106	106	94	97
Method Blank	JWG0904361-4	104	110	97	105
MW-8AMS	JWG0904361-1	95	103	89	92
MW-8ADMS	JWG0904361-2	99	112	92	97
Lab Control Sample	JWG0904361-3	95	111	97	99

Surrogate Recovery Control Limits (%)

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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 SWDF/FQ1512A.03  
 Sample Matrix: Water

Service Request: J0906369  
 Date Extracted: 12/28/2009  
 Date Analyzed: 12/28/2009

Matrix Spike/Duplicate Matrix Spike Summary  
 Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-8A  
 Lab Code: J0906369-001  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0904361

Analyte Name	Sample Result	MW-8AMS JWG0904361-1 Matrix Spike			MW-8ADMS JWG0904361-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Chloromethane	ND	20.3	20.0	102	21.1	20.0	105	73-139	4	30
Vinyl Chloride	ND	21.1	20.0	106	20.6	20.0	103	78-141	3	30
Bromomethane	ND	19.0	20.0	95	18.5	20.0	93	78-129	2	30
Chloroethane	ND	23.4	20.0	117	22.1	20.0	110	76-129	6	30
Trichlorofluoromethane	ND	23.8	20.0	119	22.7	20.0	113	81-133	5	30
1,1-Dichloroethene	ND	22.8	20.0	114	22.9	20.0	115	79-133	1	30
Acetone	ND	106	100	106	103	100	103	56-139	4	30
Iodomethane (Methyl Iodide)	ND	110	100	110	120	100	120	74-134	8	30
Carbon Disulfide	ND	114	100	114	108	100	108	71-146	6	30
Methylene Chloride	ND	18.0	20.0	90	17.9	20.0	90	75-123	0	30
trans-1,2-Dichloroethene	ND	21.2	20.0	106	20.6	20.0	103	76-125	3	30
Acrylonitrile	ND	94.2	100	94	93.0	100	93	68-131	1	30
1,1-Dichloroethane	ND	20.9	20.0	104	21.1	20.0	105	78-125	1	30
Vinyl Acetate	ND	58.7	100	59	56.3	100	56	43-163	4	30
cis-1,2-Dichloroethene	ND	19.4	20.0	97	19.5	20.0	98	75-127	1	30
2-Butanone (MEK)	ND	95.1	100	95	92.6	100	93	63-134	3	30
Bromochloromethane	ND	20.9	20.0	104	20.8	20.0	104	80-124	0	30
Chloroform	ND	20.2	20.0	101	21.2	20.0	106	81-124	5	30
1,1,1-Trichloroethane (TCA)	ND	21.9	20.0	110	22.1	20.0	110	76-130	1	30
Carbon Tetrachloride	ND	22.4	20.0	112	21.6	20.0	108	76-131	3	30
Benzene	ND	20.8	20.0	104	20.4	20.0	102	78-123	2	30
1,2-Dichloroethane (EDC)	ND	21.1	20.0	106	20.4	20.0	102	74-126	3	30
Trichloroethene (TCE)	ND	20.8	20.0	104	20.9	20.0	104	77-128	0	30
1,2-Dichloropropane	ND	20.2	20.0	101	19.8	20.0	99	77-122	2	30
Dibromomethane	ND	20.7	20.0	104	20.3	20.0	101	78-124	2	30
Bromodichloromethane	ND	20.4	20.0	102	19.7	20.0	99	79-125	4	30
cis-1,3-Dichloropropene	ND	13.4	20.0	67 *	13.7	20.0	68 *	77-117	2	30
4-Methyl-2-pentanone (MIBK)	ND	97.3	100	97	91.1	100	91	65-138	7	30
Toluene	ND	20.0	20.0	100	19.0	20.0	95	86-119	5	30
trans-1,3-Dichloropropene	ND	14.1	20.0	70 *	14.1	20.0	70 *	75-120	0	30
1,1,2-Trichloroethane	ND	20.2	20.0	101	18.8	20.0	94	77-124	7	30
Tetrachloroethene (PCE)	ND	19.6	20.0	98	18.8	20.0	94	79-123	4	30
2-Hexanone	ND	95.2	100	95	87.4	100	87	63-142	9	30
Dibromochloromethane	ND	20.1	20.0	101	18.6	20.0	93	78-124	8	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 SWDF/FQ1512A.03  
 Sample Matrix: Water

Service Request: J0906369  
 Date Extracted: 12/28/2009  
 Date Analyzed: 12/28/2009

Matrix Spike/Duplicate Matrix Spike Summary  
 Appendix I Volatile Organic Compounds by GC/MS

Sample Name: MW-8A  
 Lab Code: J0906369-001  
 Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: JWG0904361

Analyte Name	Sample Result	MW-8AMS JWG0904361-1 Matrix Spike			MW-8ADMS JWG0904361-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
1,2-Dibromoethane (EDB)	ND	18.9	20.0	94	19.4	20.0	97	81-119	3	30
Chlorobenzene	ND	19.4	20.0	97	18.7	20.0	94	81-120	3	30
1,1,1,2-Tetrachloroethane	ND	20.1	20.0	101	20.1	20.0	100	82-118	0	30
Ethylbenzene	ND	20.7	20.0	104	20.3	20.0	102	87-122	2	30
m,p-Xylenes	ND	39.1	40.0	98	38.6	40.0	97	82-120	1	30
o-Xylene	ND	19.5	20.0	98	19.3	20.0	97	85-119	1	30
Styrene	ND	17.9	20.0	90	16.1	20.0	81 *	84-126	11	30
Bromoform	ND	17.1	20.0	86	17.3	20.0	87	70-129	1	30
1,1,2,2-Tetrachloroethane	ND	18.6	20.0	93	17.7	20.0	89	72-127	5	30
1,2,3-Trichloropropane	ND	19.1	20.0	96	19.0	20.0	95	76-123	0	30
1,4-Dichlorobenzene	ND	18.4	20.0	92	19.5	20.0	97	75-115	6	30
trans-1,4-Dichloro-2-butene	ND	7.07	20.0	35	8.26	20.0	41	22-135	16	30
1,2-Dichlorobenzene	ND	19.0	20.0	95	19.2	20.0	96	77-116	1	30
1,2-Dibromo-3-chloropropane (DBCP)	ND	15.2	20.0	76	18.5	20.0	92	54-120	19	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 SWDF/FQ1512A.03  
 Sample Matrix: Water

Service Request: J0906369  
 Date Extracted: 12/27/2009  
 Date Analyzed: 12/27/2009

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: JWG0904361

Lab Control Sample  
 JWG0904361-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Chloromethane	19.4	20.0	97	67-135
Vinyl Chloride	20.9	20.0	105	78-132
Bromomethane	23.5	20.0	118	79-130
Chloroethane	22.4	20.0	112	74-126
Trichlorofluoromethane	24.1	20.0	120	74-134
1,1-Dichloroethene	23.8	20.0	119	78-130
Acetone	108	100	108	67-133
Iodomethane (Methyl Iodide)	114	100	114	68-134
Carbon Disulfide	103	100	103	76-138
Methylene Chloride	19.4	20.0	97	72-124
trans-1,2-Dichloroethene	21.7	20.0	109	77-124
Acrylonitrile	94.7	100	95	77-127
1,1-Dichloroethane	20.9	20.0	104	80-128
Vinyl Acetate	98.5	100	99	61-148
cis-1,2-Dichloroethene	20.8	20.0	104	80-126
2-Butanone (MEK)	100	100	100	73-127
Bromochloromethane	21.4	20.0	107	79-129
Chloroform	22.1	20.0	110	83-124
1,1,1-Trichloroethane (TCA)	22.8	20.0	114	79-124
Carbon Tetrachloride	22.5	20.0	112	81-125
Benzene	20.8	20.0	104	79-119
1,2-Dichloroethane (EDC)	21.5	20.0	107	80-124
Trichloroethene (TCE)	21.7	20.0	109	76-124
1,2-Dichloropropane	20.2	20.0	101	79-123
Dibromomethane	20.4	20.0	102	83-123
Bromodichloromethane	20.7	20.0	104	81-123
cis-1,3-Dichloropropene	19.9	20.0	100	86-123
4-Methyl-2-pentanone (MIBK)	98.2	100	98	72-136
Toluene	20.1	20.0	100	86-117
trans-1,3-Dichloropropene	20.8	20.0	104	83-124
1,1,2-Trichloroethane	19.5	20.0	97	86-114
Tetrachloroethene (PCE)	20.2	20.0	101	80-121
2-Hexanone	95.6	100	96	71-138
Dibromochloromethane	19.5	20.0	97	82-121
1,2-Dibromoethane (EDB)	19.0	20.0	95	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.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoSyntec Consultants  
 Project: JED SWDF/FQ1512A.03  
 Sample Matrix: Water

Service Request: J0906369  
 Date Extracted: 12/27/2009  
 Date Analyzed: 12/27/2009

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: JWG0904361

Lab Control Sample  
 JWG0904361-3  
 Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	21.2	20.0	106	85-117
Ethylbenzene	20.8	20.0	104	90-118
m,p-Xylenes	41.4	40.0	104	86-121
o-Xylene	20.7	20.0	103	89-119
Styrene	19.5	20.0	97	89-122
Bromoform	18.9	20.0	95	68-129
1,1,2,2-Tetrachloroethane	18.4	20.0	92	83-120
1,2,3-Trichloropropane	21.0	20.0	105	83-123
1,4-Dichlorobenzene	21.7	20.0	108	83-113
trans-1,4-Dichloro-2-butene	20.6	20.0	103	53-143
1,2-Dichlorobenzene	22.0	20.0	110	84-115
1,2-Dibromo-3-chloropropane (DBCP)	21.3	20.0	107	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 Form

Client: Geosyntec Service Request #: J0906369  
 Project: JED SWDF  
 Cooler received on 12-23-09 and opened on 12-23-09 SR  
 COURIER: CAS UPS FEDEX Client Other \_\_\_\_\_ Airbill # J2290589336

- |    |   |                                      |                          |                                      |
|----|---|--------------------------------------|--------------------------|--------------------------------------|
| 1  | Were custody seals on outside of cooler?                                      | <input checked="" type="radio"/> Yes | <input type="radio"/> No |                                      |
|    | If yes, how many and where?   | #: <u>1</u> on lid other             |                          |                                      |
| 2  | Were seals intact and signature and date correct?                             | <input checked="" type="radio"/> Yes | <input type="radio"/> No | N/A                                  |
| 3  | Were custody papers properly filled out?                                      | <input checked="" type="radio"/> Yes | <input type="radio"/> No | N/A                                  |
| 4  | Temperature of cooler(s) upon receipt (Should be 4 +/- 2 degrees C)           | <u>3.3</u>                           |                          |                                      |
| 5  | Thermometer ID  | <u>T116</u>                          |                          |                                      |
| 6  | Temperature Blank Present?  | <input checked="" type="radio"/> Yes | <input type="radio"/> No |                                      |
| 7  | Were Ice or Ice Packs present?  | <input checked="" type="radio"/> Ice | Ice Packs                | No                                   |
| 8  | Did all bottles arrive in good condition (unbroken, etc....)?                 | <input checked="" type="radio"/> Yes | <input type="radio"/> No | N/A                                  |
| 9  | Type of packing material present  | <u>bubble wrap</u>                   |                          |                                      |
| 10 | Were all bottle labels complete (sample ID, preservation, etc....)?           | <input checked="" type="radio"/> Yes | <input type="radio"/> No | N/A                                  |
| 11 | Did all bottle labels and tags agree with custody papers?                     | <input checked="" type="radio"/> Yes | <input type="radio"/> No | N/A                                  |
| 12 | Were the correct bottles used for the tests indicated?                        | <input checked="" type="radio"/> Yes | <input type="radio"/> No | N/A                                  |
| 13 | Were all of the preserved bottles received with the appropriate preservative? | Yes                                  | No                       | <input checked="" type="radio"/> N/A |
|    | HNO3 pH<2    H2SO4 pH<2    ZnAc2/NaOH pH>9    NaOH pH>12    HCl pH<2          | Preservative additions noted below   |                          |                                      |
| 14 | Were all samples received within analysis holding times?                      | <input checked="" type="radio"/> Yes | <input type="radio"/> No | N/A                                  |
| 15 | Were VOA vials checked for absence of air bubbles? If present, note below     | <input checked="" type="radio"/> Yes | <input type="radio"/> No | N/A                                  |
| 16 | Where did the bottles originate?  | <input checked="" type="radio"/> CAS | Client                   |                                      |

Sample ID	Reagent	Lot #	ml added	Initials Date/Time

Additional comments and/or explanation of all discrepancies noted above:

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# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

9143 Phillips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011 PAGE 1 OF 1

www.caslab.com

SR #

**70906369**

CAS Contact

Project Name <b>SED SWDF</b>		Project Number <b>FQ1512A.03</b>		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
Project Manager <b>Kirk Wills</b>		Email Address <b>kwillis@geosynke.com</b>		PRESERVATIVE	
Company/Address <b>Geosynke</b>		<b>141055 Riveredge Dr.</b>		NUMBER OF CONTAINERS	
<b>Tampa, FL 33637</b>		Ste 300		0260	
Phone # <b>813-558-0990</b>	FAX # <b>813-558-9726</b>	Sampler's Printed Name <b>Joe Terry</b>		REMARKS/ ALTERNATE DESCRIPTION	
Sampler's Signature <i>Joe Terry</i>		LAB ID		SAMPLING DATE	
CLIENT SAMPLE ID		SAMPLING TIME		MATRIX	
<b>MW-8A</b>		<b>12-22-09 1245</b>		<b>GW 3 3</b>	
<b>MW-9A</b>		<b>12-22-09 1252</b>		<b>GW 3 3</b>	
<b>Top Blank</b>		<b>12-17-09 1000</b>		<b>HPD 2 2</b>	
SPECIAL INSTRUCTIONS/COMMENTS		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 Edata <input type="checkbox"/> Yes <input type="checkbox"/> No	
INVOICE INFORMATION		REQUESTED FAX DATE		BILL TO:	
REQUESTED REPORT DATE		RECEIVED BY <i>[Signature]</i>		RELINQUISHED BY <i>[Signature]</i>	
CUSTODY SEALS: Y N		Signature		Signature	
RELINQUISHED BY		Printed Name		Printed Name	
Signature <i>Joe Terry</i>		Printed Name <b>Joe Terry</b>		Signature	
Printed Name <b>Joe Terry</b>		Firm <b>UPS</b>		Printed Name	
Firm <b>UPS</b>		Date/Time <b>12-22-09/1530</b>		Firm	
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