

## **Phase II Environmental Site Assessment Report**

---

**Main Street Properties APNs: 002-183-002, 002-182-006, 002-183-011;  
and,  
City Right-of-Way Surrounding the Old Railroad Maintenance Yard  
Carlin, Elko County, Nevada**

**Prepared For**

**City of Carlin  
101 South Main Street  
Carlin, NV 89822**

**February 4, 2014**

**Converse Project No. 08-73103-01**

**Prepared By**

**CONVERSE CONSULTANTS  
4840 Mill Street Suite 5  
Reno, Nevada  
(775) 856-3833**



## Converse Consultants

Geotechnical Engineering, Environmental and Groundwater Science, Inspection and Testing Services

February 4, 2014

Mr. Glenn Trust  
City Manager  
City of Carlin  
P.O. Box 787  
Carlin, Nevada 89822

**Reference: PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT**  
Main Street Properties  
APNs: 002-183-002, 002-182-006, 002-183-011; and  
City Right-of-Way Surrounding the Old Railroad Maintenance Yard  
Carlin, Elko County, Nevada  
Converse Project No. 08-73103-01-04

Dear Mr. Trust:

Converse Consultants is pleased to submit the attached report summarizing activities and results of a Phase II Environmental Site Assessment conducted at the above referenced properties.

Should you have any questions or comments regarding this report, please contact us. We appreciate the opportunity to have worked with you on this project.

### CONVERSE CONSULTANTS

Kathi Brandmueller, P.E., C.E.M.,  
Senior Engineer

Robert Gegenheimer, C.E.M.  
Principal

## Executive Summary

---

The following is an Executive Summary of the Phase II Environmental Site Assessment (ESA) conducted by Converse Consultants (Converse) as presented in the body of this report. Please refer to the appropriate sections of the report for a complete discussion of these issues. In the event of a conflict between this Executive Summary and the report, or an omission in the Executive Summary, the report shall take precedence.

This report presents the results of the Converse's Phase II ESA performed on several properties along Main Street (APNs: 002-183-002, 002-182-006, 002-183-011); and, the City of Carlin Right-of-Way (ROW) surrounding the historic Union Pacific Rail Road Yard (Yard), Carlin, Elko County, Nevada. This Phase II ESA was performed in conformance with the American Society for Testing Materials Standard E1903-11 and the Field Sampling Plan developed specifically for this work.

The Property is located adjacent to and/or up-gradient of the Yard. The Property is comprised of three rectangular-shaped parcels located along Main Street and the City ROW along the perimeter of the Yard. The City owns the ROW portion of the Property, which consists of an approximately a 10 foot wide easement, and is located between the paved roadways (Hamilton, Main, Railroad, Fourth, Seventh, and Tenth Streets) and railroad owned property. The ROW portion of the Property does not have an address or a parcel number since the county does not assign parcel numbers or addresses to government owned ROW. Two of the Property parcels, at 523 and 603 Main Street, consist of undeveloped City owned land. The parcel at 617 Main Street is owned by First & Main Street, LLC and consists of a vacant, dilapidated hotel built in the 1950s.

- On November 6 and 7, 2013, a GeoProbe direct push drilling rig was used to collect soil samples from fifteen borings. An attempt was made to advance each of the borings to groundwater. Refusal was encountered in borings B-3, B-8, B-12, and B-14 at depths between 6 and 7 feet below ground surface. Groundwater was encountered in the remaining borings. Soil samples were collected in each boring at approximate 5 foot intervals as conditions allowed. Groundwater was encountered in borings B-1, B-2, B-4, B-5, B-6, B-7, B-9, B-10, B-11, B-13, and B-15. Groundwater was encountered at depths ranging from 11 to 16 feet below ground surface. Samples were collected from these borings with the exception of B-10 which collapsed before a sample was able to be collected.
- Of the forty five soil samples collected, nineteen were selected for laboratory analyses based on the criteria outlined in the FSP. Soil samples were analyzed for: total petroleum hydrocarbon (TPH) by EPA Method 8015B; volatile organic compounds (VOCs) by EPA Method 8260B; semi-volatile organic compounds (SVOCs), by EPA Method 8270C; and, chromium, arsenic, selenium, silver, cadmium, barium, mercury and lead (RCRA 8 metals) by EPA Method 6020.

- Four of the soil samples contained TPH concentrations over the State of Nevada Reporting Limit (SRL) of 100 milligrams per kilogram (mg/kg). The soil samples contained the detectable concentrations of TPH as follows: B-3 at 6.5 feet below ground surface (1,030 mg/kg), B-4 at 12 feet below ground surface (between 5,770 and 15,830 mg/kg), B-5 at 8 feet below ground surface (5,080 mg/kg), and B-5 at 12 feet below ground surface (660 mg/kg). TPH was not detected over the laboratory reporting limit in the remaining soil samples analyzed. The samples from B-3 at 6.5 feet below ground surface, B-4 at 12 feet below ground surface, B-5 at 8 feet below ground surface, and B-5 at 12 feet below ground surface were also analyzed for VOCs and SVOCs. No VOCs were detected in any of the soil samples over the laboratory reporting limits. SVOCs were detected in the soil sample from B-4 at 12 feet below ground surface and B-5 at 12 feet below ground surface. However, none were at concentrations above the EPA Regional Screening Levels for Residential Soils (RSLr).
- Nineteen soil samples were analyzed for 8 RCRA metals. All of the samples contained arsenic over the RSLr. While EPA, Region 9 has established an RSLr of 0.61 mg/kg for arsenic as a screening level, soils within the intermountain west generally have naturally occurring levels of arsenic in excess of that concentration. Several studies have been conducted in the Washoe County area to establish background levels for arsenic in soil. Two studies were reviewed for this report. They included the *Nevada Division of Environmental Protection Screening/Action Levels for Arsenic in Surface Soils in the Carson River Basin* (2006), which set a background level of 32 mg/kg for soil in the Carson River Basin. Additionally, the United States Department of the Interior Geological Survey prepared a report titled *Analysis of Soil Samples from the Fernley Area-Churchill, Lyon, and Washoe Counties, Nevada*, dated 1990, which describes the collection of soil samples in the Fernley Wildlife Management area to identify naturally occurring metals in soils. Based on this report, arsenic was found at concentrations ranging from 19 to 66 mg/kg. The arsenic concentrations identified in the soil samples collected during this Phase II ESA ranged from 3.1 to 27 mg/kg; therefore, the concentrations of arsenic were within the range that would be considered background for the area. The State of Nevada does not require background levels of metal in soil to be reported. The soil sample collected from boring B-9 from 8 feet below ground surface contained a mercury concentration of 408 mg/kg, which is above the State of Nevada Reporting Limit (SRL) of 6.5 mg/kg and the RSLr of 10 mg/kg. The soil sample collected from boring 6.5 feet below ground surface contained a concentration of lead of 400 mg/kg. The SRL and RSLr for lead in soil is 400 mg/kg. Selenium was identified in one of the soil samples (B-13 at 11 feet below ground surface) at 5.6 mg/kg which is above the SRL of 5.0 mg/kg and below the RSLr of 39 mg/kg. Based upon this information, the concentration of selenium in soils is not considered to be a concern.

- Ten groundwater samples were analyzed for VOCs, SVOCs and 8 RCRA metals. No VOCs were detected in the samples analyzed; SVOCs were detected in the samples from B-1, B-2, B-4, B-5, B-6, B-7, B-9, B-13 and B-15. However, no regulatory limits have been set for the compounds detected. The only metal detected in groundwater samples over the Maximum Concentration Levels set by EPA for drinking water (MCL) was arsenic. The arsenic was within concentrations considered to be background for the area

TPH concentrations over the SRL were detected in soil samples collected from borings B-3, B-4, and B-5. These borings are all adjacent and down-gradient from the Yard. Concentrations of lead were reported in a soil sample collected from B-3 at the RSLr level. This boring is adjacent and down-gradient of the Yard. Concentrations of mercury above the RSL were reported in boring B-9, which is adjacent to the Yard. SVOCs were detected in groundwater in eight borings. All of these borings are down-gradient of the Yard.

Based on the results of the laboratory analyses and field observations, it is our opinion that the objective of the Phase II ESA was met. The source of the contamination identified during this Phase II in the soil and groundwater is most likely the Yard. Additional soil and groundwater sampling should be conducted at the Yard and adjoining properties to better define the amount and type of contamination present.

In addition to the properties that were adjoining the Yard, three other parcels were investigated. These parcels are down-gradient of the Yard. No soil contamination was identified at these parcels. No VOCs were identified in the groundwater; however, SVOCs were detected. The SVOCs detected do not have regulatory limits. Additionally, no soil contamination was identified; therefore, the SVOC's identified in the groundwater should not limit development of these three sites and no additional investigation is recommended for these sites.

# Table of Contents

---

	<u>Page</u>
1.0 INTRODUCTION .....	1
2.0 BACKGROUND .....	1
2.1 Site Description and Features .....	1
2.1.1 Current Uses of the Property .....	1
2.1.2 Location and Legal Description .....	2
2.1.3 Property General Characteristics .....	2
2.2 Physical Setting .....	2
2.2.1 Topography .....	2
2.2.2 Geology .....	2
2.2.3 Hydrogeology .....	3
2.3 Property History and Land Use .....	3
2.4 Adjacent/Surrounding Property Land Use .....	4
2.5 Summary of Previous Assessments .....	4
3.0 WORK PERFORMED AND RATIONALE .....	5
3.1 Scope of Assessment .....	5
3.2 Soil Sample Collection .....	5
3.3 Groundwater Sample Collection .....	6
3.4 Field Quality Assurance/Quality Control .....	6
3.5 Chemical Analytical Methods .....	6
4.0 PRESENTATION AND EVALUATION OF RESULTS .....	6
4.1 Subsurface Conditions .....	6
4.2 Analytical Results .....	7
4.2.1 Soil Samples .....	7
4.2.2 Investigation Derived Waste (IDW) .....	9
4.2.3 Groundwater Samples .....	9
4.2.4 Data Quality Assurance/Quality Control .....	11
5.0 INTERPRETATION AND CONCLUSIONS .....	12
5.1 Recognized Environmental Conditions / Potential Release Area .....	12
5.2 Adequacy of Investigations .....	12
5.3 Absence, Presence, Degree, Extent of Target Analytes .....	12
5.4 Other Concerns .....	14
5.4.1 Significant Assumptions .....	14
5.4.2 Limitations and Exceptions .....	14
5.4.3 Special Terms and Conditions .....	14
5.5 Conclusions / Objectives Met .....	14
6.0 RECOMMENDATIONS .....	14

7.0	SIGNATURES OF ENVIRONMENTAL PROFESSIONAL .....	16
8.0	RELIANCE .....	17
9.0	REFERENCES AND SOURCES OF INFORMATION .....	18

## TABLES

Table 1 – Laboratory Analytical Results: Soil Samples (Organics)
Table 2 – Laboratory Analytical Results: Soil Samples (Metals)
Table 3 – Laboratory Analytical Results: Groundwater Samples (Organics)
Table 4 – Laboratory Analytical Results: Groundwater Samples (Metals)

## Plates

Plate 1	Site Map
---------	----------

## APPENDICES

Appendix A	Boring Logs
Appendix B	Analytical Reports & Chain of Custody Documentation
Appendix C	QA/QC Memorandum

## 1.0 Introduction

---

This Report presents the results of the Converse Consultants (Converse) Phase II Environmental Site Assessment (ESA) performed on several properties along Main Street (APNs: 002-183-002, 002-182-006, 002-183-011) and the City of Carlin Right-of-Way (ROW) surrounding the historic Union Pacific Rail Road Yard (Yard), Carlin, Elko County, Nevada, referred to as the “Property” in this report. Converse was retained by the City of Carlin (User) to conduct the Phase II ESA at the Property. The location of the Property is shown on Plate 1, Site Map. The scope of this Phase II ESA was completed in accordance with the Field Sampling Plan (FSP) prepared by Converse dated September 18, 2013, and approved by the EPA on September 18, 2013.

Converse generally followed the standard practices of the American Society for Testing Materials (ASTM) Designation: E1903-11 *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process* (ASTM, E 1903-11). The purpose of conducting the Phase II ESA in accordance with ASTM, E 1903-11 was to acquire and evaluate information sufficient to achieve the objectives set forth in the FSP developed by the User and Converse. The objective of the assessment was to evaluate if potential releases from an adjacent offsite source had impacted soil and/or groundwater and would impede future redevelopment of the Property.

The Phase II ESA included the following primary tasks:

- Advancement of fifteen soil borings.
- Collection of soil and groundwater samples from the borings.
- Laboratory analysis of select groundwater and soil samples for total petroleum hydrocarbons (TPH), volatile organic compounds (VOC), semi volatile organic compounds (SVOCs), and metals.

## 2.0 Background

---

### 2.1 Site Description and Features

#### 2.1.1 Current Uses of the Property

The Property is located adjacent to the Yard. It comprises several parcels and City Right-of-Way (ROW). The Property is comprised of three rectangular-shaped parcels located along Main Street and the City ROW along the perimeter of the Yard. The City-owned ROW portion of the Property consists of an approximately 10 foot wide easement, that is located between the paved roadways (Hamilton, Main, Railroad, Fourth, Seventh, and Tenth Streets) and railroad owned property. Two of the parcels, at 523 and 603 Main Street, consist of undeveloped City-owned land. The parcel at 617

Main Street is owned by First & Main Street, LLC and consists of a vacant, dilapidated hotel built in the 1950s.

### **2.1.2 Location and Legal Description**

The City owned ROW is located along Main and Hamilton Streets between, 4<sup>th</sup> and 7<sup>th</sup> Streets, 4<sup>th</sup> Street between Hamilton and Main Streets, and 7<sup>th</sup> Street between Railroad and Hamilton Streets. The ROW does not have an address or a parcel number since the county does not assign parcel numbers to government owned ROW.

The parcel located at 523 Main Street has an assigned Assessor's Parcel Number (APN) of 002-182-006. The Elko County Assessor's Office partial legal description is as follows: Parcel Map 002-180, Lot 1 and the easterly 12 ½ feet of Lot 2, Block D, Township 33 Range 52.

The parcel located at 603 Main Street has an assigned APN of 002-183-002. The Elko County Assessor's Office partial legal description is as follows: Carlin City, Lot 9-11, Block C.

The parcel located at 617 Main Street has an assigned APN of 002-183-011. Elko County Assessor's Office partial legal description is as follows: Carlin City Lots 3,4, 5 in Block C

### **2.1.3 Property General Characteristics**

The majority of the Property is undeveloped and it includes two lots and the City ROW which surrounds the Yard. One of the parcels that is included in the Property is developed with a dilapidated hotel. The hotel footprint encompasses the entire parcel.

The Property is located in the historic area of Carlin, Nevada. The area is developed with residential and commercial properties.

## **2.2 Physical Setting**

### **2.2.1 Topography**

The elevation of the Property is approximately 4,902 feet above mean sea level (msl), and the vicinity is relatively flat to gently sloping to the south and southwest. The Humboldt River is located approximately ½ mile south of the Property.

### **2.2.2 Geology**

According to the Geologic Map of Elko County, Nevada, Nevada Bureau of Mines and Geology, the Property is located in the quaternary zone that consists of alluvium deposits which consist of clayey silt, sand, and gravel. These are soils with layers that impede downward movement of water, or soils with moderately fine or fine textures that are poorly drained.

During this Phase II ESA, the majority of the near surface soils encountered were silty sands and sandy silts. A minor amount of sandy clays was also encountered, and varying amounts of gravel were identified in soils below 6 feet in depth.

### **2.2.3 Hydrogeology**

According to documentation researched, groundwater in the area of the Property is approximately 15 feet below the ground surface and has a flow direction to the south/southwest towards the Humboldt River (the groundwater gradient was established during the previous investigation at the up gradient Yard). During the Phase II ESA, groundwater was encountered at depths ranging from 11 to 16 feet below ground surface.

## **2.3 Property History and Land Use**

The ROW portion of the Property has been utilized as a public right-of-way since at least 1885. A portion of the ROW along Main Street was utilized as a railroad platform, passenger depot, freight car depot, library, ice house, restaurant, and dormitories. The structures were removed between 1952 and 1982.

The parcel located at 523 Main Street, was undeveloped as depicted on a 1885 Sanborn Map. By the early 1920s, the parcel was developed with a Post Office. In the early 1940s, the Post office was converted to a dwelling. Sometime between the 1950s and 1980, the building was demolished. The parcel is presently vacant.

The parcel located at 601 Main Street was developed as a carpenter shop, a saloon with lodging, a post office and a barber shop according to an 1885 Sanborn Map. By 1890, the carpenter's shop was listed as vacant. A 1907 Sanborn Map shows that the vacant shop was utilized as a dry goods store. There were no substantial changes to the other parcels. By 1927, the Property was developed as the Overland Hotel and remained as such according to a 1952 Sanborn Map. In the 1960s, the Property structure was converted to a Chinese restaurant which was operated on the Property until it caught fire in the 1990s. After the fire, the building collapsed, and the City of Carlin ultimately removed the rubble and graded the Property in 2010.

In 1885, the parcel at 617 Main Street, was originally developed as multiple businesses with a restaurant, society hall, dwelling, and a general merchandise store with a warehouse. There were some minor reconfigurations to the parcel between 1885 and 1938, at which time it was redeveloped with the existing structure. The parcel operated as a restaurant/gambling hall/hotel until it was closed down approximately 30 years ago.

## **2.4 Adjacent/Surrounding Property Land Use**

The Property is located in an area that was primarily used for railroad activities until the late-1950s at which time commercial and residential development started. The general area north of the Property was developed as a railroad depot in 1868. By 1884, a roundhouse, machine shop, four stores, one hotel, two saloons, two restaurants, two blacksmith shops, a telegraph office, an express office, and a jail were developed in the area. Many of the structures on the railroad property were removed between 1952 and 1982. The turnable was removed and the depression was filled in sometime between 1982 and 1994. The half-dome steel buildings on the railroad property near the corner of Hamilton Street and 4<sup>th</sup> Street were removed between 1994 and 1999. Some of the other remaining railroad related structures were removed between 1999 and 2006. There are a few remaining structures on the adjacent railroad property including fueling stands.

## **2.5 Summary of Previous Assessments**

Converse performed Phase I ESAs on the parcels that comprise the Property in April 2013. The following (REC) was identified in association with the Property:

- Historic Union Pacific Rail Road Yard (Yard) located adjacent and/or up-gradient of the Property.

Converse recommended a Phase II investigation to include soil and groundwater sampling to evaluate potential impacts from the Yard.

As part of the Phase I ESA's conducted on the parcels for the Property, Converse reviewed files located at the Nevada Division of Environmental Protection (NDEP) for the historic Union Pacific Rail Road Yard (Yard). The following summarizes the information contained in the files:

- In 1983, diesel fuel was discovered in groundwater in the area of the Yard. Several homes down-gradient of the Yard on Main Street between 4th and 5th Street were impacted with oil seeping into their basements. The Union Pacific Rail Road Company was placed under an Order by the NDEP to remediate the site. In 1990, 12 USTs were removed from the Yard. The tanks contained gasoline, kerosene, and diesel. Groundwater remediation was conducted at the site from 1983 to 2007, when the site received closure from the NDEP. Groundwater was monitored for free product, total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene and xylenes (BTEX). Possible solvent contamination, metal contamination, and vapor intrusion were not considered as part of the closure.

## 3.0 Work Performed and Rationale

---

### 3.1 Scope of Assessment

A FSP was developed based on data obtained during the Phase I ESAs. During the Phase I ESAs, the the up-gradient and/or adjoining historic Union Pacific Rail Road Yard was identified as a REC.

**Target Analytes:** Petroleum products, solvents and/or metals in soil and/or groundwater from the adjoining and/or up-gradient Yard could be located at the Property. Target analytes consisted of TPH, VOCs, SVOCs and arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver (RCRA 8 metals).

**Target Analytes First Entered the Environment:** Target analytes would have entered the environment from the adjoining/up-gradient Yard and spread through soil or groundwater to the Property.

**Environmental Media and Locations most likely to have the Highest Concentrations of Target Analytes:** Areas closest to, and down-gradient of the Yard, would be most likely to be impacted.

This Phase II ESA consisted of the following primary elements:

- Collection of soil and groundwater samples for laboratory analysis

### 3.2 Soil Sample Collection

Sample collection and delivery were conducted as outlined in the approved FSP and Quality Assurance Project Plan (QAPP). The locations of the boring are shown on Plate 1.

On November 6 and 7, 2013, a GeoProbe direct push drilling rig was used to advance fifteen borings for the purpose of collecting soil and groundwater samples. An attempt was made to advance all of the borings to groundwater. Refusal was encountered in borings B-3, B-8, B-12, and B-14 between 6 and 7 feet below ground surface. Groundwater was encountered in the remaining borings. Soil samples were collected in each boring approximately every 5 feet as conditions allowed.

### **3.3 Groundwater Sample Collection**

Groundwater was encountered in borings B-1 B-2, B-4, B-5, B-6, B-7, B-9, B-10, B-11, B-13, and B-15. Groundwater samples were collected in all the borings with the exception of B-10 because the hole collapsed before a sample was able to be collected. Sample collection and delivery was conducted as outlined in the approved FSP and QAPP.

### **3.4 Field Quality Assurance/Quality Control**

Quality control samples were collected and analyzed to evaluate the accuracy and precision of both field and laboratory data in accordance with the approved QAPP and FSP. As a part of this Phase II ESA, three groundwater field-split samples and three soil field-split samples were collected. Additionally, two field blanks were collected and submitted for laboratory analysis.

### **3.5 Chemical Analytical Methods**

A total of 19 soil samples were selected and analyzed for TPH by EPA Method 8015B; 4 soil samples were selected and analyzed for VOCs by EPA Method 8260B; 4 soil samples were selected and analyzed for SVOCs by EPA Method 8270C; and, 19 soil samples were selected and analyzed for 8 RCRA metals by EPA Method 6020. Ten groundwater samples were analyzed for VOCs by EPA Method 8260B, SVOCs by EPA Method 8270C, and RCRA dissolved metals by EPA Method 200.8.

## **4.0 Presentation and Evaluation of Results**

---

### **4.1 Subsurface Conditions**

The majority of the near surface soils encountered were silty sands and sandy silts. A minor amount of sandy clays was also encountered in the study area. Varying amounts of gravel were encountered in soils below 6 feet in depth. Boring logs are included in Appendix A.

## **4.2 Analytical Results**

### **4.2.1 Soil Samples**

Of the forty five soil samples collected, nineteen were selected for laboratory analyses based on the criteria described in the FSP. The results of laboratory analysis are present in the following tables:

**Table 1 – Laboratory Analytical Results - Soil (Organics)**

Location	Depth Feet	TPH mg/kg				VOCs	SVOC mg/kg				
		Gasoline Range	Diesel Range	Oil Range	Total		Naphthalene	1- Methylnaphthalene	2- Methylnaphthalene	Acenaphthene	Phenanthrene
B-1	12	ND**	ND	ND	ND	NA***	NA	NA	NA	NA	NA
B-2	12	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
B-3	6.5	ND	280	750	1,030	ND	ND	ND	ND	ND	ND
B-4	8	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
B-4	12*	3,600	2,000	170	5,770	ND	ND	1.0	0.49	ND	ND
		6,500	8,600	730	15,830						
B-5	8	2,000	2,500	580	5,080	ND	ND	ND	ND	ND	ND
B-5	12	ND	660	ND	660	ND	0.028	0.250	0.110	0.040	0.140
B-6	4	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
B-6	11	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
B-7	12*	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
		ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
B-8	7	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
B-9	8	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
B-10	12	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
B-11	12	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
B-11	15	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
B-12	7	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
B-13	11	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
B-15	8*	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
		ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
B-15	12	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
SRL^					100						
RSLr^^							3.6	16	230	3,400	-

Results in mg/kg = milligrams kilograms

\* Sample split in the field for QA/QC purposes (duplicate)

\*\* ND - Not detected above the laboratory reporting limit

\*\*\* NA - Not Analyzed

^ SRL - State of Nevada Reporting Limit

^^ RSLr - EPA Region 9 Regional Screening Levels for Residential Soil, Updated May 2013

Over SRL

**Table 2 – Laboratory Analytical Results - Soil (Metals)**

Location	Depth	Total Chromium	Arsenic	Selenium	Silver	Cadmium	Barium	Mercury	Lead
B-1	12	11	19	ND	ND	ND	360	ND	9.0
B-2	12	15	3.1	ND	ND	ND	96	ND	2.6
B-3	6.5	23	27	ND	2.0	18	320	1.7	400
B-4	8	18	11	ND	ND	ND	850	ND	12
B-4	12*	8.1	5.8	ND	ND	ND	84	ND	4.0
		6.1	5.5	ND	ND	ND	73	ND	4.1
B-5	8	20	11	ND	ND	1.1	530	ND	12
B-5	12	13	5.4	ND	ND	ND	130	ND	4.7
B-6	4	17	5.5	ND	ND	ND	290	ND	7.0
B-6	11	9.2	4.5	ND	ND	ND	410	ND	5.5
B-7	12*	13	7.7	ND	ND	ND	530	ND	9.8
		15	7.0	ND	ND	ND	410	ND	11
B-8	7	17	12	ND	ND	ND	400	ND	9.2
B-9	8	16	8.0	ND	ND	ND	ND	480	9.5
B-10	12	17	6.4	ND	ND	ND	350	ND	7.0
B-11	12	14	7.1	ND	ND	ND	420	ND	8.4
B-11	15	5.2	5.1	ND	ND	ND	94	ND	3.8
B-12	7	8.6	8.5	ND	ND	ND	280	ND	8.2
B-13	11	16	19	5.6	ND	ND	110	ND	11
B-15	8*	15	8.4	ND	ND	ND	550	ND	10
		15	7.5	2.1	ND	1.1	200	ND	9.6
B-15	12	4.7	5.8	ND	ND	ND	67	ND	3.5
SRL^		38	0.39	5.0	34	8.0	1,600	6.7	400
RSLr^^		-	0.61	39	39	7.0	1,500	10	400

Results in mg/kg = milligrams kilograms

\* Sample was split in the field for QA/QC purposes

\*\* ND - Not detected above the laboratory reporting limit

^ SRL - State of Nevada Reporting Limit

^^ RSLr - EPA Region 9 Regional Screening Levels for Residential Soil, Updated May 2013

Equal to or over SRL and/or RSL

#### 4.2.2 Investigation Derived Waste (IDW)

IDW was not generated during this investigation.

#### 4.2.3 Groundwater Samples

Groundwater was encountered in the borings at depths ranging from 11 to 16 feet below ground surface. Groundwater samples were collected from borings B-1, B-2, B-4, B-5, B-6, B-7, B-9, B-11, B-13, and B-15. Groundwater samples were analyzed for VOCs, SVOCs and 8 RCRA metal. No VOCs were reported in the groundwater samples. The results of laboratory analysis are summarized below:

**Table 3 – Laboratory Analytical Results - Groundwater (Organics)**

Location	VOCs	SVOC ug/L								
		Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Fluoranthene	Pyrene
B-1	ND	0.021	ND	ND	ND	ND	ND	0.038	ND	ND
B-2	ND	0.046	0.16	0.18	ND	0.025	ND	0.067	ND	ND
B-4	ND	70	180	61	2.3	9.2	18	21	ND	ND
	ND	69	180	64	4.4	8.9	19	36	ND	ND
B-5	ND	93	250	120	1.6	30	41	93	3.2	4.3
B-6	ND	6.0	15	4.8	0.24	0.97	0.90	1.4	ND	ND
B-7	ND	0.039	0.031	0.040	ND	ND	ND	ND	ND	ND
	ND	ND	0.022	ND	ND	ND	ND	ND	ND	ND
B-9	ND	ND	0.027	ND	ND	ND	ND	ND	ND	ND
B-11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-13	ND	0.040	0.030	0.039	ND	ND	ND	ND	ND	ND
B-15	ND	0.028	ND	ND	ND	ND	ND	ND	ND	ND
	ND	0.027	0.022	ND	ND	ND	ND	ND	ND	ND
MCL/SRL^										

Results in ug/kg = micrograms per liter

\* Sample was split in the field for QA/QC purposes

\*\* ND - Not detected above the laboratory reporting limit

^ MCL – Maximum Concentration Levels, set by EPA for Drinking Water and SRL, State of Nevada Reporting Limits. No MCL's or SRL have been set for these compounds.

**Table 4 – Laboratory Analytical Results - Groundwater (Metals)**

Location	Chromium Total	Arsenic	Selenium	Silver	Cadmium	Barium	Mercury	Lead
B-1	ND	16	ND	ND	ND	61	ND	ND
B-2	ND	8.6	ND	ND	ND	75	ND	ND
B-4	ND	6.7	ND	ND	ND	230	ND	ND
	ND	5.1	ND	ND	ND	220	ND	ND
B-5	ND	5.8	ND	ND	ND	260	ND	ND
B-6	ND	15	ND	ND	ND	180	ND	ND
B-7	ND	9.2	7.3	ND	ND	75	ND	ND
	ND	9.4	7.7	ND	ND	79	ND	ND
B-9	ND	8.5	6.8	ND	ND	57	ND	ND
B-11	ND	15	5.8	ND	ND	160	ND	ND
B-13	ND	15	ND	ND	ND	100	ND	ND
B-15	ND	ND	5.2	ND	ND	790	ND	ND
	ND	ND	ND	ND	ND	830	ND	ND
SRL^	-	10	50	-	5	2,000	2	15
MCL^^	100	10	50	-	5	2,000	2	15

Results in ug/kg = microgram/liter

\* Sample was split in the field for QA/QC purposes

\*\* ND - Not detected above the laboratory reporting limit

^SRL- ^ SRL - State of Nevada Reporting Limit

^^ MCL – Maximum Concentration Levels, set by EPA for Drinking Water

Over SRL and MCL

Laboratory analytical reports and chain-of-custody documentation are included in Appendix B.

#### 4.2.4 Data Quality Assurance/Quality Control

##### 4.2.4.1 Holding Times

All samples were received and analyzed by the analytical laboratory within the U.S. EPA recommended holding times. As such, data is considered acceptable for use.

##### 4.2.4.2 Laboratory Quality Assurance

Samples were submitted to a Nevada Certified Laboratory, Alpha Analytical, for analysis. The laboratory provided data to estimate precision, accuracy, and bias. For additional information on Laboratory Quality Assurance, please refer to Appendix C QA/QC Memorandum.

The field sampling for this Phase II ESA was done in conjunction with several other Brownfield sites. During the sampling event, three duplicate soil samples and three duplicate groundwater samples were collected.

The QAPP states the QC limits for precision are 20% RPD for metals, TPH, VOCs, and Polychlorinated Biphenyls (PCBs); 30% RPD for SVOCs; and 40% RPD for other compounds. These are very strict standards and intended as a guide when reviewing the data. While these standards were not met for each individual sample the averages met or were close to the RPD listed in the QAPP, and the data is considered usable.

#### **4.2.4.3 Field Blank**

Two field blanks were collected during the Phase II investigation. There were no analytes identified in the field blanks at a concentration greater than the laboratory reporting limit. As such, the data is considered acceptable for use.

#### **4.2.4.4 Laboratory Reporting Limits**

The reporting limits used by Alpha Analytical were not consistent with the approved QAPP, but Alpha did use the reporting limits consistent with their QA/QC Manual, which are below RSLs and State of Nevada SALs, and ran its lowest calibration standards at or near its Practical Quantitation Limits (PQLs). As such, data is considered acceptable for use.

## **5.0 Interpretation and Conclusions**

---

### **5.1 Recognized Environmental Conditions / Potential Release Area**

During the Phase I ESAs, the up-gradient and/or adjoining historic Union Pacific Rail Road Yard (Yard) was considered a REC for the following sites: APNs: 002-183-002, 002-182-006, 002-183-011; and, the City of Carlin ROW surrounding the Yard.

### **5.2 Adequacy of Investigations**

It is our opinion that the results of our field investigation adequately evaluated the identified objective of the FSP developed for this Phase II ESA.

### **5.3 Absence, Presence, Degree, Extent of Target Analytes**

Of the forty five soil samples collected, nineteen were selected for laboratory analyses based on criteria identified in the FSP. Soil samples were analyzed for TPH by EPA Method 8015B; VOCs by EPA Method 8260B; SVOCs by EPA Method 8270C; and

chromium, arsenic, selenium, silver, cadmium, barium, mercury and lead (RCRA 8 metals) by EPA Method 6020.

Four of the soil samples contained TPH concentrations over the State of Nevada Reporting Limit (SRL) of 100 milligrams per kilogram (mg/kg). The soil samples contained the detectable concentrations of TPH as follows: B-3 at 6.5 feet below ground surface (1,030 mg/kg), B-4 at 12 feet below ground surface (between 5,770 and 15,830 mg/kg), B-5 at 8 feet below ground surface (5,080 mg/kg), and B-5 at 12 feet below ground surface (660 mg/kg). TPH was not detected over the laboratory reporting limit in the remaining soil samples analyzed. The samples from B-3 at 6.5 feet below ground surface, B-4 at 12 feet below ground surface, B-5 at 8 feet below ground surface and B-5 at 12 feet below ground surface were also analyzed for VOCs and SVOCs. No VOCs were detected in any of the soil samples over the laboratory reporting limits. SVOCs were detected in the soil sample from B-4 at 12 feet below ground surface and B-5 at 12 feet below ground surface. However, none were at concentrations above the EPA Regional Screening Levels for Residential Soils (RSLr).

Nineteen soil samples were analyzed for 8 RCRA metals. All of the samples contained arsenic over the RSLr. While EPA, Region 9 has established an RSLr of 0.61 mg/kg for arsenic as a screening level, soils within the intermountain west generally have naturally occurring levels of arsenic in excess of that concentration. Several studies have been conducted in the Washoe County area to establish background levels for arsenic in soil. Two studies were reviewed for this report. They included the *Nevada Division of Environmental Protection Screening/Action Levels for Arsenic in Surface Soils in the Carson River Basin* (2006), which set a background level of 32 mg/kg for soil in the Carson River Basin. Additionally, the United States Department of the Interior Geological Survey prepared a report titled *Analysis of Soil Samples from the Fernley Area-Churchill, Lyon, and Washoe Counties, Nevada*, dated 1990, which describes the collection of soil samples in the Fernley Wildlife Management area to identify naturally occurring metals in soils. Based on this report, arsenic was found at concentrations ranging from 19 to 66 mg/kg. The arsenic concentrations identified in the soil samples collected during this Phase II ESA ranged from 3.1 to 27 mg/kg; therefore, the concentrations of arsenic were within the range that would be considered background for the area. The State of Nevada does not require background levels of metal in soil to be reported. The soil sample collected from boring B-9 from 8 feet below ground surface contained a mercury concentration of 408 mg/kg, which is above the State of Nevada Reporting Limit (SRL) of 6.5 mg/kg and the RSLr of 10 mg/kg. The soil sample collected from boring 6.5 feet below ground surface reportedly contained a concentration of lead of 400 mg/kg. The SRL and RSLr for lead in soil is 400 mg/kg. Selenium was identified in one of the soil samples (B-13 at 11 feet below ground surface) at 5.6 mg/kg which is above the SRL of 5.0 mg/kg and below the RSLr of 39 mg/kg. Based upon this information the selenium is not considered to be a concern.

Ten groundwater samples were analyzed for VOCs, SVOCs and 8 RCRA metals. No VOCs were detected in the samples analyzed; SVOCs were detected in the samples

from B-1, B-2, B-4, B-5, B-6, B-7, B-9, B-13 and B-15. However, no regulatory limits have been set for the compounds detected. The only metals detected in groundwater samples over the Maximum Concentration Levels, set by EPA for drinking water (MCL) was arsenic. The arsenic was within concentrations considered to be background for the area.

## **5.4 Other Concerns**

### **5.4.1 Significant Assumptions**

It was assumed, based on available data, that the selected sample locations were the most likely to have the highest concentrations of the target analytes.

### **5.4.2 Limitations and Exceptions**

No limitations or exceptions were encountered during the completion of the Phase II ESA.

### **5.4.3 Special Terms and Conditions**

No special terms or conditions are noted in this report.

## **5.5 Conclusions / Objectives Met**

Converse performed a Phase II Environmental Site Assessment on several properties along Main Street (APNs: 002-183-002, 002-182-006, 002-183-011); and, the City of Carlin ROW surrounding the historic Union Pacific Rail Road Yard, Carlin, Elko County, Nevada in conformance with the scope and limitations of ASTM, E 1903-11 to investigate if the adjoining and/or up-gradient Yard had impacted the Property.

TPH concentrations over the SRL were detected in soil samples collected from borings B-3, B-4 and B-5. These borings are all adjacent and down-gradient from the Yard. Concentrations of lead were reported in a soil sample collected from B-3 at the RSL level. This boring is adjacent and down-gradient of the Yard. Concentrations of mercury above the RSL were reported in boring B-9, which is adjacent to the Yard. SVOCs were detected in groundwater in eight borings. All these borings are down gradient of the Yard.

## **6.0 Recommendations**

---

Based on the results of the laboratory analyses and field observations, it is Converse opinion that the objective of the Phase II ESA was met.

The source of the contamination identified during this Phase II in the soil and groundwater is most likely the Yard. Additional soil and groundwater sampling should be conducted at the Yard and adjoining properties to better define the amount and type of contamination present.

In addition to the properties that were adjoining the Yard, three other parcels were investigated. These parcels are down-gradient of the Yard. No soil contamination was identified at these parcels. No VOCs were identified in the groundwater; however, SVOCs were detected. The SVOCs detected do not have regulatory limits. Additionally, no soil contamination was identified; therefore, the SVOC's identified in the groundwater should not limit development of these three sites and no additional investigation is recommended for these sites.

## 7.0 Signatures of Environmental Professional

---

I declare that, to the best of my professional knowledge and belief, I meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR 312.



---

**Kathi Brandmueller, PE, CEM**  
CEM No. 1197, Expires 12/22/14  
Senior Engineer

### Nevada Certified Environmental Manager Jurat

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all Federal, State, and local statutes, regulations, and ordinances.

## 8.0 Reliance

---

This Report is for the sole benefit and exclusive use of the City of Carlin in accordance with the terms and conditions presented of the Brownfields Contract under which these services have been provided. Preparation of this Report has been in accordance with generally accepted environmental practices. No other warranty, either expressed or implied, is made.

This report should not be regarded as a guarantee that no further contamination, beyond that which could be detected within the scope of this assessment, is present at the Property. Converse makes no warranties or guarantees as to the accuracy or completeness of information provided or compiled by others. It is possible that information exists beyond the scope of this assessment. It is not possible to absolutely confirm that no hazardous materials and/or substances exist at the Property. If none are identified as part of a limited scope of work, such a conclusion should not be construed as a guaranteed absence of such materials, but merely the results of the evaluation of the property at the time of the assessment. Also, events may occur after the Property visit, which may result in contamination of the Property. Additional information, which was not found or available to Converse at the time of report preparation, may result in a modification of the conclusions and recommendations presented. Any reliance on this report by Third Parties shall be at the Third Party's sole risk.

## **9.0 References and Sources of Information**

---

ASTM, E 1903-11. Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process, American Society for Testing and Materials


Converse Phase I Environmental Site Assessment, Eklund Property, 7<sup>th</sup> Street. Carlin, Elko County, Nevada, September 19, 2012.


Field Sampling Plan Petroleum Phase II Environmental Site Assessment, Petroleum Phase II Environmental Site Assessment

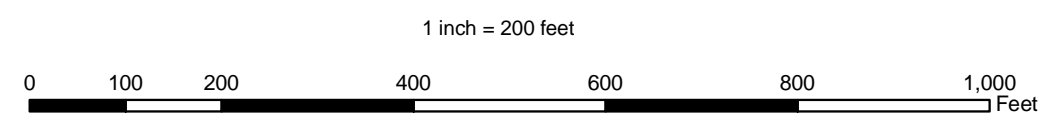


1 inch = 0.25 miles

**Legend**

 Boring Locations

 Phase II Property Boundary



**BORING LOCATIONS**

**CITY OF CARLIN PHASE II**

Elko County  
Carlin, Nevada

**Plate 1**

# Appendix A

# Log No. B-1

DRAFTED BY FMR

Date of Drilling: 11-6-2013

Driller: Western Strata

Logged By: FMR

Location:

Borehole Diameter: 2"

Groundwater Depth (ft): 12 feet

Ground Surface Elevation (ft): 4,902

Equipment: GeoProbe

Driving Wt. and Drop:

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS  This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.	Samples			Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
			Drive	Bulk	Blow Count				
0		ASPHALT							
		SILTY SAND (SM); Medium Dense, Moist, Light Brown							
2									
4			✕						PID 0.0 ppm
6									
8			✕						PID 0.0 ppm
10									
12		Wet	✕						PID 0.0 ppm
		Boring Terminated							
14									
16									
18									
20									
22									
24									
26									
End of Exploration at 13.0'			✕	Converse Sampler (white symbol=no recovery)		✕	SPT Sampler (white symbol=no recovery)		

Carlin Brownfields  
Former Railyard and Surrounding Properties Right of Ways  
Carlin, Nevada

Project No.  
08-73103-01



Converse Consultants

Over 60 Years of Dedication  
in Engineering and  
Environmental Sciences

Drawing No.

1

# Log No. B-2

DRAFTED BY FMR

Date of Drilling: 11-6-2013

Driller: Western Strata

Logged By: FMR

Location:

Borehole Diameter: 2"

Groundwater Depth (ft): 13'

Ground Surface Elevation (ft): 4,902

Equipment: GeoProbe

Driving Wt. and Drop:

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS  This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.	Samples			Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
			Drive	Bulk	Blow Count				
0		ASPHALT							
		SILTY SAND (SM); Medium Dense, Moist, Light Brown							
2									
4			✕						PID 0.0 ppm
6									
8			✕						PID 0.0 ppm
10									
12		SILTY SAND with Gravel (SM); Dense, Wet, Black	✕						PID 0.0 ppm
14									
16		Boring Terminated							
18									
20									
22									
24									
26									
End of Exploration at 16.0'			✕	Converse Sampler (white symbol=no recovery)		✕	SPT Sampler (white symbol=no recovery)		

Carlin Brownfields  
Former Railyard and Surrounding Properties Right of Ways  
Carlin, Nevada

Project No.  
08-73103-01



Over 60 Years of Dedication  
in Engineering and  
Environmental Sciences

Drawing No.  
2

# Log No. B-3

DRAFTED BY FMR

**Date of Drilling:** 12/6/13  
**Driller:** Western Strada  
**Logged By:** FMR

**Location:**  
**Borehole Diameter:** 2"  
**Groundwater Depth (ft):** Not Encountered

**Ground Surface Elevation (ft):** 4,902  
**Equipment:** Geo Probe  
**Driving Wt. and Drop:** NA

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS  This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.	Samples			Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
			Drive	Bulk	Blow Count				
0		ASPHALT							
2		SILTY SAND with Gravel (SM); Fill, Dense, Moist, Dark Brown							
4		Brown and Black with Debris	✕						PID 0.0 ppm
6			✕						PID 0.0 ppm
8		Refusal							
10									
12									
14									
16									
18									
20									
22									
24									
26									
End of Exploration at 7.0'			✕	Converse Sampler (white symbol=no recovery)		✕	SPT Sampler (white symbol=no recovery)		

**Carlin Brownfields**  
**Former Railyard and Surrounding Properties Right of Ways**  
**Carlin, Nevada**

**Project No.**  
**08-73103-01**



**Converse Consultants**

Over 60 Years of Dedication  
in Engineering and  
Environmental Sciences

**Drawing No.**

**3**

# Log No. B-4

DRAFTED BY FMR

Date of Drilling: 11-6-2013

Driller: Western Strata

Logged By: FMR

Location:

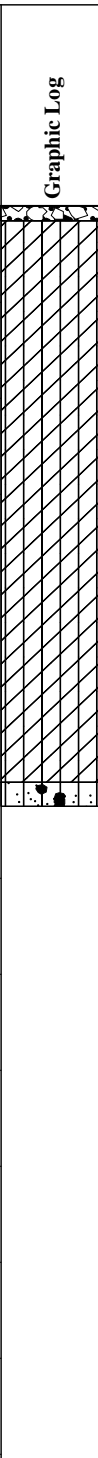
Borehole Diameter: 2"

Groundwater Depth (ft): 11.5'

Ground Surface Elevation (ft): 4,902

Equipment: GeoProbe

Driving Wt. and Drop: NA

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS  This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.	Samples			Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
			Drive	Bulk	Blow Count				
0		ASPHALT							
		SILTY CLAY (CL); Medium Stiff, Dry, Light Brown							
2									
4				✕					PID 0.0 ppm
6									
8		Moist		✕					PID 2.2 ppm
10									
12				✕					PID 4.3 ppm
		SILTY SAND with Gravel (SM); Dense, Wet, Black							
		Boring Terminated							
14									
16									
18									
20									
22									
24									
26									
End of Exploration at 12.5'			✕	Converse Sampler (white symbol=no recovery)		✕	SPT Sampler (white symbol=no recovery)		

Carlin Brownfields  
Former Railyard and Surrounding Properties Right of Ways  
Carlin, Nevada

Project No.  
08-73103-01



Over 60 Years of Dedication  
in Engineering and  
Environmental Sciences

Drawing No.

4

# Log No. B-5

DRAFTED BY FMR

Date of Drilling: 11-6-2013

Driller: Western Strata

Logged By: FMR

Location:


Borehole Diameter: 2"

Groundwater Depth (ft): 11.5

Ground Surface Elevation (ft): 4,902

Equipment: GeoProbe

Driving Wt. and Drop: NA

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS  This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.	Samples			Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
			Drive	Bulk	Blow Count				
0		ASPHALT							
2		SANDY SILT (ML); Stiff, Dry, Light Brown							
4			✕						PID 0.0 ppm
6									
8		SANDY CLAY with Gravel (CL); Stiff, Dry, Dark Brown	✕						PID 85.5 ppm
10									
12		SILTY SAND with GRAVEL (SM); Dense, Wet, Dark Brown	✕						PID 20.5 ppm
14		Boring Terminated							
16									
18									
20									
22									
24									
26									
End of Exploration at 12.0'			✕	Converse Sampler (white symbol=no recovery)		✕	SPT Sampler (white symbol=no recovery)		

Carlin Brownfields  
Former Railyard and Surrounding Properties Right of Ways  
Carlin, Nevada

Project No.  
08-73103-01



Converse Consultants

Over 60 Years of Dedication  
in Engineering and  
Environmental Sciences

Drawing No.

5

# Log No. B-6

DRAFTED BY FMR

Date of Drilling: 11-6-2013

Driller: Western Strata

Logged By: FMR

Location:

Borehole Diameter: 2"

Groundwater Depth (ft): 12'

Ground Surface Elevation (ft): 4,902

Equipment: GeoProbe

Driving Wt. and Drop: NA

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS  This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.	Samples			Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
			Drive	Bulk	Blow Count				
0		ASPHALT							
2		SILTY SAND (SM); Loose, Dry, Light Brown							
4			✕						PID 5.3 ppm
6									
8		SANDY SILT with Gravel (ML); Stiff, Moist, Dark Brown	✕						PID 0.9 ppm
10									
12		SAND with Gravel (SP); Dense, Wet, Dark Brown	✕						PID 0.3 ppm
14		Boring terminated							
16									
18									
20									
22									
24									
26									
End of Exploration at 13.0'			✕	Converse Sampler (white symbol=no recovery)		✕	SPT Sampler (white symbol=no recovery)		

Carlin Brownfields  
Former Railyard and Surrounding Properties Right of Ways  
Carlin, Nevada

Project No.  
08-73103-01



Over 60 Years of Dedication  
in Engineering and  
Environmental Sciences

Drawing No.  
6

# Log No. B-7

DRAFTED BY FMR

Date of Drilling: 11-7-2013

Driller: Western Strata

Logged By: FMR

Location:

Borehole Diameter: 2"

Groundwater Depth (ft): 11'

Ground Surface Elevation (ft): 4,902

Equipment: GeoProbe

Driving Wt. and Drop: NA

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS  This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.	Samples			Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
			Drive	Bulk	Blow Count				
0		SANDY SILT (ML); Medium Stiff, Dry, Light Brown							
2									
4		Stiff, Slightly Moist	✕						PID 0.6 ppm
6									
8		SILTY CLAY (CL); Stiff, Slightly Moist, Light Brown	✕						PID 1.0 ppm
10									
12		Boring Terminated	✕						PID 1.9 ppm
14									
16									
18									
20									
22									
24									
26									

End of Exploration at 12.5'

✕ Converse Sampler (white symbol=no recovery)

▲ SPT Sampler (white symbol=no recovery)

Carlin Brownfields  
Former Railyard and Surrounding Properties Right of Ways  
Carlin, Nevada

Project No.  
08-73103-01



Converse Consultants

Over 60 Years of Dedication  
in Engineering and  
Environmental Sciences

Drawing No.

7

# Log No. B-8

DRAFTED BY FMR

Date of Drilling: 11-7-2013

Driller: Western Strata

Logged By: FMR

Location:

Borehole Diameter: 2"

Groundwater Depth (ft): Not Encountered

Ground Surface Elevation (ft): 4,902

Equipment:

Driving Wt. and Drop: NA

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS  This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.	Samples			Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
			Drive	Bulk	Blow Count				
0		SANDY SILT (ML); Medium Stiff, Dry, Light Brown							
2									
4		SANDY CLAY (CL); Medium Stiff, Slightly Moist, Light Brown	✕						PID 0.1 ppm
6									
8		Refusal	✕						PID 0.4 ppm
10									
12									
14									
16									
18									
20									
22									
24									
26									
End of Exploration at 7.5'			✕	Converse Sampler (white symbol=no recovery)		✕	SPT Sampler (white symbol=no recovery)		

Carlin Brownfields  
Former Railyard and Surrounding Properties Right of Ways  
Carlin, Nevada

Project No.  
08-73103-01



Converse Consultants

Over 60 Years of Dedication  
in Engineering and  
Environmental Sciences

Drawing No.

8

# Log No. B-9

DRAFTED BY FMR

Date of Drilling: 11-7-2013

Driller: Western Strata

Logged By: FMR

Location:

Borehole Diameter: 2"

Groundwater Depth (ft): 11'

Ground Surface Elevation (ft): 4,902

Equipment: GeoProbe

Driving Wt. and Drop: NA

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS  This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.	Samples			Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
			Drive	Bulk	Blow Count				
0		SANDY SILT (ML); Medium Stiff, Dry, Light Brown							PID 0.2 ppm  

Carlin Brownfields  
Former Railyard and Surrounding Properties Right of Ways  
Carlin, Nevada

Project No.  
08-73103-01



Converse Consultants

Over 60 Years of Dedication  
in Engineering and  
Environmental Sciences

Drawing No.

9

# Log No. B-10

DRAFTED BY FMR

Date of Drilling: 11-7-2013

Driller: Western Strata

Logged By: FMR

Location:

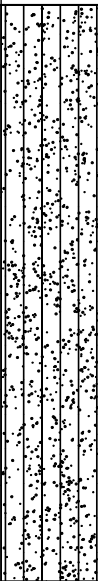


Borehole Diameter: 2"

Groundwater Depth (ft): 13'

Ground Surface Elevation (ft): 4,902

Equipment: GeoProbe

Driving Wt. and Drop: NA

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS  This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.	Samples			Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
			Drive	Bulk	Blow Count				
0		SILTY SAND (SM); Dense, Slightly Moist, Dark Brown							
2									
4			✕						PID 0.4 ppm
6									
8			✕						PID 0.4 ppm
10									
12			SAND (SP); Dense, Wet, Dark Brown	✕					PID 2.2 ppm
14									
16			Boring Terminated						PID 2.8 ppm
18									
20									
22									
24									
26									
End of Exploration at 16.0'			✕	Converse Sampler (white symbol=no recovery)			SPT Sampler (white symbol=no recovery)		

Carlin Brownfields  
Former Railyard and Surrounding Properties Right of Ways  
Carlin, Nevada

Project No.  
08-73103-01



Converse Consultants

Over 60 Years of Dedication  
in Engineering and  
Environmental Sciences

Drawing No.  
10

# Log No. B-11

DRAFTED BY FMR

Date of Drilling: 11-7-2013  
Driller: Western Strata  
Logged By: FMR

Location:  
Borehole Diameter: 2"  
Groundwater Depth (ft): 16'

Ground Surface Elevation (ft): 4,902  
Equipment: GeoProbe  
Driving Wt. and Drop: NA

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS  This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.	Samples			Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
			Drive	Bulk	Blow Count				
0		SILTY SAND (SM); Dense, Dry, Dark Drown							
2									
4			✕						PID 0.6 ppm
6									
8		Moist	✕						PID 1.0 ppm
10									
12			✕						PID 3.7 ppm
14									
16		SILTY SAND with Gravel (SM); Dense, Wet, Dark Brown	✕						PID 4.4 ppm
18		Boring Terminated							
20									
22									
24									
26									
End of Exploration at 17.0'			✕	Converse Sampler (white symbol=no recovery)		✕	SPT Sampler (white symbol=no recovery)		

Carlin Brownfields  
Former Railyard and Surrounding Properties Right of Ways  
Carlin, Nevada

Project No.  
**08-73103-01**



Over 60 Years of Dedication  
in Engineering and  
Environmental Sciences

Drawing No.  
**11**

# Log No. B-12

DRAFTED BY FMR

Date of Drilling: 11-7-2013

Driller: Western Strata

Logged By: FMR

Location:

Borehole Diameter: 3"

Groundwater Depth (ft): Not Encountered

Ground Surface Elevation (ft): 4,902

Equipment: GeoProbe

Driving Wt. and Drop: NA

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS  This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.	Samples			Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
			Drive	Bulk	Blow Count				
0		SILTY SAND (SM); Loose, Dry, Light Brown							
2									
4		SILTY SAND with Gravel (SM); Medium Dense, Dry, Light Brown	✕						PID 1.7 ppm
6									
8		Refusal	✕						PID 3.3 ppm
10									
12									
14									
16									
18									
20									
22									
24									
26									
End of Exploration at 7.5'			✕	Converse Sampler (white symbol=no recovery)		✕	SPT Sampler (white symbol=no recovery)		

Carlin Brownfields  
Former Railyard and Surrounding Properties Right of Ways  
Carlin, Nevada

Project No.  
**08-73103-01**



Converse Consultants

Over 60 Years of Dedication  
in Engineering and  
Environmental Sciences

Drawing No.  
**12**

# Log No. B-13

DRAFTED BY FMR

Date of Drilling: 11-6-2013

Driller: Western Strata

Logged By: FMR

Location:

Borehole Diameter: 2"

Groundwater Depth (ft): 11'

Ground Surface Elevation (ft): 4,902

Equipment: GeoProbe

Driving Wt. and Drop:

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS  This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.	Samples			Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests	
			Drive	Bulk	Blow Count					
0		CONCRETE								
		SILTY SAND (SM); Medium Dense, Moist, Light Brown								
2										
4										
6										
8										
10										
		SAND with Gravel (SP); Dense, Wet, Dark Brown								
		Boring Terminated								
12										
14										
16										
18										
20										
22										
24										
26										
End of Exploration at 11.5'				Converse Sampler (white symbol=no recovery)				SPT Sampler (white symbol=no recovery)		

Carlin Brownfields  
Former Railyard and Surrounding Properties Right of Ways  
Carlin, Nevada

Project No.  
08-73103-01



Over 60 Years of Dedication  
in Engineering and  
Environmental Sciences

Drawing No.  
13

# Log No. B-14

DRAFTED BY FMR

Date of Drilling: 11-6-2013

Driller: Western Strata

Logged By: FMR

Location:

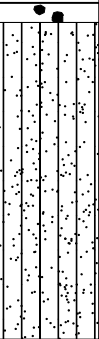
Borehole Diameter: 2"

Groundwater Depth (ft): Not Encountered

Ground Surface Elevation (ft): 4,902

Equipment: GeoProbe

Driving Wt. and Drop: NA

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS  This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.	Samples			Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
			Drive	Bulk	Blow Count				
0		GRAVEL							PID 0.0 ppm
2		SANDY SILT (ML); Medium Stiff, Moist, Light Brown							
4									
6									
8		Refusal							
10									
12									
14									
16									
18									
20									
22									
24									
26									

End of Exploration at 7.0'

Converse Sampler (white symbol=no recovery)

SPT Sampler (white symbol=no recovery)

Carlin Brownfields  
Former Railyard and Surrounding Properties Right of Ways  
Carlin, Nevada

Project No.  
08-73103-01



Converse Consultants

Over 60 Years of Dedication  
in Engineering and  
Environmental Sciences

Drawing No.

14

# Log No. B-15

DRAFTED BY FMR

Date of Drilling: 11-6-2013

Driller: Western Strata

Logged By: FMR

Location:

Borehole Diameter: 2"

Groundwater Depth (ft): 12'

Ground Surface Elevation (ft): 4,902

Equipment: GeoProbe

Driving Wt. and Drop: NA

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS  This log is part of the report prepared by Converse for this project and should be read with the report. This summary applies only at the location and time of the exploration. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplified model of the actual conditions encountered.	Samples			Drill Rate (sec/ft)	Moisture (%)	Dry Density (lb/cf)	Field or Lab Tests
			Drive	Bulk	Blow Count				
0		SILTY SAND (SM); Dense, Dry, Light Brown							PID 0.0 ppm
2									
4			✕						
6									
8		GRAVEL with Sand (GP); Dense, Very Moist, Light Brown	✕						PID 1.2 ppm
10									
12			✕						PID 0.7 ppm
14									
16		Boring Terminated							
18									
20									
22									
24									
26									

End of Exploration at 12.5'

✕ Converse Sampler (white symbol=no recovery)

▲ SPT Sampler (white symbol=no recovery)

Carlin Brownfields  
Former Railyard and Surrounding Properties Right of Ways  
Carlin, Nevada

Project No.  
08-73103-01



Converse Consultants

Over 60 Years of Dedication  
in Engineering and  
Environmental Sciences

Drawing No.  
15

---

**Analytical Reports &  
Chain of Custody  
Documentation**

# Appendix B



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502

Attn: Kathi Brandmueller

Phone: (775) 284-9752

Fax: (775) 856-3513

Date Received : 11/08/13

Job: 08-73103-01/02-07/ Carlin Brownfields RRP

### Dissolved Metals by ICPMS

EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: B-13				
Lab ID : CON13110824-05A Chromium (Cr), Dissolved	ND	0.010 mg/L	11/12/13	11/12/13
Date Sampled 11/06/13 09:20 Arsenic (As), Dissolved	0.015	0.0050 mg/L	11/12/13	11/12/13
Selenium (Se), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
Silver (Ag), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
Cadmium (Cd), Dissolved	ND	0.0020 mg/L	11/12/13	11/12/13
Barium (Ba), Dissolved	0.10	0.0050 mg/L	11/12/13	11/12/13
Mercury (Hg), Dissolved	ND	0.0010 mg/L	11/12/13	11/12/13
Lead (Pb), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
Client ID: B-2				
Lab ID : CON13110824-10A Chromium (Cr), Dissolved	ND	0.010 mg/L	11/12/13	11/12/13
Date Sampled 11/06/13 09:55 Arsenic (As), Dissolved	0.0086	0.0050 mg/L	11/12/13	11/12/13
Selenium (Se), Dissolved	ND	0.0050 mg/L	11/12/13	11/13/13
Silver (Ag), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
Cadmium (Cd), Dissolved	ND	0.0020 mg/L	11/12/13	11/12/13
Barium (Ba), Dissolved	0.075	0.0050 mg/L	11/12/13	11/12/13
Mercury (Hg), Dissolved	ND	0.0010 mg/L	11/12/13	11/12/13
Lead (Pb), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
Client ID: B-1				
Lab ID : CON13110824-14A Chromium (Cr), Dissolved	ND	0.010 mg/L	11/12/13	11/12/13
Date Sampled 11/06/13 10:40 Arsenic (As), Dissolved	0.016	0.0050 mg/L	11/12/13	11/12/13
Selenium (Se), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
Silver (Ag), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
Cadmium (Cd), Dissolved	ND	0.0020 mg/L	11/12/13	11/12/13
Barium (Ba), Dissolved	0.061	0.0050 mg/L	11/12/13	11/12/13
Mercury (Hg), Dissolved	ND	0.0010 mg/L	11/12/13	11/12/13
Lead (Pb), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
Client ID: B-15				
Lab ID : CON13110824-21A Chromium (Cr), Dissolved	ND	0.010 mg/L	11/12/13	11/12/13
Date Sampled 11/06/13 13:15 Arsenic (As), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
Selenium (Se), Dissolved	0.0052	0.0050 mg/L	11/12/13	11/12/13
Silver (Ag), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
Cadmium (Cd), Dissolved	ND	0.0020 mg/L	11/12/13	11/12/13
Barium (Ba), Dissolved	0.079	0.0050 mg/L	11/12/13	11/12/13
Mercury (Hg), Dissolved	ND	0.0010 mg/L	11/12/13	11/12/13
Lead (Pb), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## Client ID: B-5

Lab ID : CON13110824-28A	Chromium (Cr), Dissolved	ND	0.010 mg/L	11/12/13	11/12/13
Date Sampled 11/06/13 15:35	Arsenic (As), Dissolved	0.0058	0.0050 mg/L	11/12/13	11/12/13
	Selenium (Se), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
	Silver (Ag), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
	Cadmium (Cd), Dissolved	ND	0.0020 mg/L	11/12/13	11/12/13
	Barium (Ba), Dissolved	0.26	0.0050 mg/L	11/12/13	11/12/13
	Mercury (Hg), Dissolved	ND	0.0010 mg/L	11/12/13	11/12/13
	Lead (Pb), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13

## Client ID: B-6

Lab ID : CON13110824-32A	Chromium (Cr), Dissolved	ND	0.010 mg/L	11/12/13	11/12/13
Date Sampled 11/06/13 16:35	Arsenic (As), Dissolved	0.015	0.0050 mg/L	11/12/13	11/12/13
	Selenium (Se), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
	Silver (Ag), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
	Cadmium (Cd), Dissolved	ND	0.0020 mg/L	11/12/13	11/12/13
	Barium (Ba), Dissolved	0.18	0.0050 mg/L	11/12/13	11/12/13
	Mercury (Hg), Dissolved	ND	0.0010 mg/L	11/12/13	11/12/13
	Lead (Pb), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13

## Client ID: B-15-A

Lab ID : CON13110824-33A	Chromium (Cr), Dissolved	ND	0.010 mg/L	11/12/13	11/12/13
Date Sampled 11/06/13 13:16	Arsenic (As), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
	Selenium (Se), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
	Silver (Ag), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
	Cadmium (Cd), Dissolved	ND	0.0020 mg/L	11/12/13	11/12/13
	Barium (Ba), Dissolved	0.083	0.0050 mg/L	11/12/13	11/12/13
	Mercury (Hg), Dissolved	ND	0.0010 mg/L	11/12/13	11/12/13
	Lead (Pb), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13

## Client ID: B-4-A

Lab ID : CON13110824-34A	Chromium (Cr), Dissolved	ND	0.010 mg/L	11/12/13	11/12/13
Date Sampled 11/06/13 14:41	Arsenic (As), Dissolved	0.0051	0.0050 mg/L	11/12/13	11/12/13
	Selenium (Se), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
	Silver (Ag), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
	Cadmium (Cd), Dissolved	ND	0.0020 mg/L	11/12/13	11/12/13
	Barium (Ba), Dissolved	0.22	0.0050 mg/L	11/12/13	11/12/13
	Mercury (Hg), Dissolved	ND	0.0010 mg/L	11/12/13	11/12/13
	Lead (Pb), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13

## Client ID: Field Blank

Lab ID : CON13110824-36A	Chromium (Cr), Dissolved	ND	0.010 mg/L	11/12/13	11/12/13
Date Sampled 11/06/13 16:45	Arsenic (As), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
	Selenium (Se), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
	Silver (Ag), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
	Cadmium (Cd), Dissolved	ND	0.0020 mg/L	11/12/13	11/12/13
	Barium (Ba), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
	Mercury (Hg), Dissolved	ND	0.0010 mg/L	11/12/13	11/12/13
	Lead (Pb), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13

## Client ID: B-4

Lab ID : CON13110824-39A	Chromium (Cr), Dissolved	ND	0.010 mg/L	11/12/13	11/12/13
Date Sampled 11/06/13 14:40	Arsenic (As), Dissolved	0.0067	0.0050 mg/L	11/12/13	11/12/13
	Selenium (Se), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
	Silver (Ag), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
	Cadmium (Cd), Dissolved	ND	0.0020 mg/L	11/12/13	11/12/13
	Barium (Ba), Dissolved	0.23	0.0050 mg/L	11/12/13	11/12/13
	Mercury (Hg), Dissolved	ND	0.0010 mg/L	11/12/13	11/12/13
	Lead (Pb), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ND = Not Detected



*Roger Scholl*     *Randy Gardner*     *Walter Hinchman*

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity : Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/15/13

Report Date



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513  
Date Received : 11/08/13

Job: 08-73103-01/02-07/ Carlin Brownfields RRP

### Metals by ICPMS EPA Method SW6020 / SW6020A

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: B-13@11FT				
Lab ID : CON13110824-04A	Chromium (Cr)	16	1.0 mg/Kg	11/13/13
Date Sampled 11/06/13 08:40	Arsenic (As)	19	1.0 mg/Kg	11/13/13
	Selenium (Se)	5.6	2.0 mg/Kg	11/13/13
	Silver (Ag)	ND	1.0 mg/Kg	11/13/13
	Cadmium (Cd)	ND	1.0 mg/Kg	11/13/13
	Barium (Ba)	110	1.0 mg/Kg	11/13/13
	Mercury (Hg)	ND	0.20 mg/Kg	11/13/13
	Lead (Pb)	11	1.0 mg/Kg	11/13/13
Client ID: B-2@12FT				
Lab ID : CON13110824-08A	Chromium (Cr)	15	1.0 mg/Kg	11/13/13
Date Sampled 11/06/13 09:40	Arsenic (As)	3.1	1.0 mg/Kg	11/13/13
	Selenium (Se)	ND	2.0 mg/Kg	11/13/13
	Silver (Ag)	ND	1.0 mg/Kg	11/13/13
	Cadmium (Cd)	ND	1.0 mg/Kg	11/13/13
	Barium (Ba)	96	1.0 mg/Kg	11/13/13
	Mercury (Hg)	ND	0.20 mg/Kg	11/13/13
	Lead (Pb)	2.6	1.0 mg/Kg	11/13/13
Client ID: B-1@12FT				
Lab ID : CON13110824-13A	Chromium (Cr)	11	1.0 mg/Kg	11/13/13
Date Sampled 11/06/13 10:29	Arsenic (As)	19	1.0 mg/Kg	11/13/13
	Selenium (Se)	ND	2.0 mg/Kg	11/13/13
	Silver (Ag)	ND	1.0 mg/Kg	11/13/13
	Cadmium (Cd)	ND	1.0 mg/Kg	11/13/13
	Barium (Ba)	360	1.0 mg/Kg	11/13/13
	Mercury (Hg)	ND	0.20 mg/Kg	11/13/13
	Lead (Pb)	9.0	1.0 mg/Kg	11/13/13
Client ID: B-3@6.5FT				
Lab ID : CON13110824-16A	Chromium (Cr)	23	1.0 mg/Kg	11/13/13
Date Sampled 11/06/13 11:35	Arsenic (As)	27	1.0 mg/Kg	11/13/13
	Selenium (Se)	ND	2.0 mg/Kg	11/13/13
	Silver (Ag)	2.0	1.0 mg/Kg	11/13/13
	Cadmium (Cd)	18	1.0 mg/Kg	11/13/13
	Barium (Ba)	320	1.0 mg/Kg	11/13/13
	Mercury (Hg)	1.7	0.20 mg/Kg	11/13/13
	Lead (Pb)	400	1.0 mg/Kg	11/13/13



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

**Client ID: B-15@8FT**

Lab ID :	CON13110824-18A	Chromium (Cr)	15	1.0 mg/Kg	11/13/13	11/13/13
Date Sampled	11/06/13 12:40	Arsenic (As)	8.4	1.0 mg/Kg	11/13/13	11/13/13
		Selenium (Se)	ND	2.0 mg/Kg	11/13/13	11/13/13
		Silver (Ag)	ND	1.0 mg/Kg	11/13/13	11/13/13
		Cadmium (Cd)	ND	1.0 mg/Kg	11/13/13	11/13/13
		Barium (Ba)	550	1.0 mg/Kg	11/13/13	11/13/13
		Mercury (Hg)	ND	0.20 mg/Kg	11/13/13	11/13/13
		Lead (Pb)	10	1.0 mg/Kg	11/13/13	11/13/13

**Client ID: B-15A@8FT**

Lab ID :	CON13110824-19A	Chromium (Cr)	15	1.0 mg/Kg	11/13/13	11/13/13
Date Sampled	11/06/13 12:41	Arsenic (As)	7.5	1.0 mg/Kg	11/13/13	11/13/13
		Selenium (Se)	2.1	2.0 mg/Kg	11/13/13	11/13/13
		Silver (Ag)	ND	1.0 mg/Kg	11/13/13	11/13/13
		Cadmium (Cd)	1.1	1.0 mg/Kg	11/13/13	11/13/13
		Barium (Ba)	200	1.0 mg/Kg	11/13/13	11/13/13
		Mercury (Hg)	ND	0.20 mg/Kg	11/13/13	11/13/13
		Lead (Pb)	9.6	1.0 mg/Kg	11/13/13	11/13/13

**Client ID: B-15@12FT**

Lab ID :	CON13110824-20A	Chromium (Cr)	4.7	1.0 mg/Kg	11/13/13	11/13/13
Date Sampled	11/06/13 12:48	Arsenic (As)	5.8	1.0 mg/Kg	11/13/13	11/13/13
		Selenium (Se)	ND	2.0 mg/Kg	11/13/13	11/13/13
		Silver (Ag)	ND	1.0 mg/Kg	11/13/13	11/13/13
		Cadmium (Cd)	ND	1.0 mg/Kg	11/13/13	11/13/13
		Barium (Ba)	67	1.0 mg/Kg	11/13/13	11/13/13
		Mercury (Hg)	ND	0.20 mg/Kg	11/13/13	11/13/13
		Lead (Pb)	3.5	1.0 mg/Kg	11/13/13	11/13/13

**Client ID: B-4@8FT**

Lab ID :	CON13110824-23A	Chromium (Cr)	18	1.0 mg/Kg	11/13/13	11/13/13
Date Sampled	11/06/13 14:00	Arsenic (As)	11	1.0 mg/Kg	11/13/13	11/13/13
		Selenium (Se)	ND	2.0 mg/Kg	11/13/13	11/13/13
		Silver (Ag)	ND	1.0 mg/Kg	11/13/13	11/13/13
		Cadmium (Cd)	ND	1.0 mg/Kg	11/13/13	11/13/13
		Barium (Ba)	850	1.0 mg/Kg	11/13/13	11/13/13
		Mercury (Hg)	ND	0.20 mg/Kg	11/13/13	11/13/13
		Lead (Pb)	12	1.0 mg/Kg	11/13/13	11/13/13

**Client ID: B-4@12FT**

Lab ID :	CON13110824-24A	Chromium (Cr)	8.1	1.0 mg/Kg	11/13/13	11/13/13
Date Sampled	11/06/13 14:10	Arsenic (As)	5.8	1.0 mg/Kg	11/13/13	11/13/13
		Selenium (Se)	ND	2.0 mg/Kg	11/13/13	11/13/13
		Silver (Ag)	ND	1.0 mg/Kg	11/13/13	11/13/13
		Cadmium (Cd)	ND	1.0 mg/Kg	11/13/13	11/13/13
		Barium (Ba)	84	1.0 mg/Kg	11/13/13	11/13/13
		Mercury (Hg)	ND	0.20 mg/Kg	11/13/13	11/13/13
		Lead (Pb)	4.0	1.0 mg/Kg	11/13/13	11/13/13

**Client ID: B-5@8FT**

Lab ID :	CON13110824-26A	Chromium (Cr)	20	1.0 mg/Kg	11/13/13	11/13/13
Date Sampled	11/06/13 15:15	Arsenic (As)	11	1.0 mg/Kg	11/13/13	11/13/13
		Selenium (Se)	ND	2.0 mg/Kg	11/13/13	11/13/13
		Silver (Ag)	ND	1.0 mg/Kg	11/13/13	11/13/13
		Cadmium (Cd)	1.1	1.0 mg/Kg	11/13/13	11/13/13
		Barium (Ba)	530	1.0 mg/Kg	11/13/13	11/13/13
		Mercury (Hg)	ND	0.20 mg/Kg	11/13/13	11/13/13
		Lead (Pb)	12	1.0 mg/Kg	11/13/13	11/13/13



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

**Client ID: B-5@12FT**

Lab ID : CON13110824-27A	Chromium (Cr)	13	1.0 mg/Kg	11/13/13	11/13/13
Date Sampled 11/06/13 15:22	Arsenic (As)	5.4	1.0 mg/Kg	11/13/13	11/13/13
	Selenium (Se)	ND	2.0 mg/Kg	11/13/13	11/13/13
	Silver (Ag)	ND	1.0 mg/Kg	11/13/13	11/13/13
	Cadmium (Cd)	ND	1.0 mg/Kg	11/13/13	11/13/13
	Barium (Ba)	130	1.0 mg/Kg	11/13/13	11/13/13
	Mercury (Hg)	ND	0.20 mg/Kg	11/13/13	11/13/13
	Lead (Pb)	4.7	1.0 mg/Kg	11/13/13	11/13/13

**Client ID: B-6@4FT**

Lab ID : CON13110824-29A	Chromium (Cr)	17	1.0 mg/Kg	11/13/13	11/13/13
Date Sampled 11/06/13 16:05	Arsenic (As)	5.5	1.0 mg/Kg	11/13/13	11/13/13
	Selenium (Se)	ND	2.0 mg/Kg	11/13/13	11/13/13
	Silver (Ag)	ND	1.0 mg/Kg	11/13/13	11/13/13
	Cadmium (Cd)	ND	1.0 mg/Kg	11/13/13	11/13/13
	Barium (Ba)	290	1.0 mg/Kg	11/13/13	11/13/13
	Mercury (Hg)	ND	0.20 mg/Kg	11/13/13	11/13/13
	Lead (Pb)	7.0	1.0 mg/Kg	11/13/13	11/13/13

**Client ID: B-6@11FT**

Lab ID : CON13110824-31A	Chromium (Cr)	9.2	1.0 mg/Kg	11/13/13	11/13/13
Date Sampled 11/06/13 16:20	Arsenic (As)	4.5	1.0 mg/Kg	11/13/13	11/13/13
	Selenium (Se)	ND	2.0 mg/Kg	11/13/13	11/13/13
	Silver (Ag)	ND	1.0 mg/Kg	11/13/13	11/13/13
	Cadmium (Cd)	ND	1.0 mg/Kg	11/13/13	11/13/13
	Barium (Ba)	410	1.0 mg/Kg	11/13/13	11/13/13
	Mercury (Hg)	ND	0.20 mg/Kg	11/13/13	11/13/13
	Lead (Pb)	5.5	1.0 mg/Kg	11/13/13	11/13/13

**Client ID: B-4A@12FT**

Lab ID : CON13110824-35A	Chromium (Cr)	6.1	1.0 mg/Kg	11/13/13	11/13/13
Date Sampled 11/06/13 14:11	Arsenic (As)	5.5	1.0 mg/Kg	11/13/13	11/13/13
	Selenium (Se)	ND	2.0 mg/Kg	11/13/13	11/13/13
	Silver (Ag)	ND	1.0 mg/Kg	11/13/13	11/13/13
	Cadmium (Cd)	ND	1.0 mg/Kg	11/13/13	11/13/13
	Barium (Ba)	73	1.0 mg/Kg	11/13/13	11/13/13
	Mercury (Hg)	ND	0.20 mg/Kg	11/13/13	11/13/13
	Lead (Pb)	4.1	1.0 mg/Kg	11/13/13	11/13/13

Sample results were calculated on a wet weight basis.

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/15/13

Report Date



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-05A  
Client I.D. Number: B-13

Sampled: 11/06/13 09:20  
Received: 11/08/13  
Extracted: 11/08/13 13:11  
Analyzed: 11/13/13

### Semivolatile Organics by GC/MS - SIM EPA Method 625/SW8270C

	Compound	Concentration	Reporting Limit
1	Naphthalene	0.040	0.020 µg/L
2	2-Methylnaphthalene	0.039	0.020 µg/L
3	1-Methylnaphthalene	0.030	0.020 µg/L
4	Acenaphthylene	ND	0.020 µg/L
5	Acenaphthene	ND	0.020 µg/L
6	Fluorene	ND	0.020 µg/L
7	Phenanthrene	ND	0.020 µg/L
8	Anthracene	ND	0.020 µg/L
9	Fluoranthene	ND	0.020 µg/L
10	Pyrene	ND	0.020 µg/L
11	Benzo(a)anthracene	ND	0.020 µg/L
12	Chrysene	ND	0.020 µg/L
13	Benzo(b&k)fluoranthene, isomeric pair	ND	0.040 µg/L
14	Benzo(a)pyrene	ND	0.020 µg/L
15	Indeno(1,2,3-cd)pyrene	ND	0.020 µg/L
16	Dibenz(a,h)anthracene	ND	0.020 µg/L
17	Benzo(g,h,i)perylene	ND	0.020 µg/L

Note: EPA Method 8270C CC compounds Acenaphthene, Fluoranthene and Benzo(a)pyrene were evaluated in the CV at the method criteria of 80-120% recovery.

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse

4840 Mill Street, Suite 5

Reno, NV 89502

Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller

Phone: (775) 284-9752

Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-10A

Client I.D. Number: B-2

Sampled: 11/06/13 09:55

Received: 11/08/13

Extracted: 11/08/13 13:11

Analyzed: 11/13/13

Semivolatile Organics by GC/MS - SIM

EPA Method 625/SW8270C

	Compound	Concentration	Reporting Limit
1	Naphthalene	0.046	0.020 µg/L
2	2-Methylnaphthalene	0.18	0.020 µg/L
3	1-Methylnaphthalene	0.16	0.020 µg/L
4	Acenaphthylene	ND	0.020 µg/L
5	Acenaphthene	0.025	0.020 µg/L
6	Fluorene	ND	0.020 µg/L
7	Phenanthrene	0.067	0.020 µg/L
8	Anthracene	ND	0.020 µg/L
9	Fluoranthene	ND	0.020 µg/L
10	Pyrene	ND	0.020 µg/L
11	Benzo(a)anthracene	ND	0.020 µg/L
12	Chrysene	ND	0.020 µg/L
13	Benzo(b&k)fluoranthene, isomeric pair	ND	0.040 µg/L
14	Benzo(a)pyrene	ND	0.020 µg/L
15	Indeno(1,2,3-cd)pyrene	ND	0.020 µg/L
16	Dibenz(a,h)anthracene	ND	0.020 µg/L
17	Benzo(g,h,i)perylene	ND	0.020 µg/L

Note: EPA Method 8270C CC compounds Acenaphthene, Fluoranthene and Benzo(a)pyrene were evaluated in the CV at the method criteria of 80-120% recovery.

ND = Not Detected



Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse

4840 Mill Street, Suite 5

Reno, NV 89502

Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller

Phone: (775) 284-9752

Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-14A

Client I.D. Number: B-1

Sampled: 11/06/13 10:40

Received: 11/08/13

Extracted: 11/08/13 13:11

Analyzed: 11/13/13

Semivolatile Organics by GC/MS - SIM

EPA Method 625/SW8270C

	Compound	Concentration	Reporting Limit
1	Naphthalene	0.021	0.020 µg/L
2	2-Methylnaphthalene	ND	0.020 µg/L
3	1-Methylnaphthalene	ND	0.020 µg/L
4	Acenaphthylene	ND	0.020 µg/L
5	Acenaphthene	ND	0.020 µg/L
6	Fluorene	ND	0.020 µg/L
7	Phenanthrene	0.038	0.020 µg/L
8	Anthracene	ND	0.020 µg/L
9	Fluoranthene	ND	0.020 µg/L
10	Pyrene	ND	0.020 µg/L
11	Benzo(a)anthracene	ND	0.020 µg/L
12	Chrysene	ND	0.020 µg/L
13	Benzo(b&k)fluoranthene, isomeric pair	ND	0.040 µg/L
14	Benzo(a)pyrene	ND	0.020 µg/L
15	Indeno(1,2,3-cd)pyrene	ND	0.020 µg/L
16	Dibenz(a,h)anthracene	ND	0.020 µg/L
17	Benzo(g,h,i)perylene	ND	0.020 µg/L

Note: EPA Method 8270C CC compounds Acenaphthene, Fluoranthene and Benzo(a)pyrene were evaluated in the CV at the method criteria of 80-120% recovery.

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com  
Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.  
Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-16A  
Client I.D. Number: B-3@6.5FT

Sampled: 11/06/13 11:35  
Received: 11/08/13  
Extracted: 11/20/13 11:18  
Analyzed: 11/26/13

### Semivolatile Organics by GC/MS - SIM EPA Method SW8270C

Compound	Concentration	Reporting Limit
1 Naphthalene	ND	250 µg/Kg
2 2-Methylnaphthalene	ND	250 µg/Kg
3 1-Methylnaphthalene	ND	250 µg/Kg
4 Acenaphthylene	ND	250 µg/Kg
5 Acenaphthene	ND	250 µg/Kg
6 Fluorene	ND	250 µg/Kg
7 Phenanthrene	ND	250 µg/Kg
8 Anthracene	ND	250 µg/Kg
9 Fluoranthene	ND	250 µg/Kg
10 Pyrene	ND	250 µg/Kg
11 Benzo(a)anthracene	ND	250 µg/Kg
12 Chrysene	ND	250 µg/Kg
13 Benzo(b&k)fluoranthene, isomeric pair	ND	500 µg/Kg
14 Benzo(a)pyrene	ND	250 µg/Kg
15 Indeno(1,2,3-cd)pyrene	ND	250 µg/Kg
16 Dibenzo(a,h)anthracene	ND	250 µg/Kg
17 Benzo(g,h,i)perylene	ND	250 µg/Kg

Note: EPA Method 8270C CC compounds Acenaphthene, Fluoranthene and Benzo(a)pyrene were evaluated in the CV at the method criteria of 80-120% recovery. Reporting Limits were increased due to the hydrocarbons present in the sample.

Sample results were calculated on a wet weight basis.  
ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



*[Signature]*  
12/2/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-24A  
Client I.D. Number: B-4@12FT

Sampled: 11/06/13 14:10  
Received: 11/08/13  
Extracted: 11/20/13 11:18  
Analyzed: 11/26/13

### Semivolatile Organics by GC/MS - SIM EPA Method SW8270C

Compound	Concentration	Reporting Limit
1 Naphthalene	ND	250 µg/Kg
2 2-Methylnaphthalene	490	250 µg/Kg
3 1-Methylnaphthalene	1,000	250 µg/Kg
4 Acenaphthylene	ND	250 µg/Kg
5 Acenaphthene	ND	250 µg/Kg
6 Fluorene	ND	250 µg/Kg
7 Phenanthrene	ND	250 µg/Kg
8 Anthracene	ND	250 µg/Kg
9 Fluoranthene	ND	250 µg/Kg
10 Pyrene	ND	250 µg/Kg
11 Benzo(a)anthracene	ND	250 µg/Kg
12 Chrysene	ND	250 µg/Kg
13 Benzo(b&k)fluoranthene, isomeric pair	ND	500 µg/Kg
14 Benzo(a)pyrene	ND	250 µg/Kg
15 Indeno(1,2,3-cd)pyrene	ND	250 µg/Kg
16 Dibenz(a,h)anthracene	ND	250 µg/Kg
17 Benzo(g,h,i)perylene	ND	250 µg/Kg

Note: EPA Method 8270C CC compounds Acenaphthene, Fluoranthene and Benzo(a)pyrene were evaluated in the CV at the method criteria of 80-120% recovery.  
Reporting Limits were increased due to the hydrocarbons present in the sample.

Sample results were calculated on a wet weight basis.  
ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



*[Signature]*  
12/2/13  
Report Date



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-21A  
Client I.D. Number: B-15

Sampled: 11/06/13 13:15  
Received: 11/08/13  
Extracted: 11/08/13 13:11  
Analyzed: 11/13/13

### Semivolatile Organics by GC/MS - SIM EPA Method 625/SW8270C

	Compound	Concentration	Reporting Limit
1	Naphthalene	0.028	0.020 µg/L
2	2-Methylnaphthalene	ND	0.020 µg/L
3	1-Methylnaphthalene	ND	0.020 µg/L
4	Acenaphthylene	ND	0.020 µg/L
5	Acenaphthene	ND	0.020 µg/L
6	Fluorene	ND	0.020 µg/L
7	Phenanthrene	ND	0.020 µg/L
8	Anthracene	ND	0.020 µg/L
9	Fluoranthene	ND	0.020 µg/L
10	Pyrene	ND	0.020 µg/L
11	Benzo(a)anthracene	ND	0.020 µg/L
12	Chrysene	ND	0.020 µg/L
13	Benzo(b&k)fluoranthene, isomeric pair	ND	0.040 µg/L
14	Benzo(a)pyrene	ND	0.020 µg/L
15	Indeno(1,2,3-cd)pyrene	ND	0.020 µg/L
16	Dibenz(a,h)anthracene	ND	0.020 µg/L
17	Benzo(g,h,i)perylene	ND	0.020 µg/L

Note: EPA Method 8270C CC compounds Acenaphthene, Fluoranthene and Benzo(a)pyrene were evaluated in the CV at the method criteria of 80-120% recovery.

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse

4840 Mill Street, Suite 5

Reno, NV 89502

Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller

Phone: (775) 284-9752

Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-26A

Client I.D. Number: B-5@8FT

Sampled: 11/06/13 15:15

Received: 11/08/13

Extracted: 11/12/13 15:29

Analyzed: 11/15/13

Semivolatile Organics by GC/MS - SIM

EPA Method SW8270C

	Compound	Concentration	Reporting Limit
1	Naphthalene	ND	250 µg/Kg
2	2-Methylnaphthalene	ND	250 µg/Kg
3	1-Methylnaphthalene	ND	250 µg/Kg
4	Acenaphthylene	ND	250 µg/Kg
5	Acenaphthene	ND	250 µg/Kg
6	Fluorene	ND	250 µg/Kg
7	Phenanthrene	ND	250 µg/Kg
8	Anthracene	ND	250 µg/Kg
9	Fluoranthene	ND	250 µg/Kg
10	Pyrene	ND	250 µg/Kg
11	Benzo(a)anthracene	ND	250 µg/Kg
12	Chrysene	ND	250 µg/Kg
13	Benzo(b&k)fluoranthene, isomeric pair	ND	500 µg/Kg
14	Benzo(a)pyrene	ND	250 µg/Kg
15	Indeno(1,2,3-cd)pyrene	ND	250 µg/Kg
16	Dibenz(a,h)anthracene	ND	250 µg/Kg
17	Benzo(g,h,i)perylene	ND	250 µg/Kg

Note: EPA Method 8270C CC compounds Acenaphthene, Fluoranthene and Benzo(a)pyrene were evaluated in the CV at the method criteria of 80-120% recovery. Reporting Limits were increased due to the hydrocarbons present in the sample.

Sample results were calculated on a wet weight basis.

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-27A  
Client I.D. Number: B-5@12FT

Sampled: 11/06/13 15:22  
Received: 11/08/13  
Extracted: 11/12/13 15:29  
Analyzed: 11/15/13

### Semivolatile Organics by GC/MS - SIM EPA Method SW8270C

	Compound	Concentration	Reporting Limit
1	Naphthalene	28	25 µg/Kg
2	2-Methylnaphthalene	110	25 µg/Kg
3	1-Methylnaphthalene	250	25 µg/Kg
4	Acenaphthylene	ND	25 µg/Kg
5	Acenaphthene	40	25 µg/Kg
6	Fluorene	ND	25 µg/Kg
7	Phenanthrene	140	25 µg/Kg
8	Anthracene	ND	25 µg/Kg
9	Fluoranthene	ND	25 µg/Kg
10	Pyrene	ND	25 µg/Kg
11	Benzo(a)anthracene	ND	25 µg/Kg
12	Chrysene	ND	25 µg/Kg
13	Benzo(b&k)fluoranthene, isomeric pair	ND	50 µg/Kg
14	Benzo(a)pyrene	ND	25 µg/Kg
15	Indeno(1,2,3-cd)pyrene	ND	25 µg/Kg
16	Dibenz(a,h)anthracene	ND	25 µg/Kg
17	Benzo(g,h,i)perylene	ND	25 µg/Kg

Note: EPA Method 8270C CC compounds Acenaphthene, Fluoranthene and Benzo(a)pyrene were evaluated in the CV at the method criteria of 80-120% recovery.

Sample results were calculated on a wet weight basis.  
ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV000016.



11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-28A  
Client I.D. Number: B-5

Sampled: 11/06/13 15:35  
Received: 11/08/13  
Extracted: 11/08/13 13:11  
Analyzed: 11/15/13

### Semivolatile Organics by GC/MS - SIM EPA Method 625/SW8270C

	Compound	Concentration	Reporting Limit
1	Naphthalene	93	1.0 µg/L
2	2-Methylnaphthalene	120	1.0 µg/L
3	1-Methylnaphthalene	250	1.0 µg/L
4	Acenaphthylene	1.6	1.0 µg/L
5	Acenaphthene	30	1.0 µg/L
6	Fluorene	41	1.0 µg/L
7	Phenanthrene	93	1.0 µg/L
8	Anthracene	ND	1.0 µg/L
9	Fluoranthene	3.2	1.0 µg/L
10	Pyrene	4.3	1.0 µg/L
11	Benzo(a)anthracene	ND	1.0 µg/L
12	Chrysene	ND	1.0 µg/L
13	Benzo(b&k)fluoranthene, isomeric pair	ND	2.0 µg/L
14	Benzo(a)pyrene	ND	1.0 µg/L
15	Indeno(1,2,3-cd)pyrene	ND	1.0 µg/L
16	Dibenz(a,h)anthracene	ND	1.0 µg/L
17	Benzo(g,h,i)perylene	ND	1.0 µg/L

Note: EPA Method 8270C CC compounds Acenaphthene, Fluoranthene and Benzo(a)pyrene were evaluated in the CV at the method criteria of 80-120% recovery. Reporting Limits were increased due to high concentrations of target analytes.

\*These compounds slightly exceeded the instrument's calibration range and are estimated values.

ND = Not Detected



Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-32A  
Client I.D. Number: B-6

Sampled: 11/06/13 16:35  
Received: 11/08/13  
Extracted: 11/08/13 13:11  
Analyzed: 11/13/13

### Semivolatile Organics by GC/MS - SIM EPA Method 625/SW8270C

	Compound	Concentration	Reporting Limit
1	Naphthalene	6.0	0.10 µg/L
2	2-Methylnaphthalene	4.8	0.10 µg/L
3	1-Methylnaphthalene	15 *	0.20 µg/L
4	Acenaphthylene	0.24	0.10 µg/L
5	Acenaphthene	0.97	0.10 µg/L
6	Fluorene	0.90	0.10 µg/L
7	Phenanthrene	1.4	0.10 µg/L
8	Anthracene	ND	0.10 µg/L
9	Fluoranthene	ND	0.10 µg/L
10	Pyrene	ND	0.10 µg/L
11	Benzo(a)anthracene	ND	0.10 µg/L
12	Chrysene	ND	0.10 µg/L
13	Benzo(b&k)fluoranthene, isomeric pair	ND	0.20 µg/L
14	Benzo(a)pyrene	ND	0.10 µg/L
15	Indeno(1,2,3-cd)pyrene	ND	0.10 µg/L
16	Dibenz(a,h)anthracene	ND	0.10 µg/L
17	Benzo(g,h,i)perylene	ND	0.10 µg/L

Note: EPA Method 8270C CC compounds Acenaphthene, Fluoranthene and Benzo(a)pyrene were evaluated in the CV at the method criteria of 80-120% recovery. Reporting Limits were increased due to high concentrations of target analytes.

\*This compound was analyzed separately on 11/15/13 to be within its calibration, while achieving the lowest possible reporting limits for the other compounds.

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13  
Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-33A  
Client I.D. Number: B-15-A

Sampled: 11/06/13 13:16  
Received: 11/08/13  
Extracted: 11/08/13 13:11  
Analyzed: 11/13/13

### Semivolatile Organics by GC/MS - SIM EPA Method 625/SW8270C

	Compound	Concentration	Reporting Limit
1	Naphthalene	0.027	0.020 µg/L
2	2-Methylnaphthalene	ND	0.020 µg/L
3	1-Methylnaphthalene	0.022	0.020 µg/L
4	Acenaphthylene	ND	0.020 µg/L
5	Acenaphthene	ND	0.020 µg/L
6	Fluorene	ND	0.020 µg/L
7	Phenanthrene	ND	0.020 µg/L
8	Anthracene	ND	0.020 µg/L
9	Fluoranthene	ND	0.020 µg/L
10	Pyrene	ND	0.020 µg/L
11	Benzo(a)anthracene	ND	0.020 µg/L
12	Chrysene	ND	0.020 µg/L
13	Benzo(b&k)fluoranthene, isomeric pair	ND	0.040 µg/L
14	Benzo(a)pyrene	ND	0.020 µg/L
15	Indeno(1,2,3-cd)pyrene	ND	0.020 µg/L
16	Dibenz(a,h)anthracene	ND	0.020 µg/L
17	Benzo(g,h,i)perylene	ND	0.020 µg/L

Note: EPA Method 8270C CC compounds Acenaphthene, Fluoranthene and Benzo(a)pyrene were evaluated in the CV at the method criteria of 80-120% recovery.

ND = Not Detected



Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13  
Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-34A  
Client I.D. Number: B-4-A

Sampled: 11/06/13 14:41  
Received: 11/08/13  
Extracted: 11/08/13 13:11  
Analyzed: 11/15/13

### Semivolatile Organics by GC/MS - SIM EPA Method 625/SW8270C

	Compound	Concentration	Reporting Limit
1	Naphthalene	69	1.0 µg/L
2	2-Methylnaphthalene	64	1.0 µg/L
3	1-Methylnaphthalene	180 *	1.0 µg/L
4	Acenaphthylene	4.4	1.0 µg/L
5	Acenaphthene	8.9	1.0 µg/L
6	Fluorene	19	1.0 µg/L
7	Phenanthrene	39	1.0 µg/L
8	Anthracene	ND	1.0 µg/L
9	Fluoranthene	ND	1.0 µg/L
10	Pyrene	ND	1.0 µg/L
11	Benzo(a)anthracene	ND	1.0 µg/L
12	Chrysene	ND	1.0 µg/L
13	Benzo(b&k)fluoranthene, isomeric pair	ND	2.0 µg/L
14	Benzo(a)pyrene	ND	1.0 µg/L
15	Indeno(1,2,3-cd)pyrene	ND	1.0 µg/L
16	Dibenz(a,h)anthracene	ND	1.0 µg/L
17	Benzo(g,h,i)perylene	ND	1.0 µg/L

Note: EPA Method 8270C CC compounds Acenaphthene, Fluoranthene and Benzo(a)pyrene were evaluated in the CV at the method criteria of 80-120% recovery.

Reporting Limits were increased due to high concentrations of target analytes.

\*These compounds slightly exceeded the instrument's calibration range and are estimated values.

ND = Not Detected



*Roger Schell* *Randy Gardner* *Walter Hinchman*  
Roger L. Schell, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-36A  
Client I.D. Number: Field Blank

Sampled: 11/06/13 16:45  
Received: 11/08/13  
Extracted: 11/08/13 13:11  
Analyzed: 11/13/13

### Semivolatile Organics by GC/MS - SIM EPA Method 625/SW8270C

	Compound	Concentration	Reporting Limit
1	Naphthalene	ND	0.020 µg/L
2	2-Methylnaphthalene	ND	0.020 µg/L
3	1-Methylnaphthalene	ND	0.020 µg/L
4	Acenaphthylene	ND	0.020 µg/L
5	Acenaphthene	ND	0.020 µg/L
6	Fluorene	ND	0.020 µg/L
7	Phenanthrene	ND	0.020 µg/L
8	Anthracene	ND	0.020 µg/L
9	Fluoranthene	ND	0.020 µg/L
10	Pyrene	ND	0.020 µg/L
11	Benzo(a)anthracene	ND	0.020 µg/L
12	Chrysene	ND	0.020 µg/L
13	Benzo(b&k)fluoranthene, isomeric pair	ND	0.040 µg/L
14	Benzo(a)pyrene	ND	0.020 µg/L
15	Indeno(1,2,3-cd)pyrene	ND	0.020 µg/L
16	Dibenz(a,h)anthracene	ND	0.020 µg/L
17	Benzo(g,h,i)perylene	ND	0.020 µg/L

Note: EPA Method 8270C CC compounds Acenaphthene, Fluoranthene and Benzo(a)pyrene were evaluated in the CV at the method criteria of 80-120% recovery.

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse

4840 Mill Street, Suite 5

Reno, NV 89502

Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller

Phone: (775) 284-9752

Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-39A

Client I.D. Number: B-4

Sampled: 11/06/13 14:40

Received: 11/08/13

Extracted: 11/08/13 13:11

Analyzed: 11/15/13

Semivolatile Organics by GC/MS - SIM

EPA Method 625/SW8270C

	Compound	Concentration	Reporting Limit
1	Naphthalene	70	1.0 µg/L
2	2-Methylnaphthalene	61	1.0 µg/L
3	1-Methylnaphthalene	180 *	1.0 µg/L
4	Acenaphthylene	2.3	1.0 µg/L
5	Acenaphthene	9.2	1.0 µg/L
6	Fluorene	18	1.0 µg/L
7	Phenanthrene	21	1.0 µg/L
8	Anthracene	ND	1.0 µg/L
9	Fluoranthene	ND	1.0 µg/L
10	Pyrene	ND	1.0 µg/L
11	Benzo(a)anthracene	ND	1.0 µg/L
12	Chrysene	ND	1.0 µg/L
13	Benzo(b&k)fluoranthene, isomeric pair	ND	2.0 µg/L
14	Benzo(a)pyrene	ND	1.0 µg/L
15	Indeno(1,2,3-cd)pyrene	ND	1.0 µg/L
16	Dibenz(a,h)anthracene	ND	1.0 µg/L
17	Benzo(g,h,i)perylene	ND	1.0 µg/L

Note: EPA Method 8270C CC compounds Acenaphthene, Fluoranthene and Benzo(a)pyrene were evaluated in the CV at the method criteria of 80-120% recovery.

Reporting Limits were increased due to high concentrations of target analytes.

\*These compounds slightly exceeded the instrument's calibration range and are estimated values.

ND = Not Detected



Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513  
Date Received : 11/08/13

Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Total Petroleum Hydrocarbons - Extractable (TPH-E) EPA Method SW8015B

Total Petroleum Hydrocarbons - Purgeable (TPH-P) EPA Method SW8015B / SW8260B

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID : B-13@11FT					
Lab ID : CON13110824-04A	TPH-E (DRO)	ND	10 mg/Kg	11/08/13	11/09/13
Date Sampled 11/06/13 08:40	TPH-E (ORO)	ND	10 mg/Kg	11/08/13	11/09/13
	TPH-P (GRO)	ND	10 mg/Kg	11/13/13	11/15/13
Client ID : B-2@12FT					
Lab ID : CON13110824-08A	TPH-E (DRO)	ND	10 mg/Kg	11/08/13	11/09/13
Date Sampled 11/06/13 09:40	TPH-E (ORO)	ND	10 mg/Kg	11/08/13	11/09/13
	TPH-P (GRO)	ND	10 mg/Kg	11/13/13	11/15/13
Client ID : B-1@12FT					
Lab ID : CON13110824-13A	TPH-E (DRO)	ND	10 mg/Kg	11/08/13	11/09/13
Date Sampled 11/06/13 10:29	TPH-E (ORO)	ND	10 mg/Kg	11/08/13	11/09/13
	TPH-P (GRO)	ND	10 mg/Kg	11/13/13	11/15/13
Client ID : B-3@6.5FT					
Lab ID : CON13110824-16A	TPH-E (DRO)	280 L	50 mg/Kg	11/08/13	11/09/13
Date Sampled 11/06/13 11:35	TPH-E (ORO)	750	50 mg/Kg	11/08/13	11/09/13
	TPH-P (GRO)	ND	10 mg/Kg	11/13/13	11/15/13
Client ID : B-15@8FT					
Lab ID : CON13110824-18A	TPH-E (DRO)	ND	10 mg/Kg	11/08/13	11/09/13
Date Sampled 11/06/13 12:40	TPH-E (ORO)	ND	10 mg/Kg	11/08/13	11/09/13
	TPH-P (GRO)	ND	10 mg/Kg	11/13/13	11/15/13
Client ID : B-15A@8FT					
Lab ID : CON13110824-19A	TPH-E (DRO)	ND	10 mg/Kg	11/08/13	11/09/13
Date Sampled 11/06/13 12:41	TPH-E (ORO)	ND	10 mg/Kg	11/08/13	11/09/13
	TPH-P (GRO)	ND	10 mg/Kg	11/13/13	11/15/13
Client ID : B-15@12FT					
Lab ID : CON13110824-20A	TPH-E (DRO)	ND	10 mg/Kg	11/08/13	11/09/13
Date Sampled 11/06/13 12:48	TPH-E (ORO)	ND	10 mg/Kg	11/08/13	11/09/13
	TPH-P (GRO)	ND	10 mg/Kg	11/13/13	11/15/13
Client ID : B-4@8FT					
Lab ID : CON13110824-23A	TPH-E (DRO)	ND	10 mg/Kg	11/08/13	11/09/13
Date Sampled 11/06/13 14:00	TPH-E (ORO)	ND	10 mg/Kg	11/08/13	11/09/13
	TPH-P (GRO)	ND	10 mg/Kg	11/13/13	11/15/13
Client ID : B-4@12FT					
Lab ID : CON13110824-24A	TPH-E (DRO)	2,000	100 mg/Kg	11/08/13	11/09/13
Date Sampled 11/06/13 14:10	TPH-E (ORO)	170	100 mg/Kg	11/08/13	11/09/13
	TPH-P (GRO)	3,600	200 mg/Kg	11/13/13	11/15/13
Client ID : B-5@8FT					
Lab ID : CON13110824-26A	TPH-E (DRO)	2,500	50 mg/Kg	11/08/13	11/09/13
Date Sampled 11/06/13 15:15	TPH-E (ORO)	580	50 mg/Kg	11/08/13	11/09/13
	TPH-P (GRO)	2,000	80 mg/Kg	11/13/13	11/18/13
Client ID : B-5@12FT					
Lab ID : CON13110824-27A	TPH-E (DRO)	660	100 mg/Kg	11/08/13	11/09/13
Date Sampled 11/06/13 15:22	TPH-E (ORO)	ND	100 mg/Kg	11/08/13	11/09/13
	TPH-P (GRO)	ND	10 mg/Kg	11/13/13	11/18/13



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Client ID :	<b>B-6@4FT</b>					
Lab ID :	CON13110824-29A	TPH-E (DRO)	ND	10 mg/Kg	11/08/13	11/09/13
Date Sampled	11/06/13 16:05	TPH-E (ORO)	ND	10 mg/Kg	11/08/13	11/09/13
		TPH-P (GRO)	ND	10 mg/Kg	11/13/13	11/15/13
Client ID :	<b>B-6@11FT</b>					
Lab ID :	CON13110824-31A	TPH-E (DRO)	ND	10 mg/Kg	11/08/13	11/09/13
Date Sampled	11/06/13 16:20	TPH-E (ORO)	ND	10 mg/Kg	11/08/13	11/09/13
		TPH-P (GRO)	ND	10 mg/Kg	11/13/13	11/15/13
Client ID :	<b>B-4A@12FT</b>					
Lab ID :	CON13110824-35A	TPH-E (DRO)	8,600	100 mg/Kg	11/08/13	11/11/13
Date Sampled	11/06/13 14:11	TPH-E (ORO)	730	100 mg/Kg	11/08/13	11/11/13
		TPH-P (GRO)	6,500	200 mg/Kg	11/13/13	11/18/13
Client ID :	<b>Field Blank</b>					
Lab ID :	CON13110824-36A	TPH-E (DRO)	ND	0.50 mg/L	11/08/13	11/09/13
Date Sampled	11/06/13 16:45	TPH-E (ORO)	ND	0.50 mg/L	11/08/13	11/09/13
		TPH-P (GRO)	ND	0.50 mg/L	11/12/13	11/12/13

Diesel Range Organics (DRO) C13-C22

Gasoline Range Organics (GRO) C4-C13

L = DRO concentration may include contributions from heavier-end hydrocarbons that elute in the DRO range.

Oil Range Organics (ORO) C22-C40+

Sample results were calculated on a wet weight basis.

ND = Not Detected



*Roger Scholl*     *Randy Gardner*     *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / [info@alpha-analytical.com](mailto:info@alpha-analytical.com)

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-05A  
Client I.D. Number: B-13

Sampled: 11/06/13 09:20  
Received: 11/08/13  
Extracted: 11/12/13  
Analyzed: 11/12/13

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	2.0 µg/L	26 Ethylbenzene	ND	1.0 µg/L
2 Vinyl chloride	ND	1.0 µg/L	27 m,p-Xylene	ND	1.0 µg/L
3 Chloroethane	ND	1.0 µg/L	28 Bromoform	ND	1.0 µg/L
4 Bromomethane	ND	2.0 µg/L	29 o-Xylene	ND	1.0 µg/L
5 Trichlorofluoromethane	ND	1.0 µg/L	30 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
6 1,1-Dichloroethene	ND	1.0 µg/L	31 1,3-Dichlorobenzene	ND	1.0 µg/L
7 Dichloromethane	ND	2.0 µg/L	32 1,4-Dichlorobenzene	ND	1.0 µg/L
8 trans-1,2-Dichloroethene	ND	1.0 µg/L	33 1,2-Dichlorobenzene	ND	1.0 µg/L
9 1,1-Dichloroethane	ND	1.0 µg/L			
10 cis-1,2-Dichloroethene	ND	1.0 µg/L			
11 Chloroform	ND	1.0 µg/L			
12 1,2-Dichloroethane	ND	1.0 µg/L			
13 1,1,1-Trichloroethane	ND	1.0 µg/L			
14 Carbon tetrachloride	ND	1.0 µg/L			
15 Benzene	ND	1.0 µg/L			
16 1,2-Dichloropropane	ND	1.0 µg/L			
17 Trichloroethene	ND	1.0 µg/L			
18 Bromodichloromethane	ND	1.0 µg/L			
19 cis-1,3-Dichloropropene	ND	1.0 µg/L			
20 trans-1,3-Dichloropropene	ND	1.0 µg/L			
21 1,1,2-Trichloroethane	ND	1.0 µg/L			
22 Toluene	ND	1.0 µg/L			
23 Dibromochloromethane	ND	1.0 µg/L			
24 Tetrachloroethene	ND	1.0 µg/L			
25 Chlorobenzene	ND	1.0 µg/L			

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



✓  
11/18/13  
Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-10A  
Client I.D. Number: B-2

Sampled: 11/06/13 09:55  
Received: 11/08/13  
Extracted: 11/12/13  
Analyzed: 11/12/13

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	2.0 µg/L	26 Ethylbenzene	ND	1.0 µg/L
2 Vinyl chloride	ND	1.0 µg/L	27 m,p-Xylene	ND	1.0 µg/L
3 Chloroethane	ND	1.0 µg/L	28 Bromoform	ND	1.0 µg/L
4 Bromomethane	ND	2.0 µg/L	29 o-Xylene	ND	1.0 µg/L
5 Trichlorofluoromethane	ND	1.0 µg/L	30 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
6 1,1-Dichloroethene	ND	1.0 µg/L	31 1,3-Dichlorobenzene	ND	1.0 µg/L
7 Dichloromethane	ND	2.0 µg/L	32 1,4-Dichlorobenzene	ND	1.0 µg/L
8 trans-1,2-Dichloroethene	ND	1.0 µg/L	33 1,2-Dichlorobenzene	ND	1.0 µg/L
9 1,1-Dichloroethane	ND	1.0 µg/L			
10 cis-1,2-Dichloroethene	ND	1.0 µg/L			
11 Chloroform	ND	1.0 µg/L			
12 1,2-Dichloroethane	ND	1.0 µg/L			
13 1,1,1-Trichloroethane	ND	1.0 µg/L			
14 Carbon tetrachloride	ND	1.0 µg/L			
15 Benzene	ND	1.0 µg/L			
16 1,2-Dichloropropane	ND	1.0 µg/L			
17 Trichloroethene	ND	1.0 µg/L			
18 Bromodichloromethane	ND	1.0 µg/L			
19 cis-1,3-Dichloropropene	ND	1.0 µg/L			
20 trans-1,3-Dichloropropene	ND	1.0 µg/L			
21 1,1,2-Trichloroethane	ND	1.0 µg/L			
22 Toluene	ND	1.0 µg/L			
23 Dibromochloromethane	ND	1.0 µg/L			
24 Tetrachloroethene	ND	1.0 µg/L			
25 Chlorobenzene	ND	1.0 µg/L			

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13  
Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-14A  
Client I.D. Number: B-1

Sampled: 11/06/13 10:40  
Received: 11/08/13  
Extracted: 11/12/13  
Analyzed: 11/12/13

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	2.0 µg/L	26 Ethylbenzene	ND	1.0 µg/L
2 Vinyl chloride	ND	1.0 µg/L	27 m,p-Xylene	ND	1.0 µg/L
3 Chloroethane	ND	1.0 µg/L	28 Bromoform	ND	1.0 µg/L
4 Bromomethane	ND	2.0 µg/L	29 o-Xylene	ND	1.0 µg/L
5 Trichlorofluoromethane	ND	1.0 µg/L	30 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
6 1,1-Dichloroethene	ND	1.0 µg/L	31 1,3-Dichlorobenzene	ND	1.0 µg/L
7 Dichloromethane	ND	2.0 µg/L	32 1,4-Dichlorobenzene	ND	1.0 µg/L
8 trans-1,2-Dichloroethene	ND	1.0 µg/L	33 1,2-Dichlorobenzene	ND	1.0 µg/L
9 1,1-Dichloroethane	ND	1.0 µg/L			
10 cis-1,2-Dichloroethene	ND	1.0 µg/L			
11 Chloroform	ND	1.0 µg/L			
12 1,2-Dichloroethane	ND	1.0 µg/L			
13 1,1,1-Trichloroethane	ND	1.0 µg/L			
14 Carbon tetrachloride	ND	1.0 µg/L			
15 Benzene	ND	1.0 µg/L			
16 1,2-Dichloropropane	ND	1.0 µg/L			
17 Trichloroethene	ND	1.0 µg/L			
18 Bromodichloromethane	ND	1.0 µg/L			
19 cis-1,3-Dichloropropene	ND	1.0 µg/L			
20 trans-1,3-Dichloropropene	ND	1.0 µg/L			
21 1,1,2-Trichloroethane	ND	1.0 µg/L			
22 Toluene	ND	1.0 µg/L			
23 Dibromochloromethane	ND	1.0 µg/L			
24 Tetrachloroethene	ND	1.0 µg/L			
25 Chlorobenzene	ND	1.0 µg/L			

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.  
Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-16A  
Client I.D. Number: B-3@6.5FT

Sampled: 11/06/13 11:35  
Received: 11/08/13  
Extracted: 11/13/13 16:27  
Analyzed: 11/15/13

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	80 µg/Kg	26 Ethylbenzene	ND	20 µg/Kg
2 Vinyl chloride	ND	20 µg/Kg	27 m,p-Xylene	ND	20 µg/Kg
3 Chloroethane	ND	20 µg/Kg	28 Bromoform	ND	20 µg/Kg
4 Bromomethane	ND	80 µg/Kg	29 o-Xylene	ND	20 µg/Kg
5 Trichlorofluoromethane	ND	20 µg/Kg	30 1,1,2,2-Tetrachloroethane	ND	20 µg/Kg
6 1,1-Dichloroethene	ND	20 µg/Kg	31 1,3-Dichlorobenzene	ND	20 µg/Kg
7 Dichloromethane	ND	80 µg/Kg	32 1,4-Dichlorobenzene	ND	20 µg/Kg
8 trans-1,2-Dichloroethene	ND	20 µg/Kg	33 1,2-Dichlorobenzene	ND	20 µg/Kg
9 1,1-Dichloroethane	ND	20 µg/Kg			
10 cis-1,2-Dichloroethene	ND	20 µg/Kg			
11 Chloroform	ND	20 µg/Kg			
12 1,2-Dichloroethane	ND	20 µg/Kg			
13 1,1,1-Trichloroethane	ND	20 µg/Kg			
14 Carbon tetrachloride	ND	20 µg/Kg			
15 Benzene	ND	20 µg/Kg			
16 1,2-Dichloropropane	ND	20 µg/Kg			
17 Trichloroethene	ND	20 µg/Kg			
18 Bromodichloromethane	ND	20 µg/Kg			
19 cis-1,3-Dichloropropene	ND	20 µg/Kg			
20 trans-1,3-Dichloropropene	ND	20 µg/Kg			
21 1,1,2-Trichloroethane	ND	20 µg/Kg			
22 Toluene	ND	20 µg/Kg			
23 Dibromochloromethane	ND	20 µg/Kg			
24 Tetrachloroethene	ND	20 µg/Kg			
25 Chlorobenzene	ND	20 µg/Kg			

Sample results were calculated on a wet weight basis.  
ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



*VG*  
12/2/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Alpha Analytical Number: CON13110824-21A

Client I.D. Number: B-15

Sampled: 11/06/13 13:15

Received: 11/08/13

Extracted: 11/12/13

Analyzed: 11/12/13

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	2.0 µg/L	26 Ethylbenzene	ND	1.0 µg/L
2 Vinyl chloride	ND	1.0 µg/L	27 m,p-Xylene	ND	1.0 µg/L
3 Chloroethane	ND	1.0 µg/L	28 Bromoform	ND	1.0 µg/L
4 Bromomethane	ND	2.0 µg/L	29 o-Xylene	ND	1.0 µg/L
5 Trichlorofluoromethane	ND	1.0 µg/L	30 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
6 1,1-Dichloroethene	ND	1.0 µg/L	31 1,3-Dichlorobenzene	ND	1.0 µg/L
7 Dichloromethane	ND	2.0 µg/L	32 1,4-Dichlorobenzene	ND	1.0 µg/L
8 trans-1,2-Dichloroethene	ND	1.0 µg/L	33 1,2-Dichlorobenzene	ND	1.0 µg/L
9 1,1-Dichloroethane	ND	1.0 µg/L			
10 cis-1,2-Dichloroethene	ND	1.0 µg/L			
11 Chloroform	ND	1.0 µg/L			
12 1,2-Dichloroethane	ND	1.0 µg/L			
13 1,1,1-Trichloroethane	ND	1.0 µg/L			
14 Carbon tetrachloride	ND	1.0 µg/L			
15 Benzene	ND	1.0 µg/L			
16 1,2-Dichloropropane	ND	1.0 µg/L			
17 Trichloroethene	ND	1.0 µg/L			
18 Bromodichloromethane	ND	1.0 µg/L			
19 cis-1,3-Dichloropropene	ND	1.0 µg/L			
20 trans-1,3-Dichloropropene	ND	1.0 µg/L			
21 1,1,2-Trichloroethane	ND	1.0 µg/L			
22 Toluene	ND	1.0 µg/L			
23 Dibromochloromethane	ND	1.0 µg/L			
24 Tetrachloroethene	ND	1.0 µg/L			
25 Chlorobenzene	ND	1.0 µg/L			

ND = Not Detected



Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-24A  
Client I.D. Number: B-4@12FT

Sampled: 11/06/13 14:10  
Received: 11/08/13  
Extracted: 11/13/13 16:27  
Analyzed: 11/15/13

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	8,000 µg/Kg	26 Ethylbenzene	ND	1,000 µg/Kg
2 Vinyl chloride	ND	2,000 µg/Kg	27 m,p-Xylene	ND	1,000 µg/Kg
3 Chloroethane	ND	2,000 µg/Kg	28 Bromoform	ND	2,000 µg/Kg
4 Bromomethane	ND	8,000 µg/Kg	29 o-Xylene	ND	1,000 µg/Kg
5 Trichlorofluoromethane	ND	2,000 µg/Kg	30 1,1,2,2-Tetrachloroethane	ND	2,000 µg/Kg
6 1,1-Dichloroethene	ND	2,000 µg/Kg	31 1,3-Dichlorobenzene	ND	2,000 µg/Kg
7 Dichloromethane	ND	8,000 µg/Kg	32 1,4-Dichlorobenzene	ND	2,000 µg/Kg
8 trans-1,2-Dichloroethene	ND	2,000 µg/Kg	33 1,2-Dichlorobenzene	ND	2,000 µg/Kg
9 1,1-Dichloroethane	ND	2,000 µg/Kg			
10 cis-1,2-Dichloroethene	ND	2,000 µg/Kg			
11 Chloroform	ND	2,000 µg/Kg			
12 1,2-Dichloroethane	ND	2,000 µg/Kg			
13 1,1,1-Trichloroethane	ND	2,000 µg/Kg			
14 Carbon tetrachloride	ND	2,000 µg/Kg			
15 Benzene	ND	1,000 µg/Kg			
16 1,2-Dichloropropane	ND	2,000 µg/Kg			
17 Trichloroethene	ND	2,000 µg/Kg			
18 Bromodichloromethane	ND	2,000 µg/Kg			
19 cis-1,3-Dichloropropene	ND	2,000 µg/Kg			
20 trans-1,3-Dichloropropene	ND	2,000 µg/Kg			
21 1,1,2-Trichloroethane	ND	2,000 µg/Kg			
22 Toluene	ND	1,000 µg/Kg			
23 Dibromochloromethane	ND	2,000 µg/Kg			
24 Tetrachloroethene	ND	2,000 µg/Kg			
25 Chlorobenzene	ND	2,000 µg/Kg			

Reporting Limits were increased due to high concentrations of target analytes.

Sample results were calculated on a wet weight basis.

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



*[Signature]*  
12/2/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-26A  
Client I.D. Number: B-5@8FT

Sampled: 11/06/13 15:15  
Received: 11/08/13  
Extracted: 11/13/13 16:27  
Analyzed: 11/18/13

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	3,200 µg/Kg	26 Ethylbenzene	ND	400 µg/Kg
2 Vinyl chloride	ND	800 µg/Kg	27 m,p-Xylene	ND	400 µg/Kg
3 Chloroethane	ND	800 µg/Kg	28 Bromoform	ND	800 µg/Kg
4 Bromomethane	ND	3,200 µg/Kg	29 o-Xylene	ND	400 µg/Kg
5 Trichlorofluoromethane	ND	800 µg/Kg	30 1,1,2,2-Tetrachloroethane	ND	800 µg/Kg
6 1,1-Dichloroethene	ND	800 µg/Kg	31 1,3-Dichlorobenzene	ND	800 µg/Kg
7 Dichloromethane	ND	3,200 µg/Kg	32 1,4-Dichlorobenzene	ND	800 µg/Kg
8 trans-1,2-Dichloroethene	ND	800 µg/Kg	33 1,2-Dichlorobenzene	ND	800 µg/Kg
9 1,1-Dichloroethane	ND	800 µg/Kg			
10 cis-1,2-Dichloroethene	ND	800 µg/Kg			
11 Chloroform	ND	800 µg/Kg			
12 1,2-Dichloroethane	ND	800 µg/Kg			
13 1,1,1-Trichloroethane	ND	800 µg/Kg			
14 Carbon tetrachloride	ND	800 µg/Kg			
15 Benzene	ND	400 µg/Kg			
16 1,2-Dichloropropane	ND	800 µg/Kg			
17 Trichloroethene	ND	800 µg/Kg			
18 Bromodichloromethane	ND	800 µg/Kg			
19 cis-1,3-Dichloropropene	ND	800 µg/Kg			
20 trans-1,3-Dichloropropene	ND	800 µg/Kg			
21 1,1,2-Trichloroethane	ND	800 µg/Kg			
22 Toluene	ND	400 µg/Kg			
23 Dibromochloromethane	ND	800 µg/Kg			
24 Tetrachloroethene	ND	800 µg/Kg			
25 Chlorobenzene	ND	800 µg/Kg			

Reporting Limits were increased due to high concentrations of target analytes.

Encore sample was preserved, extracted, and analyzed within holding time, per Regional Interim Policy for Determination of Volatile Organic Compound Concentrations in Soil and Solid Matrices, dated June 23, 1999.

Sample results were calculated on a wet weight basis.

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-27A  
Client I.D. Number: B-5@12FT

Sampled: 11/06/13 15:22  
Received: 11/08/13  
Extracted: 11/13/13 16:27  
Analyzed: 11/18/13

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	160 µg/Kg	26 Ethylbenzene	ND	20 µg/Kg
2 Vinyl chloride	ND	40 µg/Kg	27 m,p-Xylene	ND	20 µg/Kg
3 Chloroethane	ND	40 µg/Kg	28 Bromoform	ND	40 µg/Kg
4 Bromomethane	ND	160 µg/Kg	29 o-Xylene	ND	20 µg/Kg
5 Trichlorofluoromethane	ND	40 µg/Kg	30 1,1,2,2-Tetrachloroethane	ND	40 µg/Kg
6 1,1-Dichloroethene	ND	40 µg/Kg	31 1,3-Dichlorobenzene	ND	40 µg/Kg
7 Dichloromethane	ND	160 µg/Kg	32 1,4-Dichlorobenzene	ND	40 µg/Kg
8 trans-1,2-Dichloroethene	ND	40 µg/Kg	33 1,2-Dichlorobenzene	ND	40 µg/Kg
9 1,1-Dichloroethane	ND	40 µg/Kg			
10 cis-1,2-Dichloroethene	ND	40 µg/Kg			
11 Chloroform	ND	40 µg/Kg			
12 1,2-Dichloroethane	ND	40 µg/Kg			
13 1,1,1-Trichloroethane	ND	40 µg/Kg			
14 Carbon tetrachloride	ND	40 µg/Kg			
15 Benzene	ND	20 µg/Kg			
16 1,2-Dichloropropane	ND	40 µg/Kg			
17 Trichloroethene	ND	40 µg/Kg			
18 Bromodichloromethane	ND	40 µg/Kg			
19 cis-1,3-Dichloropropene	ND	40 µg/Kg			
20 trans-1,3-Dichloropropene	ND	40 µg/Kg			
21 1,1,2-Trichloroethane	ND	40 µg/Kg			
22 Toluene	ND	20 µg/Kg			
23 Dibromochloromethane	ND	40 µg/Kg			
24 Tetrachloroethene	ND	40 µg/Kg			
25 Chlorobenzene	ND	40 µg/Kg			

Reporting Limits were increased due to high concentrations of target analytes.

Encore sample was preserved, extracted, and analyzed within holding time, per Regional Interim Policy for Determination of Volatile Organic Compound Concentrations in Soil and Solid Matrices, dated June 23, 1999.

Sample results were calculated on a wet weight basis.

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13  
Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-28A  
Client I.D. Number: B-5

Sampled: 11/06/13 15:35  
Received: 11/08/13  
Extracted: 11/12/13  
Analyzed: 11/12/13

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	2.0 µg/L	26 Ethylbenzene	ND	1.0 µg/L
2 Vinyl chloride	ND	1.0 µg/L	27 m,p-Xylene	ND	1.0 µg/L
3 Chloroethane	ND	1.0 µg/L	28 Bromoform	ND	1.0 µg/L
4 Bromomethane	ND	2.0 µg/L	29 o-Xylene	ND	1.0 µg/L
5 Trichlorofluoromethane	ND	1.0 µg/L	30 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
6 1,1-Dichloroethane	ND	1.0 µg/L	31 1,3-Dichlorobenzene	ND	1.0 µg/L
7 Dichloromethane	ND	2.0 µg/L	32 1,4-Dichlorobenzene	ND	1.0 µg/L
8 trans-1,2-Dichloroethene	ND	1.0 µg/L	33 1,2-Dichlorobenzene	ND	1.0 µg/L
9 1,1-Dichloroethane	ND	1.0 µg/L			
10 cis-1,2-Dichloroethene	ND	1.0 µg/L			
11 Chloroform	ND	1.0 µg/L			
12 1,2-Dichloroethane	ND	1.0 µg/L			
13 1,1,1-Trichloroethane	ND	1.0 µg/L			
14 Carbon tetrachloride	ND	1.0 µg/L			
15 Benzene	ND	1.0 µg/L			
16 1,2-Dichloropropane	ND	1.0 µg/L			
17 Trichloroethene	ND	1.0 µg/L			
18 Bromodichloromethane	ND	1.0 µg/L			
19 cis-1,3-Dichloropropene	ND	1.0 µg/L			
20 trans-1,3-Dichloropropene	ND	1.0 µg/L			
21 1,1,2-Trichloroethane	ND	1.0 µg/L			
22 Toluene	ND	1.0 µg/L			
23 Dibromochloromethane	ND	1.0 µg/L			
24 Tetrachloroethene	ND	1.0 µg/L			
25 Chlorobenzene	ND	1.0 µg/L			

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.  
Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13  
Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-32A  
Client I.D. Number: B-6

Sampled: 11/06/13 16:35  
Received: 11/08/13  
Extracted: 11/12/13  
Analyzed: 11/12/13

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	2.0 µg/L	26 Ethylbenzene	ND	1.0 µg/L
2 Vinyl chloride	ND	1.0 µg/L	27 m,p-Xylene	ND	1.0 µg/L
3 Chloroethane	ND	1.0 µg/L	28 Bromoform	ND	1.0 µg/L
4 Bromomethane	ND	2.0 µg/L	29 o-Xylene	ND	1.0 µg/L
5 Trichlorofluoromethane	ND	1.0 µg/L	30 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
6 1,1-Dichloroethene	ND	1.0 µg/L	31 1,3-Dichlorobenzene	ND	1.0 µg/L
7 Dichloromethane	ND	2.0 µg/L	32 1,4-Dichlorobenzene	ND	1.0 µg/L
8 trans-1,2-Dichloroethene	ND	1.0 µg/L	33 1,2-Dichlorobenzene	ND	1.0 µg/L
9 1,1-Dichloroethane	ND	1.0 µg/L			
10 cis-1,2-Dichloroethene	ND	1.0 µg/L			
11 Chloroform	ND	1.0 µg/L			
12 1,2-Dichloroethane	ND	1.0 µg/L			
13 1,1,1-Trichloroethane	ND	1.0 µg/L			
14 Carbon tetrachloride	ND	1.0 µg/L			
15 Benzene	ND	1.0 µg/L			
16 1,2-Dichloropropane	ND	1.0 µg/L			
17 Trichloroethene	ND	1.0 µg/L			
18 Bromodichloromethane	ND	1.0 µg/L			
19 cis-1,3-Dichloropropene	ND	1.0 µg/L			
20 trans-1,3-Dichloropropene	ND	1.0 µg/L			
21 1,1,2-Trichloroethane	ND	1.0 µg/L			
22 Toluene	ND	1.0 µg/L			
23 Dibromochloromethane	ND	1.0 µg/L			
24 Tetrachloroethene	ND	1.0 µg/L			
25 Chlorobenzene	ND	1.0 µg/L			

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.  
Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Alpha Analytical Number: CON13110824-33A  
Client I.D. Number: B-15-A

Sampled: 11/06/13 13:16

Received: 11/08/13

Extracted: 11/12/13

Analyzed: 11/12/13

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	2.0 µg/L	26 Ethylbenzene	ND	1.0 µg/L
2 Vinyl chloride	ND	1.0 µg/L	27 m,p-Xylene	ND	1.0 µg/L
3 Chloroethane	ND	1.0 µg/L	28 Bromoform	ND	1.0 µg/L
4 Bromomethane	ND	2.0 µg/L	29 o-Xylene	ND	1.0 µg/L
5 Trichlorofluoromethane	ND	1.0 µg/L	30 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
6 1,1-Dichloroethene	ND	1.0 µg/L	31 1,3-Dichlorobenzene	ND	1.0 µg/L
7 Dichloromethane	ND	2.0 µg/L	32 1,4-Dichlorobenzene	ND	1.0 µg/L
8 trans-1,2-Dichloroethene	ND	1.0 µg/L	33 1,2-Dichlorobenzene	ND	1.0 µg/L
9 1,1-Dichloroethane	ND	1.0 µg/L			
10 cis-1,2-Dichloroethene	ND	1.0 µg/L			
11 Chloroform	ND	1.0 µg/L			
12 1,2-Dichloroethane	ND	1.0 µg/L			
13 1,1,1-Trichloroethane	ND	1.0 µg/L			
14 Carbon tetrachloride	ND	1.0 µg/L			
15 Benzene	ND	1.0 µg/L			
16 1,2-Dichloropropane	ND	1.0 µg/L			
17 Trichloroethene	ND	1.0 µg/L			
18 Bromodichloromethane	ND	1.0 µg/L			
19 cis-1,3-Dichloropropene	ND	1.0 µg/L			
20 trans-1,3-Dichloropropene	ND	1.0 µg/L			
21 1,1,2-Trichloroethane	ND	1.0 µg/L			
22 Toluene	ND	1.0 µg/L			
23 Dibromochloromethane	ND	1.0 µg/L			
24 Tetrachloroethene	ND	1.0 µg/L			
25 Chlorobenzene	ND	1.0 µg/L			

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.  
Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-34A  
Client I.D. Number: B-4-A

Sampled: 11/06/13 14:41  
Received: 11/08/13  
Extracted: 11/12/13  
Analyzed: 11/12/13

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	2.0 µg/L	26 Ethylbenzene	ND	1.0 µg/L
2 Vinyl chloride	ND	1.0 µg/L	27 m,p-Xylene	ND	1.0 µg/L
3 Chloroethane	ND	1.0 µg/L	28 Bromoform	ND	1.0 µg/L
4 Bromomethane	ND	2.0 µg/L	29 o-Xylene	ND	1.0 µg/L
5 Trichlorofluoromethane	ND	1.0 µg/L	30 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
6 1,1-Dichloroethene	ND	1.0 µg/L	31 1,3-Dichlorobenzene	ND	1.0 µg/L
7 Dichloromethane	ND	2.0 µg/L	32 1,4-Dichlorobenzene	ND	1.0 µg/L
8 trans-1,2-Dichloroethene	ND	1.0 µg/L	33 1,2-Dichlorobenzene	ND	1.0 µg/L
9 1,1-Dichloroethane	ND	1.0 µg/L			
10 cis-1,2-Dichloroethene	ND	1.0 µg/L			
11 Chloroform	ND	1.0 µg/L			
12 1,2-Dichloroethane	ND	1.0 µg/L			
13 1,1,1-Trichloroethane	ND	1.0 µg/L			
14 Carbon tetrachloride	ND	1.0 µg/L			
15 Benzene	ND	1.0 µg/L			
16 1,2-Dichloropropane	ND	1.0 µg/L			
17 Trichloroethene	ND	1.0 µg/L			
18 Bromodichloromethane	ND	1.0 µg/L			
19 cis-1,3-Dichloropropene	ND	1.0 µg/L			
20 trans-1,3-Dichloropropene	ND	1.0 µg/L			
21 1,1,2-Trichloroethane	ND	1.0 µg/L			
22 Toluene	ND	1.0 µg/L			
23 Dibromochloromethane	ND	1.0 µg/L			
24 Tetrachloroethene	ND	1.0 µg/L			
25 Chlorobenzene	ND	1.0 µg/L			

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com  
Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.  
Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



*[Signature]*  
11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-36A  
Client I.D. Number: Field Blank

Sampled: 11/06/13 16:45  
Received: 11/08/13  
Extracted: 11/12/13  
Analyzed: 11/12/13

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	2.0 µg/L	26 Ethylbenzene	ND	1.0 µg/L
2 Vinyl chloride	ND	1.0 µg/L	27 m,p-Xylene	ND	1.0 µg/L
3 Chloroethane	ND	1.0 µg/L	28 Bromoform	ND	1.0 µg/L
4 Bromomethane	ND	2.0 µg/L	29 o-Xylene	ND	1.0 µg/L
5 Trichlorofluoromethane	ND	1.0 µg/L	30 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
6 1,1-Dichloroethene	ND	1.0 µg/L	31 1,3-Dichlorobenzene	ND	1.0 µg/L
7 Dichloromethane	ND	2.0 µg/L	32 1,4-Dichlorobenzene	ND	1.0 µg/L
8 trans-1,2-Dichloroethene	ND	1.0 µg/L	33 1,2-Dichlorobenzene	ND	1.0 µg/L
9 1,1-Dichloroethane	ND	1.0 µg/L			
10 cis-1,2-Dichloroethene	ND	1.0 µg/L			
11 Chloroform	ND	1.0 µg/L			
12 1,2-Dichloroethane	ND	1.0 µg/L			
13 1,1,1-Trichloroethane	ND	1.0 µg/L			
14 Carbon tetrachloride	ND	1.0 µg/L			
15 Benzene	ND	1.0 µg/L			
16 1,2-Dichloropropane	ND	1.0 µg/L			
17 Trichloroethene	ND	1.0 µg/L			
18 Bromodichloromethane	ND	1.0 µg/L			
19 cis-1,3-Dichloropropene	ND	1.0 µg/L			
20 trans-1,3-Dichloropropene	ND	1.0 µg/L			
21 1,1,2-Trichloroethane	ND	1.0 µg/L			
22 Toluene	ND	1.0 µg/L			
23 Dibromochloromethane	ND	1.0 µg/L			
24 Tetrachloroethene	ND	1.0 µg/L			
25 Chlorobenzene	ND	1.0 µg/L			

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/ Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110824-39A  
Client I.D. Number: B-4

Sampled: 11/06/13 14:40  
Received: 11/08/13  
Extracted: 11/12/13  
Analyzed: 11/12/13

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	2.0 µg/L	26 Ethylbenzene	ND	1.0 µg/L
2 Vinyl chloride	ND	1.0 µg/L	27 m,p-Xylene	ND	1.0 µg/L
3 Chloroethane	ND	1.0 µg/L	28 Bromoform	ND	1.0 µg/L
4 Bromomethane	ND	2.0 µg/L	29 o-Xylene	ND	1.0 µg/L
5 Trichlorofluoromethane	ND	1.0 µg/L	30 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
6 1,1-Dichloroethene	ND	1.0 µg/L	31 1,3-Dichlorobenzene	ND	1.0 µg/L
7 Dichloromethane	ND	2.0 µg/L	32 1,4-Dichlorobenzene	ND	1.0 µg/L
8 trans-1,2-Dichloroethene	ND	1.0 µg/L	33 1,2-Dichlorobenzene	ND	1.0 µg/L
9 1,1-Dichloroethane	ND	1.0 µg/L			
10 cis-1,2-Dichloroethene	ND	1.0 µg/L			
11 Chloroform	ND	1.0 µg/L			
12 1,2-Dichloroethane	ND	1.0 µg/L			
13 1,1,1-Trichloroethane	ND	1.0 µg/L			
14 Carbon tetrachloride	ND	1.0 µg/L			
15 Benzene	ND	1.0 µg/L			
16 1,2-Dichloropropane	ND	1.0 µg/L			
17 Trichloroethene	ND	1.0 µg/L			
18 Bromodichloromethane	ND	1.0 µg/L			
19 cis-1,3-Dichloropropene	ND	1.0 µg/L			
20 trans-1,3-Dichloropropene	ND	1.0 µg/L			
21 1,1,2-Trichloroethane	ND	1.0 µg/L			
22 Toluene	ND	1.0 µg/L			
23 Dibromochloromethane	ND	1.0 µg/L			
24 Tetrachloroethene	ND	1.0 µg/L			
25 Chlorobenzene	ND	1.0 µg/L			

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date

Page 1 of 1



# *Alpha Analytical, Inc.*

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## **VOC Sample Preservation Report**

**Work Order:** CON13110824

**Job:** 08-73103-01/02-07/ Carlin Brownfields RRP

Alpha's Sample ID	Client's Sample ID	Matrix	pH
13110824-05A	B-13	Aqueous	2
13110824-10A	B-2	Aqueous	2
13110824-14A	B-1	Aqueous	2
13110824-21A	B-15	Aqueous	2
13110824-28A	B-5	Aqueous	2
13110824-32A	B-6	Aqueous	2
13110824-33A	B-15-A	Aqueous	2
13110824-34A	B-4-A	Aqueous	2
13110824-36A	Field Blank	Aqueous	2
13110824-39A	B-4	Aqueous	2

11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:  
15-Nov-13

## QC Summary Report

Work Order:  
13110824

### Method Blank

Type MBLK Test Code: EPA Method 200.8

File ID: 018\_

Batch ID: 31981

Analysis Date: 11/12/2013 15:16

Sample ID: MB-31981

Units: mg/L

Run ID: ICP/MS\_131112A

Prep Date: 11/12/2013 13:43

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr), Dissolved	ND	0.01								
Arsenic (As), Dissolved	ND	0.005								
Selenium (Se), Dissolved	ND	0.005								
Silver (Ag), Dissolved	ND	0.005								
Cadmium (Cd), Dissolved	ND	0.002								
Barium (Ba), Dissolved	ND	0.005								
Mercury (Hg), Dissolved	ND	0.001								
Lead (Pb), Dissolved	ND	0.005								

### Laboratory Control Spike

Type LCS Test Code: EPA Method 200.8

File ID: 020\_

Batch ID: 31981

Analysis Date: 11/12/2013 15:23

Sample ID: LCS-31981

Units: mg/L

Run ID: ICP/MS\_131112A

Prep Date: 11/12/2013 13:43

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr), Dissolved	0.0513	0.01	0.05		103	80	120			
Arsenic (As), Dissolved	0.0515	0.005	0.05		103	80	120			
Selenium (Se), Dissolved	0.0523	0.005	0.05		105	80	120			
Silver (Ag), Dissolved	0.0533	0.005	0.05		107	80	120			
Cadmium (Cd), Dissolved	0.0518	0.002	0.05		104	80	120			
Barium (Ba), Dissolved	0.049	0.005	0.05		98	80	120			
Mercury (Hg), Dissolved	0.000959	0.001	0.001		96	80	120			
Lead (Pb), Dissolved	0.0467	0.005	0.05		93	80	120			

### Sample Matrix Spike

Type MS Test Code: EPA Method 200.8

File ID: 022\_

Batch ID: 31981

Analysis Date: 11/12/2013 15:29

Sample ID: 13110849-05AMS

Units: mg/L

Run ID: ICP/MS\_131112A

Prep Date: 11/12/2013 13:43

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr), Dissolved	0.0518	0.01	0.05	0	104	75	125			
Arsenic (As), Dissolved	0.0612	0.005	0.05	0.0092	104	75	125			
Selenium (Se), Dissolved	0.0581	0.005	0.05	0.0073	102	75	125			
Silver (Ag), Dissolved	0.0533	0.005	0.05	0	107	75	125			
Cadmium (Cd), Dissolved	0.0529	0.002	0.05	0	106	75	125			
Barium (Ba), Dissolved	0.127	0.005	0.05	0.0752	103	75	125			
Mercury (Hg), Dissolved	0.0008	0.001	0.001	0	80	75	125			
Lead (Pb), Dissolved	0.047	0.005	0.05	0	94	75	125			

### Sample Matrix Spike Duplicate

Type MSD Test Code: EPA Method 200.8

File ID: 023\_

Batch ID: 31981

Analysis Date: 11/12/2013 15:32

Sample ID: 13110849-05AMSD

Units: mg/L

Run ID: ICP/MS\_131112A

Prep Date: 11/12/2013 13:43

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr), Dissolved	0.0557	0.01	0.05	0	111	75	125	0.0518	7.3(20)	
Arsenic (As), Dissolved	0.0654	0.005	0.05	0.0092	112	75	125	0.0612	6.6(20)	
Selenium (Se), Dissolved	0.0625	0.005	0.05	0.0073	110	75	125	0.0581	7.3(20)	
Silver (Ag), Dissolved	0.0564	0.005	0.05	0	113	75	125	0.0533	5.7(20)	
Cadmium (Cd), Dissolved	0.0565	0.002	0.05	0	113	75	125	0.0529	6.6(20)	
Barium (Ba), Dissolved	0.131	0.005	0.05	0.0752	111	75	125	0.1265	3.4(20)	
Mercury (Hg), Dissolved	0.0008	0.001	0.001	0	80	75	125	0.0008	0.0(20)	
Lead (Pb), Dissolved	0.0504	0.005	0.05	0	101	75	125	0.047	7.0(20)	



# *Alpha Analytical, Inc.*

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

**Date:**  
15-Nov-13

## QC Summary Report

**Work Order:**  
13110824

**Comments:**

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:

15-Nov-13

## QC Summary Report

Work Order:

13110824

### Method Blank

Type: MBLK Test Code: EPA Method SW6020 / SW6020A

File ID: 014\_

Batch ID: 31995

Analysis Date: 11/13/2013 18:00

Sample ID: MB-31995

Units : mg/Kg

Run ID: ICP/MS\_131113B

Prep Date: 11/13/2013 13:51

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	1								
Arsenic (As)	ND	1								
Selenium (Se)	ND	2								
Silver (Ag)	ND	1								
Cadmium (Cd)	ND	1								
Barium (Ba)	ND	1								
Mercury (Hg)	ND	0.2								
Lead (Pb)	ND	1								

### Laboratory Control Spike

Type: LCS Test Code: EPA Method SW6020 / SW6020A

File ID: 016\_

Batch ID: 31995

Analysis Date: 11/13/2013 18:06

Sample ID: LCS-31995

Units : mg/Kg

Run ID: ICP/MS\_131113B

Prep Date: 11/13/2013 13:51

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	23.4	1	25		94	80	120			
Arsenic (As)	23.3	1	25		93	80	120			
Selenium (Se)	24.1	2	25		96	80	120			
Silver (Ag)	24	1	25		96	80	120			
Cadmium (Cd)	23.2	1	25		93	80	120			
Barium (Ba)	223	1	250		89	80	120			
Mercury (Hg)	0.552	0.2	0.5		110	80	120			
Lead (Pb)	21.8	1	25		87	80	120			

### Sample Matrix Spike

Type: MS Test Code: EPA Method SW6020 / SW6020A

File ID: 018\_

Batch ID: 31995

Analysis Date: 11/13/2013 18:24

Sample ID: 13110824-04AMS

Units : mg/Kg

Run ID: ICP/MS\_131113B

Prep Date: 11/13/2013 13:51

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	38	1	25	15.89	88	75	125			
Arsenic (As)	30	1	25	18.59	46	75	125			M2
Selenium (Se)	28.2	2	25	5.641	90	75	125			
Silver (Ag)	25.4	1	25	0	102	75	125			
Cadmium (Cd)	25.2	1	25	0	101	75	125			
Barium (Ba)	384	1	250	110.7	109	75	125			
Mercury (Hg)	0.487	0.2	0.5	0	97	75	125			
Lead (Pb)	26.6	1	25	10.86	63	75	125			M2

### Sample Matrix Spike Duplicate

Type: MSD Test Code: EPA Method SW6020 / SW6020A

File ID: 019\_

Batch ID: 31995

Analysis Date: 11/13/2013 18:27

Sample ID: 13110824-04AMSD

Units : mg/Kg

Run ID: ICP/MS\_131113B

Prep Date: 11/13/2013 13:51

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	34.4	1	25	15.89	74	75	125	37.96	9.7(20)	M2
Arsenic (As)	35.7	1	25	18.59	68	75	125	30.01	17.3(20)	M2
Selenium (Se)	27.1	2	25	5.641	86	75	125	28.16	3.9(20)	
Silver (Ag)	26.5	1	25	0	106	75	125	25.38	4.3(20)	
Cadmium (Cd)	25.7	1	25	0	103	75	125	25.25	1.8(20)	
Barium (Ba)	406	1	250	110.7	118	75	125	384.1	5.6(20)	
Mercury (Hg)	0.423	0.2	0.5	0	85	75	125	0.487	14.1(20)	
Lead (Pb)	28.6	1	25	10.86	71	75	125	26.61	7.2(20)	M2



## *Alpha Analytical, Inc.*

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

**Date:**  
15-Nov-13

### QC Summary Report

**Work Order:**  
13110824

**Comments:**

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

M2 = Matrix spike recovery was low, the method control sample recovery was acceptable.



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:  
18-Nov-13

## QC Summary Report

Work Order:  
13110824

### Method Blank

File ID: 13111514.D

Type: MBLK Test Code: EPA Method SW8270C

Batch ID: 31982

Analysis Date: 11/15/2013 20:05

Sample ID: MBLK-31982

Units: µg/Kg

Run ID: MSD\_16\_131112A

Prep Date: 11/12/2013 15:29

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Naphthalene	ND	25								
2-Methylnaphthalene	ND	25								
1-Methylnaphthalene	ND	25								
Acenaphthylene	ND	25								
Acenaphthene	ND	25								
Fluorene	ND	25								
Phenanthrene	ND	25								
Anthracene	ND	25								
Fluoranthene	ND	25								
Pyrene	ND	25								
Benzo(a)anthracene	ND	25								
Chrysene	ND	25								
Benzo(b&k)fluoranthene, isomeric pair	ND	50								
Benzo(a)pyrene	ND	25								
Indeno(1,2,3-cd)pyrene	ND	25								
Dibenz(a,h)anthracene	ND	25								
Benzo(g,h,i)perylene	ND	25								
Surr: 2-Fluorobiphenyl	341		312.5		109	47	137			
Surr: 4-Terphenyl-d14	261		312.5		83	27	141			

### Laboratory Control Spike

File ID: 13111515.D

Type: LCS Test Code: EPA Method SW8270C

Batch ID: 31982

Analysis Date: 11/15/2013 20:30

Sample ID: LCS-31982

Units: µg/Kg

Run ID: MSD\_16\_131112A

Prep Date: 11/12/2013 15:29

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Acenaphthene	253	25	312.5		81	42	138			
Pyrene	245	25	312.5		79	29	143			
Surr: 2-Fluorobiphenyl	345		312.5		110	47	137			
Surr: 4-Terphenyl-d14	266		312.5		85	27	141			

### Laboratory Control Spike Duplicate

File ID: 13111516.D

Type: LCSD Test Code: EPA Method SW8270C

Batch ID: 31982

Analysis Date: 11/15/2013 20:55

Sample ID: LCSD-31982

Units: µg/Kg

Run ID: MSD\_16\_131112A

Prep Date: 11/12/2013 15:29

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Acenaphthene	253	25	312.5		81	42	138	252.8	0.2(32)	
Pyrene	202	25	312.5		65	29	143	245.5	19.2(49)	
Surr: 2-Fluorobiphenyl	333		312.5		107	47	137			
Surr: 4-Terphenyl-d14	230		312.5		74	27	141			

### Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:

18-Nov-13

## QC Summary Report

Work Order:

13110824

### Method Blank

Type: **MBLK** Test Code: **EPA Method 625/SW8270C**

File ID: **13111305.D**

Batch ID: **31959**

Analysis Date: **11/13/2013 17:51**

Sample ID: **MBLK-31959**

Units : **µg/L**

Run ID: **MSD\_16\_131108A**

Prep Date: **11/08/2013 13:11**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Naphthalene	ND	0.02								
2-Methylnaphthalene	ND	0.02								
1-Methylnaphthalene	ND	0.02								
Acenaphthylene	ND	0.02								
Acenaphthene	ND	0.02								
Fluorene	ND	0.02								
Phenanthrene	ND	0.02								
Anthracene	ND	0.02								
Fluoranthene	ND	0.02								
Pyrene	ND	0.02								
Benzo(a)anthracene	ND	0.02								
Chrysene	ND	0.02								
Benzo(b&k)fluoranthene, isomeric pair	ND	0.04								
Benzo(a)pyrene	ND	0.02								
Indeno(1,2,3-cd)pyrene	ND	0.02								
Dibenz(a,h)anthracene	ND	0.02								
Benzo(g,h,i)perylene	ND	0.02								
Surr: 2-Fluorobiphenyl	0.181		0.25		73	12	143			
Surr: 4-Terphenyl-d14	0.202		0.25		81	30	159			

### Laboratory Control Spike

Type: **LCS** Test Code: **EPA Method 625/SW8270C**

File ID: **13111505.D**

Batch ID: **31959**

Analysis Date: **11/15/2013 16:12**

Sample ID: **LCS-31959**

Units : **µg/L**

Run ID: **MSD\_16\_131108A**

Prep Date: **11/08/2013 13:11**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Acenaphthene	0.142	0.02	0.25		57	32	130			
Pyrene	0.131	0.02	0.25		52	33	130			
Surr: 2-Fluorobiphenyl	0.211		0.25		85	12	143			
Surr: 4-Terphenyl-d14	0.191		0.25		76	30	159			

### Sample Matrix Spike

Type: **MS** Test Code: **EPA Method 625/SW8270C**

File ID: **13111507.D**

Batch ID: **31959**

Analysis Date: **11/15/2013 17:04**

Sample ID: **13110722-02AMS**

Units : **µg/L**

Run ID: **MSD\_16\_131108A**

Prep Date: **11/08/2013 13:11**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Acenaphthene	0.32	0.04	0.5	0	64	8	130			
Pyrene	0.338	0.04	0.5	0	68	7	147			
Surr: 2-Fluorobiphenyl	0.384		0.5		77	12	143			
Surr: 4-Terphenyl-d14	0.459		0.5		92	30	159			

### Sample Matrix Spike Duplicate

Type: **MSD** Test Code: **EPA Method 625/SW8270C**

File ID: **13111508.D**

Batch ID: **31959**

Analysis Date: **11/15/2013 17:30**

Sample ID: **13110722-02AMSD**

Units : **µg/L**

Run ID: **MSD\_16\_131108A**

Prep Date: **11/08/2013 13:11**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Acenaphthene	0.296	0.04	0.5	0	0	8	130	0.3204	8.0(42)	
Pyrene	0.271	0.04	0.5	0	0	7	147	0.3375	21.9(40)	
Surr: 2-Fluorobiphenyl	0.343		0.5		69	12	143			
Surr: 4-Terphenyl-d14	0.364		0.5		73	30	159			

### Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:

02-Dec-13

## QC Summary Report

Work Order:

13110824

### Method Blank

Type **MBLK** Test Code: **EPA Method SW8270C**

File ID: **13112508.D**

Batch ID: **32039**

Analysis Date: **11/25/2013 17:17**

Sample ID: **MBLK-32039**

Units : **µg/Kg**

Run ID: **MSD\_16\_131120A**

Prep Date: **11/20/2013 11:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Naphthalene	ND	25								
2-Methylnaphthalene	ND	25								
1-Methylnaphthalene	ND	25								
Acenaphthylene	ND	25								
Acenaphthene	ND	25								
Fluorene	ND	25								
Phenanthrene	ND	25								
Anthracene	ND	25								
Fluoranthene	ND	25								
Pyrene	ND	25								
Benzo(a)anthracene	ND	25								
Chrysene	ND	25								
Benzo(b&k)fluoranthene, isomeric pair	ND	50								
Benzo(a)pyrene	ND	25								
Indeno(1,2,3-cd)pyrene	ND	25								
Dibenz(a,h)anthracene	ND	25								
Benzo(g,h,i)perylene	ND	25								
Surr: 2-Fluorobiphenyl	272		312.5		87	47	137			
Surr: 4-Terphenyl-d14	234		312.5		75	27	141			

### Laboratory Control Spike

Type **LCS** Test Code: **EPA Method SW8270C**

File ID: **13112509.D**

Batch ID: **32039**

Analysis Date: **11/25/2013 17:42**

Sample ID: **LCS-32039**

Units : **µg/Kg**

Run ID: **MSD\_16\_131120A**

Prep Date: **11/20/2013 11:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Acenaphthene	182	25	312.5		58	42	138			
Pyrene	217	25	312.5		69	29	143			
Surr: 2-Fluorobiphenyl	350		312.5		112	47	137			
Surr: 4-Terphenyl-d14	256		312.5		82	27	141			

### Laboratory Control Spike Duplicate

Type **LCSD** Test Code: **EPA Method SW8270C**

File ID: **13112510.D**

Batch ID: **32039**

Analysis Date: **11/25/2013 18:08**

Sample ID: **LCSD-32039**

Units : **µg/Kg**

Run ID: **MSD\_16\_131120A**

Prep Date: **11/20/2013 11:18**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Acenaphthene	174	25	312.5		56	42	138	182.4	4.7(32)	
Pyrene	176	25	312.5		56	29	143	216.9	20.8(49)	
Surr: 2-Fluorobiphenyl	297		312.5		95	47	137			
Surr: 4-Terphenyl-d14	228		312.5		73	27	141			

### Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:  
18-Nov-13

## QC Summary Report

Work Order:  
13110824

### Method Blank

File ID: 2A11091305.D

Sample ID: MBLK-31960

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	ND	10								
TPH-E (ORO)	ND	10								
Surr: Nonane	7.67		6		128	65	160			

Type: MBLK

Test Code: EPA Method SW8015B/C Ext

Batch ID: 31960

Analysis Date: 11/09/2013 13:38

Run ID: FID\_2\_131108B

Prep Date: 11/08/2013 15:08

### Laboratory Control Spike

File ID: 2A11091306.D

Sample ID: LCS-31960

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	92.1	5	100		92	70	130			
Surr: Nonane	7.64		6		127	65	160			

Type: LCS

Test Code: EPA Method SW8015B/C Ext

Batch ID: 31960

Analysis Date: 11/09/2013 14:03

Run ID: FID\_2\_131108B

Prep Date: 11/08/2013 15:08

### Sample Matrix Spike

File ID: 2A11091316.D

Sample ID: 13110824-31AMS

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	103	5	100		0	103	46	150		
Surr: Nonane	7.33		6		122	65	160			

Type: MS

Test Code: EPA Method SW8015B/C Ext

Batch ID: 31960

Analysis Date: 11/09/2013 18:20

Run ID: FID\_2\_131108B

Prep Date: 11/08/2013 15:08

### Sample Matrix Spike Duplicate

File ID: 2A11091317.D

Sample ID: 13110824-31AMSD

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	96.7	5	100		0	97	46	150	103	6.3(42)
Surr: Nonane	7.32		6		122	65	160			

Type: MSD

Test Code: EPA Method SW8015B/C Ext

Batch ID: 31960

Analysis Date: 11/09/2013 18:46

Run ID: FID\_2\_131108B

Prep Date: 11/08/2013 15:08

### Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

**Date:**

18-Nov-13

## QC Summary Report

**Work Order:**

13110824

**Method Blank**

File ID: 2A11071365.D

Sample ID: MBLK-31961

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	ND	0.5								
TPH-E (ORO)	ND	0.5								
Surr: Nonane	0.21		0.15		140	53	145			

Type: MBLK

Test Code: EPA Method SW8015B/C Ext

Batch ID: 31961

Analysis Date: 11/08/2013 17:31

Run ID: FID\_2\_131108A

Prep Date: 11/08/2013 16:11

**Laboratory Control Spike**

File ID: 2A11071366.D

Sample ID: LCS-31961

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	2.23	0.05	2.5		89	70	130			
Surr: Nonane	0.174		0.15		116	53	145			

Type: LCS

Test Code: EPA Method SW8015B/C Ext

Batch ID: 31961

Analysis Date: 11/08/2013 17:56

Run ID: FID\_2\_131108A

Prep Date: 11/08/2013 16:11

**Sample Matrix Spike**

File ID: 2A11071370.D

Sample ID: 13110605-02AMS

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	2.38	0.05	2.5	0	95	51	151			
Surr: Nonane	0.154		0.15		103	53	145			

Type: MS

Test Code: EPA Method SW8015B/C Ext

Batch ID: 31961

Analysis Date: 11/08/2013 19:39

Run ID: FID\_2\_131108A

Prep Date: 11/08/2013 16:11

**Sample Matrix Spike Duplicate**

File ID: 2A11071371.D

Sample ID: 13110605-02AMSD

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	2.33	0.05	2.5	0	93	51	151	2.384	2.3(40)	
Surr: Nonane	0.167		0.15		111	53	145			

Type: MSD

Test Code: EPA Method SW8015B/C Ext

Batch ID: 31961

Analysis Date: 11/08/2013 20:04

Run ID: FID\_2\_131108A

Prep Date: 11/08/2013 16:11

**Comments:**

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:

18-Nov-13

## QC Summary Report

Work Order:

13110824

### Method Blank

File ID: 13111205.D

Type: MBLK

Test Code: EPA Method SW8015B/C / SW8260B

Batch ID: MS15W1112B

Analysis Date: 11/12/2013 13:00

Sample ID: MBLK MS15W1112B

Units: mg/L

Run ID: MSD\_15\_131112A

Prep Date: 11/12/2013 13:00

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	ND	0.5								
Surr: 1,2-Dichloroethane-d4	0.0104		0.01		104	70	130			
Surr: Toluene-d8	0.0105		0.01		105	70	130			
Surr: 4-Bromofluorobenzene	0.0105		0.01		105	70	130			

### Laboratory Control Spike

File ID: 13111203.D

Type: LCS

Test Code: EPA Method SW8015B/C / SW8260B

Batch ID: MS15W1112B

Analysis Date: 11/12/2013 12:11

Sample ID: GLCS MS15W1112B

Units: mg/L

Run ID: MSD\_15\_131112A

Prep Date: 11/12/2013 12:11

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	0.456	0.05	0.4		114	70	130			
Surr: 1,2-Dichloroethane-d4	0.0102		0.01		102	70	130			
Surr: Toluene-d8	0.00992		0.01		99	70	130			
Surr: 4-Bromofluorobenzene	0.0102		0.01		102	70	130			

### Sample Matrix Spike

File ID: 13111228.D

Type: MS

Test Code: EPA Method SW8015B/C / SW8260B

Batch ID: MS15W1112B

Analysis Date: 11/12/2013 21:20

Sample ID: 13111173-02AGS

Units: mg/L

Run ID: MSD\_15\_131112A

Prep Date: 11/12/2013 21:20

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	1.96	0.25	2	0	98	54	143			
Surr: 1,2-Dichloroethane-d4	0.0493		0.05		99	70	130			
Surr: Toluene-d8	0.0494		0.05		99	70	130			
Surr: 4-Bromofluorobenzene	0.052		0.05		104	70	130			

### Sample Matrix Spike Duplicate

File ID: 13111229.D

Type: MSD

Test Code: EPA Method SW8015B/C / SW8260B

Batch ID: MS15W1112B

Analysis Date: 11/12/2013 21:42

Sample ID: 13111173-02AGSD

Units: mg/L

Run ID: MSD\_15\_131112A

Prep Date: 11/12/2013 21:42

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	2.14	0.25	2	0	107	54	143	1.96	8.6(23)	
Surr: 1,2-Dichloroethane-d4	0.0497		0.05		99	70	130			
Surr: Toluene-d8	0.0499		0.05		99.7	70	130			
Surr: 4-Bromofluorobenzene	0.0521		0.05		104	70	130			

### Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

**Date:**

18-Nov-13

## QC Summary Report

**Work Order:**

13110824

**Method Blank**

Type: **MBLK** Test Code: **EPA Method SW8260B**

File ID: **13111205.D**

Batch ID: **MS15W1112A**

Analysis Date: **11/12/2013 13:00**

Sample ID: **MBLK MS15W1112A**

Units: **µg/L**

Run ID: **MSD\_15\_131112A**

Prep Date: **11/12/2013 13:00**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloromethane	ND	2								
Vinyl chloride	ND	1								
Chloroethane	ND	1								
Bromomethane	ND	2								
Trichlorofluoromethane	ND	1								
1,1-Dichloroethene	ND	1								
Dichloromethane	ND	2								
trans-1,2-Dichloroethene	ND	1								
1,1-Dichloroethane	ND	1								
cis-1,2-Dichloroethene	ND	1								
Chloroform	ND	1								
1,2-Dichloroethane	ND	1								
1,1,1-Trichloroethane	ND	1								
Carbon tetrachloride	ND	1								
Benzene	ND	1								
1,2-Dichloropropane	ND	1								
Trichloroethene	ND	1								
Bromodichloromethane	ND	1								
cis-1,3-Dichloropropene	ND	1								
trans-1,3-Dichloropropene	ND	1								
1,1,2-Trichloroethane	ND	1								
Toluene	ND	1								
Dibromochloromethane	ND	1								
Tetrachloroethene	ND	1								
Chlorobenzene	ND	1								
Ethylbenzene	ND	1								
m,p-Xylene	ND	1								
Bromoform	ND	1								
o-Xylene	ND	1								
1,1,2,2-Tetrachloroethane	ND	1								
1,3-Dichlorobenzene	ND	1								
1,4-Dichlorobenzene	ND	1								
1,2-Dichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.4		10		104	70	130			
Surr: Toluene-d8	10.5		10		105	70	130			
Surr: 4-Bromofluorobenzene	10.5		10		105	70	130			

**Laboratory Control Spike**

Type: **LCS**

Test Code: **EPA Method SW8260B**

File ID: **13111202.D**

Batch ID: **MS15W1112A**

Analysis Date: **11/12/2013 11:49**

Sample ID: **LCS MS15W1112A**

Units: **µg/L**

Run ID: **MSD\_15\_131112A**

Prep Date: **11/12/2013 11:49**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	11.2	1	10		112	80	120			
Benzene	10.9	0.5	10		109	70	130			
Trichloroethene	10.4	1	10		104	68	138			
Toluene	9.9	0.5	10		99	80	120			
Chlorobenzene	10.1	1	10		101	70	130			
Ethylbenzene	10.6	0.5	10		106	80	120			
m,p-Xylene	10.8	0.5	10		108	65	139			
o-Xylene	11.1	0.5	10		111	70	130			
Surr: 1,2-Dichloroethane-d4	11.5		10		115	70	130			
Surr: Toluene-d8	9.53		10		95	70	130			
Surr: 4-Bromofluorobenzene	10		10		100	70	130			



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:

18-Nov-13

## QC Summary Report

Work Order:

13110824

### Sample Matrix Spike

File ID: 13111226.D

Type: MS

Test Code: EPA Method SW8260B

Batch ID: MS15W1112A

Analysis Date: 11/12/2013 20:37

Sample ID: 13110849-12AMS

Units: µg/L

Run ID: MSD\_15\_131112A

Prep Date: 11/12/2013 20:37

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	44.9	2.5	50	0	90	62	133			
Benzene	49	1.3	50	0	98	67	134			
Trichloroethene	46.2	2.5	50	0	92	68	138			
Toluene	46.2	1.3	50	0	92	38	130			
Chlorobenzene	46.2	2.5	50	0	92	70	130			
Ethylbenzene	47	1.3	50	0	94	70	130			
m,p-Xylene	49	1.3	50	0	98	65	139			
o-Xylene	51.1	1.3	50	0	102	69	130			
Surr: 1,2-Dichloroethane-d4	50.1		50		100	70	130			
Surr: Toluene-d8	48.6		50		97	70	130			
Surr: 4-Bromofluorobenzene	52.3		50		105	70	130			

### Sample Matrix Spike Duplicate

File ID: 13111227.D

Type: MSD

Test Code: EPA Method SW8260B

Batch ID: MS15W1112A

Analysis Date: 11/12/2013 20:59

Sample ID: 13110849-12AMSD

Units: µg/L

Run ID: MSD\_15\_131112A

Prep Date: 11/12/2013 20:59

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	50.4	2.5	50	0	101	62	133	44.89	11.6(35)	
Benzene	54.2	1.3	50	0	108	67	134	49.04	9.9(21)	
Trichloroethene	52.4	2.5	50	0	105	68	138	46.15	12.6(20)	
Toluene	52.5	1.3	50	0	105	38	130	46.16	12.8(20)	
Chlorobenzene	51.9	2.5	50	0	104	70	130	46.22	11.5(20)	
Ethylbenzene	52.9	1.3	50	0	106	70	130	46.96	11.8(20)	
m,p-Xylene	54.6	1.3	50	0	109	65	139	48.96	10.9(20)	
o-Xylene	56.3	1.3	50	0	113	69	130	51.11	9.7(20)	
Surr: 1,2-Dichloroethane-d4	54		50		108	70	130			
Surr: Toluene-d8	49.6		50		99	70	130			
Surr: 4-Bromofluorobenzene	51.5		50		103	70	130			

### Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:  
02-Dec-13

## QC Summary Report

Work Order:  
13110824

### Method Blank

Type **MBLK** Test Code: **EPA Method SW8260B**

File ID: **13112036.D**

Batch ID: **MS08S1999A**

Analysis Date: **11/21/2013 02:06**

Sample ID: **MBLK MS08S1999A**

Units: **µg/Kg**

Run ID: **MSD\_08\_131120A**

Prep Date: **11/21/2013 02:06**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloromethane	ND	80								
Vinyl chloride	ND	20								
Chloroethane	ND	20								
Bromomethane	ND	80								
Trichlorofluoromethane	ND	20								
1,1-Dichloroethene	ND	20								
Dichloromethane	ND	80								
trans-1,2-Dichloroethene	ND	20								
1,1-Dichloroethane	ND	20								
cis-1,2-Dichloroethene	ND	20								
Chloroform	ND	20								
1,2-Dichloroethane	ND	20								
1,1,1-Trichloroethane	ND	20								
Carbon tetrachloride	ND	20								
Benzene	ND	20								
1,2-Dichloropropane	ND	20								
Trichloroethene	ND	20								
Bromodichloromethane	ND	20								
cis-1,3-Dichloropropene	ND	20								
trans-1,3-Dichloropropene	ND	20								
1,1,2-Trichloroethane	ND	20								
Toluene	ND	20								
Dibromochloromethane	ND	20								
Tetrachloroethene	ND	20								
Chlorobenzene	ND	20								
Ethylbenzene	ND	20								
m,p-Xylene	ND	20								
Bromoform	ND	20								
o-Xylene	ND	20								
1,1,2,2-Tetrachloroethane	ND	20								
1,3-Dichlorobenzene	ND	20								
1,4-Dichlorobenzene	ND	20								
1,2-Dichlorobenzene	ND	20								
Surr: 1,2-Dichloroethane-d4	174		200		87	70	130			
Surr: Toluene-d8	246		200		123	70	130			
Surr: 4-Bromofluorobenzene	192		200		96	70	130			

### Laboratory Control Spike

Type **LCS** Test Code: **EPA Method SW8260B**

File ID: **13112038.D**

Batch ID: **MS08S1999A**

Analysis Date: **11/21/2013 02:56**

Sample ID: **LCS MS08S1999A**

Units: **µg/Kg**

Run ID: **MSD\_08\_131120A**

Prep Date: **11/21/2013 02:56**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	427	20	400		107	10	131			
Benzene	405	10	400		101	70	137			
Trichloroethene	450	20	400		113	70	149			
Toluene	418	10	400		104	70	139			
Chlorobenzene	409	20	400		102	70	137			
Ethylbenzene	400	10	400		99.9	70	137			
m,p-Xylene	394	10	400		98	70	145			
o-Xylene	368	10	400		92	70	145			
Surr: 1,2-Dichloroethane-d4	356		400		89	70	130			
Surr: Toluene-d8	426		400		107	70	130			
Surr: 4-Bromofluorobenzene	425		400		106	70	130			



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:

02-Dec-13

## QC Summary Report

Work Order:

13110824

### Sample Matrix Spike

File ID: 13112039.D

Type MS

Test Code: EPA Method SW8260B

Batch ID: MS08S1999A

Analysis Date: 11/21/2013 03:21

Sample ID: 13110848-02AMS

Units: µg/Kg

Run ID: MSD\_08\_131120A

Prep Date: 11/21/2013 03:21

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	401	20	400	0	100	10	131			
Benzene	379	10	400	0	95	52	151			
Trichloroethene	421	20	400	0	105	48	165			
Toluene	399	10	400	0	99.9	47	154			
Chlorobenzene	389	20	400	0	97	50	151			
Ethylbenzene	377	10	400	0	94	52	154			
m,p-Xylene	369	10	400	0	92	51	162			
o-Xylene	356	10	400	0	89	52	162			
Surr: 1,2-Dichloroethane-d4	350		400		88	70	130			
Surr: Toluene-d8	419		400		105	70	130			
Surr: 4-Bromofluorobenzene	404		400		101	70	130			

### Sample Matrix Spike Duplicate

File ID: 13112040.D

Type MSD

Test Code: EPA Method SW8260B

Batch ID: MS08S1999A

Analysis Date: 11/21/2013 03:47

Sample ID: 13110848-02AMSD

Units: µg/Kg

Run ID: MSD\_08\_131120A

Prep Date: 11/21/2013 03:47

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	409	20	400	0	102	10	131	400.9	2.0(40)	
Benzene	380	10	400	0	95	52	151	378.8	0.4(30)	
Trichloroethene	403	20	400	0	101	48	165	421.4	4.5(29)	
Toluene	398	10	400	0	99.6	47	154	399.5	0.3(28)	
Chlorobenzene	390	20	400	0	97	50	151	389.3	0.1(40)	
Ethylbenzene	379	10	400	0	95	52	154	377.2	0.5(37)	
m,p-Xylene	370	10	400	0	92	51	162	369.3	0.2(34)	
o-Xylene	355	10	400	0	89	52	162	355.8	0.3(40)	
Surr: 1,2-Dichloroethane-d4	352		400		88	70	130			
Surr: Toluene-d8	423		400		106	70	130			
Surr: 4-Bromofluorobenzene	411		400		103	70	130			

### Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

**Billing Information :**

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

**Client:**

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 10204, 10203, 13449, 6043 Job : 08-73103-01/02-07/ Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD with Surrogates

**CHAIN-OF-CUSTODY RECORD**

**Alpha Analytical, Inc.**

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

**Report Attention**

Kathi Brandmuller

**Phone Number**

(775) 284-9752 x

**Email Address**

kbrandmuller@converseconsultants

**AMENDED**  
Page: 1 of 10

Workorder : CONNR13110824

Report Due By : 5:00 PM On : 18-Nov-13

*Amendment due 11-29-13*

EDD Required : No

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp

Samples Received

Date Printed

4 °C

08-Nov-13

19-Nov-13

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles Alpha Sub	TAT	Requested Tests							Sample Remarks	
					HOLD	METALS_O S	METALS_S O	PNA_SIM S	PNA_SIM W	TPH/E_S	TPH/E_W		TPH/P_S
CON13110824-01A	B-14@5FT	SO 11/06/13 08:05	3	0	6	Hold							1-tube, 2-25 gram Encores
CON13110824-02A	B-13@4FT	SO 11/06/13 08:30	3	0	6	Hold							1-tube, 2-25 gram Encores. Encores labeled B-14@4FT, matched up per phone call with Kathi.
CON13110824-03A	B-13@8FT	SO 11/06/13 08:35	3	0	6	Hold							1-tube, 2-25 gram Encores
CON13110824-04A	B-13@11FT	SO 11/06/13 08:40	3	0	6			As, Ba, Cd Cr, Pb, Hg, Ag, Se		TPH/E_N		GAS-N	1-tube, 2-25 gram Encores
CON13110824-05A	B-13	AQ 11/06/13 09:20	4	0	6			As, Ba, Cd Cr, Pb, Hg, Ag, Se		SIM			Limited sample volume. Analyze for SIM and Metals if enough volume, per Kathi.
CON13110824-06A	B-2@4FT	SO 11/06/13 09:28	3	0	6	Hold							1-tube, 2-25 gram Encores
CON13110824-07A	B-2@8FT	SO 11/06/13 09:30	3	0	6	Hold							1-tube, 2-25 gram Encores
CON13110824-08A	B-2@12FT	SO 11/06/13 09:40	3	0	6			As, Ba, Cd Cr, Pb, Hg, Ag, Se		TPH/E_N		GAS-N	1-tube, 2-25 gram Encores

**Comments:**

Samples brought in by client. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. B-4 added to chain by lab, per phone conversation with Kathi. Amended 11/19/13 16:35 to add 8260 and 8270 SIM to 16A and 24A on standard TAT, per phone conversation with Kathi. Please extract/analyze within holding time. Client will pay rush extraction charges. Due 11/29/13 KM

Logged in by:

*K. Murray*

*K. Murray*

Alpha Analytical, Inc.

11/19/13 16:35

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

**Billing Information :**

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

**Client:**

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 10204, 10203, 13449, 6043 Job : 08-73103-01/02-07/ Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD with Surrogates

**CHAIN-OF-CUSTODY RECORD**

**Alpha Analytical, Inc.**

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

**Report Attention**

**Phone Number**

**Email Address**

Kathi Brandmuller (775) 284-9752 x kbrandmuller@converseconsultants

**AMENDED**  
**NV**

Page: 2 of 10

**Workorder : CONR13110824**

**Report Due By : 5:00 PM On : 18-Nov-13**

EDD Required : No

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp Samples Received Date Printed

4 °C 08-Nov-13 19-Nov-13

Alpha Sample ID	Client Sample ID	Collection Matrix	Date	No. of Bottles			TAT	Requested Tests							Sample Remarks	
				Alpha	Sub			HOLD	METALS_D S	METALS_S O	PNA_SIM S	PNA_SIM W	TPHE_S	TPHE_W		TPHE_S
CON13110824-09A	B-2@16FT	SO	11/06/13 09:50	1	0	6		Hold								1-tube, no Encores
CON13110824-10A	B-2	AQ	11/06/13 09:55	6	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se			SIM				
CON13110824-11A	B-1@4FT	SO	11/06/13 10:15	3	0	6		Hold								1-tube, 2-25 gram Encores
CON13110824-12A	B-1@8FT	SO	11/06/13 10:20	3	0	6		Hold								1-tube, 2-25 gram Encores
CON13110824-13A	B-1@12FT	SO	11/06/13 10:29	3	0	6				As, Ba, Cd, Cr, Pb, Hg, Ag, Se			TPHE_N		GAS_N	1-tube, 2-25 gram Encores
CON13110824-14A	B-1	AQ	11/06/13 10:40	6	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se			SIM				
CON13110824-15A	B-3@4FT	SO	11/06/13 11:25	3	0	6		Hold								1-tube, 2-25 gram Encores
CON13110824-16A	B-3@6.5FT	SO	11/06/13 11:35	3	0	6				As, Ba, Cd, Cr, Pb, Hg, Ag, Se		SIM		TPHE_N	GAS_N	1-tube, 2-25 gram Encores
CON13110824-17A	B-15@4FT	SO	11/06/13 12:35	3	0	6		Hold								1-tube, 2-25 gram Encores

**Comments:**

Samples brought in by client. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. B-4 added to chain by lab, per phone conversation : with Kathi. Amended 11/19/13 16:35 to add 8260 and 8270 SIM to 16A and 24A on standard TAT, per phone conversation with Kathi. Please extract/analyze within holding time. Client will pay rush extraction charges. Due 11/29/13, KM

Logged in by:

Signature

Print Name

Company

Date/Time

K. Brandmuller

K. Brandmuller

Alpha Analytical, Inc.

11/19/13 16:35

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

**Billing Information :**

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

**Client:**

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 10204, 10203, 13449, 6043 Job : 08-73103-01/02-07/ Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD with Surrogates

**CHAIN-OF-CUSTODY RECORD**

**Alpha Analytical, Inc.**

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

**Report Attention**

**Phone Number**

**Email Address**

Kathi Brandmuller (775) 284-9752 x kbrandmuller@converseconsultants

**AMENDED**  
Page: 3 of 10

**Workorder : CONR13110824**

**Report Due By : 5:00 PM On : 18-Nov-13**

**EDD Required : No**

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp Samples Received Date Printed

4 °C 08-Nov-13 19-Nov-13

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles			TAT	Requested Tests							Sample Remarks
			HOLD	METALS_D S	METALS_S O		PNA_SIM_S	PNA_SIM_W	TPHE_S	TPHE_W	TPHE_S			
CON13110824-18A	B-15@8FT	SO	11/06/13 12:40	3	0	6		As, Ba, Cd, Cr, Pb, Hg, Ag, Se			TPHE_N		GAS_N	1-tube, 2-25 gram Encores
CON13110824-19A	B-15A@8FT	SO	11/06/13 12:41	3	0	6		As, Ba, Cd, Cr, Pb, Hg, Ag, Se			TPHE_N		GAS_N	1-tube, 2-25 gram Encores
CON13110824-20A	B-15@12FT	SO	11/06/13 12:48	3	0	6		As, Ba, Cd, Cr, Pb, Hg, Ag, Se			TPHE_N		GAS_N	1-tube, 2-25 gram Encores
CON13110824-21A	B-15	AQ	11/06/13 13:15	6	0	6		As, Ba, Cd, Cr, Pb, Hg, Ag, Se		SIM				
CON13110824-22A	B-4@4FT	SO	11/06/13 14:05	3	0	6	Hold							1-tube, 2-25 gram Encores
CON13110824-23A	B-4@8FT	SO	11/06/13 14:00	3	0	6		As, Ba, Cd, Cr, Pb, Hg, Ag, Se			TPHE_N		GAS_N	1-tube, 2-25 gram Encores
CON13110824-24A	B-4@12FT	SO	11/06/13 14:10	3	0	6		As, Ba, Cd, Cr, Pb, Hg, Ag, Se		SIM	TPHE_N		GAS_N	1-tube, 2-25 gram Encores
CON13110824-25A	B-5@4FT	SO	11/06/13 15:00	3	0	6	Hold							1-tube, 2-25 gram Encores
CON13110824-26A	B-5@8FT	SO	11/06/13 15:15	3	0	6		As, Ba, Cd, Cr, Pb, Hg, Ag, Se		SIM	TPHE_N		GAS_N	1-tube, 2-25 gram Encores

**Comments:**

Samples brought in by client. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. B-4 added to chain by lab, per phone conversation : with Kathi. Amended 11/19/13 16:35 to add 8260 and 8270 SIM to 16A and 24A on standard TAT, per phone conversation with Kathi. Please extract/analyze within holding time. Client will pay rush extraction charges. Due 11/29/13 KM

Logged in by:

*K. Brandmuller*

*K. Brandmuller*

Alpha Analytical, Inc.

11/19/13 16:35

Signature

Print Name

Company

Date/Time

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information :  
Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502

Client:

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 10204, 10203, 13449, 6043 Job : 08-73103-01/02-07/ Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD with Surrogates

## CHAIN-OF-CUSTODY RECORD

Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

AMENDED  
NV

Page: 4 of 10

Workorder : CONR13110824

Report Due By : 5:00 PM On : 18-Nov-13

Report Attention Phone Number Email Address

Kathi Brandmuller (775) 284-9752 x kbrandmuller@converseconsultants

EDD Required : No

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp Samples Received Date Printed

4 °C 08-Nov-13 19-Nov-13

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles Alpha Sub TAT			Requested Tests							Sample Remarks		
			HOLD	METALS_D S	METALS_S O	PMA_SIM_S	PMA_SIM_W	TPHE_S	TPHE_W	TPHE_S					
CON13110824-27A	B-5@12FT	SO 11/06/13 15:22	3	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se		SIM		TPHE_N		GAS_N	1-tube, 2-25 gram Encores
CON13110824-28A	B-5	AQ 11/06/13 15:35	6	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se				SIM			
CON13110824-29A	B-6@4FT	SO 11/06/13 16:05	3	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se				TPHE_N		GAS_N	1-tube, 2-25 gram Encores
CON13110824-30A	B-6@8FT	SO 11/06/13 16:15	3	0	6	Hold									1-tube, 2-25 gram Encores
CON13110824-31A	B-6@11FT	SO 11/06/13 16:20	3	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se				TPHE_N		GAS_N	1-tube, 2-25 gram Encores
CON13110824-32A	B-6	AQ 11/06/13 16:35	6	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se				SIM			
CON13110824-33A	B-15-A	AQ 11/06/13 13:16	6	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se				SIM			
CON13110824-34A	B-4-A	AQ 11/06/13 14:41	6	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se				SIM			
CON13110824-35A	B-4A@12FT	SO 11/06/13 14:11	3	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se				TPHE_N		GAS_N	1-tube, 2-25 gram Encores

Comments:

Samples brought in by client. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. B-4 added to chain by lab, per phone conversation : with Kathi. Amended 11/19/13 16:35 to add 8260 and 8270 SIM to 16A and 24A on standard TAT, per phone conversation with Kathi. Please extract/analyze within holding time. Client will pay rush extraction charges. Due 11/29/13 KM

Signature

Print Name

Company

Date/Time

Logged in by:

K. Murray

K. Murray

Alpha Analytical, Inc.

11/19/13 16:35

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

## Billing Information :

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

## Client:

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 10204, 10203, 13449, 6043 Job : 08-73103-01/02-07/ Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD with Surrogates

## CHAIN-OF-CUSTODY RECORD

## Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

AMENDED

Page: 5 of 10

Workorder : CONR13110824

Report Due By : 5:00 PM On : 18-Nov-13

Report Attention Phone Number EMAIL Address

Kathi Brandmuller (775) 284-9752 x kbrandmuller@converseconsultants

EDD Required : No

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp Samples Received Date Printed

4 °C 08-Nov-13 19-Nov-13

Alpha Sample ID	Client Sample ID	Collection Date	No. of Bottles			Requested Tests										Sample Remarks
						HOLD	METALS_D S	METALS_S O	PNA_SIM S	PNA_SIM W	TPHE_S	TPHE_W	TPHE_N	TPHE_S		
CON13110824-36A	Field Blank	AQ 11/06/13 16:45	6	0	6		As, Ba, Cd, Cr, Pb, Hg, Ag, Se				SIM		TPHE_N			
CON13110824-37A	B-14@4FT	SO 11/06/13 08:30	0	0	6		Hold								Sample canceled. Encores matched up with 02A, per phone call with Kathi.	
CON13110824-38A	B-1@16FT	SO 11/06/13 10:40	1	0	6		Hold								1-tube, no Encores	
CON13110824-39A	B-4	AQ 11/06/13 14:40	6	0	6		As, Ba, Cd, Cr, Pb, Hg, Ag, Se				SIM					

## Comments:

Samples brought in by client. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. B-4 added to chain by lab, per phone conversation : with Kathi. Amended 11/19/13 16:35 to add 8260 and 8270 SIM to 16A and 24A on standard TAT, per phone conversation with Kathi. Please extract/analyze within holding time. Client will pay rush extraction charges. Due 11/29/13, KM

Signature

Print Name

Company

Date/Time

Logged in by:

K. Reynolds

K. Reynolds

Alpha Analytical, Inc.

11/19/13 16:35

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orto T-Tedlar B-Brass P-Plastic OT-Other

**Billing Information :**  
Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502

**Client:**  
Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502

**Report Attention**  
Kathi Brandmuller (775) 284-9752 x kbrandmuller@converseconsultants

**PO :** 08-73103-01/02-07

**Client's COC # :** 10204, 10203, 13449, 6043 Job : 08-73103-01/02-07/ Carlin Brownfields RRP

**QC Level :** S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

## CHAIN-OF-CUSTODY RECORD

**Alpha Analytical, Inc.**

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

**AMENDED**  
Page: 6 of 10

**WorkOrder : CONR13110824**

**Report Due By : 5:00 PM On : 18-Nov-13**

**EDD Required : No**

**Sampled by : Frank M. Reynolds III, Kathi Brand**

**Cooler Temp** 4 °C **Samples Received** 08-Nov-13 **Date Printed** 19-Nov-13

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests						Sample Remarks
							TPHP_W	VOC_S	VOC_W				
CON13110824-01A	B-14@5FT	SO	11/06/13 08:05	3	0	6							1-tube, 2-25 gram Encores
CON13110824-02A	B-13@4FT	SO	11/06/13 08:30	3	0	6							1-tube, 2-25 gram Encores. Encores labeled B-14@4FT, matched up per phone call with Kathi.
CON13110824-03A	B-13@8FT	SO	11/06/13 08:35	3	0	6							1-tube, 2-25 gram Encores
CON13110824-04A	B-13@11FT	SO	11/06/13 08:40	3	0	6							1-tube, 2-25 gram Encores
CON13110824-05A	B-13	AQ	11/06/13 09:20	4	0	6							Limited sample volume. Analyze for SIM and Metals if enough volume, per Kathi.
CON13110824-06A	B-2@4FT	SO	11/06/13 09:28	3	0	6							1-tube, 2-25 gram Encores
CON13110824-07A	B-2@8FT	SO	11/06/13 09:30	3	0	6							1-tube, 2-25 gram Encores
CON13110824-08A	B-2@12FT	SO	11/06/13 09:40	3	0	6							1-tube, 2-25 gram Encores

**Comments:** Samples brought in by client. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. B-4 added to chain by lab, per phone conversation with Kathi. Amended 11/19/13 16:35 to add 8260 and 8270 SIM to 16A and 24A on standard TAT, per phone conversation with Kathi. Please extract/analyze within holding time. Client will pay rush extraction charges. Due 11/29/13, KM

Signature	Print Name	Company	Date/Time
<i>K. Murray</i>	<i>K. Murray</i>	Alpha Analytical, Inc.	11/19/13 16:35

**NOTE:** Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orto T-Tedlar B-Brass P-Plastic OT-Other

**Billing Information :**  
Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502

# CHAIN-OF-CUSTODY RECORD

**Alpha Analytical, Inc.**

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

**AMENDED**  
**NV**

Page: 7 of 10

**Workorder : CONR13110824**  
**Report Due By : 5:00 PM On : 18-Nov-13**

**Client:**

Converse  
4840 Mill Street, Suite 5

**Report Attention**

**Phone Number**

**Email Address**

Kathi Brandmuller (775) 284-9752 x kbrandmuller@converseconsultants

EDD Required : No

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 10204, 10203, 13449, 6043 Job : 08-73103-01/02-07/ Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp Samples Received Date Printed

4 °C 08-Nov-13 19-Nov-13

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha Sub TAT	Requested Tests					Sample Remarks
					TPH/P_W	VOC_S	VOC_W			
CON13110824-09A	B-2@16FT	SO	11/06/13 09:50	1 0 6						1-tube, no Encores
CON13110824-10A	B-2	AQ	11/06/13 09:55	6 0 6			8260_Ng			
CON13110824-11A	B-1@4FT	SO	11/06/13 10:15	3 0 6						1-tube, 2-25 gram Encores
CON13110824-12A	B-1@8FT	SO	11/06/13 10:20	3 0 6						1-tube, 2-25 gram Encores
CON13110824-13A	B-1@12FT	SO	11/06/13 10:29	3 0 6						1-tube, 2-25 gram Encores
CON13110824-14A	B-1	AQ	11/06/13 10:40	6 0 6			8260_Ng			
CON13110824-15A	B-3@4FT	SO	11/06/13 11:25	3 0 6						1-tube, 2-25 gram Encores
CON13110824-16A	B-3@6.5FT	SO	11/06/13 11:35	3 0 6			8260_Ng			1-tube, 2-25 gram Encores
CON13110824-17A	B-15@4FT	SO	11/06/13 12:35	3 0 6						1-tube, 2-25 gram Encores
CON13110824-18A	B-15@8FT	SO	11/06/13 12:40	3 0 6						1-tube, 2-25 gram Encores

**Comments:**

Samples brought in by client. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. B-4 added to chain by lab, per phone conversation : with Kathi. Amended 11/19/13 16:35 to add 8260 and 8270 SIM to 16A and 24A on standard TAT, per phone conversation with Kathi. Please extract/analyze within holding time. Client will pay rush extraction charges. Due 11/29/13. KM

Signature

Print Name

Company

Date/Time

Logged in by:

*K. Murney*

*K. Murney*

Alpha Analytical, Inc.

11/19/13 16:35

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tradlar B-Brass P-Plastic OT-Other

**Billing Information :**  
Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502

**Client:**

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502

**Report Attention**

Kathi Brandmuller (775) 284-9752 x kbbrandmuller@converseconsultants

**Phone Number**

**Email Address**

## Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

# CHAIN-OF-CUSTODY RECORD

# AMENDED NV

Page: 8 of 10

Workorder : CONR13110824

Report Due By : 5:00 PM On : 18-Nov-13

EDD Required : No

Sampled by : Frank M. Reynolds III, Kathi Brand

PO : 08-73103-01/02-07

Cooler Temp

Samples Received

Date Printed

Client's COC # : 10204, 10203, 13449, 6043 Job : 08-73103-01/02-07/ Carlin Brownfields RRP

4 °C

08-Nov-13

19-Nov-13

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD with Surrogates

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles			Requested Tests						Sample Remarks
				Alpha	Sub	TAT	THIP_W	VOC_S	VOC_W				
CON13110824-19A	B-15A@8FT	SO	11/06/13 12:41	3	0	6							1-tube, 2-25 gram Encores
CON13110824-20A	B-15@12FT	SO	11/06/13 12:48	3	0	6							1-tube, 2-25 gram Encores
CON13110824-21A	B-15	AQ	11/06/13 13:15	6	0	6			8260_Ns				
CON13110824-22A	B-4@4FT	SO	11/06/13 14:05	3	0	6							1-tube, 2-25 gram Encores
CON13110824-23A	B-4@8FT	SO	11/06/13 14:00	3	0	6							1-tube, 2-25 gram Encores
CON13110824-24A	B-4@12FT	SO	11/06/13 14:10	3	0	6			8260_Ns				1-tube, 2-25 gram Encores
CON13110824-25A	B-5@4FT	SO	11/06/13 15:00	3	0	6							1-tube, 2-25 gram Encores
CON13110824-26A	B-5@8FT	SO	11/06/13 15:15	3	0	6			8260_Ns				1-tube, 2-25 gram Encores
CON13110824-27A	B-5@12FT	SO	11/06/13 15:22	3	0	6			8260_Ns				1-tube, 2-25 gram Encores
CON13110824-28A	B-5	AQ	11/06/13 15:35	6	0	6			8260_Ns				

**Comments:**

Samples brought in by client. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. B-4 added to chain by lab, per phone conversation : with Kathi. Amended 11/19/13 16:35 to add 8260 and 8270 SIM to 16A and 24A on standard TAT, per phone conversation with Kathi. Please extract/analyze within holding time. Client will pay rush extraction charges. Due 11/29/13 KM

Signature

Print Name

Company

Date/Time

Logged in by:

K. Murray

K. Murray

Alpha Analytical, Inc.

11/19/13 16:35

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

AMENDED

Billing Information :

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

Client:

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 10204, 10203, 13449, 6043 Job : 08-73103-01/02-07/ Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

CHAIN-OF-CUSTODY RECORD

Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

NV

Workorder : CONR13110824

Report Due By : 5:00 PM On : 18-Nov-13

Client:

Converse

4840 Mill Street, Suite 5

Report Attention

Kathi Braundmuller

Phone Number

(775) 284-9752 x

Email Address

kbraundmuller@converseconsultants

EDD Required : No

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp

4 °C

Samples Received

08-Nov-13

Date Printed

19-Nov-13

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests						Sample Remarks
							TPHP_W	VOC_S	VOC_W				
CON13110824-29A	B-6@4FT	SO	11/06/13 16:05	3	0	6							1-tube, 2-25 gram Encores
CON13110824-30A	B-6@3FT	SO	11/06/13 16:15	3	0	6							1-tube, 2-25 gram Encores
CON13110824-31A	B-6@11FT	SO	11/06/13 16:20	3	0	6							1-tube, 2-25 gram Encores
CON13110824-32A	B-6	AQ	11/06/13 16:35	6	0	6			8260_Ns				
CON13110824-33A	B-15-A	AQ	11/06/13 13:16	6	0	6			8260_Ns				
CON13110824-34A	B-4-A	AQ	11/06/13 14:41	6	0	6			8260_Ns				
CON13110824-35A	B-4A@12FT	SO	11/06/13 14:11	3	0	6							1-tube, 2-25 gram Encores
CON13110824-36A	Field Blank	AQ	11/06/13 16:45	6	0	6			8260_Ns				
CON13110824-37A	B-14@4FT	SO	11/06/13 08:30	0	0	6							Sample canceled. Encores matched up with 02A, per phone call with Kathi.

Comments:

Samples brought in by client. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. B-4 added to chain by lab, per phone conversation with Kathi. Amended 11/19/13 16:35 to add 8260 and 8270 SIM to 16A and 24A on standard TAT, per phone conversation with Kathi. Please extract/analyze within holding time. Client will pay rush extraction charges. Due 11/29/13, KM

Signature

Print Name

Company

Date/Time

Logged in by:

K. Murray

K. Murray

Alpha Analytical, Inc.

11/19/13 16:35

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

AMENDED

## Billing Information :

Converse

4840 Mill Street, Suite 5

Reno, NV 89502

## Client:

Converse

4840 Mill Street, Suite 5

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 10204, 10203, 13449, 6043 Job : 08-73103-01/02-07/ Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD with Surrogates

## CHAIN-OF-CUSTODY RECORD

## Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778

TEL: (775) 355-1044 FAX: (775) 355-0406

Report Attention Phone Number Email Address

Kathi Brandmuller (775) 284-9752 x kbrandmuller@converseconsultants

NV

Workorder : CONR13110824

Report Due By : 5:00 PM On : 18-Nov-13

Page: 10 of 10

EDD Required : No

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp Samples Received Date Printed

4 °C 08-Nov-13 19-Nov-13

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles Alpha Sub TAT			Requested Tests								Sample Remarks	
						TPHP_W	VOC_S	VOC_W							
CON13110824-38A	B-1@16FT	SO 11/06/13 10:40	1	0	6										1-tube, no Encores
CON13110824-39A	B-4	AQ 11/06/13 14:40	6	0	6			8260_Ns							

## Comments:

Samples brought in by client. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. B-4 added to chain by lab. per phone conversation ; with Kathi. Amended 11/19/13 16:35 to add 8260 and 8270 SM to 16A and 24A on standard TAT, per phone conversation with Kathi. Please extract/analyze within holding time. Client will pay rush extraction charges. Due 11/29/13.KM

Logged in by:

Signature

Print Name

Company

Date/Time

Alpha Analytical, Inc.

11/19/13 16:35

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

## Billing Information :

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

## Client:

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 10204, 10203, 13449, 6043 Job : 08-73103-01/02-07/ Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

## CHAIN-OF-CUSTODY RECORD

## Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

NV

Page: 1 of 10

WorkOrder : CONNR13110824

Report Due By : 5:00 PM On : 18-Nov-13

## Client:

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 10204, 10203, 13449, 6043 Job : 08-73103-01/02-07/ Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

EDD Required : No

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp Samples Received Date Printed

4 °C 08-Nov-13 08-Nov-13

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles			TAT	Requested Tests							Sample Remarks	
			Alpha	Sub			HOLD	METALS_D S	METALS_S O	PNA_SIM_ S	PNA_SIM_ W	TPHE_S	TPHE_W		TPHP_S
CON13110824-01A	B-14@5FT	SO	11/06/13 08:05	3	0	6	Hold								1-tube, 2-25 gram Encores
CON13110824-02A	B-13@4FT	SO	11/06/13 08:30	3	0	6	Hold								1-tube, 2-25 gram Encores. Encores labeled B-14@4FT, matched up per phone call with Kathi.
CON13110824-03A	B-13@8FT	SO	11/06/13 08:35	3	0	6	Hold								1-tube, 2-25 gram Encores
CON13110824-04A	B-13@11FT	SO	11/06/13 08:40	3	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se			TPHE_N		GAS_N	1-tube, 2-25 gram Encores
CON13110824-05A	B-13	AQ	11/06/13 09:20	4	0	6		As, Ba, Cd, Cr, Pb, Hg, Ag, Se			SIM				Limited sample volume. Analyze for SIM and Metals if enough volume, per Kathi.
CON13110824-06A	B-2@4FT	SO	11/06/13 09:28	3	0	6	Hold								1-tube, 2-25 gram Encores
CON13110824-07A	B-2@8FT	SO	11/06/13 09:30	3	0	6	Hold								1-tube, 2-25 gram Encores
CON13110824-08A	B-2@12FT	SO	11/06/13 09:40	3	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se			TPHE_N		GAS_N	1-tube, 2-25 gram Encores

Comments: Samples brought in by client. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. B-4 added to chain by lab, per phone conversation : with Kathi.

Logged in by:

*K. Murray*

*K. Murray*

Alpha Analytical, Inc.

11/8/13 1425

Signature

Print Name

Company

Date/Time

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.

Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

## Billing Information :

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

## Client:

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 10204, 10203, 13449, 6043 Job : 08-73103-01/02-07 Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

## CHAIN-OF-CUSTODY RECORD

## Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

NV

Page: 2 of 10

Workorder : CONR13110824

Report Due By : 5:00 PM On : 18-Nov-13

## Report Attention Phone Number Email Address

Kathi Brandmuller (775) 284-9752 x kbbrandmuller@converseconsultants

EDD Required : No

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp Samples Received Date Printed

4 °C 08-Nov-13 08-Nov-13

Alpha Sample ID	Client Sample ID	Collection Matrix	Date	No. of Bottles			TAT	Requested Tests							Sample Remarks
				Alpha	Sub			HOLD	METALS_D S	METALS_S O	PNA_SIM_S	PNA_SIM_W	TPHE_S	TPHE_W	
CON13110824-09A	B-2.@16FT	SO	11/06/13 09:50	1	0	6		Hold							1-tube, no Encores
CON13110824-10A	B-2	AQ	11/06/13 09:55	6	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se			SIM			
CON13110824-11A	B-1@4FT	SO	11/06/13 10:15	3	0	6		Hold							1-tube, 2-25 gram Encores
CON13110824-12A	B-1@8FT	SO	11/06/13 10:20	3	0	6		Hold							1-tube, 2-25 gram Encores
CON13110824-13A	B-1@12FT	SO	11/06/13 10:29	3	0	6				As, Ba, Cd, Cr, Pb, Hg, Ag, Se			TPHE_N	GAS_N	1-tube, 2-25 gram Encores
CON13110824-14A	B-1	AQ	11/06/13 10:40	6	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se			SIM			
CON13110824-15A	B-3@4FT	SO	11/06/13 11:25	3	0	6		Hold							1-tube, 2-25 gram Encores
CON13110824-16A	B-3.@6.5FT	SO	11/06/13 11:35	3	0	6				As, Ba, Cd, Cr, Pb, Hg, Ag, Se			TPHE_N	GAS_N	1-tube, 2-25 gram Encores
CON13110824-17A	B-15@4FT	SO	11/06/13 12:35	3	0	6		Hold							1-tube, 2-25 gram Encores

Comments: Samples brought in by client. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. B-4 added to chain by lab. per phone conversation : with Kathi.

Logged in by:

K. Brandmuller

K. Brandmuller

Alpha Analytical, Inc.

11/01/13 1435

Signature

Print Name

Company

Date/Time

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.  
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

## Billing Information :

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

## Client:

Converse  
4840 Mill Street, Suite 5

## CHAIN-OF-CUSTODY RECORD

## Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

NV

Page: 3 of 10

WorkOrder : CONR13110824

Report Due By : 5:00 PM On : 18-Nov-13

Report Attention Phone Number Email Address

Kathi Brandmuller (775) 284-9752 x kbbrandmuller@converseconsultants

EDD Required : No

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 10204, 10203, 13449, 6043 Job : 08-73103-01/02-07/ Carlin Brownfields RRP

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp Samples Received Date Printed

4 °C 08-Nov-13 08-Nov-13

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles Alpha Sub TAT			Requested Tests						Sample Remarks	
						HOLD	METALS_D S	METALS_S O	PNA_SIM_S	PNA_SIM_W	TPHE_S		TPHE_W
CON13110824-18A	B-15@8FT	SO 11/06/13 12:40	3	0	6		As, Ba, Cd, Cr, Pb, Hg, Ag, Se			TPHE_N		GAS_N	1-tube, 2-25 gram Encores
CON13110824-19A	B-15A@8FT	SO 11/06/13 12:41	3	0	6		As, Ba, Cd, Cr, Pb, Hg, Ag, Se			TPHE_N		GAS_N	1-tube, 2-25 gram Encores
CON13110824-20A	B-15@12FT	SO 11/06/13 12:48	3	0	6		As, Ba, Cd, Cr, Pb, Hg, Ag, Se			TPHE_N		GAS_N	1-tube, 2-25 gram Encores
CON13110824-21A	B-15	AQ 11/06/13 13:15	6	0	6		As, Ba, Cd, Cr, Pb, Hg, Ag, Se		SIM				
CON13110824-22A	B-4@4FT	SO 11/06/13 14:05	3	0	6	Hold							1-tube, 2-25 gram Encores
CON13110824-23A	B-4@8FT	SO 11/06/13 14:00	3	0	6		As, Ba, Cd, Cr, Pb, Hg, Ag, Se			TPHE_N		GAS_N	1-tube, 2-25 gram Encores
CON13110824-24A	B-4@12FT	SO 11/06/13 14:10	3	0	6		As, Ba, Cd, Cr, Pb, Hg, Ag, Se			TPHE_N		GAS_N	1-tube, 2-25 gram Encores
CON13110824-25A	B-5@4FT	SO 11/06/13 15:00	3	0	6	Hold							1-tube, 2-25 gram Encores
CON13110824-26A	B-5@8FT	SO 11/06/13 15:15	3	0	6		As, Ba, Cd, Cr, Pb, Hg, Ag, Se	SIM		TPHE_N		GAS_N	1-tube, 2-25 gram Encores

Comments: Samples brought in by client. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. B-4 added to chain by lab. per phone conversation : with Kathi.

Logged in by:

Signature

Print Name

Company

Date/Time

K. Brandmuller

K. Brandmuller

Alpha Analytical, Inc.

11/8/13 1425

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.  
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

## Billing Information :

Converse

4840 Mill Street, Suite 5

Reno, NV 89502

## Client:

Converse

4840 Mill Street, Suite 5

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 10204, 10203, 13449, 6043 Job : 08-73103-01/02-07/ Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD with Surrogates

## CHAIN-OF-CUSTODY RECORD

## Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

NV

Page: 4 of 10

Workorder : CONNR13110824

Report Due By : 5:00 PM On : 18-Nov-13

## Report Attention

Kathi Brandmuller

(775) 284-9752 x

kbrandmuller@converseconsultants

Phone Number

Email Address

EDD Required : No

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp Samples Received Date Printed

4 °C 08-Nov-13 08-Nov-13

Alpha Sample ID	Client Sample ID	Collection Matrix	Date	No. of Bottles			TAT	Requested Tests							Sample Remarks	
				Alpha	Sub			HOLD	METALS_D S	METALS_S O	PNA_SIM S	PNA_SIM W	TPHE_S	TPHE_W		TPHP_S
CON13110824-27A	B-5@12FT	SO	11/06/13 15:22	3	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se		SIM		TPHE_N		GAS_N	1-tube, 2-25 gram Encores
CON13110824-28A	B-5	AQ	11/06/13 15:35	6	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se				SIM			
CON13110824-29A	B-6@4FT	SO	11/06/13 16:05	3	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se				TPHE_N		GAS_N	1-tube, 2-25 gram Encores
CON13110824-30A	B-6@8FT	SO	11/06/13 16:15	3	0	6	Hold									1-tube, 2-25 gram Encores
CON13110824-31A	B-6@11FT	SO	11/06/13 16:20	3	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se				TPHE_N		GAS_N	1-tube, 2-25 gram Encores
CON13110824-32A	B-6	AQ	11/06/13 16:35	6	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se				SIM			
CON13110824-33A	B-15-A	AQ	11/06/13 13:16	6	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se				SIM			
CON13110824-34A	B-4-A	AQ	11/06/13 14:41	6	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se				SIM			
CON13110824-35A	B-4A@12FT	SO	11/06/13 14:11	3	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se				TPHE_N		GAS_N	1-tube, 2-25 gram Encores

## Comments:

Samples brought in by client. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. B-4 added to chain by lab. per phone conversation with Kathi.

Logged in by:

*K. Murray*

Signature

Print Name

*K. Murray*

Alpha Analytical, Inc.

11/11/13 H35

Company

Date/Time

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.  
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type : L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

## Billing Information :

Converse

4840 Mill Street, Suite 5

Reno, NV 89502

## Client:

Converse

4840 Mill Street, Suite 5

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 10204, 10203, 13449, 6043 Job : 08-73103-01/02-07/ Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD with Surrogates

## CHAIN-OF-CUSTODY RECORD

## Alpha Analytical, Inc.

235 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778

TEL: (775) 355-1044 FAX: (775) 355-0406

NV

Page: 5 of 10

Workorder : CONR13110824

Report Due By : 5:00 PM On : 18-Nov-13

## Report Attention Phone Number Email Address

Kathi Brandmuller (775) 284-9752 x kbrandmuller@conversiconsultants

EDD Required : No

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp Samples Received Date Printed

4 °C 08-Nov-13 08-Nov-13

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles Alpha Sub TAT			Requested Tests							Sample Remarks		
						HOLD	METALS_D S	METALS_S O	PVA_SIM S	PVA_SIM_W	TPHE_S	TPHE_W		TPHP_S	
CON13110824-36A	Field Blank	AQ 11/06/13 16:45	6	0	6		As, Ba, Cd, Cr, Pb, Hg, Ag, Se				SIM		TPHE_N		
CON13110824-37A	B-14@4FT	SO 11/06/13 08:30	0	0	6	Hold									Sample canceled. Encores matched up with 02A, per phone call with Kathi.
CON13110824-38A	B-1@16FT	SO 11/06/13 10:40	1	0	6	Hold									1-tube, no Encores
CON13110824-39A	B-4	AQ 11/06/13 14:40	6	0	6		As, Ba, Cd, Cr, Pb, Hg, Ag, Se				SIM				

Comments: Samples brought in by client. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of \$260. B-4 added to chain by lab, per phone conversation with Kathi.

Signature

Print Name

Company

Date/Time

Logged in by:

K Murray

K Murray

Alpha Analytical, Inc.

11/8/13 1425

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

## Billing Information :

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502

## CHAIN-OF-CUSTODY RECORD

## Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

NV

Page: 6 of 10

WorkOrder : CONNR13110824

Report Due By : 5:00 PM On : 18-Nov-13

## Client:

Converse  
4840 Mill Street, Suite 5

## Report Attention

Phone Number

Email Address

Kathi Brandmueller (775) 284-9752 x kbrandmueller@converseconsultants

EDD Required : No

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 10204, 10203, 13449, 6043 Job : 08-73103-01/02-07/ Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp Samples Received Date Printed

4 °C 08-Nov-13 08-Nov-13

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles Alpha	Sub TAT	Requested Tests						Sample Remarks
					TPHP_W	VOC_S	VOC_W				
CON13110824-01A	B-14@5FT	SO 11/06/13 08:05	3	0	6						1-tube, 2-25 gram Encores
CON13110824-02A	B-13@4FT	SO 11/06/13 08:30	3	0	6						1-tube, 2-25 gram Encores. Encores labeled B-14@4FT, matched up per phone call with Kathi.
CON13110824-03A	B-13@8FT	SO 11/06/13 08:35	3	0	6						1-tube, 2-25 gram Encores
CON13110824-04A	B-13@11FT	SO 11/06/13 08:40	3	0	6						1-tube, 2-25 gram Encores
CON13110824-05A	B-13	AQ 11/06/13 09:20	4	0	6						Limited sample volume. Analyze for SIM and Metals if enough volume, per Kathi.
CON13110824-06A	B-2@4FT	SO 11/06/13 09:28	3	0	6						1-tube, 2-25 gram Encores
CON13110824-07A	B-2@8FT	SO 11/06/13 09:30	3	0	6						1-tube, 2-25 gram Encores
CON13110824-08A	B-2@12FT	SO 11/06/13 09:40	3	0	6						1-tube, 2-25 gram Encores

Comments: Samples brought in by client. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. B-4 added to chain by lab. per phone conversation with Kathi.

Signature	Print Name	Company	Date/Time
<i>K. Brandmueller</i>	<i>K. Brandmueller</i>	Alpha Analytical, Inc.	11/8/13 1435

Logged in by:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.  
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

## Billing Information :

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

## Client:

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 10204, 10203, 13449, 6043 Job : 08-73103-01/02-07/ Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

## CHAIN-OF-CUSTODY RECORD

## Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

## Report Attention

Phone Number

Email Address

Kathi Brandmuller (775) 284-9752 x kbrandmuller@converseconsultants

NV

Page: 7 of 10

WorkOrder : CONR13110824

Report Due By : 5:00 PM On : 18-Nov-13

EDD Required : No

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp Samples Received Date Printed

4 °C 08-Nov-13 08-Nov-13

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests						Sample Remarks
							TPHP_W	VOC_S	VOC_W				
CON13110824-09A	B-2@16FT	SO	11/06/13 09:50	1	0	6							1-tube, no Encores
CON13110824-10A	B-2	AQ	11/06/13 09:55	6	0	6			8260_Ns				
CON13110824-11A	B-1@4FT	SO	11/06/13 10:15	3	0	6							1-tube, 2-25 gram Encores
CON13110824-12A	B-1@8FT	SO	11/06/13 10:20	3	0	6							1-tube, 2-25 gram Encores
CON13110824-13A	B-1@12FT	SO	11/06/13 10:29	3	0	6							1-tube, 2-25 gram Encores
CON13110824-14A	B-1	AQ	11/06/13 10:40	6	0	6			8260_Ns				
CON13110824-15A	B-3@4FT	SO	11/06/13 11:25	3	0	6							1-tube, 2-25 gram Encores
CON13110824-16A	B-3@6.5FT	SO	11/06/13 11:35	3	0	6							1-tube, 2-25 gram Encores
CON13110824-17A	B-15@4FT	SO	11/06/13 12:35	3	0	6							1-tube, 2-25 gram Encores
CON13110824-18A	B-15@8FT	SO	11/06/13 12:40	3	0	6							1-tube, 2-25 gram Encores

Comments: Samples brought in by client. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. B-4 added to chain by lab, per phone conversation with Kathi.

Signature

Print Name

Company

Date/Time

Logged in by:

K. Brandmuller

K. Brandmuller

Alpha Analytical, Inc.

11/8/13 1435

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.  
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

## Billing Information :

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

## Client:

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 10204, 10203, 13449, 6043 Job : 08-73103-01/02-07/ Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

## CHAIN-OF-CUSTODY RECORD

## Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

NV

Page: 8 of 10

Workorder : CONR13110824

Report Due By : 5:00 PM On : 18-Nov-13

## Report Attention

Phone Number

Email Address

Kathi Brandmuller (775) 284-9752 x kbrandmuller@converseconsultants

EDD Required : No

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp Samples Received Date Printed

4 °C 08-Nov-13 08-Nov-13

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests						Sample Remarks
							TPHP_W	VOC_S	VOC_W				
CON13110824-19A	B-15A@8FT	SO	11/06/13 12:41	3	0	6							1-tube, 2-25 gram Encores
CON13110824-20A	B-15@12FT	SO	11/06/13 12:48	3	0	6							1-tube, 2-25 gram Encores
CON13110824-21A	B-15	AQ	11/06/13 13:15	6	0	6			8260_Ns				
CON13110824-22A	B-4@4FT	SO	11/06/13 14:05	3	0	6							1-tube, 2-25 gram Encores
CON13110824-23A	B-4@8FT	SO	11/06/13 14:00	3	0	6							1-tube, 2-25 gram Encores
CON13110824-24A	B-4@12FT	SO	11/06/13 14:10	3	0	6							1-tube, 2-25 gram Encores
CON13110824-25A	B-5@4FT	SO	11/06/13 15:00	3	0	6							1-tube, 2-25 gram Encores
CON13110824-26A	B-5@8FT	SO	11/06/13 15:15	3	0	6			8260_Ns				1-tube, 2-25 gram Encores
CON13110824-27A	B-5@12FT	SO	11/06/13 15:22	3	0	6			8260_Ns				1-tube, 2-25 gram Encores
CON13110824-28A	B-5	AQ	11/06/13 15:35	6	0	6			8260_Ns				

## Comments:

Samples brought in by client. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. B-4 added to chain by lab, per phone conversation : with Kathi.

Logged in by:

*K. Murray*

*K. Murray*

Alpha Analytical, Inc.

11/8/13 #25

Signature

Print Name

Company

Date/Time

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.

Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

## Billing Information :

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

## Client :

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 10204, 10203, 13449, 6043 Job : 08-73103-01/02-07/ Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

## CHAIN-OF-CUSTODY RECORD

## Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

NV

Page: 9 of 10

Workorder : CONR13110824

Report Due By : 5:00 PM On : 18-Nov-13

## Report Attention

Phone Number

Email Address

Kathi Brandmuller (775) 284-9752 x kbrandmuller@converseconsultants

EDD Required : No

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp Samples Received Date Printed

4 °C

08-Nov-13

08-Nov-13

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests					Sample Remarks
							TPHP_W	VOC_S	VOC_W			
CON13110824-29A	B-6@4FT	SO	11/06/13 16:05	3	0	6						1-tube, 2-25 gram Encores
CON13110824-30A	B-6@8FT	SO	11/06/13 16:15	3	0	6						1-tube, 2-25 gram Encores
CON13110824-31A	B-6@11FT	SO	11/06/13 16:20	3	0	6						1-tube, 2-25 gram Encores
CON13110824-32A	B-6	AQ	11/06/13 16:35	6	0	6						
CON13110824-33A	B-15-A	AQ	11/06/13 13:16	6	0	6						
CON13110824-34A	B-4-A	AQ	11/06/13 14:41	6	0	6						
CON13110824-35A	B-4A@12FT	SO	11/06/13 14:11	3	0	6						1-tube, 2-25 gram Encores
CON13110824-36A	Field Blank	AQ	11/06/13 16:45	6	0	6						
CON13110824-37A	B-14@4FT	SO	11/06/13 08:30	0	0	6						Sample canceled. Encores matched up with 02A, per phone call with Kathi.

## Comments:

Samples brought in by client. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. B-4 added to chain by lab, per phone conversation with Kathi.

Logged in by:

K. M. M. M.

K. M. M. M.

Alpha Analytical, Inc.

11/01/13 14:35

Signature

Print Name

Company

Date/Time

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.  
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

**Billing Information :**

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502

Reno, NV 89502

**Client:**

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502

**Report Attention**

**Phone Number**

**Email Address**

Kathi Brandmuller (775) 284-9752 x kbrandmuller@converseconsultants

**CHAIN-OF-CUSTODY RECORD****Alpha Analytical, Inc.**

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

**NV**

Page: 10 of 10

**Workorder : CONNR13110824**

**Report Due By : 5:00 PM On : 18-Nov-13**

EDD Required : No

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp Samples Received Date Printed

4 °C 08-Nov-13 08-Nov-13

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles Alpha Sub TAT	Requested Tests						Sample Remarks
				TPHP_W	VOC_S	VOC_W				
CON13110824-384	B-1@16FT	SO 11/06/13 10:40	1 0 6							1-tube, no Encores
CON13110824-394	B-4	AQ 11/06/13 14:40	6 0 6			8260_Ns				

**Comments:** Samples brought in by client. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. B-4 added to chain by lab. per phone conversation : with Kathi.

Logged in by:

Signature

Print Name

Company

Date/Time

*K. Brandmuller*

*K. Brandmuller*

Alpha Analytical, Inc.

11/8/13 1435

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.  
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

**Billing Information:**  
 Company: Converse Consultants  
 Attn: Kathi Broadnutt  
 Address: 1048 Hill St. #5  
 City, State, Zip: Reno, NV  
 Phone Number: 775-856-3833 Fax: \_\_\_\_\_



**Alpha Analytical, Inc.**  
 Main Laboratory: 255 Glendale Ave, Suite 21 Sparks, NV 89431  
 Satellite Service Centers:  
 Northern CA: 9891 Horn Road, Suite C, Rancho Cordova, CA 95827  
 Southern NV: 6255 Midland Ave, Suite 24, Las Vegas, NV 89120  
 Southern CA: 1007 E. Dominguez St., Suite O, Carson, CA 90746

Phone: 775-355-1044  
 Fax: 775-355-0408  
 Phone: 916-365-9089  
 Phone: 702-281-4848  
 Phone: 714-388-2901

Page # 1 of 4

**Consultant/Client Info:**  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City, State, Zip: \_\_\_\_\_

**Job and Purchase Order Info:**  
 Job #: 08-13103-01/02-07  
 Job Name: Carl's Broomfields RRP  
 P.O. #: 08-13103-01/02-07  
 Name: \_\_\_\_\_  
 Email Address: \_\_\_\_\_  
 Phone #: \_\_\_\_\_  
 Cell #: \_\_\_\_\_

**Report Attention/Project Manager:**  
 Name: \_\_\_\_\_  
 Email Address: \_\_\_\_\_  
 Phone #: \_\_\_\_\_  
 Cell #: \_\_\_\_\_

**QC Deliverable Info:**  
 EDD Required? Yes / No \_\_\_\_\_  
 EDF Required? Yes / No \_\_\_\_\_  
 Global ID: \_\_\_\_\_  
 Data Validation Level: \_\_\_\_\_

Time Sampled (HH:MM)	Date Sampled	Metric (See Key Below)	Lab ID Number (For Lab Use Only)	Sample Description	TAT	Field Filtered?	# Containers** (See Key Below)	TPH (E+P)	VOC (Standard)	SVOC (SIM)	RCRA Metals (B)	Soil	RCRA Metals (B)	Disolved	Analysis Requested	Remarks
8:30	11/13/07	OT	CON1310824-01	B-14 @ 5'	9	NA	1-P20	HOLD								no EnCores
8:35				B-13 @ 4'			1-P	HOLD								
8:40				B-13 @ 8'			1-P	HOLD								
8:45				B-13 @ 11'			1-P	HOLD								
9:20		AG		B-13			3V-L	X								
9:25		OT		B-2 @ 4'			1-P20	HOLD								
9:30				B-2 @ 8'			1-P20	HOLD								
9:40				B-2 @ 12'			1-P	X								
9:50				B-2 @ 16'			1-P	X								
9:55		AG		B-2			1-P	X								
10:15		OT		B-1 @ 4'			1-P	X								
10:20				B-1 @ 8			1-P	X								

**ADDITIONAL INSTRUCTIONS:**

I (field sampler) attest to the validity and authenticity of the sample(s). I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. MAC 445.0636 (c) (2).

Sampled by: Frank M. Broadnutt III Date: 11/8/13 Time: 0917  
 Received by: Kathi Broadnutt Date: 11/8/13 Time: 0917

Reinquired by: Frank M. Broadnutt III Date: 11/8/13 Time: 0917  
 Received by: Kathi Broadnutt Date: 11/8/13 Time: 0917

Reinquired by: Frank M. Broadnutt III Date: 11/8/13 Time: 0917  
 Received by: Kathi Broadnutt Date: 11/8/13 Time: 0917

\* Key: AQ - Aqueous WA - Waste OT - Other \*\* L - Liter V - VOA S - Soil Jar O - Other T - Tedlar B - Brass P - Plastic OT - Other

NOTE: Samples are discarded 60 days after sample receipt unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.

Billing Information:  
 Company: Converse Consultants  
 Attn: Kate Broadmiller  
 Address: 9840 Hill St NW  
 City, State, Zip: Rocke NV 89502  
 Phone Number: 775-355-0202



Alpha Analytical, Inc.  
 Main Laboratory: 255 Glendale Ave, Suite 21 Sparks, NV 89431  
 Satellite Service Centers:  
 Northern CA: 9891 Horn Road, Suite C, Rancho Cordova, CA 95827  
 Southern NV: 9255 McLeod Ave, Suite 24, Las Vegas, NV 89120  
 Southern CA: 1007 E. Dominguez St., Suite O, Carson, CA 90746

Phone: 775-355-1044  
 Fax: 775-355-0405  
 Phone: 816-396-9089  
 Phone: 702-261-4848  
 Phone: 714-396-2801

Page # 2 of 4  
 10203

Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City, State, Zip: \_\_\_\_\_  
 Job # \_\_\_\_\_  
 Job Name: \_\_\_\_\_  
 P.O. #: \_\_\_\_\_

Report Attention/Project Manager: \_\_\_\_\_  
 Name: \_\_\_\_\_  
 Email Address: \_\_\_\_\_  
 Phone #: \_\_\_\_\_  
 Cell #: \_\_\_\_\_

QC Deliverable Info:  
 EDD Required? Yes / No \_\_\_\_\_  
 EDF Required? Yes / No \_\_\_\_\_  
 Global ID: \_\_\_\_\_  
 Data Validation Level: \_\_\_\_\_

Samples Collected from which State? (circle one) AZ CA NV WA ID OR DOD Site Other

Time Sampled (H:M:S)	Date Sampled (MM/DD)	Matrix (See Key Below)	Lab ID Number (For Lab Use Only)	Sample Description	TAT	Field Filtered?	# Containers** (See Key Below)	TPH (E+D)	Standard List	VOCs	SVOC (SIM)	Soil RCRA	8 Metals	Water RCRA	Metals Dis.	Analysis Requested	Remarks
10:29	11/6	OT	CON13110824-13	B-1 @ 12'	S	NA	1-2-20	X			X						
11:40		AQ		B-1	S	*	3-2-21	X									* Filter for metals and pesticides
11:25		OT		B-3 @ 4'			UA 1-2-21	Hold									
11:35				B-3 @ 6.5'													
12:35				B-15 @ 4'				Hold									
12:40				B-15 @ 8'													
12:41				B-15 A @ 8'													
12:48				B-15 @ 12'													
13:15		AQ		B-15		*	3-2-21	X									
14:05		OT		B-4 @ 4'			UA 1-2-21	Hold									
14:10				B-4 @ 8'													
14:10				B-4 @ 12'													

ADDITIONAL INSTRUCTIONS:

I (field sampler) attest to the validity and authenticity of the sample(s). I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. NAC 445.0036 (c) (2).

Sampled By: Frank M. Korman

Date: 11/8/13

Time: 09:17

Received by: Frank M. Korman

Date: 11/8/13

Time: 09:17

Relinquished by: Frank M. Korman

Date: 11/8/13

Time: 09:17

Received by: Frank M. Korman

Date: 11/8/13

Time: 09:17

Relinquished by: Frank M. Korman

Date: 11/8/13

Time: 09:17

Received by: Frank M. Korman

Date: 11/8/13

Time: 09:17

\* Key: AQ - Aqueous WA - Waste OT - Other \*\* L - Liter V - VOA S - Soil Jar O - Other T - Tedlar B - Brass P - Plastic QT - Other  
 NOTE: Samples are discarded 60 days after sample receipt unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.

**Billing Information:**  
 Company: Converse Consultants  
 Attn: Kate Brackmiller  
 Address: 4840 Hill St. #5  
 City, State, Zip: Reno, NV 89502  
 Phone Number: \_\_\_\_\_  
 Fax: \_\_\_\_\_



**Alpha Analytical, Inc.**  
 Main Laboratory: 255 Glendale Ave, Suite 21 Sparks, NV 89431  
 Satellite Service Centers:  
 Northern CA: 8881 Horn Road, Suite C, Rancho Cordova, CA 95827  
 Southern NV: 6255 McLeod Ave, Suite 24, Las Vegas, NV 89120  
 Southern CA: 1007 E. Dominguez St., Suite O, Carson, CA 90746

Phone: 775-355-1044  
 Fax: 775-355-0405  
 Phone: 916-386-9089  
 Phone: 702-281-4846  
 Phone: 714-386-2901

Page # 3 of 4  
 13449

**Consultant/Client Info:** \_\_\_\_\_  
**Job and Purchase Order Info:** Job # 50091  
 Job Name: \_\_\_\_\_ P.O. #: \_\_\_\_\_  
**Report Attention/Project Manager:** Name: \_\_\_\_\_  
 Email Address: \_\_\_\_\_ Phone #: \_\_\_\_\_  
 Cell #: \_\_\_\_\_  
**QC Deliverable Info:** EDD Required? Yes / No \_\_\_\_\_ EDF Required? Yes / No \_\_\_\_\_  
 Global ID: \_\_\_\_\_ Data Validation Level: \_\_\_\_\_ III or IV \_\_\_\_\_

Samples Collected from which State? (circle one) AZ CA <u>NV</u> WA ID OR DOD Site Other									
Time Sampled (HH:MM)	Date Sampled (MM/DD)	Matrix (See Key)	Lab ID Number (For Lab Use Only)	Sample Description	TAT	Field Filtered?	# Containers** (See Key Below)	Analysis Requested	
15:00	11/6/07	OT	CON13110824-25	B-5 @ 4'	S	NA	1-B	TRH (E+P)	
15:15				B-5 @ 8'		NA	1-B	(Standard list) VOCs	
15:22		↓		B-5 @ 12'		NA	1-B	SVOC (SIM)	
15:35		AO		B-5		NA	1-B	Soil RCRA	
16:05		OT		B-6 @ 4'		NA	1-B	8 Metals	
16:15				B-6 @ 8'		NA	1-B	Water RCRA	
16:20		↓		B-6 @ 11'		NA	1-B	8 Metals Dig	
16:35		AO		B-6		NA	1-B		
13:16		AO		B-15-A		*			
14:41		AO		B-4-A		*			
14:11		OT		B-4 @ 12'		*			
16:45		AO		Field Blank		NA			

**ADDITIONAL INSTRUCTIONS:** \_\_\_\_\_

I (field sampler) attest to the validity and authenticity of this sample(s). I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. MAC 445.0036 (c) (2).

Sampled by: Kate Brackmiller Date: 11/6/13 Time: 0917  
 Received by: John M. Reynolds III Date: 11/8/13 Time: 0917  
 Requisitioned by: John M. Reynolds III Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Requisitioned by: John M. Reynolds III Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Relinquished by: John M. Reynolds III Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Relinquished by: John M. Reynolds III Date: \_\_\_\_\_ Time: \_\_\_\_\_

\* Key: AO - Aqueous WA - Waste OT - Other L - Litter V - VOA S - Soil Jar O - Other T - Tedlar B - Brass P - Plastic OT - Other

NOTE: Samples are discarded 90 days after sample receipt unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.

## 60435

Samples Collected From Which State?

AZ	<del>CA</del>	NV	X	WA
ID	OR	OTHER		P

Page # 4 of 4[illegible]

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled By: Robert Brownlee James  
FCA MC N. REYNOLDS IN JAN 2008

Date: 10/10/17 Time: 2:00 PM

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_

\*Key: AQ - Aqueous  
SO - Soil  
WA - Waste  
OT - Other  
AR - Air  
\*: L-Liter  
V-Voa  
S-Soil jar  
O-Orbo  
T-Tedlar  
B-Brass  
P-Plastic  
OT-Other

**NOTE:** Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount paid for the report.



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513  
Date Received : 11/08/13

Job: 08-73103-01/02-07/Carlin Brownfields RRP

Metals by ICPMS  
EPA Method SW6020 / SW6020A

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: Field Blank				
Lab ID: CON13110849-22A Chromium (Cr)	ND	0.010 mg/L	11/13/13	11/13/13
Date Sampled 11/07/13 15:18 Arsenic (As)	ND	0.0050 mg/L	11/13/13	11/13/13
Selenium (Se)	ND	0.0050 mg/L	11/13/13	11/13/13
Silver (Ag)	ND	0.0050 mg/L	11/13/13	11/13/13
Cadmium (Cd)	ND	0.0020 mg/L	11/13/13	11/13/13
Barium (Ba)	ND	0.0050 mg/L	11/13/13	11/13/13
Mercury (Hg)	ND	0.0010 mg/L	11/13/13	11/13/13
Lead (Pb)	ND	0.0050 mg/L	11/13/13	11/13/13

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



✓  
11/15/13

Report Date



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502

Attn: Kathi Brandmueller

Phone: (775) 284-9752

Fax: (775) 856-3513

Date Received : 11/08/13

Job: 08-73103-01/02-07/Carlin Brownfields RRP

### Dissolved Metals by ICPMS

EPA Method 200.8

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: B-7				
Lab ID : CON13110849-05A Chromium (Cr), Dissolved	ND	0.010 mg/L	11/12/13	11/12/13
Date Sampled 11/07/13 12:30 Arsenic (As), Dissolved	0.0092	0.0050 mg/L	11/12/13	11/12/13
Selenium (Se), Dissolved	0.0073	0.0050 mg/L	11/12/13	11/12/13
Silver (Ag), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
Cadmium (Cd), Dissolved	ND	0.0020 mg/L	11/12/13	11/12/13
Barium (Ba), Dissolved	0.075	0.0050 mg/L	11/12/13	11/12/13
Mercury (Hg), Dissolved	ND	0.0010 mg/L	11/12/13	11/12/13
Lead (Pb), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
Client ID: B-7A				
Lab ID : CON13110849-06A Chromium (Cr), Dissolved	ND	0.010 mg/L	11/12/13	11/12/13
Date Sampled 11/07/13 12:32 Arsenic (As), Dissolved	0.0094	0.0050 mg/L	11/12/13	11/12/13
Selenium (Se), Dissolved	0.0077	0.0050 mg/L	11/12/13	11/12/13
Silver (Ag), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
Cadmium (Cd), Dissolved	ND	0.0020 mg/L	11/12/13	11/12/13
Barium (Ba), Dissolved	0.079	0.0050 mg/L	11/12/13	11/12/13
Mercury (Hg), Dissolved	ND	0.0010 mg/L	11/12/13	11/12/13
Lead (Pb), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
Client ID: B-9				
Lab ID : CON13110849-12A Chromium (Cr), Dissolved	ND	0.010 mg/L	11/12/13	11/12/13
Date Sampled 11/07/13 13:25 Arsenic (As), Dissolved	0.0085	0.0050 mg/L	11/12/13	11/12/13
Selenium (Se), Dissolved	0.0068	0.0050 mg/L	11/12/13	11/12/13
Silver (Ag), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
Cadmium (Cd), Dissolved	ND	0.0020 mg/L	11/12/13	11/12/13
Barium (Ba), Dissolved	0.057	0.0050 mg/L	11/12/13	11/12/13
Mercury (Hg), Dissolved	ND	0.0010 mg/L	11/12/13	11/12/13
Lead (Pb), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
Client ID: B-11				
Lab ID : CON13110849-21A Chromium (Cr), Dissolved	ND	0.010 mg/L	11/12/13	11/12/13
Date Sampled 11/07/13 15:00 Arsenic (As), Dissolved	0.015	0.0050 mg/L	11/12/13	11/12/13
Selenium (Se), Dissolved	0.0058	0.0050 mg/L	11/12/13	11/12/13
Silver (Ag), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13
Cadmium (Cd), Dissolved	ND	0.0020 mg/L	11/12/13	11/12/13
Barium (Ba), Dissolved	0.16	0.0050 mg/L	11/12/13	11/12/13
Mercury (Hg), Dissolved	ND	0.0010 mg/L	11/12/13	11/12/13
Lead (Pb), Dissolved	ND	0.0050 mg/L	11/12/13	11/12/13



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ND = Not Detected



*Roger Scholl*     *Randy Gardner*     *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com  
Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.  
Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.  
Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



*[Signature]*  
11/15/13

Report Date



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513  
Date Received : 11/08/13

Job: 08-73103-01/02-07/Carlin Brownfields RRP

### Metals by ICPMS EPA Method SW6020 / SW6020A

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: B-7@12ft				
Lab ID : CON13110849-03A	Chromium (Cr)	13	1.0 mg/Kg	11/13/13
Date Sampled 11/07/13 11:34	Arsenic (As)	7.7	1.0 mg/Kg	11/13/13
	Selenium (Se)	ND	2.0 mg/Kg	11/13/13
	Silver (Ag)	ND	1.0 mg/Kg	11/13/13
	Cadmium (Cd)	ND	1.0 mg/Kg	11/13/13
	Barium (Ba)	530	1.0 mg/Kg	11/13/13
	Mercury (Hg)	ND	0.20 mg/Kg	11/13/13
	Lead (Pb)	9.8	1.0 mg/Kg	11/13/13
Client ID: B-7A@12ft				
Lab ID : CON13110849-04A	Chromium (Cr)	15	1.0 mg/Kg	11/13/13
Date Sampled 11/07/13 11:35	Arsenic (As)	7.0	1.0 mg/Kg	11/13/13
	Selenium (Se)	ND	2.0 mg/Kg	11/13/13
	Silver (Ag)	ND	1.0 mg/Kg	11/13/13
	Cadmium (Cd)	ND	1.0 mg/Kg	11/13/13
	Barium (Ba)	410	1.0 mg/Kg	11/13/13
	Mercury (Hg)	ND	0.20 mg/Kg	11/13/13
	Lead (Pb)	11	1.0 mg/Kg	11/13/13
Client ID: B-8@7ft				
Lab ID : CON13110849-08A	Chromium (Cr)	17	1.0 mg/Kg	11/13/13
Date Sampled 11/07/13 12:53	Arsenic (As)	12	1.0 mg/Kg	11/13/13
	Selenium (Se)	ND	2.0 mg/Kg	11/13/13
	Silver (Ag)	ND	1.0 mg/Kg	11/13/13
	Cadmium (Cd)	ND	1.0 mg/Kg	11/13/13
	Barium (Ba)	400	1.0 mg/Kg	11/13/13
	Mercury (Hg)	ND	0.20 mg/Kg	11/13/13
	Lead (Pb)	9.2	1.0 mg/Kg	11/13/13
Client ID: B-9@8ft				
Lab ID : CON13110849-10A	Chromium (Cr)	16	1.0 mg/Kg	11/13/13
Date Sampled 11/07/13 13:05	Arsenic (As)	8.0	1.0 mg/Kg	11/13/13
	Selenium (Se)	ND	2.0 mg/Kg	11/13/13
	Silver (Ag)	ND	1.0 mg/Kg	11/13/13
	Cadmium (Cd)	ND	1.0 mg/Kg	11/13/13
	Barium (Ba)	ND	1.0 mg/Kg	11/13/13
	Mercury (Hg)	480	0.20 mg/Kg	11/13/13
	Lead (Pb)	9.5	1.0 mg/Kg	11/13/13



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## Client ID: B-10@12ft

Lab ID : CON13110849-15A	Chromium (Cr)	17	1.0 mg/Kg	11/13/13	11/13/13
Date Sampled 11/07/13 13:48	Arsenic (As)	6.4	1.0 mg/Kg	11/13/13	11/13/13
	Selenium (Se)	ND	2.0 mg/Kg	11/13/13	11/13/13
	Silver (Ag)	ND	1.0 mg/Kg	11/13/13	11/13/13
	Cadmium (Cd)	ND	1.0 mg/Kg	11/13/13	11/13/13
	Barium (Ba)	350	1.0 mg/Kg	11/13/13	11/13/13
	Mercury (Hg)	ND	0.20 mg/Kg	11/13/13	11/13/13
	Lead (Pb)	7.0	1.0 mg/Kg	11/13/13	11/13/13

## Client ID: B-11@12ft

Lab ID : CON13110849-19A	Chromium (Cr)	14	1.0 mg/Kg	11/14/13	11/14/13
Date Sampled 11/07/13 14:28	Arsenic (As)	7.1	1.0 mg/Kg	11/14/13	11/14/13
	Selenium (Se)	ND	2.0 mg/Kg	11/14/13	11/14/13
	Silver (Ag)	ND	1.0 mg/Kg	11/14/13	11/14/13
	Cadmium (Cd)	ND	1.0 mg/Kg	11/14/13	11/14/13
	Barium (Ba)	420	1.0 mg/Kg	11/14/13	11/14/13
	Mercury (Hg)	ND	0.20 mg/Kg	11/14/13	11/14/13
	Lead (Pb)	8.4	1.0 mg/Kg	11/14/13	11/14/13

## Client ID: B-11@15ft

Lab ID : CON13110849-20A	Chromium (Cr)	5.2	1.0 mg/Kg	11/14/13	11/14/13
Date Sampled 11/07/13 14:38	Arsenic (As)	5.1	1.0 mg/Kg	11/14/13	11/14/13
	Selenium (Se)	ND	2.0 mg/Kg	11/14/13	11/14/13
	Silver (Ag)	ND	1.0 mg/Kg	11/14/13	11/14/13
	Cadmium (Cd)	ND	1.0 mg/Kg	11/14/13	11/14/13
	Barium (Ba)	94	1.0 mg/Kg	11/14/13	11/14/13
	Mercury (Hg)	ND	0.20 mg/Kg	11/14/13	11/14/13
	Lead (Pb)	3.8	1.0 mg/Kg	11/14/13	11/14/13

## Client ID: B-12@7ft

Lab ID : CON13110849-24A	Chromium (Cr)	8.6	1.0 mg/Kg	11/14/13	11/14/13
Date Sampled 11/07/13 15:24	Arsenic (As)	8.5	1.0 mg/Kg	11/14/13	11/14/13
	Selenium (Se)	ND	2.0 mg/Kg	11/14/13	11/14/13
	Silver (Ag)	ND	1.0 mg/Kg	11/14/13	11/14/13
	Cadmium (Cd)	ND	1.0 mg/Kg	11/14/13	11/14/13
	Barium (Ba)	280	1.0 mg/Kg	11/14/13	11/14/13
	Mercury (Hg)	ND	0.20 mg/Kg	11/14/13	11/14/13
	Lead (Pb)	8.2	1.0 mg/Kg	11/14/13	11/14/13

Sample results were calculated on a wet weight basis.

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/15/13

Report Date



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110849-05A  
Client I.D. Number: B-7

Sampled: 11/07/13 12:30  
Received: 11/08/13  
Extracted: 11/08/13 13:11  
Analyzed: 11/15/13

### Semivolatile Organics by GC/MS - SIM EPA Method 625/SW8270C

	Compound	Concentration	Reporting Limit
1	Naphthalene	0.039	0.020 µg/L
2	2-Methylnaphthalene	0.040	0.020 µg/L
3	1-Methylnaphthalene	0.031	0.020 µg/L
4	Acenaphthylene	ND	0.020 µg/L
5	Acenaphthene	ND	0.020 µg/L
6	Fluorene	ND	0.020 µg/L
7	Phenanthrene	ND	0.020 µg/L
8	Anthracene	ND	0.020 µg/L
9	Fluoranthene	ND	0.020 µg/L
10	Pyrene	ND	0.020 µg/L
11	Benzo(a)anthracene	ND	0.020 µg/L
12	Chrysene	ND	0.020 µg/L
13	Benzo(b&k)fluoranthene, isomeric pair	ND	0.040 µg/L
14	Benzo(a)pyrene	ND	0.020 µg/L
15	Indeno(1,2,3-cd)pyrene	ND	0.020 µg/L
16	Dibenz(a,h)anthracene	ND	0.020 µg/L
17	Benzo(g,h,i)perylene	ND	0.020 µg/L

Note: EPA Method 8270C CC compounds Acenaphthene, Fluoranthene and Benzo(a)pyrene were evaluated in the CV at the method criteria of 80-120% recovery.

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



WJ  
11/18/13  
Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110849-06A  
Client I.D. Number: B-7A

Sampled: 11/07/13 12:32  
Received: 11/08/13  
Extracted: 11/08/13 13:11  
Analyzed: 11/13/13

### Semivolatile Organics by GC/MS - SIM EPA Method 625/SW8270C

	Compound	Concentration	Reporting Limit
1	Naphthalene	ND	0.020 µg/L
2	2-Methylnaphthalene	ND	0.020 µg/L
3	1-Methylnaphthalene	0.022	0.020 µg/L
4	Acenaphthylene	ND	0.020 µg/L
5	Acenaphthene	ND	0.020 µg/L
6	Fluorene	ND	0.020 µg/L
7	Phenanthrene	ND	0.020 µg/L
8	Anthracene	ND	0.020 µg/L
9	Fluoranthene	ND	0.020 µg/L
10	Pyrene	ND	0.020 µg/L
11	Benzo(a)anthracene	ND	0.020 µg/L
12	Chrysene	ND	0.020 µg/L
13	Benzo(b&k)fluoranthene, isomeric pair	ND	0.040 µg/L
14	Benzo(a)pyrene	ND	0.020 µg/L
15	Indeno(1,2,3-cd)pyrene	ND	0.020 µg/L
16	Dibenz(a,h)anthracene	ND	0.020 µg/L
17	Benzo(g,h,i)perylene	ND	0.020 µg/L

Note: EPA Method 8270C CC compounds Acenaphthene, Fluoranthene and Benzo(a)pyrene were evaluated in the CV at the method criteria of 80-120% recovery.

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110849-12A  
Client I.D. Number: B-9

Sampled: 11/07/13 13:25  
Received: 11/08/13  
Extracted: 11/08/13 13:11  
Analyzed: 11/13/13

### Semivolatile Organics by GC/MS - SIM EPA Method 625/SW8270C

	Compound	Concentration	Reporting Limit
1	Naphthalene	ND	0.020 µg/L
2	2-Methylnaphthalene	ND	0.020 µg/L
3	1-Methylnaphthalene	0.027	0.020 µg/L
4	Acenaphthylene	ND	0.020 µg/L
5	Acenaphthene	ND	0.020 µg/L
6	Fluorene	ND	0.020 µg/L
7	Phenanthrene	ND	0.020 µg/L
8	Anthracene	ND	0.020 µg/L
9	Fluoranthene	ND	0.020 µg/L
10	Pyrene	ND	0.020 µg/L
11	Benzo(a)anthracene	ND	0.020 µg/L
12	Chrysene	ND	0.020 µg/L
13	Benzo(b&k)fluoranthene, isomeric pair	ND	0.040 µg/L
14	Benzo(a)pyrene	ND	0.020 µg/L
15	Indeno(1,2,3-cd)pyrene	ND	0.020 µg/L
16	Dibenz(a,h)anthracene	ND	0.020 µg/L
17	Benzo(g,h,i)perylene	ND	0.020 µg/L

Note: EPA Method 8270C CC compounds Acenaphthene, Fluoranthene and Benzo(a)pyrene were evaluated in the CV at the method criteria of 80-120% recovery.

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110849-21A  
Client I.D. Number: B-11

Sampled: 11/07/13 15:00  
Received: 11/08/13  
Extracted: 11/08/13 13:11  
Analyzed: 11/13/13

### Semivolatile Organics by GC/MS - SIM EPA Method 625/SW8270C

	Compound	Concentration	Reporting Limit
1	Naphthalene	ND	0.020 µg/L
2	2-Methylnaphthalene	ND	0.020 µg/L
3	1-Methylnaphthalene	ND	0.020 µg/L
4	Acenaphthylene	ND	0.020 µg/L
5	Acenaphthene	ND	0.020 µg/L
6	Fluorene	ND	0.020 µg/L
7	Phenanthrene	ND	0.020 µg/L
8	Anthracene	ND	0.020 µg/L
9	Fluoranthene	ND	0.020 µg/L
10	Pyrene	ND	0.020 µg/L
11	Benzo(a)anthracene	ND	0.020 µg/L
12	Chrysene	ND	0.020 µg/L
13	Benzo(b&k)fluoranthene, isomeric pair	ND	0.040 µg/L
14	Benzo(a)pyrene	ND	0.020 µg/L
15	Indeno(1,2,3-cd)pyrene	ND	0.020 µg/L
16	Dibenz(a,h)anthracene	ND	0.020 µg/L
17	Benzo(g,h,i)perylene	ND	0.020 µg/L

Note: EPA Method 8270C CC compounds Acenaphthene, Fluoranthene and Benzo(a)pyrene were evaluated in the CV at the method criteria of 80-120% recovery.

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110849-22A  
Client I.D. Number: Field Blank

Sampled: 11/07/13 15:18  
Received: 11/08/13  
Extracted: 11/08/13 13:11  
Analyzed: 11/13/13

### Semivolatile Organics by GC/MS - SIM EPA Method 625/SW8270C

	Compound	Concentration	Reporting Limit
1	Naphthalene	ND	0.020 µg/L
2	2-Methylnaphthalene	ND	0.020 µg/L
3	1-Methylnaphthalene	ND	0.020 µg/L
4	Acenaphthylene	ND	0.020 µg/L
5	Acenaphthene	ND	0.020 µg/L
6	Fluorene	ND	0.020 µg/L
7	Phenanthrene	ND	0.020 µg/L
8	Anthracene	ND	0.020 µg/L
9	Fluoranthene	ND	0.020 µg/L
10	Pyrene	ND	0.020 µg/L
11	Benzo(a)anthracene	ND	0.020 µg/L
12	Chrysene	ND	0.020 µg/L
13	Benzo(b&k)fluoranthene, isomeric pair	ND	0.040 µg/L
14	Benzo(a)pyrene	ND	0.020 µg/L
15	Indeno(1,2,3-cd)pyrene	ND	0.020 µg/L
16	Dibenz(a,h)anthracene	ND	0.020 µg/L
17	Benzo(g,h,i)perylene	ND	0.020 µg/L

Note: EPA Method 8270C CC compounds Acenaphthene, Fluoranthene and Benzo(a)pyrene were evaluated in the CV at the method criteria of 80-120% recovery.

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13  
Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513  
Date Received : 11/08/13

Job: 08-73103-01/02-07/Carlin Brownfields RRP

Total Petroleum Hydrocarbons - Extractable (TPH-E) EPA Method SW8015B

Total Petroleum Hydrocarbons - Purgeable (TPH-P) EPA Method SW8015B / SW8260B

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID : B-7@12ft					
Lab ID : CON13110849-03A	TPH-E (DRO)	ND	10 mg/Kg	11/08/13	11/09/13
Date Sampled 11/07/13 11:34	TPH-E (ORO)	ND	10 mg/Kg	11/08/13	11/09/13
	TPH-P (GRO)	ND	10 mg/Kg	11/11/13	11/13/13
Client ID : B-7A@12ft					
Lab ID : CON13110849-04A	TPH-E (DRO)	ND	10 mg/Kg	11/08/13	11/09/13
Date Sampled 11/07/13 11:35	TPH-E (ORO)	ND	10 mg/Kg	11/08/13	11/09/13
	TPH-P (GRO)	ND	10 mg/Kg	11/11/13	11/13/13
Client ID : B-8@7ft					
Lab ID : CON13110849-08A	TPH-E (DRO)	ND	10 mg/Kg	11/15/13	11/16/13
Date Sampled 11/07/13 12:53	TPH-E (ORO)	ND	10 mg/Kg	11/15/13	11/16/13
	TPH-P (GRO)	ND	10 mg/Kg	11/11/13	11/13/13
Client ID : B-9@8ft					
Lab ID : CON13110849-10A	TPH-E (DRO)	ND	10 mg/Kg	11/08/13	11/09/13
Date Sampled 11/07/13 13:05	TPH-E (ORO)	ND	10 mg/Kg	11/08/13	11/09/13
	TPH-P (GRO)	ND	10 mg/Kg	11/11/13	11/13/13
Client ID : B-10@12ft					
Lab ID : CON13110849-15A	TPH-E (DRO)	ND	10 mg/Kg	11/08/13	11/09/13
Date Sampled 11/07/13 13:48	TPH-E (ORO)	ND	10 mg/Kg	11/08/13	11/09/13
	TPH-P (GRO)	ND	10 mg/Kg	11/11/13	11/13/13
Client ID : B-11@12ft					
Lab ID : CON13110849-19A	TPH-E (DRO)	ND	10 mg/Kg	11/08/13	11/09/13
Date Sampled 11/07/13 14:28	TPH-E (ORO)	ND	10 mg/Kg	11/08/13	11/09/13
	TPH-P (GRO)	ND	10 mg/Kg	11/11/13	11/13/13
Client ID : B-11@15ft					
Lab ID : CON13110849-20A	TPH-E (DRO)	ND	10 mg/Kg	11/08/13	11/09/13
Date Sampled 11/07/13 14:38	TPH-E (ORO)	ND	10 mg/Kg	11/08/13	11/09/13
	TPH-P (GRO)	ND	10 mg/Kg	11/11/13	11/13/13
Client ID : Field Blank					
Lab ID : CON13110849-22A	TPH-E (DRO)	ND	0.50 mg/L	11/08/13	11/09/13
Date Sampled 11/07/13 15:18	TPH-E (ORO)	ND	0.50 mg/L	11/08/13	11/09/13
	TPH-P (GRO)	ND	0.50 mg/L	11/12/13	11/12/13
Client ID : B-12@7ft					
Lab ID : CON13110849-24A	TPH-E (DRO)	ND	10 mg/Kg	11/08/13	11/09/13
Date Sampled 11/07/13 15:24	TPH-E (ORO)	ND	10 mg/Kg	11/08/13	11/09/13
	TPH-P (GRO)	ND	10 mg/Kg	11/11/13	11/13/13



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Diesel Range Organics (DRO) C13-C22

Gasoline Range Organics (GRO) C4-C13

Oil Range Organics (ORO) C22-C40+

Sample results were calculated on a wet weight basis.

ND = Not Detected



*Roger Scholl*      *Randy Gardner*      *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110849-05A  
Client I.D. Number: B-7

Sampled: 11/07/13 12:30  
Received: 11/08/13  
Extracted: 11/12/13  
Analyzed: 11/12/13

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	2.0 µg/L	26 Ethylbenzene	ND	1.0 µg/L
2 Vinyl chloride	ND	1.0 µg/L	27 m,p-Xylene	ND	1.0 µg/L
3 Chloroethane	ND	1.0 µg/L	28 Bromoform	ND	1.0 µg/L
4 Bromomethane	ND	2.0 µg/L	29 o-Xylene	ND	1.0 µg/L
5 Trichlorofluoromethane	ND	1.0 µg/L	30 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
6 1,1-Dichloroethene	ND	1.0 µg/L	31 1,3-Dichlorobenzene	ND	1.0 µg/L
7 Dichloromethane	ND	2.0 µg/L	32 1,4-Dichlorobenzene	ND	1.0 µg/L
8 trans-1,2-Dichloroethene	ND	1.0 µg/L	33 1,2-Dichlorobenzene	ND	1.0 µg/L
9 1,1-Dichloroethane	ND	1.0 µg/L			
10 cis-1,2-Dichloroethene	ND	1.0 µg/L			
11 Chloroform	ND	1.0 µg/L			
12 1,2-Dichloroethane	ND	1.0 µg/L			
13 1,1,1-Trichloroethane	ND	1.0 µg/L			
14 Carbon tetrachloride	ND	1.0 µg/L			
15 Benzene	ND	1.0 µg/L			
16 1,2-Dichloropropane	ND	1.0 µg/L			
17 Trichloroethene	ND	1.0 µg/L			
18 Bromodichloromethane	ND	1.0 µg/L			
19 cis-1,3-Dichloropropene	ND	1.0 µg/L			
20 trans-1,3-Dichloropropene	ND	1.0 µg/L			
21 1,1,2-Trichloroethane	ND	1.0 µg/L			
22 Toluene	ND	1.0 µg/L			
23 Dibromochloromethane	ND	1.0 µg/L			
24 Tetrachloroethene	ND	1.0 µg/L			
25 Chlorobenzene	ND	1.0 µg/L			

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110849-06A  
Client I.D. Number: B-7A

Sampled: 11/07/13 12:32  
Received: 11/08/13  
Extracted: 11/12/13  
Analyzed: 11/12/13

### Volatile Organics by GC/MS EPA Method SW8260B

Reporting			Reporting		
Compound	Concentration	Limit	Compound	Concentration	Limit
1 Chloromethane	ND	2.0 µg/L	26 Ethylbenzene	ND	1.0 µg/L
2 Vinyl chloride	ND	1.0 µg/L	27 m,p-Xylene	ND	1.0 µg/L
3 Chloroethane	ND	1.0 µg/L	28 Bromoform	ND	1.0 µg/L
4 Bromomethane	ND	2.0 µg/L	29 o-Xylene	ND	1.0 µg/L
5 Trichlorofluoromethane	ND	1.0 µg/L	30 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
6 1,1-Dichloroethene	ND	1.0 µg/L	31 1,3-Dichlorobenzene	ND	1.0 µg/L
7 Dichloromethane	ND	2.0 µg/L	32 1,4-Dichlorobenzene	ND	1.0 µg/L
8 trans-1,2-Dichloroethene	ND	1.0 µg/L	33 1,2-Dichlorobenzene	ND	1.0 µg/L
9 1,1-Dichloroethane	ND	1.0 µg/L			
10 cis-1,2-Dichloroethene	ND	1.0 µg/L			
11 Chloroform	ND	1.0 µg/L			
12 1,2-Dichloroethane	ND	1.0 µg/L			
13 1,1,1-Trichloroethane	ND	1.0 µg/L			
14 Carbon tetrachloride	ND	1.0 µg/L			
15 Benzene	ND	1.0 µg/L			
16 1,2-Dichloropropane	ND	1.0 µg/L			
17 Trichloroethene	ND	1.0 µg/L			
18 Bromodichloromethane	ND	1.0 µg/L			
19 cis-1,3-Dichloropropene	ND	1.0 µg/L			
20 trans-1,3-Dichloropropene	ND	1.0 µg/L			
21 1,1,2-Trichloroethane	ND	1.0 µg/L			
22 Toluene	ND	1.0 µg/L			
23 Dibromochloromethane	ND	1.0 µg/L			
24 Tetrachloroethene	ND	1.0 µg/L			
25 Chlorobenzene	ND	1.0 µg/L			

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com  
Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.  
Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13  
Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110849-12A  
Client I.D. Number: B-9

Sampled: 11/07/13 13:25  
Received: 11/08/13  
Extracted: 11/12/13  
Analyzed: 11/12/13

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	2.0 µg/L	26 Ethylbenzene	ND	1.0 µg/L
2 Vinyl chloride	ND	1.0 µg/L	27 m,p-Xylene	ND	1.0 µg/L
3 Chloroethane	ND	1.0 µg/L	28 Bromoform	ND	1.0 µg/L
4 Bromomethane	ND	2.0 µg/L	29 o-Xylene	ND	1.0 µg/L
5 Trichlorofluoromethane	ND	1.0 µg/L	30 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
6 1,1-Dichloroethene	ND	1.0 µg/L	31 1,3-Dichlorobenzene	ND	1.0 µg/L
7 Dichloromethane	ND	2.0 µg/L	32 1,4-Dichlorobenzene	ND	1.0 µg/L
8 trans-1,2-Dichloroethene	ND	1.0 µg/L	33 1,2-Dichlorobenzene	ND	1.0 µg/L
9 1,1-Dichloroethane	ND	1.0 µg/L			
10 cis-1,2-Dichloroethene	ND	1.0 µg/L			
11 Chloroform	ND	1.0 µg/L			
12 1,2-Dichloroethane	ND	1.0 µg/L			
13 1,1,1-Trichloroethane	ND	1.0 µg/L			
14 Carbon tetrachloride	ND	1.0 µg/L			
15 Benzene	ND	1.0 µg/L			
16 1,2-Dichloropropane	ND	1.0 µg/L			
17 Trichloroethene	ND	1.0 µg/L			
18 Bromodichloromethane	ND	1.0 µg/L			
19 cis-1,3-Dichloropropene	ND	1.0 µg/L			
20 trans-1,3-Dichloropropene	ND	1.0 µg/L			
21 1,1,2-Trichloroethane	ND	1.0 µg/L			
22 Toluene	ND	1.0 µg/L			
23 Dibromochloromethane	ND	1.0 µg/L			
24 Tetrachloroethene	ND	1.0 µg/L			
25 Chlorobenzene	ND	1.0 µg/L			

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com  
Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.  
Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13  
Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110849-21A  
Client I.D. Number: B-11

Sampled: 11/07/13 15:00  
Received: 11/08/13  
Extracted: 11/12/13  
Analyzed: 11/12/13

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Chloromethane	ND	2.0 µg/L	26 Ethylbenzene	ND	1.0 µg/L
2 Vinyl chloride	ND	1.0 µg/L	27 m,p-Xylene	ND	1.0 µg/L
3 Chloroethane	ND	1.0 µg/L	28 Bromoform	ND	1.0 µg/L
4 Bromomethane	ND	2.0 µg/L	29 o-Xylene	ND	1.0 µg/L
5 Trichlorofluoromethane	ND	1.0 µg/L	30 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
6 1,1-Dichloroethene	ND	1.0 µg/L	31 1,3-Dichlorobenzene	ND	1.0 µg/L
7 Dichloromethane	ND	2.0 µg/L	32 1,4-Dichlorobenzene	ND	1.0 µg/L
8 trans-1,2-Dichloroethene	ND	1.0 µg/L	33 1,2-Dichlorobenzene	ND	1.0 µg/L
9 1,1-Dichloroethane	ND	1.0 µg/L			
10 cis-1,2-Dichloroethene	ND	1.0 µg/L			
11 Chloroform	ND	1.0 µg/L			
12 1,2-Dichloroethane	ND	1.0 µg/L			
13 1,1,1-Trichloroethane	ND	1.0 µg/L			
14 Carbon tetrachloride	ND	1.0 µg/L			
15 Benzene	ND	1.0 µg/L			
16 1,2-Dichloropropane	ND	1.0 µg/L			
17 Trichloroethene	ND	1.0 µg/L			
18 Bromodichloromethane	ND	1.0 µg/L			
19 cis-1,3-Dichloropropene	ND	1.0 µg/L			
20 trans-1,3-Dichloropropene	ND	1.0 µg/L			
21 1,1,2-Trichloroethane	ND	1.0 µg/L			
22 Toluene	ND	1.0 µg/L			
23 Dibromochloromethane	ND	1.0 µg/L			
24 Tetrachloroethene	ND	1.0 µg/L			
25 Chlorobenzene	ND	1.0 µg/L			

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

Converse  
4840 Mill Street, Suite 5  
Reno, NV 89502  
Job: 08-73103-01/02-07/Carlin Brownfields RRP

Attn: Kathi Brandmueller  
Phone: (775) 284-9752  
Fax: (775) 856-3513

Alpha Analytical Number: CON13110849-22A  
Client I.D. Number: Field Blank

Sampled: 11/07/13 15:18  
Received: 11/08/13  
Extracted: 11/12/13  
Analyzed: 11/12/13

### Volatile Organics by GC/MS EPA Method SW8260B

Reporting			Reporting		
Compound	Concentration	Limit	Compound	Concentration	Limit
1 Chloromethane	ND	2.0 µg/L	26 Ethylbenzene	ND	1.0 µg/L
2 Vinyl chloride	ND	1.0 µg/L	27 m,p-Xylene	ND	1.0 µg/L
3 Chloroethane	ND	1.0 µg/L	28 Bromoform	ND	1.0 µg/L
4 Bromomethane	ND	2.0 µg/L	29 o-Xylene	ND	1.0 µg/L
5 Trichlorofluoromethane	ND	1.0 µg/L	30 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
6 1,1-Dichloroethene	ND	1.0 µg/L	31 1,3-Dichlorobenzene	ND	1.0 µg/L
7 Dichloromethane	ND	2.0 µg/L	32 1,4-Dichlorobenzene	ND	1.0 µg/L
8 trans-1,2-Dichloroethene	ND	1.0 µg/L	33 1,2-Dichlorobenzene	ND	1.0 µg/L
9 1,1-Dichloroethane	ND	1.0 µg/L			
10 cis-1,2-Dichloroethene	ND	1.0 µg/L			
11 Chloroform	ND	1.0 µg/L			
12 1,2-Dichloroethane	ND	1.0 µg/L			
13 1,1,1-Trichloroethane	ND	1.0 µg/L			
14 Carbon tetrachloride	ND	1.0 µg/L			
15 Benzene	ND	1.0 µg/L			
16 1,2-Dichloropropane	ND	1.0 µg/L			
17 Trichloroethene	ND	1.0 µg/L			
18 Bromodichloromethane	ND	1.0 µg/L			
19 cis-1,3-Dichloropropene	ND	1.0 µg/L			
20 trans-1,3-Dichloropropene	ND	1.0 µg/L			
21 1,1,2-Trichloroethane	ND	1.0 µg/L			
22 Toluene	ND	1.0 µg/L			
23 Dibromochloromethane	ND	1.0 µg/L			
24 Tetrachloroethene	ND	1.0 µg/L			
25 Chlorobenzene	ND	1.0 µg/L			

ND = Not Detected



*Roger Scholl* *Randy Gardner* *Walter Hinchman*  
Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAP unless footnoted otherwise.  
Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.  
Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV00016.



11/18/13  
Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## VOC Sample Preservation Report

**Work Order:** CON13110849

**Job:** 08-73103-01/02-07/Carlin Brownfields RRP

Alpha's Sample ID	Client's Sample ID	Matrix	pH
13110849-05A	B-7	Aqueous	2
13110849-06A	B-7A	Aqueous	2
13110849-12A	B-9	Aqueous	2
13110849-21A	B-11	Aqueous	2
13110849-22A	Field Blank	Aqueous	2

**11/18/13**

**Report Date**

*Page 1 of 1*



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:

15-Nov-13

## QC Summary Report

Work Order:

13110849

### Method Blank

File ID: 049\_

Sample ID: MB-31988

Type: MBLK

Test Code: EPA Method SW6020 / SW6020A

Batch ID: 31988

Analysis Date: 11/13/2013 19:59

Units: mg/L

Run ID: ICP/MS\_131113A

Prep Date: 11/13/2013 09:16

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	0.01								
Arsenic (As)	ND	0.005								
Selenium (Se)	ND	0.005								
Silver (Ag)	ND	0.005								
Cadmium (Cd)	ND	0.002								
Barium (Ba)	ND	0.005								
Mercury (Hg)	ND	0.001								
Lead (Pb)	ND	0.005								

### Laboratory Control Spike

File ID: 051\_

Sample ID: LCS-31988

Type: LCS

Test Code: EPA Method SW6020 / SW6020A

Batch ID: 31988

Analysis Date: 11/13/2013 20:05

Units: mg/L

Run ID: ICP/MS\_131113A

Prep Date: 11/13/2013 09:16

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.263	0.01	0.25		105	80	120			
Arsenic (As)	0.267	0.005	0.25		107	80	120			
Selenium (Se)	0.268	0.005	0.25		107	80	120			
Silver (Ag)	0.27	0.005	0.25		108	80	120			
Cadmium (Cd)	0.264	0.002	0.25		106	80	120			
Barium (Ba)	2.52	0.005	2.5		101	80	120			
Mercury (Hg)	0.0043	0.001	0.005		86	80	120			
Lead (Pb)	0.244	0.005	0.25		98	80	120			

### Sample Matrix Spike

File ID: 053\_

Sample ID: 13110849-22AMS

Type: MS

Test Code: EPA Method SW6020 / SW6020A

Batch ID: 31988

Analysis Date: 11/13/2013 20:11

Units: mg/L

Run ID: ICP/MS\_131113A

Prep Date: 11/13/2013 09:16

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.255	0.01	0.25		0 102	75	125			
Arsenic (As)	0.253	0.005	0.25		0 101	75	125			
Selenium (Se)	0.258	0.005	0.25		0 103	75	125			
Silver (Ag)	0.26	0.005	0.25		0 104	75	125			
Cadmium (Cd)	0.251	0.002	0.25		0 101	75	125			
Barium (Ba)	2.45	0.005	2.5		0 98	75	125			
Mercury (Hg)	0.0041	0.001	0.005		0 82	75	125			
Lead (Pb)	0.235	0.005	0.25		0 94	75	125			

### Sample Matrix Spike Duplicate

File ID: 054\_

Sample ID: 13110849-22AMSD

Type: MSD

Test Code: EPA Method SW6020 / SW6020A

Batch ID: 31988

Analysis Date: 11/13/2013 20:14

Units: mg/L

Run ID: ICP/MS\_131113A

Prep Date: 11/13/2013 09:16

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	0.265	0.01	0.25		0 106	75	125	0.2554	3.7(20)	
Arsenic (As)	0.269	0.005	0.25		0 108	75	125	0.2531	6.0(20)	
Selenium (Se)	0.275	0.005	0.25		0 110	75	125	0.2584	6.1(20)	
Silver (Ag)	0.274	0.005	0.25		0 110	75	125	0.2598	5.3(20)	
Cadmium (Cd)	0.267	0.002	0.25		0 107	75	125	0.2513	6.1(20)	
Barium (Ba)	2.57	0.005	2.5		0 103	75	125	2.449	4.8(20)	
Mercury (Hg)	0.004	0.001	0.005		0 80	75	125	0.0041	2.5(20)	
Lead (Pb)	0.247	0.005	0.25		0 99	75	125	0.2351	4.7(20)	



# *Alpha Analytical, Inc.*

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

**Date:**

15-Nov-13

## QC Summary Report

**Work Order:**

13110849

**Comments:**

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:

15-Nov-13

## QC Summary Report

Work Order:

13110849

### Method Blank

File ID: 014\_

Type MBLK Test Code: EPA Method SW6020 / SW6020A

Batch ID: 31995

Analysis Date: 11/13/2013 18:00

Sample ID: MB-31995

Units: mg/Kg

Run ID: ICP/MS\_131113B

Prep Date: 11/13/2013 13:51

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	ND	1								
Arsenic (As)	ND	1								
Selenium (Se)	ND	2								
Silver (Ag)	ND	1								
Cadmium (Cd)	ND	1								
Barium (Ba)	ND	1								
Mercury (Hg)	ND	0.2								
Lead (Pb)	ND	1								

### Laboratory Control Spike

File ID: 016\_

Type LCS Test Code: EPA Method SW6020 / SW6020A

Batch ID: 31995

Analysis Date: 11/13/2013 18:06

Sample ID: LCS-31995

Units: mg/Kg

Run ID: ICP/MS\_131113B

Prep Date: 11/13/2013 13:51

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	23.4	1	25		94	80	120			
Arsenic (As)	23.3	1	25		93	80	120			
Selenium (Se)	24.1	2	25		96	80	120			
Silver (Ag)	24	1	25		96	80	120			
Cadmium (Cd)	23.2	1	25		93	80	120			
Barium (Ba)	223	1	250		89	80	120			
Mercury (Hg)	0.552	0.2	0.5		110	80	120			
Lead (Pb)	21.8	1	25		87	80	120			

### Sample Matrix Spike

File ID: 018\_

Type MS Test Code: EPA Method SW6020 / SW6020A

Batch ID: 31995

Analysis Date: 11/13/2013 18:24

Sample ID: 13110824-04AMS

Units: mg/Kg

Run ID: ICP/MS\_131113B

Prep Date: 11/13/2013 13:51

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	38	1	25	15.89	88	75	125			
Arsenic (As)	30	1	25	18.59	46	75	125			M2
Selenium (Se)	28.2	2	25	5.641	90	75	125			
Silver (Ag)	25.4	1	25	0	102	75	125			
Cadmium (Cd)	25.2	1	25	0	101	75	125			
Barium (Ba)	384	1	250	110.7	109	75	125			
Mercury (Hg)	0.487	0.2	0.5	0	97	75	125			
Lead (Pb)	26.6	1	25	10.86	63	75	125			M2

### Sample Matrix Spike Duplicate

File ID: 019\_

Type MSD Test Code: EPA Method SW6020 / SW6020A

Batch ID: 31995

Analysis Date: 11/13/2013 18:27

Sample ID: 13110824-04AMSD

Units: mg/Kg

Run ID: ICP/MS\_131113B

Prep Date: 11/13/2013 13:51

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr)	34.4	1	25	15.89	74	75	125	37.96	9.7(20)	M2
Arsenic (As)	35.7	1	25	18.59	68	75	125	30.01	17.3(20)	M2
Selenium (Se)	27.1	2	25	5.641	86	75	125	28.16	3.9(20)	
Silver (Ag)	26.5	1	25	0	106	75	125	25.38	4.3(20)	
Cadmium (Cd)	25.7	1	25	0	103	75	125	25.25	1.8(20)	
Barium (Ba)	406	1	250	110.7	118	75	125	384.1	5.6(20)	
Mercury (Hg)	0.423	0.2	0.5	0	85	75	125	0.487	14.1(20)	
Lead (Pb)	28.6	1	25	10.86	71	75	125	26.61	7.2(20)	M2



# *Alpha Analytical, Inc.*

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

**Date:**

15-Nov-13

## QC Summary Report

**Work Order:**

13110849

**Comments:**

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

M2 = Matrix spike recovery was low, the method control sample recovery was acceptable.



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:  
15-Nov-13

## QC Summary Report

Work Order:  
13110849

### Method Blank

File ID: 018_	Type MBLK		Test Code: EPA Method 200.8							
Sample ID: MB-31981	Units : mg/L		Batch ID: 31981				Analysis Date: 11/12/2013 15:16			
Analyte	Result	PQL	Run ID: ICP/MS_131112A		Prep Date: 11/12/2013 13:43					
			SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr), Dissolved	ND	0.01								
Arsenic (As), Dissolved	ND	0.005								
Selenium (Se), Dissolved	ND	0.005								
Silver (Ag), Dissolved	ND	0.005								
Cadmium (Cd), Dissolved	ND	0.002								
Barium (Ba), Dissolved	ND	0.005								
Mercury (Hg), Dissolved	ND	0.001								
Lead (Pb), Dissolved	ND	0.005								

### Laboratory Control Spike

File ID: 020_			Batch ID: 31981				Analysis Date: 11/12/2013 15:23			
Sample ID: LCS-31981	Units : mg/L	Run ID: ICP/MS_131112A				Prep Date: 11/12/2013 13:43				
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr), Dissolved	0.0513	0.01	0.05		103	80	120			
Arsenic (As), Dissolved	0.0515	0.005	0.05		103	80	120			
Selenium (Se), Dissolved	0.0523	0.005	0.05		105	80	120			
Silver (Ag), Dissolved	0.0533	0.005	0.05		107	80	120			
Cadmium (Cd), Dissolved	0.0518	0.002	0.05		104	80	120			
Barium (Ba), Dissolved	0.049	0.005	0.05		98	80	120			
Mercury (Hg), Dissolved	0.000959	0.001	0.001		96	80	120			
Lead (Pb), Dissolved	0.0467	0.005	0.05		93	80	120			

### Sample Matrix Spike

Sample Matrix Spike			Type MS	Test Code: EPA Method 200.8						
File ID: 022_				Batch ID: 31981				Analysis Date: 11/12/2013 15:29		
Sample ID: 13110849-05AMS			Units : mg/L	Run ID: ICP/MS_131112A				Prep Date: 11/12/2013 13:43		
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr), Dissolved	0.0518	0.01	0.05	0	104	75	125			
Arsenic (As), Dissolved	0.0612	0.005	0.05	0.0092	104	75	125			
Selenium (Se), Dissolved	0.0581	0.005	0.05	0.0073	102	75	125			
Silver (Ag), Dissolved	0.0533	0.005	0.05	0	107	75	125			
Cadmium (Cd), Dissolved	0.0529	0.002	0.05	0	106	75	125			
Barium (Ba), Dissolved	0.127	0.005	0.05	0.0752	103	75	125			
Mercury (Hg), Dissolved	0.0008	0.001	0.001	0	80	75	125			
Lead (Pb), Dissolved	0.047	0.005	0.05	0	94	75	125			

### Sample Matrix Spike Duplicate

Sample Matrix Spike Duplicate			Type	MSD Test Code: EPA Method 200.8						
File ID: 023_			Batch ID: 31981					Analysis Date: 11/12/2013 15:32		
Sample ID: 13110849-05AMSD			Units : mg/L	Run ID: ICP/MS_131112A				Prep Date: 11/12/2013 13:43		
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chromium (Cr), Dissolved	0.0557	0.01	0.05	0	111	75	125	0.0518	7.3(20)	
Arsenic (As), Dissolved	0.0654	0.005	0.05	0.0092	112	75	125	0.0612	6.6(20)	
Selenium (Se), Dissolved	0.0625	0.005	0.05	0.0073	110	75	125	0.0581	7.3(20)	
Silver (Ag), Dissolved	0.0564	0.005	0.05	0	113	75	125	0.0533	5.7(20)	
Cadmium (Cd), Dissolved	0.0565	0.002	0.05	0	113	75	125	0.0529	6.6(20)	
Barium (Ba), Dissolved	0.131	0.005	0.05	0.0752	111	75	125	0.1265	3.4(20)	
Mercury (Hg), Dissolved	0.0008	0.001	0.001	0	80	75	125	0.0008	0.0(20)	
Lead (Pb), Dissolved	0.0504	0.005	0.05	0	101	75	125	0.047	7.0(20)	



# *Alpha Analytical, Inc.*

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

---

**Date:**

15-Nov-13

## QC Summary Report

**Work Order:**

13110849

---

**Comments:**

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:

19-Nov-13

## QC Summary Report

Work Order:

13110849

### Method Blank

File ID: 13111305.D

Sample ID: MBLK-31959

Type MBLK

Test Code: EPA Method 625/SW8270C

Batch ID: 31959

Analysis Date: 11/13/2013 17:51

Run ID: MSD\_16\_131108A

Prep Date: 11/08/2013 13:11

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Naphthalene	ND	0.02								
2-Methylnaphthalene	ND	0.02								
1-Methylnaphthalene	ND	0.02								
Acenaphthylene	ND	0.02								
Acenaphthene	ND	0.02								
Fluorene	ND	0.02								
Phenanthrene	ND	0.02								
Anthracene	ND	0.02								
Fluoranthene	ND	0.02								
Pyrene	ND	0.02								
Benzo(a)anthracene	ND	0.02								
Chrysene	ND	0.02								
Benzo(b&k)fluoranthene, isomeric pair	ND	0.04								
Benzo(a)pyrene	ND	0.02								
Indeno(1,2,3-cd)pyrene	ND	0.02								
Dibenz(a,h)anthracene	ND	0.02								
Benzo(g,h,i)perylene	ND	0.02								
Surr: 2-Fluorobiphenyl	0.181		0.25		73	12	143			
Surr: 4-Terphenyl-d14	0.202		0.25		81	30	159			

### Laboratory Control Spike

File ID: 13111505.D

Sample ID: LCS-31959

Type LCS

Test Code: EPA Method 625/SW8270C

Batch ID: 31959

Analysis Date: 11/15/2013 16:12

Run ID: MSD\_16\_131108A

Prep Date: 11/08/2013 13:11

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Acenaphthene	0.142	0.02	0.25		57	32	130			
Pyrene	0.131	0.02	0.25		52	33	130			
Surr: 2-Fluorobiphenyl	0.211		0.25		85	12	143			
Surr: 4-Terphenyl-d14	0.191		0.25		76	30	159			

### Sample Matrix Spike

File ID: 13111507.D

Sample ID: 13110722-02AMS

Type MS

Test Code: EPA Method 625/SW8270C

Batch ID: 31959

Analysis Date: 11/15/2013 17:04

Run ID: MSD\_16\_131108A

Prep Date: 11/08/2013 13:11

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Acenaphthene	0.32	0.04	0.5	0	64	8	130			
Pyrene	0.338	0.04	0.5	0	68	7	147			
Surr: 2-Fluorobiphenyl	0.384		0.5		77	12	143			
Surr: 4-Terphenyl-d14	0.459		0.5		92	30	159			

### Sample Matrix Spike Duplicate

File ID: 13111508.D

Sample ID: 13110722-02AMSD

Type MSD

Test Code: EPA Method 625/SW8270C

Batch ID: 31959

Analysis Date: 11/15/2013 17:30

Run ID: MSD\_16\_131108A

Prep Date: 11/08/2013 13:11

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Acenaphthene	0.296	0.04	0.5	0	0	8	130	0.3204	8.0(42)	
Pyrene	0.271	0.04	0.5	0	0	7	147	0.3375	21.9(40)	
Surr: 2-Fluorobiphenyl	0.343		0.5		69	12	143			
Surr: 4-Terphenyl-d14	0.364		0.5		73	30	159			

### Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:  
18-Nov-13

## QC Summary Report

Work Order:  
13110849

### Method Blank

File ID: 1A11071346.D

Sample ID: MBLK-31954

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	ND	10								
TPH-E (ORO)	ND	10								
Surr: Nonane	6.76		6		113	65	160			

Type: MBLK

Test Code: EPA Method SW8015B/C Ext

Batch ID: 31954

Analysis Date: 11/08/2013 13:20

Run ID: FID\_1\_131108A

Prep Date: 11/08/2013 10:03

### Laboratory Control Spike

File ID: 1A11071347.D

Sample ID: LCS-31954

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	93	5	100		93	70	130			
Surr: Nonane	6.51		6		109	65	160			

Type: LCS

Test Code: EPA Method SW8015B/C Ext

Batch ID: 31954

Analysis Date: 11/08/2013 13:46

Run ID: FID\_1\_131108A

Prep Date: 11/08/2013 10:03

### Sample Matrix Spike

File ID: 1A11071351.D

Sample ID: 13110840-03AMS

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	103	5	100		0 103	46	150			
Surr: Nonane	7.51		6		125	65	160			

Type: MS

Test Code: EPA Method SW8015B/C Ext

Batch ID: 31954

Analysis Date: 11/08/2013 16:38

Run ID: FID\_1\_131108A

Prep Date: 11/08/2013 10:03

### Sample Matrix Spike Duplicate

File ID: 1A11071352.D

Sample ID: 13110840-03AMSD

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	97.8	5	100		0 98	46	150	102.8	5.0(42)	
Surr: Nonane	6.74		6		112	65	160			

Type: MSD

Test Code: EPA Method SW8015B/C Ext

Batch ID: 31954

Analysis Date: 11/08/2013 17:04

Run ID: FID\_1\_131108A

Prep Date: 11/08/2013 10:03

### Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:  
18-Nov-13

## QC Summary Report

Work Order:  
13110849

### Method Blank

File ID: 2A11071365.D

Sample ID: MBLK-31961

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	ND	0.5								
TPH-E (ORO)	ND	0.5								
Surr: Nonane	0.21		0.15		140	53	145			

### Laboratory Control Spike

File ID: 2A11071366.D

Sample ID: LCS-31961

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	2.23	0.05	2.5		89	70	130			
Surr: Nonane	0.174		0.15		116	53	145			

### Sample Matrix Spike

File ID: 2A11071370.D

Sample ID: 13110605-02AMS

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	2.38	0.05	2.5		0 95	51	151			
Surr: Nonane	0.154		0.15		103	53	145			

### Sample Matrix Spike Duplicate

File ID: 2A11071371.D

Sample ID: 13110605-02AMSD

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	2.33	0.05	2.5		0 93	51	151	2.384	2.3(40)	
Surr: Nonane	0.167		0.15		111	53	145			

### Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:

18-Nov-13

## QC Summary Report

Work Order:

13110849

### Method Blank

File ID: 13111234.D

Type: MBLK

Test Code: EPA Method SW8015B/C / SW8260B

Batch ID: MS08S1969B

Analysis Date: 11/13/2013 00:56

Sample ID: MBLK MS08S1969B

Units: mg/Kg

Run ID: MSD\_08\_131112B

Prep Date: 11/13/2013 00:56

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	ND	10								
Surr: 1,2-Dichloroethane-d4	0.19		0.2		95	70	130			
Surr: Toluene-d8	0.238		0.2		119	70	130			
Surr: 4-Bromofluorobenzene	0.189		0.2		95	70	130			

### Laboratory Control Spike

File ID: 13111251.D

Type: LCS

Test Code: EPA Method SW8015B/C / SW8260B

Batch ID: MS08S1969B

Analysis Date: 11/13/2013 08:07

Sample ID: GLCS MS08S1969B

Units: mg/Kg

Run ID: MSD\_08\_131112B

Prep Date: 11/13/2013 08:07

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	14.6	2	16		91	63	149			
Surr: 1,2-Dichloroethane-d4	0.358		0.4		89	70	130			
Surr: Toluene-d8	0.407		0.4		102	70	130			
Surr: 4-Bromofluorobenzene	0.448		0.4		112	70	130			

### Sample Matrix Spike

File ID: 13111252.D

Type: MS

Test Code: EPA Method SW8015B/C / SW8260B

Batch ID: MS08S1969B

Analysis Date: 11/13/2013 08:32

Sample ID: 13110849-03AGS

Units: mg/Kg

Run ID: MSD\_08\_131112B

Prep Date: 11/13/2013 08:32

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	13.7	2	16	0	86	36	164			
Surr: 1,2-Dichloroethane-d4	0.352		0.4		88	70	130			
Surr: Toluene-d8	0.405		0.4		101	70	130			
Surr: 4-Bromofluorobenzene	0.454		0.4		113	70	130			

### Sample Matrix Spike Duplicate

File ID: 13111253.D

Type: MSD

Test Code: EPA Method SW8015B/C / SW8260B

Batch ID: MS08S1969B

Analysis Date: 11/13/2013 08:58

Sample ID: 13110849-03AGSD

Units: mg/Kg

Run ID: MSD\_08\_131112B

Prep Date: 11/13/2013 08:58

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	19.1	2	16	0	119	36	164	13.69	32.8(40)	
Surr: 1,2-Dichloroethane-d4	0.348		0.4		87	70	130			
Surr: Toluene-d8	0.404		0.4		101	70	130			
Surr: 4-Bromofluorobenzene	0.457		0.4		114	70	130			

### Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:

18-Nov-13

## QC Summary Report

Work Order:

13110849

### Method Blank

File ID: 13111205.D

Type: MBLK

Test Code: EPA Method SW8015B/C / SW8260B

Batch ID: MS15W1112B

Analysis Date: 11/12/2013 13:00

Sample ID: MBLK MS15W1112B

Units : mg/L

Run ID: MSD\_15\_131112A

Prep Date: 11/12/2013 13:00

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	ND	0.5								
Surr: 1,2-Dichloroethane-d4	0.0104		0.01		104	70	130			
Surr: Toluene-d8	0.0105		0.01		105	70	130			
Surr: 4-Bromofluorobenzene	0.0105		0.01		105	70	130			

### Laboratory Control Spike

File ID: 13111203.D

Type: LCS

Test Code: EPA Method SW8015B/C / SW8260B

Batch ID: MS15W1112B

Analysis Date: 11/12/2013 12:11

Sample ID: GLCS MS15W1112B

Units : mg/L

Run ID: MSD\_15\_131112A

Prep Date: 11/12/2013 12:11

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	0.456	0.05	0.4		114	70	130			
Surr: 1,2-Dichloroethane-d4	0.0102		0.01		102	70	130			
Surr: Toluene-d8	0.00992		0.01		99	70	130			
Surr: 4-Bromofluorobenzene	0.0102		0.01		102	70	130			

### Sample Matrix Spike

File ID: 13111228.D

Type: MS

Test Code: EPA Method SW8015B/C / SW8260B

Batch ID: MS15W1112B

Analysis Date: 11/12/2013 21:20

Sample ID: 13111173-02AGS

Units : mg/L

Run ID: MSD\_15\_131112A

Prep Date: 11/12/2013 21:20

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	1.96	0.25	2	0	98	54	143			
Surr: 1,2-Dichloroethane-d4	0.0493		0.05		99	70	130			
Surr: Toluene-d8	0.0494		0.05		99	70	130			
Surr: 4-Bromofluorobenzene	0.052		0.05		104	70	130			

### Sample Matrix Spike Duplicate

File ID: 13111229.D

Type: MSD

Test Code: EPA Method SW8015B/C / SW8260B

Batch ID: MS15W1112B

Analysis Date: 11/12/2013 21:42

Sample ID: 13111173-02AGSD

Units : mg/L

Run ID: MSD\_15\_131112A

Prep Date: 11/12/2013 21:42

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	2.14	0.25	2	0	107	54	143	1.96	8.6(23)	
Surr: 1,2-Dichloroethane-d4	0.0497		0.05		99	70	130			
Surr: Toluene-d8	0.0499		0.05		99.7	70	130			
Surr: 4-Bromofluorobenzene	0.0521		0.05		104	70	130			

### Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:

18-Nov-13

## QC Summary Report

Work Order:

13110849

### Method Blank

File ID: 13111205.D

Type: MBLK Test Code: EPA Method SW8260B

Batch ID: MS15W1112A

Analysis Date: 11/12/2013 13:00

Sample ID: MBLK MS15W1112A

Units: µg/L

Run ID: MSD\_15\_131112A

Prep Date: 11/12/2013 13:00

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Chloromethane	ND	2								
Vinyl chloride	ND	1								
Chloroethane	ND	1								
Bromomethane	ND	2								
Trichlorofluoromethane	ND	1								
1,1-Dichloroethene	ND	1								
Dichloromethane	ND	2								
trans-1,2-Dichloroethene	ND	1								
1,1-Dichloroethane	ND	1								
cis-1,2-Dichloroethene	ND	1								
Chloroform	ND	1								
1,2-Dichloroethane	ND	1								
1,1,1-Trichloroethane	ND	1								
Carbon tetrachloride	ND	1								
Benzene	ND	1								
1,2-Dichloropropane	ND	1								
Trichloroethene	ND	1								
Bromodichloromethane	ND	1								
cis-1,3-Dichloropropene	ND	1								
trans-1,3-Dichloropropene	ND	1								
1,1,2-Trichloroethane	ND	1								
Toluene	ND	1								
Dibromochloromethane	ND	1								
Tetrachloroethene	ND	1								
Chlorobenzene	ND	1								
Ethylbenzene	ND	1								
m,p-Xylene	ND	1								
Bromoform	ND	1								
o-Xylene	ND	1								
1,1,2,2-Tetrachloroethane	ND	1								
1,3-Dichlorobenzene	ND	1								
1,4-Dichlorobenzene	ND	1								
1,2-Dichlorobenzene	ND	1								
Surr: 1,2-Dichloroethane-d4	10.4		10		104	70	130			
Surr: Toluene-d8	10.5		10		105	70	130			
Surr: 4-Bromofluorobenzene	10.5		10		105	70	130			

### Laboratory Control Spike

File ID: 13111202.D

Type: LCS

Test Code: EPA Method SW8260B

Batch ID: MS15W1112A

Analysis Date: 11/12/2013 11:49

Sample ID: LCS MS15W1112A

Units: µg/L

Run ID: MSD\_15\_131112A

Prep Date: 11/12/2013 11:49

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	11.2	1	10		112	80	120			
Benzene	10.9	0.5	10		109	70	130			
Trichloroethene	10.4	1	10		104	68	138			
Toluene	9.9	0.5	10		99	80	120			
Chlorobenzene	10.1	1	10		101	70	130			
Ethylbenzene	10.6	0.5	10		106	80	120			
m,p-Xylene	10.8	0.5	10		108	65	139			
o-Xylene	11.1	0.5	10		111	70	130			
Surr: 1,2-Dichloroethane-d4	11.5		10		115	70	130			
Surr: Toluene-d8	9.53		10		95	70	130			
Surr: 4-Bromofluorobenzene	10		10		100	70	130			



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:

18-Nov-13

## QC Summary Report

Work Order:

13110849

### Sample Matrix Spike

File ID: 13111226.D

Type: MS

Test Code: EPA Method SW8260B

Batch ID: MS15W1112A

Analysis Date: 11/12/2013 20:37

Sample ID: 13110849-12AMS

Units: µg/L

Run ID: MSD\_15\_131112A

Prep Date: 11/12/2013 20:37

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	44.9	2.5	50	0	90	62	133			
Benzene	49	1.3	50	0	98	67	134			
Trichloroethene	46.2	2.5	50	0	92	68	138			
Toluene	46.2	1.3	50	0	92	38	130			
Chlorobenzene	46.2	2.5	50	0	92	70	130			
Ethylbenzene	47	1.3	50	0	94	70	130			
m,p-Xylene	49	1.3	50	0	98	65	139			
o-Xylene	51.1	1.3	50	0	102	69	130			
Surr: 1,2-Dichloroethane-d4	50.1		50		100	70	130			
Surr: Toluene-d8	48.6		50		97	70	130			
Surr: 4-Bromofluorobenzene	52.3		50		105	70	130			

### Sample Matrix Spike Duplicate

File ID: 13111227.D

Type: MSD

Test Code: EPA Method SW8260B

Batch ID: MS15W1112A

Analysis Date: 11/12/2013 20:59

Sample ID: 13110849-12AMSD

Units: µg/L

Run ID: MSD\_15\_131112A

Prep Date: 11/12/2013 20:59

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	50.4	2.5	50	0	101	62	133	44.89	11.6(35)	
Benzene	54.2	1.3	50	0	108	67	134	49.04	9.9(21)	
Trichloroethene	52.4	2.5	50	0	105	68	138	46.15	12.6(20)	
Toluene	52.5	1.3	50	0	105	38	130	46.16	12.8(20)	
Chlorobenzene	51.9	2.5	50	0	104	70	130	46.22	11.5(20)	
Ethylbenzene	52.9	1.3	50	0	106	70	130	46.96	11.8(20)	
m,p-Xylene	54.6	1.3	50	0	109	65	139	48.96	10.9(20)	
o-Xylene	56.3	1.3	50	0	113	69	130	51.11	9.7(20)	
Surr: 1,2-Dichloroethane-d4	54		50		108	70	130			
Surr: Toluene-d8	49.6		50		99	70	130			
Surr: 4-Bromofluorobenzene	51.5		50		103	70	130			

### Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

## Billing Information :

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

## Client:

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 13450

Job : 08-73103-01/02-07/Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

## CHAIN-OF-CUSTODY RECORD

NV

Page: 1 of 6

**Alpha Analytical, Inc.**  
255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

**WorkOrder : CONNR13110849**  
**Report Due By : 5:00 PM On : 18-Nov-13**

**Report Attention** **Phone Number** **Email Address**

Kathi Brandmueller (775) 284-9752 x kbrandmueller@converseconsultants

EDD Required : No

Sampled by : Frank M. Reynolds III, Kathi Brand  
Cooler Temp Samples Received Date Printed  
4 °C 08-Nov-13 08-Nov-13

Alpha										Requested Tests					Sample Remarks
Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles Alpha	Sub	TAT	HOLD	METALS_A Q	METALS_D S	METALS_S O	PNA_SIM W	TPHE_S	TPHE_W	TPHE_S		
CON13110849-01A	B-7@4ft	SO 11/07/13 11:23	3	0	6	Hold								1-probe, 2-25 gram Encores	
CON13110849-02A	B-7@8ft	SO 11/07/13 11:27	3	0	6	Hold								1-probe, 2-25 gram Encores	
CON13110849-03A	B-7@12ft	SO 11/07/13 11:34	4	0	6									1-probe, 3-25 gram Encores MS/MSD	
CON13110849-04A	B-7A@12ft	SO 11/07/13 11:35	3	0	6						TPHE_N			1-probe, 2-25 gram Encores	
CON13110849-05A	B-7	AQ 11/07/13 12:30	6	0	6						SIM				
CON13110849-06A	B-7A	AQ 11/07/13 12:32	6	0	6						SIM				
CON13110849-07A	B-8@4ft	SO 11/07/13 12:50	3	0	6	Hold								1-probe, 2-25 gram Encores	
CON13110849-08A	B-8@7ft	SO 11/07/13 12:53	3	0	6						TPHE_N			1-probe, 2-25 gram Encores	
CON13110849-09A	B-9@4ft	SO 11/07/13 13:00	3	0	6	Hold								1-probe, 2-25 gram Encores	

Comments: Samples brought in by client. Security seals intact. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. Total metals for sample - 22A & and MS/MSD for VOCs on sample - 12A confirmed per phone conversation with Kathi @ 16:04.

Logged in by:

Signature

Print Name

Company

Date/Time

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.  
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

## Billing Information :

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

## Client:

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 13450

Job : 08-73103-01/02-07/Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

## CHAIN-OF-CUSTODY RECORD

## Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

## Report Attention

Phone Number

Email Address

Kathi Brandmuller (775) 284-9752 x kbrandmuller@converseconsultants

EDD Required : NO

WorkOrder : CONNR13110849  
Report Due By : 5:00 PM On : 18-Nov-13

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp Samples Received Date Printed

4 °C 08-Nov-13 08-Nov-13

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles Alpha	Sub	TAT	Requested Tests							Sample Remarks
						HOLD	METALS_A Q	METALS_D S	METALS_S O	PNA_SIM_W	TPHE_S	TPHE_W	
CON13110849-10A	B-9@8ft	SO 11/07/13 13:05	3	0	6				As, Ba, Cd, Cr, Pb, Hg, Ag, Se	TPHE_N		GAS_N	1-probe, 2-25 gram Encores
CON13110849-11A	B-9@12ft	SO 11/07/13 13:10	1	0	6	Hold							
CON13110849-12A	B-9	AQ 11/07/13 13:25	9	0	6				As, Ba, Cd, Cr, Pb, Hg, Ag, Se	SIM			MS/MSD for VOCs.
CON13110849-13A	B-10@4ft	SO 11/07/13 13:40	3	0	6	Hold							1-probe, 2-25 gram Encores
CON13110849-14A	B-10@8ft	SO 11/07/13 13:45	3	0	6	Hold							1-probe, 2-25 gram Encores
CON13110849-15A	B-10@12ft	SO 11/07/13 13:48	4	0	6				As, Ba, Cd, Cr, Pb, Hg, Ag, Se	TPHE_N		GAS_N	1-probe, 2-25 gram Encores MS/MSD
CON13110849-16A	B-10@16ft	SO 11/07/13 13:53	1	0	6	Hold							
CON13110849-17A	B-11@4ft	SO 11/07/13 14:20	3	0	6	Hold							1-probe, 2-25 gram Encores
CON13110849-18A	B-11@8ft	SO 11/07/13 14:23	3	0	6	Hold							1-probe, 2-25 gram Encores

## Comments:

Samples brought in by client. Security seals intact. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. Total metals for sample : -22A & and MS/MSD for VOCs on sample -12A confirmed per phone conversation with Kathi @ 16:04.

Logged in by:

Signature

Print Name

Company

Date/Time

*Kathi Brandmuller*

Alpha Analytical, Inc.

11/8/13 14:15

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.  
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Utter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

## Billing Information :

Converse

4840 Mill Street, Suite 5

Reno, NV 89502

## Client:

Converse

4840 Mill Street, Suite 5

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 13450

Job : 08-73103-01/02-07/Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

## CHAIN-OF-CUSTODY RECORD

NV

Page: 3 of 6

## Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778

TEL: (775) 355-1044 FAX: (775) 355-0406

WorkOrder : CONNR13110849

Report Due By : 5:00 PM On : 18-Nov-13

## Report Attention Phone Number Email Address

Kathi Brandmueller (775) 284-9752 x kbrandmueller@converseconsultants

EDD Required : No

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp

Samples Received

Date Printed

4 °C

08-Nov-13

08-Nov-13

Alpha Sample ID	Client Sample ID	Collection Matrix	Date	No. of Bottles			TAT	Requested Tests							Sample Remarks
				HOLD	METALS_A Q	METALS_D S		METALS_S O	PNA_SIM_W	TPHE_S	TPHE_W	TPHE_S			
CON13110849-19A	B-11@12ft	SO	11/07/13 14:28	3	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se			TPHE_N		GAS-N	1-probe received, 2-25 gram Encores
CON13110849-20A	B-11@15ft	SO	11/07/13 14:38	3	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se			TPHE_N		GAS-N	1-probe received, 2-25 gram Encores
CON13110849-21A	B-11	AQ	11/07/13 15:00	6	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se			SIM			
CON13110849-22A	Field Blank	AQ	11/07/13 15:18	9	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se			SIM		TPHE_N	
CON13110849-23A	B-12@4ft	SO	11/07/13 15:20	3	0	6		Hold							1-probe, 2-25 gram Encores
CON13110849-24A	B-12@7ft	SO	11/07/13 15:24	3	0	6			As, Ba, Cd, Cr, Pb, Hg, Ag, Se			TPHE_N		GAS-N	1-probe, 2-25 gram Encores

Comments: Samples brought in by client. Security seals intact. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. Total metals for sample: -22A & and MS/MSD for VOCs on sample -12A confirmed per phone conversation with Kathi @ 16:04.

Logged in by:

Signature

Print Name

Company

Date/Time

Kathi Brandmueller

Alpha Analytical, Inc.

11/8/13 16:15

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.

Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other)

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

## Billing Information :

Converse

4840 Mill Street, Suite 5

Reno, NV 89502

## Client:

Converse

4840 Mill Street, Suite 5

Reno, NV 89502

PO : 08-73103-01/102-07

Client's COC # : 13450

Job : 08-73103-01/102-07/Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

## CHAIN-OF-CUSTODY RECORD

NV

Page: 4 of 6

## Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778

TEL: (775) 355-1044 FAX: (775) 355-0406

WorkOrder : CONR13110849

Report Due By : 5:00 PM On : 18-Nov-13

## Report Attention

Phone Number

Email Address

Kathi Brandmuller

(775) 284-9752 x

kbrandmuller@converseconsultants

EDD Required : No

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp

Samples Received

Date Printed

4 °C

08-Nov-13

08-Nov-13

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles Alpha	Sub	TAT	Requested Tests				Sample Remarks
						TPHP_W	VOC_W			
CON13110849-01A	B-7@4H	SO 11/07/13 11:23	3	0	6					1-probe, 2-25 gram Encores
CON13110849-02A	B-7@8H	SO 11/07/13 11:27	3	0	6					1-probe, 2-25 gram Encores
CON13110849-03A	B-7@12H	SO 11/07/13 11:34	4	0	6					1-probe, 3-25 gram Encores MS/MSD
CON13110849-04A	B-7A@12H	SO 11/07/13 11:35	3	0	6					1-probe, 2-25 gram Encores
CON13110849-05A	B-7	AQ 11/07/13 12:30	6	0	6		8260_Ns			
CON13110849-06A	B-7A	AQ 11/07/13 12:32	6	0	6		8260_Ns			
CON13110849-07A	B-8@4H	SO 11/07/13 12:50	3	0	6					1-probe, 2-25 gram Encores
CON13110849-08A	B-8@7H	SO 11/07/13 12:53	3	0	6					1-probe, 2-25 gram Encores
CON13110849-09A	B-9@4H	SO 11/07/13 13:00	3	0	6					1-probe, 2-25 gram Encores
CON13110849-10A	B-9@8H	SO 11/07/13 13:05	3	0	6					1-probe, 2-25 gram Encores

Comments: Samples brought in by client. Security seals intact. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. Total metals for sample : 22A & and MS/MSD for VOCs on sample - 12A confirmed per phone conversation with Kathi @ 16:04.

Logged in by:

Signature

Print Name

Company

Date/Time



Kathi Brandmuller

Alpha Analytical, Inc.

11/8/13 1415

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orto T-Tedlar B-Brass P-Plastic OT-Other

## Billing Information :

Converse

4840 Mill Street, Suite 5

Reno, NV 89502

## Client:

Converse

4840 Mill Street, Suite 5

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 13450

Job : 08-73103-01/02-07/Carlin Brownfields RRP

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD with Surrogates

## CHAIN-OF-CUSTODY RECORD

## Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778

TEL: (775) 355-1044 FAX: (775) 355-0406

NV

Page: 5 of 6

WorkOrder : CONR13110849

Report Due By : 5:00 PM On : 18-Nov-13

EDD Required : No

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp

Samples Received

Date Printed

4 °C

08-Nov-13

08-Nov-13

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles Alpha	Sub TAT	Requested Tests				Sample Remarks
					TPHP_W	VOC_W			
CON13110849-11A	B-9@12ft	SO 11/07/13 13:10	1	0	6				
CON13110849-12A	B-9	AQ 11/07/13 13:25	9	0	6	8260_Ns			MS/MSD for VOCs.
CON13110849-13A	B-10@4ft	SO 11/07/13 13:40	3	0	6				1-probe, 2-25 gram Encores
CON13110849-14A	B-10@8ft	SO 11/07/13 13:45	3	0	6				1-probe, 2-25 gram Encores
CON13110849-15A	B-10@12ft	SO 11/07/13 13:48	4	0	6				1-probe, 2-25 gram Encores MS/MSD
CON13110849-16A	B-10@16ft	SO 11/07/13 13:53	1	0	6				
CON13110849-17A	B-11@4ft	SO 11/07/13 14:20	3	0	6				1-probe, 2-25 gram Encores
CON13110849-18A	B-11@8ft	SO 11/07/13 14:23	3	0	6				1-probe, 2-25 gram Encores
CON13110849-19A	B-11@12ft	SO 11/07/13 14:28	3	0	6				1-probe received, 2-25 gram Encores
CON13110849-20A	B-11@15ft	SO 11/07/13 14:38	3	0	6				1-probe received, 2-25 gram Encores

Comments: Samples brought in by client. Security seals intact. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. Total metals for sample : -22A &amp; and MS/MSD for VOCs on sample -12A confirmed per phone conversation with Kathi @ 16:04.

Signature

Print Name

Company

Date/Time

Logged in by:

Kathi Brand

Alpha Analytical, Inc.

11/8/13 14:15

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

## Billing Information :

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

## Client:

Converse  
4840 Mill Street, Suite 5

Reno, NV 89502

PO : 08-73103-01/02-07

Client's COC # : 13460

Job : 08-73103-01/02-07/Carlin Brownfields RRP

QC Level : S3 = Final Rpt. MBLK, LCS, MS/MSD With Surrogates

## CHAIN-OF-CUSTODY RECORD

NV

Page: 6 of 6

## Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

WorkOrder : CONR13110849

Report Due By : 5:00 PM On : 18-Nov-13

Report Attention Phone Number Email Address

Kathi Brandmueller (775) 284-9752 x kbrandmueller@converseconsultants

EDD Required : No

Sampled by : Frank M. Reynolds III, Kathi Brand

Cooler Temp Samples Received Date Printed

4 °C 08-Nov-13 08-Nov-13

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles Alpha Sub	TAT	Requested Tests						Sample Remarks
					TPHP_W	VOC_W					
CON13110849-21A	B-11	AQ 11/07/13 15:00	6	0	6	8260_Ns					
CON13110849-22A	Field Blank	AQ 11/07/13 15:18	9	0	6	GAS-N 8260_Ns					
CON13110849-23A	B-12@4ft	SO 11/07/13 15:20	3	0	6						1-probe, 2-25 gram Encores
CON13110849-24A	B-12@7ft	SO 11/07/13 15:24	3	0	6						1-probe, 2-25 gram Encores

## Comments:

Samples brought in by client. Security seals intact. Frozen ice. Encores received on dry ice. Please filter and preserve dissolved metals in lab. Encores placed on hold kept frozen and secure for possible later analysis of 8260. Total metals for sample: -22A & and MS/MSD for VOCs on sample -12A confirmed per phone conversation with Kathi @ 16:04.

Logged in by:

Signature

Print Name

Company

Date/Time

*Sarah Neri*

Alpha Analytical, Inc.

11/8/13 1615

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Matrix Type: AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voe S-Soil Jar O-Orto T-Tedlar B-Brass P-Plastic OT-Other

**Billing Information:**  
 Company: CONV 845  
 Attn: Kathleen Broadmiller  
 Address: 4840 Mill St. #5  
 City, State, Zip: Kenosha NV 89702  
 Phone Number: 775-856-3835



**Alpha Analytical, Inc.**  
 Main Laboratory: 255 Glendale Ave, Suite 21 Sparks, NV 89431  
 Satellite Service Centers:  
 Northern CA: 8991 Hom Road, Suite C, Rancho Cordova, CA 95627  
 Southern NV: 8256 Midland Ave, Suite 24, Las Vegas, NV 89120  
 Southern CA: 1007 E. Dominguez St., Suite D, Carson, CA 90746

Phone: 775-355-1044  
 Fax: 775-355-0406  
 Phone: 916-366-9089  
 Phone: 702-281-4548  
 Phone: 714-366-2901

13450

Page # 1 of 2

**Consultant/Client Info:**

Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City, State, Zip: \_\_\_\_\_

**Job and Purchase Order Info:**

Job # 08-13103-01/02-67  
 Job Name: Callin Broadmiller TRP  
 P.O. # 08-13103-01/02-01

**Report Attention/Project Manager:**

Name: \_\_\_\_\_  
 Email Address: \_\_\_\_\_  
 Phone #: \_\_\_\_\_  
 Cell #: \_\_\_\_\_

**QC Deliverable Info:**

EDD Required? Yes / No \_\_\_\_\_ EDF Required? Yes / No \_\_\_\_\_  
 Global ID: \_\_\_\_\_  
 Data Validation Level: III or IV

Samples Collected from which State? (circle one) AZ CA NV WA ID OR DOD Site Other

Time Sampled (HH:MM)	Date Sampled	Matrix (See Key Below)	Lab ID Number (For Lab Use Only)	Sample Description	TAT	Field Filtered?	# Containers** (See Key Below)	Analysis Requested	Remarks
11:23	11/7	GT	081311030102067	B-7 @ 4'	S	NA	2-3	TH (E+P) VOC (Standard list) SVOC (SIM) RCRA Metals (8) Soil RCRA 8 Metals Dissolved (lab)	
11:27				B-7 @ 8'		NA	2-3	HOLD	
11:34		J		B-7 @ 12'		NA	1-2	X	
11:35				B-7 @ 12'		NA	2-3	X	
12:30		AQ		B-7		*	3-2	X	
12:30		AQ		B-7A		*	1-2	X	
12:30		GT		B-8 @ 4'		NA	2-3	HOLD	
12:33				B-8 @ 7'		NA	1-2	X	
13:00				B-9 @ 4'		NA	2-3	X	
13:05				B-9 @ 8'		NA	1-2	X	
13:19		J		B-9 @ 12'		NA	1-2	HOLD	
13:25		AQ		B-9		NA	1-2	X	

\* Extra Soil for lab QA/QC  
 \* Extra Soil for pressurized cell test from materials

No Enclosures

**ADDITIONAL INSTRUCTIONS:**

I (field sampler) attest to the validity and authenticity of this sample(s). I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. NAC 445.0038 (c) (2).

Sampled by: Kathleen Broadmiller

Date: 11/8/13

Time: 0917

Received by: Francis M. Reynolds III

Signature: [Signature]

Date: 11/8/13

Time: 0917

Reinquired by: [Signature]

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Received by: [Signature]

Signature: [Signature]

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Reinquired by: [Signature]

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Received by: [Signature]

Signature: [Signature]

Date: \_\_\_\_\_

Time: \_\_\_\_\_

\* Key: AQ - Aqueous WA - Waste OT - Other \*\* L - Litter V - VOA S - Soil Jar O - Ordo T - Tedlar B - Brass P - Plastic OT - Other  
 NOTE: Samples are discarded 60 days after sample receipt unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.

**Billing Information:**  
 Company: Converse Consulting  
 Attn: Kelli Brandom  
 Address: 4840 Mill St. #5  
 City, State, Zip: Reno, NV 89502  
 Phone Number: \_\_\_\_\_  
 Fax: \_\_\_\_\_



**Alpha Analytical, Inc.**  
 Main Laboratory: 255 Glendale Ave, Suite 21 Sparks, NV 89431  
**Satellite Service Centers:**  
 Northern CA: 9991 Horn Road, Suite C, Rancho Cordova, CA 95827  
 Southern NV: 6255 McLeod Ave, Suite 24, Las Vegas, NV 89120  
 Southern CA: 1007 E. Dominguez St., Suite O, Carson, CA 90748

Phone: 775-355-1044  
 Fax: 775-355-0405  
 Phone: 916-386-9089  
 Phone: 702-281-4848  
 Phone: 714-386-2801

Page # 2 of 2  
**13451**

**Consultant/Client Info:**

**Report Attention/Project Manager:**

**QC Deliverable Info:**

Company: \_\_\_\_\_ Job # 08-73103-01/02-07 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_ Job Name: Carlin Broadband Field RR2 Email Address: \_\_\_\_\_  
 City, State, Zip: \_\_\_\_\_ P.O. # 08-73103-01/02-07 Phone # \_\_\_\_\_  
 Cell # \_\_\_\_\_

**Samples Collected from which State? (circle one)** AZ CA NV WA ID OR DOD Site Other

Time Sampled (HH:MM)	Date Sampled (See Key Below)	Mark Sampled (See Key Below)	Lab ID Number (For Lab Use Only)	Sample Description	TAT	Field Filtered?	# Containers** (See Key Below)	TPH (E+D)	VOC Standard List	SVOC (SIN)	RCRA Metals (8)-Soil	RCRA Metals Dissolved (Water)	Analysis Requested	Remarks
13:46	11/13	OT	134	B-10 @ 4'	S	NA	1-01	HOLD						
13:48			144	B-10 @ 8'			1-01	HOLD						
13:53			154	B-10 @ 12'			1-01	HOLD						
14:20			164	B-10 @ 14'			1-01	HOLD						
14:23			174	B-11 @ 4'			1-01	HOLD						
14:28			184	B-11 @ 8'			1-01	HOLD						
14:30			194	B-11 @ 12'			1-01	HOLD						
15:00			204	B-11 @ 15'			1-01	HOLD						
15:16			214	B-11			1-01	HOLD						
15:20			224	Field Blank			1-01	HOLD						
15:24			234	B-12 @ 4'			1-01	HOLD						
15:24			244	B-12 @ 7'			1-01	HOLD						

**ADDITIONAL INSTRUCTIONS:**

(Field sample) attest to the validity and authenticity of this sample(s). I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. NAC 445.0636 (c)(2).

Sampled By: John Doe Broadband Consultant  
 Date: 11/8/13 Time: 0917  
 Received By: John Doe Broadband Consultant  
 Date: 11/8/13 Time: 0917  
 Relinquished By: John Doe Broadband Consultant  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Relinquished By: John Doe Broadband Consultant  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_

**NOTE:** Samples are discarded 60 days after sample receipt unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.

# Appendix C

DATE: November 21, 2013

TO: Kathi Brandmueller  
Converse Consultants

FROM: Sara Thacker  
Converse Consultants

SUBJECT: **City of Carlin Phase II Brownfields Project - Level II Data Validation Memorandum** - Analytical Reports from:

- Alpha Analytical, Inc. dated November 15, 2013; and November 18, 2013.

## INTRODUCTION

This Data Validation Memorandum summarizes the findings of a Level II data validation for analytical results of soil samples, duplicate soil samples, groundwater samples, duplicate water samples and field blank samples collected as part of a Phase II Environmental Site Assessment (ESA). The samples were collected from the following properties: Eklund Property 7<sup>th</sup> Street, Carlin Nevada, APNs: 002-220-018, 002-220-041. Main Street Properties and City Right-of-Way, Carlin, Nevada, APNs: 002-182-006, 002-183-002 and 002-183-011.

Converse Consultants (Converse) prepared a Field Sampling Plan (FSP) for the sites located at: Eklund Property 7<sup>th</sup> Street, Carlin Nevada dated September 18, 2013, and approved by US EPA Region 9 on September 18, 2013. Main Street Properties and City Right-of-Way, Carlin, Nevada dated September 18, 2013, and approved by US EPA Region 9 on September 18, 2013.

The FSP provided a scope of the Phase II ESAs to address potential subsurface impact at the Site from historic activities identified during the Phase I Environmental Site Assessments (ESAs). A Quality Assurance Project Plan (QAPP), was prepared by Converse Consultants for the overall Brownfields Community-Wide Assessment project. The US EPA conditionally approved the QAPP, pending revisions, in a letter dated March 18, 2013, revisions were completed on March 19, 2013 and the QAPP was finalized. The FSPs were prepared in conjunction with the QAPP to provide an appropriate level of assurance regarding the reliability and usability of the data generated during the Phase II ESA.

## Evaluation of Field Records

Field Documentation: Field logs and other documentation were reviewed regarding sampling procedures (e.g., sample containers, collection, preservation, packaging, transportation, receipt, handling and storage, chain of custody (COC), holding time, and decontamination procedures) conducted on: November 6, 2013 and November 7, 2013. Converse received notification from Alpha on November 8, 2013 of possible insufficient

volume for sample B-13, Lab ID: CON13110824-05A. Per Kathi Brandmueller, Alpha was asked to analyze sample B-13 for SVOC and metals if the sample volume allowed. Sample B-13 was later found to have sufficient volume for all requested analysis. Alpha also notified Converse of the cancellation of sample B-14@4' lab ID: CON13110824-37A due to these encores having been found to belong to sample B-13@4' Lab ID: CON13110824-02A, and the addition of sample B-4 lab ID: CON13110824-39A which was present but had not been added to the COC. Converse does not deem these changes as an issue.

All collected samples were received by Alpha within 49 hours of collection. Encore samples were frozen in the field and therefore had an extended holding time.

### Summary of Amount and Type of Sample Collected

Between November 6, 2013 and November 7, 2013, Converse implemented the FSP. Sample collection is summarized below.

Sample Type	FSP (Request)	Actual Work	Comments
Soil Samples Collected	60	54	The actual Soil, Soil Duplicate, and Ground Water samples differ from the FSP. Based on field conditions, Converse finds the number of samples taken sufficient to the phase II objectives.
Soil Samples Analyzed		22	
Soil Duplicate Analyzed	10%	3	
Ground Water Collected	18	13	
Groundwater Samples Analyzed			
Ground Water Duplicate Analyzed	10%	3	
Field Blank	2	2	

- Twenty-two (22) of fifty-four (54) soil samples delivered to Alpha Analytical, Inc. (Alpha) were analyzed for: Purgeable and Extractable Total Petroleum Hydrocarbons (TPH) in accordance with EPA Test Method 8015B; and or VOCs in accordance with EPA Methods 8260B and or SVOCs in accordance with EPA Methods 8270C; and or Heavy Metals in accordance with EPA Method 6020/6020A; as per the chain of custody (COC) instructions.
- Three (3) soil sample duplicates delivered to Alpha were analyzed for: TPH in accordance with EPA Test Method 8015B; and or metals in accordance with EPA Method 6020/6020A as per the COC instructions. The number of soil sample duplicates met the 10 percent requirement as per the FSP.
- Thirteen (13) groundwater samples, and three (3) duplicate water samples



delivered to Alpha were analyzed for: VOCs in accordance with EPA Method 8260B; SVOCs in accordance with EPA Methods 8270C; and metals in accordance with EPA Method 6020/6020A as per the COC instructions.

- Two (2) field blank samples delivered to Alpha were analyzed for: TPH in accordance with EPA Test Method 8015B; VOCs in accordance with EPA Methods 8260B; SVOCs in accordance with EPA Methods 8270C; and metals in accordance with EPA Method 6020/6020A as per the COC instructions as per the COC instructions.

## **Review of QC Information**

**Basic QC Procedures:** Basic QC evaluation criteria include field decontamination, supplies, holding times, equipment calibration and maintenance, and standards.

**Field Decontamination:** Non-dedicated sampling equipment was decontaminated before each sample was collected.

**Supplies:** All sampling supplies were certified clean by the suppliers, inspected by Converse prior to their use and monitored by Alpha through the use of standards and blank samples.

**Holding Times:** Compliance with holding time requirements was verified.

**Field QC Samples:** The FSPs called for 10 percent of the samples analyzed to be split in the field and a blank to be collected for every day of field work for QC purposes. Field QC samples included two (2) field blanks, three (3) ground water duplicates, and three (3) duplicate soil samples (for assessment of sampling variability due to sampling technique, instrument performance or the heterogeneity of the matrix being sampled).

**Background Samples:** Background samples were not collected.

## **Summary of Deviation**

**Field QC Samples (Field Duplicates):** Three (3) soil samples were submitted to Alpha as field duplicates. The primary and duplicate soil samples were analyzed for TPH in accordance with EPA Test Method 8015M; and metals in accordance with EPA Method 6020/6020A. Three (3) ground water samples were submitted to Alpha as field duplicates. The primary and duplicate ground water samples were analyzed for VOCs in accordance with EPA Methods 8260B; SVOCs in accordance with EPA Methods 8270C; and metals in accordance with EPA Method 6020/6020A.

A summary of the parameters detected in the field duplicates are presented below:



Matrix	Parameter	Sample ID Primary Sample	Sample ID Duplicate	Results Primary Sample	Results Duplicate Samples	RPDs
Water	VOC	B-15	B-15-A	ND	ND	0
	SVOC:					
	Naphthalene			0.028µg/L	0.027µg/L	3.6%
	1-Methylnaphthalene			ND	0.022µg/L	-
	Metals:					
	Selenium			0.0052mg/L	ND	-
	Barium			0.079mg/L	0.083mg/L	4.9%
Water	VOC	B-4	B-4-A	ND	ND	0
	SVOC:					
	Naphthalene			70µg/L	69µg/L	1.4%
	2-Methylnaphthalene			61µg/L	64µg/L	4.8%
	1-Methylnaphthalene			180µg/L	180µg/L	0
	Acenaphthylene			2.3µg/L	4.4µg/L	62.7%
	Acenaphthene			9.2µg/L	8.9µg/L	3.3%
	Fluorene			18µg/L	19µg/L	5.4%
	Phenanthrene			21µg/L	39µg/L	60%
	Metals:					
	Arsenic			0.0067 mg/L	0.0051 mg/L	27.1%
	Barium			0.23 mg/L	0.22 mg/L	4.4%
Water	VOC	B-7	B-7-A	ND	ND	0
	SVOC:					
	Naphthalene			0.039µg/L	ND	-
	2-Methylnaphthalene			0.040µg/L	ND	-
	1-Methylnaphthalene			0.031µg/L	0.022µg/L	34%
	Metals:					
	Arsenic			0.0092 mg/L	0.0094 mg/L	2.2%
	Selenium			0.0073 mg/L	0.0077mg/L	5.3%
	Barium			0.075 mg/L	0.079 mg/L	5.2%
Soil	TPH	B-7@12'	B-7A@12'	ND	ND	0
	Metals:					
	Chromium			13 mg/Kg	15 mg/Kg	14.3%



	Arsenic			7.7 mg/Kg	7.0 mg/Kg	9.5%
	Barium			530 mg/Kg	410 mg/Kg	25.5%
	Lead			9.8 mg/Kg	11 mg/Kg	11.5%
Soil	TPH	B-15@8'	B-15A@8'	ND	ND	-
	Metals:					
	Chromium			15 mg/Kg	15 mg/Kg	0
	Arsenic			8.4 mg/Kg	7.5 mg/Kg	11.3%
	Selenium			ND	2.1 mg/Kg	-
	Cadmium			ND	1.1 mg/Kg	-
	Barium			550 mg/Kg	200 mg/Kg	93.3%
	Lead			10 mg/Kg	9.6 mg/Kg	4.1%
Soil		B-4@12'	B-4A@12'			
	TPH:					
	DRO			2,000 mg/Kg	8,600 mg/Kg	124.5%
	ORO			170 mg/Kg	730 mg/Kg	124.4%
	GRO			3,600 mg/Kg	6,500 mg/Kg	57.4%
	Metals:					
	Chromium			8.1 mg/Kg	6.1 mg/Kg	28.2%
	Arsenic			5.8 mg/Kg	5.5 mg/Kg	5.3%
	Barium			84 mg/Kg	73 mg/Kg	14%
	Lead			4.0 mg/Kg	4.1 mg/Kg	2.5%

The QAPP states the QC limits for precision are 20% RPD for metals, Total Petroleum Hydrocarbons (TPH), Volatile Organic Compounds (VOCs), and Polychlorinated Biphenyls (PCBs); 30% RPD for Semi-volatile Organic Compounds (SVOCs); and 40% RPD for other compounds. These are very strict standards and intended as a guide when reviewing the data. While these standards were not met for each individual sample the averages met or were close to the RPD listed in the QAPP, therefore the data is usable.

Field QC Samples (Field Blanks): Two (2) field blanks samples of certified clean water were analyzed by Alpha for: TPH in accordance with EPA Test Method 8015M; VOCs in accordance with EPA Method 8260B; SVOCs in accordance with EPA Method 8270C; and metals in accordance with EPA Method 6020/6020A. The analysis for both field blank samples concluded in no detection of the specified parameters.

Data Qualifiers: Data validation flags, as defined in the National Functional Guidelines, indicate if results are considered anomalous, quantitative, estimated, or rejected. All qualifiers should be discussed prior to utilizing the chemical data for the screening risk evaluation. Only rejected data are unusable for decision-making purposes. Other qualified data may require further verification. Alpha reported estimated concentrations, which were within the Diesel Range Organic (DRO) concentration and may include contributions from heavier-end hydrocarbons that elute to the DRO range, with a "L" flag. Based on the concentrations reported and type of flag, the flags are not considered significant to data interpolation.



Observations of Significance: No occurrences which might adversely affect sample integrity or data quality were noted in the analytical report.

## **DATA VALIDATION**

The quality assurance (QA) objectives of the investigation are to assure that sampling, analysis and reporting activities provide data that are accurate, precise, representative, and legally defensible. Quality control (QC) represents the specific steps and procedures followed during the course of the project to achieve QA. The primary QC features of the FSP implementation included the collection and analysis of QC samples, and the data validation.

As per the QAPP, the following steps were followed to verify/validate field activities:

- Evaluation of field records for completeness and consistency.
- Summarization of number and type of samples collected.
- Review of QC information.
- Summarization of deviations and determined effects on data quality.

## **CONCLUSIONS**

Based on this Level II validation, all data collected through implementation of the FSP satisfy data quality requirements specified for the Phase II ESA for the Site. The analyses followed the approved methods and included acceptable QC procedures. Relevant QA/QC results were satisfactory and acceptable. No outstanding issues were identified during the course of the data validation review that would cause the data to be rejected. Overall, the presented data (including the qualified results) are reliable and useable for project decision making.

## **RECOMMENDATION**

It is recommended that the data can be used to characterize the nature and extent of any contamination, support screening risk evaluation, and/or evaluate the response action need relative to the Site.





