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# LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT

**UNDEVELOPED LAND  
NORTH OF FLAMINGO ROAD  
AND CABANA DRIVE  
APN 161-16-402-003  
LAS VEGAS  
CLARK COUNTY  
NEVADA**

*Prepared for:*

*State of Nevada  
Department of Conservation & Natural Resources  
Division of Environmental Protection  
901 South Stewart Street, Suite 4001  
Carson City, Nevada 89701*

*On behalf of:  
Clark County School District*

*April 22, 2013*

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## EXECUTIVE SUMMARY

*This report presents the findings of a Limited Phase II Environmental Site Assessment (ESA) performed on one parcel of land located in Las Vegas, Nevada. The parcel is listed with Clark County, Nevada as Assessor's Parcel Number (APN) 161-16-402-003 and is located just north of the intersection of Flamingo Road and Cabana Drive. The objectives of the ESA activities were to address the recognized environmental conditions (RECs) identified during a previous Phase I ESA and to assess for the presence of regulated, hazardous, or potentially hazardous chemical constituents within soil/debris found on the subject property.*

*In May of 2012, a Phase I ESA was conducted by McGinley & Associates, Inc. (MGA) on the site. The purpose of the Phase I ESA was to determine if any RECs were associated with the property that was slated for construction of a school. Based upon the site reconnaissance and available historic information, it was determined that debris and soil, which may have been related to staging activities for a construction project that took place in 2008 and 2009, had been imported to the site and the surface graded. Due to a school being proposed for construction, it was recommended that a limited Phase II ESA be performed to determine if the debris and soil from an unknown source contained regulated chemical constituents.*

*For the Limited Phase II ESA, surface soil samples were collected at depths of zero to 12 inches below ground surface (bgs). The samples were collected per the Nevada Brownfields Program (NBP) approved SAP prepared by MGA prior to the sampling activities. There were no field adjustments made to the SAP for this project. Sample locations were chosen based on visual observation of potential contamination and historical information such as aerial photographs. All collected soil samples were delivered to ESC Lab Sciences (the laboratory) under proper Chain of Custody (COC) protocol and samples were analyzed for Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), and Total Petroleum Hydrocarbons (TPH) within both the gasoline range (GRO) and diesel range (DRO). Analytical suites were based upon MGA's conceptual understanding of the site and its historic uses.*

*The results of the analyses indicate that no VOC constituents were found above laboratory reporting limits. Several SVOC constituents were found above laboratory reporting limits. However, none of the contaminant concentrations was found to be above the State of Nevada Reportable Concentrations (RCs) associated with those constituents. Lastly, two of the samples collected had TPH-DRO concentrations above laboratory detection limits. However, the levels detected were not above the State of Nevada RC for TPH (100 mg/Kg).*

*We have performed a Phase II environmental site assessment of the APN: 161-16-402-003, the property. The assessment was performed in conformance with the scope and limitations of ASTM Practice E 1903-1 and for determining the extent, if any, of environmental contamination within the debris and soil surface of the property that was brought onto the property from an unknown source. Based on the analytical laboratory data found for the collected samples, MGA is of the opinion that the objectives of the Phase II ESA were achieved and no further assessments are warranted at this time.*

## 1. INTRODUCTION

McGinley & Associates (MGA) conducted a Limited Phase II Environmental Site Assessment (ESA) on undeveloped property located just north of the intersection of Flamingo Road and Cabana Drive. MGA conducted this investigation for the purpose of investigating previously identified *recognized environmental conditions* (RECs) on the subject property.

## 2. OBJECTIVES AND SCOPE OF SERVICES

The objectives of the ESA activities were to assess for the potential presence of environmental contamination from the historical import of debris and soil onto the property from an unknown source. As required by the State of Nevada Administrative Code (NAC) 459, all MGA services were supervised and reviewed by a Nevada Certified Environmental Manager (CEM).

The ESA activities performed by MGA for the limited Phase II ESA consisted of the following:

- Collection of surface soil samples from four locations on the site based upon visual observations and the understanding of the historical uses of the site;
- Laboratory analysis of these samples;
- Preparation of a technical report complete with findings and recommendations.

## 3. BACKGROUND

In May of 2012, a Phase I ESA was conducted by MGA on the property. The purpose of the Phase I ESA was to determine if RECs may be associated with the property that was slated for construction of a school.

The site reconnaissance revealed that the property is currently undeveloped, but appears to have been graded in the past. Surface soils were observed to contain debris that was unknown in origin. The soils at the site also exhibited a whitish appearance with fluffy texture at the time of the site visit. The entire parcel was surrounded by chain-link fencing with one gate providing access. The layout of the subject property is illustrated in Figure 2.

The Phase I ESA concluded that the assessment had revealed evidence of a REC in connection with the property. The REC was described as follows:

- It appears that debris has been brought onto the property and mixed with surface soils prior to grading activities. The debris appears to be related to staging activities for a construction project that took place in 2008 and 2009. However, the exact origin of the debris is unknown.

Due to a school being proposed for construction, it was recommended that a limited Phase II ESA be performed to determine if the unknown debris and/or soil on the property contain regulated, hazardous, or potentially hazardous chemical constituents.

## 4. ENVIRONMENTAL INVESTIGATION

Limited Phase II ESA field activities were performed by MGA on March 7, 2013. Based on visual identification of potentially contaminated areas and MGA's understanding of the historical uses of the site, four surface soil samples were collected throughout the site according to the NBP approved SAP previously prepared by MGA for this project. Two laboratory-provided glass sample jars were filled at each sampling location using decontaminated sampling tools consisting of a stainless steel sampling scoop. Samples were collected between ground surface and 12

inches below ground surface (bgs). All sampling tools were decontaminated between each sampling event. Per the SAP, samples were identified with a designation of LVBRN016-SS-XX with SS indicating Soil Sample and XX indicating the sample location. These locations are shown on Figure 2.

## 5. ANALYTICAL TESTING

Soil samples were delivered under chain-of-custody protocol to ESC Lab Sciences located in Mt. Juliet, Tennessee. The following analyses were requested to be performed on all soil samples submitted:

- VOCs per EPA Method SW8260B
- SVOC-SIM per EPA Method SW8270C
- TPH per EPA Method 8015 (both gas range organics (GRO) and diesel range organics (DRO))

The chain-of-custody records for the soil samples are provided in Appendix A.

## 6. ANALYTICAL RESULTS

### 6.1 Summary of Results

All collected soil samples were analyzed for VOCs, SVOCs, and TPH (GRO and DRO). The analytical results for the soil samples are summarized in the following sections.

### 6.2 VOCs

There were no VOCs detected above laboratory reporting limits for any of the samples collected.

### 6.3 SVOCs

Several SVOC analytes were detected at concentrations greater than the laboratory reporting limits. However, none of the detected analytes were reported at concentrations above its corresponding NDEP reportable concentration (RC) for soils.

### 6.4 TPHs

Two of the four collected samples contained DRO at concentrations greater than the laboratory reporting limits. However, neither sample was greater than the corresponding State of Nevada RC in soils (100 mg/Kg).

## 7. DATA QUALITY

### 7.1 Soil Sampling

The soil samples were collected in accordance with EPA and MGA SOPs. Care was taken to minimize sample disturbance. Soil samples were preserved in a cooler until they were received by the laboratory (see chain-of-custody records provided in Appendix A).

### 7.2 Laboratory Analytical Data for Soils

The laboratory analytical data for the soil samples were in compliance with the data quality objectives established in the laboratory's SOP. According to the report, several qualifiers were

noted in the analyses of the samples. These qualifiers indicate that interferences were encountered that required sample dilutions. However, the qualifiers are common and do not appear to materially affect the usability of the results for decision making purposes.

## 8. SUMMARY OF FIELD ACTIVITIES

- The 10.84 acre site was assessed for potential environmental contamination within surface soils;
- Surface soil samples were collected from four locations throughout the site;
- Per the NBP approved SAP, surface soil samples were collected at a depth of zero to 12 inches below ground surface at each sample location; and
- Per requirements of the analytical laboratory, two soil jars were collected at each soil sample location.

## 9. FINDINGS

- Soil samples were analyzed for VOCs, SVOCs, and TPH GRO/DRO;
- Complete soil analytical results are summarized in Table 1 through Table 3; and
- None of the samples submitted contained VOCs or SVOCs or TPH above their associated NDEP RC for soils.

## 10. CONCLUSIONS AND RECOMMENDATIONS

McGinley & Associates was contracted by the NDEP on behalf of the Clark County School District to perform a Limited Phase II ESA on the subject property located just north of the intersection of Flamingo Road and Cabana Drive in Clark County, Nevada. The property is comprised of one parcel of land that is listed with Clark County, Nevada as Assessor's Parcel Number (APN) 161-16-402-003. The ESA activities were supervised and reviewed by a Nevada Certified Environmental Manager (CEM) as required by the State of Nevada NAC 459.

The field work conducted by MGA included collection of four surface soil samples from the site. Surface samples were collected at depths of zero to 12 inches below ground surface. All samples were delivered under Chain of Custody protocol to ESC Lab Sciences for analysis of VOCs, SVOCs, and TPH GRO/DRO.

The results of the analyses indicate that no VOC constituents were found above laboratory reporting limits. Several SVOC constituents were found above laboratory reporting limits. However, none of the contaminant concentrations was found to be above the State of Nevada Reportable Concentrations (RCs) associated with those constituents. Lastly, two of the samples collected had TPH-DRO concentrations above laboratory detection limits. However, the levels detected were not above the State of Nevada RC for TPH (100 mg/Kg).

We have performed a Phase II environmental site assessment of the APN: 161-16-402-003, the property. The assessment was performed in conformance with the scope and limitations of ASTM Practice E 1903-1 and for determining the extent, if any, of environmental contamination within the graded debris and soil surface of the property that may have been related to staging activities for a construction project that took place in 2008 and 2009. Based on the analytical laboratory data found for the collected samples, MGA is of the opinion that the objectives of the Phase II ESA were achieved and no further assessments are warranted at this time.

## 11. LIMITATIONS

The conclusions presented herein are based on analytical data and observations. MGA makes no warranties or guarantees as to the accuracy or completeness of information provided or compiled by others. The results reported herein are applicable to the time the sampling occurred. Changes in site conditions may occur as a result of illegal dumping practices, prevailing winds, rainfall, or other factors.

It should be recognized that definition and evaluation of environmental conditions is a difficult and inexact science. Judgments and opinions leading to conclusions and recommendations are generally made with an incomplete knowledge of the conditions present. More extensive studies, including additional environmental investigations, can tend to reduce the inherent uncertainties associated with such studies. Additional information not found or unavailable to MGA at the time of writing this report may result in a modification to the conclusions and recommendations contained herein.

This report is not a legal opinion. The services performed by MGA have been conducted in a manner consistent with the level of care ordinarily exercised by members of our profession currently practicing under similar conditions. No other warranty, expressed or implied, is made.

The use of the word "certify" in this document constitutes an expression of professional opinion regarding those facts or findings which are the subject of the certification and does not constitute a warranty or guarantee, either expressed or implied.

## 12. CLOSING

Should you have any questions regarding this report please contact Brett Bottenberg at (702) 260-4961, ext.-7003.

Respectfully submitted,

**McGinley and Associates, Inc.**

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 applicable federal, state and local statutes, regulations, and ordinances.



Brett C. Bottenberg, C.E.M. #1690, Exp. 10/07/13  
Senior Project Manager

Reviewed by:



Joseph M. McGinley, P.E., C.E.M. #1036, Exp. 11/14  
Principal



## 13. REFERENCES

*NDEP Draft Guidelines for Discovery Events, Issues relating to required notification under NAC 445A.345 to 445A.348 (Soil RCs).* Nevada Division of Environmental Protection, February 2009.

Table 1 - Summary of Soil VOC Data

Parameter	Units	LVBRN016-SS-01	LVBRN016-SS-02	LVBRN016-SS-03	LVBRN016-SS-04	NDEP RC
Acetone	mg/kg	ND	ND	ND	ND	16
Acrylonitrile	mg/kg	ND	ND	ND	ND	0.24
Benzene	mg/kg	ND	ND	ND	ND	0.03
Bromobenzene	mg/kg	ND	ND	ND	ND	94
Bromodichloromethane	mg/kg	ND	ND	ND	ND	0.6
Bromoform	mg/kg	ND	ND	ND	ND	0.8
Bromomethane	mg/kg	ND	ND	ND	ND	0.2
n-Butylbenzene	mg/kg	ND	ND	ND	ND	None
sec-Butylbenzene	mg/kg	ND	ND	ND	ND	None
tert-Butylbenzene	mg/kg	ND	ND	ND	ND	None
Carbon tetrachloride	mg/kg	ND	ND	ND	ND	0.07
Chlorobenzene	mg/kg	ND	ND	ND	ND	1
Chlorodibromomethane	mg/kg	ND	ND	ND	ND	None
Chloroethane	mg/kg	ND	ND	ND	ND	None
2-Chloroethyl vinyl ether	mg/kg	ND	ND	ND	ND	None
Chloroform	mg/kg	ND	ND	ND	ND	0.3
Chloromethane	mg/kg	ND	ND	ND	ND	1.7
2-Chlorotoluene	mg/kg	ND	ND	ND	ND	1600
4-Chlorotoluene	mg/kg	ND	ND	ND	ND	5500
1,2-Dibromo-3-Chloropropane	mg/kg	ND	ND	ND	ND	0.0056
1,2-Dibromoethane	mg/kg	ND	ND	ND	ND	0.034
Dibromomethane	mg/kg	ND	ND	ND	ND	780
1,2-Dichlorobenzene	mg/kg	ND	ND	ND	ND	17
1,3-Dichlorobenzene	mg/kg	ND	ND	ND	ND	None
1,4-Dichlorobenzene	mg/kg	ND	ND	ND	ND	2
Dichlorodifluoromethane	mg/kg	ND	ND	ND	ND	190
1,1-Dichloroethane	mg/kg	ND	ND	ND	ND	3.4
1,2-Dichloroethane	mg/kg	ND	ND	ND	ND	0.02
1,1-Dichloroethene	mg/kg	ND	ND	ND	ND	0.06
cis-1,2-Dichloroethene	mg/kg	ND	ND	ND	ND	0.4
trans-1,2-Dichloroethene	mg/kg	ND	ND	ND	ND	0.7
1,2-Dichloropropane	mg/kg	ND	ND	ND	ND	0.03
1,1-Dichloropropene	mg/kg	ND	ND	ND	ND	None
1,3-Dichloropropane	mg/kg	ND	ND	ND	ND	1600
cis-1,3-Dichloropropene	mg/kg	ND	ND	ND	ND	0.004
trans-1,3-Dichloropropene	mg/kg	ND	ND	ND	ND	0.004
2,2-Dichloropropane	mg/kg	ND	ND	ND	ND	None
Di-isopropyl ether	mg/kg	ND	ND	ND	ND	1200
Ethylbenzene	mg/kg	ND	ND	ND	ND	5.7
Hexachloro-1,3-butadiene	mg/kg	ND	ND	ND	ND	2
Isopropylbenzene	mg/kg	ND	ND	ND	ND	None
p-Isopropyltoluene	mg/kg	ND	ND	ND	ND	None
2-Butanone (MEK)	mg/kg	ND	ND	ND	ND	28000
Methylene Chloride	mg/kg	ND	ND	ND	ND	0.02
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	ND	ND	ND	5300
Methyl tert-butyl ether	mg/kg	ND	ND	ND	ND	39
Naphthalene	mg/kg	ND	ND	ND	ND	None
n-Propylbenzene	mg/kg	ND	ND	ND	ND	None
Styrene	mg/kg	ND	ND	ND	ND	4
1,1,1,2-Tetrachloroethane	mg/kg	ND	ND	ND	ND	2
1,1,2,2-Tetrachloroethane	mg/kg	ND	ND	ND	ND	0.003
1,1,2-Trichlorotrifluoroethane	mg/kg	ND	ND	ND	ND	43000
Tetrachloroethene	mg/kg	ND	ND	ND	ND	0.06
Toluene	mg/kg	ND	ND	ND	ND	12
1,2,3-Trichlorobenzene	mg/kg	ND	ND	ND	ND	None
1,2,4-Trichlorobenzene	mg/kg	ND	ND	ND	ND	5
1,1,1-Trichloroethane	mg/kg	ND	ND	ND	ND	2
1,1,2-Trichloroethane	mg/kg	ND	ND	ND	ND	0.02
Trichloroethene	mg/kg	ND	ND	ND	ND	0.06
Trichlorofluoromethane	mg/kg	ND	ND	ND	ND	800
1,2,3-Trichloropropane	mg/kg	ND	ND	ND	ND	0.091
1,2,4-Trimethylbenzene	mg/kg	ND	ND	ND	ND	67
1,2,3-Trimethylbenzene	mg/kg	ND	ND	ND	ND	None
1,3,5-Trimethylbenzene	mg/kg	ND	ND	ND	ND	47
Vinyl chloride	mg/kg	ND	ND	ND	ND	0.01
Xylenes, Total	mg/kg	ND	ND	ND	ND	210

**Notes:**

ND = Not Detected above laboratory reporting limits

mg/kg = parts per million

NDEP RC = State of Nevada Reportable Concentration

**Table 2 - Summary of Soil SVOC Data**

Parameter	Units	LVBRN016-SS-01	LVBRN016-SS-02	LVBRN016-SS-03	LVBRN016-SS-04	NDEP RC
Anthracene	mg/kg	ND	ND	ND	ND	12000
Acenaphthene	mg/kg	ND	ND	ND	ND	570
Acenaphthylene	mg/kg	ND	ND	ND	ND	None
Benzo(a)anthracene	mg/kg	0.0015	0.0022	0.02	0.0022	0.15
Benzo(a)pyrene	mg/kg	0.0043	0.00069	0.008	ND	0.015
Benzo(b)fluoranthene	mg/kg	0.0054	0.0013	0.015	ND	0.15
Benzo(g,h,i)perylene	mg/kg	0.0026	0.0013	0.018	ND	None
Benzo(k)fluoranthene	mg/kg	0.0044	ND	ND	ND	None
Chrysene	mg/kg	0.0051	ND	ND	ND	1.5
Dibenz(a,h)anthracene	mg/kg	ND	ND	ND	ND	0.015
Fluoranthene	mg/kg	0.0032	0.0014	ND	ND	2300
Fluorene	mg/kg	ND	ND	ND	ND	560
Indeno(1,2,3-cd)pyrene	mg/kg	0.0012	ND	ND	ND	0.15
Naphthalene	mg/kg	ND	ND	ND	ND	3.9
Phenanthrene	mg/kg	0.0085	0.0017	ND	ND	None
Pyrene	mg/kg	0.0051	0.0016	0.0082	ND	1700
1-Methylnaphthalene	mg/kg	ND	ND	ND	ND	22
2-Methylnaphthalene	mg/kg	ND	ND	ND	ND	310
2-Chloronaphthalene	mg/kg	ND	ND	ND	ND	None

**Notes:**

ND = Not Detected above laboratory reporting limits

mg/kg = parts per million

NDEP RC = State of Nevada Reportable Concentration

**Table 3 - Summary of Soil TPH Results**

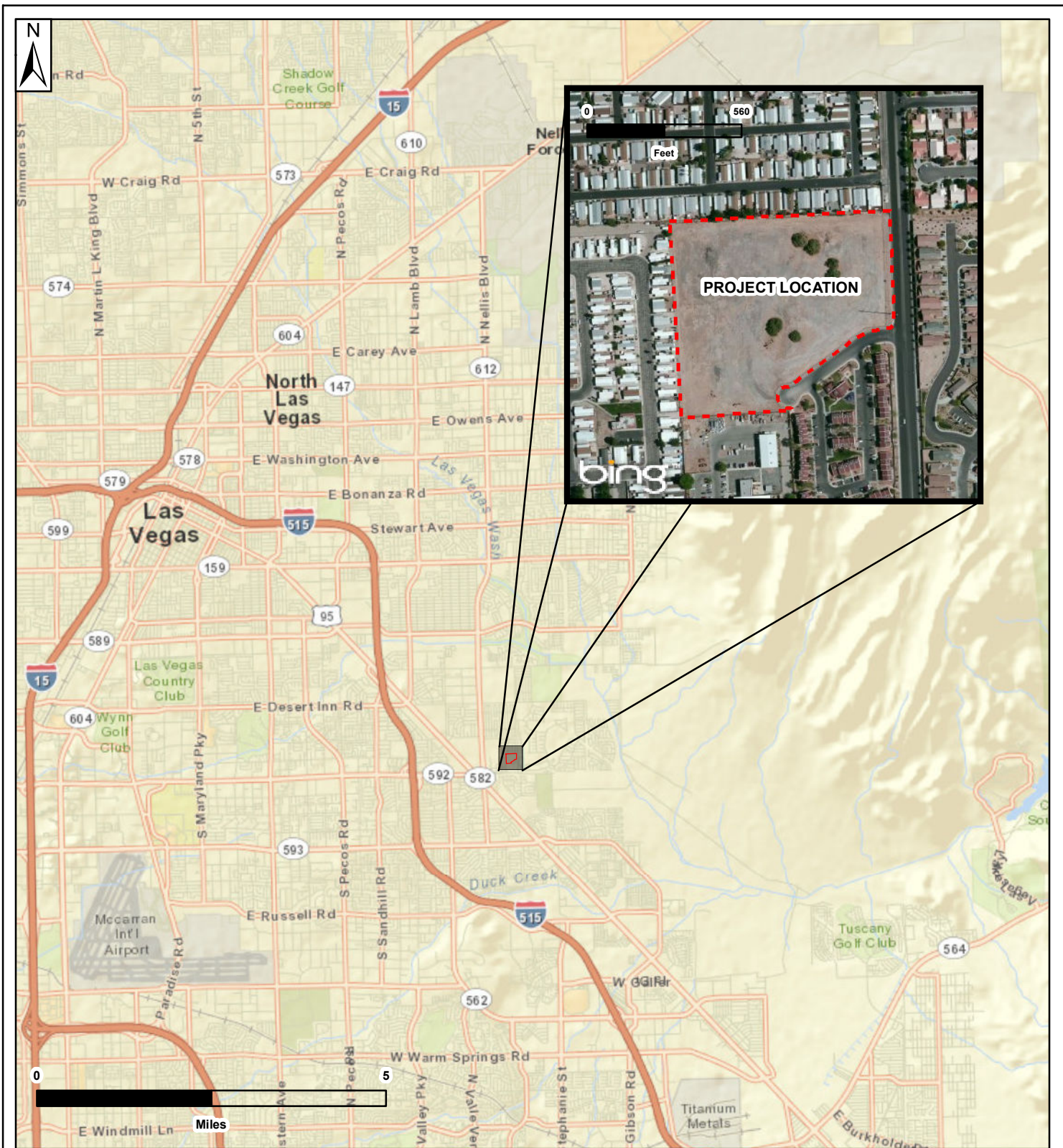
Parameter	Units	LVBRN016-SS-01	LVBRN016-SS-02	LVBRN016-SS-03	LVBRN016-SS-04	NDEP RC
TPH (GC/FID) Low Fraction	mg/kg	ND	ND	ND	ND	100
TPH (GC/FID) High Fraction	mg/kg	48	ND	ND	1.5	100

**Notes:**

ND = Not Detected above laboratory reporting limits

mg/kg = parts per million

NDEP RC = State of Nevada Reportable Concentration



**FIGURE 1**

TITLE:  
**PROJECT LOCATION MAP**  
 -SHOWING-  
**APN 161-16-402-003**  
**LAS VEGAS, NEVADA**

JOB NO.:  
**LVBRN016**

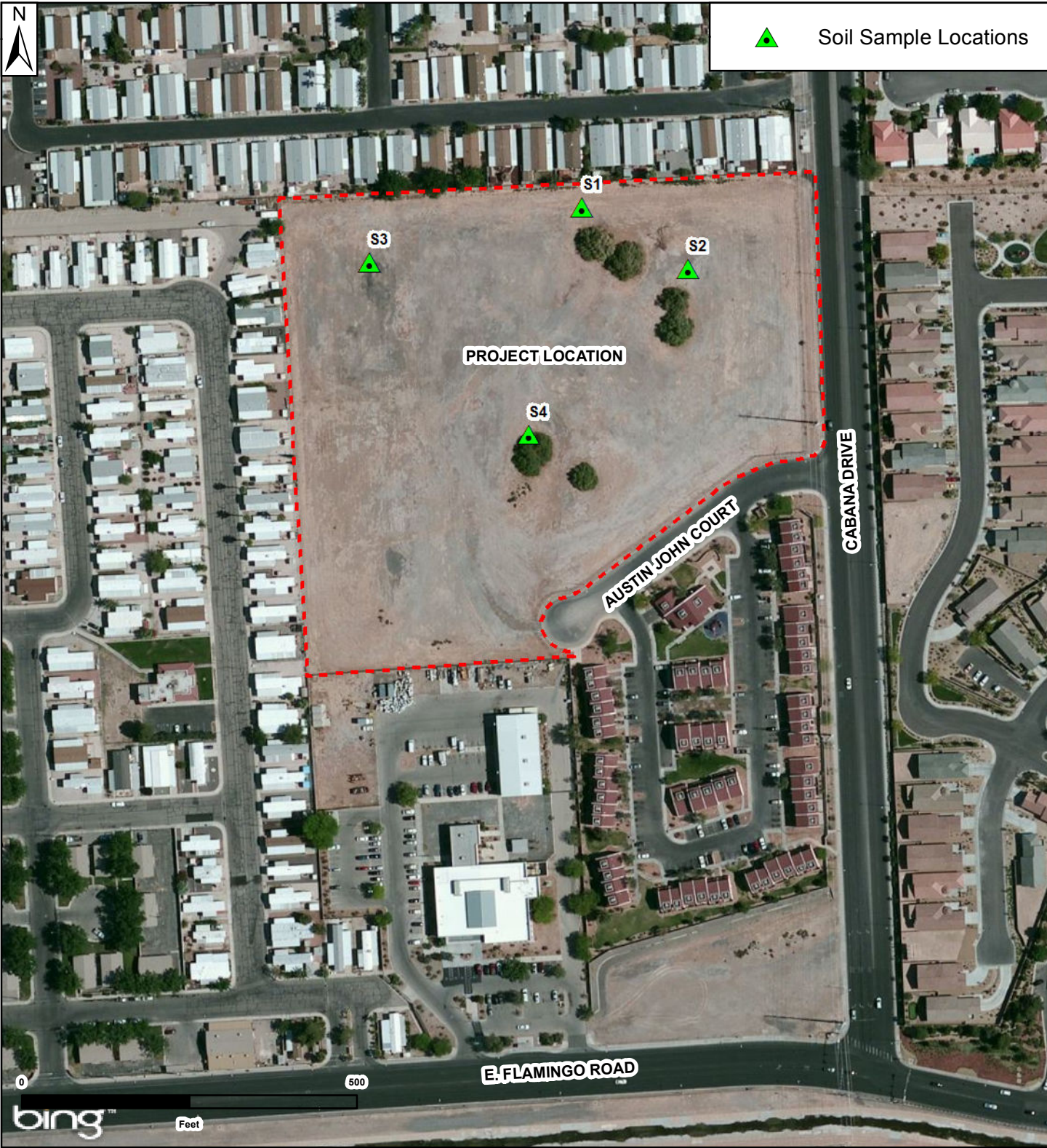
DATE:  
**1/14/2013**



FILE:  
**LVBRN016\_figure1\_msp\_85x11\_portrait**

COORDINATE SYSTEM:  
**NAD 1983 UTM Zone 11N US Feet**

REF.	DESIGNED	MSP	CHECKED	MSP	REVISION: -
	DRAWN	MSP	APPROVED	BB	



**FIGURE 2**

TITLE:

**SITE MAP  
-SHOWING-  
SOIL SAMPLE LOCATIONS  
APN 161-16-402-003  
LAS VEGAS, NEVADA**

JOB NO.:  
**LVBRN016**

DATE:  
**4/16/2013**

**McGinley & Associates**  
Environmental Engineering and Science

FILE:  
**LVBRN016\_figure2a\_msp\_85x11\_portrait**

COORDINATE SYSTEM:  
**NAD 1983 UTM Zone 11N US Feet**

REF.	DESIGNED	MSP	CHECKED	MSP	REVISION:
	DRAWN	MSP	APPROVED	BB	-

# **APPENDIX A**

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## **Chain-of-Custody Records and Laboratory Reports for Soil Samples**

Company Name/Address  
**MCGINLEY AND ASSOCIATES**  
**6280 S. Valley View Blvd, Suite 604**  
**LAS VEGAS, NV 89118**

Chain of Custody  
 Page 1 of 1

Prepared by:  
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 Phone (800) 767-5859  
 FAX (615)758-5859

Alternate Billing  
**MCGINLVN-BOTTENBERG**

Report to: BRETT BOTTENBERG  
 E-mail to: bbottenberg@mcg.in.com

City/State Collected: Las Vegas, NV

Project Description: APN: 161-16-402-003

Lab Project #: V

Client Project No. LVRN016

Site/Facility ID#

Collected by: B. Park

Collected by (Signature): [Signature]

Packed on ice N Y X

Sample ID	Comp/Grab	Matrix	Depth	Date	Time	Date Results Needed		No of Cntrs	Remarks/contaminant	Sample # (lab only)
						Rush?	Lab MUST be Notified			
LVRN016-JF-01	Grab	SS	6"	3-7-13	0830			2		
LVRN016-JF-02	Grab	SS	6"	3-7-13	0845			2		
LVRN016-JF-03	Grab	SS	6"	3-7-13	0900			2		
LVRN016-JF-04	Grab	SS	6"	3-7-13	0915			2		

Analysis/Container/Preservative	Analysis/Container/Preservative	Analysis/Container/Preservative	Analysis/Container/Preservative	Analysis/Container/Preservative	Analysis/Container/Preservative	Analysis/Container/Preservative	Analysis/Container/Preservative	Analysis/Container/Preservative	Analysis/Container/Preservative
8270PAHSIM/DRO / 4oz Clr/ No Pres	V8260/ GRO/ 4oz clr jar/ no pres								

\*Matrix: SS-Soil/Solid GW-Groundwater WW-Wastewater DW-Drinking Water OT-Other \_\_\_\_\_

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Remarks:

Relinquished by (Signature) \_\_\_\_\_ Date: 3-7-13 Time: 1430

Relinquished by (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by (Signature) [Signature] Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received for lab by (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Temp: \_\_\_\_\_ Bottles Received: \_\_\_\_\_

Date: \_\_\_\_\_

Condition (lab use only)

pH Checked: \_\_\_\_\_ NCF: \_\_\_\_\_





12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Brett Bottenberg  
McGinley and Assoc.- Las Vegas, NV  
6280 S Valley View Blvd, Suite 604  
Las Vegas, NV 89118

## Report Summary

Monday March 18, 2013

Report Number: L623996


Samples Received: 03/08/13

Client Project: LVBRN016

Description: APN: 161-16-402-003

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

  
Jared Willis, ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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Est. 1970

REPORT OF ANALYSIS

Brett Bottenberg  
 McGinley and Assoc.- Las Vegs, NV  
 6280 S Valley View Blvd, Suite 604  
 Las Vegas, NV 89118

March 18, 2013

Date Received : March 08, 2013  
 Description : APN: 161-16-402-003

ESC Sample # : L623996-01

Sample ID : LVBRN016-SS-01 6IN

Site ID :

Collected By : BP/MP  
 Collection Date : 03/07/13 08:20

Project # : LVBRN016

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	0.11	0.50	mg/kg	J6	8015D/G	03/12/13	5
Surrogate Recovery (70-130)								
a,a,a-Trifluorotoluene(FID)	97.4			% Rec.		602/801	03/12/13	5
Volatile Organics								
Acetone	U	0.029	0.25	mg/kg		8260B	03/09/13	5
Acrylonitrile	U	0.0090	0.050	mg/kg		8260B	03/09/13	5
Benzene	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Bromobenzene	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Bromodichloromethane	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
Bromoform	U	0.0021	0.0050	mg/kg		8260B	03/09/13	5
Bromomethane	U	0.0067	0.025	mg/kg		8260B	03/09/13	5
n-Butylbenzene	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
sec-Butylbenzene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
tert-Butylbenzene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
Carbon tetrachloride	U	0.0016	0.0050	mg/kg		8260B	03/09/13	5
Chlorobenzene	U	0.0011	0.0050	mg/kg		8260B	03/09/13	5
Chlorodibromomethane	U	0.0019	0.0050	mg/kg		8260B	03/09/13	5
Chloroethane	U	0.0047	0.025	mg/kg		8260B	03/09/13	5
2-Chloroethyl vinyl ether	U	0.012	0.25	mg/kg		8260B	03/09/13	5
Chloroform	U	0.0011	0.025	mg/kg		8260B	03/09/13	5
Chloromethane	U	0.0019	0.013	mg/kg		8260B	03/09/13	5
2-Chlorotoluene	U	0.0015	0.0050	mg/kg		8260B	03/09/13	5
4-Chlorotoluene	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5
1,2-Dibromo-3-Chloropropane	U	0.0052	0.025	mg/kg		8260B	03/09/13	5
1,2-Dibromoethane	U	0.0017	0.0050	mg/kg		8260B	03/09/13	5
Dibromomethane	U	0.0019	0.0050	mg/kg		8260B	03/09/13	5
1,2-Dichlorobenzene	U	0.0015	0.0050	mg/kg		8260B	03/09/13	5
1,3-Dichlorobenzene	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5
1,4-Dichlorobenzene	U	0.0011	0.0050	mg/kg		8260B	03/09/13	5
Dichlorodifluoromethane	U	0.0036	0.025	mg/kg		8260B	03/09/13	5
1,1-Dichloroethane	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
1,2-Dichloroethane	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
1,1-Dichloroethene	U	0.0015	0.0050	mg/kg		8260B	03/09/13	5
cis-1,2-Dichloroethene	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5
trans-1,2-Dichloroethene	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
1,2-Dichloropropane	U	0.0018	0.0050	mg/kg		8260B	03/09/13	5
1,1-Dichloropropene	U	0.0016	0.0050	mg/kg		8260B	03/09/13	5
1,3-Dichloropropane	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
cis-1,3-Dichloropropene	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
trans-1,3-Dichloropropene	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
2,2-Dichloropropane	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Di-isopropyl ether	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD = TRRP SDL

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

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REPORT OF ANALYSIS

Brett Bottenberg  
 McGinley and Assoc.- Las Vegs, NV  
 6280 S Valley View Blvd, Suite 604  
 Las Vegas, NV 89118

March 18, 2013

Date Received : March 08, 2013  
 Description : APN: 161-16-402-003

ESC Sample # : L623996-01

Sample ID : LVBRN016-SS-01 6IN

Site ID :

Collected By : BP/MP  
 Collection Date : 03/07/13 08:20

Project # : LVBRN016

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Ethylbenzene	U	0.0015	0.0050	mg/kg		8260B	03/09/13	5
Hexachloro-1,3-butadiene	U	0.0017	0.0050	mg/kg		8260B	03/09/13	5
Isopropylbenzene	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5
p-Isopropyltoluene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
2-Butanone (MEK)	U	0.023	0.050	mg/kg		8260B	03/09/13	5
Methylene Chloride	U	0.0027	0.025	mg/kg		8260B	03/09/13	5
4-Methyl-2-pentanone (MIBK)	U	0.0094	0.050	mg/kg		8260B	03/09/13	5
Methyl tert-butyl ether	U	0.0011	0.0050	mg/kg		8260B	03/09/13	5
Naphthalene	U	0.0022	0.025	mg/kg		8260B	03/09/13	5
n-Propylbenzene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
Styrene	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5
1,1,1,2-Tetrachloroethane	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
1,1,2,2-Tetrachloroethane	U	0.0018	0.0050	mg/kg		8260B	03/09/13	5
1,1,2-Trichlorotrifluoroethane	U	0.0018	0.0050	mg/kg		8260B	03/09/13	5
Tetrachloroethene	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Toluene	U	0.0022	0.025	mg/kg		8260B	03/09/13	5
1,2,3-Trichlorobenzene	U	0.0015	0.0050	mg/kg		8260B	03/09/13	5
1,2,4-Trichlorobenzene	U	0.0019	0.0050	mg/kg		8260B	03/09/13	5
1,1,1-Trichloroethane	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
1,1,2-Trichloroethane	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Trichloroethene	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Trichlorofluoromethane	U	0.0019	0.025	mg/kg		8260B	03/09/13	5
1,2,3-Trichloropropane	U	0.0037	0.013	mg/kg		8260B	03/09/13	5
1,2,4-Trimethylbenzene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
1,2,3-Trimethylbenzene	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
1,3,5-Trimethylbenzene	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
Vinyl chloride	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Xylenes, Total	U	0.0035	0.015	mg/kg		8260B	03/09/13	5
Surrogate Recovery								
Toluene-d8	97.4			% Rec.		8260B	03/09/13	5
Dibromofluoromethane	100.			% Rec.		8260B	03/09/13	5
4-Bromofluorobenzene	92.5			% Rec.		8260B	03/09/13	5
TPH (GC/FID) High Fraction	48.	3.1	16.	mg/kg	J6	3546/DR	03/14/13	4
Surrogate recovery(%)								
o-Terphenyl	62.3			% Rec.		3546/DR	03/14/13	4
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Acenaphthene	U	0.00071	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Acenaphthylene	U	0.00057	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Benzo(a)anthracene	0.0015	0.00092	0.0060	mg/kg	JJ3	8270C-S	03/13/13	1
Benzo(a)pyrene	0.0043	0.00062	0.0060	mg/kg	JJ3	8270C-S	03/13/13	1

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REPORT OF ANALYSIS

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 McGinley and Assoc.- Las Vegs, NV  
 6280 S Valley View Blvd, Suite 604  
 Las Vegas, NV 89118

March 18, 2013

Date Received : March 08, 2013  
 Description : APN: 161-16-402-003

ESC Sample # : L623996-01

Sample ID : LVBRN016-SS-01 6IN

Site ID :

Collected By : BP/MP  
 Collection Date : 03/07/13 08:20

Project # : LVBRN016

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzo(b)fluoranthene	0.0054	0.00082	0.0060	mg/kg	JJ3	8270C-S	03/13/13	1
Benzo(g,h,i)perylene	0.0026	0.0012	0.0060	mg/kg	JJ3	8270C-S	03/13/13	1
Benzo(k)fluoranthene	0.0044	0.0013	0.0060	mg/kg	JJ3	8270C-S	03/13/13	1
Chrysene	0.0051	0.0011	0.0060	mg/kg	JJ3	8270C-S	03/13/13	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Fluoranthene	0.0032	0.0010	0.0060	mg/kg	JJ3	8270C-S	03/13/13	1
Fluorene	U	0.00055	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Indeno(1,2,3-cd)pyrene	0.0012	0.0012	0.0060	mg/kg	JJ3	8270C-S	03/13/13	1
Naphthalene	U	0.00065	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Phenanthrene	0.0085	0.00074	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Pyrene	0.0051	0.00059	0.0060	mg/kg	JJ3	8270C-S	03/13/13	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg	J3	8270C-S	03/13/13	1
2-Methylnaphthalene	U	0.00059	0.0060	mg/kg	J3	8270C-S	03/13/13	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Surrogate Recovery								
Nitrobenzene-d5	57.5			% Rec.		8270C-S	03/13/13	1
2-Fluorobiphenyl	60.1			% Rec.		8270C-S	03/13/13	1
p-Terphenyl-d14	66.0			% Rec.		8270C-S	03/13/13	1

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March 18, 2013

Date Received : March 08, 2013  
 Description : APN: 161-16-402-003

ESC Sample # : L623996-02

Sample ID : LVBRN016-SS-02 6IN

Site ID :

Collected By : BP/MP  
 Collection Date : 03/07/13 08:45

Project # : LVBRN016

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	0.11	0.50	mg/kg		8015D/G	03/12/13	5
Surrogate Recovery (70-130)								
a,a,a-Trifluorotoluene(FID)	97.6			% Rec.		602/801	03/12/13	5
Volatile Organics								
Acetone	U	0.029	0.25	mg/kg		8260B	03/09/13	5
Acrylonitrile	U	0.0090	0.050	mg/kg		8260B	03/09/13	5
Benzene	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Bromobenzene	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Bromodichloromethane	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
Bromoform	U	0.0021	0.0050	mg/kg		8260B	03/09/13	5
Bromomethane	U	0.0067	0.025	mg/kg		8260B	03/09/13	5
n-Butylbenzene	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
sec-Butylbenzene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
tert-Butylbenzene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
Carbon tetrachloride	U	0.0016	0.0050	mg/kg		8260B	03/09/13	5
Chlorobenzene	U	0.0011	0.0050	mg/kg		8260B	03/09/13	5
Chlorodibromomethane	U	0.0019	0.0050	mg/kg		8260B	03/09/13	5
Chloroethane	U	0.0047	0.025	mg/kg		8260B	03/09/13	5
2-Chloroethyl vinyl ether	U	0.012	0.25	mg/kg		8260B	03/09/13	5
Chloroform	U	0.0011	0.025	mg/kg		8260B	03/09/13	5
Chloromethane	U	0.0019	0.013	mg/kg		8260B	03/09/13	5
2-Chlorotoluene	U	0.0015	0.0050	mg/kg		8260B	03/09/13	5
4-Chlorotoluene	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5
1,2-Dibromo-3-Chloropropane	U	0.0052	0.025	mg/kg		8260B	03/09/13	5
1,2-Dibromoethane	U	0.0017	0.0050	mg/kg		8260B	03/09/13	5
Dibromomethane	U	0.0019	0.0050	mg/kg		8260B	03/09/13	5
1,2-Dichlorobenzene	U	0.0015	0.0050	mg/kg		8260B	03/09/13	5
1,3-Dichlorobenzene	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5
1,4-Dichlorobenzene	U	0.0011	0.0050	mg/kg		8260B	03/09/13	5
Dichlorodifluoromethane	U	0.0036	0.025	mg/kg		8260B	03/09/13	5
1,1-Dichloroethane	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
1,2-Dichloroethane	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
1,1-Dichloroethene	U	0.0015	0.0050	mg/kg		8260B	03/09/13	5
cis-1,2-Dichloroethene	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5
trans-1,2-Dichloroethene	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
1,2-Dichloropropane	U	0.0018	0.0050	mg/kg		8260B	03/09/13	5
1,1-Dichloropropene	U	0.0016	0.0050	mg/kg		8260B	03/09/13	5
1,3-Dichloropropane	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
cis-1,3-Dichloropropene	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
trans-1,3-Dichloropropene	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
2,2-Dichloropropane	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Di-isopropyl ether	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD = TRRP SDL

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 Las Vegas, NV 89118

March 18, 2013

Date Received : March 08, 2013  
 Description : APN: 161-16-402-003

ESC Sample # : L623996-02

Sample ID : LVBRN016-SS-02 6IN

Site ID :

Collected By : BP/MP  
 Collection Date : 03/07/13 08:45

Project # : LVBRN016

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Ethylbenzene	U	0.0015	0.0050	mg/kg		8260B	03/09/13	5
Hexachloro-1,3-butadiene	U	0.0017	0.0050	mg/kg		8260B	03/09/13	5
Isopropylbenzene	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5
p-Isopropyltoluene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
2-Butanone (MEK)	U	0.023	0.050	mg/kg		8260B	03/09/13	5
Methylene Chloride	U	0.0027	0.025	mg/kg		8260B	03/09/13	5
4-Methyl-2-pentanone (MIBK)	U	0.0094	0.050	mg/kg		8260B	03/09/13	5
Methyl tert-butyl ether	U	0.0011	0.0050	mg/kg		8260B	03/09/13	5
Naphthalene	U	0.0022	0.025	mg/kg		8260B	03/09/13	5
n-Propylbenzene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
Styrene	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5
1,1,1,2-Tetrachloroethane	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
1,1,2,2-Tetrachloroethane	U	0.0018	0.0050	mg/kg		8260B	03/09/13	5
1,1,2-Trichlorotrifluoroethane	U	0.0018	0.0050	mg/kg		8260B	03/09/13	5
Tetrachloroethene	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Toluene	U	0.0022	0.025	mg/kg		8260B	03/09/13	5
1,2,3-Trichlorobenzene	U	0.0015	0.0050	mg/kg		8260B	03/09/13	5
1,2,4-Trichlorobenzene	U	0.0019	0.0050	mg/kg		8260B	03/09/13	5
1,1,1-Trichloroethane	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
1,1,2-Trichloroethane	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Trichloroethene	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Trichlorofluoromethane	U	0.0019	0.025	mg/kg		8260B	03/09/13	5
1,2,3-Trichloropropane	U	0.0037	0.013	mg/kg		8260B	03/09/13	5
1,2,4-Trimethylbenzene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
1,2,3-Trimethylbenzene	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
1,3,5-Trimethylbenzene	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
Vinyl chloride	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Xylenes, Total	U	0.0035	0.015	mg/kg		8260B	03/09/13	5
Surrogate Recovery								
Toluene-d8	97.9			% Rec.		8260B	03/09/13	5
Dibromofluoromethane	105.			% Rec.		8260B	03/09/13	5
4-Bromofluorobenzene	93.7			% Rec.		8260B	03/09/13	5
TPH (GC/FID) High Fraction	U	3.1	16.	mg/kg	0	3546/DR	03/14/13	4
Surrogate recovery(%)								
o-Terphenyl	61.7			% Rec.		3546/DR	03/14/13	4
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Acenaphthene	U	0.00071	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Acenaphthylene	U	0.00057	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Benzo(a)anthracene	0.0022	0.00092	0.0060	mg/kg	JJ3	8270C-S	03/13/13	1
Benzo(a)pyrene	0.00069	0.00062	0.0060	mg/kg	JJ3	8270C-S	03/13/13	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD = TRRP SDL

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Brett Bottenberg  
 McGinley and Assoc.- Las Vegs, NV  
 6280 S Valley View Blvd, Suite 604  
 Las Vegas, NV 89118

March 18, 2013

Date Received : March 08, 2013  
 Description : APN: 161-16-402-003

ESC Sample # : L623996-02

Sample ID : LVBRN016-SS-02 6IN

Site ID :

Collected By : BP/MP  
 Collection Date : 03/07/13 08:45

Project # : LVBRN016

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzo(b)fluoranthene	0.0013	0.00082	0.0060	mg/kg	JJ3	8270C-S	03/13/13	1
Benzo(g,h,i)perylene	0.0013	0.0012	0.0060	mg/kg	JJ3	8270C-S	03/13/13	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Chrysene	U	0.0011	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Fluoranthene	0.0014	0.0010	0.0060	mg/kg	JJ3	8270C-S	03/13/13	1
Fluorene	U	0.00055	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Naphthalene	U	0.00065	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Phenanthrene	0.0017	0.00074	0.0060	mg/kg	JJ3	8270C-S	03/13/13	1
Pyrene	0.0016	0.00059	0.0060	mg/kg	JJ3	8270C-S	03/13/13	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg	J3	8270C-S	03/13/13	1
2-Methylnaphthalene	U	0.00059	0.0060	mg/kg	J3	8270C-S	03/13/13	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Surrogate Recovery								
Nitrobenzene-d5	52.9			% Rec.		8270C-S	03/13/13	1
2-Fluorobiphenyl	49.2			% Rec.		8270C-S	03/13/13	1
p-Terphenyl-d14	44.2			% Rec.		8270C-S	03/13/13	1

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REPORT OF ANALYSIS

Brett Bottenberg  
 McGinley and Assoc.- Las Vegs, NV  
 6280 S Valley View Blvd, Suite 604  
 Las Vegas, NV 89118

March 18, 2013

Date Received : March 08, 2013  
 Description : APN: 161-16-402-003

ESC Sample # : L623996-03

Sample ID : LVBRN016-SS-03 6IN

Site ID :

Collected By : BP/MP  
 Collection Date : 03/07/13 09:00

Project # : LVBRN016

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	0.11	0.50	mg/kg		8015D/G	03/12/13	5
Surrogate Recovery (70-130)								
a,a,a-Trifluorotoluene(FID)	98.0			% Rec.		602/801	03/12/13	5
Volatile Organics								
Acetone	U	0.029	0.25	mg/kg		8260B	03/09/13	5
Acrylonitrile	U	0.0090	0.050	mg/kg		8260B	03/09/13	5
Benzene	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Bromobenzene	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Bromodichloromethane	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
Bromoform	U	0.0021	0.0050	mg/kg		8260B	03/09/13	5
Bromomethane	U	0.0067	0.025	mg/kg		8260B	03/09/13	5
n-Butylbenzene	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
sec-Butylbenzene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
tert-Butylbenzene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
Carbon tetrachloride	U	0.0016	0.0050	mg/kg		8260B	03/09/13	5
Chlorobenzene	U	0.0011	0.0050	mg/kg		8260B	03/09/13	5
Chlorodibromomethane	U	0.0019	0.0050	mg/kg		8260B	03/09/13	5
Chloroethane	U	0.0047	0.025	mg/kg		8260B	03/09/13	5
2-Chloroethyl vinyl ether	U	0.012	0.25	mg/kg		8260B	03/09/13	5
Chloroform	U	0.0011	0.025	mg/kg		8260B	03/09/13	5
Chloromethane	U	0.0019	0.013	mg/kg		8260B	03/09/13	5
2-Chlorotoluene	U	0.0015	0.0050	mg/kg		8260B	03/09/13	5
4-Chlorotoluene	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5
1,2-Dibromo-3-Chloropropane	U	0.0052	0.025	mg/kg		8260B	03/09/13	5
1,2-Dibromoethane	U	0.0017	0.0050	mg/kg		8260B	03/09/13	5
Dibromomethane	U	0.0019	0.0050	mg/kg		8260B	03/09/13	5
1,2-Dichlorobenzene	U	0.0015	0.0050	mg/kg		8260B	03/09/13	5
1,3-Dichlorobenzene	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5
1,4-Dichlorobenzene	U	0.0011	0.0050	mg/kg		8260B	03/09/13	5
Dichlorodifluoromethane	U	0.0036	0.025	mg/kg		8260B	03/09/13	5
1,1-Dichloroethane	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
1,2-Dichloroethane	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
1,1-Dichloroethene	U	0.0015	0.0050	mg/kg		8260B	03/09/13	5
cis-1,2-Dichloroethene	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5
trans-1,2-Dichloroethene	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
1,2-Dichloropropane	U	0.0018	0.0050	mg/kg		8260B	03/09/13	5
1,1-Dichloropropene	U	0.0016	0.0050	mg/kg		8260B	03/09/13	5
1,3-Dichloropropene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
cis-1,3-Dichloropropene	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
trans-1,3-Dichloropropene	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
2,2-Dichloropropane	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Di-isopropyl ether	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5

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REPORT OF ANALYSIS

Brett Bottenberg  
 McGinley and Assoc.- Las Vegs, NV  
 6280 S Valley View Blvd, Suite 604  
 Las Vegas, NV 89118

March 18, 2013

Date Received : March 08, 2013  
 Description : APN: 161-16-402-003

ESC Sample # : L623996-03

Sample ID : LVBRN016-SS-03 6IN

Site ID :

Collected By : BP/MP  
 Collection Date : 03/07/13 09:00

Project # : LVBRN016

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Ethylbenzene	U	0.0015	0.0050	mg/kg		8260B	03/09/13	5
Hexachloro-1,3-butadiene	U	0.0017	0.0050	mg/kg		8260B	03/09/13	5
Isopropylbenzene	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5
p-Isopropyltoluene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
2-Butanone (MEK)	U	0.023	0.050	mg/kg		8260B	03/09/13	5
Methylene Chloride	U	0.0027	0.025	mg/kg		8260B	03/09/13	5
4-Methyl-2-pentanone (MIBK)	U	0.0094	0.050	mg/kg		8260B	03/09/13	5
Methyl tert-butyl ether	U	0.0011	0.0050	mg/kg		8260B	03/09/13	5
Naphthalene	U	0.0022	0.025	mg/kg		8260B	03/09/13	5
n-Propylbenzene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
Styrene	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5
1,1,1,2-Tetrachloroethane	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
1,1,2,2-Tetrachloroethane	U	0.0018	0.0050	mg/kg		8260B	03/09/13	5
1,1,2-Trichlorotrifluoroethane	U	0.0018	0.0050	mg/kg		8260B	03/09/13	5
Tetrachloroethene	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Toluene	U	0.0022	0.025	mg/kg		8260B	03/09/13	5
1,2,3-Trichlorobenzene	U	0.0015	0.0050	mg/kg		8260B	03/09/13	5
1,2,4-Trichlorobenzene	U	0.0019	0.0050	mg/kg		8260B	03/09/13	5
1,1,1-Trichloroethane	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
1,1,2-Trichloroethane	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Trichloroethene	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Trichlorofluoromethane	U	0.0019	0.025	mg/kg		8260B	03/09/13	5
1,2,3-Trichloropropane	U	0.0037	0.013	mg/kg		8260B	03/09/13	5
1,2,4-Trimethylbenzene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
1,2,3-Trimethylbenzene	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
1,3,5-Trimethylbenzene	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
Vinyl chloride	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Xylenes, Total	U	0.0035	0.015	mg/kg		8260B	03/09/13	5
Surrogate Recovery								
Toluene-d8	97.7			% Rec.		8260B	03/09/13	5
Dibromofluoromethane	100.			% Rec.		8260B	03/09/13	5
4-Bromofluorobenzene	91.3			% Rec.		8260B	03/09/13	5
TPH (GC/FID) High Fraction	U	31.	160	mg/kg	0	3546/DR	03/15/13	40
Surrogate recovery(%)								
o-Terphenyl	100.			% Rec.	J7	3546/DR	03/15/13	40
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.0076	0.060	mg/kg	J3	8270C-S	03/13/13	10
Acenaphthene	U	0.0071	0.060	mg/kg	J3	8270C-S	03/13/13	10
Acenaphthylene	U	0.0057	0.060	mg/kg	J3	8270C-S	03/13/13	10
Benzo(a)anthracene	0.020	0.0092	0.060	mg/kg	JJ3	8270C-S	03/13/13	10
Benzo(a)pyrene	0.0080	0.0062	0.060	mg/kg	JJ3	8270C-S	03/13/13	10

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REPORT OF ANALYSIS

Brett Bottenberg  
 McGinley and Assoc.- Las Vegs, NV  
 6280 S Valley View Blvd, Suite 604  
 Las Vegas, NV 89118

March 18, 2013

Date Received : March 08, 2013  
 Description : APN: 161-16-402-003

ESC Sample # : L623996-03

Sample ID : LVBRN016-SS-03 6IN

Site ID :

Collected By : BP/MP  
 Collection Date : 03/07/13 09:00

Project # : LVBRN016

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzo(b)fluoranthene	0.015	0.0082	0.060	mg/kg	JJ3	8270C-S	03/13/13	10
Benzo(g,h,i)perylene	0.018	0.012	0.060	mg/kg	JJ3	8270C-S	03/13/13	10
Benzo(k)fluoranthene	U	0.013	0.060	mg/kg	J3	8270C-S	03/13/13	10
Chrysene	U	0.011	0.060	mg/kg	J3	8270C-S	03/13/13	10
Dibenz(a,h)anthracene	U	0.011	0.060	mg/kg	J3	8270C-S	03/13/13	10
Fluoranthene	U	0.010	0.060	mg/kg	J3	8270C-S	03/13/13	10
Fluorene	U	0.0055	0.060	mg/kg	J3	8270C-S	03/13/13	10
Indeno(1,2,3-cd)pyrene	U	0.012	0.060	mg/kg	J3	8270C-S	03/13/13	10
Naphthalene	U	0.0065	0.060	mg/kg	J3	8270C-S	03/13/13	10
Phenanthrene	U	0.0074	0.060	mg/kg	J3	8270C-S	03/13/13	10
Pyrene	0.0082	0.0059	0.060	mg/kg	JJ3	8270C-S	03/13/13	10
1-Methylnaphthalene	U	0.0079	0.060	mg/kg	J3	8270C-S	03/13/13	10
2-Methylnaphthalene	U	0.0059	0.060	mg/kg	J3	8270C-S	03/13/13	10
2-Chloronaphthalene	U	0.0060	0.060	mg/kg	J3	8270C-S	03/13/13	10
Surrogate Recovery								
Nitrobenzene-d5	79.8			% Rec.		8270C-S	03/13/13	10
2-Fluorobiphenyl	78.4			% Rec.		8270C-S	03/13/13	10
p-Terphenyl-d14	81.9			% Rec.		8270C-S	03/13/13	10

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 6280 S Valley View Blvd, Suite 604  
 Las Vegas, NV 89118

March 18, 2013

Date Received : March 08, 2013  
 Description : APN: 161-16-402-003

ESC Sample # : L623996-04

Sample ID : LVBRN016-SS-04 6IN

Site ID :

Collected By : BP/MP  
 Collection Date : 03/07/13 09:15

Project # : LVBRN016

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	0.11	0.50	mg/kg		8015D/G	03/12/13	5
Surrogate Recovery (70-130)								
a,a,a-Trifluorotoluene(FID)	97.8			% Rec.		602/801	03/12/13	5
Volatile Organics								
Acetone	U	0.029	0.25	mg/kg		8260B	03/09/13	5
Acrylonitrile	U	0.0090	0.050	mg/kg		8260B	03/09/13	5
Benzene	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Bromobenzene	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Bromodichloromethane	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
Bromoform	U	0.0021	0.0050	mg/kg		8260B	03/09/13	5
Bromomethane	U	0.0067	0.025	mg/kg		8260B	03/09/13	5
n-Butylbenzene	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
sec-Butylbenzene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
tert-Butylbenzene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
Carbon tetrachloride	U	0.0016	0.0050	mg/kg		8260B	03/09/13	5
Chlorobenzene	U	0.0011	0.0050	mg/kg		8260B	03/09/13	5
Chlorodibromomethane	U	0.0019	0.0050	mg/kg		8260B	03/09/13	5
Chloroethane	U	0.0047	0.025	mg/kg		8260B	03/09/13	5
2-Chloroethyl vinyl ether	U	0.012	0.25	mg/kg		8260B	03/09/13	5
Chloroform	U	0.0011	0.025	mg/kg		8260B	03/09/13	5
Chloromethane	U	0.0019	0.013	mg/kg		8260B	03/09/13	5
2-Chlorotoluene	U	0.0015	0.0050	mg/kg		8260B	03/09/13	5
4-Chlorotoluene	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5
1,2-Dibromo-3-Chloropropane	U	0.0052	0.025	mg/kg		8260B	03/09/13	5
1,2-Dibromoethane	U	0.0017	0.0050	mg/kg		8260B	03/09/13	5
Dibromomethane	U	0.0019	0.0050	mg/kg		8260B	03/09/13	5
1,2-Dichlorobenzene	U	0.0015	0.0050	mg/kg		8260B	03/09/13	5
1,3-Dichlorobenzene	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5
1,4-Dichlorobenzene	U	0.0011	0.0050	mg/kg		8260B	03/09/13	5
Dichlorodifluoromethane	U	0.0036	0.025	mg/kg		8260B	03/09/13	5
1,1-Dichloroethane	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
1,2-Dichloroethane	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
1,1-Dichloroethene	U	0.0015	0.0050	mg/kg		8260B	03/09/13	5
cis-1,2-Dichloroethene	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5
trans-1,2-Dichloroethene	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
1,2-Dichloropropane	U	0.0018	0.0050	mg/kg		8260B	03/09/13	5
1,1-Dichloropropene	U	0.0016	0.0050	mg/kg		8260B	03/09/13	5
1,3-Dichloropropene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
cis-1,3-Dichloropropene	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
trans-1,3-Dichloropropene	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
2,2-Dichloropropane	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Di-isopropyl ether	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD = TRRP SDL

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

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REPORT OF ANALYSIS

Brett Bottenberg  
 McGinley and Assoc.- Las Vegs, NV  
 6280 S Valley View Blvd, Suite 604  
 Las Vegas, NV 89118

March 18, 2013

Date Received : March 08, 2013  
 Description : APN: 161-16-402-003

ESC Sample # : L623996-04

Sample ID : LVBRN016-SS-04 6IN

Site ID :

Collected By : BP/MP  
 Collection Date : 03/07/13 09:15

Project # : LVBRN016

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Ethylbenzene	U	0.0015	0.0050	mg/kg		8260B	03/09/13	5
Hexachloro-1,3-butadiene	U	0.0017	0.0050	mg/kg		8260B	03/09/13	5
Isopropylbenzene	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5
p-Isopropyltoluene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
2-Butanone (MEK)	U	0.023	0.050	mg/kg		8260B	03/09/13	5
Methylene Chloride	U	0.0027	0.025	mg/kg		8260B	03/09/13	5
4-Methyl-2-pentanone (MIBK)	U	0.0094	0.050	mg/kg		8260B	03/09/13	5
Methyl tert-butyl ether	U	0.0011	0.0050	mg/kg		8260B	03/09/13	5
Naphthalene	U	0.0022	0.025	mg/kg		8260B	03/09/13	5
n-Propylbenzene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
Styrene	U	0.0012	0.0050	mg/kg		8260B	03/09/13	5
1,1,1,2-Tetrachloroethane	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
1,1,2,2-Tetrachloroethane	U	0.0018	0.0050	mg/kg		8260B	03/09/13	5
1,1,2-Trichlorotrifluoroethane	U	0.0018	0.0050	mg/kg		8260B	03/09/13	5
Tetrachloroethene	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Toluene	U	0.0022	0.025	mg/kg		8260B	03/09/13	5
1,2,3-Trichlorobenzene	U	0.0015	0.0050	mg/kg		8260B	03/09/13	5
1,2,4-Trichlorobenzene	U	0.0019	0.0050	mg/kg		8260B	03/09/13	5
1,1,1-Trichloroethane	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
1,1,2-Trichloroethane	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Trichloroethene	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Trichlorofluoromethane	U	0.0019	0.025	mg/kg		8260B	03/09/13	5
1,2,3-Trichloropropane	U	0.0037	0.013	mg/kg		8260B	03/09/13	5
1,2,4-Trimethylbenzene	U	0.0010	0.0050	mg/kg		8260B	03/09/13	5
1,2,3-Trimethylbenzene	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
1,3,5-Trimethylbenzene	U	0.0013	0.0050	mg/kg		8260B	03/09/13	5
Vinyl chloride	U	0.0014	0.0050	mg/kg		8260B	03/09/13	5
Xylenes, Total	U	0.0035	0.015	mg/kg		8260B	03/09/13	5
Surrogate Recovery								
Toluene-d8	98.0			% Rec.		8260B	03/09/13	5
Dibromofluoromethane	99.0			% Rec.		8260B	03/09/13	5
4-Bromofluorobenzene	92.6			% Rec.		8260B	03/09/13	5
TPH (GC/FID) High Fraction	1.5	0.77	4.0	mg/kg	J	3546/DR	03/12/13	1
Surrogate recovery(%)								
o-Terphenyl	51.3			% Rec.		3546/DR	03/12/13	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.00076	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Acenaphthene	U	0.00071	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Acenaphthylene	U	0.00057	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Benzo(a)anthracene	0.0022	0.00092	0.0060	mg/kg	JJ3	8270C-S	03/13/13	1
Benzo(a)pyrene	U	0.00062	0.0060	mg/kg	J3	8270C-S	03/13/13	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD = TRRP SDL

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 03/18/13 10:18 Printed: 03/18/13 10:25



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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Brett Bottenberg  
 McGinley and Assoc.- Las Vegs, NV  
 6280 S Valley View Blvd, Suite 604  
 Las Vegas, NV 89118

March 18, 2013

Date Received : March 08, 2013  
 Description : APN: 161-16-402-003

ESC Sample # : L623996-04

Sample ID : LVBRN016-SS-04 6IN

Site ID :

Collected By : BP/MP  
 Collection Date : 03/07/13 09:15

Project # : LVBRN016

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Benzo(b)fluoranthene	U	0.00082	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Benzo(g,h,i)perylene	U	0.0012	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Benzo(k)fluoranthene	U	0.0013	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Chrysene	U	0.0011	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Dibenz(a,h)anthracene	U	0.0011	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Fluoranthene	U	0.0010	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Fluorene	U	0.00055	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Indeno(1,2,3-cd)pyrene	U	0.0012	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Naphthalene	U	0.00065	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Phenanthrene	U	0.00074	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Pyrene	U	0.00059	0.0060	mg/kg	J3	8270C-S	03/13/13	1
1-Methylnaphthalene	U	0.00079	0.0060	mg/kg	J3	8270C-S	03/13/13	1
2-Methylnaphthalene	U	0.00059	0.0060	mg/kg	J3	8270C-S	03/13/13	1
2-Chloronaphthalene	U	0.00060	0.0060	mg/kg	J3	8270C-S	03/13/13	1
Surrogate Recovery								
Nitrobenzene-d5	70.2			% Rec.		8270C-S	03/13/13	1
2-Fluorobiphenyl	61.2			% Rec.		8270C-S	03/13/13	1
p-Terphenyl-d14	37.5			% Rec.		8270C-S	03/13/13	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD = TRRP SDL

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 03/18/13 10:18 Printed: 03/18/13 10:25

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier	
L623996-01	WG650278	SAMP	Anthracene	R2578960	J3	
	WG650278	SAMP	Acenaphthene	R2578960	J3	
	WG650278	SAMP	Acenaphthylene	R2578960	J3	
	WG650278	SAMP	Benzo(a)anthracene	R2578960	JJ3	
	WG650278	SAMP	Benzo(a)pyrene	R2578960	JJ3	
	WG650278	SAMP	Benzo(b)fluoranthene	R2578960	JJ3	
	WG650278	SAMP	Benzo(g,h,i)perylene	R2578960	JJ3	
	WG650278	SAMP	Benzo(k)fluoranthene	R2578960	JJ3	
	WG650278	SAMP	Chrysene	R2578960	JJ3	
	WG650278	SAMP	Dibenz(a,h)anthracene	R2578960	J3	
	WG650278	SAMP	Fluoranthene	R2578960	JJ3	
	WG650278	SAMP	Fluorene	R2578960	J3	
	WG650278	SAMP	Indeno(1,2,3-cd)pyrene	R2578960	JJ3	
	WG650278	SAMP	Naphthalene	R2578960	J3	
	WG650278	SAMP	Phenanthrene	R2578960	J3	
	WG650278	SAMP	Pyrene	R2578960	JJ3	
	WG650278	SAMP	1-Methylnaphthalene	R2578960	J3	
	WG650278	SAMP	2-Methylnaphthalene	R2578960	J3	
	WG650278	SAMP	2-Chloronaphthalene	R2578960	J3	
	WG650315	SAMP	TPH (GC/FID) Low Fraction	R2578657	J6	
	WG650760	SAMP	TPH (GC/FID) High Fraction	R2580898	J6	
	L623996-02	WG650278	SAMP	Anthracene	R2578960	J3
		WG650278	SAMP	Acenaphthene	R2578960	J3
		WG650278	SAMP	Acenaphthylene	R2578960	J3
		WG650278	SAMP	Benzo(a)anthracene	R2578960	JJ3
WG650278		SAMP	Benzo(a)pyrene	R2578960	JJ3	
WG650278		SAMP	Benzo(b)fluoranthene	R2578960	JJ3	
WG650278		SAMP	Benzo(g,h,i)perylene	R2578960	JJ3	
WG650278		SAMP	Benzo(k)fluoranthene	R2578960	J3	
WG650278		SAMP	Chrysene	R2578960	J3	
WG650278		SAMP	Dibenz(a,h)anthracene	R2578960	J3	
WG650278		SAMP	Fluoranthene	R2578960	JJ3	
WG650278		SAMP	Fluorene	R2578960	J3	
WG650278		SAMP	Indeno(1,2,3-cd)pyrene	R2578960	J3	
WG650278		SAMP	Naphthalene	R2578960	J3	
WG650278		SAMP	Phenanthrene	R2578960	JJ3	
WG650278		SAMP	Pyrene	R2578960	JJ3	
WG650278		SAMP	1-Methylnaphthalene	R2578960	J3	
WG650278		SAMP	2-Methylnaphthalene	R2578960	J3	
WG650278		SAMP	2-Chloronaphthalene	R2578960	J3	
WG650760		SAMP	TPH (GC/FID) High Fraction	R2580898	0	
L623996-03		WG650278	SAMP	Anthracene	R2578960	J3
		WG650278	SAMP	Acenaphthene	R2578960	J3
		WG650278	SAMP	Acenaphthylene	R2578960	J3
		WG650278	SAMP	Benzo(a)anthracene	R2578960	JJ3
		WG650278	SAMP	Benzo(a)pyrene	R2578960	JJ3
	WG650278	SAMP	Benzo(b)fluoranthene	R2578960	JJ3	
	WG650278	SAMP	Benzo(g,h,i)perylene	R2578960	JJ3	
	WG650278	SAMP	Benzo(k)fluoranthene	R2578960	J3	
	WG650278	SAMP	Chrysene	R2578960	J3	
	WG650278	SAMP	Dibenz(a,h)anthracene	R2578960	J3	
	WG650278	SAMP	Fluoranthene	R2578960	J3	
	WG650278	SAMP	Fluorene	R2578960	J3	
	WG650278	SAMP	Indeno(1,2,3-cd)pyrene	R2578960	J3	
	WG650278	SAMP	Naphthalene	R2578960	J3	
	WG650278	SAMP	Phenanthrene	R2578960	J3	
	WG650278	SAMP	Pyrene	R2578960	JJ3	
	WG650278	SAMP	1-Methylnaphthalene	R2578960	J3	
	WG650278	SAMP	2-Methylnaphthalene	R2578960	J3	
	WG650278	SAMP	2-Chloronaphthalene	R2578960	J3	
	WG650760	SAMP	TPH (GC/FID) High Fraction	R2583578	0	
	L623996-04	WG650760	SAMP	o-Terphenyl	R2583578	J7
		WG650278	SAMP	Anthracene	R2578960	J3
		WG650278	SAMP	Acenaphthene	R2578960	J3
		WG650278	SAMP	Acenaphthylene	R2578960	J3
		WG650278	SAMP	Benzo(a)anthracene	R2578960	JJ3
WG650278		SAMP	Benzo(a)pyrene	R2578960	J3	
WG650278		SAMP	Benzo(b)fluoranthene	R2578960	J3	
WG650278		SAMP	Benzo(g,h,i)perylene	R2578960	J3	

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
WG650278		SAMP	Benzo(k)fluoranthene	R2578960	J3
WG650278		SAMP	Chrysene	R2578960	J3
WG650278		SAMP	Dibenz(a,h)anthracene	R2578960	J3
WG650278		SAMP	Fluoranthene	R2578960	J3
WG650278		SAMP	Fluorene	R2578960	J3
WG650278		SAMP	Indeno(1,2,3-cd)pyrene	R2578960	J3
WG650278		SAMP	Naphthalene	R2578960	J3
WG650278		SAMP	Phenanthrene	R2578960	J3
WG650278		SAMP	Pyrene	R2578960	J3
WG650278		SAMP	1-Methylnaphthalene	R2578960	J3
WG650278		SAMP	2-Methylnaphthalene	R2578960	J3
WG650278		SAMP	2-Chloronaphthalene	R2578960	J3
WG650274		SAMP	TPH (GC/FID) High Fraction	R2579699	J

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



Summary of Remarks For Samples Printed  
03/18/13 at 10:25:25

TSR Signing Reports: 358

Accounting - new account- verify billing info- 5k CL

Sample: L623996-01 Account: MCGINLVNV Received: 03/08/13 09:00 Due Date: 03/15/13 00:00 RPT Date: 03/18/13 10:18

Sample: L623996-02 Account: MCGINLVNV Received: 03/08/13 09:00 Due Date: 03/15/13 00:00 RPT Date: 03/18/13 10:18

Sample: L623996-03 Account: MCGINLVNV Received: 03/08/13 09:00 Due Date: 03/15/13 00:00 RPT Date: 03/18/13 10:18

Sample: L623996-04 Account: MCGINLVNV Received: 03/08/13 09:00 Due Date: 03/15/13 00:00 RPT Date: 03/18/13 10:18



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McGinley and Assoc.- Las Vegas, NV  
Brett Bottenberg  
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Quality Assurance Report  
Level II

L623996

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Tax I.D. 62-0814289

Est. 1970

March 18, 2013

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,1,1,2-Tetrachloroethane	< .001	mg/kg			WG650138	03/09/13 11:37
1,1,1-Trichloroethane	< .001	mg/kg			WG650138	03/09/13 11:37
1,1,2,2-Tetrachloroethane	< .001	mg/kg			WG650138	03/09/13 11:37
1,1,2-Trichloroethane	< .001	mg/kg			WG650138	03/09/13 11:37
1,1,2-Trichlorotrifluoroethane	< .001	mg/kg			WG650138	03/09/13 11:37
1,1-Dichloroethane	< .001	mg/kg			WG650138	03/09/13 11:37
1,1-Dichloroethene	< .001	mg/kg			WG650138	03/09/13 11:37
1,1-Dichloropropene	< .001	mg/kg			WG650138	03/09/13 11:37
1,2,3-Trichlorobenzene	< .001	mg/kg			WG650138	03/09/13 11:37
1,2,3-Trichloropropane	< .0025	mg/kg			WG650138	03/09/13 11:37
1,2,3-Trimethylbenzene	< .001	mg/kg			WG650138	03/09/13 11:37
1,2,4-Trichlorobenzene	< .001	mg/kg			WG650138	03/09/13 11:37
1,2,4-Trimethylbenzene	< .001	mg/kg			WG650138	03/09/13 11:37
1,2-Dibromo-3-Chloropropane	< .005	mg/kg			WG650138	03/09/13 11:37
1,2-Dibromoethane	< .001	mg/kg			WG650138	03/09/13 11:37
1,2-Dichlorobenzene	< .001	mg/kg			WG650138	03/09/13 11:37
1,2-Dichloroethane	< .001	mg/kg			WG650138	03/09/13 11:37
1,2-Dichloropropane	< .001	mg/kg			WG650138	03/09/13 11:37
1,3,5-Trimethylbenzene	< .001	mg/kg			WG650138	03/09/13 11:37
1,3-Dichlorobenzene	< .001	mg/kg			WG650138	03/09/13 11:37
1,3-Dichloropropane	< .001	mg/kg			WG650138	03/09/13 11:37
1,4-Dichlorobenzene	< .001	mg/kg			WG650138	03/09/13 11:37
2,2-Dichloropropane	< .001	mg/kg			WG650138	03/09/13 11:37
2-Butanone (MEK)	< .01	mg/kg			WG650138	03/09/13 11:37
2-Chloroethyl vinyl ether	< .05	mg/kg			WG650138	03/09/13 11:37
2-Chlorotoluene	< .001	mg/kg			WG650138	03/09/13 11:37
4-Chlorotoluene	< .001	mg/kg			WG650138	03/09/13 11:37
4-Methyl-2-pentanone (MIBK)	< .01	mg/kg			WG650138	03/09/13 11:37
Acetone	< .05	mg/kg			WG650138	03/09/13 11:37
Acrylonitrile	< .01	mg/kg			WG650138	03/09/13 11:37
Benzene	< .001	mg/kg			WG650138	03/09/13 11:37
Bromobenzene	< .001	mg/kg			WG650138	03/09/13 11:37
Bromodichloromethane	< .001	mg/kg			WG650138	03/09/13 11:37
Bromoform	< .001	mg/kg			WG650138	03/09/13 11:37
Bromomethane	< .005	mg/kg			WG650138	03/09/13 11:37
Carbon tetrachloride	< .001	mg/kg			WG650138	03/09/13 11:37
Chlorobenzene	< .001	mg/kg			WG650138	03/09/13 11:37
Chlorodibromomethane	< .001	mg/kg			WG650138	03/09/13 11:37
Chloroethane	< .005	mg/kg			WG650138	03/09/13 11:37
Chloroform	< .005	mg/kg			WG650138	03/09/13 11:37
Chloromethane	< .0025	mg/kg			WG650138	03/09/13 11:37
cis-1,2-Dichloroethene	< .001	mg/kg			WG650138	03/09/13 11:37
cis-1,3-Dichloropropane	< .001	mg/kg			WG650138	03/09/13 11:37
Di-isopropyl ether	< .001	mg/kg			WG650138	03/09/13 11:37
Dibromomethane	< .001	mg/kg			WG650138	03/09/13 11:37
Dichlorodifluoromethane	< .005	mg/kg			WG650138	03/09/13 11:37
Ethylbenzene	< .001	mg/kg			WG650138	03/09/13 11:37
Hexachloro-1,3-butadiene	< .001	mg/kg			WG650138	03/09/13 11:37
Isopropylbenzene	< .001	mg/kg			WG650138	03/09/13 11:37
Methyl tert-butyl ether	< .001	mg/kg			WG650138	03/09/13 11:37
Methylene Chloride	< .005	mg/kg			WG650138	03/09/13 11:37
n-Butylbenzene	< .001	mg/kg			WG650138	03/09/13 11:37
n-Propylbenzene	< .001	mg/kg			WG650138	03/09/13 11:37
Naphthalene	< .005	mg/kg			WG650138	03/09/13 11:37
p-Isopropyltoluene	< .001	mg/kg			WG650138	03/09/13 11:37
sec-Butylbenzene	< .001	mg/kg			WG650138	03/09/13 11:37
Styrene	< .001	mg/kg			WG650138	03/09/13 11:37
tert-Butylbenzene	< .001	mg/kg			WG650138	03/09/13 11:37
Tetrachloroethene	< .001	mg/kg			WG650138	03/09/13 11:37

\* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Brett Bottenberg  
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Quality Assurance Report  
Level II

L623996

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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

March 18, 2013

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Toluene	< .005	mg/kg			WG650138	03/09/13 11:37
trans-1,2-Dichloroethene	< .001	mg/kg			WG650138	03/09/13 11:37
trans-1,3-Dichloropropene	< .001	mg/kg			WG650138	03/09/13 11:37
Trichloroethene	< .001	mg/kg			WG650138	03/09/13 11:37
Trichlorofluoromethane	< .005	mg/kg			WG650138	03/09/13 11:37
Vinyl chloride	< .001	mg/kg			WG650138	03/09/13 11:37
Xylenes, Total	< .003	mg/kg			WG650138	03/09/13 11:37
4-Bromofluorobenzene	% Rec.		93.68	67-133	WG650138	03/09/13 11:37
Dibromofluoromethane	% Rec.		97.65	72-135	WG650138	03/09/13 11:37
Toluene-d8	% Rec.		97.16	90-113	WG650138	03/09/13 11:37
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG650315	03/12/13 14:36
a,a,a-Trifluorotoluene(FID)	% Rec.		99.82	59-128	WG650315	03/12/13 14:36
TPH (GC/FID) High Fraction	< 4	mg/kg			WG650274	03/12/13 22:10
o-Terphenyl	% Rec.		56.20	50-150	WG650274	03/12/13 22:10
TPH (GC/FID) High Fraction	< 4	mg/kg			WG650760	03/14/13 15:03
o-Terphenyl	% Rec.		60.00	50-150	WG650760	03/14/13 15:03

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,1,2-Tetrachloroethane	mg/kg	.025	0.0232	92.8	77-129	WG650138
1,1,1-Trichloroethane	mg/kg	.025	0.0264	106.	70-127	WG650138
1,1,2,2-Tetrachloroethane	mg/kg	.025	0.0233	93.4	76-133	WG650138
1,1,2-Trichloroethane	mg/kg	.025	0.0233	93.3	79-123	WG650138
1,1,2-Trichlorotrifluoroethane	mg/kg	.025	0.0281	112.	52-145	WG650138
1,1-Dichloroethane	mg/kg	.025	0.0287	115.	74-121	WG650138
1,1-Dichloroethene	mg/kg	.025	0.0284	113.	53-135	WG650138
1,1-Dichloropropene	mg/kg	.025	0.0278	111.	67-127	WG650138
1,2,3-Trichlorobenzene	mg/kg	.025	0.0241	96.6	74-131	WG650138
1,2,3-Trichloropropane	mg/kg	.025	0.0213	85.2	75-135	WG650138
1,2,3-Trimethylbenzene	mg/kg	.025	0.0262	105.	76-128	WG650138
1,2,4-Trichlorobenzene	mg/kg	.025	0.0244	97.8	72-130	WG650138
1,2,4-Trimethylbenzene	mg/kg	.025	0.0234	93.6	75-131	WG650138
1,2-Dibromo-3-Chloropropane	mg/kg	.025	0.0221	88.5	55-142	WG650138
1,2-Dibromoethane	mg/kg	.025	0.0229	91.7	77-126	WG650138
1,2-Dichlorobenzene	mg/kg	.025	0.0248	99.4	80-123	WG650138
1,2-Dichloroethane	mg/kg	.025	0.0271	109.	70-128	WG650138
1,2-Dichloropropane	mg/kg	.025	0.0268	107.	74-125	WG650138
1,3,5-Trimethylbenzene	mg/kg	.025	0.0236	94.5	77-129	WG650138
1,3-Dichlorobenzene	mg/kg	.025	0.0225	90.0	76-128	WG650138
1,3-Dichloropropane	mg/kg	.025	0.0241	96.5	77-118	WG650138
1,4-Dichlorobenzene	mg/kg	.025	0.0248	99.3	77-119	WG650138
2,2-Dichloropropane	mg/kg	.025	0.0275	110.	60-132	WG650138
2-Butanone (MEK)	mg/kg	.125	0.135	108.	56-146	WG650138
2-Chloroethyl vinyl ether	mg/kg	.125	0.136	109.	17-179	WG650138
2-Chlorotoluene	mg/kg	.025	0.0237	95.0	76-125	WG650138
4-Chlorotoluene	mg/kg	.025	0.0238	95.1	76-125	WG650138
4-Methyl-2-pentanone (MIBK)	mg/kg	.125	0.135	108.	55-148	WG650138
Acetone	mg/kg	.125	0.137	110.	47-155	WG650138
Acrylonitrile	mg/kg	.125	0.144	115.	50-155	WG650138
Benzene	mg/kg	.025	0.0275	110.	72-120	WG650138
Bromobenzene	mg/kg	.025	0.0241	96.5	74-122	WG650138
Bromodichloromethane	mg/kg	.025	0.0251	100.	74-128	WG650138

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Quality Assurance Report  
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Tax I.D. 62-0814289

Est. 1970

March 18, 2013

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Bromoform	mg/kg	.025	0.0221	88.5	62-137	WG650138
Bromomethane	mg/kg	.025	0.0431	172.	38-180	WG650138
Carbon tetrachloride	mg/kg	.025	0.0262	105.	62-130	WG650138
Chlorobenzene	mg/kg	.025	0.0233	93.2	77-124	WG650138
Chlorodibromomethane	mg/kg	.025	0.0229	91.5	74-128	WG650138
Chloroethane	mg/kg	.025	0.0317	127.	46-173	WG650138
Chloroform	mg/kg	.025	0.0270	108.	76-122	WG650138
Chloromethane	mg/kg	.025	0.0317	127.	49-143	WG650138
cis-1,2-Dichloroethene	mg/kg	.025	0.0272	109.	73-123	WG650138
cis-1,3-Dichloropropene	mg/kg	.025	0.0270	108.	73-126	WG650138
Di-isopropyl ether	mg/kg	.025	0.0302	121.	64-131	WG650138
Dibromomethane	mg/kg	.025	0.0248	99.3	75-127	WG650138
Dichlorodifluoromethane	mg/kg	.025	0.0261	105.	30-177	WG650138
Ethylbenzene	mg/kg	.025	0.0233	93.4	76-126	WG650138
Hexachloro-1,3-butadiene	mg/kg	.025	0.0233	93.2	71-134	WG650138
Isopropylbenzene	mg/kg	.025	0.0239	95.5	70-128	WG650138
Methyl tert-butyl ether	mg/kg	.025	0.0279	112.	66-127	WG650138
Methylene Chloride	mg/kg	.025	0.0280	112.	67-124	WG650138
n-Butylbenzene	mg/kg	.025	0.0276	110.	71-133	WG650138
n-Propylbenzene	mg/kg	.025	0.0243	97.0	76-126	WG650138
Naphthalene	mg/kg	.025	0.0250	100.	68-136	WG650138
p-Isopropyltoluene	mg/kg	.025	0.0239	95.5	75-134	WG650138
sec-Butylbenzene	mg/kg	.025	0.0237	94.7	75-132	WG650138
Styrene	mg/kg	.025	0.0245	98.0	68-148	WG650138
tert-Butylbenzene	mg/kg	.025	0.0236	94.2	75-132	WG650138
Tetrachloroethene	mg/kg	.025	0.0218	87.3	70-131	WG650138
Toluene	mg/kg	.025	0.0242	96.6	74-155	WG650138
trans-1,2-Dichloroethene	mg/kg	.025	0.0281	113.	63-126	WG650138
trans-1,3-Dichloropropene	mg/kg	.025	0.0264	106.	68-126	WG650138
Trichloroethene	mg/kg	.025	0.0235	94.1	75-121	WG650138
Trichlorofluoromethane	mg/kg	.025	0.0282	113.	48-170	WG650138
Vinyl chloride	mg/kg	.025	0.0299	119.	54-144	WG650138
Xylenes, Total	mg/kg	.075	0.0690	92.0	76-126	WG650138
4-Bromofluorobenzene				91.90	67-133	WG650138
Dibromofluoromethane				101.4	72-135	WG650138
Toluene-d8				98.48	90-113	WG650138
TPH (GC/FID) Low Fraction	mg/kg	5.5	5.74	104.	67-135	WG650315
a,a,a-Trifluorotoluene(FID)				100.4	59-128	WG650315
TPH (GC/FID) High Fraction	mg/kg	60	41.6	69.3	50-150	WG650274
o-Terphenyl				61.60	50-150	WG650274
TPH (GC/FID) High Fraction	mg/kg	60	47.3	78.8	50-150	WG650760
o-Terphenyl				64.40	50-150	WG650760

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
1,1,1,2-Tetrachloroethane	mg/kg	0.0224	0.0232	89.0	77-129	3.71	20	WG650138
1,1,1-Trichloroethane	mg/kg	0.0261	0.0264	104.	70-127	1.35	20	WG650138
1,1,2,2-Tetrachloroethane	mg/kg	0.0228	0.0233	91.0	76-133	2.24	20	WG650138
1,1,2-Trichloroethane	mg/kg	0.0226	0.0233	90.0	79-123	3.34	20	WG650138
1,1,2-Trichlorotrifluoroethane	mg/kg	0.0271	0.0281	108.	52-145	3.83	20	WG650138
1,1-Dichloroethane	mg/kg	0.0282	0.0287	113.	74-121	1.70	20	WG650138
1,1-Dichloroethene	mg/kg	0.0276	0.0284	110.	53-135	2.68	20	WG650138

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
1,1-Dichloropropene	mg/kg	0.0271	0.0278	108.	67-127	2.77	20	WG650138
1,2,3-Trichlorobenzene	mg/kg	0.0236	0.0241	94.0	74-131	2.28	20	WG650138
1,2,3-Trichloropropane	mg/kg	0.0212	0.0213	85.0	75-135	0.470	20	WG650138
1,2,3-Trimethylbenzene	mg/kg	0.0256	0.0262	102.	76-128	2.10	20	WG650138
1,2,4-Trichlorobenzene	mg/kg	0.0242	0.0244	97.0	72-130	1.18	20	WG650138
1,2,4-Trimethylbenzene	mg/kg	0.0229	0.0234	91.0	75-131	2.28	20	WG650138
1,2-Dibromo-3-Chloropropane	mg/kg	0.0221	0.0221	88.0	55-142	0.270	20	WG650138
1,2-Dibromoethane	mg/kg	0.0225	0.0229	90.0	77-126	1.88	20	WG650138
1,2-Dichlorobenzene	mg/kg	0.0246	0.0248	98.0	80-123	1.16	20	WG650138
1,2-Dichloroethane	mg/kg	0.0267	0.0271	107.	70-128	1.49	20	WG650138
1,2-Dichloropropane	mg/kg	0.0266	0.0268	106.	74-125	0.780	20	WG650138
1,3,5-Trimethylbenzene	mg/kg	0.0231	0.0236	92.0	77-129	2.43	20	WG650138
1,3-Dichlorobenzene	mg/kg	0.0220	0.0225	88.0	76-128	2.40	20	WG650138
1,3-Dichloropropane	mg/kg	0.0237	0.0241	95.0	77-118	1.94	20	WG650138
1,4-Dichlorobenzene	mg/kg	0.0240	0.0248	96.0	77-119	3.25	20	WG650138
2,2-Dichloropropane	mg/kg	0.0267	0.0275	107.	60-132	3.27	20	WG650138
2-Butanone (MEK)	mg/kg	0.134	0.135	107.	56-146	0.980	20	WG650138
2-Chloroethyl vinyl ether	mg/kg	0.132	0.136	106.	17-179	2.82	22	WG650138
2-Chlorotoluene	mg/kg	0.0230	0.0237	92.0	76-125	3.12	20	WG650138
4-Chlorotoluene	mg/kg	0.0232	0.0238	93.0	76-125	2.51	20	WG650138
4-Methyl-2-pentanone (MIBK)	mg/kg	0.132	0.135	106.	55-148	2.06	20	WG650138
Acetone	mg/kg	0.135	0.137	108.	47-155	1.95	22	WG650138
Acrylonitrile	mg/kg	0.140	0.144	112.	50-155	2.49	20	WG650138
Benzene	mg/kg	0.0269	0.0275	107.	72-120	2.26	20	WG650138
Bromobenzene	mg/kg	0.0236	0.0241	94.0	74-122	2.41	20	WG650138
Bromodichloromethane	mg/kg	0.0248	0.0251	99.0	74-128	0.930	20	WG650138
Bromoform	mg/kg	0.0220	0.0221	88.0	62-137	0.700	20	WG650138
Bromomethane	mg/kg	0.0402	0.0431	161.	38-180	6.97	20	WG650138
Carbon tetrachloride	mg/kg	0.0255	0.0262	102.	62-130	2.71	20	WG650138
Chlorobenzene	mg/kg	0.0229	0.0233	92.0	77-124	1.73	20	WG650138
Chlorodibromomethane	mg/kg	0.0227	0.0229	91.0	74-128	0.850	20	WG650138
Chloroethane	mg/kg	0.0305	0.0317	122.	46-173	3.90	20	WG650138
Chloroform	mg/kg	0.0260	0.0270	104.	76-122	3.53	20	WG650138
Chloromethane	mg/kg	0.0305	0.0317	122.	49-143	4.11	20	WG650138
cis-1,2-Dichloroethene	mg/kg	0.0265	0.0272	106.	73-123	2.70	20	WG650138
cis-1,3-Dichloropropene	mg/kg	0.0263	0.0270	105.	73-126	2.38	20	WG650138
Di-isopropyl ether	mg/kg	0.0297	0.0302	119.	64-131	1.54	20	WG650138
Dibromomethane	mg/kg	0.0243	0.0248	97.0	75-127	1.90	20	WG650138
Dichlorodifluoromethane	mg/kg	0.0253	0.0261	101.	30-177	3.12	20	WG650138
Ethylbenzene	mg/kg	0.0227	0.0233	91.0	76-126	2.74	20	WG650138
Hexachloro-1,3-butadiene	mg/kg	0.0233	0.0233	93.0	71-134	0.190	20	WG650138
Isopropylbenzene	mg/kg	0.0233	0.0239	93.0	70-128	2.29	20	WG650138
Methyl tert-butyl ether	mg/kg	0.0268	0.0279	107.	66-127	3.93	20	WG650138
Methylene Chloride	mg/kg	0.0268	0.0280	107.	67-124	4.22	20	WG650138
n-Butylbenzene	mg/kg	0.0266	0.0276	106.	71-133	3.42	20	WG650138
n-Propylbenzene	mg/kg	0.0235	0.0243	94.0	76-126	3.15	20	WG650138
Naphthalene	mg/kg	0.0247	0.0250	99.0	68-136	1.21	20	WG650138
p-Isopropyltoluene	mg/kg	0.0233	0.0239	93.0	75-134	2.48	20	WG650138
sec-Butylbenzene	mg/kg	0.0231	0.0237	92.0	75-132	2.44	20	WG650138
Styrene	mg/kg	0.0240	0.0245	96.0	68-148	2.27	20	WG650138
tert-Butylbenzene	mg/kg	0.0228	0.0236	91.0	75-132	3.11	20	WG650138
Tetrachloroethene	mg/kg	0.0212	0.0218	85.0	70-131	2.78	20	WG650138
Toluene	mg/kg	0.0237	0.0242	95.0	74-155	1.76	20	WG650138
trans-1,2-Dichloroethene	mg/kg	0.0270	0.0281	108.	63-126	4.02	20	WG650138
trans-1,3-Dichloropropene	mg/kg	0.0259	0.0264	104.	68-126	1.74	20	WG650138
Trichloroethene	mg/kg	0.0230	0.0235	92.0	75-121	2.16	20	WG650138
Trichlorofluoromethane	mg/kg	0.0275	0.0282	110.	48-170	2.79	20	WG650138
Vinyl chloride	mg/kg	0.0289	0.0299	116.	54-144	3.09	20	WG650138
Xylenes, Total	mg/kg	0.0674	0.0690	90.0	76-126	2.37	20	WG650138

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March 18, 2013

L623996

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
4-Bromofluorobenzene				90.79	67-133			
Dibromofluoromethane				100.8	72-135			
Toluene-d8				99.01	90-113			
TPH (GC/FID) Low Fraction	mg/kg	5.84	5.74	106.	67-135	1.69	20	WG650315
a,a,a-Trifluorotoluene(FID)				100.3	59-128			WG650315
TPH (GC/FID) High Fraction	mg/kg	44.4	41.6	74.0	50-150	6.57	20	WG650274
o-Terphenyl				65.80	50-150			WG650274
TPH (GC/FID) High Fraction	mg/kg	47.2	47.3	78.0	50-150	0.230	20	WG650760
o-Terphenyl				64.80	50-150			WG650760

Analyte	Units	MS Res	Matrix Spike			Limit	Ref Samp	Batch
			Ref Res	TV	% Rec			
1,1,1,2-Tetrachloroethane	mg/kg	0.118	0	.025	94.7	49-135	L623983-01	WG650138
1,1,1-Trichloroethane	mg/kg	0.138	0	.025	111.	43-142	L623983-01	WG650138
1,1,2,2-Tetrachloroethane	mg/kg	0.111	0	.025	88.4	42-147	L623983-01	WG650138
1,1,2-Trichloroethane	mg/kg	0.113	0	.025	90.2	51-134	L623983-01	WG650138
1,1,2-Trichlorotrifluoroethane	mg/kg	0.145	0	.025	116.	25-156	L623983-01	WG650138
1,1-Dichloroethane	mg/kg	0.147	0	.025	117.	50-131	L623983-01	WG650138
1,1-Dichloroethene	mg/kg	0.146	0	.025	117.	29-145	L623983-01	WG650138
1,1-Dichloropropene	mg/kg	0.143	0	.025	114.	40-136	L623983-01	WG650138
1,2,3-Trichlorobenzene	mg/kg	0.119	0	.025	95.4	13-142	L623983-01	WG650138
1,2,3-Trichloropropane	mg/kg	0.102	0	.025	81.7	41-149	L623983-01	WG650138
1,2,3-Trimethylbenzene	mg/kg	0.135	0	.025	108.	33-146	L623983-01	WG650138
1,2,4-Trichlorobenzene	mg/kg	0.122	0	.025	97.8	12-140	L623983-01	WG650138
1,2,4-Trimethylbenzene	mg/kg	0.121	0	.025	96.9	29-143	L623983-01	WG650138
1,2-Dibromo-3-Chloropropane	mg/kg	0.104	0	.025	83.2	29-151	L623983-01	WG650138
1,2-Dibromoethane	mg/kg	0.111	0	.025	89.1	48-133	L623983-01	WG650138
1,2-Dichlorobenzene	mg/kg	0.126	0	.025	101.	37-136	L623983-01	WG650138
1,2-Dichloroethane	mg/kg	0.135	0	.025	108.	49-131	L623983-01	WG650138
1,2-Dichloropropane	mg/kg	0.136	0	.025	108.	50-132	L623983-01	WG650138
1,3,5-Trimethylbenzene	mg/kg	0.122	0	.025	97.5	29-144	L623983-01	WG650138
1,3-Dichlorobenzene	mg/kg	0.115	0	.025	92.1	26-140	L623983-01	WG650138
1,3-Dichloropropane	mg/kg	0.118	0	.025	94.7	50-126	L623983-01	WG650138
1,4-Dichlorobenzene	mg/kg	0.126	0	.025	101.	34-132	L623983-01	WG650138
2,2-Dichloropropane	mg/kg	0.142	0	.025	114.	35-148	L623983-01	WG650138
2-Butanone (MEK)	mg/kg	0.621	0	.125	99.3	40-149	L623983-01	WG650138
2-Chloroethyl vinyl ether	mg/kg	0.635	0	.125	102.	10-173	L623983-01	WG650138
2-Chlorotoluene	mg/kg	0.123	0	.025	98.5	34-136	L623983-01	WG650138
4-Chlorotoluene	mg/kg	0.122	0	.025	97.3	31-137	L623983-01	WG650138
4-Methyl-2-pentanone (MIBK)	mg/kg	0.600	0	.125	96.0	37-153	L623983-01	WG650138
Acetone	mg/kg	0.622	0.0154	.125	97.1	10-177	L623983-01	WG650138
Acrylonitrile	mg/kg	0.639	0	.125	102.	33-159	L623983-01	WG650138
Benzene	mg/kg	0.141	0	.025	112.	44-131	L623983-01	WG650138
Bromobenzene	mg/kg	0.122	0	.025	97.9	36-132	L623983-01	WG650138
Bromodichloromethane	mg/kg	0.126	0	.025	100.	48-134	L623983-01	WG650138
Bromoform	mg/kg	0.108	0	.025	86.7	34-141	L623983-01	WG650138
Bromomethane	mg/kg	0.222	0	.025	178.*	19-173	L623983-01	WG650138
Carbon tetrachloride	mg/kg	0.135	0	.025	108.	36-140	L623983-01	WG650138
Chlorobenzene	mg/kg	0.120	0	.025	95.8	42-133	L623983-01	WG650138
Chlorodibromomethane	mg/kg	0.114	0	.025	91.1	45-135	L623983-01	WG650138
Chloroethane	mg/kg	0.162	0	.025	129.	16-178	L623983-01	WG650138
Chloroform	mg/kg	0.138	0	.025	110.	52-130	L623983-01	WG650138
Chloromethane	mg/kg	0.166	0	.025	133.	28-147	L623983-01	WG650138
cis-1,2-Dichloroethene	mg/kg	0.138	0	.025	110.	52-128	L623983-01	WG650138

\* Performance of this Analyte is outside of established criteria.

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L623996

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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

March 18, 2013

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
cis-1,3-Dichloropropene	mg/kg	0.133	0	.025	106.	46-131	L623983-01	WG650138
Di-isopropyl ether	mg/kg	0.150	0	.025	120.	46-134	L623983-01	WG650138
Dibromomethane	mg/kg	0.119	0	.025	95.5	51-133	L623983-01	WG650138
Dichlorodifluoromethane	mg/kg	0.136	0	.025	109.	12-179	L623983-01	WG650138
Ethylbenzene	mg/kg	0.120	0	.025	96.4	38-139	L623983-01	WG650138
Hexachloro-1,3-butadiene	mg/kg	0.122	0	.025	97.4	10-147	L623983-01	WG650138
Isopropylbenzene	mg/kg	0.124	0	.025	99.2	34-137	L623983-01	WG650138
Methyl tert-butyl ether	mg/kg	0.131	0	.025	105.	45-134	L623983-01	WG650138
Methylene Chloride	mg/kg	0.139	0.000784	.025	111.	41-133	L623983-01	WG650138
n-Butylbenzene	mg/kg	0.143	0	.025	114.	19-149	L623983-01	WG650138
n-Propylbenzene	mg/kg	0.126	0	.025	101.	27-142	L623983-01	WG650138
Napthalene	mg/kg	0.117	0	.025	93.5	19-146	L623983-01	WG650138
p-Isopropyltoluene	mg/kg	0.124	0	.025	99.2	21-150	L623983-01	WG650138
sec-Butylbenzene	mg/kg	0.123	0	.025	98.3	25-148	L623983-01	WG650138
Styrene	mg/kg	0.125	0	.025	100.	30-156	L623983-01	WG650138
tert-Butylbenzene	mg/kg	0.122	0	.025	97.9	32-146	L623983-01	WG650138
Tetrachloroethene	mg/kg	0.116	0.00511	.025	88.6	35-139	L623983-01	WG650138
Toluene	mg/kg	0.123	0.000440	.025	97.7	43-127	L623983-01	WG650138
trans-1,2-Dichloroethene	mg/kg	0.145	0	.025	116.	41-132	L623983-01	WG650138
trans-1,3-Dichloropropene	mg/kg	0.130	0	.025	104.	43-129	L623983-01	WG650138
Trichloroethene	mg/kg	0.120	0	.025	96.2	42-136	L623983-01	WG650138
Trichlorofluoromethane	mg/kg	0.145	0	.025	116.	20-178	L623983-01	WG650138
Vinyl chloride	mg/kg	0.155	0	.025	124.	30-157	L623983-01	WG650138
Xylenes, Total	mg/kg	0.357	0	.075	95.1	38-137	L623983-01	WG650138
4-Bromofluorobenzene					89.94	67-133		WG650138
Dibromofluoromethane					100.1	72-135		WG650138
Toluene-d8					98.46	90-113		WG650138
TPH (GC/FID) Low Fraction	mg/kg	16.5	0	5.5	59.9	55-109	L623996-01	WG650315
a,a,a-Trifluorotoluene(FID)					95.50	59-128		WG650315
1-Methylnaphthalene	mg/kg	0.0169	0	.033	51.1	14.2-149	L623996-01	WG650278
2-Chloronaphthalene	mg/kg	0.0165	0	.033	49.9	30.4-130	L623996-01	WG650278
2-Methylnaphthalene	mg/kg	0.0168	0	.033	50.9	19.4-145	L623996-01	WG650278
Acenaphthene	mg/kg	0.0175	0	.033	53.0	30.4-133	L623996-01	WG650278
Acenaphthylene	mg/kg	0.0173	0	.033	52.4	30.5-137	L623996-01	WG650278
Anthracene	mg/kg	0.0182	0.000571	.033	53.6	24.8-145	L623996-01	WG650278
Benzo(a)anthracene	mg/kg	0.0257	0.00151	.033	73.2	17.4-147	L623996-01	WG650278
Benzo(a)pyrene	mg/kg	0.0272	0.00434	.033	69.3	14.5-149	L623996-01	WG650278
Benzo(b)fluoranthene	mg/kg	0.0347	0.00543	.033	88.5	17-151	L623996-01	WG650278
Benzo(g,h,i)perylene	mg/kg	0.0118	0.00260	.033	27.7	10-154	L623996-01	WG650278
Benzo(k)fluoranthene	mg/kg	0.0263	0.00446	.033	66.3	14.8-150	L623996-01	WG650278
Chrysene	mg/kg	0.0310	0.00513	.033	78.6	15.7-148	L623996-01	WG650278
Dibenz(a,h)anthracene	mg/kg	0.0119	0.000631	.033	34.3	10-142	L623996-01	WG650278
Fluoranthene	mg/kg	0.0296	0.00321	.033	79.8	22.9-153	L623996-01	WG650278
Fluorene	mg/kg	0.0195	0	.033	59.0	28.9-140	L623996-01	WG650278
Indeno(1,2,3-cd)pyrene	mg/kg	0.0127	0.00125	.033	34.7	10-155	L623996-01	WG650278
Naphthalene	mg/kg	0.0165	0	.033	50.1	19.5-137	L623996-01	WG650278
Phenanthrene	mg/kg	0.0324	0.00847	.033	72.6	15.6-153	L623996-01	WG650278
Pyrene	mg/kg	0.0328	0.00508	.033	83.9	18.4-146	L623996-01	WG650278
2-Fluorobiphenyl					52.70	26.1-136		WG650278
Nitrobenzene-d5					51.60	12.7-142		WG650278
p-Terphenyl-d14					58.30	20.5-158		WG650278
TPH (GC/FID) High Fraction	mg/kg	70.2	48.6	15	36.0*	50-150	L623996-01	WG650760
o-Terphenyl					51.30	50-150		WG650760

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Est. 1970

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1,1,2-Tetrachloroethane	mg/kg	0.109	0.118	87.6	49-135	7.84	23	L623983-01	WG650138
1,1,1-Trichloroethane	mg/kg	0.126	0.138	100.	43-142	9.68	24	L623983-01	WG650138
1,1,2,2-Tetrachloroethane	mg/kg	0.106	0.111	84.7	42-147	4.32	25	L623983-01	WG650138
1,1,2-Trichloroethane	mg/kg	0.107	0.113	85.8	51-134	4.99	21	L623983-01	WG650138
1,1,2-Trichlorotrifluoroethane	mg/kg	0.132	0.145	105.	25-156	9.45	29	L623983-01	WG650138
1,1-Dichloroethane	mg/kg	0.136	0.147	109.	50-131	7.58	21	L623983-01	WG650138
1,1-Dichloroethene	mg/kg	0.135	0.146	108.	29-145	8.10	28	L623983-01	WG650138
1,1-Dichloropropene	mg/kg	0.132	0.143	106.	40-136	8.04	24	L623983-01	WG650138
1,2,3-Trichlorobenzene	mg/kg	0.108	0.119	86.3	13-142	10.0	33	L623983-01	WG650138
1,2,3-Trichloropropane	mg/kg	0.0968	0.102	77.4	41-149	5.30	28	L623983-01	WG650138
1,2,3-Trimethylbenzene	mg/kg	0.124	0.135	99.2	33-146	8.61	27	L623983-01	WG650138
1,2,4-Trichlorobenzene	mg/kg	0.109	0.122	87.1	12-140	11.5	32	L623983-01	WG650138
1,2,4-Trimethylbenzene	mg/kg	0.112	0.121	89.3	29-143	8.17	30	L623983-01	WG650138
1,2-Dibromo-3-Chloropropane	mg/kg	0.0996	0.104	79.7	29-151	4.28	31	L623983-01	WG650138
1,2-Dibromoethane	mg/kg	0.106	0.111	84.5	48-133	5.26	22	L623983-01	WG650138
1,2-Dichlorobenzene	mg/kg	0.115	0.126	91.9	37-136	9.48	25	L623983-01	WG650138
1,2-Dichloroethane	mg/kg	0.125	0.135	100.	49-131	7.47	20	L623983-01	WG650138
1,2-Dichloropropane	mg/kg	0.126	0.136	101.	50-132	7.17	21	L623983-01	WG650138
1,3,5-Trimethylbenzene	mg/kg	0.114	0.122	91.2	29-144	6.76	30	L623983-01	WG650138
1,3-Dichlorobenzene	mg/kg	0.106	0.115	84.7	26-140	8.32	28	L623983-01	WG650138
1,3-Dichloropropane	mg/kg	0.112	0.118	89.5	50-126	5.60	22	L623983-01	WG650138
1,4-Dichlorobenzene	mg/kg	0.116	0.126	92.8	34-132	8.10	26	L623983-01	WG650138
2,2-Dichloropropane	mg/kg	0.131	0.142	104.	35-148	8.40	26	L623983-01	WG650138
2-Butanone (MEK)	mg/kg	0.588	0.621	94.2	40-149	5.31	27	L623983-01	WG650138
2-Chloroethyl vinyl ether	mg/kg	0.585	0.635	93.7	10-173	8.14	33	L623983-01	WG650138
2-Chlorotoluene	mg/kg	0.113	0.123	90.8	34-136	8.14	28	L623983-01	WG650138
4-Chlorotoluene	mg/kg	0.112	0.122	89.8	31-137	8.06	27	L623983-01	WG650138
4-Methyl-2-pentanone (MIBK)	mg/kg	0.583	0.600	93.3	37-153	2.87	27	L623983-01	WG650138
Acetone	mg/kg	0.593	0.622	92.5	10-177	4.75	28	L623983-01	WG650138
Acrylonitrile	mg/kg	0.609	0.639	97.5	33-159	4.75	26	L623983-01	WG650138
Benzene	mg/kg	0.130	0.141	104.	44-131	7.99	21	L623983-01	WG650138
Bromobenzene	mg/kg	0.114	0.122	91.4	36-132	6.89	26	L623983-01	WG650138
Bromodichloromethane	mg/kg	0.116	0.126	92.6	48-134	8.10	20	L623983-01	WG650138
Bromoform	mg/kg	0.101	0.108	80.5	34-141	7.42	24	L623983-01	WG650138
Bromomethane	mg/kg	0.196	0.222	157.	19-173	12.3	25	L623983-01	WG650138
Carbon tetrachloride	mg/kg	0.125	0.135	99.9	36-140	7.55	26	L623983-01	WG650138
Chlorobenzene	mg/kg	0.112	0.120	89.2	42-133	7.04	24	L623983-01	WG650138
Chlorodibromomethane	mg/kg	0.107	0.114	85.4	45-135	6.45	23	L623983-01	WG650138
Chloroethane	mg/kg	0.149	0.162	119.	16-178	8.13	25	L623983-01	WG650138
Chloroform	mg/kg	0.127	0.138	102.	52-130	8.34	21	L623983-01	WG650138
Chloromethane	mg/kg	0.149	0.166	119.	28-147	10.7	23	L623983-01	WG650138
cis-1,2-Dichloroethene	mg/kg	0.128	0.138	102.	52-128	7.42	21	L623983-01	WG650138
cis-1,3-Dichloropropene	mg/kg	0.123	0.133	98.5	46-131	7.65	21	L623983-01	WG650138
Di-isopropyl ether	mg/kg	0.140	0.150	112.	46-134	6.73	20	L623983-01	WG650138
Dibromomethane	mg/kg	0.110	0.119	87.8	51-133	8.40	21	L623983-01	WG650138
Dichlorodifluoromethane	mg/kg	0.124	0.136	99.3	12-179	9.15	27	L623983-01	WG650138
Ethylbenzene	mg/kg	0.112	0.120	90.0	38-139	6.87	27	L623983-01	WG650138
Hexachloro-1,3-butadiene	mg/kg	0.110	0.122	88.0	10-147	10.1	37	L623983-01	WG650138
Isopropylbenzene	mg/kg	0.116	0.124	92.5	34-137	7.02	29	L623983-01	WG650138
Methyl tert-butyl ether	mg/kg	0.122	0.131	97.6	45-134	7.24	22	L623983-01	WG650138
Methylene Chloride	mg/kg	0.127	0.139	101.	41-133	9.19	28	L623983-01	WG650138
n-Butylbenzene	mg/kg	0.130	0.143	104.	19-149	9.83	32	L623983-01	WG650138
n-Propylbenzene	mg/kg	0.117	0.126	93.6	27-142	7.32	29	L623983-01	WG650138
Naphthalene	mg/kg	0.109	0.117	87.1	19-146	7.04	30	L623983-01	WG650138
p-Isopropyltoluene	mg/kg	0.115	0.124	92.1	21-150	7.39	31	L623983-01	WG650138
sec-Butylbenzene	mg/kg	0.115	0.123	91.6	25-148	7.00	31	L623983-01	WG650138
Styrene	mg/kg	0.116	0.125	93.1	30-156	7.08	26	L623983-01	WG650138
tert-Butylbenzene	mg/kg	0.115	0.122	91.6	32-146	6.57	30	L623983-01	WG650138
Tetrachloroethane	mg/kg	0.110	0.116	84.3	35-139	4.76	27	L623983-01	WG650138

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Toluene	mg/kg	0.114	0.123	90.6	43-127	7.49	21	L623983-01	WG650138
trans-1,2-Dichloroethene	mg/kg	0.132	0.145	105.	41-132	9.66	23	L623983-01	WG650138
trans-1,3-Dichloropropene	mg/kg	0.121	0.130	96.6	43-129	7.27	23	L623983-01	WG650138
Trichloroethene	mg/kg	0.112	0.120	89.3	42-136	7.42	23	L623983-01	WG650138
Trichlorofluoromethane	mg/kg	0.133	0.145	106.	20-178	8.96	30	L623983-01	WG650138
Vinyl chloride	mg/kg	0.141	0.155	113.	30-157	8.90	24	L623983-01	WG650138
Xylenes, Total	mg/kg	0.332	0.357	88.6	38-137	7.14	26	L623983-01	WG650138
4-Bromofluorobenzene				92.37	67-133				WG650138
Dibromofluoromethane				101.1	72-135				WG650138
Toluene-d8				98.51	90-113				WG650138
TPH (GC/FID) Low Fraction	mg/kg	14.8	16.5	53.8*	55-109	10.7	20	L623996-01	WG650315
a,a,a-Trifluorotoluene(FID)				95.89	59-128				WG650315
1-Methylnaphthalene	mg/kg	0.0174	0.0169	52.8	14.2-149	3.18	31.3	L623996-01	WG650278
2-Chloronaphthalene	mg/kg	0.0174	0.0165	52.7	30.4-130	5.38	24.4	L623996-01	WG650278
2-Methylnaphthalene	mg/kg	0.0175	0.0168	53.0	19.4-145	4.03	33.8	L623996-01	WG650278
Acenaphthene	mg/kg	0.0185	0.0175	56.0	30.4-133	5.49	27.6	L623996-01	WG650278
Acenaphthylene	mg/kg	0.0184	0.0173	55.8	30.5-137	6.21	27.3	L623996-01	WG650278
Anthracene	mg/kg	0.0192	0.0182	56.5	24.8-145	5.20	30	L623996-01	WG650278
Benzo(a)anthracene	mg/kg	0.0231	0.0257	65.4	17.4-147	10.6	29.9	L623996-01	WG650278
Benzo(a)pyrene	mg/kg	0.0270	0.0272	68.5	14.5-149	0.880	30.9	L623996-01	WG650278
Benzo(b)fluoranthene	mg/kg	0.0314	0.0347	78.6	17-151	9.95	34.6	L623996-01	WG650278
Benzo(g,h,i)perylene	mg/kg	0.0105	0.0118	24.0	10-154	11.2	35.7	L623996-01	WG650278
Benzo(k)fluoranthene	mg/kg	0.0272	0.0263	69.0	14.8-150	3.26	34.5	L623996-01	WG650278
Chrysene	mg/kg	0.0270	0.0310	66.4	15.7-148	13.8	30.5	L623996-01	WG650278
Dibenz(a,h)anthracene	mg/kg	0.0129	0.0119	37.1	10-142	7.48	34.8	L623996-01	WG650278
Fluoranthene	mg/kg	0.0230	0.0296	60.0	22.9-153	25.0	32.8	L623996-01	WG650278
Fluorene	mg/kg	0.0209	0.0195	63.2	28.9-140	6.94	30	L623996-01	WG650278
Indeno(1,2,3-cd)pyrene	mg/kg	0.0119	0.0127	32.2	10-155	6.61	36.2	L623996-01	WG650278
Naphthalene	mg/kg	0.0168	0.0165	50.8	19.5-137	1.48	33	L623996-01	WG650278
Phenanthrene	mg/kg	0.0284	0.0324	60.6	15.6-153	13.1	32.9	L623996-01	WG650278
Pyrene	mg/kg	0.0278	0.0328	69.0	18.4-146	16.2	33.5	L623996-01	WG650278
2-Fluorobiphenyl				55.80	26.1-136				WG650278
Nitrobenzene-d5				51.00	12.7-142				WG650278
p-Terphenyl-d14				61.60	20.5-158				WG650278
TPH (GC/FID) High Fraction	mg/kg	79.0	70.2	50.8	50-150	11.9	20	L623996-01	WG650760
o-Terphenyl				51.90	50-150				WG650760

Batch number /Run number / Sample number cross reference

WG650138: R2577257: L623996-01 02 03 04  
 WG650315: R2578657: L623996-01 02 03 04  
 WG650278: R2578960: L623996-01 02 03 04  
 WG650274: R2579699: L623996-04  
 WG650760: R2580898 R2583578: L623996-01 02 03

\* \* Calculations are performed prior to rounding of reported values.

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Est. 1970

March 18, 2013

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.