geo - logic *geotechnical and environmental consulting services*
1140 - 5th Avenue, Crockett, CA 94525 (510) 593-5382 - Fax (510) 787-1457

August 15, 2017

Armer-Norman & Associates, Inc.
2600 Williams Street
San Leandro, CA 94577

Attention: Mr. Rick Montesano

RE: Sampling Report for Station Upgrades
Livermore Chevron
4707 First Street
Livermore, California

Dear Mr. Montesano:

This report summarizes the results of sampling performed by Geo-Logic at the referenced site, following the recent station upgrades at the facility.

The scope of the work performed by Geo-Logic consisted of the following:

Collection of soil samples beneath four former dispensers and along the product and vent piping trenches, and from the stockpiles

Delivery of the samples with properly executed Chain of Custody documentation to a certified analytical laboratory

Technical review of data and preparation of this report.

SITE HISTORY AND BACKGROUND

The subject site is located at 4707 First Street, the city of Livermore, Alameda County, California. The site was an operating service station and convenience store, and there are three underground storage tanks. All of the above-grade improvements and most of the product piping have been removed. A Site Plan (Figure 1) showing the locations of the samples is attached to this report.

RECENT FIELD ACTIVITIES

On July 20, 2017, under the supervision of Mr. Isaac Mendel of the Livermore-Pleasanton Fire Department (LPFD), soil samples were collected beneath four former dispensers and along the product and vent piping trenches. The soil samples from beneath the former dispensers were designated as P1 d 3' through P4 d 3', as shown on Figure 1. These samples were collected at about three feet below grade, beneath the pea gravel fill. Samples designated as T1 and T3 through T11 were collected at critical joins and every 20 feet along the piping and vent trench, where the piping had been removed. These samples were collected at approximately 3.5 to four feet below grade, again beneath the pea gravel fill.

The samples were collected in what appeared to be native or disturbed clayey silt and silty clay. No odors of hydrocarbons or obvious hydrocarbon staining was observed during the sampling. The soil that had been removed from the dispenser and piping trench areas was sampled at four points, to be composited as one sample at the laboratory.

The soil samples were again analyzed by McCampbell Analytical in Pittsburg, California, and were accompanied by properly executed Chain of Custody documentation. Per the requirements of the LPFD, the samples were analyzed for Total Petroleum Hydrocarbons (TPH) as gasoline and diesel, BTEX, MTBE, TBA, EDB, EDC, naphthalene, and ethanol by EPA Method 8260, and for total lead by EPA 6010.

The analytical results of the hydrocarbon analyses, except for up to 3.3 parts per million (ppm) of diesel in two samples, were entirely non-detectable except at P3 d 3'. At this location, 1,800 ppm of TPH as diesel, 950 ppm of TPH as gas, 4.0 ppm of naphthalene, 5.2 ppm of ethylbenzene, 9.1 ppm of toluene and 36 ppm of xylenes were detected. These values are in excess of the "Tier 1" ESLs although not necessarily in excess of commercial/industrial ESLs for direct exposure.

Total lead was detected in all of the samples at concentrations ranging between 5.7 and 18 ppm. These values appear to be naturally occurring background concentrations, not related to hydrocarbon contamination, and below the Tier 1 ESL.

Based on these findings, on July 31, 2017, the dispenser area at P3 d 3' was over excavated and an additional sample was obtained. Mr. Isaac Mendel of the Livermore-Pleasanton Fire Department witnessed the overexcavation and sampling. The depth of the excavation was 10.5 feet, the limit of the excavator. The excavation was about four by eight feet laterally, with the longer length along the direction of the piping between the dispensers. The sample, designated as P3 d 10.5', was collected in dark gray silty clay which did not appear stained and did not have a noticeable odor. The excavation appeared to be four feet or more beneath the obvious stained soil with odor, and the sidewalls appeared relatively clean. The analytical results for P3 d 10.5' indicated concentrations of TPH as diesel and TPH as gasoline of 1.1 ppm and 0.32 ppm, respectively.

A four part composite soil sample, designated as Comp S1 (N-S-E-W) was collected from the excavated soil. The results of this sample indicated relatively low concentrations of hydrocarbons, suggesting that the excavation had extended well beyond the significant contamination area.

The analytical results of the soil samples and their corresponding Environmental Screening Levels (ESLs) are shown on Table 1. The locations of the sample points are shown on Figure 1. Copies of the laboratory analyses and the Chain of Custody documentation are attached to this report.

DISCUSSION

It is Geo-Logic's understanding that an Unauthorized Release Report will be submitted to Alameda County Environmental Health, who will provide oversight. Based on the over excavation of the only soil sample with concentrations of the Tier 1 ESLs, it is Geo-Logic's opinion that no further work appears warranted.

DISTRIBUTION

A copy of this report should be sent to Mr. Isaac Mendel of the LPFD, and to Mr. Paresh Khatri of Alameda County Environmental Health.

LIMITATIONS

Soil deposits and rock formations may vary in thickness, lithology, saturation, strength and other properties across any site. In addition, environmental changes, either naturally-occurring or artificially-induced, may cause changes in the extent and concentration of any contaminants. Our studies assume that the field and laboratory data are reasonably representative of the site as a whole, and assume that subsurface conditions are reasonably conducive to interpolation and extrapolation.

The results of this study are based on the data obtained from the field and laboratory analyses obtained from a state certified laboratory. We have analyzed this data using what we believe to be currently applicable engineering techniques and principles in the Northern California region. We make no warranty, either expressed or implied, regarding the above, including laboratory analyses, except that our services have been performed in accordance with generally accepted professional principles and practices existing for such work.

Should you have any questions regarding this report, please feel free to call me at (510) 593-5382.

Sincerely,

Geo-Logic

Joel G. Greger, C.E.G.
Certified Engineering Geologist No. EG 1633

License No. EG 1633

Attachments
Figure 1
Table 1
Laboratory Analytical Reports

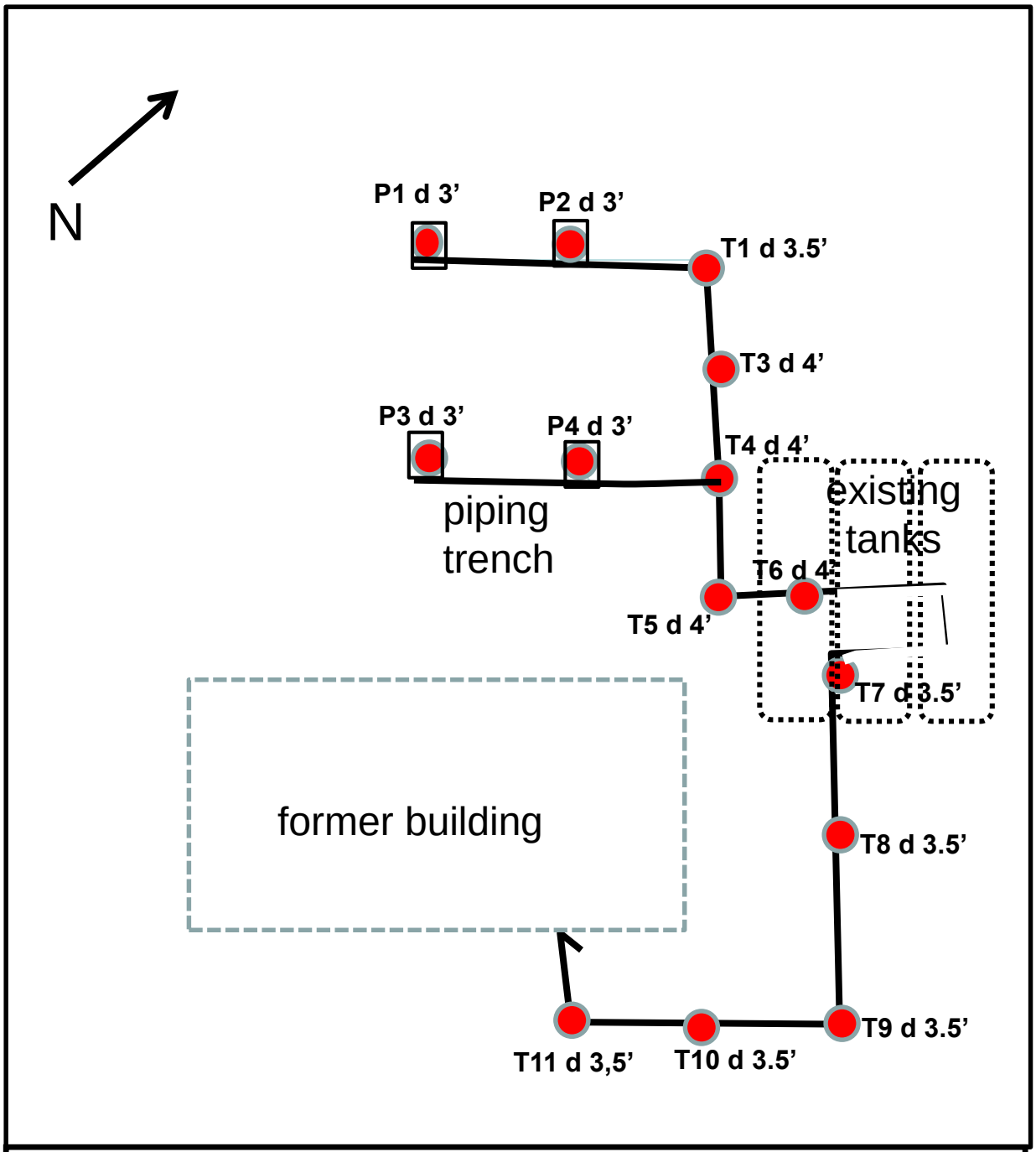

FIGURE 1

LOCATIONS OF SOIL SAMPLES

LIVERMORE CHEVRON
4707 FIRST STREET
LIVERMORE, CALIFORNIA

AUG. 2017
1" = 20' (APPROX.)

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TABLE 1
SOIL ANALYTICAL RESULTS
4704 First St., Livermore, CA

Samples collected on 7-20 and 7-31-2017

Sample/ Depth (feet)	TPH-d (ppm)	TPH-g (ppm)	BTEX (ppm)	Napthalene (ppm)	Total Lead (ppm)
P1 d 3'	<1.0	<0.25	ND	<0.0050	14
P2 d 3'	<1.0	<0.25	ND	<0.0050	10
P3 d 3'	**1800**	**950**	* see note	**4.0**	8.2
P3 d 10.5'	1.1	0.32	ND	<0.0050	8.2
P4 d 3'	1.3	<0.25	ND	<0.0050	5.7
T1 d 3.5'	<1.0	<0.25	ND	<0.0050	16
T3 d 4'	3.3	<0.25	ND	<0.0050	7.2
T4 d 4'	<1.0	<0.25	ND	<0.0050	18
T5 d 4'	<1.0	<0.25	ND	<0.0050	15
T6 d 4'	<1.0	<0.25	ND	<0.0050	9.7
T7 d 3.5'	<1.0	<0.25	ND	<0.0050	6.3
T8 d 3.5'	<1.0	<0.25	ND	<0.0050	11
T9 d 3.5'	<1.0	<0.25	ND	<0.0050	7.3
T10 d 3.5'	<1.0	<0.25	ND	<0.0050	8.1
T11 d 3.5'	<1.0	<0.25	ND	<0.0050	9.5
Comp S1 (A-D)	<1.0	<0.25	ND	ND	9.0
Comp S1 (N-S-E-W)	25	11	ND	<0.0050	8.9
ESL - Tier 1	230	100	* see note	0.033	80

EXPLANATION:
ppm = parts per million

ESL = Environmental Screening Level, Regional Water Quality Control Board, Tier 1, February, 2016.

TPHg/d =Total Petroleum Hydrocarbons as gasoline/diesel.

ND = not detected

* **5.2** ppm ethylbenzene (Tier 1 ESL 1.4), **9.1** ppm of toluene (Tier 1 ESL 2.9) and **36** ppm xylenes (Tier 1 ESL 2.3) were also detected.

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1707748

Report Created for: Geo-Logic

1140 5th Avenue
Crockett, CA 94525

Project Contact: Joel Gregor
Project P.O.:
Project Name: Chevron-Livermore

Project Received: 07/20/2017

Analytical Report reviewed & approved for release on 07/28/2017 by:

Angela Rydelius,
Laboratory Manager

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CA ELAP 1644 ♦ NELAP 4033ORELAP

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Glossary of Terms & Qualifier Definitions

Client: Geo-Logic
Project: Chevron-Livermore
WorkOrder: 1707748

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ERS	External reference sample. Second source calibration verification.
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

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Glossary of Terms & Qualifier Definitions

Client: Geo-Logic
Project: Chevron-Livermore
WorkOrder: 1707748

Analytical Qualifiers

S	Surrogate spike recovery outside accepted recovery limits
c7	Surrogate value diluted out of range
e2	Diesel range compounds are significant; no recognizable pattern
e3/e1	Aged diesel is significant; and/or Unmodified or weakly modified diesel is significant
e4	Gasoline range compounds are significant.
e7	Oil range compounds are significant

Quality Control Qualifiers

F1	MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validates the prep batch.
F2	LCS/LCSD recovery and/or RPD is out of acceptance criteria.

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW5030B
Date Prepared:	7/20/17	**Analytical Method:**	SW8260B
Project:	Chevron-Livermore	**Unit:**	mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P1d 3'	1707748-001A	Soil	07/20/2017 08:19	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	07/27/2017 21:55
t-Butyl alcohol (TBA)	ND	0.050	1	07/27/2017 21:55
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/27/2017 21:55
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/27/2017 21:55
Ethanol	ND	0.50	1	07/27/2017 21:55
Ethylbenzene	ND	0.0050	1	07/27/2017 21:55
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/27/2017 21:55
Naphthalene	ND	0.0050	1	07/27/2017 21:55
Toluene	ND	0.0050	1	07/27/2017 21:55
Xylenes, Total	ND	0.0050	1	07/27/2017 21:55

Surrogates	REC (%)	Limits	
Dibromofluoromethane	100	70-130	07/27/2017 21:55
Toluene-d8	113	70-130	07/27/2017 21:55
4-BFB	117	70-130	07/27/2017 21:55
Benzene-d6	82	60-140	07/27/2017 21:55
Ethylbenzene-d10	103	60-140	07/27/2017 21:55
1,2-DCB-d4	77	60-140	07/27/2017 21:55

Analyst(s): KF

(Cont.)

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW5030B
Date Prepared:	7/20/17	**Analytical Method:**	SW8260B
Project:	Chevron-Livermore	**Unit:**	mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2d 3'	1707748-002A	Soil	07/20/2017 08:25	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	07/27/2017 22:36
t-Butyl alcohol (TBA)	ND	0.050	1	07/27/2017 22:36
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/27/2017 22:36
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/27/2017 22:36
Ethanol	ND	0.50	1	07/27/2017 22:36
Ethylbenzene	ND	0.0050	1	07/27/2017 22:36
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/27/2017 22:36
Naphthalene	ND	0.0050	1	07/27/2017 22:36
Toluene	ND	0.0050	1	07/27/2017 22:36
Xylenes, Total	ND	0.0050	1	07/27/2017 22:36

Surrogates	REC (%)	Limits	
Dibromofluoromethane	102	70-130	07/27/2017 22:36
Toluene-d8	112	70-130	07/27/2017 22:36
4-BFB	114	70-130	07/27/2017 22:36
Benzene-d6	69	60-140	07/27/2017 22:36
Ethylbenzene-d10	97	60-140	07/27/2017 22:36
1,2-DCB-d4	77	60-140	07/27/2017 22:36

Analyst(s): KF

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW5030B
Date Prepared:	7/20/17	**Analytical Method:**	SW8260B
Project:	Chevron-Livermore	**Unit:**	mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P3d 3'	**1707748-003A**	**Soil**	**07/20/2017 08:30**	**GC10**	**142302**

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	1.0	200	07/28/2017 06:37
t-Butyl alcohol (TBA)	ND	10	200	07/28/2017 06:37
1,2-Dibromoethane (EDB)	ND	0.80	200	07/28/2017 06:37
1,2-Dichloroethane (1,2-DCA)	ND	0.80	200	07/28/2017 06:37
Ethanol	ND	100	200	07/28/2017 06:37
Ethylbenzene	**5.2**	1.0	200	07/28/2017 06:37
Methyl-t-butyl ether (MTBE)	ND	1.0	200	07/28/2017 06:37
Naphthalene	**4.0**	1.0	200	07/28/2017 06:37
Toluene	**9.1**	1.0	200	07/28/2017 06:37
Xylenes, Total	**36**	1.0	200	07/28/2017 06:37

Surrogates	REC (%)	Qualifiers	Limits	
Dibromofluoromethane	101		70-130	07/28/2017 06:37
Toluene-d8	105		70-130	07/28/2017 06:37
4-BFB	118		70-130	07/28/2017 06:37
Benzene-d6	103		60-140	07/28/2017 06:37
Ethylbenzene-d10	1	S	60-140	07/28/2017 06:37
1,2-DCB-d4	278	S	60-140	07/28/2017 06:37

Analyst(s): KF Analytical Comments: c7

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW5030B
Date Prepared:	7/20/17	**Analytical Method:**	SW8260B
Project:	Chevron-Livermore	**Unit:**	mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P4d 3	1707748-004A	Soil	07/20/2017 08:35	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	07/27/2017 23:16
t-Butyl alcohol (TBA)	ND	0.050	1	07/27/2017 23:16
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/27/2017 23:16
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/27/2017 23:16
Ethanol	ND	0.50	1	07/27/2017 23:16
Ethylbenzene	ND	0.0050	1	07/27/2017 23:16
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/27/2017 23:16
Naphthalene	ND	0.0050	1	07/27/2017 23:16
Toluene	ND	0.0050	1	07/27/2017 23:16
Xylenes, Total	ND	0.0050	1	07/27/2017 23:16

Surrogates	REC (%)	Limits	
Dibromofluoromethane	101	70-130	07/27/2017 23:16
Toluene-d8	113	70-130	07/27/2017 23:16
4-BFB	114	70-130	07/27/2017 23:16
Benzene-d6	81	60-140	07/27/2017 23:16
Ethylbenzene-d10	101	60-140	07/27/2017 23:16
1,2-DCB-d4	78	60-140	07/27/2017 23:16

Analyst(s): KF

(Cont.)

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW5030B
Date Prepared:	7/20/17	**Analytical Method:**	SW8260B
Project:	Chevron-Livermore	**Unit:**	mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T1d 3.5'	1707748-005A	Soil	07/20/2017 08:29	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	07/27/2017 23:56
t-Butyl alcohol (TBA)	ND	0.050	1	07/27/2017 23:56
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/27/2017 23:56
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/27/2017 23:56
Ethanol	ND	0.50	1	07/27/2017 23:56
Ethylbenzene	ND	0.0050	1	07/27/2017 23:56
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/27/2017 23:56
Naphthalene	ND	0.0050	1	07/27/2017 23:56
Toluene	ND	0.0050	1	07/27/2017 23:56
Xylenes, Total	ND	0.0050	1	07/27/2017 23:56

Surrogates	REC (%)	Limits	
Dibromofluoromethane	101	70-130	07/27/2017 23:56
Toluene-d8	114	70-130	07/27/2017 23:56
4-BFB	112	70-130	07/27/2017 23:56
Benzene-d6	81	60-140	07/27/2017 23:56
Ethylbenzene-d10	103	60-140	07/27/2017 23:56
1,2-DCB-d4	78	60-140	07/27/2017 23:56

Analyst(s): KF

(Cont.)

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Analytical Report

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Date Received:	7/20/17 11:57	**Extraction Method:**	SW5030B
Date Prepared:	7/20/17	**Analytical Method:**	SW8260B
Project:	Chevron-Livermore	**Unit:**	mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T4d 4'	1707748-006A	Soil	07/20/2017 08:40	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	07/28/2017 00:36
t-Butyl alcohol (TBA)	ND	0.050	1	07/28/2017 00:36
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/28/2017 00:36
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/28/2017 00:36
Ethanol	ND	0.50	1	07/28/2017 00:36
Ethylbenzene	ND	0.0050	1	07/28/2017 00:36
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/28/2017 00:36
Naphthalene	ND	0.0050	1	07/28/2017 00:36
Toluene	ND	0.0050	1	07/28/2017 00:36
Xylenes, Total	ND	0.0050	1	07/28/2017 00:36

Surrogates	REC (%)	Limits	
Dibromofluoromethane	100	70-130	07/28/2017 00:36
Toluene-d8	113	70-130	07/28/2017 00:36
4-BFB	111	70-130	07/28/2017 00:36
Benzene-d6	79	60-140	07/28/2017 00:36
Ethylbenzene-d10	101	60-140	07/28/2017 00:36
1,2-DCB-d4	78	60-140	07/28/2017 00:36

Analyst(s): KF

(Cont.)

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Analytical Report

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Date Received:	7/20/17 11:57	**Extraction Method:**	SW5030B
Date Prepared:	7/20/17	**Analytical Method:**	SW8260B
Project:	Chevron-Livermore	**Unit:**	mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T5d 4'	1707748-007A	Soil	07/20/2017 08:44	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	07/28/2017 01:16
t-Butyl alcohol (TBA)	ND	0.050	1	07/28/2017 01:16
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/28/2017 01:16
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/28/2017 01:16
Ethanol	ND	0.50	1	07/28/2017 01:16
Ethylbenzene	ND	0.0050	1	07/28/2017 01:16
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/28/2017 01:16
Naphthalene	ND	0.0050	1	07/28/2017 01:16
Toluene	ND	0.0050	1	07/28/2017 01:16
Xylenes, Total	ND	0.0050	1	07/28/2017 01:16

Surrogates	REC (%)	Limits	
Dibromofluoromethane	100	70-130	07/28/2017 01:16
Toluene-d8	113	70-130	07/28/2017 01:16
4-BFB	107	70-130	07/28/2017 01:16
Benzene-d6	79	60-140	07/28/2017 01:16
Ethylbenzene-d10	100	60-140	07/28/2017 01:16
1,2-DCB-d4	77	60-140	07/28/2017 01:16

Analyst(s): KF

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http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW5030B
Date Prepared:	7/20/17	**Analytical Method:**	SW8260B
Project:	Chevron-Livermore	**Unit:**	mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T6d 4'	1707748-008A	Soil	07/20/2017 08:47	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	07/28/2017 01:57
t-Butyl alcohol (TBA)	ND	0.050	1	07/28/2017 01:57
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/28/2017 01:57
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/28/2017 01:57
Ethanol	ND	0.50	1	07/28/2017 01:57
Ethylbenzene	ND	0.0050	1	07/28/2017 01:57
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/28/2017 01:57
Naphthalene	ND	0.0050	1	07/28/2017 01:57
Toluene	ND	0.0050	1	07/28/2017 01:57
Xylenes, Total	ND	0.0050	1	07/28/2017 01:57

Surrogates	REC (%)	Limits	
Dibromofluoromethane	100	70-130	07/28/2017 01:57
Toluene-d8	114	70-130	07/28/2017 01:57
4-BFB	108	70-130	07/28/2017 01:57
Benzene-d6	79	60-140	07/28/2017 01:57
Ethylbenzene-d10	103	60-140	07/28/2017 01:57
1,2-DCB-d4	78	60-140	07/28/2017 01:57

Analyst(s): KF

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW5030B
Date Prepared:	7/20/17	**Analytical Method:**	SW8260B
Project:	Chevron-Livermore	**Unit:**	mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T7d 3.5'	1707748-009A	Soil	07/20/2017 08:49	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	07/28/2017 02:37
t-Butyl alcohol (TBA)	ND	0.050	1	07/28/2017 02:37
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/28/2017 02:37
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/28/2017 02:37
Ethanol	ND	0.50	1	07/28/2017 02:37
Ethylbenzene	ND	0.0050	1	07/28/2017 02:37
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/28/2017 02:37
Naphthalene	ND	0.0050	1	07/28/2017 02:37
Toluene	ND	0.0050	1	07/28/2017 02:37
Xylenes, Total	ND	0.0050	1	07/28/2017 02:37

Surrogates	REC (%)	Limits	
Dibromofluoromethane	98	70-130	07/28/2017 02:37
Toluene-d8	115	70-130	07/28/2017 02:37
4-BFB	107	70-130	07/28/2017 02:37
Benzene-d6	80	60-140	07/28/2017 02:37
Ethylbenzene-d10	105	60-140	07/28/2017 02:37
1,2-DCB-d4	79	60-140	07/28/2017 02:37

Analyst(s): KF

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW5030B
Date Prepared:	7/20/17	**Analytical Method:**	SW8260B
Project:	Chevron-Livermore	**Unit:**	mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T8d 3.5'	1707748-010A	Soil	07/20/2017 08:52	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	07/28/2017 03:17
t-Butyl alcohol (TBA)	ND	0.050	1	07/28/2017 03:17
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/28/2017 03:17
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/28/2017 03:17
Ethanol	ND	0.50	1	07/28/2017 03:17
Ethylbenzene	ND	0.0050	1	07/28/2017 03:17
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/28/2017 03:17
Naphthalene	ND	0.0050	1	07/28/2017 03:17
Toluene	ND	0.0050	1	07/28/2017 03:17
Xylenes, Total	ND	0.0050	1	07/28/2017 03:17

Surrogates	REC (%)	Limits	
Dibromofluoromethane	98	70-130	07/28/2017 03:17
Toluene-d8	115	70-130	07/28/2017 03:17
4-BFB	108	70-130	07/28/2017 03:17
Benzene-d6	85	60-140	07/28/2017 03:17
Ethylbenzene-d10	113	60-140	07/28/2017 03:17
1,2-DCB-d4	82	60-140	07/28/2017 03:17

Analyst(s): KF

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW5030B
Date Prepared:	7/20/17	**Analytical Method:**	SW8260B
Project:	Chevron-Livermore	**Unit:**	mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T9d 3.5'	1707748-011A	Soil	07/20/2017 08:54	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	07/28/2017 03:57
t-Butyl alcohol (TBA)	ND	0.050	1	07/28/2017 03:57
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/28/2017 03:57
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/28/2017 03:57
Ethanol	ND	0.50	1	07/28/2017 03:57
Ethylbenzene	ND	0.0050	1	07/28/2017 03:57
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/28/2017 03:57
Naphthalene	ND	0.0050	1	07/28/2017 03:57
Toluene	ND	0.0050	1	07/28/2017 03:57
Xylenes, Total	ND	0.0050	1	07/28/2017 03:57

Surrogates	REC (%)	Limits	
Dibromofluoromethane	98	70-130	07/28/2017 03:57
Toluene-d8	113	70-130	07/28/2017 03:57
4-BFB	109	70-130	07/28/2017 03:57
Benzene-d6	75	60-140	07/28/2017 03:57
Ethylbenzene-d10	98	60-140	07/28/2017 03:57
1,2-DCB-d4	76	60-140	07/28/2017 03:57

Analyst(s): KF

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW5030B
Date Prepared:	7/20/17	**Analytical Method:**	SW8260B
Project:	Chevron-Livermore	**Unit:**	mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T10d 3.5'	1707748-012A	Soil	07/20/2017 08:57	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	07/28/2017 04:37
t-Butyl alcohol (TBA)	ND	0.050	1	07/28/2017 04:37
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/28/2017 04:37
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/28/2017 04:37
Ethanol	ND	0.50	1	07/28/2017 04:37
Ethylbenzene	ND	0.0050	1	07/28/2017 04:37
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/28/2017 04:37
Naphthalene	ND	0.0050	1	07/28/2017 04:37
Toluene	ND	0.0050	1	07/28/2017 04:37
Xylenes, Total	ND	0.0050	1	07/28/2017 04:37

Surrogates	REC (%)	Limits	
Dibromofluoromethane	98	70-130	07/28/2017 04:37
Toluene-d8	115	70-130	07/28/2017 04:37
4-BFB	109	70-130	07/28/2017 04:37
Benzene-d6	81	60-140	07/28/2017 04:37
Ethylbenzene-d10	105	60-140	07/28/2017 04:37
1,2-DCB-d4	79	60-140	07/28/2017 04:37

Analyst(s): KF

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW5030B
Date Prepared:	7/20/17	**Analytical Method:**	SW8260B
Project:	Chevron-Livermore	**Unit:**	mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T11d 3.5'	1707748-013A	Soil	07/20/2017 09:05	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	07/28/2017 05:17
t-Butyl alcohol (TBA)	ND	0.050	1	07/28/2017 05:17
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/28/2017 05:17
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/28/2017 05:17
Ethanol	ND	0.50	1	07/28/2017 05:17
Ethylbenzene	ND	0.0050	1	07/28/2017 05:17
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/28/2017 05:17
Naphthalene	ND	0.0050	1	07/28/2017 05:17
Toluene	ND	0.0050	1	07/28/2017 05:17
Xylenes, Total	ND	0.0050	1	07/28/2017 05:17

Surrogates	REC (%)	Limits	
Dibromofluoromethane	98	70-130	07/28/2017 05:17
Toluene-d8	112	70-130	07/28/2017 05:17
4-BFB	108	70-130	07/28/2017 05:17
Benzene-d6	76	60-140	07/28/2017 05:17
Ethylbenzene-d10	101	60-140	07/28/2017 05:17
1,2-DCB-d4	76	60-140	07/28/2017 05:17

Analyst(s): KF

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW5030B
Date Prepared:	7/20/17	**Analytical Method:**	SW8260B
Project:	Chevron-Livermore	**Unit:**	mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Comp S1 (A-D)	**1707748-014A**	**Soil**	**07/20/2017**	**GC10**	**142302**

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	07/28/2017 05:57
t-Butyl alcohol (TBA)	ND	0.050	1	07/28/2017 05:57
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/28/2017 05:57
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/28/2017 05:57
Ethanol	ND	0.50	1	07/28/2017 05:57
Ethylbenzene	ND	0.0050	1	07/28/2017 05:57
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/28/2017 05:57
Naphthalene	ND	0.0050	1	07/28/2017 05:57
Toluene	ND	0.0050	1	07/28/2017 05:57
Xylenes, Total	ND	0.0050	1	07/28/2017 05:57

Surrogates	REC (%)	Limits	
Dibromofluoromethane	99	70-130	07/28/2017 05:57
Toluene-d8	114	70-130	07/28/2017 05:57
4-BFB	109	70-130	07/28/2017 05:57
Benzene-d6	80	60-140	07/28/2017 05:57
Ethylbenzene-d10	105	60-140	07/28/2017 05:57
1,2-DCB-d4	79	60-140	07/28/2017 05:57

Analyst(s): KF

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW5030B
Date Prepared:	7/20/17	**Analytical Method:**	SW8260B
Project:	Chevron-Livermore	**Unit:**	mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T3d 4'	1707748-015A	Soil	07/20/2017 08:37	GC10	142434

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	07/27/2017 13:35
t-Butyl alcohol (TBA)	ND	0.050	1	07/27/2017 13:35
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/27/2017 13:35
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/27/2017 13:35
Ethanol	ND	0.50	1	07/27/2017 13:35
Ethylbenzene	ND	0.0050	1	07/27/2017 13:35
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/27/2017 13:35
Naphthalene	ND	0.0050	1	07/27/2017 13:35
Toluene	ND	0.0050	1	07/27/2017 13:35
Xylenes, Total	ND	0.0050	1	07/27/2017 13:35

Surrogates	REC (%)	Limits	
Dibromofluoromethane	100	70-130	07/27/2017 13:35
Toluene-d8	109	70-130	07/27/2017 13:35
4-BFB	101	70-130	07/27/2017 13:35
Benzene-d6	79	60-140	07/27/2017 13:35
Ethylbenzene-d10	97	60-140	07/27/2017 13:35
1,2-DCB-d4	77	60-140	07/27/2017 13:35

Analyst(s): AK

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW5030B
Date Prepared:	7/20/17	**Analytical Method:**	SW8260B
Project:	Chevron-Livermore	**Unit:**	mg/kg

TPH(g)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P1d 3'	1707748-001A	Soil	07/20/2017 08:19	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	0.25	1	07/27/2017 21:55

Surrogates	REC (%)	Limits	
Dibromofluoromethane	115	70-130	07/27/2017 21:55

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2d 3'	1707748-002A	Soil	07/20/2017 08:25	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	0.25	1	07/27/2017 22:36

Surrogates	REC (%)	Limits	
Dibromofluoromethane	117	70-130	07/27/2017 22:36

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P3d 3'	1707748-003A	Soil	07/20/2017 08:30	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	**950**	50	200	07/28/2017 06:37

Surrogates	REC (%)	Limits	
Dibromofluoromethane	116	70-130	07/28/2017 06:37

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P4d 3	1707748-004A	Soil	07/20/2017 08:35	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	0.25	1	07/27/2017 23:16

Surrogates	REC (%)	Limits	
Dibromofluoromethane	116	70-130	07/27/2017 23:16

Analyst(s): KF

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW5030B
Date Prepared:	7/20/17	**Analytical Method:**	SW8260B
Project:	Chevron-Livermore	**Unit:**	mg/kg

TPH(g)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T1d 3.5'	1707748-005A	Soil	07/20/2017 08:29	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	0.25	1	07/27/2017 23:56

Surrogates	REC (%)	Limits	
Dibromofluoromethane	116	70-130	07/27/2017 23:56

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T4d 4'	1707748-006A	Soil	07/20/2017 08:40	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	0.25	1	07/28/2017 00:36

Surrogates	REC (%)	Limits	
Dibromofluoromethane	114	70-130	07/28/2017 00:36

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T5d 4'	1707748-007A	Soil	07/20/2017 08:44	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	0.25	1	07/28/2017 01:16

Surrogates	REC (%)	Limits	
Dibromofluoromethane	115	70-130	07/28/2017 01:16

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T6d 4'	1707748-008A	Soil	07/20/2017 08:47	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	0.25	1	07/28/2017 01:57

Surrogates	REC (%)	Limits	
Dibromofluoromethane	115	70-130	07/28/2017 01:57

Analyst(s): KF

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW5030B
Date Prepared:	7/20/17	**Analytical Method:**	SW8260B
Project:	Chevron-Livermore	**Unit:**	mg/kg

TPH(g)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T7d 3.5'	1707748-009A	Soil	07/20/2017 08:49	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	0.25	1	07/28/2017 02:37

Surrogates	REC (%)	Limits	
Dibromofluoromethane	113	70-130	07/28/2017 02:37

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T8d 3.5'	1707748-010A	Soil	07/20/2017 08:52	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	0.25	1	07/28/2017 03:17

Surrogates	REC (%)	Limits	
Dibromofluoromethane	112	70-130	07/28/2017 03:17

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T9d 3.5'	1707748-011A	Soil	07/20/2017 08:54	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	0.25	1	07/28/2017 03:57

Surrogates	REC (%)	Limits	
Dibromofluoromethane	112	70-130	07/28/2017 03:57

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T10d 3.5'	1707748-012A	Soil	07/20/2017 08:57	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	0.25	1	07/28/2017 04:37

Surrogates	REC (%)	Limits	
Dibromofluoromethane	113	70-130	07/28/2017 04:37

Analyst(s): KF

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Analytical Report

Client: Geo-Logic
Date Received: 7/20/17 11:57
Date Prepared: 7/20/17
Project: Chevron-Livermore

WorkOrder: 1707748
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

TPH(g)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T11d 3.5'	1707748-013A	Soil	07/20/2017 09:05	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	0.25	1	07/28/2017 05:17

Surrogates	REC (%)	Limits	
Dibromofluoromethane	113	70-130	07/28/2017 05:17

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Comp S1 (A-D)	1707748-014A	Soil	07/20/2017	GC10	142302

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	0.25	1	07/28/2017 05:57

Surrogates	REC (%)	Limits	
Dibromofluoromethane	113	70-130	07/28/2017 05:57

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T3d 4'	1707748-015A	Soil	07/20/2017 08:37	GC10	142434

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	0.25	1	07/27/2017 13:35

Surrogates	REC (%)	Limits	
Dibromofluoromethane	115	70-130	07/27/2017 13:35

Analyst(s): AK

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW3050B
Date Prepared:	7/20/17	**Analytical Method:**	SW6020
Project:	Chevron-Livermore	**Unit:**	mg/Kg

Lead

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P1d 3'	1707748-001A	Soil	07/20/2017 08:19	ICP-MS1	142341

Analytes	Result	RL	DF	Date Analyzed
Lead	**14**	0.50	1	07/22/2017 01:32

Surrogates	REC (%)	Limits	
Terbium	97	70-130	07/22/2017 01:32

Analyst(s): ND

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2d 3'	1707748-002A	Soil	07/20/2017 08:25	ICP-MS1	142341

Analytes	Result	RL	DF	Date Analyzed
Lead	**10**	0.50	1	07/22/2017 01:38

Surrogates	REC (%)	Limits	
Terbium	100	70-130	07/22/2017 01:38

Analyst(s): ND

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P3d 3'	1707748-003A	Soil	07/20/2017 08:30	ICP-MS1	142341

Analytes	Result	RL	DF	Date Analyzed
Lead	**8.2**	0.50	1	07/22/2017 01:44

Surrogates	REC (%)	Limits	
Terbium	100	70-130	07/22/2017 01:44

Analyst(s): ND

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P4d 3	1707748-004A	Soil	07/20/2017 08:35	ICP-MS1	142341

Analytes	Result	RL	DF	Date Analyzed
Lead	**5.7**	0.50	1	07/22/2017 01:51

Surrogates	REC (%)	Limits	
Terbium	97	70-130	07/22/2017 01:51

Analyst(s): ND

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Analytical Report

Client: Geo-Logic
Date Received: 7/20/17 11:57
Date Prepared: 7/20/17
Project: Chevron-Livermore

WorkOrder: 1707748
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

Lead

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T1d 3.5'	1707748-005A	Soil	07/20/2017 08:29	ICP-MS1	142341

Analytes	Result	RL	DF	Date Analyzed
Lead	**16**	0.50	1	07/22/2017 01:57

Surrogates	REC (%)	Limits	
Terbium	98	70-130	07/22/2017 01:57

Analyst(s): ND

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T4d 4'	1707748-006A	Soil	07/20/2017 08:40	ICP-MS1	142341

Analytes	Result	RL	DF	Date Analyzed
Lead	**18**	0.50	1	07/22/2017 02:03

Surrogates	REC (%)	Limits	
Terbium	98	70-130	07/22/2017 02:03

Analyst(s): ND

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T5d 4'	1707748-007A	Soil	07/20/2017 08:44	ICP-MS1	142341

Analytes	Result	RL	DF	Date Analyzed
Lead	**15**	0.50	1	07/22/2017 02:09

Surrogates	REC (%)	Limits	
Terbium	100	70-130	07/22/2017 02:09

Analyst(s): ND

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T6d 4'	1707748-008A	Soil	07/20/2017 08:47	ICP-MS1	142341

Analytes	Result	RL	DF	Date Analyzed
Lead	**9.7**	0.50	1	07/22/2017 02:15

Surrogates	REC (%)	Limits	
Terbium	96	70-130	07/22/2017 02:15

Analyst(s): ND

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW3050B
Date Prepared:	7/20/17	**Analytical Method:**	SW6020
Project:	Chevron-Livermore	**Unit:**	mg/Kg

Lead

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T7d 3.5'	1707748-009A	Soil	07/20/2017 08:49	ICP-MS1	142341

Analytes	Result	RL	DF	Date Analyzed
Lead	**6.3**	0.50	1	07/22/2017 02:21

Surrogates	REC (%)	Limits	
Terbium	101	70-130	07/22/2017 02:21

Analyst(s): ND

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T8d 3.5'	1707748-010A	Soil	07/20/2017 08:52	ICP-MS1	142341

Analytes	Result	RL	DF	Date Analyzed
Lead	**11**	0.50	1	07/22/2017 02:28

Surrogates	REC (%)	Limits	
Terbium	99	70-130	07/22/2017 02:28

Analyst(s): ND

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T9d 3.5'	1707748-011A	Soil	07/20/2017 08:54	ICP-MS1	142341

Analytes	Result	RL	DF	Date Analyzed
Lead	**7.3**	0.50	1	07/22/2017 02:52

Surrogates	REC (%)	Limits	
Terbium	98	70-130	07/22/2017 02:52

Analyst(s): ND

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T10d 3.5'	1707748-012A	Soil	07/20/2017 08:57	ICP-MS1	142341

Analytes	Result	RL	DF	Date Analyzed
Lead	**8.1**	0.50	1	07/22/2017 02:58

Surrogates	REC (%)	Limits	
Terbium	99	70-130	07/22/2017 02:58

Analyst(s): ND

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW3050B
Date Prepared:	7/20/17	**Analytical Method:**	SW6020
Project:	Chevron-Livermore	**Unit:**	mg/Kg

Lead

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T11d 3.5'	1707748-013A	Soil	07/20/2017 09:05	ICP-MS3	142352

Analytes	Result	RL	DF	Date Analyzed
Lead	**9.5**	0.50	1	07/22/2017 02:44

Surrogates	REC (%)	Limits	
Terbium	99	70-130	07/22/2017 02:44

Analyst(s): DB

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Comp S1 (A-D)	1707748-014A	Soil	07/20/2017	ICP-MS1	142352

Analytes	Result	RL	DF	Date Analyzed
Lead	**9.0**	0.50	1	07/22/2017 03:05

Surrogates	REC (%)	Limits	
Terbium	102	70-130	07/22/2017 03:05

Analyst(s): ND

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T3d 4'	1707748-015A	Soil	07/20/2017 08:37	ICP-MS1	142352

Analytes	Result	RL	DF	Date Analyzed
Lead	**7.2**	0.50	1	07/22/2017 03:11

Surrogates	REC (%)	Limits	
Terbium	104	70-130	07/22/2017 03:11

Analyst(s): ND

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW3550B/3630C
Date Prepared:	7/20/17	**Analytical Method:**	SW8015B
Project:	Chevron-Livermore	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P1d 3'	1707748-001A	Soil	07/20/2017 08:19	GC39B	142333

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/21/2017 20:38

Surrogates	REC (%)	Limits	
C9	98	78-109	07/21/2017 20:38

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P2d 3'	1707748-002A	Soil	07/20/2017 08:25	GC39B	142333

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/21/2017 21:56

Surrogates	REC (%)	Limits	
C9	99	78-109	07/21/2017 21:56

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P3d 3'	1707748-003A	Soil	07/20/2017 08:30	GC39B	142333

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**1800**	10	10	07/22/2017 05:43

Surrogates	REC (%)	Limits	
C26	106	70-130	07/22/2017 05:43

Analyst(s): TK Analytical Comments: e3/e1,e4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P4d 3	1707748-004A	Soil	07/20/2017 08:35	GC39B	142333

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**1.3**	1.0	1	07/22/2017 00:32

Surrogates	REC (%)	Limits	
C9	98	78-109	07/22/2017 00:32

Analyst(s): TK Analytical Comments: e2

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW3550B/3630C
Date Prepared:	7/20/17	**Analytical Method:**	SW8015B
Project:	Chevron-Livermore	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T1d 3.5'	1707748-005A	Soil	07/20/2017 08:29	GC39B	142333

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/22/2017 01:50

Surrogates	REC (%)	Limits	
C9	97	78-109	07/22/2017 01:50

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T4d 4'	1707748-006A	Soil	07/20/2017 08:40	GC39B	142333

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/22/2017 03:07

Surrogates	REC (%)	Limits	
C9	98	78-109	07/22/2017 03:07

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T5d 4'	1707748-007A	Soil	07/20/2017 08:44	GC39B	142333

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/22/2017 04:25

Surrogates	REC (%)	Limits	
C9	97	78-109	07/22/2017 04:25

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T6d 4'	1707748-008A	Soil	07/20/2017 08:47	GC39B	142333

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/21/2017 23:14

Surrogates	REC (%)	Limits	
C9	97	78-109	07/21/2017 23:14

Analyst(s): TK

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW3550B/3630C
Date Prepared:	7/20/17	**Analytical Method:**	SW8015B
Project:	Chevron-Livermore	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T7d 3.5'	1707748-009A	Soil	07/20/2017 08:49	GC39A	142333

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/21/2017 21:17

Surrogates	REC (%)	Limits	
C9	104	78-109	07/21/2017 21:17

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T8d 3.5'	1707748-010A	Soil	07/20/2017 08:52	GC39A	142333

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/21/2017 22:35

Surrogates	REC (%)	Limits	
C9	105	78-109	07/21/2017 22:35

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T9d 3.5'	1707748-011A	Soil	07/20/2017 08:54	GC39A	142333

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/21/2017 23:53

Surrogates	REC (%)	Limits	
C9	104	78-109	07/21/2017 23:53

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T10d 3.5'	1707748-012A	Soil	07/20/2017 08:57	GC39A	142333

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/22/2017 01:11

Surrogates	REC (%)	Limits	
C9	104	78-109	07/22/2017 01:11

Analyst(s): TK

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Received:	7/20/17 11:57	**Extraction Method:**	SW3550B/3630C
Date Prepared:	7/20/17	**Analytical Method:**	SW8015B
Project:	Chevron-Livermore	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T11d 3.5'	**1707748-013A**	**Soil**	**07/20/2017 09:05**	**GC39A**	**142333**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/22/2017 02:28

Surrogates	REC (%)	Limits	
C9	104	78-109	07/22/2017 02:28

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Comp S1 (A-D)	**1707748-014A**	**Soil**	**07/20/2017**	**GC39A**	**142333**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	07/22/2017 03:46

Surrogates	REC (%)	Limits	
C9	104	78-109	07/22/2017 03:46

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
T3d 4'	**1707748-015A**	**Soil**	**07/20/2017 08:37**	**GC39A**	**142333**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**3.3**	1.0	1	07/22/2017 05:04

Surrogates	REC (%)	Limits	
C9	104	78-109	07/22/2017 05:04

Analyst(s): TK Analytical Comments: e7,e2

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Prepared:	7/20/17	**BatchID:**	142302
Date Analyzed:	7/20/17 - 7/24/17	**Extraction Method:**	SW5030B
Instrument:	GC10, GC18	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS-142302 1707721-004AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	1.16	0.10	1	-	116	72-156
tert-Amyl methyl ether (TAME)	ND	0.0455	0.0050	0.050	-	91	53-116
Benzene	ND	0.0488	0.0050	0.050	-	98	63-137
Bromobenzene	ND	0.0488	0.0050	0.050	-	98	68-126
Bromochloromethane	ND	0.0469	0.0050	0.050	-	94	72-126
Bromodichloromethane	ND	0.0481	0.0050	0.050	-	96	61-127
Bromoform	ND	0.0358	0.0050	0.050	-	72	49-100
Bromomethane	ND	0.0530	0.0050	0.050	-	106	40-161
2-Butanone (MEK)	ND	0.206	0.020	0.20	-	103	43-157
t-Butyl alcohol (TBA)	ND	0.210	0.050	0.20	-	105	41-135
n-Butyl benzene	ND	0.0655	0.0050	0.050	-	131	102-160
sec-Butyl benzene	ND	0.0685	0.0050	0.050	-	137	74-168
tert-Butyl benzene	ND	0.0542	0.0050	0.050	-	108	88-157
Carbon Disulfide	ND	0.0464	0.0050	0.050	-	93	42-151
Carbon Tetrachloride	ND	0.0510	0.0050	0.050	-	102	49-149
Chlorobenzene	ND	0.0467	0.0050	0.050	-	93	77-121
Chloroethane	ND	0.0532	0.0050	0.050	-	106	41-134
Chloroform	ND	0.0495	0.0050	0.050	-	99	69-133
Chloromethane	ND	0.0475	0.0050	0.050	-	95	31-119
2-Chlorotoluene	ND	0.0511	0.0050	0.050	-	102	79-139
4-Chlorotoluene	ND	0.0548	0.0050	0.050	-	110	77-138
Dibromochloromethane	ND	0.0393	0.0050	0.050	-	79	58-121
1,2-Dibromo-3-chloropropane	ND	0.0147	0.0040	0.020	-	73	39-115
1,2-Dibromoethane (EDB)	ND	0.0452	0.0040	0.050	-	90	67-119
Dibromomethane	ND	0.0472	0.0050	0.050	-	94	66-117
1,2-Dichlorobenzene	ND	0.0410	0.0050	0.050	-	82	59-109
1,3-Dichlorobenzene	ND	0.0484	0.0050	0.050	-	97	75-130
1,4-Dichlorobenzene	ND	0.0464	0.0050	0.050	-	93	71-122
Dichlorodifluoromethane	ND	0.0250	0.0050	0.050	-	50	43-68
1,1-Dichloroethane	ND	0.0493	0.0050	0.050	-	99	62-139
1,2-Dichloroethane (1,2-DCA)	ND	0.0505	0.0040	0.050	-	101	58-135
1,1-Dichloroethene	ND	0.0455	0.0050	0.050	-	91	42-145
cis-1,2-Dichloroethene	ND	0.0467	0.0050	0.050	-	93	67-129
trans-1,2-Dichloroethene	ND	0.0465	0.0050	0.050	-	93	54-139
1,2-Dichloropropane	ND	0.0467	0.0050	0.050	-	93	68-125
1,3-Dichloropropane	ND	0.0460	0.0050	0.050	-	92	65-125
2,2-Dichloropropane	ND	0.0522	0.0050	0.050	-	104	45-151

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Prepared:	7/20/17	**BatchID:**	142302
Date Analyzed:	7/20/17 - 7/24/17	**Extraction Method:**	SW5030B
Instrument:	GC10, GC18	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS-142302 1707721-004AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	0.0497	0.0050	0.050	-	99	64-138
cis-1,3-Dichloropropene	ND	0.0453	0.0050	0.050	-	91	62-134
trans-1,3-Dichloropropene	ND	0.0467	0.0050	0.050	-	93	59-128
Diisopropyl ether (DIPE)	ND	0.0476	0.0050	0.050	-	95	52-129
Ethylbenzene	ND	0.0543	0.0050	0.050	-	109	74-142
Ethyl tert-butyl ether (ETBE)	ND	0.0496	0.0050	0.050	-	99	53-125
Freon 113	ND	0.0409	0.0050	0.050	-	82	51-126
Hexachlorobutadiene	ND	0.0538	0.0050	0.050	-	108	70-158
Hexachloroethane	ND	0.0497	0.0050	0.050	-	99	80-160
2-Hexanone	ND	0.0424	0.0050	0.050	-	85	41-116
Isopropylbenzene	ND	0.0644	0.0050	0.050	-	129	77-146
4-Isopropyl toluene	ND	0.0637	0.0050	0.050	-	127	96-159
Methyl-t-butyl ether (MTBE)	ND	0.0474	0.0050	0.050	-	95	58-122
Methylene chloride	ND	0.0454	0.0050	0.050	-	91	58-135
4-Methyl-2-pentanone (MIBK)	ND	0.0425	0.0050	0.050	-	85	40-112
Naphthalene	ND	0.0248	0.0050	0.050	-	50	23-73
n-Propyl benzene	ND	0.0558	0.0050	0.050	-	112	82-160
Styrene	ND	0.0433	0.0050	0.050	-	87	68-124
1,1,1,2-Tetrachloroethane	ND	0.0427	0.0050	0.050	-	85	70-128
1,1,2,2-Tetrachloroethane	ND	0.0420	0.0050	0.050	-	84	57-111
Tetrachloroethene	ND	0.0461	0.0050	0.050	-	92	73-145
Toluene	ND	0.0494	0.0050	0.050	-	99	76-130
1,2,3-Trichlorobenzene	ND	0.0304	0.0050	0.050	-	61	43-72
1,2,4-Trichlorobenzene	ND	0.0375	0.0050	0.050	-	75	47-95
1,1,1-Trichloroethane	ND	0.0502	0.0050	0.050	-	100	60-141
1,1,2-Trichloroethane	ND	0.0454	0.0050	0.050	-	91	62-118
Trichloroethene	ND	0.0476	0.0050	0.050	-	95	72-132
Trichlorofluoromethane	ND	0.0434	0.0050	0.050	-	87	43-135
1,2,3-Trichloropropane	ND	0.0505	0.0050	0.050	-	101	57-122
1,2,4-Trimethylbenzene	ND	0.0615	0.0050	0.050	-	123	81-152
1,3,5-Trimethylbenzene	ND	0.0622	0.0050	0.050	-	124	78-160
Vinyl Chloride	ND	0.0493	0.0050	0.050	-	99	42-131
Xylenes, Total	ND	0.153	0.0050	0.15	-	102	70-130

(Cont.)

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Prepared:	7/20/17	**BatchID:**	142302
Date Analyzed:	7/20/17 - 7/24/17	**Extraction Method:**	SW5030B
Instrument:	GC10, GC18	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS-142302 1707721-004AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.1409	0.147		0.12	113	118	70-130
Toluene-d8	0.1513	0.148		0.12	121	119	70-130
4-BFB	0.01501	0.0145		0.012	120	116	70-130
Benzene-d6	0.1083	0.0963		0.10	108	96	60-140
Ethylbenzene-d10	0.1306	0.112		0.10	131	112	60-140
1,2-DCB-d4	0.08703	0.0844		0.10	87	84	60-140

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Prepared:	7/20/17	**BatchID:**	142302
Date Analyzed:	7/20/17 - 7/24/17	**Extraction Method:**	SW5030B
Instrument:	GC10, GC18	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS-142302 1707721-004AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Acetone	0.924	0.912	1	ND	92	91	72-156	1.31	20
tert-Amyl methyl ether (TAME)	0.0435	0.0462	0.050	ND	87	92	53-116	6.08	20
Benzene	0.0478	0.0482	0.050	ND	96	96	63-137	0	20
Bromobenzene	0.0474	0.0489	0.050	ND	95	98	68-126	3.10	20
Bromochloromethane	0.0448	0.0455	0.050	ND	90	91	72-126	1.64	20
Bromodichloromethane	0.0488	0.0489	0.050	ND	98	98	61-127	0	20
Bromoform	0.0347	0.0347	0.050	ND	69	69	49-100	0	20
Bromomethane	0.0331	0.0334	0.050	ND	66	67	40-161	0.863	20
2-Butanone (MEK)	0.172	0.171	0.20	ND	86	86	43-157	0	20
t-Butyl alcohol (TBA)	0.187	0.192	0.20	ND	94	96	41-135	2.69	20
n-Butyl benzene	0.0662	0.0711	0.050	ND	132	142	102-160	7.17	20
sec-Butyl benzene	0.0638	0.0685	0.050	ND	128	137	74-168	7.03	20
tert-Butyl benzene	0.0641	0.0675	0.050	ND	128	135	88-157	5.14	20
Carbon Disulfide	0.0234	0.0258	0.050	ND	47	52	42-151	9.88	20
Carbon Tetrachloride	0.0569	0.0595	0.050	ND	114	119	49-149	4.41	20
Chlorobenzene	0.0472	0.0480	0.050	ND	94	96	77-121	1.70	20
Chloroethane	0.0394	0.0392	0.050	ND	79	78	41-134	0.417	20
Chloroform	0.0508	0.0517	0.050	ND	102	103	69-133	1.72	20
Chloromethane	0.0333	0.0332	0.050	ND	67	66	31-119	0.286	20
2-Chlorotoluene	0.0552	0.0562	0.050	ND	110	112	79-139	1.86	20
4-Chlorotoluene	0.0526	0.0538	0.050	ND	105	108	77-138	2.15	20
Dibromochloromethane	0.0435	0.0438	0.050	ND	87	88	58-121	0.500	20
1,2-Dibromo-3-chloropropane	0.0185	0.0202	0.020	ND	92	101	39-115	8.73	20
1,2-Dibromoethane (EDB)	0.0467	0.0470	0.050	ND	93	94	67-119	0.637	20
Dibromomethane	0.0430	0.0424	0.050	ND	86	85	66-117	1.41	20
1,2-Dichlorobenzene	0.0392	0.0396	0.050	ND	78	79	59-109	1.09	20
1,3-Dichlorobenzene	0.0477	0.0480	0.050	ND	95	96	75-130	0.628	20
1,4-Dichlorobenzene	0.0443	0.0455	0.050	ND	89	91	71-122	2.67	20
Dichlorodifluoromethane	0.0139	0.0149	0.050	ND	28,F1	30,F1	43-68	7.22	20
1,1-Dichloroethane	0.0505	0.0516	0.050	ND	101	103	62-139	2.18	20
1,2-Dichloroethane (1,2-DCA)	0.0484	0.0479	0.050	ND	97	96	58-135	0.984	20
1,1-Dichloroethene	0.0467	0.0493	0.050	ND	93	99	42-145	5.38	20
cis-1,2-Dichloroethene	0.0538	0.0548	0.050	ND	108	110	67-129	1.86	20
trans-1,2-Dichloroethene	0.0399	0.0409	0.050	ND	80	82	54-139	2.65	20
1,2-Dichloropropane	0.0468	0.0475	0.050	ND	94	95	68-125	1.51	20
1,3-Dichloropropane	0.0505	0.0516	0.050	ND	101	103	65-125	2.23	20
2,2-Dichloropropane	0.0603	0.0620	0.050	ND	121	124	45-151	2.86	20

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Prepared:	7/20/17	**BatchID:**	142302
Date Analyzed:	7/20/17 - 7/24/17	**Extraction Method:**	SW5030B
Instrument:	GC10, GC18	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS-142302 1707721-004AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
1,1-Dichloropropene	0.0487	0.0526	0.050	ND	97	105	64-138	7.75	20
cis-1,3-Dichloropropene	0.0533	0.0536	0.050	ND	107	107	62-134	0	20
trans-1,3-Dichloropropene	0.0470	0.0465	0.050	ND	94	93	59-128	1.12	20
Diisopropyl ether (DIPE)	0.0456	0.0460	0.050	ND	91	92	52-129	0.801	20
Ethylbenzene	0.0540	0.0556	0.050	ND	108	111	74-142	2.84	20
Ethyl tert-butyl ether (ETBE)	0.0464	0.0467	0.050	ND	93	93	53-125	0	20
Freon 113	0.0418	0.0449	0.050	ND	84	90	51-126	7.22	20
Hexachlorobutadiene	0.0573	0.0641	0.050	ND	115	128	70-158	11.2	20
Hexachloroethane	0.0550	0.0598	0.050	ND	110	120	80-160	8.29	20
2-Hexanone	0.0390	0.0399	0.050	ND	78	80	41-116	2.28	20
Isopropylbenzene	0.0579	0.0578	0.050	ND	116	116	77-146	0	20
4-Isopropyl toluene	0.0609	0.0643	0.050	ND	122	129	96-159	5.41	20
Methyl-t-butyl ether (MTBE)	0.0445	0.0447	0.050	ND	89	89	58-122	0	20
Methylene chloride	0.0493	0.0495	0.050	ND	99	99	58-135	0	20
4-Methyl-2-pentanone (MIBK)	0.0414	0.0420	0.050	ND	83	84	40-112	1.52	20
Naphthalene	0.0228	0.0237	0.050	ND	46	47	23-73	3.96	20
n-Propyl benzene	0.0638	0.0657	0.050	ND	128	131	82-160	2.96	20
Styrene	0.0470	0.0460	0.050	ND	94	92	68-124	2.07	20
1,1,1,2-Tetrachloroethane	0.0534	0.0537	0.050	ND	107	107	70-128	0	20
1,1,2,2-Tetrachloroethane	0.0334	0.0359	0.050	ND	67	72	57-111	7.03	20
Tetrachloroethene	0.0558	0.0588	0.050	ND	112	118	73-145	5.33	20
Toluene	0.0533	0.0545	0.050	ND	107	109	76-130	2.21	20
1,2,3-Trichlorobenzene	0.0255	0.0266	0.050	ND	51	53	43-72	4.24	20
1,2,4-Trichlorobenzene	0.0324	0.0336	0.050	ND	65	67	47-95	3.65	20
1,1,1-Trichloroethane	0.0557	0.0582	0.050	ND	111	116	60-141	4.33	20
1,1,2-Trichloroethane	0.0468	0.0477	0.050	ND	94	95	62-118	1.94	20
Trichloroethene	0.0560	0.0566	0.050	ND	112	113	72-132	1.21	20
Trichlorofluoromethane	0.0461	0.0488	0.050	ND	92	98	43-135	5.63	20
1,2,3-Trichloropropane	0.0483	0.0502	0.050	ND	97	100	57-122	3.80	20
1,2,4-Trimethylbenzene	0.0554	0.0575	0.050	ND	111	115	81-152	3.76	20
1,3,5-Trimethylbenzene	0.0607	0.0635	0.050	ND	121	127	78-160	4.44	20
Vinyl Chloride	0.0338	0.0342	0.050	ND	68	68	42-131	0	20
Xylenes, Total	0.154	0.154	0.15	ND	102	103	70-130	0.397	20

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Prepared:	7/20/17	**BatchID:**	142302
Date Analyzed:	7/20/17 - 7/24/17	**Extraction Method:**	SW5030B
Instrument:	GC10, GC18	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS-142302 1707721-004AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Surrogate Recovery									
Dibromofluoromethane	0.129	0.127	0.12		103	102	70-130	1.08	20
Toluene-d8	0.142	0.144	0.12		113	115	70-130	1.37	20
4-BFB	0.0150	0.0154	0.012		120	123	70-130	2.48	20
Benzene-d6	0.0931	0.0930	0.10		93	93	60-140	0	20
Ethylbenzene-d10	0.113	0.114	0.10		113	114	60-140	1.19	20
1,2-DCB-d4	0.0797	0.0809	0.10		80	81	60-140	1.51	20

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Prepared:	7/21/17	**BatchID:**	142434
Date Analyzed:	7/24/17 - 7/26/17	**Extraction Method:**	SW5030B
Instrument:	GC10, GC28	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS-142434 1707825-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	1.12	0.10	1	-	112	72-156
tert-Amyl methyl ether (TAME)	ND	0.0364	0.0050	0.050	-	73	53-116
Benzene	ND	0.0443	0.0050	0.050	-	89	63-137
Bromobenzene	ND	0.0482	0.0050	0.050	-	96	68-126
Bromochloromethane	ND	0.0496	0.0050	0.050	-	99	72-126
Bromodichloromethane	ND	0.0372	0.0050	0.050	-	74	61-127
Bromoform	ND	0.0341	0.0050	0.050	-	68	49-100
Bromomethane	ND	0.0459	0.0050	0.050	-	92	40-161
2-Butanone (MEK)	ND	0.168	0.020	0.20	-	84	43-157
t-Butyl alcohol (TBA)	ND	0.180	0.050	0.20	-	90	41-135
n-Butyl benzene	ND	0.0549	0.0050	0.050	-	110	102-160
sec-Butyl benzene	ND	0.0550	0.0050	0.050	-	110	74-168
tert-Butyl benzene	ND	0.0583	0.0050	0.050	-	117	88-157
Carbon Disulfide	ND	0.0512	0.0050	0.050	-	102	42-151
Carbon Tetrachloride	ND	0.0472	0.0050	0.050	-	94	49-149
Chlorobenzene	ND	0.0482	0.0050	0.050	-	96	77-121
Chloroethane	ND	0.0378	0.0050	0.050	-	76	41-134
Chloroform	ND	0.0438	0.0050	0.050	-	88	69-133
Chloromethane	ND	0.0342	0.0050	0.050	-	68	31-119
2-Chlorotoluene	ND	0.0561	0.0050	0.050	-	112	79-139
4-Chlorotoluene	ND	0.0528	0.0050	0.050	-	106	77-138
Dibromochloromethane	ND	0.0389	0.0050	0.050	-	78	58-121
1,2-Dibromo-3-chloropropane	ND	0.0151	0.0040	0.020	-	76	39-115
1,2-Dibromoethane (EDB)	ND	0.0469	0.0040	0.050	-	94	67-119
Dibromomethane	ND	0.0425	0.0050	0.050	-	85	66-117
1,2-Dichlorobenzene	ND	0.0442	0.0050	0.050	-	88	59-109
1,3-Dichlorobenzene	ND	0.0545	0.0050	0.050	-	109	75-130
1,4-Dichlorobenzene	ND	0.0488	0.0050	0.050	-	98	71-122
Dichlorodifluoromethane	ND	0.0206	0.0050	0.050	-	41, F2	43-68
1,1-Dichloroethane	ND	0.0442	0.0050	0.050	-	88	62-139
1,2-Dichloroethane (1,2-DCA)	ND	0.0346	0.0040	0.050	-	69	58-135
1,1-Dichloroethene	ND	0.0525	0.0050	0.050	-	105	42-145
cis-1,2-Dichloroethene	ND	0.0466	0.0050	0.050	-	93	67-129
trans-1,2-Dichloroethene	ND	0.0465	0.0050	0.050	-	93	54-139
1,2-Dichloropropane	ND	0.0421	0.0050	0.050	-	84	68-125
1,3-Dichloropropane	ND	0.0425	0.0050	0.050	-	85	65-125
2,2-Dichloropropane	ND	0.0439	0.0050	0.050	-	88	45-151

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Prepared:	7/21/17	**BatchID:**	142434
Date Analyzed:	7/24/17 - 7/26/17	**Extraction Method:**	SW5030B
Instrument:	GC10, GC28	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS-142434 1707825-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	0.0434	0.0050	0.050	-	87	64-138
cis-1,3-Dichloropropene	ND	0.0391	0.0050	0.050	-	78	62-134
trans-1,3-Dichloropropene	ND	0.0369	0.0050	0.050	-	74	59-128
Diisopropyl ether (DIPE)	ND	0.0445	0.0050	0.050	-	89	52-129
Ethylbenzene	ND	0.0500	0.0050	0.050	-	100	74-142
Ethyl tert-butyl ether (ETBE)	ND	0.0397	0.0050	0.050	-	79	53-125
Freon 113	ND	0.0490	0.0050	0.050	-	98	51-126
Hexachlorobutadiene	ND	0.0704	0.0050	0.050	-	141	70-158
Hexachloroethane	ND	0.0398	0.0050	0.050	-	80	80-160
2-Hexanone	ND	0.0303	0.0050	0.050	-	61	41-116
Isopropylbenzene	ND	0.0567	0.0050	0.050	-	113	77-146
4-Isopropyl toluene	ND	0.0567	0.0050	0.050	-	113	96-159
Methyl-t-butyl ether (MTBE)	ND	0.0392	0.0050	0.050	-	78	58-122
Methylene chloride	ND	0.0504	0.0050	0.050	-	101	58-135
4-Methyl-2-pentanone (MIBK)	ND	0.0340	0.0050	0.050	-	68	40-112
Naphthalene	ND	0.0244	0.0050	0.050	-	49	23-73
n-Propyl benzene	ND	0.0600	0.0050	0.050	-	120	82-160
Styrene	ND	0.0486	0.0050	0.050	-	97	68-124
1,1,1,2-Tetrachloroethane	ND	0.0487	0.0050	0.050	-	97	70-128
1,1,2,2-Tetrachloroethane	ND	0.0285	0.0050	0.050	-	57	57-111
Tetrachloroethene	ND	0.0555	0.0050	0.050	-	111	73-145
Toluene	ND	0.0476	0.0050	0.050	-	95	76-130
1,2,3-Trichlorobenzene	ND	0.0315	0.0050	0.050	-	63	43-72
1,2,4-Trichlorobenzene	ND	0.0410	0.0050	0.050	-	82	47-95
1,1,1-Trichloroethane	ND	0.0454	0.0050	0.050	-	91	60-141
1,1,2-Trichloroethane	ND	0.0446	0.0050	0.050	-	89	62-118
Trichloroethene	ND	0.0510	0.0050	0.050	-	102	72-132
Trichlorofluoromethane	ND	0.0507	0.0050	0.050	-	101	43-135
1,2,3-Trichloropropane	ND	0.0422	0.0050	0.050	-	84	57-122
1,2,4-Trimethylbenzene	ND	0.0479	0.0050	0.050	-	96	81-152
1,3,5-Trimethylbenzene	ND	0.0540	0.0050	0.050	-	108	78-160
Vinyl Chloride	ND	0.0376	0.0050	0.050	-	75	42-131
Xylenes, Total	ND	0.147	0.0050	0.15	-	98	70-130

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Prepared:	7/21/17	**BatchID:**	142434
Date Analyzed:	7/24/17 - 7/26/17	**Extraction Method:**	SW5030B
Instrument:	GC10, GC28	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS-142434 1707825-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.1471	0.152		0.12	118	121	70-130
Toluene-d8	0.1487	0.154		0.12	119	124	70-130
4-BFB	0.01153	0.0125		0.012	92	100	70-130
Benzene-d6	0.1079	0.0962		0.10	108	96	60-140
Ethylbenzene-d10	0.1095	0.104		0.10	109	104	60-140
1,2-DCB-d4	0.09969	0.0987		0.10	100	99	60-140

(Cont.)

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Prepared:	7/21/17	**BatchID:**	142434
Date Analyzed:	7/24/17 - 7/26/17	**Extraction Method:**	SW5030B
Instrument:	GC10, GC28	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS-142434 1707825-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Acetone	1.04	1.00	1	ND	96	92	72-156	4.17	20
tert-Amyl methyl ether (TAME)	0.0314	0.0316	0.050	ND	63	63	53-116	0	20
Benzene	0.0382	0.0387	0.050	ND	76	77	63-137	1.43	20
Bromobenzene	0.0423	0.0424	0.050	ND	85	85	68-126	0	20
Bromochloromethane	0.0423	0.0435	0.050	ND	85	87	72-126	2.63	20
Bromodichloromethane	0.0329	0.0327	0.050	ND	66	65	61-127	0.630	20
Bromoform	0.0318	0.0319	0.050	ND	64	64	49-100	0	20
Bromomethane	0.0429	0.0442	0.050	ND	86	88	40-161	2.97	20
2-Butanone (MEK)	0.133	0.133	0.20	ND	67	66	43-157	0.408	20
t-Butyl alcohol (TBA)	0.138	0.130	0.20	ND	69	65	41-135	5.80	20
n-Butyl benzene	0.0465	0.0473	0.050	ND	93,F1	95,F1	102-160	1.69	20
sec-Butyl benzene	0.0467	0.0474	0.050	ND	93	95	74-168	1.50	20
tert-Butyl benzene	0.0490	0.0495	0.050	ND	98	99	88-157	0.999	20
Carbon Disulfide	0.0420	0.0413	0.050	ND	84	83	42-151	1.73	20
Carbon Tetrachloride	0.0400	0.0408	0.050	ND	80	82	49-149	1.79	20
Chlorobenzene	0.0419	0.0424	0.050	ND	84	85	77-121	1.25	20
Chloroethane	0.0346	0.0368	0.050	ND	69	74	41-134	5.95	20
Chloroform	0.0380	0.0383	0.050	ND	76	77	69-133	0.627	20
Chloromethane	0.0287	0.0307	0.050	ND	57	61	31-119	6.85	20
2-Chlorotoluene	0.0477	0.0487	0.050	ND	95	97	79-139	1.97	20
4-Chlorotoluene	0.0456	0.0455	0.050	ND	91	91	77-138	0	20
Dibromochloromethane	0.0352	0.0350	0.050	ND	70	70	58-121	0	20
1,2-Dibromo-3-chloropropane	0.0136	0.0141	0.020	ND	68	71	39-115	3.98	20
1,2-Dibromoethane (EDB)	0.0407	0.0398	0.050	ND	81	80	67-119	2.28	20
Dibromomethane	0.0377	0.0373	0.050	ND	75	75	66-117	0	20
1,2-Dichlorobenzene	0.0400	0.0403	0.050	ND	80	81	59-109	0.688	20
1,3-Dichlorobenzene	0.0472	0.0477	0.050	ND	94	95	75-130	1.14	20
1,4-Dichlorobenzene	0.0432	0.0435	0.050	ND	86	87	71-122	0.848	20
Dichlorodifluoromethane	0.0164	0.0169	0.050	ND	33,F1	34,F1	43-68	2.89	20
1,1-Dichloroethane	0.0371	0.0377	0.050	ND	74	75	62-139	1.76	20
1,2-Dichloroethane (1,2-DCA)	0.0303	0.0298	0.050	ND	61	59	58-135	1.85	20
1,1-Dichloroethene	0.0423	0.0427	0.050	ND	85	85	42-145	0	20
cis-1,2-Dichloroethene	0.0403	0.0407	0.050	ND	81	81	67-129	0	20
trans-1,2-Dichloroethene	0.0394	0.0403	0.050	ND	79	81	54-139	2.31	20
1,2-Dichloropropane	0.0363	0.0366	0.050	ND	73	73	68-125	0	20
1,3-Dichloropropane	0.0366	0.0369	0.050	ND	73	74	65-125	0.937	20
2,2-Dichloropropane	0.0371	0.0372	0.050	ND	74	74	45-151	0	20

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Prepared:	7/21/17	**BatchID:**	142434
Date Analyzed:	7/24/17 - 7/26/17	**Extraction Method:**	SW5030B
Instrument:	GC10, GC28	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS-142434 1707825-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
1,1-Dichloropropene	0.0366	0.0368	0.050	ND	73	74	64-138	0.500	20
cis-1,3-Dichloropropene	0.0338	0.0339	0.050	ND	67	68	62-134	0.535	20
trans-1,3-Dichloropropene	0.0316	0.0318	0.050	ND	63	64	59-128	0.723	20
Diisopropyl ether (DIPE)	0.0383	0.0385	0.050	ND	77	77	52-129	0	20
Ethylbenzene	0.0429	0.0433	0.050	ND	86	87	74-142	0.921	20
Ethyl tert-butyl ether (ETBE)	0.0344	0.0342	0.050	ND	69	68	53-125	0.472	20
Freon 113	0.0380	0.0372	0.050	ND	76	74	51-126	2.09	20
Hexachlorobutadiene	0.0589	0.0601	0.050	ND	118	120	70-158	2.08	20
Hexachloroethane	0.0359	0.0408	0.050	ND	63,F1	73,F1	80-160	12.9	20
2-Hexanone	0.0268	0.0274	0.050	ND	54	55	41-116	2.25	20
Isopropylbenzene	0.0473	0.0479	0.050	ND	95	96	77-146	1.12	20
4-Isopropyl toluene	0.0481	0.0486	0.050	ND	96	97	96-159	0.976	20
Methyl-t-butyl ether (MTBE)	0.0332	0.0336	0.050	ND	66	67	58-122	1.20	20
Methylene chloride	0.0431	0.0410	0.050	ND	86	82	58-135	5.00	20
4-Methyl-2-pentanone (MIBK)	0.0285	0.0282	0.050	ND	57	56	40-112	0.934	20
Naphthalene	0.0236	0.0236	0.050	ND	47	47	23-73	0	20
n-Propyl benzene	0.0504	0.0510	0.050	ND	101	102	82-160	1.27	20
Styrene	0.0425	0.0426	0.050	ND	85	85	68-124	0	20
1,1,1,2-Tetrachloroethane	0.0427	0.0431	0.050	ND	85	86	70-128	0.856	20
1,1,2,2-Tetrachloroethane	0.0296	0.0306	0.050	ND	59	61	57-111	3.03	20
Tetrachloroethene	0.0461	0.0438	0.050	ND	92	88	73-145	5.14	20
Toluene	0.0404	0.0408	0.050	ND	81	82	76-130	0.998	20
1,2,3-Trichlorobenzene	0.0297	0.0297	0.050	ND	59	59	43-72	0	20
1,2,4-Trichlorobenzene	0.0375	0.0378	0.050	ND	75	76	47-95	0.871	20
1,1,1-Trichloroethane	0.0386	0.0388	0.050	ND	77	78	60-141	0.708	20
1,1,2-Trichloroethane	0.0386	0.0390	0.050	ND	77	78	62-118	1.12	20
Trichloroethene	0.0402	0.0411	0.050	ND	80	82	72-132	2.21	20
Trichlorofluoromethane	0.0434	0.0446	0.050	ND	87	89	43-135	2.91	20
1,2,3-Trichloropropane	0.0373	0.0366	0.050	ND	75	73	57-122	1.83	20
1,2,4-Trimethylbenzene	0.0398	0.0411	0.050	ND	80,F1	82	81-152	3.22	20
1,3,5-Trimethylbenzene	0.0460	0.0463	0.050	ND	92	93	78-160	0.586	20
Vinyl Chloride	0.0335	0.0359	0.050	ND	67	72	42-131	6.93	20
Xylenes, Total	0.127	0.129	0.15	ND	85	86	70-130	1.28	20

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Prepared:	7/21/17	**BatchID:**	142434
Date Analyzed:	7/24/17 - 7/26/17	**Extraction Method:**	SW5030B
Instrument:	GC10, GC28	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS-142434 1707825-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Surrogate Recovery									
Dibromofluoromethane	0.153	0.152	0.12		122	121	70-130	0.863	20
Toluene-d8	0.153	0.153	0.12		122	122	70-130	0	20
4-BFB	0.0123	0.0126	0.012		98	101	70-130	2.33	20
Benzene-d6	0.0849	0.0853	0.10		85	85	60-140	0	20
Ethylbenzene-d10	0.0920	0.0922	0.10		92	92	60-140	0	20
1,2-DCB-d4	0.0903	0.0906	0.10		90	91	60-140	0.311	20

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Prepared:	7/20/17	**BatchID:**	142302
Date Analyzed:	7/20/17 - 7/24/17	**Extraction Method:**	SW5030B
Instrument:	GC10, GC18	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS/LCSD-142302 1707721-004AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
TPH(g) (C6-C12)	ND	0.25	-	-	-
Surrogate Recovery					
Dibromofluoromethane	0.1475		0.12	118	70-130
Benzene-D6	0.1038		0.10	104	70-130

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH(g) (C6-C12)	0.966	0.940	1	97	94	67-117	2.76	20
Surrogate Recovery								
Dibromofluoromethane	0.146	0.144	0.12	117	115	70-130	1.45	20
Benzene-D6	0.107	0.106	0.10	107	106	60-140	0.684	20

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(g) (C6-C12)	N/A	N/A		N/A	N/A	N/A	-	N/A	-
Surrogate Recovery									
Dibromofluoromethane	N/A	N/A			N/A	N/A	-	N/A	-
Benzene-D6	N/A	N/A			N/A	N/A	-	N/A	-

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Prepared:	7/21/17	**BatchID:**	142434
Date Analyzed:	7/24/17 - 7/26/17	**Extraction Method:**	SW5030B
Instrument:	GC10, GC28	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS/LCSD-142434 1707825-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
TPH(g) (C6-C12)	ND	0.25	-	-	-
Surrogate Recovery					
Dibromofluoromethane	0.14		0.12	112	70-130
Benzene-D6	0.09618		0.10	96	70-130

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH(g) (C6-C12)	0.914	0.929	1	91	93	67-117	1.61	20
Surrogate Recovery								
Dibromofluoromethane	0.144	0.144	0.12	115	115	70-130	0	20
Benzene-D6	0.0976	0.0972	0.10	98	97	60-140	0.453	20

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(g) (C6-C12)	N/A	N/A		N/A	N/A	N/A	-	N/A	-
Surrogate Recovery									
Dibromofluoromethane	N/A	N/A			N/A	N/A	-	N/A	-
Benzene-D6	N/A	N/A			N/A	N/A	-	N/A	-

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Prepared:	7/20/17	**BatchID:**	142333
Date Analyzed:	7/20/17	**Extraction Method:**	SW3550B/3630C
Instrument:	GC9b	**Analytical Method:**	SW8015B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS-142333 1707604-051AMS/MSD

QC Report for SW8015B w/ SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	38.1	1.0	40	-	95	79-133
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	22.89	23.1		25	92	92	77-109

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	38.8	38.6	40	ND<1.2	97	97	59-150	0	30
Surrogate Recovery									
C9	23.3	23.2	25		93	93	78-109	0	30

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QA/QC Officer

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Prepared:	7/20/17	**BatchID:**	142341
Date Analyzed:	7/21/17 - 7/24/17	**Extraction Method:**	SW3050B
Instrument:	ICP-MS1, ICP-MS3	**Analytical Method:**	SW6020
Matrix:	Soil	**Unit:**	mg/Kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS-142341 1707748-009AMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	47.1	0.50	50	-	94	75-125
Surrogate Recovery							
Terbium	471.5	489		500	94	98	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	56.3	57.7	50	6.310	100	103	75-125	2.51	20
Surrogate Recovery									
Terbium	521	525	500		104	105	70-130	0.822	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Lead	6.92	6.310	9.67	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Prepared:	7/20/17	**BatchID:**	142352
Date Analyzed:	7/22/17	**Extraction Method:**	SW3050B
Instrument:	ICP-MS3	**Analytical Method:**	SW6020
Matrix:	Soil	**Unit:**	mg/Kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS-142352 1707748-013AMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	47.6	0.50	50	-	95	75-125
Surrogate Recovery							
Terbium	471.6	499		500	94	100	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	56.5	57.6	50	9.541	94	96	75-125	1.96	20
Surrogate Recovery									
Terbium	490	486	500		98	97	70-130	0.799	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Lead	7.98	9.541	16.4	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707748
Date Prepared:	7/20/17	**BatchID:**	142333
Date Analyzed:	7/20/17	**Extraction Method:**	SW3550B/3630C
Instrument:	GC9b	**Analytical Method:**	SW8015B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS-142333 1707604-051AMS/MSD

QC Report for SW8015B w/ SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	38.1	1.0	40	-	95	79-133
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	22.89	23.1		25	92	92	77-109

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	38.8	38.6	40	ND<1.2	97	97	59-150	0	30
Surrogate Recovery									
C9	23.3	23.2	25		93	93	78-109	0	30

McCampbell Analytical, Inc.
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CHAIN-OF-CUSTODY RECORD

WorkOrder: 1707748 **ClientCode: GLC**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Joel Gregor
Geo-Logic
1140 5th Avenue
Crockett, CA 94525
(510) 787-6867 FAX: (510) 787-1457

Email: joelgreger2@gmail.com
cc/3rd Party: Rick@amer-norman.com;
PO:
ProjectNo: Chevron-Livermore

Bill to:
Joel Greger
Geo-Logic
1140 5th Avenue
Crockett, CA 94525

Requested TAT: **5 days;**

Date Received: **07/20/2017**
Date Logged: **07/20/2017**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1707748-001	P1d 3'	Soil	7/20/2017 08:19	☐	A	A	A	A								
1707748-002	P2d 3'	Soil	7/20/2017 08:25	☐	A	A	A	A								
1707748-003	P3d 3'	Soil	7/20/2017 08:30	☐	A	A	A	A								
1707748-004	P4d 3	Soil	7/20/2017 08:35	☐	A	A	A	A								
1707748-005	T1d 3.5'	Soil	7/20/2017 08:29	☐	A	A	A	A								
1707748-006	T4d 4'	Soil	7/20/2017 08:40	☐	A	A	A	A								
1707748-007	T5d 4'	Soil	7/20/2017 08:44	☐	A	A	A	A								
1707748-008	T6d 4'	Soil	7/20/2017 08:47	☐	A	A	A	A								
1707748-009	T7d 3.5'	Soil	7/20/2017 08:49	☐	A	A	A	A								
1707748-010	T8d 3.5'	Soil	7/20/2017 08:52	☐	A	A	A	A								
1707748-011	T9d 3.5'	Soil	7/20/2017 08:54	☐	A	A	A	A								
1707748-012	T10d 3.5'	Soil	7/20/2017 08:57	☐	A	A	A	A								
1707748-013	T11d 3.5'	Soil	7/20/2017 09:05	☐	A	A	A	A								
1707748-014	Comp S1 (A-D)	Soil	7/20/2017 00:00	☐	A	A	A	A								
1707748-015	T3d 4'	Soil	7/20/2017 08:37	☐	A	A	A	A								

Test Legend:

1	8260B_S	2	8260GAS_S	3	PBMS_TTLC_S	4	TPH(D)WSG_S
5		6		7		8	
9		10		11		12	

Prepared by: Kena Ponce

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A, 011A, 012A, 013A, 014A, 015A contain testgroup Gas8260_S.

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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WORK ORDER SUMMARY

Client Name: GEO-LOGIC
Client Contact: Joel Gregor
Contact's Email: joelgreger2@gmail.com

Project: Chevron-Livermore
Comments:

Work Order: 1707748
QC Level: LEVEL 2
Date Logged: 7/20/2017

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1707748-001A	P1d 3'	Soil	SW8015B (Diesel w/ S.G. Clean-Up)	1	Stainless Steel tube 2"x6"	☐	7/20/2017 8:19	5 days		☐	
			SW6020 (Lead)			☐		5 days		☐	
			TPH(g) & 8260 by P&T GCMS			☐		5 days		☐	
1707748-002A	P2d 3'	Soil	SW8015B (Diesel w/ S.G. Clean-Up)	1	Stainless Steel tube 2"x6"	☐	7/20/2017 8:25	5 days		☐	
			SW6020 (Lead)			☐		5 days		☐	
			TPH(g) & 8260 by P&T GCMS			☐		5 days		☐	
1707748-003A	P3d 3'	Soil	SW8015B (Diesel w/ S.G. Clean-Up)	1	Stainless Steel tube 2"x6"	☐	7/20/2017 8:30	5 days		☐	
			SW6020 (Lead)			☐		5 days		☐	
			TPH(g) & 8260 by P&T GCMS			☐		5 days		☐	
1707748-004A	P4d 3	Soil	SW8015B (Diesel w/ S.G. Clean-Up)	1	Stainless Steel tube 2"x6"	☐	7/20/2017 8:35	5 days		☐	
			SW6020 (Lead)			☐		5 days		☐	
			TPH(g) & 8260 by P&T GCMS			☐		5 days		☐	
1707748-005A	T1d 3.5'	Soil	SW8015B (Diesel w/ S.G. Clean-Up)	1	Stainless Steel tube 2"x6"	☐	7/20/2017 8:29	5 days		☐	
			SW6020 (Lead)			☐		5 days		☐	
			TPH(g) & 8260 by P&T GCMS			☐		5 days		☐	
1707748-006A	T4d 4'	Soil	SW8015B (Diesel w/ S.G. Clean-Up)	1	Stainless Steel tube 2"x6"	☐	7/20/2017 8:40	5 days		☐	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

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WORK ORDER SUMMARY

Client Name: GEO-LOGIC **Project:** Chevron-Livermore **Work Order:** 1707748
Client Contact: Joel Gregor **QC Level:** LEVEL 2
Contact's Email: joelgreger2@gmail.com **Comments:** **Date Logged:** 7/20/2017

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1707748-006A	T4d 4'	Soil	SW6020 (Lead)	1	Stainless Steel tube 2"x6"	☐	7/20/2017 8:40	5 days		☐	
			TPH(g) & 8260 by P&T GCMS			☐		5 days		☐	
1707748-007A	T5d 4'	Soil	SW8015B (Diesel w/ S.G. Clean-Up)	1	Stainless Steel tube 2"x6"	☐	7/20/2017 8:44	5 days		☐	
			SW6020 (Lead)			☐		5 days		☐	
			TPH(g) & 8260 by P&T GCMS			☐		5 days		☐	
1707748-008A	T6d 4'	Soil	SW8015B (Diesel w/ S.G. Clean-Up)	1	Stainless Steel tube 2"x6"	☐	7/20/2017 8:47	5 days		☐	
			SW6020 (Lead)			☐		5 days		☐	
			TPH(g) & 8260 by P&T GCMS			☐		5 days		☐	
1707748-009A	T7d 3.5'	Soil	SW8015B (Diesel w/ S.G. Clean-Up)	1	Stainless Steel tube 2"x6"	☐	7/20/2017 8:49	5 days		☐	
			SW6020 (Lead)			☐		5 days		☐	
			TPH(g) & 8260 by P&T GCMS			☐		5 days		☐	
1707748-010A	T8d 3.5'	Soil	SW8015B (Diesel w/ S.G. Clean-Up)	1	Stainless Steel tube 2"x6"	☐	7/20/2017 8:52	5 days		☐	
			SW6020 (Lead)			☐		5 days		☐	
			TPH(g) & 8260 by P&T GCMS			☐		5 days		☐	
1707748-011A	T9d 3.5'	Soil	SW8015B (Diesel w/ S.G. Clean-Up)	1	Stainless Steel tube 2"x6"	☐	7/20/2017 8:54	5 days		☐	
			SW6020 (Lead)			☐		5 days		☐	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

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WORK ORDER SUMMARY

Client Name: GEO-LOGIC **Project:** Chevron-Livermore **Work Order:** 1707748
Client Contact: Joel Gregor **QC Level:** LEVEL 2
Contact's Email: joelgreger2@gmail.com **Comments:** **Date Logged:** 7/20/2017

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1707748-011A	T9d 3.5'	Soil	TPH(g) & 8260 by P&T GCMS	1	Stainless Steel tube 2"x6"	☐	7/20/2017 8:54	5 days		☐	
1707748-012A	T10d 3.5'	Soil	SW8015B (Diesel w/ S.G. Clean-Up)	1	Stainless Steel tube 2"x6"	☐	7/20/2017 8:57	5 days		☐	
			SW6020 (Lead)			☐		5 days		☐	
			TPH(g) & 8260 by P&T GCMS			☐		5 days		☐	
1707748-013A	T11d 3.5'	Soil	SW8015B (Diesel w/ S.G. Clean-Up)	1	Stainless Steel tube 2"x6"	☐	7/20/2017 9:05	5 days		☐	
			SW6020 (Lead)			☐		5 days		☐	
			TPH(g) & 8260 by P&T GCMS			☐		5 days		☐	
1707748-014A	Comp S1 (A-D)	Soil	SW8015B (Diesel w/ S.G. Clean-Up)	1	Stainless Steel tube 2"x6"	☐	7/20/2017	5 days		☐	
			SW6020 (Lead)			☐		5 days		☐	
			TPH(g) & 8260 by P&T GCMS			☐		5 days		☐	
1707748-015A	T3d 4'	Soil	SW8015B (Diesel w/ S.G. Clean-Up)	1	Stainless Steel tube 2"x6"	☐	7/20/2017 8:37	5 days		☐	
			SW6020 (Lead)			☐		5 days		☐	
			TPH(g) & 8260 by P&T GCMS			☐		5 days		☐	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

General COC

also send to rick.amer-norman.com

MAI Work Order # 1707748

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CHAIN OF CUSTODY RECORD

Turn Around Time: 1 Day Rush | 2 Day Rush | 3 Day Rush | STD X | Quote # See quote
J-Flag / MDL | ESL | Cleanup Approved | Bottle Order #
Delivery Format: PDF X | GeoTracker EDF | EDD | Write On (DW) | EQuIS

Report To: Joel Greger | Bill To: Amer-Norman
Company: Geo-Logic
Email: joelgreger2@gmail.com
Alt Email: | Tele: 510 5935382
Project Name: Chevron-Livermore | Project #:
Project Location: 4707 First St | PO #
Sampler Signature: Joel Greger

SAMPLE ID Location / Field Point	Sampling Date	Sampling Time	#Containers	Matrix	Preservative
P1 d 3'	7-20-17	819 AM	1	soil	ice
P2 d 3'		825 AM			
P3 d 3		830 AM			
P4 d 3		835 AM			
T1 d 3.5		829 AM			
T4 d 4'		840 AM			
T5 d 4'		844 AM			
T6 d 4'		847 AM			
T7 d 3.5'		849 AM			
T8 d 3.5'		852			

Analysis Requested

BTEX & TPH as Gas (8021/8015) MTBE	TPH as Diesel (8015) + Motor Oil Without Silica Gel	TPH as Diesel (8015) + ~~Motor Oil With~~ Silica Gel	Total Oil & Grease (1664 / 9071) Without Silica Gel	Total Petroleum Hydrocarbons - Oil & Grease (1664 / 9071) With Silica Gel	Total Petroleum Hydrocarbons (418.1) With Silica Gel	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ; Aroclors only	TPH gas 5, BTEX, MTBE EPA 524.2 / 624 / 8260 (VOCs), TBA naphthalene, EDB, EDC, 1,2-DCA	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.8 / 6020)*	Metals (200.8 / 6020)	Baylands Requirements	Lab to filter sample for dissolved metals analysis	Total / Lead 6010			
		X						X							X			
		X						X							X			
		X						X							X			
		X						X							X			
		X						X							X			
		X						X							X			
		X						X							X			
		X						X							X			
		X						X							X			
		X						X							X			

MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate $250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

* If metals are requested for water samples and the water type (Matrix) is not specified on the chain of custody, MAI will default to metals by E200.8.

Please provide an adequate volume of sample. If the volume is not sufficient for a MS/MSD a LCS/LCSD will be prepared in its place and noted in the report.

Comments / Instructions

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
PJ	7-20-17	1043 AM	PJ	7/20/17	1043
PJ	7/20/17	1157		7/20/17	1157

Matrix Code: DW=Drinking Water, GW=Ground Water, WW=Waste Water, SW=Seawater, S=Soil, SL=Sludge, A=Air, WP=Wipe, O=Other
Preservative Code: 1=4°C 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=ZnOAc/NaOH 7=None

Temp _____ °C Initials _____

Page ___ of ___

General COC

also send to rick@amer-norman.com

MAI Work Order # 1707748

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Telephone: (877) 252-9262 / Fax: (925) 252-9269
www.mccampbell.com main@mccampbell.com

CHAIN OF CUSTODY RECORD

Turn Around Time: 1 Day Rush | 2 Day Rush | 3 Day Rush | STD X | Quote # See quote
J-Flag / MDL | ESL | Cleanup Approved | Bottle Order #
Delivery Format: PDF X | GeoTracker EDF | EDD | Write On (DW) | EQuIS

Report To: Joel Greger | Bill To: Amer-Norman
Company: Geo-Logic
Email: joelgreger2@gmail.com
Alt Email: Tele: 510 5935382
Project Name: Chevron - Livermore | Project #:
Project Location: 4707 1st St | PO #
Sampler Signature: Joel G

SAMPLE ID Location / Field Point	Sampling Date	Sampling Time	#Containers	Matrix	Preservative
T9 d 3-5	7-20-17	854	1	Soil	ice
T10 d 3.5		857Am			
T11 d 3.5		905			
Comp-S1 (A-D)			4		
T3 d 4'		837Am	1		

Analysis Requested

BTEX & TPH as Gas (8021/8015) MTBE	TPH as Diesel (8015) + Motor Oil Without Silica Gel	TPH as Diesel (8015) + ~~Motor Oil~~ With Silica Gel	Total Oil & Grease (1664 / 9071) Without Silica Gel	Total Oil & Grease (1664 / 9071) With Silica Gel	Total Petroleum Hydrocarbons (418.1) With Silica Gel	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ; Aroclors only	EPA 524.2 / 624 / 8260 (~~VOC~~) TPH Gas, BTEX, MTBE, TBA, Oxygenates, EDB, EDC, eEthanol	EPA 525.2 / 625 / 8270 (SVOC's)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.8 / 6020)*	Metals (200.8 / 6020)	Baylands Requirements	Lab to filter sample for dissolved metals analysis	6010 Total Cam
		X						X							X
		X						X							X
		X						X							X
		X						X							X
		X						X							X

MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate $250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

* If metals are requested for water samples and the water type (Matrix) is not specified on the chain of custody, MAI will default to metals by E200.8.

Please provide an adequate volume of sample. If the volume is not sufficient for a MS/MSD a LCS/LCSD will be prepared in its place and noted in the report.

Comments / Instructions

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
Joel G	7-20-17	1043Am	PTS	7/20/17	1043
PTS	7/20/17	1157		7/20/17	1157

Matrix Code: DW=Drinking Water, GW=Ground Water, WW=Waste Water, SW=Seawater, S=Soil, SL=Sludge, A=Air, WP=Wipe, O=Other
Preservative Code: 1=4°C 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=ZnOAc/NaOH 7=None

Temp _____ °C Initials _____

Page ___ of ___

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Sample Receipt Checklist

Client Name:	**Geo-Logic**	Date and Time Received	**7/20/2017 11:57**
Project Name:	**Chevron-Livermore**	Date Logged:	**7/20/2017**
		Received by:	Kena Ponce
WorkOrder №:	**1707748** Matrix: Soil	Logged by:	Kena Ponce
Carrier:	Patrick Johnson (MAI Courier)		

Chain of Custody (COC) Information

Chain of custody present?	Yes	☑	No	☐	
Chain of custody signed when relinquished and received?	Yes	☑	No	☐	
Chain of custody agrees with sample labels?	Yes	☑	No	☐	
Sample IDs noted by Client on COC?	Yes	☑	No	☐	
Date and Time of collection noted by Client on COC?	Yes	☑	No	☐	
Sampler's name noted on COC?	Yes	☑	No	☐	

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes	☐	No	☐	NA ☑
Shipping container/cooler in good condition?	Yes	☑	No	☐	
Samples in proper containers/bottles?	Yes	☑	No	☐	
Sample containers intact?	Yes	☑	No	☐	
Sufficient sample volume for indicated test?	Yes	☑	No	☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes	☑	No	☐	NA ☐
Sample/Temp Blank temperature		Temp: 7.2°C			NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes	☐	No	☐	NA ☑
Sample labels checked for correct preservation?	Yes	☑	No	☐	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes	☐	No	☐	NA ☑
Samples Received on Ice?	Yes	☐	No	☑	

UCMR Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes	☐	No	☐	NA ☑
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes	☐	No	☐	NA ☑

Comments:

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1707b94

Report Created for: Geo-Logic

1140 5th Avenue
Crockett, CA 94525

Project Contact: Joel Gregor
Project P.O.:
Project Name: Chevron-Livermore

Project Received: 07/31/2017

Analytical Report reviewed & approved for release on 08/01/2017 by:

Angela Rydelius,
Laboratory Manager

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Glossary of Terms & Qualifier Definitions

Client: Geo-Logic
Project: Chevron-Livermore
WorkOrder: 1707B94

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ERS	External reference sample. Second source calibration verification.
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

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Glossary of Terms & Qualifier Definitions

Client: Geo-Logic
Project: Chevron-Livermore
WorkOrder: 1707B94

Analytical Qualifiers

e2	Diesel range compounds are significant; no recognizable pattern
e11/e4	Pattern resembles stoddard solvent/mineral spirit; and/or Gasoline range compounds are significant.

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707B94
Date Received:	7/31/17 14:43	**Extraction Method:**	SW5030B
Date Prepared:	7/31/17	**Analytical Method:**	SW8260B
Project:	Chevron-Livermore	**Unit:**	mg/kg

TPH(g)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P3d 10.5	1707B94-001A	Soil	07/31/2017 13:08	GC10	142868

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	**0.32**	0.25	1	07/31/2017 22:07

Surrogates	REC (%)	Limits	
Dibromofluoromethane	116	70-130	07/31/2017 22:07
Benzene-D6	84	60-140	07/31/2017 22:07

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
COMP S1 (N-S-E-W)	1707B94-002A	Soil	07/31/2017 13:27	GC10	142868

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	**11**	2.5	10	07/31/2017 22:47

Surrogates	REC (%)	Limits	
Dibromofluoromethane	120	70-130	07/31/2017 22:47
Benzene-D6	74	60-140	07/31/2017 22:47

Analyst(s): KF

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707B94
Date Received:	7/31/17 14:43	**Extraction Method:**	SW5030B
Date Prepared:	7/31/17	**Analytical Method:**	SW8260B
Project:	Chevron-Livermore	**Unit:**	mg/Kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P3d 10.5	1707B94-001A	Soil	07/31/2017 13:08	GC10	142868

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	0.0050	1	07/31/2017 22:07
t-Butyl alcohol (TBA)	ND	0.050	1	07/31/2017 22:07
1,2-Dibromoethane (EDB)	ND	0.0040	1	07/31/2017 22:07
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	07/31/2017 22:07
Ethanol	ND	0.50	1	07/31/2017 22:07
Ethylbenzene	ND	0.0050	1	07/31/2017 22:07
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	07/31/2017 22:07
Naphthalene	ND	0.0050	1	07/31/2017 22:07
Toluene	ND	0.0050	1	07/31/2017 22:07
Xylenes, Total	ND	0.0050	1	07/31/2017 22:07

Surrogates	REC (%)	Limits	
Dibromofluoromethane	101	70-130	07/31/2017 22:07
Toluene-d8	110	70-130	07/31/2017 22:07
4-BFB	108	70-130	07/31/2017 22:07
Benzene-d6	83	60-140	07/31/2017 22:07
Ethylbenzene-d10	102	60-140	07/31/2017 22:07
1,2-DCB-d4	81	60-140	07/31/2017 22:07

Analyst(s): KF

(Cont.)

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707B94
Date Received:	7/31/17 14:43	**Extraction Method:**	SW5030B
Date Prepared:	7/31/17	**Analytical Method:**	SW8260B
Project:	Chevron-Livermore	**Unit:**	mg/Kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
COMP S1 (N-S-E-W)	**1707B94-002A**	**Soil**	**07/31/2017 13:27**	**GC10**	**142868**

Analytes	Result	RL	DF	Date Analyzed
Benzene	ND	0.050	10	07/31/2017 22:47
t-Butyl alcohol (TBA)	ND	0.50	10	07/31/2017 22:47
1,2-Dibromoethane (EDB)	ND	0.040	10	07/31/2017 22:47
1,2-Dichloroethane (1,2-DCA)	ND	0.040	10	07/31/2017 22:47
Ethanol	ND	5.0	10	07/31/2017 22:47
Ethylbenzene	ND	0.050	10	07/31/2017 22:47
Methyl-t-butyl ether (MTBE)	ND	0.050	10	07/31/2017 22:47
Naphthalene	**1.0**	0.050	10	07/31/2017 22:47
Toluene	ND	0.050	10	07/31/2017 22:47
Xylenes, Total	ND	0.050	10	07/31/2017 22:47

Surrogates	REC (%)	Limits	
Dibromofluoromethane	104	70-130	07/31/2017 22:47
Toluene-d8	101	70-130	07/31/2017 22:47
4-BFB	103	70-130	07/31/2017 22:47
Benzene-d6	82	60-140	07/31/2017 22:47
Ethylbenzene-d10	77	60-140	07/31/2017 22:47
1,2-DCB-d4	94	60-140	07/31/2017 22:47

Analyst(s): KF

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707B94
Date Received:	7/31/17 14:43	**Extraction Method:**	SW3050B
Date Prepared:	7/31/17	**Analytical Method:**	SW6020
Project:	Chevron-Livermore	**Unit:**	mg/Kg

Lead

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P3d 10.5	1707B94-001A	Soil	07/31/2017 13:08	ICP-MS3	142889

Analytes	Result	RL	DF	Date Analyzed
Lead	**8.2**	0.50	1	08/01/2017 09:55

Surrogates	REC (%)	Limits	
Terbium	101	70-130	08/01/2017 09:55

Analyst(s): ND

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
COMP S1 (N-S-E-W)	1707B94-002A	Soil	07/31/2017 13:27	ICP-MS3	142889

Analytes	Result	RL	DF	Date Analyzed
Lead	**8.9**	0.50	1	08/01/2017 10:01

Surrogates	REC (%)	Limits	
Terbium	101	70-130	08/01/2017 10:01

Analyst(s): ND

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Analytical Report

Client:	Geo-Logic	**WorkOrder:**	1707B94
Date Received:	7/31/17 14:43	**Extraction Method:**	SW3550B/3630C
Date Prepared:	7/31/17	**Analytical Method:**	SW8015B
Project:	Chevron-Livermore	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P3d 10.5	1707B94-001A	Soil	07/31/2017 13:08	GC39A	142900

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**1.1**	1.0	1	08/01/2017 15:28

Surrogates	REC (%)	Limits	
C26	101	70-130	08/01/2017 15:28

Analyst(s): TK Analytical Comments: e2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
COMP S1 (N-S-E-W)	1707B94-002A	Soil	07/31/2017 13:27	GC39A	142900

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**25**	1.0	1	08/01/2017 01:28

Surrogates	REC (%)	Limits	
C26	102	70-130	08/01/2017 01:28

Analyst(s): TK Analytical Comments: e11/e4,e2

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707B94
Date Prepared:	7/31/17	**BatchID:**	142868
Date Analyzed:	7/31/17	**Extraction Method:**	SW5030B
Instrument:	GC10	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS/LCSD-142868

QC Summary Report for SW8260B

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
TPH(g) (C6-C12)	ND	0.25	-	-	-
Surrogate Recovery					
Dibromofluoromethane	0.1434		0.12	115	70-130
Benzene-D6	0.1027		0.10	103	70-130

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH(g) (C6-C12)	0.875	0.838	1	88	84	67-117	4.39	20
Surrogate Recovery								
Dibromofluoromethane	0.144	0.146	0.12	115	116	70-130	0.875	20
Benzene-D6	0.0970	0.0917	0.10	97	92	60-140	5.66	20

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707B94
Date Prepared:	7/31/17	**BatchID:**	142868
Date Analyzed:	7/31/17 - 8/1/17	**Extraction Method:**	SW5030B
Instrument:	GC10, GC16	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS-142868

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	0.971	0.10	1	-	97	72-156
tert-Amyl methyl ether (TAME)	ND	0.0429	0.0050	0.050	-	86	53-116
Benzene	ND	0.0485	0.0050	0.050	-	97	63-137
Bromobenzene	ND	0.0494	0.0050	0.050	-	99	68-126
Bromochloromethane	ND	0.0491	0.0050	0.050	-	98	72-126
Bromodichloromethane	ND	0.0472	0.0050	0.050	-	94	61-127
Bromoform	ND	0.0358	0.0050	0.050	-	72	49-100
Bromomethane	ND	0.0408	0.0050	0.050	-	81	40-161
2-Butanone (MEK)	ND	0.158	0.020	0.20	-	79	43-157
t-Butyl alcohol (TBA)	ND	0.180	0.050	0.20	-	90	41-135
n-Butyl benzene	ND	0.0717	0.0050	0.050	-	143	102-160
sec-Butyl benzene	ND	0.0726	0.0050	0.050	-	145	74-168
tert-Butyl benzene	ND	0.0659	0.0050	0.050	-	132	88-157
Carbon Disulfide	ND	0.0506	0.0050	0.050	-	101	42-151
Carbon Tetrachloride	ND	0.0543	0.0050	0.050	-	109	49-149
Chlorobenzene	ND	0.0499	0.0050	0.050	-	100	77-121
Chloroethane	ND	0.0403	0.0050	0.050	-	81	41-134
Chloroform	ND	0.0471	0.0050	0.050	-	94	69-133
Chloromethane	ND	0.0460	0.0050	0.050	-	92	31-119
2-Chlorotoluene	ND	0.0611	0.0050	0.050	-	122	79-139
4-Chlorotoluene	ND	0.0582	0.0050	0.050	-	116	77-138
Dibromochloromethane	ND	0.0436	0.0050	0.050	-	87	58-121
1,2-Dibromo-3-chloropropane	ND	0.0126	0.0040	0.020	-	63	39-115
1,2-Dibromoethane (EDB)	ND	0.0478	0.0040	0.050	-	96	67-119
Dibromomethane	ND	0.0438	0.0050	0.050	-	88	66-117
1,2-Dichlorobenzene	ND	0.0467	0.0050	0.050	-	93	59-109
1,3-Dichlorobenzene	ND	0.0571	0.0050	0.050	-	114	75-130
1,4-Dichlorobenzene	ND	0.0544	0.0050	0.050	-	109	71-122
Dichlorodifluoromethane	ND	0.0313	0.0050	0.050	-	63	43-68
1,1-Dichloroethane	ND	0.0488	0.0050	0.050	-	98	62-139
1,2-Dichloroethane (1,2-DCA)	ND	0.0483	0.0040	0.050	-	97	58-135
1,1-Dichloroethene	ND	0.0513	0.0050	0.050	-	103	42-145
cis-1,2-Dichloroethene	ND	0.0455	0.0050	0.050	-	91	67-129
trans-1,2-Dichloroethene	ND	0.0602	0.0050	0.050	-	120	54-139
1,2-Dichloropropane	ND	0.0466	0.0050	0.050	-	93	68-125
1,3-Dichloropropane	ND	0.0471	0.0050	0.050	-	94	65-125
2,2-Dichloropropane	ND	0.0548	0.0050	0.050	-	110	45-151

(Cont.)

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707B94
Date Prepared:	7/31/17	**BatchID:**	142868
Date Analyzed:	7/31/17 - 8/1/17	**Extraction Method:**	SW5030B
Instrument:	GC10, GC16	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS-142868

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	0.0548	0.0050	0.050	-	110	64-138
cis-1,3-Dichloropropene	ND	0.0558	0.0050	0.050	-	112	62-134
trans-1,3-Dichloropropene	ND	0.0468	0.0050	0.050	-	94	59-128
Diisopropyl ether (DIPE)	ND	0.0466	0.0050	0.050	-	93	52-129
Ethanol	ND	2.02	0.50	2.5	-	81	40-113
Ethylbenzene	ND	0.0530	0.0050	0.050	-	106	74-142
Ethyl tert-butyl ether (ETBE)	ND	0.0454	0.0050	0.050	-	91	53-125
Freon 113	ND	0.0446	0.0050	0.050	-	89	51-126
Hexachlorobutadiene	ND	0.0728	0.0050	0.050	-	146	70-158
Hexachloroethane	ND	0.0624	0.0050	0.050	-	125	80-160
2-Hexanone	ND	0.0355	0.0050	0.050	-	71	41-116
Isopropylbenzene	ND	0.0555	0.0050	0.050	-	111	77-146
4-Isopropyl toluene	ND	0.0720	0.0050	0.050	-	144	96-159
Methyl-t-butyl ether (MTBE)	ND	0.0444	0.0050	0.050	-	89	58-122
Methylene chloride	ND	0.0488	0.0050	0.050	-	98	58-135
4-Methyl-2-pentanone (MIBK)	ND	0.0361	0.0050	0.050	-	72	40-112
Naphthalene	ND	0.0255	0.0050	0.050	-	51	23-73
n-Propyl benzene	ND	0.0697	0.0050	0.050	-	139	82-160
Styrene	ND	0.0516	0.0050	0.050	-	103	68-124
1,1,1,2-Tetrachloroethane	ND	0.0495	0.0050	0.050	-	99	70-128
1,1,2,2-Tetrachloroethane	ND	0.0372	0.0050	0.050	-	74	57-111
Tetrachloroethene	ND	0.0641	0.0050	0.050	-	128	73-145
Toluene	ND	0.0551	0.0050	0.050	-	110	76-130
1,2,3-Trichlorobenzene	ND	0.0336	0.0050	0.050	-	67	43-72
1,2,4-Trichlorobenzene	ND	0.0430	0.0050	0.050	-	86	47-95
1,1,1-Trichloroethane	ND	0.0528	0.0050	0.050	-	106	60-141
1,1,2-Trichloroethane	ND	0.0483	0.0050	0.050	-	97	62-118
Trichloroethene	ND	0.0592	0.0050	0.050	-	118	72-132
Trichlorofluoromethane	ND	0.0466	0.0050	0.050	-	93	43-135
1,2,3-Trichloropropane	ND	0.0434	0.0050	0.050	-	87	57-122
1,2,4-Trimethylbenzene	ND	0.0650	0.0050	0.050	-	130	81-152
1,3,5-Trimethylbenzene	ND	0.0657	0.0050	0.050	-	131	78-160
Vinyl Chloride	ND	0.0414	0.0050	0.050	-	83	42-131
Xylenes, Total	ND	0.161	0.0050	0.15	-	107	70-130

(Cont.)

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707B94
Date Prepared:	7/31/17	**BatchID:**	142868
Date Analyzed:	7/31/17 - 8/1/17	**Extraction Method:**	SW5030B
Instrument:	GC10, GC16	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS-142868

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.1187	0.130		0.12	95	104	70-130
Toluene-d8	0.1453	0.145		0.12	116	116	70-130
4-BFB	0.01277	0.0132		0.012	102	106	70-130
Benzene-d6	0.08543	0.0847		0.10	85	85	60-140
Ethylbenzene-d10	0.1114	0.0985		0.10	111	98	60-140
1,2-DCB-d4	0.08271	0.0910		0.10	83	91	60-140

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707B94
Date Prepared:	7/31/17	**BatchID:**	142889
Date Analyzed:	7/31/17 - 8/1/17	**Extraction Method:**	SW3050B
Instrument:	ICP-MS1, ICP-MS3	**Analytical Method:**	SW6020
Matrix:	Soil	**Unit:**	mg/Kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS-142889 1707C12-001AMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	51.3	0.50	50	-	103	75-125
Surrogate Recovery							
Terbium	515.6	525		500	103	105	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	50.8	53.1	50	2.413	97	101	75-125	4.33	20
Surrogate Recovery									
Terbium	505	518	500		101	104	70-130	2.60	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Lead	ND<2.5	2.413	-	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.

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Quality Control Report

Client:	Geo-Logic	**WorkOrder:**	1707B94
Date Prepared:	7/31/17	**BatchID:**	142900
Date Analyzed:	7/31/17	**Extraction Method:**	SW3550B/3630C
Instrument:	GC39A	**Analytical Method:**	SW8015B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	Chevron-Livermore	**Sample ID:**	MB/LCS-142900 1707B94-001AMS/MSD

QC Report for SW8015B w/ SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	43.3	1.0	40	-	108	79-133
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C26	24.96	24.8		25	100	99	81-103

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	41.4	41.7	40	1.098	101	102	59-150	0.719	30
Surrogate Recovery									
C26	25.2	25.2	25		101	101	70-130	0	30

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CHAIN-OF-CUSTODY RECORD

WorkOrder: 1707B94 **ClientCode: GLC**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Joel Gregor
Geo-Logic
1140 5th Avenue
Crockett, CA 94525
(510) 787-6867 FAX: (510) 787-1457

Email: joelgreger2@gmail.com
cc/3rd Party: rick@armer-norman.com;
PO:
ProjectNo: Chevron-Livermore

Bill to:
Joel Greger
Geo-Logic
1140 5th Avenue
Crockett, CA 94525

Requested TAT: **1 day;**

Date Received: **07/31/2017**
Date Logged: **07/31/2017**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1707B94-001	P3d 10.5	Soil	7/31/2017 13:08	☐	A	A	A	A								
1707B94-002	COMP S1 (N-S-E-W)	Soil	7/31/2017 13:27	☐	A	A	A	A								

Test Legend:

1	8260GAS_S	2	8260VOC_S	3	PBMS_TTLC_S	4	TPH(D)WSG_S
5		6		7		8	
9		10		11		12	

Prepared by: Kena Ponce

The following SampIDs: 001A, 002A contain testgroup Gas8260VOC_S.

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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WORK ORDER SUMMARY

Client Name: GEO-LOGIC
Client Contact: Joel Gregor
Contact's Email: joelgreger2@gmail.com

Project: Chevron-Livermore
Comments:

Work Order: 1707B94
QC Level: LEVEL 2
Date Logged: 7/31/2017

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1707B94-001A	P3d 10.5	Soil	SW8015B (Diesel w/ S.G. Clean-Up)	1	Stainless Steel tube 2"x6"	☐	7/31/2017 13:08	1 day		☐	
			SW6020 (Lead)			☐		1 day		☐	
			TPH(g) & 8260 (Misc. Compounds) by P&T GCMS			☐		1 day		☐	
1707B94-002A	COMP S1 (N-S-E-W)	Soil	SW8015B (Diesel w/ S.G. Clean-Up)	4 / (4:1)	Stainless Steel tube 2"x6"	☐	7/31/2017 13:27	1 day		☐	
			SW6020 (Lead)			☐		1 day		☐	
			TPH(g) & 8260 (Misc. Compounds) by P&T GCMS			☐		1 day		☐	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

General COC **RUSH** also send to rick@amer-norman.com MAI Work Order # 1707B94

McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Rd. Pittsburg, Ca. 94565-1701
Telephone: (877) 252-9262 / Fax: (925) 252-9269
www.mccampbell.com main@mccampbell.com

CHAIN OF CUSTODY RECORD

Turn Around Time: 1 Day Rush	X	2 Day Rush		3 Day Rush		STD		Quote #	7559
J-Flag / MDL		ESL		Cleanup Approved				Bottle Order #	
Delivery Format:	PDF	X	GeoTracker EDF		EDD		Write On (DW)		EQuIS

Report To: Joel Greger	Bill To: Amer-Norman
Company: Geo-Logic	(formerly Paradiso Mech)
Email: joelgreger2@gmail.com	
Alt Email:	Tele: 510 593 5882
Project Name: Chevron-Livermore	Project #:
Project Location: 4707 First St	PO #
Sampler Signature: Joel [signature]	

Analysis Requested

SAMPLE ID Location / Field Point	Sampling Date	Sampling Time	# Containers	Matrix	Preservative	BTEX & TPH as Gas (8021 / 8015) MTBE	TPH as Diesel (8015) + Motor Oil Without Silica Gel	TPH as Diesel (8015) + ~~Motor~~ Oil With Silica Gel	Total Oil & Grease (1664 / 9071) Without Silica Gel	Total Petroleum Hydrocarbons - Oil & Grease (1664 / 9071) With Silica Gel	Total Petroleum Hydrocarbons (418.1) With Silica Gel	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ; Aroclors only	EPA 524.2 / 624 / 8260 (VOCs) TPH gas, BTEX, MTBE, TBA, naphthalene, EDB, EDC, ethanol	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.8 / 6020)*	Metals (200.8 / 6020)	Baylands Requirements	Lab to filter sample for dissolved metals analysis	Total Lead			
B-3 d 10.5	7-31-17	1:08PM	1	soil	1c			X						X							X			
Comp S1 (N-S-E-W)	↓	1:27PM	4	↓	↓			X						X							X			

MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate $250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

* If metals are requested for water samples and the water type (Matrix) is not specified on the chain of custody, MAI will default to metals by E200.8.

Please provide an adequate volume of sample. If the volume is not sufficient for a MS/MSD a LCS/LCSD will be prepared in its place and noted in the report.

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
Joel [signature]	7-31-17	2:43 Pm	[signature]	7/31/17	1443

Comments / Instructions

Matrix Code: DW=Drinking Water, GW=Ground Water, WW=Waste Water, SW=Seawater, S=Soil, SL=Sludge, A=Air, WP=Wipe, O=Other

Preservative Code: 1=4°C 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=ZnOAc/NaOH 7=None

Temp ______ °C Initials ______

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"When Quality Counts"

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Sample Receipt Checklist

Client Name:	**Geo-Logic**	Date and Time Received	**7/31/2017 14:43**
Project Name:	**Chevron-Livermore**	Date Logged:	**7/31/2017**
		Received by:	Kena Ponce
WorkOrder №:	**1707B94** Matrix: Soil	Logged by:	Kena Ponce
Carrier:	Client Drop-In		

Chain of Custody (COC) Information

Chain of custody present?	Yes	☑	No	☐	
Chain of custody signed when relinquished and received?	Yes	☑	No	☐	
Chain of custody agrees with sample labels?	Yes	☑	No	☐	
Sample IDs noted by Client on COC?	Yes	☑	No	☐	
Date and Time of collection noted by Client on COC?	Yes	☑	No	☐	
Sampler's name noted on COC?	Yes	☑	No	☐	

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes	☐	No	☐	NA ☑
Shipping container/cooler in good condition?	Yes	☑	No	☐	
Samples in proper containers/bottles?	Yes	☑	No	☐	
Sample containers intact?	Yes	☑	No	☐	
Sufficient sample volume for indicated test?	Yes	☑	No	☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes	☑	No	☐	NA ☐
Sample/Temp Blank temperature		Temp:			NA ☑
Water - VOA vials have zero headspace / no bubbles?	Yes	☐	No	☐	NA ☑
Sample labels checked for correct preservation?	Yes	☑	No	☐	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes	☐	No	☐	NA ☑
Samples Received on Ice?	Yes	☐	No	☑	

UCMR Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes	☐	No	☐	NA ☑
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes	☐	No	☐	NA ☑

Comments: