ANALYTICAL REPORT

October 11, 2017

Churchill Energy, Inc.

Sample Delivery Group:	L940457
Samples Received:	09/30/2017
Project Number:	
Description:	Closer of Pit

Report To: Gary Kluksdahl
8177 South Norfolk Street
Englewood, CO 80112

Entire Report Reviewed By:

Shane Gambill
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

VAUIT PIT BOTTOM CENTER L940457-01 Solid

Collected by: Tim Rogers | Collected date/time: 09/28/17 14:00 | Received date/time: 09/30/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Calculated Results	WG1029174	1	10/09/17 14:35	10/10/17 13:55	CCE
Calculated Results	WG1028477	1	10/07/17 08:21	10/09/17 19:32	JDG
Wet Chemistry by Method 3060A/7196A	WG1027608	1	10/05/17 11:30	10/05/17 17:16	ER
Wet Chemistry by Method 9045D	WG1026705	1	10/02/17 13:25	10/02/17 14:08	ER
Wet Chemistry by Method 9050AMod	WG1028002	1	10/05/17 15:01	10/05/17 15:01	MA
Mercury by Method 7471A	WG1028224	1	10/08/17 10:59	10/09/17 10:36	ABL
Metals (ICP) by Method 6010B	WG1028477	1	10/07/17 08:21	10/09/17 19:32	TRB
Volatile Organic Compounds (GC) by Method 8015/8021	WG1028360	1	10/03/17 13:30	10/05/17 18:25	JAH
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1028264	20	10/06/17 00:06	10/06/17 14:08	KLM
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1027989	1	10/05/17 09:07	10/09/17 21:32	KM

VAUIT PIT BOTTOM NORTH L940457-02 Solid

Collected by: Tim Rogers | Collected date/time: 09/28/17 14:00 | Received date/time: 09/30/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Calculated Results	WG1029174	1	10/09/17 14:35	10/10/17 13:58	CCE
Calculated Results	WG1028477	1	10/07/17 08:21	10/09/17 19:35	JDG
Wet Chemistry by Method 3060A/7196A	WG1027608	1	10/05/17 11:30	10/05/17 17:22	ER
Wet Chemistry by Method 9045D	WG1026705	1	10/02/17 13:25	10/02/17 14:08	ER
Wet Chemistry by Method 9050AMod	WG1028002	1	10/05/17 15:01	10/05/17 15:01	MA
Mercury by Method 7471A	WG1028224	1	10/08/17 10:59	10/09/17 12:58	ABL
Metals (ICP) by Method 6010B	WG1028477	1	10/07/17 08:21	10/09/17 19:35	TRB
Volatile Organic Compounds (GC) by Method 8015/8021	WG1028360	1	10/03/17 13:30	10/05/17 18:47	JAH
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1028264	1	10/06/17 00:06	10/06/17 14:19	KLM
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1027989	1	10/05/17 09:07	10/06/17 03:54	KM

VAUIT PIT EAST WALL L940457-03 Solid

Collected by: Tim Rogers | Collected date/time: 09/28/17 14:00 | Received date/time: 09/30/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Calculated Results	WG1029174	1	10/09/17 14:35	10/10/17 14:01	CCE
Calculated Results	WG1028477	1	10/07/17 08:21	10/09/17 18:42	JDG
Wet Chemistry by Method 3060A/7196A	WG1027608	1	10/05/17 11:30	10/05/17 17:24	ER
Wet Chemistry by Method 9045D	WG1026705	1	10/02/17 13:25	10/02/17 14:08	ER
Wet Chemistry by Method 9050AMod	WG1028002	1	10/05/17 15:01	10/05/17 15:01	MA
Mercury by Method 7471A	WG1028224	1	10/08/17 10:59	10/09/17 13:00	ABL
Metals (ICP) by Method 6010B	WG1028477	1	10/07/17 08:21	10/09/17 18:42	TRB
Volatile Organic Compounds (GC) by Method 8015/8021	WG1028360	1	10/03/17 13:30	10/05/17 19:09	JAH
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1028264	20	10/06/17 00:06	10/06/17 14:30	KLM
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1027989	1	10/05/17 09:07	10/09/17 21:11	ADF

STAND BY PIT EAST WALL L940457-04 Solid

Collected by: Tim Rogers | Collected date/time: 09/28/17 14:00 | Received date/time: 09/30/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Calculated Results	WG1029174	1	10/09/17 14:35	10/10/17 14:04	CCE
Calculated Results	WG1028477	1	10/07/17 08:21	10/09/17 19:38	JDG
Wet Chemistry by Method 3060A/7196A	WG1027608	1	10/05/17 11:30	10/05/17 17:24	ER
Wet Chemistry by Method 9045D	WG1026705	1	10/02/17 13:25	10/02/17 14:08	ER
Wet Chemistry by Method 9050AMod	WG1028002	1	10/05/17 15:01	10/05/17 15:01	MA
Mercury by Method 7471A	WG1028224	1	10/08/17 10:59	10/09/17 13:03	ABL
Metals (ICP) by Method 6010B	WG1028477	1	10/07/17 08:21	10/09/17 19:38	TRB
Volatile Organic Compounds (GC) by Method 8015/8021	WG1028360	1	10/03/17 13:30	10/05/17 19:31	JAH

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

STAND BY PIT EAST WALL L940457-04 Solid

Collected by: Tim Rogers
Collected date/time: 09/28/17 14:00
Received date/time: 09/30/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1028264	1	10/06/17 00:06	10/06/17 15:35	KLM
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1027989	1	10/05/17 09:07	10/09/17 20:08	KM

STAND BY PIT BOTTOM NORTH L940457-05 Solid

Collected by: Tim Rogers
Collected date/time: 09/28/17 14:00
Received date/time: 09/30/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Calculated Results	WG1029174	1	10/09/17 14:35	10/10/17 14:08	CCE
Calculated Results	WG1028477	1	10/07/17 08:21	10/09/17 19:47	JDG
Wet Chemistry by Method 3060A/7196A	WG1027608	1	10/05/17 11:30	10/05/17 17:25	ER
Wet Chemistry by Method 9045D	WG1026705	1	10/02/17 13:25	10/02/17 14:08	ER
Wet Chemistry by Method 9050AMod	WG1028002	1	10/05/17 15:01	10/05/17 15:01	MA
Mercury by Method 7471A	WG1028224	1	10/08/17 10:59	10/09/17 13:05	ABL
Metals (ICP) by Method 6010B	WG1028477	1	10/07/17 08:21	10/09/17 19:47	TRB
Volatile Organic Compounds (GC) by Method 8015/8021	WG1028360	1	10/03/17 13:30	10/09/17 03:27	JAH
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1028264	1	10/06/17 00:06	10/06/17 15:46	KLM
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1027989	1	10/05/17 09:07	10/06/17 04:36	KM

STAND BY PIT BOTTOM SOUTH L940457-06 Solid

Collected by: Tim Rogers
Collected date/time: 09/28/17 14:00
Received date/time: 09/30/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Calculated Results	WG1029174	1	10/09/17 14:35	10/10/17 14:11	CCE
Calculated Results	WG1028477	1	10/07/17 08:21	10/09/17 19:50	JDG
Wet Chemistry by Method 3060A/7196A	WG1027608	1	10/05/17 11:30	10/05/17 17:25	ER
Wet Chemistry by Method 9045D	WG1026705	1	10/02/17 13:25	10/02/17 14:08	ER
Wet Chemistry by Method 9050AMod	WG1028002	1	10/05/17 15:01	10/05/17 15:01	MA
Mercury by Method 7471A	WG1028224	1	10/08/17 10:59	10/09/17 13:07	ABL
Metals (ICP) by Method 6010B	WG1028477	1	10/07/17 08:21	10/09/17 19:50	TRB
Volatile Organic Compounds (GC) by Method 8015/8021	WG1028360	1	10/03/17 13:30	10/05/17 20:15	JAH
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1028264	1	10/06/17 00:06	10/06/17 15:57	KLM
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1027989	1	10/05/17 09:07	10/06/17 04:57	KM

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Shane Gambill
Technical Service Representative

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.91		1	10/10/2017 13:55	WG1029174

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	2.91		1.00	1	10/09/2017 19:32	WG1028477

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND	J5	2.00	1	10/05/2017 17:16	WG1027608

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.59	T8	1	10/02/2017 14:08	WG1026705

Sample Narrative:

L940457-01 WG1026705: 7.59 at 22.2c

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	163		1	10/05/2017 15:01	WG1028002

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0200	1	10/09/2017 10:36	WG1028224

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	ND		2.00	1	10/09/2017 19:32	WG1028477
Barium	41.5		0.500	1	10/09/2017 19:32	WG1028477
Cadmium	ND		0.500	1	10/09/2017 19:32	WG1028477
Chromium	2.91		1.00	1	10/09/2017 19:32	WG1028477
Copper	2.20		2.00	1	10/09/2017 19:32	WG1028477
Lead	2.87		0.500	1	10/09/2017 19:32	WG1028477
Nickel	2.51		2.00	1	10/09/2017 19:32	WG1028477
Selenium	ND		2.00	1	10/09/2017 19:32	WG1028477
Silver	ND		1.00	1	10/09/2017 19:32	WG1028477
Zinc	14.0	B	5.00	1	10/09/2017 19:32	WG1028477

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	10/05/2017 18:25	WG1028360
Toluene	ND		0.00500	1	10/05/2017 18:25	WG1028360
Ethylbenzene	ND		0.000500	1	10/05/2017 18:25	WG1028360
Total Xylene	ND	J6	0.00150	1	10/05/2017 18:25	WG1028360
TPH (GC/FID) Low Fraction	ND		0.100	1	10/05/2017 18:25	WG1028360

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
(S) a,a,a-Trifluorotoluene(FID)	*96.8*		*77.0-120*		*10/05/2017 18:25*	WG1028360
(S) a,a,a-Trifluorotoluene(PID)	*103*		*75.0-128*		*10/05/2017 18:25*	WG1028360

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	415		80.0	20	10/06/2017 14:08	WG1028264
(S) o-Terphenyl	*0.000*	J7	*18.0-148*		*10/06/2017 14:08*	WG1028264

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	10/09/2017 21:32	WG1027989
Acenaphthene	ND	J4	0.00600	1	10/09/2017 21:32	WG1027989
Acenaphthylene	ND		0.00600	1	10/09/2017 21:32	WG1027989
Benzo(a)anthracene	ND		0.00600	1	10/09/2017 21:32	WG1027989
Benzo(a)pyrene	0.0615		0.00600	1	10/09/2017 21:32	WG1027989
Benzo(b)fluoranthene	0.00705		0.00600	1	10/09/2017 21:32	WG1027989
Benzo(g,h,i)perylene	0.0409		0.00600	1	10/09/2017 21:32	WG1027989
Benzo(k)fluoranthene	ND		0.00600	1	10/09/2017 21:32	WG1027989
Chrysene	ND		0.00600	1	10/09/2017 21:32	WG1027989
Dibenz(a,h)anthracene	ND		0.00600	1	10/09/2017 21:32	WG1027989
Fluoranthene	ND		0.00600	1	10/09/2017 21:32	WG1027989
Fluorene	ND		0.00600	1	10/09/2017 21:32	WG1027989
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	10/09/2017 21:32	WG1027989
Naphthalene	ND		0.0200	1	10/09/2017 21:32	WG1027989
Phenanthrene	ND		0.00600	1	10/09/2017 21:32	WG1027989
Pyrene	ND		0.00600	1	10/09/2017 21:32	WG1027989
1-Methylnaphthalene	ND		0.0200	1	10/09/2017 21:32	WG1027989
2-Methylnaphthalene	ND		0.0200	1	10/09/2017 21:32	WG1027989
2-Chloronaphthalene	ND		0.0200	1	10/09/2017 21:32	WG1027989
(S) p-Terphenyl-d14	*76.7*		*23.0-120*		*10/09/2017 21:32*	WG1027989
(S) Nitrobenzene-d5	*53.1*		*14.0-149*		*10/09/2017 21:32*	WG1027989
(S) 2-Fluorobiphenyl	*83.1*		*34.0-125*		*10/09/2017 21:32*	WG1027989

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.03		1	10/10/2017 13:58	WG1029174

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	3.17		1.00	1	10/09/2017 19:35	WG1028477

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.00	1	10/05/2017 17:22	WG1027608

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	9.86	T8	1	10/02/2017 14:08	WG1026705

Sample Narrative:

L940457-02 WG1026705: 9.86 at 21.7c

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	259		1	10/05/2017 15:01	WG1028002

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0200	1	10/09/2017 12:58	WG1028224

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	ND		2.00	1	10/09/2017 19:35	WG1028477
Barium	44.2		0.500	1	10/09/2017 19:35	WG1028477
Cadmium	ND		0.500	1	10/09/2017 19:35	WG1028477
Chromium	3.17		1.00	1	10/09/2017 19:35	WG1028477
Copper	2.07		2.00	1	10/09/2017 19:35	WG1028477
Lead	2.72		0.500	1	10/09/2017 19:35	WG1028477
Nickel	2.29		2.00	1	10/09/2017 19:35	WG1028477
Selenium	ND		2.00	1	10/09/2017 19:35	WG1028477
Silver	ND		1.00	1	10/09/2017 19:35	WG1028477
Zinc	12.9	B	5.00	1	10/09/2017 19:35	WG1028477

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	10/05/2017 18:47	WG1028360
Toluene	ND		0.00500	1	10/05/2017 18:47	WG1028360
Ethylbenzene	ND		0.000500	1	10/05/2017 18:47	WG1028360
Total Xylene	ND		0.00150	1	10/05/2017 18:47	WG1028360
TPH (GC/FID) Low Fraction	ND		0.100	1	10/05/2017 18:47	WG1028360

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
(S) a,a,a-Trifluorotoluene(FID)	*96.9*		*77.0-120*		*10/05/2017 18:47*	WG1028360
(S) a,a,a-Trifluorotoluene(PID)	*103*		*75.0-128*		*10/05/2017 18:47*	WG1028360

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	18.0		4.00	1	10/06/2017 14:19	WG1028264
(S) o-Terphenyl	*59.1*		*18.0-148*		*10/06/2017 14:19*	WG1028264

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	10/06/2017 03:54	WG1027989
Acenaphthene	ND	J4	0.00600	1	10/06/2017 03:54	WG1027989
Acenaphthylene	ND		0.00600	1	10/06/2017 03:54	WG1027989
Benzo(a)anthracene	ND		0.00600	1	10/06/2017 03:54	WG1027989
Benzo(a)pyrene	ND		0.00600	1	10/06/2017 03:54	WG1027989
Benzo(b)fluoranthene	ND		0.00600	1	10/06/2017 03:54	WG1027989
Benzo(g,h,i)perylene	ND		0.00600	1	10/06/2017 03:54	WG1027989
Benzo(k)fluoranthene	ND		0.00600	1	10/06/2017 03:54	WG1027989
Chrysene	ND		0.00600	1	10/06/2017 03:54	WG1027989
Dibenz(a,h)anthracene	ND		0.00600	1	10/06/2017 03:54	WG1027989
Fluoranthene	ND		0.00600	1	10/06/2017 03:54	WG1027989
Fluorene	ND		0.00600	1	10/06/2017 03:54	WG1027989
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	10/06/2017 03:54	WG1027989
Naphthalene	ND		0.0200	1	10/06/2017 03:54	WG1027989
Phenanthrene	ND		0.00600	1	10/06/2017 03:54	WG1027989
Pyrene	ND		0.00600	1	10/06/2017 03:54	WG1027989
1-Methylnaphthalene	ND		0.0200	1	10/06/2017 03:54	WG1027989
2-Methylnaphthalene	ND		0.0200	1	10/06/2017 03:54	WG1027989
2-Chloronaphthalene	ND		0.0200	1	10/06/2017 03:54	WG1027989
(S) p-Terphenyl-d14	*48.2*		*23.0-120*		*10/06/2017 03:54*	WG1027989
(S) Nitrobenzene-d5	*64.8*		*14.0-149*		*10/06/2017 03:54*	WG1027989
(S) 2-Fluorobiphenyl	*52.7*		*34.0-125*		*10/06/2017 03:54*	WG1027989

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.51		1	10/10/2017 14:01	WG1029174

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	3.28		1.00	1	10/09/2017 18:42	WG1028477

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.00	1	10/05/2017 17:24	WG1027608

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.60	T8	1	10/02/2017 14:08	WG1026705

Sample Narrative:

L940457-03 WG1026705: 7.60 at 21.6c

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	384		1	10/05/2017 15:01	WG1028002

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0200	1	10/09/2017 13:00	WG1028224

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	ND		2.00	1	10/09/2017 18:42	WG1028477
Barium	48.8		0.500	1	10/09/2017 18:42	WG1028477
Cadmium	ND		0.500	1	10/09/2017 18:42	WG1028477
Chromium	3.28		1.00	1	10/09/2017 18:42	WG1028477
Copper	2.24		2.00	1	10/09/2017 18:42	WG1028477
Lead	3.51		0.500	1	10/09/2017 18:42	WG1028477
Nickel	2.70		2.00	1	10/09/2017 18:42	WG1028477
Selenium	ND		2.00	1	10/09/2017 18:42	WG1028477
Silver	ND		1.00	1	10/09/2017 18:42	WG1028477
Zinc	15.8	B	5.00	1	10/09/2017 18:42	WG1028477

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	10/05/2017 19:09	WG1028360
Toluene	ND		0.00500	1	10/05/2017 19:09	WG1028360
Ethylbenzene	ND		0.000500	1	10/05/2017 19:09	WG1028360
Total Xylene	ND		0.00150	1	10/05/2017 19:09	WG1028360
TPH (GC/FID) Low Fraction	ND		0.100	1	10/05/2017 19:09	WG1028360

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
(S) a,a,a-Trifluorotoluene(FID)	*96.3*		*77.0-120*		*10/05/2017 19:09*	WG1028360
(S) a,a,a-Trifluorotoluene(PID)	*102*		*75.0-128*		*10/05/2017 19:09*	WG1028360

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	218		80.0	20	10/06/2017 14:30	WG1028264
(S) o-Terphenyl	*0.000*	J7	*18.0-148*		*10/06/2017 14:30*	WG1028264

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	10/09/2017 21:11	WG1027989
Acenaphthene	ND	J4	0.00600	1	10/09/2017 21:11	WG1027989
Acenaphthylene	ND		0.00600	1	10/09/2017 21:11	WG1027989
Benzo(a)anthracene	ND		0.00600	1	10/09/2017 21:11	WG1027989
Benzo(a)pyrene	ND		0.00600	1	10/09/2017 21:11	WG1027989
Benzo(b)fluoranthene	ND		0.00600	1	10/09/2017 21:11	WG1027989
Benzo(g,h,i)perylene	0.0839		0.00600	1	10/09/2017 21:11	WG1027989
Benzo(k)fluoranthene	ND		0.00600	1	10/09/2017 21:11	WG1027989
Chrysene	ND		0.00600	1	10/09/2017 21:11	WG1027989
Dibenz(a,h)anthracene	ND		0.00600	1	10/09/2017 21:11	WG1027989
Fluoranthene	ND		0.00600	1	10/09/2017 21:11	WG1027989
Fluorene	ND		0.00600	1	10/09/2017 21:11	WG1027989
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	10/09/2017 21:11	WG1027989
Naphthalene	ND		0.0200	1	10/09/2017 21:11	WG1027989
Phenanthrene	ND		0.00600	1	10/09/2017 21:11	WG1027989
Pyrene	ND		0.00600	1	10/09/2017 21:11	WG1027989
1-Methylnaphthalene	ND		0.0200	1	10/09/2017 21:11	WG1027989
2-Methylnaphthalene	ND		0.0200	1	10/09/2017 21:11	WG1027989
2-Chloronaphthalene	ND		0.0200	1	10/09/2017 21:11	WG1027989
(S) p-Terphenyl-d14	*64.7*		*23.0-120*		*10/09/2017 21:11*	WG1027989
(S) Nitrobenzene-d5	*85.1*		*14.0-149*		*10/09/2017 21:11*	WG1027989
(S) 2-Fluorobiphenyl	*71.8*		*34.0-125*		*10/09/2017 21:11*	WG1027989

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	19.9		1	10/10/2017 14:04	WG1029174

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	3.90		1.00	1	10/09/2017 19:38	WG1028477

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.00	1	10/05/2017 17:24	WG1027608

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	9.62	T8	1	10/02/2017 14:08	WG1026705

Sample Narrative:

L940457-04 WG1026705: 9.62 at 21.7c

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	825		1	10/05/2017 15:01	WG1028002

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0200	1	10/09/2017 13:03	WG1028224

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	ND		2.00	1	10/09/2017 19:38	WG1028477
Barium	56.0		0.500	1	10/09/2017 19:38	WG1028477
Cadmium	ND		0.500	1	10/09/2017 19:38	WG1028477
Chromium	3.90		1.00	1	10/09/2017 19:38	WG1028477
Copper	3.20		2.00	1	10/09/2017 19:38	WG1028477
Lead	4.68		0.500	1	10/09/2017 19:38	WG1028477
Nickel	3.10		2.00	1	10/09/2017 19:38	WG1028477
Selenium	ND		2.00	1	10/09/2017 19:38	WG1028477
Silver	ND		1.00	1	10/09/2017 19:38	WG1028477
Zinc	17.6	B	5.00	1	10/09/2017 19:38	WG1028477

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	10/05/2017 19:31	WG1028360
Toluene	ND		0.00500	1	10/05/2017 19:31	WG1028360
Ethylbenzene	ND		0.000500	1	10/05/2017 19:31	WG1028360
Total Xylene	ND		0.00150	1	10/05/2017 19:31	WG1028360
TPH (GC/FID) Low Fraction	ND		0.100	1	10/05/2017 19:31	WG1028360

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
(S) a,a,a-Trifluorotoluene(FID)	*97.5*		*77.0-120*		*10/05/2017 19:31*	WG1028360
(S) a,a,a-Trifluorotoluene(PID)	*103*		*75.0-128*		*10/05/2017 19:31*	WG1028360

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	91.6		4.00	1	10/06/2017 15:35	WG1028264
(S) o-Terphenyl	*56.2*		*18.0-148*		*10/06/2017 15:35*	WG1028264

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	10/09/2017 20:08	WG1027989
Acenaphthene	ND	J4	0.00600	1	10/09/2017 20:08	WG1027989
Acenaphthylene	ND		0.00600	1	10/09/2017 20:08	WG1027989
Benzo(a)anthracene	ND		0.00600	1	10/09/2017 20:08	WG1027989
Benzo(a)pyrene	ND		0.00600	1	10/09/2017 20:08	WG1027989
Benzo(b)fluoranthene	ND		0.00600	1	10/09/2017 20:08	WG1027989
Benzo(g,h,i)perylene	0.00926		0.00600	1	10/09/2017 20:08	WG1027989
Benzo(k)fluoranthene	ND		0.00600	1	10/09/2017 20:08	WG1027989
Chrysene	ND		0.00600	1	10/09/2017 20:08	WG1027989
Dibenz(a,h)anthracene	ND		0.00600	1	10/09/2017 20:08	WG1027989
Fluoranthene	ND		0.00600	1	10/09/2017 20:08	WG1027989
Fluorene	ND		0.00600	1	10/09/2017 20:08	WG1027989
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	10/09/2017 20:08	WG1027989
Naphthalene	ND		0.0200	1	10/09/2017 20:08	WG1027989
Phenanthrene	ND		0.00600	1	10/09/2017 20:08	WG1027989
Pyrene	ND		0.00600	1	10/09/2017 20:08	WG1027989
1-Methylnaphthalene	ND		0.0200	1	10/09/2017 20:08	WG1027989
2-Methylnaphthalene	ND		0.0200	1	10/09/2017 20:08	WG1027989
2-Chloronaphthalene	ND		0.0200	1	10/09/2017 20:08	WG1027989
(S) p-Terphenyl-d14	*74.5*		*23.0-120*		*10/09/2017 20:08*	WG1027989
(S) Nitrobenzene-d5	*85.3*		*14.0-149*		*10/09/2017 20:08*	WG1027989
(S) 2-Fluorobiphenyl	*79.9*		*34.0-125*		*10/09/2017 20:08*	WG1027989

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	6.92		1	10/10/2017 14:08	WG1029174

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	4.89		1.00	1	10/09/2017 19:47	WG1028477

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.00	1	10/05/2017 17:25	WG1027608

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.51	T8	1	10/02/2017 14:08	WG1026705

Sample Narrative:
L940457-05 WG1026705: 8.51 at 22.1c

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	527		1	10/05/2017 15:01	WG1028002

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0200	1	10/09/2017 13:05	WG1028224

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	ND		2.00	1	10/09/2017 19:47	WG1028477
Barium	53.6		0.500	1	10/09/2017 19:47	WG1028477
Cadmium	ND		0.500	1	10/09/2017 19:47	WG1028477
Chromium	4.89		1.00	1	10/09/2017 19:47	WG1028477
Copper	3.73		2.00	1	10/09/2017 19:47	WG1028477
Lead	3.66		0.500	1	10/09/2017 19:47	WG1028477
Nickel	3.60		2.00	1	10/09/2017 19:47	WG1028477
Selenium	ND		2.00	1	10/09/2017 19:47	WG1028477
Silver	ND		1.00	1	10/09/2017 19:47	WG1028477
Zinc	20.0	B	5.00	1	10/09/2017 19:47	WG1028477

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	10/09/2017 03:27	WG1028360
Toluene	ND		0.00500	1	10/09/2017 03:27	WG1028360
Ethylbenzene	ND		0.000500	1	10/09/2017 03:27	WG1028360
Total Xylene	ND		0.00150	1	10/09/2017 03:27	WG1028360
TPH (GC/FID) Low Fraction	ND		0.100	1	10/09/2017 03:27	WG1028360

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
(S) a,a,a-Trifluorotoluene(FID)	*94.4*		*77.0-120*		*10/09/2017 03:27*	WG1028360
(S) a,a,a-Trifluorotoluene(PID)	*100*		*75.0-128*		*10/09/2017 03:27*	WG1028360

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	16.8		4.00	1	10/06/2017 15:46	WG1028264
(S) o-Terphenyl	*44.8*		*18.0-148*		*10/06/2017 15:46*	WG1028264

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	10/06/2017 04:36	WG1027989
Acenaphthene	ND	J4	0.00600	1	10/06/2017 04:36	WG1027989
Acenaphthylene	ND		0.00600	1	10/06/2017 04:36	WG1027989
Benzo(a)anthracene	ND		0.00600	1	10/06/2017 04:36	WG1027989
Benzo(a)pyrene	ND		0.00600	1	10/06/2017 04:36	WG1027989
Benzo(b)fluoranthene	ND		0.00600	1	10/06/2017 04:36	WG1027989
Benzo(g,h,i)perylene	ND		0.00600	1	10/06/2017 04:36	WG1027989
Benzo(k)fluoranthene	ND		0.00600	1	10/06/2017 04:36	WG1027989
Chrysene	ND		0.00600	1	10/06/2017 04:36	WG1027989
Dibenz(a,h)anthracene	ND		0.00600	1	10/06/2017 04:36	WG1027989
Fluoranthene	ND		0.00600	1	10/06/2017 04:36	WG1027989
Fluorene	ND		0.00600	1	10/06/2017 04:36	WG1027989
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	10/06/2017 04:36	WG1027989
Naphthalene	ND		0.0200	1	10/06/2017 04:36	WG1027989
Phenanthrene	ND		0.00600	1	10/06/2017 04:36	WG1027989
Pyrene	ND		0.00600	1	10/06/2017 04:36	WG1027989
1-Methylnaphthalene	ND		0.0200	1	10/06/2017 04:36	WG1027989
2-Methylnaphthalene	ND		0.0200	1	10/06/2017 04:36	WG1027989
2-Chloronaphthalene	ND		0.0200	1	10/06/2017 04:36	WG1027989
(S) p-Terphenyl-d14	*40.6*		*23.0-120*		*10/06/2017 04:36*	WG1027989
(S) Nitrobenzene-d5	*52.3*		*14.0-149*		*10/06/2017 04:36*	WG1027989
(S) 2-Fluorobiphenyl	*42.8*		*34.0-125*		*10/06/2017 04:36*	WG1027989

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	7.11		1	10/10/2017 14:11	WG1029174

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	2.64		1.00	1	10/09/2017 19:50	WG1028477

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	ND		2.00	1	10/05/2017 17:25	WG1027608

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.53	T8	1	10/02/2017 14:08	WG1026705

Sample Narrative:

L940457-06 WG1026705: 8.53 at 21.9c

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	636		1	10/05/2017 15:01	WG1028002

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0200	1	10/09/2017 13:07	WG1028224

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.38		2.00	1	10/09/2017 19:50	WG1028477
Barium	48.9		0.500	1	10/09/2017 19:50	WG1028477
Cadmium	ND		0.500	1	10/09/2017 19:50	WG1028477
Chromium	2.64		1.00	1	10/09/2017 19:50	WG1028477
Copper	ND		2.00	1	10/09/2017 19:50	WG1028477
Lead	6.51		0.500	1	10/09/2017 19:50	WG1028477
Nickel	2.08		2.00	1	10/09/2017 19:50	WG1028477
Selenium	ND		2.00	1	10/09/2017 19:50	WG1028477
Silver	ND		1.00	1	10/09/2017 19:50	WG1028477
Zinc	15.6	B	5.00	1	10/09/2017 19:50	WG1028477

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	10/05/2017 20:15	WG1028360
Toluene	ND		0.00500	1	10/05/2017 20:15	WG1028360
Ethylbenzene	ND		0.000500	1	10/05/2017 20:15	WG1028360
Total Xylene	ND		0.00150	1	10/05/2017 20:15	WG1028360
TPH (GC/FID) Low Fraction	ND		0.100	1	10/05/2017 20:15	WG1028360

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
(S) a,a,a-Trifluorotoluene(FID)	*96.8*		*77.0-120*		*10/05/2017 20:15*	WG1028360
(S) a,a,a-Trifluorotoluene(PID)	*102*		*75.0-128*		*10/05/2017 20:15*	WG1028360

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	ND		4.00	1	10/06/2017 15:57	WG1028264
(S) o-Terphenyl	*19.7*		*18.0-148*		*10/06/2017 15:57*	WG1028264

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	10/06/2017 04:57	WG1027989
Acenaphthene	ND	J4	0.00600	1	10/06/2017 04:57	WG1027989
Acenaphthylene	ND		0.00600	1	10/06/2017 04:57	WG1027989
Benzo(a)anthracene	ND		0.00600	1	10/06/2017 04:57	WG1027989
Benzo(a)pyrene	ND		0.00600	1	10/06/2017 04:57	WG1027989
Benzo(b)fluoranthene	ND		0.00600	1	10/06/2017 04:57	WG1027989
Benzo(g,h,i)perylene	ND		0.00600	1	10/06/2017 04:57	WG1027989
Benzo(k)fluoranthene	ND		0.00600	1	10/06/2017 04:57	WG1027989
Chrysene	ND		0.00600	1	10/06/2017 04:57	WG1027989
Dibenz(a,h)anthracene	ND		0.00600	1	10/06/2017 04:57	WG1027989
Fluoranthene	ND		0.00600	1	10/06/2017 04:57	WG1027989
Fluorene	ND		0.00600	1	10/06/2017 04:57	WG1027989
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	10/06/2017 04:57	WG1027989
Naphthalene	ND		0.0200	1	10/06/2017 04:57	WG1027989
Phenanthrene	ND		0.00600	1	10/06/2017 04:57	WG1027989
Pyrene	ND		0.00600	1	10/06/2017 04:57	WG1027989
1-Methylnaphthalene	ND		0.0200	1	10/06/2017 04:57	WG1027989
2-Methylnaphthalene	ND		0.0200	1	10/06/2017 04:57	WG1027989
2-Chloronaphthalene	ND		0.0200	1	10/06/2017 04:57	WG1027989
(S) p-Terphenyl-d14	*44.7*		*23.0-120*		*10/06/2017 04:57*	WG1027989
(S) Nitrobenzene-d5	*62.5*		*14.0-149*		*10/06/2017 04:57*	WG1027989
(S) 2-Fluorobiphenyl	*51.0*		*34.0-125*		*10/06/2017 04:57*	WG1027989

Method Blank (MB)

(MB) R3255171-1 10/05/17 17:11

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chromium,Hexavalent	U		0.64	2.00

L940457-01 Original Sample (OS) • Duplicate (DUP)

(OS) L940457-01 10/05/17 17:16 • (DUP) R3255171-4 10/05/17 17:17

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	ND	0.000	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3255171-2 10/05/17 17:12 • (LCSD) R3255171-3 10/05/17 17:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	56.9	42.8	35.6	75	63	30-170			18	20

L940457-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L940457-01 10/05/17 17:16 • (MS) R3255171-5 10/05/17 17:18 • (MSD) R3255171-6 10/05/17 17:20

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	20.0	ND	17.5	17.5	87	87	1	75-125			0	20

L940457-01 Original Sample (OS) • Duplicate (DUP)

(OS) L940457-01 10/02/17 14:08 • (DUP) WG1026705-3 10/02/17 14:08

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.59	7.61	1	0.263	T8	1

Sample Narrative:

OS: 7.59 at 22.2c

DUP: 7.61 at 22.3c

L940461-04 Original Sample (OS) • Duplicate (DUP)

(OS) L940461-04 10/02/17 14:08 • (DUP) WG1026705-4 10/02/17 14:08

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.04	8.04	1	0.000	T8	1

Sample Narrative:

OS: 8.04 at 21.9c

DUP: 8.04 at 22.0c

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) WG1026705-1 10/02/17 14:08 • (LCSD) WG1026705-2 10/02/17 14:08

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	su	su	su	%	%	%			%	%
pH	10.0	9.94	9.94	99.4	99.4	98.4-102			0.000	1

Sample Narrative:

LCS: 9.94 at 21.1c

LCSD: 9.94 at 21.2c

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) WG1028002-1 10/05/17 15:01

Analyte	MB Result umhos/cm	MB Qualifier	MB MDL umhos/cm	MB RDL umhos/cm
Specific Conductance	3.05			

L939738-09 Original Sample (OS) • Duplicate (DUP)

(OS) L939738-09 10/05/17 15:01 • (DUP) WG1028002-4 10/05/17 15:01

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	1190	1190	1	0.000		20

L940163-02 Original Sample (OS) • Duplicate (DUP)

(OS) L940163-02 10/05/17 15:01 • (DUP) WG1028002-5 10/05/17 15:01

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	3120	3110	1	0.321		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) WG1028002-2 10/05/17 15:01 • (LCSD) WG1028002-3 10/05/17 15:01

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCSD Result umhos/cm	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Specific Conductance	559	560	559	100	100	90.0-110			0.179	20

Method Blank (MB)

(MB) R3255866-1 10/09/17 10:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0028	0.0200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3255866-5 10/09/17 13:34 • (LCSD) R3255866-2 10/09/17 10:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.300	0.264	0.258	88	86	80-120			2	20

L940457-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L940457-01 10/09/17 10:36 • (MS) R3255866-3 10/09/17 10:38 • (MSD) R3255866-4 10/09/17 10:41

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.300	ND	0.255	0.278	85	93	1	75-125			8	20

Method Blank (MB)

(MB) R3256004-1 10/09/17 18:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.65	2.00
Barium	U		0.17	0.500
Cadmium	U		0.07	0.500
Chromium	U		0.14	1.00
Copper	U		0.53	2.00
Lead	U		0.19	0.500
Nickel	U		0.49	2.00
Selenium	U		0.74	2.00
Silver	U		0.28	1.00
Zinc	2.86	J	0.59	5.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3256004-2 10/09/17 18:36 • (LCSD) R3256004-3 10/09/17 18:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	100	96.0	94.0	96	94	80-120			2	20
Barium	100	104	100	104	100	80-120			3	20
Cadmium	100	98.8	96.1	99	96	80-120			3	20
Chromium	100	97.3	94.3	97	94	80-120			3	20
Copper	100	102	99.2	102	99	80-120			3	20
Lead	100	96.9	94.8	97	95	80-120			2	20
Nickel	100	97.1	94.4	97	94	80-120			3	20
Selenium	100	97.6	94.8	98	95	80-120			3	20
Silver	20.0	18.2	17.7	91	89	80-120			3	20
Zinc	100	99.7	96.1	100	96	80-120			4	20

L940457-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L940457-03 10/09/17 18:42 • (MS) R3256004-6 10/09/17 18:51 • (MSD) R3256004-7 10/09/17 18:53

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	ND	94.0	98.2	92	96	1	75-125			4	20
Barium	100	48.8	155	154	107	105	1	75-125			1	20
Cadmium	100	ND	96.4	100	96	100	1	75-125			4	20
Chromium	100	3.28	97.6	102	94	99	1	75-125			4	20
Copper	100	2.24	103	106	100	104	1	75-125			3	20
Lead	100	3.51	98.1	102	95	98	1	75-125			4	20
Nickel	100	2.70	97.9	101	95	99	1	75-125			4	20

L940457-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L940457-03 10/09/17 18:42 • (MS) R3256004-6 10/09/17 18:51 • (MSD) R3256004-7 10/09/17 18:53

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Selenium	100	ND	94.0	97.8	94	98	1	75-125			4	20
Silver	20.0	ND	17.4	18.3	87	91	1	75-125			5	20
Zinc	100	15.8	108	111	92	95	1	75-125			3	20

Method Blank (MB)

(MB) R3255658-5 10/05/17 15:54

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000120	0.000500
Toluene	0.000178	J	0.000150	0.00500
Ethylbenzene	U		0.000110	0.000500
Total Xylene	U		0.000460	0.00150
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*100*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*107*			*75.0-128*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3255658-1 10/05/17 14:02 • (LCSD) R3255658-2 10/05/17 14:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0500	0.0457	0.0482	91.3	96.3	71.0-121			5.33	20
Toluene	0.0500	0.0467	0.0481	93.4	96.2	72.0-120			2.94	20
Ethylbenzene	0.0500	0.0485	0.0500	97.0	99.9	76.0-121			3.03	20
Total Xylene	0.150	0.152	0.154	101	103	75.0-124			1.64	20
(S) a,a,a-Trifluorotoluene(FID)				*99.3*	*99.3*	*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)				*105*	*104*	*75.0-128*				

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3255658-3 10/05/17 14:47 • (LCSD) R3255658-4 10/05/17 15:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.38	5.32	97.9	96.8	70.0-136			1.14	20
(S) a,a,a-Trifluorotoluene(FID)				*102*	*102*	*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)				*114*	*114*	*75.0-128*				

L940457-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L940457-01 10/05/17 18:25 • (MS) R3255658-6 10/05/17 23:39 • (MSD) R3255658-7 10/06/17 00:01

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0500	ND	0.0365	0.0350	72.9	69.9	1	10.0-146			4.21	29
Toluene	0.0500	ND	0.0298	0.0274	59.6	54.9	1	10.0-143			8.26	30
Ethylbenzene	0.0500	ND	0.0243	0.0209	48.5	41.8	1	10.0-147			14.9	31
Total Xylene	0.150	ND	0.0700	0.0610	46.7	40.7	1	10.0-149	J6	J6	13.7	30
(S) a,a,a-Trifluorotoluene(FID)					*97.4*	*97.4*		*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)					*102*	*102*		*75.0-128*				

L940457-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L940457-01 10/05/17 18:25 • (MS) R3255658-8 10/06/17 00:23 • (MSD) R3255658-9 10/06/17 00:46

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	ND	1.50	1.44	27.3	26.1	1	10.0-147			4.37	30
(S) a,a,a-Trifluorotoluene(FID)					*95.6*	*95.8*		*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)					*103*	*103*		*75.0-128*				

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3255472-1 10/06/17 12:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) High Fraction	U		0.769	4.00
(S) o-Terphenyl	*67.1*			*18.0-148*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3255472-2 10/06/17 12:30 • (LCSD) R3255472-3 10/06/17 12:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) High Fraction	60.0	45.4	40.3	75.6	67.2	50.0-150			11.8	20
(S) o-Terphenyl				*83.7*	*72.0*	*18.0-148*				

L940548-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L940548-01 10/06/17 17:58 • (MS) R3255472-4 10/06/17 18:09 • (MSD) R3255472-5 10/06/17 18:20

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) High Fraction	77.9	8.01	60.9	59.7	67.9	66.3	1	50.0-150			1.99	20
(S) o-Terphenyl					*78.1*	*85.9*		*18.0-148*				

Method Blank (MB)

(MB) R3255816-3 10/06/17 02:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.000600	0.00600
Acenaphthene	U		0.000600	0.00600
Acenaphthylene	U		0.000600	0.00600
Benzo(a)anthracene	U		0.000600	0.00600
Benzo(a)pyrene	U		0.000600	0.00600
Benzo(b)fluoranthene	U		0.000600	0.00600
Benzo(g,h,i)perylene	0.000708	J	0.000600	0.00600
Benzo(k)fluoranthene	U		0.000600	0.00600
Chrysene	U		0.000600	0.00600
Dibenz(a,h)anthracene	0.000660	J	0.000600	0.00600
Fluoranthene	U		0.000600	0.00600
Fluorene	U		0.000600	0.00600
Indeno(1,2,3-cd)pyrene	0.000601	J	0.000600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.000600	0.00600
Pyrene	U		0.000600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) Nitrobenzene-d5	*65.5*			*14.0-149*
(S) 2-Fluorobiphenyl	*54.2*			*34.0-125*
(S) p-Terphenyl-d14	*47.2*			*23.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3255816-1 10/06/17 01:46 • (LCSD) R3255816-2 10/06/17 02:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	0.0456	0.0463	57.0	57.9	50.0-125			1.51	20
Acenaphthene	0.0800	0.0414	0.0412	51.8	51.5	52.0-120	J4	J4	0.540	20
Acenaphthylene	0.0800	0.0468	0.0462	58.5	57.8	51.0-120			1.17	20
Benzo(a)anthracene	0.0800	0.0423	0.0431	52.9	53.9	46.0-121			1.87	20
Benzo(a)pyrene	0.0800	0.0404	0.0415	50.6	51.9	42.0-121			2.56	20
Benzo(b)fluoranthene	0.0800	0.0384	0.0420	48.0	52.4	42.0-123			8.74	20
Benzo(g,h,i)perylene	0.0800	0.0409	0.0418	51.2	52.3	43.0-128			2.13	20
Benzo(k)fluoranthene	0.0800	0.0405	0.0392	50.7	49.0	45.0-128			3.43	20
Chrysene	0.0800	0.0409	0.0424	51.1	53.0	48.0-127			3.71	20
Dibenz(a,h)anthracene	0.0800	0.0412	0.0417	51.5	52.1	43.0-132			1.12	20
Fluoranthene	0.0800	0.0398	0.0397	49.8	49.6	49.0-129			0.400	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3255816-1 10/06/17 01:46 • (LCSD) R3255816-2 10/06/17 02:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Fluorene	0.0800	0.0432	0.0427	53.9	53.4	50.0-120			1.10	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0398	0.0405	49.8	50.7	44.0-131			1.73	20
Naphthalene	0.0800	0.0476	0.0465	59.5	58.1	50.0-120			2.33	20
Phenanthrene	0.0800	0.0440	0.0436	55.0	54.5	48.0-120			0.830	20
Pyrene	0.0800	0.0426	0.0434	53.3	54.2	48.0-135			1.77	20
1-Methylnaphthalene	0.0800	0.0523	0.0502	65.4	62.7	52.0-122			4.15	20
2-Methylnaphthalene	0.0800	0.0501	0.0481	62.6	60.1	52.0-120			4.07	20
2-Chloronaphthalene	0.0800	0.0434	0.0431	54.2	53.9	50.0-120			0.630	20
(S) Nitrobenzene-d5				*70.3*	*68.0*	*14.0-149*				
(S) 2-Fluorobiphenyl				*56.8*	*56.3*	*34.0-125*				
(S) p-Terphenyl-d14				*49.2*	*50.0*	*23.0-120*				

L940455-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L940455-02 10/06/17 05:39 • (MS) R3255816-4 10/06/17 06:01 • (MSD) R3255816-5 10/06/17 06:22

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0929	0.00134	0.0465	0.0497	48.6	52.1	1	20.0-136			6.67	24
Acenaphthene	0.0929	0.000841	0.0411	0.0438	43.3	46.3	1	29.0-124			6.58	20
Acenaphthylene	0.0929	U	0.0457	0.0483	49.1	52.0	1	35.0-120			5.65	20
Benzo(a)anthracene	0.0929	0.00709	0.0487	0.0511	44.8	47.4	1	13.0-132			4.73	27
Benzo(a)pyrene	0.0929	0.00895	0.0482	0.0507	42.2	44.9	1	14.0-138			5.02	27
Benzo(b)fluoranthene	0.0929	0.0138	0.0518	0.0505	40.8	39.4	1	10.0-129			2.51	31
Benzo(g,h,i)perylene	0.0929	0.00889	0.0479	0.0503	42.0	44.6	1	10.0-133			4.99	30
Benzo(k)fluoranthene	0.0929	0.00459	0.0412	0.0480	39.4	46.8	1	15.0-131			15.3	27
Chrysene	0.0929	0.00678	0.0475	0.0502	43.8	46.7	1	15.0-137			5.45	25
Dibenz(a,h)anthracene	0.0929	0.00223	0.0445	0.0467	45.5	47.9	1	15.0-132			4.82	27
Fluoranthene	0.0929	0.0111	0.0510	0.0542	43.0	46.4	1	13.0-139			6.04	28
Fluorene	0.0929	0.000718	0.0437	0.0464	46.3	49.2	1	27.0-122			5.88	22
Indeno(1,2,3-cd)pyrene	0.0929	0.00717	0.0459	0.0482	41.7	44.2	1	11.0-133			4.86	29
Naphthalene	0.0929	U	0.0484	0.0494	52.1	53.2	1	18.0-136			2.00	21
Phenanthrene	0.0929	0.00383	0.0462	0.0495	45.6	49.2	1	15.0-133			7.01	25
Pyrene	0.0929	0.0208	0.0645	0.0785	47.0	62.1	1	11.0-146			19.7	29
1-Methylnaphthalene	0.0929	0.00421	0.0540	0.0737	53.6	74.8	1	24.0-137		J3	30.9	22
2-Methylnaphthalene	0.0929	U	0.0495	0.0618	53.3	66.5	1	23.0-136		J3	22.1	22
2-Chloronaphthalene	0.0929	U	0.0428	0.0450	46.0	48.4	1	36.0-120			4.99	20
(S) Nitrobenzene-d5					*58.4*	*63.4*		*14.0-149*				
(S) 2-Fluorobiphenyl					*48.3*	*51.5*		*34.0-125*				
(S) p-Terphenyl-d14					*46.9*	*49.9*		*23.0-120*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
T8	Sample(s) received past/too close to holding time expiration.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

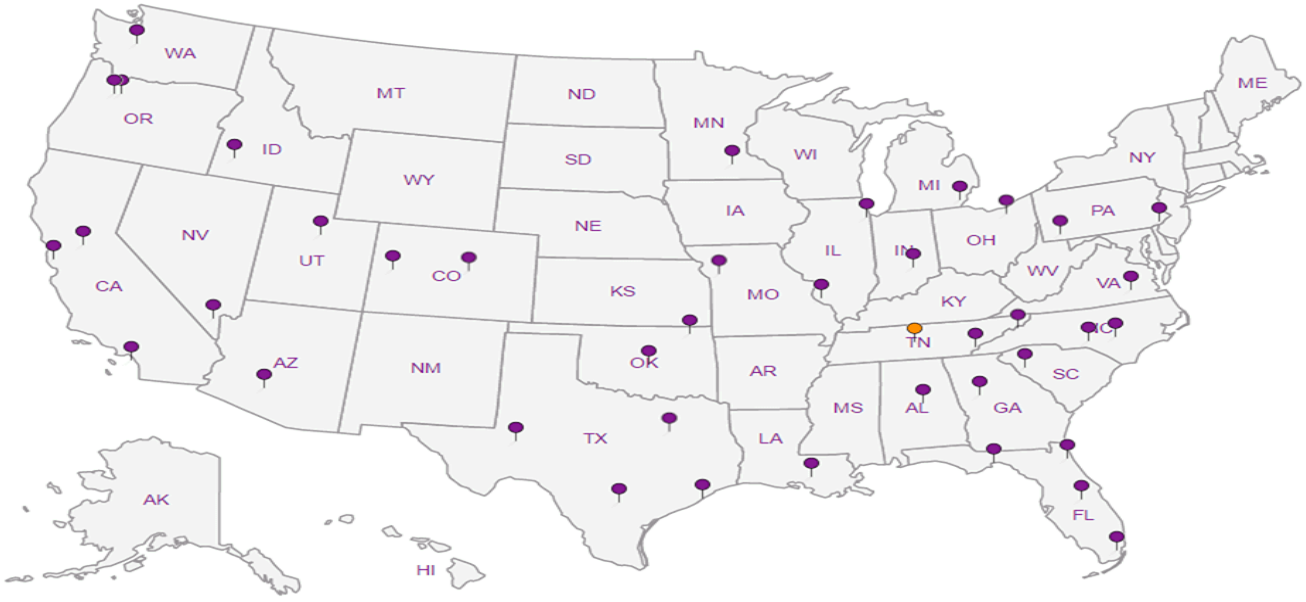
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Churchill Energy, Inc.
8177 S. Norfolk St.
Englewood, CO 80112

Billing Information:

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L946457
F192

Report to: **Gary Kluksdahl**

Email To: **gary.kluksdahl@comcast.net**

Project Description: Closer of pit

City/State Collected: Limon/Co.

Phone: **303-840-7000**
Fax:

Client Project #

Lab Project #

Collected by (print): Tim L Rogers

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: AS/ASA

Acctnum:
Template:
Prelogin:
TSR:
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX/GRO - 4oz Soil Jar	PAHSIM/DRO - 4oz Soil Jar	CR6/Metals - 4oz Soil Jar	SAR, pH, SPCON - 8oz Soil Jar	Remarks	Sample # (lab only)
Vault pit Bottom center		SS	0'6"	9/28/17	1400	4	X	X	X	X		-01
Vault pit Bottom North		SS	0'6"	9/28/17	1400		X	X	X	X		02
Vault pit EAST wall		SS	0'6"	9/28/17	1400		X	X	X	X		03
Stand By Pit EAST wall		SS	0'6"	9/28/17	1400		X	X	X	X		04
Stand By Pit Bottom North		SS	0'6"	9/28/17	1400		X	X	X	X		05
Stand By Pit Bottom South		SS	0'6"	9/28/17	1400		X	X	X	X		06

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS _X FedEx __ Courier __ _____

Tracking # 7466 1467 0658

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 0.9 °C Bottles Received: 24

Date: 9.30.17 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK