

## Apex Companies, LLC-Grand Junction, CO

Sample Delivery Group: L790713  
Samples Received: 09/25/2015  
Project Number: 744.1508.01 COD J931  
Description: Extraction OG Skaer 3 Separator  
Site: SKAER 3 SEPARATOR  
Report To: Jana Nilsen  
743 Horizon Court  
Suite 110  
Grand Junction, CO 81506

Entire Report Reviewed By:



Darren Reeder

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.



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# SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



## SKAER3-SEPARTOR-BOTTOM 4.5FT L790713-01 Solid

Collected by  
John Hickey

Collected date/time  
09/23/15 13:50

Received date/time  
09/25/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Calculated Results	WG817781	1	09/27/15 17:06	09/28/15 23:50	ST
Calculated Results	WG818054	1	09/27/15 18:31	09/28/15 20:35	ST
Mercury by Method 7471A	WG817714	1	09/25/15 17:12	09/26/15 14:33	TRB
Metals (ICP) by Method 6010B	WG818054	1	09/27/15 18:31	09/28/15 17:59	ST
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG817792	5	09/25/15 19:11	09/28/15 23:06	KMP
Semi-Volatile Organic Compounds (GC) by Method 3546/DRO	WG817800	10	09/25/15 21:36	09/26/15 19:41	CLG
Volatile Organic Compounds (GC) by Method 8015/8021	WG817672	5	09/25/15 11:38	09/25/15 16:32	MCB
Wet Chemistry by Method 2580 B-2011	WG817912	1	09/28/15 15:30	09/28/15 16:11	JER
Wet Chemistry by Method 3060A/7196A	WG817723	1	09/26/15 11:05	09/28/15 15:22	JEH
Wet Chemistry by Method 9045D	WG817724	1	09/26/15 08:45	09/26/15 08:45	CM
Wet Chemistry by Method 9050AMod	WG817919	1	09/28/15 11:25	09/28/15 11:25	JER

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

## SKAER3-SEPARTOR-N-SW 3FT L790713-02 Solid

Collected by  
John Hickey

Collected date/time  
09/23/15 13:30

Received date/time  
09/25/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Calculated Results	WG817781	1	09/27/15 17:06	09/28/15 23:50	ST
Calculated Results	WG818054	1	09/27/15 18:31	09/28/15 20:35	ST
Mercury by Method 7471A	WG817714	1	09/25/15 17:12	09/26/15 14:42	TRB
Metals (ICP) by Method 6010B	WG818054	1	09/27/15 18:31	09/28/15 18:14	ST
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG817792	5	09/25/15 19:11	09/28/15 23:27	KMP
Semi-Volatile Organic Compounds (GC) by Method 3546/DRO	WG817800	100	09/25/15 21:36	09/26/15 20:49	CLG
Volatile Organic Compounds (GC) by Method 8015/8021	WG817672	5	09/25/15 11:38	09/25/15 16:54	MCB
Wet Chemistry by Method 2580 B-2011	WG817912	1	09/28/15 15:30	09/28/15 16:11	JER
Wet Chemistry by Method 3060A/7196A	WG817723	1	09/26/15 11:05	09/28/15 15:22	JEH
Wet Chemistry by Method 9045D	WG817724	1	09/26/15 08:45	09/26/15 08:45	CM
Wet Chemistry by Method 9050AMod	WG817919	1	09/28/15 11:25	09/28/15 11:25	JER

## SKAER3-SEPARTOR-S-SW 3FT L790713-03 Solid

Collected by  
John Hickey

Collected date/time  
09/23/15 13:45

Received date/time  
09/25/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Calculated Results	WG817781	1	09/27/15 17:06	09/28/15 23:50	ST
Calculated Results	WG818054	1	09/27/15 18:31	09/28/15 20:35	ST
Mercury by Method 7471A	WG817714	1	09/25/15 17:12	09/26/15 14:45	TRB
Metals (ICP) by Method 6010B	WG818054	1	09/27/15 18:31	09/28/15 18:17	ST
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG817792	1	09/25/15 19:11	09/28/15 18:53	KMP
Semi-Volatile Organic Compounds (GC) by Method 3546/DRO	WG817800	1	09/25/15 21:36	09/26/15 12:58	CLG
Volatile Organic Compounds (GC) by Method 8015/8021	WG817672	5	09/25/15 11:38	09/25/15 17:27	MCB
Wet Chemistry by Method 2580 B-2011	WG817912	1	09/28/15 15:30	09/28/15 16:11	JER
Wet Chemistry by Method 3060A/7196A	WG817723	1	09/26/15 11:05	09/28/15 15:23	JEH
Wet Chemistry by Method 9045D	WG817724	1	09/26/15 08:45	09/26/15 08:45	CM
Wet Chemistry by Method 9050AMod	WG817919	1	09/28/15 11:25	09/28/15 11:25	JER

## SKAER3-SEPARTOR-E-SW 3FT L790713-04 Solid

Collected by  
John Hickey

Collected date/time  
09/23/15 13:40

Received date/time  
09/25/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Calculated Results	WG817781	1	09/27/15 17:06	09/28/15 23:50	ST
Calculated Results	WG818054	1	09/27/15 18:31	09/28/15 20:35	ST
Mercury by Method 7471A	WG817714	1	09/25/15 17:12	09/26/15 14:48	TRB
Metals (ICP) by Method 6010B	WG818054	1	09/27/15 18:31	09/28/15 18:26	ST

ACCOUNT:

Apex Companies, LLC-Grand Junction, CO

PROJECT:

744.1508.01 COD J931

SDG:

L790713

DATE/TIME:

09/29/15 16:38

PAGE:

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## SKAER3-SEPARTOR-E-SW 3FT L790713-04 Solid

Collected by  
John HickeyCollected date/time  
09/23/15 13:40Received date/time  
09/25/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG817792	1	09/25/15 19:11	09/28/15 19:14	KMP
Semi-Volatile Organic Compounds (GC) by Method 3546/DRO	WG817800	1	09/25/15 21:36	09/26/15 12:35	CLG
Volatile Organic Compounds (GC) by Method 8015/8021	WG817877	5	09/26/15 09:28	09/26/15 20:36	MCB
Wet Chemistry by Method 2580 B-2011	WG817912	1	09/28/15 15:30	09/28/15 16:11	JER
Wet Chemistry by Method 3060A/7196A	WG817723	1	09/26/15 11:05	09/28/15 15:23	JEH
Wet Chemistry by Method 9045D	WG817724	1	09/26/15 08:45	09/26/15 08:45	CM
Wet Chemistry by Method 9050AMod	WG817919	1	09/28/15 11:25	09/28/15 11:25	JER

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

## SKAER3-SEPARTOR-W-SW 3FT L790713-05 Solid

Collected by  
John HickeyCollected date/time  
09/23/15 13:35Received date/time  
09/25/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Calculated Results	WG817781	1	09/27/15 17:06	09/28/15 23:50	ST
Calculated Results	WG818054	1	09/27/15 18:31	09/28/15 20:35	ST
Mercury by Method 7471A	WG817714	1	09/25/15 17:12	09/26/15 14:51	TRB
Metals (ICP) by Method 6010B	WG818054	1	09/27/15 18:31	09/28/15 18:29	ST
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG817792	1	09/25/15 19:11	09/28/15 19:35	KMP
Semi-Volatile Organic Compounds (GC) by Method 3546/DRO	WG817800	1	09/25/15 21:36	09/26/15 13:09	CLG
Volatile Organic Compounds (GC) by Method 8015/8021	WG817877	5	09/26/15 09:28	09/26/15 15:49	MCB
Wet Chemistry by Method 2580 B-2011	WG817912	1	09/28/15 15:30	09/28/15 16:11	JER
Wet Chemistry by Method 3060A/7196A	WG817723	1	09/26/15 11:05	09/28/15 15:24	JEH
Wet Chemistry by Method 9045D	WG817724	1	09/26/15 08:45	09/26/15 08:45	CM
Wet Chemistry by Method 9050AMod	WG817919	1	09/28/15 11:25	09/28/15 11:25	JER



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 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.

Darren Reeder  
Technical Service Representative

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	7.46		1	09/28/2015 23:50	WG817781

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Qc7  
Gl8  
Al9  
Sc

## Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	20.0		2.00	1	09/28/2015 20:35	<a href="#">WG818054</a>

## Wet Chemistry by Method 2580 B-2011

Analyte	Result mV	Qualifier	Dilution	Analysis date / time	Batch
ORP	46		1	09/28/2015 16:11	<a href="#">WG817912</a>

## 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	09/28/2015 15:22	<a href="#">WG817723</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.27		1	09/26/2015 08:45	<a href="#">WG817724</a>

## Sample Narrative:

9045D L790713-01 WG817724: 8.27 at 20.9 C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	1220		1	09/28/2015 11:25	<a href="#">WG817919</a>

## Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0200	1	09/26/2015 14:33	<a href="#">WG817714</a>

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.62		2.00	1	09/28/2015 17:59	<a href="#">WG818054</a>
Barium	141		0.500	1	09/28/2015 17:59	<a href="#">WG818054</a>
Cadmium	ND		0.500	1	09/28/2015 17:59	<a href="#">WG818054</a>
Chromium	20.0		1.00	1	09/28/2015 17:59	<a href="#">WG818054</a>
Copper	10.5		2.00	1	09/28/2015 17:59	<a href="#">WG818054</a>
Lead	11.8		0.500	1	09/28/2015 17:59	<a href="#">WG818054</a>
Nickel	16.3		2.00	1	09/28/2015 17:59	<a href="#">WG818054</a>
Selenium	ND		2.00	1	09/28/2015 17:59	<a href="#">WG818054</a>
Silver	ND		1.00	1	09/28/2015 17:59	<a href="#">WG818054</a>
Zinc	56.0		5.00	1	09/28/2015 17:59	<a href="#">WG818054</a>



Collected date/time: 09/23/15 13:50

L790713

## Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00250	5	09/25/2015 16:32	<a href="#">WG817672</a>
Toluene	ND		0.0250	5	09/25/2015 16:32	<a href="#">WG817672</a>
Ethylbenzene	ND		0.00250	5	09/25/2015 16:32	<a href="#">WG817672</a>
Total Xylene	0.0229		0.00750	5	09/25/2015 16:32	<a href="#">WG817672</a>
TPH (GC/FID) Low Fraction	2.16		0.500	5	09/25/2015 16:32	<a href="#">WG817672</a>
(S) a,a,a-Trifluorotoluene(FID)	98.0		59.0-128		09/25/2015 16:32	<a href="#">WG817672</a>
(S) a,a,a-Trifluorotoluene(PID)	104		54.0-144		09/25/2015 16:32	<a href="#">WG817672</a>

## Semi-Volatile Organic Compounds (GC) by Method 3546/DRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	747		40.0	10	09/26/2015 19:41	<a href="#">WG817800</a>
(S) o-Terphenyl	129		50.0-150		09/26/2015 19:41	<a href="#">WG817800</a>

## 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		0.0300	5	09/28/2015 23:06	<a href="#">WG817792</a>
Acenaphthene	0.0303		0.0300	5	09/28/2015 23:06	<a href="#">WG817792</a>
Acenaphthylene	ND		0.0300	5	09/28/2015 23:06	<a href="#">WG817792</a>
Benzo(a)anthracene	ND		0.0300	5	09/28/2015 23:06	<a href="#">WG817792</a>
Benzo(a)pyrene	ND		0.0300	5	09/28/2015 23:06	<a href="#">WG817792</a>
Benzo(b)fluoranthene	ND		0.0300	5	09/28/2015 23:06	<a href="#">WG817792</a>
Benzo(g,h,i)perylene	ND		0.0300	5	09/28/2015 23:06	<a href="#">WG817792</a>
Benzo(k)fluoranthene	ND		0.0300	5	09/28/2015 23:06	<a href="#">WG817792</a>
Chrysene	ND		0.0300	5	09/28/2015 23:06	<a href="#">WG817792</a>
Dibenz(a,h)anthracene	ND		0.0300	5	09/28/2015 23:06	<a href="#">WG817792</a>
Fluoranthene	ND		0.0300	5	09/28/2015 23:06	<a href="#">WG817792</a>
Fluorene	0.0759		0.0300	5	09/28/2015 23:06	<a href="#">WG817792</a>
Indeno(1,2,3-cd)pyrene	ND		0.0300	5	09/28/2015 23:06	<a href="#">WG817792</a>
Naphthalene	ND		0.100	5	09/28/2015 23:06	<a href="#">WG817792</a>
Phenanthrene	0.105		0.0300	5	09/28/2015 23:06	<a href="#">WG817792</a>
Pyrene	ND		0.0300	5	09/28/2015 23:06	<a href="#">WG817792</a>
1-Methylnaphthalene	0.381		0.100	5	09/28/2015 23:06	<a href="#">WG817792</a>
2-Methylnaphthalene	0.164		0.100	5	09/28/2015 23:06	<a href="#">WG817792</a>
2-Chloronaphthalene	ND		0.100	5	09/28/2015 23:06	<a href="#">WG817792</a>
(S) p-Terphenyl-d14	33.9		32.2-131		09/28/2015 23:06	<a href="#">WG817792</a>
(S) Nitrobenzene-d5	55.5		22.1-146		09/28/2015 23:06	<a href="#">WG817792</a>
(S) 2-Fluorobiphenyl	70.4		40.6-122		09/28/2015 23:06	<a href="#">WG817792</a>

## Sample Narrative:

8270C-SIM L790713-01 WG817792: Dilution due to matrix

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	12.2		1	09/28/2015 23:50	WG817781

## Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	18.8		2.00	1	09/28/2015 20:35	<a href="#">WG818054</a>

## Wet Chemistry by Method 2580 B-2011

Analyte	Result mV	Qualifier	Dilution	Analysis date / time	Batch
ORP	31		1	09/28/2015 16:11	<a href="#">WG817912</a>

## 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	09/28/2015 15:22	<a href="#">WG817723</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.90		1	09/26/2015 08:45	<a href="#">WG817724</a>

## Sample Narrative:

9045D L790713-02 WG817724: 8.90 at 20.7 C

## Wet Chemistry by Method 9050AMod

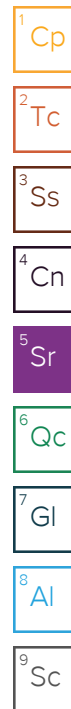
Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	1080		1	09/28/2015 11:25	<a href="#">WG817919</a>

## Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0200	1	09/26/2015 14:42	<a href="#">WG817714</a>

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.38		2.00	1	09/28/2015 18:14	<a href="#">WG818054</a>
Barium	151		0.500	1	09/28/2015 18:14	<a href="#">WG818054</a>
Cadmium	ND		0.500	1	09/28/2015 18:14	<a href="#">WG818054</a>
Chromium	18.8		1.00	1	09/28/2015 18:14	<a href="#">WG818054</a>
Copper	10.1		2.00	1	09/28/2015 18:14	<a href="#">WG818054</a>
Lead	10.8		0.500	1	09/28/2015 18:14	<a href="#">WG818054</a>
Nickel	14.8		2.00	1	09/28/2015 18:14	<a href="#">WG818054</a>
Selenium	ND		2.00	1	09/28/2015 18:14	<a href="#">WG818054</a>
Silver	ND		1.00	1	09/28/2015 18:14	<a href="#">WG818054</a>
Zinc	48.7		5.00	1	09/28/2015 18:14	<a href="#">WG818054</a>







## Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00250	5	09/25/2015 16:54	<a href="#">WG817672</a>
Toluene	ND		0.0250	5	09/25/2015 16:54	<a href="#">WG817672</a>
Ethylbenzene	ND		0.00250	5	09/25/2015 16:54	<a href="#">WG817672</a>
Total Xylene	ND		0.00750	5	09/25/2015 16:54	<a href="#">WG817672</a>
TPH (GC/FID) Low Fraction	ND		0.500	5	09/25/2015 16:54	<a href="#">WG817672</a>
(S) a,a,a-Trifluorotoluene(FID)	97.4		59.0-128		09/25/2015 16:54	<a href="#">WG817672</a>
(S) a,a,a-Trifluorotoluene(PID)	103		54.0-144		09/25/2015 16:54	<a href="#">WG817672</a>

## Semi-Volatile Organic Compounds (GC) by Method 3546/DRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	503		400	100	09/26/2015 20:49	<a href="#">WG817800</a>
(S) o-Terphenyl	108	<a href="#">J7</a>	50.0-150		09/26/2015 20:49	<a href="#">WG817800</a>

## 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		0.0300	5	09/28/2015 23:27	<a href="#">WG817792</a>
Acenaphthene	ND		0.0300	5	09/28/2015 23:27	<a href="#">WG817792</a>
Acenaphthylene	ND		0.0300	5	09/28/2015 23:27	<a href="#">WG817792</a>
Benzo(a)anthracene	ND		0.0300	5	09/28/2015 23:27	<a href="#">WG817792</a>
Benzo(a)pyrene	ND		0.0300	5	09/28/2015 23:27	<a href="#">WG817792</a>
Benzo(b)fluoranthene	ND		0.0300	5	09/28/2015 23:27	<a href="#">WG817792</a>
Benzo(g,h,i)perylene	ND		0.0300	5	09/28/2015 23:27	<a href="#">WG817792</a>
Benzo(k)fluoranthene	ND		0.0300	5	09/28/2015 23:27	<a href="#">WG817792</a>
Chrysene	ND		0.0300	5	09/28/2015 23:27	<a href="#">WG817792</a>
Dibenz(a,h)anthracene	ND		0.0300	5	09/28/2015 23:27	<a href="#">WG817792</a>
Fluoranthene	ND		0.0300	5	09/28/2015 23:27	<a href="#">WG817792</a>
Fluorene	ND		0.0300	5	09/28/2015 23:27	<a href="#">WG817792</a>
Indeno(1,2,3-cd)pyrene	ND		0.0300	5	09/28/2015 23:27	<a href="#">WG817792</a>
Naphthalene	ND		0.100	5	09/28/2015 23:27	<a href="#">WG817792</a>
Phenanthrene	ND		0.0300	5	09/28/2015 23:27	<a href="#">WG817792</a>
Pyrene	ND		0.0300	5	09/28/2015 23:27	<a href="#">WG817792</a>
1-Methylnaphthalene	ND		0.100	5	09/28/2015 23:27	<a href="#">WG817792</a>
2-Methylnaphthalene	ND		0.100	5	09/28/2015 23:27	<a href="#">WG817792</a>
2-Chloronaphthalene	ND		0.100	5	09/28/2015 23:27	<a href="#">WG817792</a>
(S) p-Terphenyl-d14	36.0		32.2-131		09/28/2015 23:27	<a href="#">WG817792</a>
(S) Nitrobenzene-d5	83.5		22.1-146		09/28/2015 23:27	<a href="#">WG817792</a>
(S) 2-Fluorobiphenyl	74.0		40.6-122		09/28/2015 23:27	<a href="#">WG817792</a>

## Sample Narrative:

8270C-SIM L790713-02 WG817792: Dilution due to matrix

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	6.84		1	09/28/2015 23:50	WG817781

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Qc7  
Gl8  
Al9  
Sc

## Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	18.9		2.00	1	09/28/2015 20:35	<a href="#">WG818054</a>

## Wet Chemistry by Method 2580 B-2011

Analyte	Result mV	Qualifier	Dilution	Analysis date / time	Batch
ORP	34		1	09/28/2015 16:11	<a href="#">WG817912</a>

## 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	09/28/2015 15:23	<a href="#">WG817723</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	9.08		1	09/26/2015 08:45	<a href="#">WG817724</a>

## Sample Narrative:

9045D L790713-03 WG817724: 9.08 at 20.6 C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	483		1	09/28/2015 11:25	<a href="#">WG817919</a>

## Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0200	1	09/26/2015 14:45	<a href="#">WG817714</a>

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.66		2.00	1	09/28/2015 18:17	<a href="#">WG818054</a>
Barium	125		0.500	1	09/28/2015 18:17	<a href="#">WG818054</a>
Cadmium	ND		0.500	1	09/28/2015 18:17	<a href="#">WG818054</a>
Chromium	18.9		1.00	1	09/28/2015 18:17	<a href="#">WG818054</a>
Copper	11.1		2.00	1	09/28/2015 18:17	<a href="#">WG818054</a>
Lead	11.5		0.500	1	09/28/2015 18:17	<a href="#">WG818054</a>
Nickel	17.3		2.00	1	09/28/2015 18:17	<a href="#">WG818054</a>
Selenium	ND		2.00	1	09/28/2015 18:17	<a href="#">WG818054</a>
Silver	ND		1.00	1	09/28/2015 18:17	<a href="#">WG818054</a>
Zinc	56.0		5.00	1	09/28/2015 18:17	<a href="#">WG818054</a>



## Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00250	5	09/25/2015 17:27	<a href="#">WG817672</a>
Toluene	ND		0.0250	5	09/25/2015 17:27	<a href="#">WG817672</a>
Ethylbenzene	ND		0.00250	5	09/25/2015 17:27	<a href="#">WG817672</a>
Total Xylene	ND		0.00750	5	09/25/2015 17:27	<a href="#">WG817672</a>
TPH (GC/FID) Low Fraction	ND		0.500	5	09/25/2015 17:27	<a href="#">WG817672</a>
(S) a,a,a-Trifluorotoluene(FID)	98.2		59.0-128		09/25/2015 17:27	<a href="#">WG817672</a>
(S) a,a,a-Trifluorotoluene(PID)	105		54.0-144		09/25/2015 17:27	<a href="#">WG817672</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Semi-Volatile Organic Compounds (GC) by Method 3546/DRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	8.49		4.00	1	09/26/2015 12:58	<a href="#">WG817800</a>
(S) o-Terphenyl	85.9		50.0-150		09/26/2015 12:58	<a href="#">WG817800</a>

## 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	09/28/2015 18:53	<a href="#">WG817792</a>
Acenaphthene	ND		0.00600	1	09/28/2015 18:53	<a href="#">WG817792</a>
Acenaphthylene	ND		0.00600	1	09/28/2015 18:53	<a href="#">WG817792</a>
Benzo(a)anthracene	ND		0.00600	1	09/28/2015 18:53	<a href="#">WG817792</a>
Benzo(a)pyrene	ND		0.00600	1	09/28/2015 18:53	<a href="#">WG817792</a>
Benzo(b)fluoranthene	ND		0.00600	1	09/28/2015 18:53	<a href="#">WG817792</a>
Benzo(g,h,i)perylene	ND		0.00600	1	09/28/2015 18:53	<a href="#">WG817792</a>
Benzo(k)fluoranthene	ND		0.00600	1	09/28/2015 18:53	<a href="#">WG817792</a>
Chrysene	ND		0.00600	1	09/28/2015 18:53	<a href="#">WG817792</a>
Dibenz(a,h)anthracene	ND		0.00600	1	09/28/2015 18:53	<a href="#">WG817792</a>
Fluoranthene	ND		0.00600	1	09/28/2015 18:53	<a href="#">WG817792</a>
Fluorene	ND		0.00600	1	09/28/2015 18:53	<a href="#">WG817792</a>
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	09/28/2015 18:53	<a href="#">WG817792</a>
Naphthalene	ND		0.0200	1	09/28/2015 18:53	<a href="#">WG817792</a>
Phenanthrene	ND		0.00600	1	09/28/2015 18:53	<a href="#">WG817792</a>
Pyrene	ND		0.00600	1	09/28/2015 18:53	<a href="#">WG817792</a>
1-Methylnaphthalene	ND		0.0200	1	09/28/2015 18:53	<a href="#">WG817792</a>
2-Methylnaphthalene	ND		0.0200	1	09/28/2015 18:53	<a href="#">WG817792</a>
2-Chloronaphthalene	ND		0.0200	1	09/28/2015 18:53	<a href="#">WG817792</a>
(S) p-Terphenyl-d14	58.0		32.2-131		09/28/2015 18:53	<a href="#">WG817792</a>
(S) Nitrobenzene-d5	89.7		22.1-146		09/28/2015 18:53	<a href="#">WG817792</a>
(S) 2-Fluorobiphenyl	69.7		40.6-122		09/28/2015 18:53	<a href="#">WG817792</a>



## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.42		1	09/28/2015 23:50	WG817781

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Qc7  
Gl8  
Al9  
Sc

## Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	20.8		2.00	1	09/28/2015 20:35	<a href="#">WG818054</a>

## Wet Chemistry by Method 2580 B-2011

Analyte	Result mV	Qualifier	Dilution	Analysis date / time	Batch
ORP	46		1	09/28/2015 16:11	<a href="#">WG817912</a>

## 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	09/28/2015 15:23	<a href="#">WG817723</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.56		1	09/26/2015 08:45	<a href="#">WG817724</a>

## Sample Narrative:

9045D L790713-04 WG817724: 8.56 at 20.2 C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	690		1	09/28/2015 11:25	<a href="#">WG817919</a>

## Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0200	1	09/26/2015 14:48	<a href="#">WG817714</a>

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.17		2.00	1	09/28/2015 18:26	<a href="#">WG818054</a>
Barium	201		0.500	1	09/28/2015 18:26	<a href="#">WG818054</a>
Cadmium	ND		0.500	1	09/28/2015 18:26	<a href="#">WG818054</a>
Chromium	20.8		1.00	1	09/28/2015 18:26	<a href="#">WG818054</a>
Copper	12.6		2.00	1	09/28/2015 18:26	<a href="#">WG818054</a>
Lead	12.9		0.500	1	09/28/2015 18:26	<a href="#">WG818054</a>
Nickel	18.7		2.00	1	09/28/2015 18:26	<a href="#">WG818054</a>
Selenium	ND		2.00	1	09/28/2015 18:26	<a href="#">WG818054</a>
Silver	ND		1.00	1	09/28/2015 18:26	<a href="#">WG818054</a>
Zinc	60.0		5.00	1	09/28/2015 18:26	<a href="#">WG818054</a>



## Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00250	5	09/26/2015 20:36	<a href="#">WG817877</a>
Toluene	ND		0.0250	5	09/26/2015 20:36	<a href="#">WG817877</a>
Ethylbenzene	ND		0.00250	5	09/26/2015 20:36	<a href="#">WG817877</a>
Total Xylene	ND		0.00750	5	09/26/2015 20:36	<a href="#">WG817877</a>
TPH (GC/FID) Low Fraction	ND		0.500	5	09/26/2015 20:36	<a href="#">WG817877</a>
(S) a,a,a-Trifluorotoluene(FID)	92.3		59.0-128		09/26/2015 20:36	<a href="#">WG817877</a>
(S) a,a,a-Trifluorotoluene(PID)	102		54.0-144		09/26/2015 20:36	<a href="#">WG817877</a>

## Semi-Volatile Organic Compounds (GC) by Method 3546/DRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	ND		4.00	1	09/26/2015 12:35	<a href="#">WG817800</a>
(S) o-Terphenyl	90.8		50.0-150		09/26/2015 12:35	<a href="#">WG817800</a>

## 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	09/28/2015 19:14	<a href="#">WG817792</a>
Acenaphthene	ND		0.00600	1	09/28/2015 19:14	<a href="#">WG817792</a>
Acenaphthylene	ND		0.00600	1	09/28/2015 19:14	<a href="#">WG817792</a>
Benzo(a)anthracene	ND		0.00600	1	09/28/2015 19:14	<a href="#">WG817792</a>
Benzo(a)pyrene	ND		0.00600	1	09/28/2015 19:14	<a href="#">WG817792</a>
Benzo(b)fluoranthene	ND		0.00600	1	09/28/2015 19:14	<a href="#">WG817792</a>
Benzo(g,h,i)perylene	ND		0.00600	1	09/28/2015 19:14	<a href="#">WG817792</a>
Benzo(k)fluoranthene	ND		0.00600	1	09/28/2015 19:14	<a href="#">WG817792</a>
Chrysene	ND		0.00600	1	09/28/2015 19:14	<a href="#">WG817792</a>
Dibenz(a,h)anthracene	ND		0.00600	1	09/28/2015 19:14	<a href="#">WG817792</a>
Fluoranthene	ND		0.00600	1	09/28/2015 19:14	<a href="#">WG817792</a>
Fluorene	ND		0.00600	1	09/28/2015 19:14	<a href="#">WG817792</a>
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	09/28/2015 19:14	<a href="#">WG817792</a>
Naphthalene	ND		0.0200	1	09/28/2015 19:14	<a href="#">WG817792</a>
Phenanthrene	ND		0.00600	1	09/28/2015 19:14	<a href="#">WG817792</a>
Pyrene	ND		0.00600	1	09/28/2015 19:14	<a href="#">WG817792</a>
1-Methylnaphthalene	ND		0.0200	1	09/28/2015 19:14	<a href="#">WG817792</a>
2-Methylnaphthalene	ND		0.0200	1	09/28/2015 19:14	<a href="#">WG817792</a>
2-Chloronaphthalene	ND		0.0200	1	09/28/2015 19:14	<a href="#">WG817792</a>
(S) p-Terphenyl-d14	65.3		32.2-131		09/28/2015 19:14	<a href="#">WG817792</a>
(S) Nitrobenzene-d5	96.1		22.1-146		09/28/2015 19:14	<a href="#">WG817792</a>
(S) 2-Fluorobiphenyl	77.5		40.6-122		09/28/2015 19:14	<a href="#">WG817792</a>

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



## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	40.0		1	09/28/2015 23:50	WG817781

1  
Cp2  
Tc3  
Ss4  
Cn5  
Sr6  
Qc7  
Gl8  
Al9  
Sc

## Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	22.3		2.00	1	09/28/2015 20:35	<a href="#">WG818054</a>

## Wet Chemistry by Method 2580 B-2011

Analyte	Result mV	Qualifier	Dilution	Analysis date / time	Batch
ORP	37		1	09/28/2015 16:11	<a href="#">WG817912</a>

## 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	09/28/2015 15:24	<a href="#">WG817723</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	9.05		1	09/26/2015 08:45	<a href="#">WG817724</a>

## Sample Narrative:

9045D L790713-05 WG817724: 9.05 at 20.3 C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	Dilution	Analysis date / time	Batch
Specific Conductance	3080		1	09/28/2015 11:25	<a href="#">WG817919</a>

## Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0212		0.0200	1	09/26/2015 14:51	<a href="#">WG817714</a>

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.32		2.00	1	09/28/2015 18:29	<a href="#">WG818054</a>
Barium	576		0.500	1	09/28/2015 18:29	<a href="#">WG818054</a>
Cadmium	ND		0.500	1	09/28/2015 18:29	<a href="#">WG818054</a>
Chromium	22.3		1.00	1	09/28/2015 18:29	<a href="#">WG818054</a>
Copper	12.9		2.00	1	09/28/2015 18:29	<a href="#">WG818054</a>
Lead	12.4		0.500	1	09/28/2015 18:29	<a href="#">WG818054</a>
Nickel	18.6		2.00	1	09/28/2015 18:29	<a href="#">WG818054</a>
Selenium	ND		2.00	1	09/28/2015 18:29	<a href="#">WG818054</a>
Silver	ND		1.00	1	09/28/2015 18:29	<a href="#">WG818054</a>
Zinc	58.6		5.00	1	09/28/2015 18:29	<a href="#">WG818054</a>



## Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00250	5	09/26/2015 15:49	<a href="#">WG817877</a>
Toluene	ND		0.0250	5	09/26/2015 15:49	<a href="#">WG817877</a>
Ethylbenzene	ND		0.00250	5	09/26/2015 15:49	<a href="#">WG817877</a>
Total Xylene	ND		0.00750	5	09/26/2015 15:49	<a href="#">WG817877</a>
TPH (GC/FID) Low Fraction	ND		0.500	5	09/26/2015 15:49	<a href="#">WG817877</a>
(S) a,a,a-Trifluorotoluene(FID)	88.4		59.0-128		09/26/2015 15:49	<a href="#">WG817877</a>
(S) a,a,a-Trifluorotoluene(PID)	98.3		54.0-144		09/26/2015 15:49	<a href="#">WG817877</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Semi-Volatile Organic Compounds (GC) by Method 3546/DRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	11.5		4.00	1	09/26/2015 13:09	<a href="#">WG817800</a>
(S) o-Terphenyl	82.0		50.0-150		09/26/2015 13:09	<a href="#">WG817800</a>

## 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	09/28/2015 19:35	<a href="#">WG817792</a>
Acenaphthene	ND		0.00600	1	09/28/2015 19:35	<a href="#">WG817792</a>
Acenaphthylene	ND		0.00600	1	09/28/2015 19:35	<a href="#">WG817792</a>
Benzo(a)anthracene	ND		0.00600	1	09/28/2015 19:35	<a href="#">WG817792</a>
Benzo(a)pyrene	ND		0.00600	1	09/28/2015 19:35	<a href="#">WG817792</a>
Benzo(b)fluoranthene	ND		0.00600	1	09/28/2015 19:35	<a href="#">WG817792</a>
Benzo(g,h,i)perylene	ND		0.00600	1	09/28/2015 19:35	<a href="#">WG817792</a>
Benzo(k)fluoranthene	ND		0.00600	1	09/28/2015 19:35	<a href="#">WG817792</a>
Chrysene	ND		0.00600	1	09/28/2015 19:35	<a href="#">WG817792</a>
Dibenz(a,h)anthracene	ND		0.00600	1	09/28/2015 19:35	<a href="#">WG817792</a>
Fluoranthene	ND		0.00600	1	09/28/2015 19:35	<a href="#">WG817792</a>
Fluorene	ND		0.00600	1	09/28/2015 19:35	<a href="#">WG817792</a>
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	09/28/2015 19:35	<a href="#">WG817792</a>
Naphthalene	ND		0.0200	1	09/28/2015 19:35	<a href="#">WG817792</a>
Phenanthrene	ND		0.00600	1	09/28/2015 19:35	<a href="#">WG817792</a>
Pyrene	ND		0.00600	1	09/28/2015 19:35	<a href="#">WG817792</a>
1-Methylnaphthalene	ND		0.0200	1	09/28/2015 19:35	<a href="#">WG817792</a>
2-Methylnaphthalene	ND		0.0200	1	09/28/2015 19:35	<a href="#">WG817792</a>
2-Chloronaphthalene	ND		0.0200	1	09/28/2015 19:35	<a href="#">WG817792</a>
(S) p-Terphenyl-d14	52.9		32.2-131		09/28/2015 19:35	<a href="#">WG817792</a>
(S) Nitrobenzene-d5	88.1		22.1-146		09/28/2015 19:35	<a href="#">WG817792</a>
(S) 2-Fluorobiphenyl	68.8		40.6-122		09/28/2015 19:35	<a href="#">WG817792</a>



L789969-01 Original Sample (OS) • Duplicate (DUP)

(OS) 09/28/15 16:11 • (DUP) 09/28/15 16:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mV	mV		%		%
ORP	82.0	84	1	2.41		20

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

L790807-01 Original Sample (OS) • Duplicate (DUP)

(OS) 09/28/15 16:11 • (DUP) 09/28/15 16:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mV	mV		%		%
ORP	55.0	56	1	1.80		20

7  
Gl

8  
Al

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

(LCS) 09/28/15 16:11 • (LCSD) 09/28/15 16:11

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mV	mV	mV	%	%	%			%	%
ORP	100	100	101	100	101	90.0-110			0.995	20

9  
Sc



Method Blank (MB)

(MB) 09/28/15 15:17

	MB Result	MB Qualifier	MB RDL
Analyte	mg/kg		mg/kg
Chromium,Hexavalent	ND		2.00

L790713-05 Original Sample (OS) • Duplicate (DUP)

(OS) 09/28/15 15:24 • (DUP) 09/28/15 15:24

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

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

(LCS) 09/28/15 15:18 • (LCSD) 09/28/15 15:18

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Chromium,Hexavalent	59.8	55.4	55.6	92.6	93.0	80.0-120			0.360	20

L790713-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/28/15 15:24 • (MS) 09/28/15 15:24 • (MSD) 09/28/15 15:25

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chromium,Hexavalent	20.0	0.520	19.3	19.2	96.5	96.0	1	75.0-125			0.519	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



L790485-01 Original Sample (OS) • Duplicate (DUP)

(OS) 09/26/15 08:45 • (DUP) 09/26/15 08:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	SU	SU		%		%
pH	9.70	9.64	1	0.620	1	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

L790747-02 Original Sample (OS) • Duplicate (DUP)

(OS) 09/26/15 08:45 • (DUP) 09/26/15 08:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	SU	SU		%		%
pH	8.82	8.82	1	0.000	1	

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

(LCS) 09/26/15 08:45 • (LCSD) 09/26/15 08:45

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	SU	SU	SU	%	%	%			%	%
pH	6.37	6.39	6.40	100	100	98.2-102			0.156	1

7Gl

8Al

9Sc



Method Blank (MB)

(MB) 09/28/15 11:25

Analyte	MB Result umhos/cm	MB Qualifier	MB RDL umhos/cm
Specific Conductance	1.10		

L790453-01 Original Sample (OS) • Duplicate (DUP)

(OS) 09/28/15 11:25 • (DUP) 09/28/15 11:25

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	602	592	1	1.68		20

L790993-07 Original Sample (OS) • Duplicate (DUP)

(OS) 09/28/15 11:25 • (DUP) 09/28/15 11:25

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	2230	2310	1	3.52		20

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

(LCS) 09/28/15 11:25 • (LCSD) 09/28/15 11:25

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	873	900	900	103	103	90.0-110			0.000	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) 09/26/15 14:24

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Mercury	ND		0.0200

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

(LCS) 09/26/15 14:27 • (LCSD) 09/26/15 14:30

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	0.272	0.271	91	90	80-120			0	20

L790713-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/26/15 14:33 • (MS) 09/26/15 14:36 • (MSD) 09/26/15 14:39

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	0.0166	0.287	0.276	90	86	1	75-125			4	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) 09/28/15 17:51

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Arsenic	ND		2.00
Barium	ND		0.500
Cadmium	ND		0.500
Chromium	ND		1.00
Copper	ND		2.00
Lead	ND		0.500
Nickel	ND		2.00
Selenium	ND		2.00
Silver	ND		1.00
Zinc	ND		5.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) 09/28/15 17:53 • (LCSD) 09/28/15 17:56

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	102	97.7	102	98	80-120			4	20
Barium	100	106	101	106	101	80-120			4	20
Cadmium	100	103	99.0	103	99	80-120			4	20
Chromium	100	103	98.3	103	98	80-120			4	20
Copper	100	104	100	104	100	80-120			4	20
Lead	100	105	101	105	101	80-120			4	20
Nickel	100	104	100	104	100	80-120			4	20
Selenium	100	108	103	108	103	80-120			5	20
Silver	100	102	97.1	102	97	80-120			5	20
Zinc	100	103	99.8	103	100	80-120			3	20

L790713-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/28/15 17:59 • (MS) 09/28/15 18:08 • (MSD) 09/28/15 18:11

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	3.62	106	102	102	98	1	75-125			4	20
Barium	100	141	220	218	79	77	1	75-125			1	20
Cadmium	100	0.00837	105	100	105	100	1	75-125			5	20



L790713-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/28/15 17:59 • (MS) 09/28/15 18:08 • (MSD) 09/28/15 18:11

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	100	20.0	118	113	98	93	1	75-125			5	20
Copper	100	10.5	115	109	105	99	1	75-125			5	20
Lead	100	11.8	122	117	110	106	1	75-125			4	20
Nickel	100	16.3	126	122	109	106	1	75-125			3	20
Selenium	100	0.993	109	104	108	103	1	75-125			5	20
Silver	100	ND	105	99.6	105	100	1	75-125			5	20
Zinc	100	56.0	151	148	95	92	1	75-125			2	20

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc



Method Blank (MB)

(MB) 09/25/15 09:36

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Benzene	ND		0.000500
Toluene	ND		0.00500
Ethylbenzene	ND		0.000500
Total Xylene	ND		0.00150
TPH (GC/FID) Low Fraction	ND		0.100
(S) a,a,a-Trifluorotoluene(FID)	99.8		59.0-128
(S) a,a,a-Trifluorotoluene(PID)	107		54.0-144

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) 09/25/15 07:45 • (LCSD) 09/25/15 08:07

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 %
Benzene	0.0500	0.0424	0.0419	84.7	83.8	70.0-130			1.09	20
Toluene	0.0500	0.0455	0.0434	91.1	86.9	70.0-130			4.72	20
Ethylbenzene	0.0500	0.0464	0.0446	92.7	89.1	70.0-130			3.96	20
Total Xylene	0.150	0.141	0.135	93.9	89.7	70.0-130			4.58	20
(S) a,a,a-Trifluorotoluene(PID)				105	105	54.0-144				

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

(LCS) 09/25/15 08:30 • (LCSD) 09/25/15 08:52

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	5.85	5.69	106	103	63.5-137			2.90	20
(S) a,a,a-Trifluorotoluene(FID)				99.6	99.6	59.0-128				

L790701-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/25/15 16:11 • (MS) 09/25/15 13:58 • (MSD) 09/25/15 14:20

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 %
Benzene	0.0500	0.214	0.229	0.202	6.11	0.000	5	49.7-127	J6	J6	12.5	23.5
Toluene	0.0500	0.696	0.384	0.423	0.000	0.000	5	49.8-132	J6	J6	9.87	23.5
Ethylbenzene	0.0500	0.172	0.221	0.184	19.9	4.91	5	40.8-141	J6	J6	18.5	23.8



L790701-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/25/15 16:11 • (MS) 09/25/15 13:58 • (MSD) 09/25/15 14:20

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 %
Total Xylene	0.150	1.60	1.07	1.13	0.000	0.000	5	41.2-140	J6	J6	4.81	23.7
(S) a,a,a-Trifluorotoluene(PID)					100	98.1		54.0-144				

L790701-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/25/15 16:11 • (MS) 09/25/15 14:42 • (MSD) 09/25/15 15:05

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	49.6	95.7	29.5	168	0.000	5	28.5-138	J5	J3 J6	106	23.6
(S) a,a,a-Trifluorotoluene(FID)					93.7	84.7		59.0-128				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc





Method Blank (MB)

(MB) 09/26/15 13:02

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Benzene	ND		0.000500
Toluene	ND		0.00500
Ethylbenzene	ND		0.000500
Total Xylene	ND		0.00150
TPH (GC/FID) Low Fraction	ND		0.100
(S) a,a,a-Trifluorotoluene(FID)	87.4		59.0-128
(S) a,a,a-Trifluorotoluene(PID)	97.9		54.0-144

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

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

(LCS) 09/26/15 11:12 • (LCSD) 09/26/15 11:34

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 %
Benzene	0.0500	0.0466	0.0511	93.2	102	70.0-130			9.19	20
Toluene	0.0500	0.0479	0.0522	95.7	104	70.0-130			8.66	20
Ethylbenzene	0.0500	0.0490	0.0540	98.0	108	70.0-130			9.82	20
Total Xylene	0.150	0.148	0.163	98.4	109	70.0-130			9.96	20
(S) a,a,a-Trifluorotoluene(PID)				97.6	97.4	54.0-144				

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

(LCS) 09/26/15 11:56 • (LCSD) 09/26/15 12:18

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	5.95	6.32	108	115	63.5-137			5.98	20
(S) a,a,a-Trifluorotoluene(FID)				96.6	99.1	59.0-128				

L790713-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/26/15 15:49 • (MS) 09/26/15 13:59 • (MSD) 09/26/15 14:21

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	0.000442	0.172	0.166	68.8	66.4	5	49.7-127			3.52	23.5
Toluene	0.0500	0.00174	0.176	0.169	69.6	66.9	5	49.8-132			3.92	23.5
Ethylbenzene	0.0500	0.000757	0.179	0.172	71.4	68.6	5	40.8-141			3.88	23.8



L790713-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/26/15 15:49 • (MS) 09/26/15 13:59 • (MSD) 09/26/15 14:21

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 %
Total Xylene	0.150	0.00354	0.538	0.519	71.3	68.8	5	41.2-140			3.58	23.7
(S) a,a,a-Trifluorotoluene(PID)					94.4	96.5		54.0-144				

L790713-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/26/15 15:49 • (MS) 09/26/15 14:43 • (MSD) 09/26/15 15:05

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	22.4	24.7	81.5	89.7	5	28.5-138			9.51	23.6
(S) a,a,a-Trifluorotoluene(FID)					95.2	93.8		59.0-128				

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc



Method Blank (MB)

(MB) 09/26/15 10:43

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
TPH (GC/FID) High Fraction	ND		4.00
(S) o-Terphenyl	88.6		50.0-150

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

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

(LCS) 09/26/15 10:55 • (LCSD) 09/26/15 11:06

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	59.2	50.3	98.7	83.8	50.0-150			16.4	20
(S) o-Terphenyl				101	90.6	50.0-150				

Method Blank (MB)

(MB) 09/28/15 07:55

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Anthracene	ND		0.00600
Acenaphthene	ND		0.00600
Acenaphthylene	ND		0.00600
Benzo(a)anthracene	ND		0.00600
Benzo(a)pyrene	ND		0.00600
Benzo(b)fluoranthene	ND		0.00600
Benzo(g,h,i)perylene	ND		0.00600
Benzo(k)fluoranthene	ND		0.00600
Chrysene	ND		0.00600
Dibenz(a,h)anthracene	ND		0.00600
Fluoranthene	ND		0.00600
Fluorene	ND		0.00600
Indeno(1,2,3-cd)pyrene	ND		0.00600
Naphthalene	ND		0.0200
Phenanthrene	ND		0.00600
Pyrene	ND		0.00600
1-Methylnaphthalene	ND		0.0200
2-Methylnaphthalene	ND		0.0200
2-Chloronaphthalene	ND		0.0200
(S) p-Terphenyl-d14	78.3		32.2-131
(S) Nitrobenzene-d5	103		22.1-146
(S) 2-Fluorobiphenyl	90.4		40.6-122

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) 09/28/15 07:13 • (LCSD) 09/28/15 07:34

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 %
Anthracene	0.0800	0.0763	0.0708	95.4	88.5	50.3-130			7.52	20
Acenaphthene	0.0800	0.0748	0.0723	93.5	90.4	52.4-120			3.39	20
Acenaphthylene	0.0800	0.0776	0.0750	97.0	93.7	49.6-120			3.45	20
Benzo(a)anthracene	0.0800	0.0738	0.0706	92.3	88.3	46.7-125			4.43	20
Benzo(a)pyrene	0.0800	0.0757	0.0732	94.7	91.5	42.3-119			3.41	20
Benzo(b)fluoranthene	0.0800	0.0753	0.0741	94.1	92.6	43.6-124			1.61	20
Benzo(g,h,i)perylene	0.0800	0.0764	0.0738	95.5	92.3	45.1-132			3.40	20
Benzo(k)fluoranthene	0.0800	0.0789	0.0731	98.6	91.3	46.1-131			7.62	20

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

(LCS) 09/28/15 07:13 • (LCSD) 09/28/15 07:34

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 %
Chrysene	0.0800	0.0767	0.0724	95.9	90.5	49.5-131			5.85	20
Dibenz(a,h)anthracene	0.0800	0.0852	0.0816	107	102	44.8-133			4.39	20
Fluoranthene	0.0800	0.0805	0.0770	101	96.2	49.3-128			4.47	20
Fluorene	0.0800	0.0763	0.0733	95.4	91.7	50.6-121			4.01	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0811	0.0790	101	98.8	46.1-135			2.65	20
Naphthalene	0.0800	0.0734	0.0711	91.7	88.8	49.6-115			3.21	20
Phenanthrene	0.0800	0.0675	0.0636	84.4	79.6	48.8-121			5.91	20
Pyrene	0.0800	0.0663	0.0628	82.8	78.6	44.7-130			5.31	20
1-Methylnaphthalene	0.0800	0.0799	0.0771	99.9	96.4	50.6-122			3.52	20
2-Methylnaphthalene	0.0800	0.0810	0.0779	101	97.4	50.4-120			3.93	20
2-Chloronaphthalene	0.0800	0.0723	0.0699	90.4	87.4	53.9-121			3.41	20
(S) p-Terphenyl-d14				82.7	75.3	32.2-131				
(S) Nitrobenzene-d5				112	105	22.1-146				
(S) 2-Fluorobiphenyl				94.5	87.7	40.6-122				

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

L790722-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/28/15 08:58 • (MS) 09/28/15 09:20 • (MSD) 09/28/15 09:41

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 %
Anthracene	0.0800	ND	0.0625	0.0687	78.1	85.9	1	26.5-141			9.46	21.2
Acenaphthene	0.0800	ND	0.0657	0.0704	82.1	87.9	1	31.9-130			6.89	20
Acenaphthylene	0.0800	ND	0.0679	0.0728	84.8	90.9	1	33.7-129			6.96	20
Benzo(a)anthracene	0.0800	0.00138	0.0599	0.0643	73.1	78.7	1	18.3-136			7.17	24.6
Benzo(a)pyrene	0.0800	0.00149	0.0617	0.0677	75.2	82.7	1	16.9-135			9.25	25.2
Benzo(b)fluoranthene	0.0800	0.00231	0.0568	0.0663	68.2	80.0	1	10.0-134			15.4	30.9
Benzo(g,h,i)perylene	0.0800	0.00137	0.0590	0.0647	72.0	79.2	1	14.1-140			9.30	25.5
Benzo(k)fluoranthene	0.0800	ND	0.0627	0.0644	78.4	80.5	1	18.2-138			2.71	25.6
Chrysene	0.0800	0.00142	0.0602	0.0657	73.5	80.3	1	17.1-145			8.73	24.2
Dibenz(a,h)anthracene	0.0800	ND	0.0660	0.0726	82.5	90.7	1	18.5-138			9.55	24.3
Fluoranthene	0.0800	0.00387	0.0681	0.0739	80.3	87.5	1	15.4-144			8.06	27.1
Fluorene	0.0800	ND	0.0652	0.0699	81.5	87.3	1	23.5-136			6.92	20
Indeno(1,2,3-cd)pyrene	0.0800	0.00108	0.0628	0.0693	77.1	85.2	1	14.5-142			9.86	25.8
Naphthalene	0.0800	ND	0.0650	0.0701	81.3	87.6	1	29.2-128			7.46	20
Phenanthrene	0.0800	0.00164	0.0565	0.0619	68.6	75.4	1	20.1-134			9.08	23.6
Pyrene	0.0800	0.00275	0.0550	0.0584	65.3	69.5	1	11.0-148			5.95	26.1

L790722-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/28/15 08:58 • (MS) 09/28/15 09:20 • (MSD) 09/28/15 09:41

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 %
1-Methylnaphthalene	0.0800	ND	0.0696	0.0748	87.0	93.6	1	28.4-137			7.29	20
2-Methylnaphthalene	0.0800	ND	0.0703	0.0760	87.8	95.0	1	26.6-137			7.84	20
2-Chloronaphthalene	0.0800	ND	0.0635	0.0680	79.4	85.0	1	38.6-126			6.85	20
(S) p-Terphenyl-d14					63.3	69.4		32.2-131				
(S) Nitrobenzene-d5					97.4	108		22.1-146				
(S) 2-Fluorobiphenyl					79.4	83.1		40.6-122				

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc



## Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
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.
(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.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
J3	The associated batch QC was outside the established quality control range for precision.
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.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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**.

## 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
Connecticut	PH-0197	North Carolina <sup>1</sup>	DW21704
Florida	E87487	North Carolina <sup>2</sup>	41
Georgia	NELAP	North Dakota	R-140
Georgia <sup>1</sup>	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 <sup>1</sup>	90010	South Dakota	n/a
Kentucky <sup>2</sup>	16	Tennessee <sup>14</sup>	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas <sup>5</sup>	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		

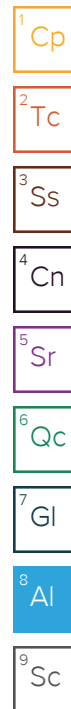
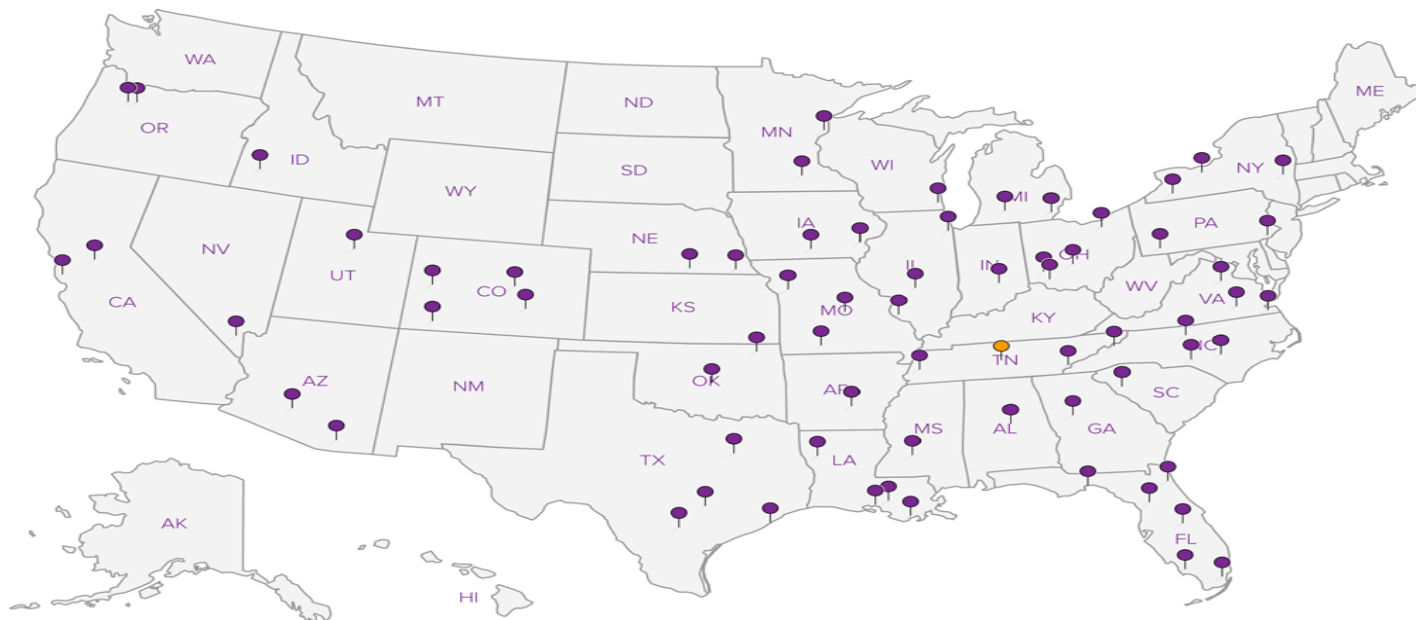
<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>n/a</sup> Accreditation not applicable

## Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
Canada	1461.01	DOD	1461.01
EPA–Crypto	TN00003	USDA	S-67674

## 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.**





<b>Billing Information:</b> <b>Apex Companies, LLC</b> 3821 Beech Street Laramie, WY 80202  ATTN: Carrie Zhang						<b>Analysis / Container / Preservative</b>									<b>Chain of Custody Page 1 of 1</b> <b>ESC</b> LAB SCIENCE S YOUR LAB OF CHOICE 12065 Lebanon Rd. Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859 	
<b>Report to:</b> <b>Jana Nilsen</b>						<b>Email To:</b> jana.nilsen@apexc.com										
<b>Project Description:</b> Extraction O&G Skaer #3 Separator						<b>City/State Collected:</b> Larimer Co, CO										
<b>Phone:</b> 307-399-2870			<b>Client Project #</b> 744.1508.01, CODJ931			<b>Fax:</b>			<b>Lab Project #</b>							
<b>Collected by (print):</b> John Hickey			<b>Site/Facility ID #</b> Skaer #3 Separator			<b>P.O. #</b>										
<b>Collected by (signature):</b> 			<b>Rush? (Lab MUST Be Notified)</b> Same Day .....200% Next Day .....100% <input checked="" type="checkbox"/> Two Day .....50% Three Day .....25%			<b>Date Results Needed</b>			<b>No. of Cntrs</b>							
<b>Immediately Packed on Ice</b> <input checked="" type="checkbox"/> <input type="checkbox"/>			<b>Email?</b> <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes			<b>FAX?</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes										
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs										
Skaer3_Separator_Bottom	Grab	SS	4.5'	09/23/15	1350	5	X									
Skaer3_Separator_N_SW	Grab	SS	3'	09/23/15	1330	5	X									
Skaer3_Separator_S_SW	Grab	SS	3'	09/23/15	1345	5	X									
Skaer3_Separator_E_SW	Grab	SS	3'	09/23/15	1340	5	X									
Skaer3_Separator_W_SW	Grab	SS	3'	09/23/15	1335	5	X									
COGCC Table 910-1																
ACCTnum: Template: Prelogin: TSR: PB: Shipped Via: Rem./Contaminant      Sample # (lab only) -OH OZ OB OV OS																
<p>* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____</p> <p>pH NA Temp NA Flow NA Other _____ Hold # _____ Condition: (lab use only) TOH</p> <p>Remarks: ESC Quote APEXGJC00901155 543555154341</p> <div style="display: flex;"> <div style="flex: 1;"> <p>Relinquished by: (Signature) </p> <p>Date: 9-23-15 Time: 1630</p> <p>Received by: (Signature) </p> <p>Date: 9-24-15 Time: FIBO</p> <p>Received for lab by: (Signature) </p> </div> <div style="flex: 1;"> <p>Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____</p> <p>Temp: 2.4°C Bottles Received: 25-Hoz</p> <p>Date: 9/25/15 Time: 0900</p> <p>COC Seal Intact: Y N NA pH Checked: NCF:</p> </div> </div>																

## Apex Companies, LLC-Grand Junction, CO

Sample Delivery Group: L794811  
Samples Received: 10/16/2015  
Project Number: 744.1508.01 CODJ931  
Description: Extraction O&G Skaer 3 Seperator  
Site: SKAER 3 SEPERATOR  
Report To: Jana Nilsen  
743 Horizon Court  
Suite 110  
Grand Junction, CO 81506

Entire Report Reviewed By:



Darren Reeder  
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.



<b><sup>1</sup>Cp: Cover Page</b>	<b>1</b>
<b><sup>2</sup>Tc: Table of Contents</b>	<b>2</b>
<b><sup>3</sup>Ss: Sample Summary</b>	<b>3</b>
<b><sup>4</sup>Cn: Case Narrative</b>	<b>4</b>
<b><sup>5</sup>Sr: Sample Results</b>	<b>5</b>
SKAER3_SEPERATOR_N_SWEEP 6 FT L794811-01	5
SKAER3_SEPERATOR_BOTTOM 17 FT L794811-02	6
<b><sup>6</sup>Qc: Quality Control Summary</b>	<b>7</b>
Volatile Organic Compounds (GC) by Method 8015D/GRO	7
Volatile Organic Compounds (GC/MS) by Method 8260B	8
Semi-Volatile Organic Compounds (GC) by Method 3546/DRO	9
<b><sup>7</sup>Gl: Glossary of Terms</b>	<b>10</b>
<b><sup>8</sup>Al: Accreditations &amp; Locations</b>	<b>11</b>
<b><sup>9</sup>Sc: Chain of Custody</b>	<b>12</b>



## SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



## SKAER3\_SEPERATOR\_N\_SWEEP 6 FT L794811-01 Solid

Collected by  
David PuchileCollected date/time  
10/15/15 14:00Received date/time  
10/16/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi-Volatile Organic Compounds (GC) by Method 3546/DRO	WG822493	1	10/16/15 11:36	10/16/15 15:11	CLG
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG822485	5	10/16/15 11:21	10/16/15 14:20	SWG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG821820	5	10/16/15 11:18	10/16/15 12:38	KLO

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

## SKAER3\_SEPERATOR\_BOTTOM 17 FT L794811-02 Solid

Collected by  
David PuchileCollected date/time  
10/15/15 14:20Received date/time  
10/16/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi-Volatile Organic Compounds (GC) by Method 3546/DRO	WG822493	1	10/16/15 11:36	10/16/15 15:23	CLG
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG822485	5	10/16/15 11:21	10/16/15 14:40	SWG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG821820	5	10/16/15 11:18	10/16/15 12:56	KLO

ACCOUNT:

Apex Companies, LLC-Grand Junction, CO

PROJECT:

744.1508.01 CODJ931

SDG:

L794811

DATE/TIME:

10/16/15 16:27

PAGE:

3 of 12



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 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.

Darren Reeder  
Technical Service Representative

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	4.42		0.500	5	10/16/2015 14:20	<a href="#">WG822485</a>
(S) a,a,a-Trifluorotoluene(FID)	97.2		59.0-128		10/16/2015 14:20	<a href="#">WG822485</a>

1 Cp

2 Tc

3 Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00500	5	10/16/2015 12:38	<a href="#">WG821820</a>
Toluene	ND		0.0250	5	10/16/2015 12:38	<a href="#">WG821820</a>
Ethylbenzene	ND		0.00500	5	10/16/2015 12:38	<a href="#">WG821820</a>
Total Xylenes	ND		0.0150	5	10/16/2015 12:38	<a href="#">WG821820</a>
(S) Toluene-d8	103		88.7-115		10/16/2015 12:38	<a href="#">WG821820</a>
(S) Dibromofluoromethane	102		76.3-123		10/16/2015 12:38	<a href="#">WG821820</a>
(S) a,a,a-Trifluorotoluene	105		87.2-117		10/16/2015 12:38	<a href="#">WG821820</a>
(S) 4-Bromofluorobenzene	111		69.7-129		10/16/2015 12:38	<a href="#">WG821820</a>

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

## Semi-Volatile Organic Compounds (GC) by Method 3546/DRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	254		4.00	1	10/16/2015 15:11	<a href="#">WG822493</a>
(S) o-Terphenyl	89.5		50.0-150		10/16/2015 15:11	<a href="#">WG822493</a>

9 Sc



## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	1.75		0.500	5	10/16/2015 14:40	<a href="#">WG822485</a>
(S) a,a,a-Trifluorotoluene(FID)	96.7		59.0-128		10/16/2015 14:40	<a href="#">WG822485</a>

1  
Cp2  
Tc3  
Ss

## Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00500	5	10/16/2015 12:56	<a href="#">WG821820</a>
Toluene	ND		0.0250	5	10/16/2015 12:56	<a href="#">WG821820</a>
Ethylbenzene	ND		0.00500	5	10/16/2015 12:56	<a href="#">WG821820</a>
Total Xylenes	ND		0.0150	5	10/16/2015 12:56	<a href="#">WG821820</a>
(S) Toluene-d8	101		88.7-115		10/16/2015 12:56	<a href="#">WG821820</a>
(S) Dibromofluoromethane	100		76.3-123		10/16/2015 12:56	<a href="#">WG821820</a>
(S) a,a,a-Trifluorotoluene	104		87.2-117		10/16/2015 12:56	<a href="#">WG821820</a>
(S) 4-Bromofluorobenzene	110		69.7-129		10/16/2015 12:56	<a href="#">WG821820</a>

4  
Cn5  
Sr6  
Qc7  
Gl8  
Al

## Semi-Volatile Organic Compounds (GC) by Method 3546/DRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	135		4.00	1	10/16/2015 15:23	<a href="#">WG822493</a>
(S) o-Terphenyl	74.0		50.0-150		10/16/2015 15:23	<a href="#">WG822493</a>

9  
Sc



Method Blank (MB)

(MB) 10/16/15 13:58

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
TPH (GC/FID) Low Fraction	ND		0.100
(S) a,a,a-Trifluorotoluene(FID)	98.5		59.0-128

1  
Cp

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Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc

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

(LCS) 10/16/15 12:41 • (LCSD) 10/16/15 13:02

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	5.81	5.79	106	105	63.5-137			0.370	20
(S) a,a,a-Trifluorotoluene(FID)				99.7	99.5	59.0-128				





Method Blank (MB)

(MB) 10/16/15 12:20

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Benzene	ND		0.00100
Ethylbenzene	ND		0.00100
Toluene	ND		0.00500
Xylenes, Total	ND		0.00300
(S) Toluene-d8	99.4		88.7-115
(S) Dibromofluoromethane	99.0		76.3-123
(S) a,a,a-Trifluorotoluene	105		87.2-117
(S) 4-Bromofluorobenzene	92.2		69.7-129

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) 10/16/15 11:09 • (LCSD) 10/16/15 11:27

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	0.0250	0.0252	0.0252	101	101	72.6-120			0.000	20
Ethylbenzene	0.0250	0.0259	0.0253	103	101	78.6-124			2.34	20
Toluene	0.0250	0.0243	0.0243	97.1	97.3	76.7-116			0.190	20
Xylenes, Total	0.0750	0.0775	0.0766	103	102	78.1-123			1.18	20
(S) Toluene-d8				100	101	88.7-115				
(S) Dibromofluoromethane				97.3	96.6	76.3-123				
(S) a,a,a-Trifluorotoluene				102	103	87.2-117				
(S) 4-Bromofluorobenzene				96.6	94.9	69.7-129				

Method Blank (MB)

(MB) 10/16/15 13:59

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
TPH (GC/FID) High Fraction	ND		4.00
(S) o-Terphenyl	89.7		50.0-150

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) 10/16/15 14:11 • (LCSD) 10/16/15 14:23

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	53.9	50.1	89.8	83.5	50.0-150			7.20	20
(S) o-Terphenyl				99.7	91.8	50.0-150				

L794817-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/16/15 14:35 • (MS) 10/16/15 14:47 • (MSD) 10/16/15 14:59

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) High Fraction	60.0	16.4	65.8	72.6	82.4	93.6	1	50.0-150			9.71	20
(S) o-Terphenyl					91.2	102		50.0-150				



## Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
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.
(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.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
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The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

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



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## 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
Connecticut	PH-0197	North Carolina <sup>1</sup>	DW21704
Florida	E87487	North Carolina <sup>2</sup>	41
Georgia	NELAP	North Dakota	R-140
Georgia <sup>1</sup>	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 <sup>1</sup>	90010	South Dakota	n/a
Kentucky <sup>2</sup>	16	Tennessee <sup>14</sup>	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas <sup>5</sup>	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		

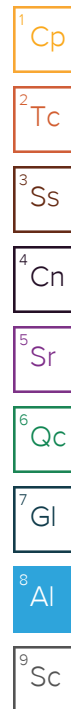
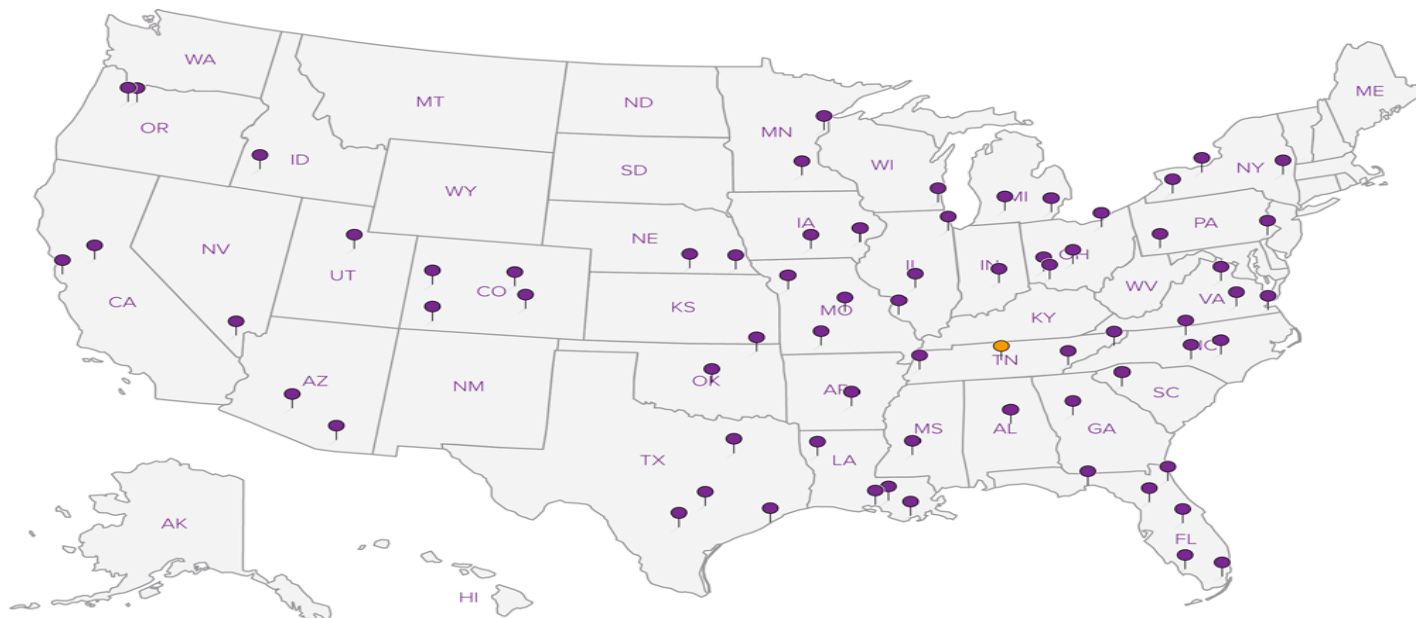
<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>n/a</sup> Accreditation not applicable

## Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
Canada	1461.01	DOD	1461.01
EPA–Crypto	TN00003	USDA	S-67674

## Our Locations

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## Apex Companies, LLC-Grand Junction, CO

Sample Delivery Group: L795113  
Samples Received: 10/17/2015  
Project Number: 744.1508.01, CODJ931  
Description: Extraction O&G Skaer #3 Separator  
Site: SKAER #3 SEPARATOR  
Report To: Jana Nilsen  
743 Horizon Court  
Suite 110  
Grand Junction, CO 81506

Entire Report Reviewed By:



Jason Romer  
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.



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## SKAER3\_SEPARATOR\_S\_SW L795113-01 Solid

Collected by  
John HickeyCollected date/time  
10/16/15 10:29Received date/time  
10/17/15 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi-Volatile Organic Compounds (GC) by Method 3546/DRO	WG822739	1	10/18/15 19:45	10/19/15 15:46	CLG
Volatile Organic Compounds (GC) by Method 8015/8021	WG822044	5	10/17/15 19:45	10/18/15 13:01	SWG

<sup>1</sup>Cp<sup>2</sup>Tc<sup>3</sup>Ss

## SKAER3\_SEPARATOR\_E\_SW L795113-02 Solid

Collected by  
John HickeyCollected date/time  
10/16/15 14:29Received date/time  
10/17/15 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi-Volatile Organic Compounds (GC) by Method 3546/DRO	WG822739	1	10/18/15 19:45	10/19/15 16:08	CLG
Volatile Organic Compounds (GC) by Method 8015/8021	WG822859	5	10/19/15 03:00	10/19/15 12:29	SWG

<sup>4</sup>Cn<sup>5</sup>Sr<sup>6</sup>Qc<sup>7</sup>Gl<sup>8</sup>Al<sup>9</sup>Sc





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 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.

Jason Romer  
Technical Service Representative

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



## Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00250	5	10/18/2015 13:01	<a href="#">WG822044</a>
Toluene	ND		0.0250	5	10/18/2015 13:01	<a href="#">WG822044</a>
Ethylbenzene	ND		0.00250	5	10/18/2015 13:01	<a href="#">WG822044</a>
Total Xylene	ND		0.00750	5	10/18/2015 13:01	<a href="#">WG822044</a>
TPH (GC/FID) Low Fraction	ND		0.500	5	10/18/2015 13:01	<a href="#">WG822044</a>
(S) a,a,a-Trifluorotoluene(FID)	101		59.0-128		10/18/2015 13:01	<a href="#">WG822044</a>
(S) a,a,a-Trifluorotoluene(PID)	94.0		54.0-144		10/18/2015 13:01	<a href="#">WG822044</a>

## Semi-Volatile Organic Compounds (GC) by Method 3546/DRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	5.37		4.00	1	10/19/2015 15:46	<a href="#">WG822739</a>
(S) o-Terphenyl	83.2		50.0-150		10/19/2015 15:46	<a href="#">WG822739</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



## Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00250	5	10/19/2015 12:29	<a href="#">WG822859</a>
Toluene	ND		0.0250	5	10/19/2015 12:29	<a href="#">WG822859</a>
Ethylbenzene	ND		0.00250	5	10/19/2015 12:29	<a href="#">WG822859</a>
Total Xylene	ND		0.00750	5	10/19/2015 12:29	<a href="#">WG822859</a>
TPH (GC/FID) Low Fraction	ND		0.500	5	10/19/2015 12:29	<a href="#">WG822859</a>
(S) a,a,a-Trifluorotoluene(FID)	101		59.0-128		10/19/2015 12:29	<a href="#">WG822859</a>
(S) a,a,a-Trifluorotoluene(PID)	94.8		54.0-144		10/19/2015 12:29	<a href="#">WG822859</a>

## Semi-Volatile Organic Compounds (GC) by Method 3546/DRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	7.07		4.00	1	10/19/2015 16:08	<a href="#">WG822739</a>
(S) o-Terphenyl	68.4		50.0-150		10/19/2015 16:08	<a href="#">WG822739</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) 10/17/15 18:28

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Benzene	ND		0.000500
Toluene	ND		0.00500
Ethylbenzene	ND		0.000500
Total Xylene	ND		0.00150
TPH (GC/FID) Low Fraction	ND		0.100
(S) a,a,a-Trifluorotoluene(FID)	105		59.0-128
(S) a,a,a-Trifluorotoluene(PID)	97.5		54.0-144

1Cp

2Tc

3Ss

4Cn

5Sr

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

(LCS) 10/17/15 15:04 • (LCSD) 10/17/15 15:25

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	0.0500	0.0493	100	98.6	70.0-130			1.51	20
Toluene	0.0500	0.0491	0.0483	98.2	96.6	70.0-130			1.72	20
Ethylbenzene	0.0500	0.0497	0.0491	99.4	98.2	70.0-130			1.26	20
Total Xylene	0.150	0.152	0.149	101	99.0	70.0-130			2.16	20
(S) a,a,a-Trifluorotoluene(FID)				103	105	59.0-128				
(S) a,a,a-Trifluorotoluene(PID)				104	107	54.0-144				

6Qc

7Gl

8Al

9Sc

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

(LCS) 10/17/15 15:47 • (LCSD) 10/17/15 16:08

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	5.41	5.16	98.4	93.7	63.5-137			4.83	20
(S) a,a,a-Trifluorotoluene(FID)				102	102	59.0-128				
(S) a,a,a-Trifluorotoluene(PID)				111	111	54.0-144				

L794313-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/17/15 22:24 • (MS) 10/17/15 22:45 • (MSD) 10/17/15 23:06

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	0.229	0.235	91.5	93.9	5	49.7-127			2.53	23.5



L794313-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/17/15 22:24 • (MS) 10/17/15 22:45 • (MSD) 10/17/15 23:06

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 %
Toluene	0.0500	0.000591	0.220	0.223	87.9	88.9	5	49.8-132			1.10	23.5
Ethylbenzene	0.0500	ND	0.212	0.215	84.8	86.0	5	40.8-141			1.44	23.8
Total Xylene	0.150	0.00668	0.664	0.675	87.7	89.1	5	41.2-140			1.57	23.7
(S) a,a,a-Trifluorotoluene(FID)					104	105		59.0-128				
(S) a,a,a-Trifluorotoluene(PID)					104	104		54.0-144				

L794313-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/17/15 22:24 • (MS) 10/17/15 23:27 • (MSD) 10/17/15 23:49

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	0.495	21.1	21.4	74.9	75.9	5	28.5-138			1.17	23.6
(S) a,a,a-Trifluorotoluene(FID)					99.5	99.6		59.0-128				
(S) a,a,a-Trifluorotoluene(PID)					108	109		54.0-144				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) 10/19/15 10:44

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Benzene	ND		0.000500
Toluene	ND		0.00500
Ethylbenzene	ND		0.000500
Total Xylene	ND		0.00150
TPH (GC/FID) Low Fraction	ND		0.100
(S) a,a,a-Trifluorotoluene(FID)	102		59.0-128
(S) a,a,a-Trifluorotoluene(PID)	95.2		54.0-144

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

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

(LCS) 10/19/15 08:57 • (LCSD) 10/19/15 09:18

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	0.0477	0.0488	95.4	97.6	70.0-130			2.22	20
Toluene	0.0500	0.0472	0.0478	94.4	95.7	70.0-130			1.27	20
Ethylbenzene	0.0500	0.0481	0.0490	96.1	98.0	70.0-130			1.92	20
Total Xylene	0.150	0.146	0.149	97.3	99.2	70.0-130			1.86	20
(S) a,a,a-Trifluorotoluene(PID)				107	104	54.0-144				

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

(LCS) 10/19/15 09:40 • (LCSD) 10/19/15 10:01

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	5.55	5.88	101	107	63.5-137			5.82	20
(S) a,a,a-Trifluorotoluene(FID)				108	107	59.0-128				



Method Blank (MB)

(MB) 10/19/15 14:11

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
TPH (GC/FID) High Fraction	ND		4.00
(S) o-Terphenyl	75.2		50.0-150

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) 10/19/15 14:22 • (LCSD) 10/19/15 14:33

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	44.8	44.7	74.6	74.5	50.0-150			0.170	20
(S) o-Terphenyl				79.7	81.0	50.0-150				



## Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
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.
(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.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
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The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

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





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Alaska	UST-080	New Hampshire	2975
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Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina <sup>1</sup>	DW21704
Florida	E87487	North Carolina <sup>2</sup>	41
Georgia	NELAP	North Dakota	R-140
Georgia <sup>1</sup>	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 <sup>1</sup>	90010	South Dakota	n/a
Kentucky <sup>2</sup>	16	Tennessee <sup>14</sup>	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas <sup>5</sup>	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		

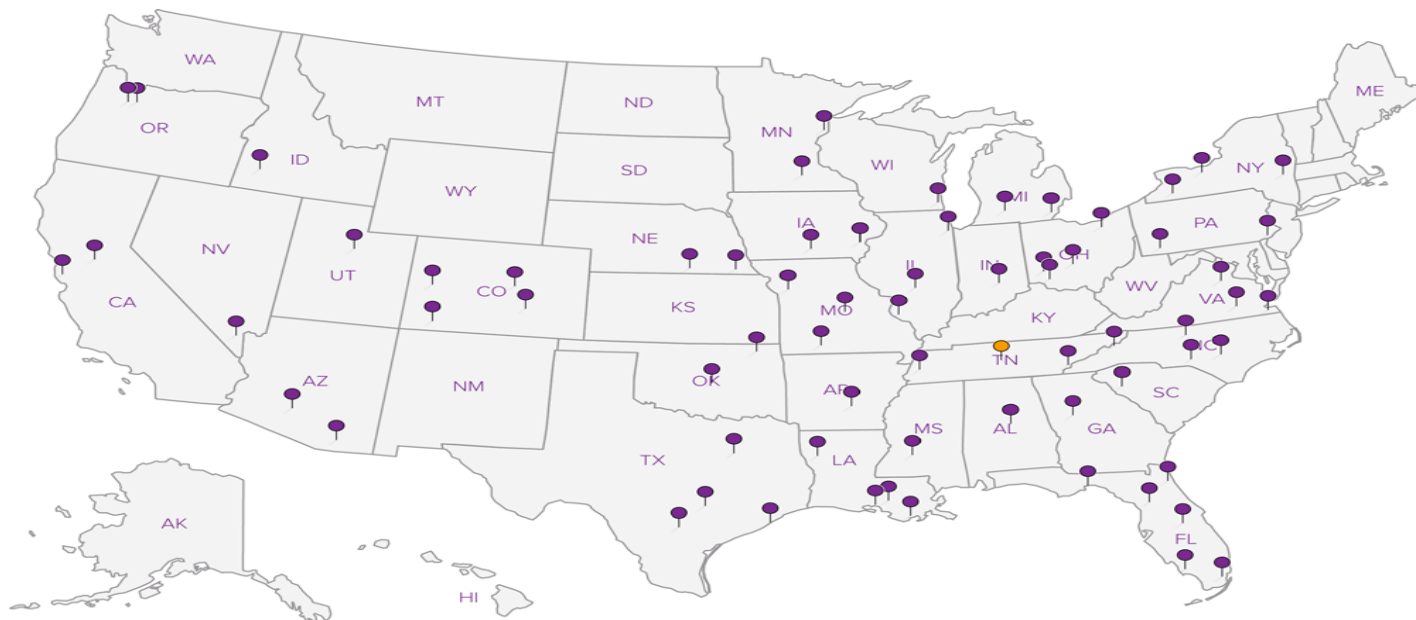
<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>n/a</sup> Accreditation not applicable

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Canada	1461.01	DOD	1461.01
EPA–Crypto	TN00003	USDA	S-67674

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## Apex Companies, LLC-Grand Junction, CO

Sample Delivery Group: L795660  
Samples Received: 10/21/2015  
Project Number: 744.1508.01 CODJ931  
Description: Extraction O&G Skaer #3 Separator  
Site: SKAER #3 SEPARATOR  
Report To: Jana Nilsen  
743 Horizon Court  
Suite 110  
Grand Junction, CO 81506

Entire Report Reviewed By:



Darren Reeder

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.



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<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

SKAER 3/SEPARATOR-W-SW 8FT L795660-01 Solid

Collected by  
John Hickey

Collected date/time  
10/19/15 11:58

Received date/time  
10/21/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi-Volatile Organic Compounds (GC) by Method 3546/DRO	WG823565	1	10/21/15 17:15	10/22/15 00:01	CLG
Volatile Organic Compounds (GC) by Method 8015/8021	WG823607	5	10/21/15 15:37	10/22/15 12:18	SWG

1

Cp

2

Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc



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 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.

Darren Reeder  
Technical Service Representative

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



## Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00250	5	10/22/2015 12:18	<a href="#">WG823607</a>
Toluene	ND		0.0250	5	10/22/2015 12:18	<a href="#">WG823607</a>
Ethylbenzene	ND		0.00250	5	10/22/2015 12:18	<a href="#">WG823607</a>
Total Xylene	0.0108		0.00750	5	10/22/2015 12:18	<a href="#">WG823607</a>
TPH (GC/FID) Low Fraction	2.14		0.500	5	10/22/2015 12:18	<a href="#">WG823607</a>
(S) a,a,a-Trifluorotoluene(FID)	99.5		59.0-128		10/22/2015 12:18	<a href="#">WG823607</a>
(S) a,a,a-Trifluorotoluene(PID)	106		54.0-144		10/22/2015 12:18	<a href="#">WG823607</a>

## Semi-Volatile Organic Compounds (GC) by Method 3546/DRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	292		4.00	1	10/22/2015 00:01	<a href="#">WG823565</a>
(S) o-Terphenyl	96.0		50.0-150		10/22/2015 00:01	<a href="#">WG823565</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) 10/22/15 01:44

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Benzene	ND		0.000500
Toluene	ND		0.00500
Ethylbenzene	ND		0.000500
Total Xylene	ND		0.00150
TPH (GC/FID) Low Fraction	ND		0.100
(S) a,a,a-Trifluorotoluene(FID)	101		59.0-128
(S) a,a,a-Trifluorotoluene(PID)	107		54.0-144

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

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

(LCS) 10/21/15 23:31 • (LCSD) 10/21/15 23:57

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	0.0503	0.0501	101	100	70.0-130			0.400	20
Toluene	0.0500	0.0469	0.0465	93.8	93.0	70.0-130			0.820	20
Ethylbenzene	0.0500	0.0494	0.0494	98.8	98.8	70.0-130			0.0500	20
Total Xylene	0.150	0.149	0.148	99.1	98.6	70.0-130			0.520	20
(S) a,a,a-Trifluorotoluene(PID)				106	106	54.0-144				

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

(LCS) 10/22/15 00:22 • (LCSD) 10/22/15 00:54

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	5.84	5.93	106	108	63.5-137			1.50	20
(S) a,a,a-Trifluorotoluene(FID)				110	110	59.0-128				

L795213-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/22/15 04:15 • (MS) 10/22/15 02:09 • (MSD) 10/22/15 02:34

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	0.0570	20.9	21.8	75.8	78.9	5	28.5-138			4.01	23.6
(S) a,a,a-Trifluorotoluene(FID)					106	106		59.0-128				





L795213-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/22/15 04:15 • (MS) 10/22/15 02:59 • (MSD) 10/22/15 03:25

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Benzene	0.0500	ND	0.229	0.227	91.5	90.7	5	49.7-127			0.870	23.5
Toluene	0.0500	ND	0.213	0.207	85.1	82.8	5	49.8-132			2.75	23.5
Ethylbenzene	0.0500	ND	0.215	0.212	86.1	84.6	5	40.8-141			1.72	23.8
Total Xylene	0.150	ND	0.651	0.640	86.8	85.4	5	41.2-140			1.62	23.7
(S) o,a,a-Trifluorotoluene(PID)					105	105		54.0-144				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) 10/21/15 23:29

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
TPH (GC/FID) High Fraction	ND		4.00
(S) o-Terphenyl	70.4		50.0-150

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

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

(LCS) 10/21/15 23:40 • (LCSD) 10/21/15 23:50

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	40.0	75.6	66.7	50.0-150			12.5	20
(S) o-Terphenyl				76.7	70.2	50.0-150				

L795276-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/22/15 02:27 • (MS) 10/22/15 02:38 • (MSD) 10/22/15 02:49

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) High Fraction	60.0	1.10	43.0	46.4	69.9	75.6	1	50.0-150			7.59	20
(S) o-Terphenyl					71.4	79.5		50.0-150				



## Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
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.
(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.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
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The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

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



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**.

## 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
Connecticut	PH-0197	North Carolina <sup>1</sup>	DW21704
Florida	E87487	North Carolina <sup>2</sup>	41
Georgia	NELAP	North Dakota	R-140
Georgia <sup>1</sup>	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 <sup>1</sup>	90010	South Dakota	n/a
Kentucky <sup>2</sup>	16	Tennessee <sup>14</sup>	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas <sup>5</sup>	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		

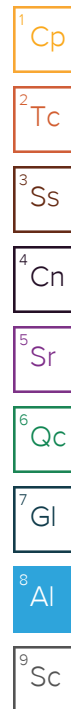
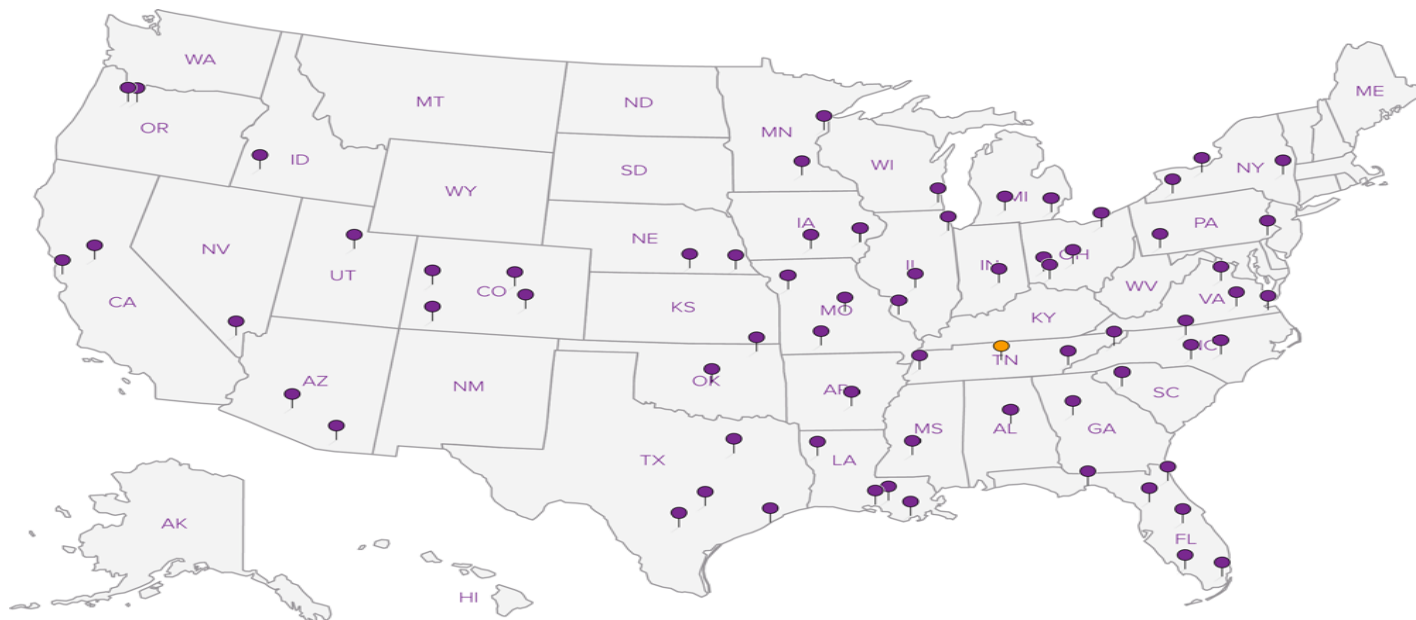
<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>n/a</sup> Accreditation not applicable

## Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
Canada	1461.01	DOD	1461.01
EPA–Crypto	TN00003	USDA	S-67674

## 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.**



Company Name/Address:

Apex Companies, LLC

743 Horizon Court, Suite 110  
Grand Junction, CO 815

Billing Information:

Apex Companies, LLC  
3821 Beech Street  
Laramie, WY 80202

ATTN: Carrie Zhang

Report to:

Jana Nilsen

Email To:

jana.nilsen@apexcos.com

Project  
Description: Extraction O&G Skaer #3 SeparatorCity/State  
Collected: Larimer Co, CO

Phone: 307-399-2870

Client Project #

744.1508.01, CODJ931

Lab Project #

Fax:

Collected by (print):

John Hickey

Site/Facility ID #

Skaer #3 Separator

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

Date Results Needed

Same Day .....200%

Next Day .....100%

Two Day .....50%

Three Day .....25%

Email? ☐ No ☒ YesFAX? ☒ No ☐ YesNo.  
of  
CntrsImmediately  
Packed on Ice N ☐ Y ☒

Sample ID

Comp/Grab

Matrix \*

Depth

Date

Time

Skaer 3 Separator W. SW

Grab

Soil

8'

10-19-15

1158

2

COGCC Table 910-1

BTEx

GRO/DRO

X

X

pH NA

Temp NA

Flow NA

Other

\* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: ESC Quote APEXGJC00901155

Relinquished by: (Signature)

Date:

10-19-15

Time:

11630

Received by: (Signature)

10-20-15

0920

Relinquished by: (Signature)

Date:

10-20-15

Time:

1130

Received by: (Signature)

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Jana Nilsen

Samples returned via: ☐ UPS☒ FedEx ☐ Courier ☐

Temp: 2.4°C Bottles Received:

242

Date: 10-21-15 Time: 0900

Hold #

Condition: (lab use only)

COC Seal Intact: ☒ Y ☐ N ☐ NA

pH Checked:

NCF:

Chain of Custody Page 1 of 1

ESC  
L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

12065 Lebanon Rd  
Mount Juliet, TN 37122  
Phone: 615-758-5858  
Phone: 800-767-5859  
Fax: 615-758-5859

L #

1105

Ta

Acctnum: APEX GJC

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Rem./Contaminant

Sample # (lab only)

-d