



June 15, 2011

Mr. Bruce Wanstall  
Field Operations Project Manager  
State & Private Contaminated Sites Program  
Department of Environmental Conservation  
PO Box 111800/410 Willoughby Avenue, Suite 302  
Juneau, AK 99801

RE: May 2011 Groundwater Sampling at Gas N Go Fuel Station

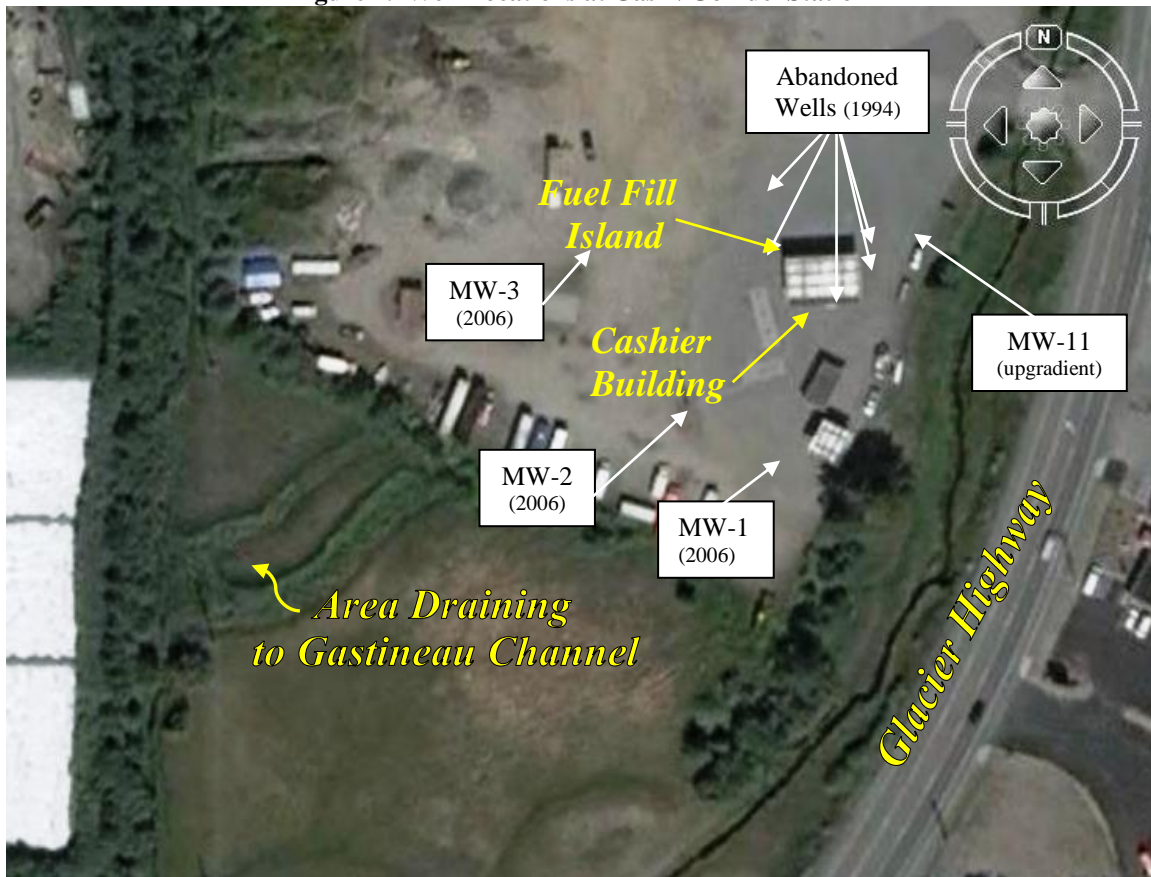
Dear Mr. Wanstall:

As part of the long term sampling plan for Gas N Go Fuel Station, groundwater samples were collected at four monitoring wells on May 25, 2011.

**Monitoring Well Locations**

Figure 1 shows locations for the four wells sampled during this event (MW-1, MW-2, MW-3, and MW-11).

**Figure 1. Well Locations at Gas N Go Fuel Station**





### Sampling Procedure

Samples were collected by Carson Dorn staff at MW-1, MW-2, MW-3, and MW-11 on May 25. Each well was purged of at least three well volumes using a low-flow peristaltic pump and then allowed to recharge to the static water level prior to sampling. Using the same pump, samples for the most volatile organic compounds were collected first. One duplicate sample was also collected for a total of five samples.

### Sampling Results

Samples were submitted to Test America Labs in Tacoma, WA, and were analyzed for gasoline and diesel range hydrocarbons (GRO and DRO) and benzene, toluene, ethylbenzene, and xylenes (BTEX). Table 1 compares the current round of sampling with results from past sampling events. The data is also compared to the ADEC Table C standards for groundwater cleanup, found in regulations 18 AAC 75. Sample results in bold exceed the cleanup standard.

Table 1. Gas N Go Groundwater Well Sampling August 2006- May 2011									
Summary of Results in mg/L									
Well No.	Well Depth	Depth to Water	Sample Date	Gasoline Range Organics	Diesel Range Organics	B	T	E	X
MW-1	10.5'	7.8'	8/16/06	0.435	0.402	<b>0.0145</b>	0.0009	0.0070	0.0236
			8/17/07	<i>ns</i>	ND	ND	ND	0.0012	ND
			11/19/07	<i>u</i>	<i>u</i>	<i>u</i>	<i>u</i>	<i>u</i>	<i>u</i>
		8.6	7/10/08	ND	ND	ND	ND	ND	ND
		8.14	5/25/11	ND	ND	ND	ND	ND	ND
MW-2	10.5'	9.0'	8/16/06	ND	0.105	ND	ND	ND	ND
			8/17/07	<i>ns</i>	0.471	<b>0.0111</b>	ND	0.0075	0.0178
			11/19/07	0.798	0.354	0.0020	0.0032	0.0291	0.0910
		7.4	7/8/08	ND	0.249	0.0014	ND	ND	ND
		6.8	5/25/11	ND	0.11	0.0011	ND	ND	ND
MW-3	10.4'	8.3'	8/16/06	<b>9.780</b>	<b>1.690</b>	<b>0.0067</b>	0.0051	0.0290	1.3300
			8/17/07	<i>ns</i>	0.906	ND	ND	0.0430	0.0542
			11/19/07	<b>3.090</b>	0.801	<b>0.0059</b>	0.0015	0.0375	0.0877
		6.95	7/10/08	<b>4.500</b>	<b>1.660</b>	<b>0.0092</b>	0.0026	0.0837	0.1530
		6.96	5/25/11	<b>3.5</b>	1.15	<b>0.00915</b>	0.00375	0.105	0.4217
MW-11	11.7'		8/16/06	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>
		9.6'	8/17/07	<i>ns</i>	ND	ND	ND	0.0035	0.0036
			11/19/07	ND	ND	ND	ND	0.0011	0.0033
		8.7	7/8/08	ND	ND	ND	ND	0.0011	0.0033
		8.78	5/25/11	ND	ND	ND	ND	ND	ND
<i>Cleanup Limits:</i>				<b>2.2</b>	<b>1.5</b>	<b>0.005</b>	<b>1.0</b>	<b>0.7</b>	<b>10.0</b>

B=benzene, T=toluene, E=Ethylene, X=xylenes, ND= not detected, ns=no sample collected, u=unproductive well

All depths are feet below ground surface.

Samples were collected for GRO, DRO, and BTEX at MW-1, MW-2, MW-3, and MW-11. Parameters were either non-detect or met cleanup standards in all samples except MW-3, located directly west of the fuel fill island. GRO in MW-3 was measured at 3.5 mg/l, slightly above the groundwater cleanup level of



2.2 mg/l and benzene was measured at a concentration of 0.00915 mg/l, close to twice the groundwater cleanup level of 0.0050 mg/l.

**Monitoring Well Sampling Plan**

Sampling results from 2006, 2007, 2008 and 2011 indicate that groundwater levels for GRO, DRO and BTEX are generally decreasing at MW-3 and are stable and satisfactory at MW-1, MW-2, and MW-11.

In accordance with the long-term monitoring plan for this site, one set of samples will be collected at the four wells on a three-year interval until cleanup standards have been consistently met at all wells. The next round of samples is scheduled to be collected in 2014.

Please don't hesitate to contact me at 586-4447 if you have any questions.

Sincerely,

Jolene Cox  
Environmental Professional

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle  
5755 8th Street East  
Tacoma, WA 98424  
Tel: (253)922-2310

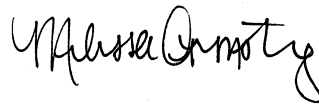
TestAmerica Job ID: 580-26384-1

Client Project/Site: Gas-n-Go Juneau

For:

Carson Dorn, Inc  
712 West 12th Street  
Juneau, Alaska 99801

Attn: Jolene Cox



Authorized for release by:  
06/09/2011 10:47:23 AM

Melissa Armstrong  
Project Manager I  
[melissa.armstrong@testamericainc.com](mailto:melissa.armstrong@testamericainc.com)



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# Case Narrative

Client: Carson Dorn, Inc  
Project/Site: Gas-n-Go Juneau

TestAmerica Job ID: 580-26384-1

**Job ID: 580-26384-1**

**Laboratory: TestAmerica Seattle**

## Narrative

**Job Narrative**  
**580-26384-1**

### Comments

No additional comments.

### Receipt

All samples were received in good condition within temperature requirements.

### GC/MS VOA - Method 8260B

Sample MW-11 (580-26384-4), was reanalyzed in analytical batch 580-87311 due to carry over contamination in the original analysis.

No other analytical or quality issues were noted.

### GC Semi VOA - Method AK102 & 103

For sample MW-2 (580-26384-2), the results in the DRO (nC10-<nC25) and RRO (nC25-nC36) ranges are due to what most closely resembles a mineral/transformer oil range product.

For sample MW-3 (580-26384-3) and MW-D (580-26384-5), the results in the DRO (nC10-<nC25) and RRO (nC25-nC36) ranges are due to a complex mixture of gasoline and what most closely resembles a mineral/transformer oil range product.

The affected analyte ranges are qualified "Y" and have been reported.

No other analytical or quality issues were noted.

### Organic Prep

No analytical or quality issues were noted.



# Definitions/Glossary

Client: Carson Dorn, Inc  
Project/Site: Gas-n-Go Juneau

TestAmerica Job ID: 580-26384-1

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## Qualifiers

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### GC Semi VOA

Qualifier	Qualifier Description
Y	The chromatographic response resembles a typical fuel pattern.

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## Glossary

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Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis.
EPA	United States Environmental Protection Agency
ND	Not Detected above the reporting level.
MDL	Method Detection Limit
RL	Reporting Limit
RE, RE1 (etc.)	Indicates a Re-extraction or Reanalysis of the sample.
%R	Percent Recovery
RPD	Relative Percent Difference, a measure of the relative difference between two points.



# Client Sample Results

Client: Carson Dorn, Inc  
Project/Site: Gas-n-Go Juneau

TestAmerica Job ID: 580-26384-1

**Client Sample ID: MW-1**

**Lab Sample ID: 580-26384-1**

**Date Collected: 05/25/11 11:40**

**Matrix: Water**

**Date Received: 05/25/11 15:00**

**Method: 8260B - BTEX**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			05/26/11 22:40	1
Toluene	ND		1.0		ug/L			05/26/11 22:40	1
Ethylbenzene	ND		1.0		ug/L			05/26/11 22:40	1
m-Xylene & p-Xylene	ND		2.0		ug/L			05/26/11 22:40	1
o-Xylene	ND		1.0		ug/L			05/26/11 22:40	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	99		80 - 120		05/26/11 22:40	1
Toluene-d8 (Surr)	101		85 - 120		05/26/11 22:40	1
Ethylbenzene-d10	103		80 - 120		05/26/11 22:40	1
Trifluorotoluene (Surr)	95		80 - 120		05/26/11 22:40	1
4-Bromofluorobenzene (Surr)	100		75 - 120		05/26/11 22:40	1

**Method: AK101 - Alaska - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		0.050		mg/L			05/26/11 22:40	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	106		50 - 150		05/26/11 22:40	1
4-Bromofluorobenzene (Surr)	97		50 - 150		05/26/11 22:40	1

**Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	ND		0.095		mg/L		05/27/11 12:23	05/31/11 21:31	1
RRO (nC25-nC36)	ND		0.095		mg/L		05/27/11 12:23	05/31/11 21:31	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	93		50 - 150	05/27/11 12:23	05/31/11 21:31	1
n-Triacontane-d62	102		50 - 150	05/27/11 12:23	05/31/11 21:31	1



# Client Sample Results

Client: Carson Dorn, Inc  
Project/Site: Gas-n-Go Juneau

TestAmerica Job ID: 580-26384-1

**Client Sample ID: MW-2**

**Lab Sample ID: 580-26384-2**

**Date Collected: 05/25/11 10:50**

**Matrix: Water**

**Date Received: 05/25/11 15:00**

**Method: 8260B - BTEX**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>1.1</b>		1.0		ug/L			05/26/11 23:05	1
Toluene	ND		1.0		ug/L			05/26/11 23:05	1
Ethylbenzene	ND		1.0		ug/L			05/26/11 23:05	1
m-Xylene & p-Xylene	ND		2.0		ug/L			05/26/11 23:05	1
o-Xylene	ND		1.0		ug/L			05/26/11 23:05	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	99		80 - 120		05/26/11 23:05	1
Toluene-d8 (Surr)	101		85 - 120		05/26/11 23:05	1
Ethylbenzene-d10	103		80 - 120		05/26/11 23:05	1
Trifluorotoluene (Surr)	96		80 - 120		05/26/11 23:05	1
4-Bromofluorobenzene (Surr)	101		75 - 120		05/26/11 23:05	1

**Method: AK101 - Alaska - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		0.050		mg/L			05/26/11 23:05	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	108		50 - 150		05/26/11 23:05	1
4-Bromofluorobenzene (Surr)	98		50 - 150		05/26/11 23:05	1

**Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>DRO (nC10-&lt;nC25)</b>	<b>0.11</b>	<b>Y</b>	0.10		mg/L		05/27/11 12:23	05/31/11 21:55	1
<b>RRO (nC25-nC36)</b>	<b>0.15</b>	<b>Y</b>	0.10		mg/L		05/27/11 12:23	05/31/11 21:55	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	92		50 - 150	05/27/11 12:23	05/31/11 21:55	1
n-Triacontane-d62	100		50 - 150	05/27/11 12:23	05/31/11 21:55	1

# Client Sample Results

Client: Carson Dorn, Inc  
Project/Site: Gas-n-Go Juneau

TestAmerica Job ID: 580-26384-1

**Client Sample ID: MW-3**

**Lab Sample ID: 580-26384-3**

**Date Collected: 05/25/11 12:13**

**Matrix: Water**

**Date Received: 05/25/11 15:00**

**Method: 8260B - BTEX**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	9.1		1.0		ug/L			05/26/11 23:31	1
Toluene	3.7		1.0		ug/L			05/26/11 23:31	1
Ethylbenzene	100		1.0		ug/L			05/26/11 23:31	1
o-Xylene	6.4		1.0		ug/L			05/26/11 23:31	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	98		80 - 120		05/26/11 23:31	1
Toluene-d8 (Surr)	101		85 - 120		05/26/11 23:31	1
Ethylbenzene-d10	102		80 - 120		05/26/11 23:31	1
Trifluorotoluene (Surr)	98		80 - 120		05/26/11 23:31	1
4-Bromofluorobenzene (Surr)	102		75 - 120		05/26/11 23:31	1

**Method: 8260B - BTEX - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	490		100		ug/L			06/06/11 21:10	50

**Method: AK101 - Alaska - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	3.4		0.050		mg/L			05/26/11 23:31	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	107		50 - 150		05/26/11 23:31	1
4-Bromofluorobenzene (Surr)	99		50 - 150		05/26/11 23:31	1

**Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	1.2	Y	0.094		mg/L		05/27/11 12:23	05/31/11 22:18	1
RRO (nC25-nC36)	0.30	Y	0.094		mg/L		05/27/11 12:23	05/31/11 22:18	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	99		50 - 150		05/27/11 12:23	05/31/11 22:18
n-Triacontane-d62	104		50 - 150		05/27/11 12:23	05/31/11 22:18

# Client Sample Results

Client: Carson Dorn, Inc  
Project/Site: Gas-n-Go Juneau

TestAmerica Job ID: 580-26384-1

**Client Sample ID: MW-11**  
**Date Collected: 05/25/11 12:41**  
**Date Received: 05/25/11 15:00**

**Lab Sample ID: 580-26384-4**  
**Matrix: Water**

**Method: 8260B - BTEX - RA**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			06/06/11 20:45	1
Toluene	ND		1.0		ug/L			06/06/11 20:45	1
Ethylbenzene	ND		1.0		ug/L			06/06/11 20:45	1
m-Xylene & p-Xylene	ND		2.0		ug/L			06/06/11 20:45	1
o-Xylene	ND		1.0		ug/L			06/06/11 20:45	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	97		80 - 120		06/06/11 20:45	1
Toluene-d8 (Surr)	102		85 - 120		06/06/11 20:45	1
Ethylbenzene-d10	106		80 - 120		06/06/11 20:45	1
Trifluorotoluene (Surr)	100		80 - 120		06/06/11 20:45	1
4-Bromofluorobenzene (Surr)	103		75 - 120		06/06/11 20:45	1

**Method: AK101 - Alaska - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		0.050		mg/L			05/26/11 23:56	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	106		50 - 150		05/26/11 23:56	1
4-Bromofluorobenzene (Surr)	97		50 - 150		05/26/11 23:56	1

**Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	ND		0.094		mg/L		05/27/11 12:23	05/31/11 22:42	1
RRO (nC25-nC36)	ND		0.094		mg/L		05/27/11 12:23	05/31/11 22:42	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	90		50 - 150	05/27/11 12:23	05/31/11 22:42	1
n-Triacontane-d62	97		50 - 150	05/27/11 12:23	05/31/11 22:42	1

# Client Sample Results

Client: Carson Dorn, Inc  
Project/Site: Gas-n-Go Juneau

TestAmerica Job ID: 580-26384-1

**Client Sample ID: MW-D**

**Lab Sample ID: 580-26384-5**

**Date Collected: 05/25/11 12:20**

**Matrix: Water**

**Date Received: 05/25/11 15:00**

**Method: 8260B - BTEX**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	9.2		1.0		ug/L			05/27/11 00:22	1
Toluene	3.8		1.0		ug/L			05/27/11 00:22	1
Ethylbenzene	110		1.0		ug/L			05/27/11 00:22	1
o-Xylene	7.0		1.0		ug/L			05/27/11 00:22	1
<b>Surrogate</b>	<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Fluorobenzene (Surr)	98		80 - 120					05/27/11 00:22	1
Toluene-d8 (Surr)	101		85 - 120					05/27/11 00:22	1
Ethylbenzene-d10	102		80 - 120					05/27/11 00:22	1
Trifluorotoluene (Surr)	96		80 - 120					05/27/11 00:22	1
4-Bromofluorobenzene (Surr)	101		75 - 120					05/27/11 00:22	1

**Method: 8260B - BTEX - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	340		100		ug/L			06/06/11 21:36	50

**Method: AK101 - Alaska - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	3.6		0.050		mg/L			05/27/11 00:22	1
<b>Surrogate</b>	<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Trifluorotoluene (Surr)	104		50 - 150					05/27/11 00:22	1
4-Bromofluorobenzene (Surr)	98		50 - 150					05/27/11 00:22	1

**Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	1.1	Y	0.094		mg/L		05/27/11 12:23	05/31/11 23:06	1
RRO (nC25-nC36)	0.27	Y	0.094		mg/L		05/27/11 12:23	05/31/11 23:06	1
<b>Surrogate</b>	<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
o-Terphenyl	89		50 - 150				05/27/11 12:23	05/31/11 23:06	1
n-Triacontane-d62	99		50 - 150				05/27/11 12:23	05/31/11 23:06	1

# QC Sample Results

Client: Carson Dorn, Inc  
Project/Site: Gas-n-Go Juneau

TestAmerica Job ID: 580-26384-1

## Method: 8260B - BTEX

**Lab Sample ID: MB 580-86807/6**

**Matrix: Water**

**Analysis Batch: 86807**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		1.0		ug/L			05/26/11 17:34	1
Toluene	ND		1.0		ug/L			05/26/11 17:34	1
Ethylbenzene	ND		1.0		ug/L			05/26/11 17:34	1
m-Xylene & p-Xylene	ND		2.0		ug/L			05/26/11 17:34	1
o-Xylene	ND		1.0		ug/L			05/26/11 17:34	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	% Recovery	Qualifier				
Fluorobenzene (Surr)	98		80 - 120		05/26/11 17:34	1
Toluene-d8 (Surr)	101		85 - 120		05/26/11 17:34	1
Ethylbenzene-d10	103		80 - 120		05/26/11 17:34	1
Trifluorotoluene (Surr)	95		80 - 120		05/26/11 17:34	1
4-Bromofluorobenzene (Surr)	102		75 - 120		05/26/11 17:34	1

**Lab Sample ID: LCS 580-86807/9**

**Matrix: Water**

**Analysis Batch: 86807**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS LCS		Unit	D	% Rec	% Rec. Limits
		Result	Qualifier				
Benzene	25.0	23.6		ug/L		94	80 - 120
Toluene	25.0	23.9		ug/L		96	75 - 120
Ethylbenzene	25.0	23.9		ug/L		96	75 - 125
m-Xylene & p-Xylene	50.0	48.5		ug/L		97	75 - 130
o-Xylene	25.0	23.5		ug/L		94	80 - 120

Surrogate	LCS LCS		Limits
	% Recovery	Qualifier	
Fluorobenzene (Surr)	99		80 - 120
Toluene-d8 (Surr)	101		85 - 120
Ethylbenzene-d10	102		80 - 120
Trifluorotoluene (Surr)	94		80 - 120
4-Bromofluorobenzene (Surr)	103		75 - 120

**Lab Sample ID: LCSD 580-86807/10**

**Matrix: Water**

**Analysis Batch: 86807**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD LCSD		Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
		Result	Qualifier						
Benzene	25.0	23.6		ug/L		94	80 - 120	0	30
Toluene	25.0	24.0		ug/L		96	75 - 120	0	30
Ethylbenzene	25.0	23.9		ug/L		96	75 - 125	0	30
m-Xylene & p-Xylene	50.0	48.5		ug/L		97	75 - 130	0	30
o-Xylene	25.0	23.4		ug/L		94	80 - 120	0	30

Surrogate	LCSD LCSD		Limits
	% Recovery	Qualifier	
Fluorobenzene (Surr)	99		80 - 120
Toluene-d8 (Surr)	102		85 - 120
Ethylbenzene-d10	102		80 - 120
Trifluorotoluene (Surr)	94		80 - 120
4-Bromofluorobenzene (Surr)	102		75 - 120

# QC Sample Results

Client: Carson Dorn, Inc  
Project/Site: Gas-n-Go Juneau

TestAmerica Job ID: 580-26384-1

## Method: 8260B - BTEX (Continued)

Lab Sample ID: MB 580-87311/6

Matrix: Water

Analysis Batch: 87311

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		1.0		ug/L			06/06/11 18:37	1
Toluene	ND		1.0		ug/L			06/06/11 18:37	1
Ethylbenzene	ND		1.0		ug/L			06/06/11 18:37	1
m-Xylene & p-Xylene	ND		2.0		ug/L			06/06/11 18:37	1
o-Xylene	ND		1.0		ug/L			06/06/11 18:37	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	% Recovery	Qualifier				
Fluorobenzene (Surr)	97		80 - 120		06/06/11 18:37	1
Toluene-d8 (Surr)	102		85 - 120		06/06/11 18:37	1
Ethylbenzene-d10	105		80 - 120		06/06/11 18:37	1
Trifluorotoluene (Surr)	97		80 - 120		06/06/11 18:37	1
4-Bromofluorobenzene (Surr)	104		75 - 120		06/06/11 18:37	1

Lab Sample ID: LCS 580-87311/9

Matrix: Water

Analysis Batch: 87311

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	% Rec	% Rec. Limits
		Result	Qualifier				
Benzene	25.0	25.0		ug/L		100	80 - 120
Toluene	25.0	25.2		ug/L		101	75 - 120
Ethylbenzene	25.0	25.3		ug/L		101	75 - 125
m-Xylene & p-Xylene	50.0	51.6		ug/L		103	75 - 130
o-Xylene	25.0	25.0		ug/L		100	80 - 120

Surrogate	LCS	LCS	Limits
	% Recovery	Qualifier	
Fluorobenzene (Surr)	97		80 - 120
Toluene-d8 (Surr)	102		85 - 120
Ethylbenzene-d10	106		80 - 120
Trifluorotoluene (Surr)	90		80 - 120
4-Bromofluorobenzene (Surr)	104		75 - 120

Lab Sample ID: LCSD 580-87311/10

Matrix: Water

Analysis Batch: 87311

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD	LCSD	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
		Result	Qualifier						
Benzene	25.0	25.0		ug/L		100	80 - 120	0	30
Toluene	25.0	25.3		ug/L		101	75 - 120	0	30
Ethylbenzene	25.0	25.5		ug/L		102	75 - 125	1	30
m-Xylene & p-Xylene	50.0	51.3		ug/L		103	75 - 130	1	30
o-Xylene	25.0	24.9		ug/L		100	80 - 120	0	30

Surrogate	LCSD	LCSD	Limits
	% Recovery	Qualifier	
Fluorobenzene (Surr)	97		80 - 120
Toluene-d8 (Surr)	102		85 - 120
Ethylbenzene-d10	105		80 - 120
Trifluorotoluene (Surr)	90		80 - 120
4-Bromofluorobenzene (Surr)	104		75 - 120

# QC Sample Results

Client: Carson Dorn, Inc  
Project/Site: Gas-n-Go Juneau

TestAmerica Job ID: 580-26384-1

## Method: AK101 - Alaska - Gasoline Range Organics (GC)

**Lab Sample ID: MB 580-86809/6**  
**Matrix: Water**  
**Analysis Batch: 86809**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Gasoline Range Organics (GRO) -C6-C10	ND		0.050		mg/L			05/26/11 17:34	1
Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac			
	% Recovery	Qualifier							
Trifluorotoluene (Surr)	106		50 - 150		05/26/11 17:34	1			
4-Bromofluorobenzene (Surr)	98		50 - 150		05/26/11 17:34	1			

**Lab Sample ID: LCS 580-86809/7**  
**Matrix: Water**  
**Analysis Batch: 86809**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS	LCS	Unit	D	% Rec	% Rec. Limits
		Result	Qualifier				
Gasoline Range Organics (GRO) -C6-C10	1.00	0.882		mg/L		88	60 - 120
Surrogate	LCS	LCS	Limits				
	% Recovery	Qualifier					
Trifluorotoluene (Surr)	97		50 - 150				
4-Bromofluorobenzene (Surr)	99		50 - 150				

**Lab Sample ID: LCSD 580-86809/8**  
**Matrix: Water**  
**Analysis Batch: 86809**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD	LCSD	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
		Result	Qualifier						
Gasoline Range Organics (GRO) -C6-C10	1.00	0.896		mg/L		90	60 - 120	2	20
Surrogate	LCSD	LCSD	Limits						
	% Recovery	Qualifier							
Trifluorotoluene (Surr)	100		50 - 150						
4-Bromofluorobenzene (Surr)	98		50 - 150						

## Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

**Lab Sample ID: MB 580-86870/1-A**  
**Matrix: Water**  
**Analysis Batch: 86906**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 86870**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
DRO (nC10-<nC25)	ND		0.10		mg/L		05/27/11 12:23	05/31/11 19:31	1
RRO (nC25-nC36)	ND		0.10		mg/L		05/27/11 12:23	05/31/11 19:31	1
Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac			
	% Recovery	Qualifier							
o-Terphenyl	88		50 - 150	05/27/11 12:23	05/31/11 19:31	1			
n-Triacontane-d62	96		50 - 150	05/27/11 12:23	05/31/11 19:31	1			

# QC Sample Results

Client: Carson Dorn, Inc  
 Project/Site: Gas-n-Go Juneau

TestAmerica Job ID: 580-26384-1

## Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC) (Continued)

**Lab Sample ID: LCS 580-86870/2-A**

**Matrix: Water**

**Analysis Batch: 86906**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 86870**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec.	
							Limits	
DRO (nC10-<nC25)	0.500	0.392		mg/L		78	75 - 125	
RRO (nC25-nC36)	0.500	0.446		mg/L		89	60 - 120	

Surrogate	LCS		Limits
	% Recovery	Qualifier	
<i>o</i> -Terphenyl	81		50 - 150
<i>n</i> -Triacontane-d62	94		50 - 150

**Lab Sample ID: LCSD 580-86870/3-A**

**Matrix: Water**

**Analysis Batch: 86906**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 86870**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.		RPD	
							Limits		RPD	Limit
DRO (nC10-<nC25)	0.500	0.375		mg/L		75	75 - 125		4	20
RRO (nC25-nC36)	0.500	0.427		mg/L		85	60 - 120		4	20

Surrogate	LCSD		Limits
	% Recovery	Qualifier	
<i>o</i> -Terphenyl	89		50 - 150
<i>n</i> -Triacontane-d62	100		50 - 150





# Lab Chronicle

Client: Carson Dorn, Inc  
Project/Site: Gas-n-Go Juneau

TestAmerica Job ID: 580-26384-1

## Client Sample ID: MW-1

Date Collected: 05/25/11 11:40

Date Received: 05/25/11 15:00

Lab Sample ID: 580-26384-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	86807	05/26/11 22:40	SK	TAL SEA
Total/NA	Analysis	AK101		1	86809	05/26/11 22:40	SK	TAL SEA
Total/NA	Prep	3520C			86870	05/27/11 12:23	MT	TAL SEA
Total/NA	Analysis	AK102 & 103		1	86906	05/31/11 21:31	EK	TAL SEA

## Client Sample ID: MW-2

Date Collected: 05/25/11 10:50

Date Received: 05/25/11 15:00

Lab Sample ID: 580-26384-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	86807	05/26/11 23:05	SK	TAL SEA
Total/NA	Analysis	AK101		1	86809	05/26/11 23:05	SK	TAL SEA
Total/NA	Prep	3520C			86870	05/27/11 12:23	MT	TAL SEA
Total/NA	Analysis	AK102 & 103		1	86906	05/31/11 21:55	EK	TAL SEA

## Client Sample ID: MW-3

Date Collected: 05/25/11 12:13

Date Received: 05/25/11 15:00

Lab Sample ID: 580-26384-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	86807	05/26/11 23:31	SK	TAL SEA
Total/NA	Analysis	8260B	DL	50	87311	06/06/11 21:10	SK	TAL SEA
Total/NA	Analysis	AK101		1	86809	05/26/11 23:31	SK	TAL SEA
Total/NA	Prep	3520C			86870	05/27/11 12:23	MT	TAL SEA
Total/NA	Analysis	AK102 & 103		1	86906	05/31/11 22:18	EK	TAL SEA

## Client Sample ID: MW-11

Date Collected: 05/25/11 12:41

Date Received: 05/25/11 15:00

Lab Sample ID: 580-26384-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B	RA	1	87311	06/06/11 20:45	SK	TAL SEA
Total/NA	Analysis	AK101		1	86809	05/26/11 23:56	SK	TAL SEA
Total/NA	Prep	3520C			86870	05/27/11 12:23	MT	TAL SEA
Total/NA	Analysis	AK102 & 103		1	86906	05/31/11 22:42	EK	TAL SEA

## Client Sample ID: MW-D

Date Collected: 05/25/11 12:20

Date Received: 05/25/11 15:00

Lab Sample ID: 580-26384-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	86807	05/27/11 00:22	SK	TAL SEA
Total/NA	Analysis	8260B	DL	50	87311	06/06/11 21:36	SK	TAL SEA
Total/NA	Analysis	AK101		1	86809	05/27/11 00:22	SK	TAL SEA

# Lab Chronicle

Client: Carson Dorn, Inc  
Project/Site: Gas-n-Go Juneau

TestAmerica Job ID: 580-26384-1

**Client Sample ID: MW-D**

**Date Collected: 05/25/11 12:20**

**Date Received: 05/25/11 15:00**

**Lab Sample ID: 580-26384-5**

**Matrix: Water**

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Prepared Or Analyzed</u>	<u>Analyst</u>	<u>Lab</u>
Total/NA	Prep	3520C			86870	05/27/11 12:23	MT	TAL SEA
Total/NA	Analysis	AK102 & 103		1	86906	05/31/11 23:06	EK	TAL SEA

**Laboratory References:**

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

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# Certification Summary

Client: Carson Dorn, Inc  
Project/Site: Gas-n-Go Juneau

TestAmerica Job ID: 580-26384-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Seattle	Alaska	Alaska UST	10	UST-022
TestAmerica Seattle	California	NELAC	9	1115CA
TestAmerica Seattle	Florida	NELAC	4	E871074
TestAmerica Seattle	L-A-B	DoD ELAP	0	L2236
TestAmerica Seattle	L-A-B	ISO/IEC 17025	0	L2236
TestAmerica Seattle	Louisiana	NELAC	6	05016
TestAmerica Seattle	Montana	MT DEQ UST	8	N/A
TestAmerica Seattle	Oregon	NELAC	10	WA100007
TestAmerica Seattle	USDA	USDA	0	P330-11-00222
TestAmerica Seattle	Washington	State Program	10	C553

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.



# Sample Summary

Client: Carson Dorn, Inc  
Project/Site: Gas-n-Go Juneau

TestAmerica Job ID: 580-26384-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-26384-1	MW-1	Water	05/25/11 11:40	05/25/11 15:00
580-26384-2	MW-2	Water	05/25/11 10:50	05/25/11 15:00
580-26384-3	MW-3	Water	05/25/11 12:13	05/25/11 15:00
580-26384-4	MW-11	Water	05/25/11 12:41	05/25/11 15:00
580-26384-5	MW-D	Water	05/25/11 12:20	05/25/11 15:00

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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Seattle  
5755 8th Street E.  
Tacoma, WA 98424  
Tel. 253-922-2310  
Fax 253-922-5047  
www.testamericainc.com

Rush

Short Hold

## Chain of Custody Record

Client CARSON DOWN INC.  
412 W 12th St  
Address JUNEAU  
City JUNEAU State AK Zip Code 99801

Client Contact JOLENE COX  
Telephone Number (Area Code)/Fax Number 907.586.4447

Date 5.25.11 Chain of Custody Number 26384  
7348

Lab Number \_\_\_\_\_ Page 1 of 1

Project Name and Location (State) GAS-N-GIO - JUNEAU  
Contract/Purchase Order/Quote No. \_\_\_\_\_

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives					Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt	
			Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH			
<u>MIN-1</u>	<u>5.25.11</u>	<u>11:40</u>		<u>X</u>						<u>X</u>					<u>2-1L, 3-40ml</u>
<u>MIN-2</u>	<u>↓</u>	<u>10:50</u>		<u>X</u>						<u>X</u>					<u>↓</u>
<u>MIN-3</u>	<u>↓</u>	<u>12:13</u>		<u>X</u>						<u>X</u>					
<u>MIN-11</u>	<u>↓</u>	<u>12:41</u>		<u>X</u>						<u>X</u>					
<u>MIN-12</u>	<u>↓</u>	<u>12:20</u>		<u>X</u>						<u>X</u>					

Lgn Green/blue  
lab Carrier  
IR=5,2/5,3  
gel/bubble

Cooler  Yes  No Cooler Temp: \_\_\_\_\_

Possible Hazard Identification  Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown

Sample Disposal  Disposal By Lab  Return To Client  Archive For \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required (business days):  24 Hours  48 Hours  5 Days  10 Days  15 Days  Other \_\_\_\_\_

QC Requirements (Specify)

1. Relinquished By Sign/Print <u>Joleene Cox</u>	Date <u>5.25.11</u>	Time <u>4:15P</u>	1. Received By Sign/Print <u>Tom Blankinship</u>	Date <u>5/25/11</u>	Time <u>1500</u>
2. Relinquished By Sign/Print	Date	Time	2. Received By Sign/Print	Date	Time
3. Relinquished By Sign/Print	Date	Time	3. Received By Sign/Print	Date	Time

Comments

## Login Sample Receipt Checklist

Client: Carson Dorn, Inc

Job Number: 580-26384-1

**Login Number: 26384**

**List Source: TestAmerica Seattle**

**List Number: 1**

**Creator: Blankinship, Tom**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

## Laboratory Data Review Checklist

Completed by:

Title:

Date:

CS Report Name:

Report Date:

Consultant Firm:

Laboratory Name:

Laboratory Report Number:

ADEC File Number:

ADEC RecKey Number:

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

Yes     No                      Comments:

b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

Yes     No                      Comments:

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?

Yes     No                      Comments:

b. Correct analyses requested?

Yes  No

Comments:

YES

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt ( $4^{\circ} \pm 2^{\circ} \text{C}$ )?

Yes  No

Comments:

YES

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes  No

Comments:

YES

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes  No

Comments:

YES

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes  No

Comments:

NO

e. Data quality or usability affected? Explain.

Comments:

NO.

4. Case Narrative

a. Present and understandable?

Yes  No

Comments:

YES



b. Discrepancies, errors or QC failures identified by the lab?

Yes  No

Comments:

Sample MW-11 (580-26384-4), was reanalyzed in analytical batch 580-87311 due to carry over contamination in the original analysis.

For sample MW-2 (580-26384-2), the results in the DRO (nC10-<nC25) and RRO (nC25-nC36) ranges are due to what most closely resembles a mineral/transformer oil range product.

For sample MW-3 (580-26384-3) and MW-D (580-26384-5), the results in the DRO (nC10-<nC25) and RRO (nC25-nC36) ranges are due to a complex mixture of gasoline and what most closely resembles a mineral/transformer oil range product.

The affected analyte ranges are qualified "Y" and have been reported.

c. Were all corrective actions documented?

Yes  No

Comments:

YES

d. What is the effect on data quality/usability according to the case narrative?

Comments:

NONE

## 5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes  No

Comments:

YES

b. All applicable holding times met?

Yes  No

Comments:

YES

c. All soils reported on a dry weight basis?

Yes  No

Comments:

YES

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

Yes  No

Comments:

e. Data quality or usability affected? Explain.

Comments:

NO

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes  No

Comments:

YES

ii. All method blank results less than PQL?

Yes  No

Comments:

iii. If above PQL, what samples are affected?

Comments:

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No

Comments:

v. Data quality or usability affected? Explain.

Comments:

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples?

Yes  No

Comments:

YES

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes  No

Comments:

NA

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes  No Comments:

YES

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes  No Comments:

YES

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

NONE

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No Comments:

NA

vii. Data quality or usability affected? Explain.

Comments:

NA

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

Yes  No Comments:

YES

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

Yes  No Comments:

Yes

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

NA

Yes    No                      Comments:

iv. Data quality or usability affected? Explain.

Comments:

NA

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and cooler?

Yes    No                      Comments:

NO

ii. All results less than PQL?

Yes    No                      Comments:

NA

iii. If above PQL, what samples are affected?

Comments:

NA

iv. Data quality or usability affected? Explain.

Comments:

NA

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes    No                      Comments:

YES

ii. Submitted blind to lab?

Yes    No                      Comments:

YES

iii. Precision – All relative percent differences (RPD) less than specified DQOs?  
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where  $R_1$  = Sample Concentration  
 $R_2$  = Field Duplicate Concentration

Yes    No   Comments:

YES

iv. Data quality or usability affected? Explain.

Comments:

NA

f. Decontamination or Equipment Blank (if applicable)

Yes    No    Not Applicable

i. All results less than PQL?

Yes    No   Comments:

NO

ii. If above PQL, what samples are affected?

Comments:

NA

iii. Data quality or usability affected? Explain.

Comments:

NA

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

Yes    No   Comments:

YES