



July 5, 2018

Ms. Danielle Duncan  
Alaska Department of Environmental Conservation  
410 Willoughby Avenue, Suite 303  
Juneau, Alaska 99811

**Re: Gas N Go Fuel Station Juneau, Alaska – 2018 Groundwater Sampling**

Dear Ms. Duncan:

The Gas N Go Fuel Station is located at 5165 Glacier Highway in Juneau, Alaska. The location of the site is depicted on Figure 1, Site Location Map. The layout of the site is depicted on Figure 2, 2013 Aerial Photograph and Figure 3, Site Plan. The historical excavation limits, sample locations, and groundwater monitoring wells are depicted on Figure 4, Historical Excavation Limits & Sample Locations & Groundwater Monitoring Wells.

**Monitoring Well Locations**

As shown on Figure 4, there are currently four existing groundwater monitoring wells (MW-1, MW-2, MW-3, and MW-11).

**Sampling Procedure**

The wells were non-productive in 2017 when sampling was attempted as the top of the well casings has been damaged and/or caps were missing and the wells had accumulated some material in the bottom of the wells. Repairs were made to the well in the Spring of 2018. The well casings have been repaired and the well caps have been replaced.

As part of the long term sampling plan for the Gas N Go Fuel Station, groundwater samples were collected at the four on-site monitoring wells (MW-1, MW-2, MW-3, and MW-11) on June 1, 2018. 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**

Groundwater sampling was conducted for diesel range organics (DRO) by Alaska Methods 102; gasoline range organics (GRO) by Alaska Method 101, and BTEX (benzene, toluene, ethylene, and xylene) by USEPA Method 8260C.

Table 1 summarizes the groundwater sampling results relative to ADEC groundwater cleanup levels (presented in Table C, 18 AAC 75.341) as well as past sampling events. The laboratory analytical report and laboratory data review checklist is presented in Appendix B.

DRO, GRO, and BTEX were non-detect in MW-1.

DRO was detected at a concentration of 0.16 mg/L and toluene was detected at a concentration of 0.0024 mg/L in MW-2. GRO, benzene, ethylbenzene, and xylenes were non-detect in MW-2.



DRO was detected at a concentration of 7.0 mg/L, GRO was detected at a concentration of 3.5 mg/L, benzene was detected at a concentration of 0.0069 mg/L, ethylbenzene was detected at a concentration of 0.16 mg/L, toluene was detected at a concentration of 0.023 mg/L, and xylenes was detected at a concentration of 0.525 mg/L in MW-3.

Toluene was detected at a concentration of 0.018 mg/L in MW-4. DRO, GRO, benzene, ethylbenzene, and xylenes were non-detect in MW-4.

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. DRO in MW-3 was detected at 7.0 mg/L, above the groundwater cleanup level of 1.5 mg/L; GRO was detected at 3.5 mg/L, above the groundwater cleanup level of 2.2 mg/L; and benzene was measured at a concentration of 0.0069 mg/l, above the groundwater cleanup level of 0.005 mg/L.

Sampling results from 2006, 2007, 2008, 2011, and 2014 had indicated that groundwater levels for GRO, DRO and BTEX were generally decreasing or stable at MW-3 (GRO decreased from 3.5 mg/L in 2011 to 0.12 mg/L in 2014 while DRO increased slightly from 1.15 mg/L in 2011 to 1.8 mg/L in 2014), however this round of analysis in 2018 shows an increase in DRO and GRO. Sampling results are stable and satisfactory at MW-1, MW-2, and MW-11.

#### **Continued Monitoring**

In accordance with the long-term monitoring plan for this site, groundwater samples are to 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 2021. However, given the increased concentrations in MW-3, CES recommends another round of groundwater samples be collected in the Spring of 2019 and that the long-term monitoring plan be reevaluated based on the results of the Spring 2019 sampling event.

Additionally, ADEC requested in their December 15, 2017 letter that a work plan be submitted to address the following:

- Soil contamination is present above the maximum allowable concentration.
- The extent of groundwater contamination has not been delineated.
- The presence of lead and PAHs in groundwater and soil is unknown.

CES will be developing a plan for review by ADEC for continued investigation in the near future.

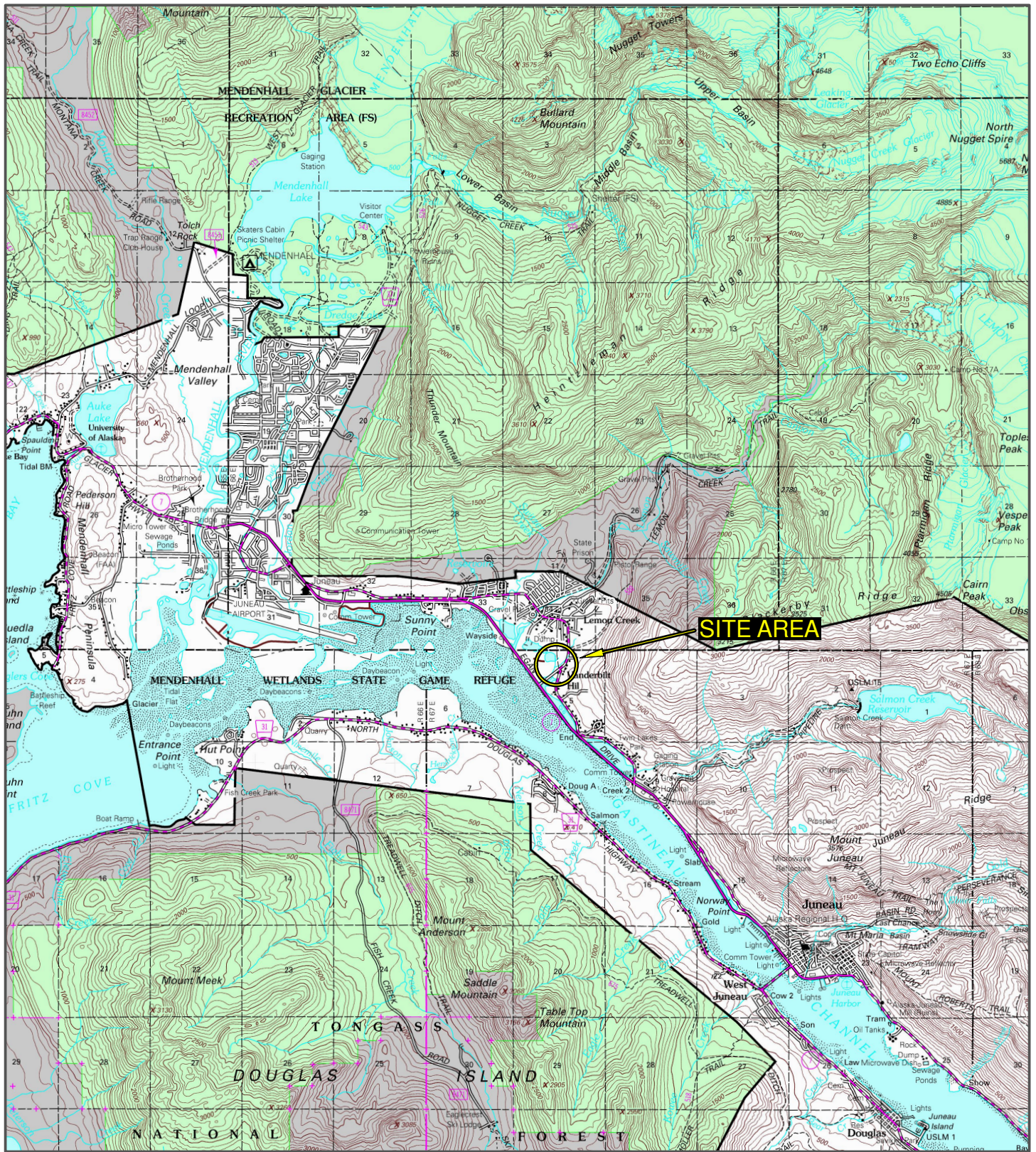
Please don't hesitate to contact me at 586-4447 if you have any questions.

Sincerely,



Jolene Cox  
Environmental Professional





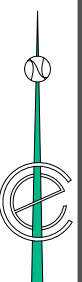
**FIGURE 1. SITE LOCATION MAP**

GAS N GO  
 5165 GLACIER HIGHWAY  
 JUNEAU, AK



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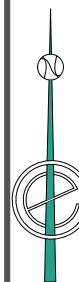


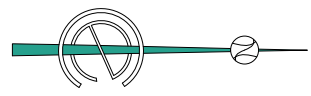
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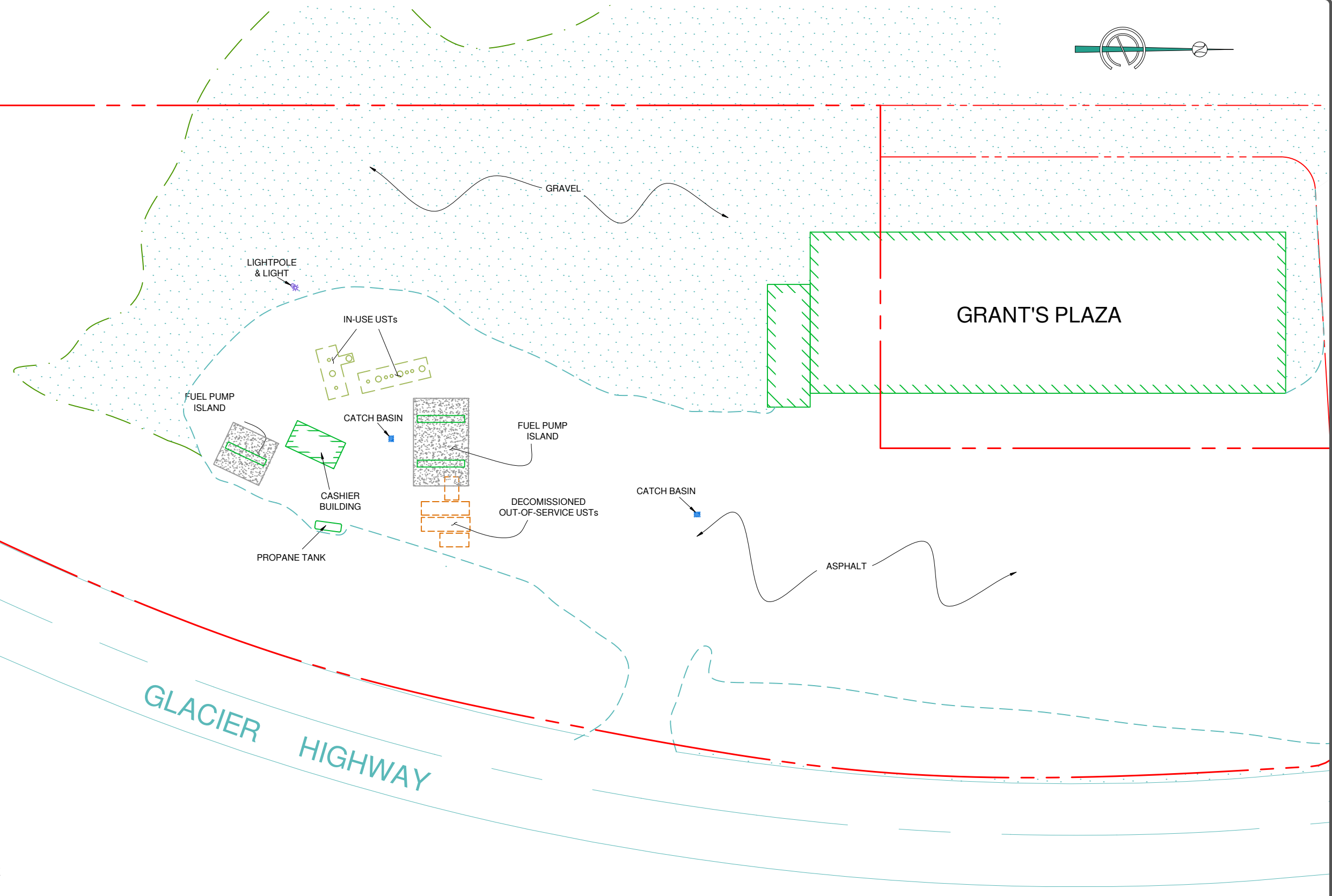
**FIGURE 2. 2013 AERIAL PHOTOGRAPH**

GAS N GO  
5165 GLACIER HIGHWAY  
JUNEAU, AK



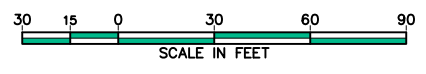


FILE: /home/erik/dropbox/EMC Drafting/Files/Project Files/Gas N Go Groundwater Sampling/DWG/gas\_n\_go\_fuel\_51566.lacrier.dwg PLOTTED: 2018-04-23



**LEGEND**

-  PROPERTY BOUNDARY
-  EDGE OF ASPHALT
-  EDGE OF GRAVEL/BRUSH



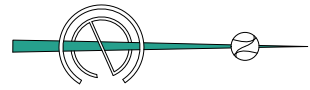

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**SITE PLAN**










SCALE 1"=60'  
 DRAWN emc  
 CHECKED jmc  
 DATE 4/23/2018

GAS N GO  
 5165 GLACIER HIGHWAY  
 JUNEAU, AK

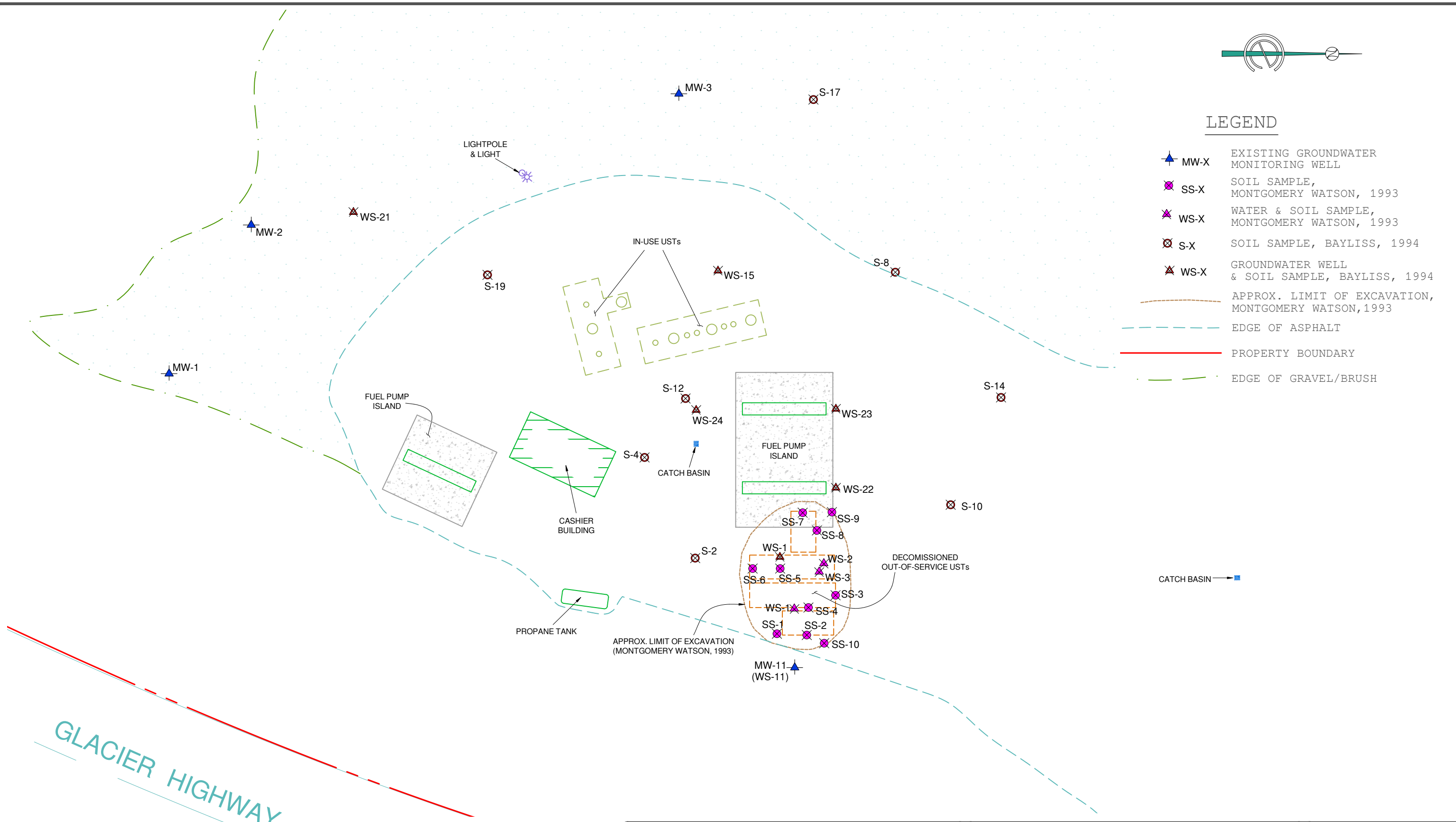
**Fig 3**



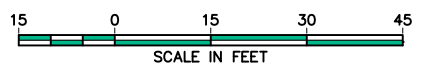
### LEGEND

-  MW-X EXISTING GROUNDWATER MONITORING WELL
-  SS-X SOIL SAMPLE, MONTGOMERY WATSON, 1993
-  WS-X WATER & SOIL SAMPLE, MONTGOMERY WATSON, 1993
-  S-X SOIL SAMPLE, BAYLISS, 1994
-  WS-X GROUNDWATER WELL & SOIL SAMPLE, BAYLISS, 1994
-  APPROX. LIMIT OF EXCAVATION, MONTGOMERY WATSON, 1993
-  EDGE OF ASPHALT
-  PROPERTY BOUNDARY
-  EDGE OF GRAVEL/BRUSH

FILE: /home/erik/dropbox/EMC Drafting Files/Project Files/DWG/gas\_n\_go\_fuel\_51566.lacrier.dwg PLOTTED: 2018-04-23



# GLACIER HIGHWAY




712 W 12th Street Juneau, Alaska 99801 907.586.4447 www.coxenv.com

HISTORICAL EXCAVATION LIMITS &  
SAMPLE LOCATIONS &  
GROUNDWATER MONITORING WELLS

SCALE 1"=30'  
DRAWN emc  
CHECKED jmc  
DATE 4/23/2018

GAS N GO  
5165 GLACIER HIGHWAY  
JUNEAU, AK

## Fig 4



Table 1. Gas N Go Groundwater Well Sampling August 2006- June 2018

Well No.	Well Depth	Depth to Water	Sample Date	GRO	DRO	Benzene	Toluene	Ethylbenzene	Xylenes	
				ADEC Groundwater Cleanup Level						
				2.2 mg/L	1.5 mg/L	0.005 mg/L	1.0 mg/L	0.7 mg/L	10 mg/L	
MW-1	10.5'	7.8'	08/16/06	0.435	0.402	<b>0.0145</b>	0.0009	0.007	0.0236	
			08/17/07	ns	ND	ND	ND	0.0012	ND	
			11/19/07	u	u	u	u	u	u	
		8.9'	8.6'	07/10/08	ND	ND	ND	ND	ND	ND
			8.14'	05/25/11	ND	ND	ND	ND	ND	ND
			8.25'	06/17/14	ND	ND	ND	ND	ND	ND
			06/01/18	ND	ND	ND	ND	ND	ND	ND
MW-2	10.5'	9.0'	08/16/06	ND	0.105	ND	ND	ND	ND	
			08/17/07	ns	0.471	<b>0.0111</b>	ND	0.0075	0.0178	
			11/19/07	0.798	0.354	0.002	0.0032	0.0291	0.091	
		8.5'	7.4'	07/08/08	ND	0.249	0.0014	ND	ND	ND
			6.8'	05/25/11	ND	0.11	0.0011	ND	ND	ND
			8.0'	06/17/14	ND	ND	0.0015	ND	ND	ND
			06/01/18	ND	0.16	ND	0.0024	ND	ND	
MW-3	10.4'	8.3'	08/16/06	<b>9.78</b>	<b>1.69</b>	<b>0.0067</b>	0.0051	0.029	1.33	
			08/17/07	ns	0.906	ND	ND	0.043	0.0542	
			11/19/07	<b>3.09</b>	0.801	<b>0.0059</b>	0.0015	0.0375	0.0877	
		8.1'	6.95'	07/10/08	<b>4.5</b>	<b>1.66</b>	<b>0.0092</b>	0.0026	0.0837	0.153
			6.96'	05/25/11	<b>3.5</b>	1.15	<b>0.00915</b>	0.00375	0.105	0.4217
			6.85'	06/17/14	0.12	<b>1.8</b>	<b>0.01</b>	ND	0.0087	0.016
			06/01/18	<b>3.5</b>	<b>7</b>	<b>0.0069</b>	0.023	0.16	0.527	
MW-11	11.7'	9.6'	08/16/06	ns	ns	ns	ns	ns	ns	
			08/17/07	ns	ND	ND	ND	0.0035	0.0036	
			11/19/07	ND	ND	ND	ND	0.0011	0.0033	
		10.1'	8.7'	07/08/08	ND	ND	ND	ND	0.0011	0.0033
			8.78'	05/25/11	ND	ND	ND	ND	ND	ND
			8.25'	06/17/14	ND	ND	ND	ND	ND	ND
			06/01/18	ND	ND	ND	0.018	ND	ND	

Notes: ND= not detected, ns=no sample collected, u=unproductive well

Results in **bold** above ADEC Groundwater Cleanup Level, Table C 18 AAC 75.341

# 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: 580-77854-1  
Client Project/Site: Gas N Go

For:  
Cox Environmental Services  
712 W 12th Street  
Juneau, Alaska 99801

Attn: Jolene Cox



Authorized for release by:  
6/18/2018 2:32:00 PM

Sheri Cruz, Project Manager I  
(253)922-2310  
[sheri.cruz@testamericainc.com](mailto:sheri.cruz@testamericainc.com)



### LINKS

Review your project  
results through  
**TotalAccess**

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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- 11





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# Case Narrative

Client: Cox Environmental Services  
Project/Site: Gas N Go

TestAmerica Job ID: 580-77854-1

**Job ID: 580-77854-1**

**Laboratory: TestAmerica Seattle**

## Narrative

### Job Narrative 580-77854-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 6/6/2018 12:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.1° C.

#### GC/MS VOA

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-3 (580-77854-3) and MW-3-1 (580-77854-4). Elevated reporting limits (RLs) are provided.

Method(s) AK101: Surrogate recovery for the following samples were outside control limits: MW-3 (580-77854-3) and MW-3-1 (580-77854-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

Method(s) 3510C: As only three 125 mL aliquots of this sample were available, two of them were mixed in the separatory funnel to give a total volume of 250 mL needed for the preparation. The separatory funnel was directly treated with surrogate, and neither bottle received a DCM rinse. The gross and tare weights recorded are the sum of the bottles to be mixed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.



# Definitions/Glossary

Client: Cox Environmental Services  
Project/Site: Gas N Go

TestAmerica Job ID: 580-77854-1

## Qualifiers

### GC VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

## Glossary

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
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Client Sample Results

Client: Cox Environmental Services  
Project/Site: Gas N Go

TestAmerica Job ID: 580-77854-1

**Client Sample ID: MW-1**  
**Date Collected: 06/01/18 10:20**  
**Date Received: 06/06/18 12:50**

**Lab Sample ID: 580-77854-1**  
**Matrix: Water**

## Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			06/11/18 16:13	1
Ethylbenzene	ND		3.0		ug/L			06/11/18 16:13	1
m-Xylene & p-Xylene	ND		3.0		ug/L			06/11/18 16:13	1
o-Xylene	ND		2.0		ug/L			06/11/18 16:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 122		06/11/18 16:13	1
Trifluorotoluene (Surr)	101		80 - 120		06/11/18 16:13	1
4-Bromofluorobenzene (Surr)	102		80 - 125		06/11/18 16:13	1
Dibromofluoromethane (Surr)	97		77 - 120		06/11/18 16:13	1
1,2-Dichloroethane-d4 (Surr)	100		80 - 126		06/11/18 16:13	1

## Method: 8260C - Volatile Organic Compounds by GC/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		2.0		ug/L			06/12/18 13:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	106		80 - 122		06/12/18 13:07	1
Trifluorotoluene (Surr)	98		80 - 120		06/12/18 13:07	1
4-Bromofluorobenzene (Surr)	100		80 - 125		06/12/18 13:07	1
Dibromofluoromethane (Surr)	97		77 - 120		06/12/18 13:07	1
1,2-Dichloroethane-d4 (Surr)	100		80 - 126		06/12/18 13:07	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		0.25		mg/L			06/08/18 22:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	112		75 - 120		06/08/18 22:03	1
4-Bromofluorobenzene (Surr)	86		68 - 119		06/08/18 22:03	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		0.11		mg/L		06/13/18 08:56	06/15/18 00:23	1
RRO (nC25-nC36)	ND		0.25		mg/L		06/13/18 08:56	06/15/18 00:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	64		50 - 150	06/13/18 08:56	06/15/18 00:23	1
n-Triacontane-d62	88		50 - 150	06/13/18 08:56	06/15/18 00:23	1

TestAmerica Seattle



# Client Sample Results

Client: Cox Environmental Services  
Project/Site: Gas N Go

TestAmerica Job ID: 580-77854-1

**Client Sample ID: MW-2**  
**Date Collected: 06/01/18 10:40**  
**Date Received: 06/06/18 12:50**

**Lab Sample ID: 580-77854-2**  
**Matrix: Water**

## Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			06/11/18 16:39	1
<b>Toluene</b>	<b>2.4</b>		2.0		ug/L			06/11/18 16:39	1
Ethylbenzene	ND		3.0		ug/L			06/11/18 16:39	1
m-Xylene & p-Xylene	ND		3.0		ug/L			06/11/18 16:39	1
o-Xylene	ND		2.0		ug/L			06/11/18 16:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 122		06/11/18 16:39	1
Trifluorotoluene (Surr)	103		80 - 120		06/11/18 16:39	1
4-Bromofluorobenzene (Surr)	99		80 - 125		06/11/18 16:39	1
Dibromofluoromethane (Surr)	97		77 - 120		06/11/18 16:39	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 126		06/11/18 16:39	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		0.25		mg/L			06/08/18 22:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	113		75 - 120		06/08/18 22:35	1
4-Bromofluorobenzene (Surr)	94		68 - 119		06/08/18 22:35	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>0.16</b>		0.11		mg/L		06/13/18 08:56	06/15/18 00:50	1
RRO (nC25-nC36)	ND		0.24		mg/L		06/13/18 08:56	06/15/18 00:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	71		50 - 150	06/13/18 08:56	06/15/18 00:50	1
n-Triacontane-d62	89		50 - 150	06/13/18 08:56	06/15/18 00:50	1

# Client Sample Results

Client: Cox Environmental Services  
Project/Site: Gas N Go

TestAmerica Job ID: 580-77854-1

**Client Sample ID: MW-3**  
**Date Collected: 06/01/18 09:15**  
**Date Received: 06/06/18 12:50**

**Lab Sample ID: 580-77854-3**  
**Matrix: Water**

## Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	6.9		3.0		ug/L			06/11/18 17:05	1
o-Xylene	5.0		2.0		ug/L			06/11/18 17:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 122					06/11/18 17:05	1
Trifluorotoluene (Surr)	103		80 - 120					06/11/18 17:05	1
4-Bromofluorobenzene (Surr)	100		80 - 125					06/11/18 17:05	1
Dibromofluoromethane (Surr)	95		77 - 120					06/11/18 17:05	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 126					06/11/18 17:05	1

## Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	23		20		ug/L			06/12/18 17:11	10
Ethylbenzene	150		30		ug/L			06/12/18 17:11	10
m-Xylene & p-Xylene	490		30		ug/L			06/12/18 17:11	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	104		80 - 122					06/12/18 17:11	10
Trifluorotoluene (Surr)	99		80 - 120					06/12/18 17:11	10
4-Bromofluorobenzene (Surr)	103		80 - 125					06/12/18 17:11	10
Dibromofluoromethane (Surr)	98		77 - 120					06/12/18 17:11	10
1,2-Dichloroethane-d4 (Surr)	100		80 - 126					06/12/18 17:11	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	3.5		0.25		mg/L			06/08/18 23:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	116		75 - 120					06/08/18 23:07	1
4-Bromofluorobenzene (Surr)	156	X	68 - 119					06/08/18 23:07	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)	0.85		0.11		mg/L		06/13/18 08:56	06/15/18 01:46	1
RRO (nC25-nC36)	ND		0.25		mg/L		06/13/18 08:56	06/15/18 01:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	73		50 - 150				06/13/18 08:56	06/15/18 01:46	1
n-Triacontane-d62	91		50 - 150				06/13/18 08:56	06/15/18 01:46	1

TestAmerica Seattle



# Client Sample Results

Client: Cox Environmental Services  
Project/Site: Gas N Go

TestAmerica Job ID: 580-77854-1

**Client Sample ID: MW-3-1**

**Lab Sample ID: 580-77854-4**

**Date Collected: 06/01/18 09:20**

**Matrix: Water**

**Date Received: 06/06/18 12:50**

## Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	6.9		3.0		ug/L			06/11/18 17:31	1
o-Xylene	5.0		2.0		ug/L			06/11/18 17:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 122					06/11/18 17:31	1
Trifluorotoluene (Surr)	103		80 - 120					06/11/18 17:31	1
4-Bromofluorobenzene (Surr)	100		80 - 125					06/11/18 17:31	1
Dibromofluoromethane (Surr)	96		77 - 120					06/11/18 17:31	1
1,2-Dichloroethane-d4 (Surr)	96		80 - 126					06/11/18 17:31	1

## Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		20		ug/L			06/12/18 17:36	10
Ethylbenzene	160		30		ug/L			06/12/18 17:36	10
m-Xylene & p-Xylene	520		30		ug/L			06/12/18 17:36	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	107		80 - 122					06/12/18 17:36	10
Trifluorotoluene (Surr)	99		80 - 120					06/12/18 17:36	10
4-Bromofluorobenzene (Surr)	101		80 - 125					06/12/18 17:36	10
Dibromofluoromethane (Surr)	98		77 - 120					06/12/18 17:36	10
1,2-Dichloroethane-d4 (Surr)	100		80 - 126					06/12/18 17:36	10

## 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		0.25		mg/L			06/08/18 23:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	113		75 - 120					06/08/18 23:39	1
4-Bromofluorobenzene (Surr)	153	X	68 - 119					06/08/18 23:39	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)	7.0		0.11		mg/L		06/13/18 08:56	06/15/18 02:13	1
RRO (nC25-nC36)	0.34		0.25		mg/L		06/13/18 08:56	06/15/18 02:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	80		50 - 150				06/13/18 08:56	06/15/18 02:13	1
n-Triacontane-d62	88		50 - 150				06/13/18 08:56	06/15/18 02:13	1

TestAmerica Seattle

# Client Sample Results

Client: Cox Environmental Services  
Project/Site: Gas N Go

TestAmerica Job ID: 580-77854-1

**Client Sample ID: MW-11**

**Date Collected: 06/01/18 11:30**

**Date Received: 06/06/18 12:50**

**Lab Sample ID: 580-77854-5**

**Matrix: Water**

## Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			06/11/18 17:58	1
<b>Toluene</b>	<b>18</b>		2.0		ug/L			06/11/18 17:58	1
Ethylbenzene	ND		3.0		ug/L			06/11/18 17:58	1
m-Xylene & p-Xylene	ND		3.0		ug/L			06/11/18 17:58	1
o-Xylene	ND		2.0		ug/L			06/11/18 17:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	100		80 - 122		06/11/18 17:58	1
<i>Trifluorotoluene (Surr)</i>	103		80 - 120		06/11/18 17:58	1
<i>4-Bromofluorobenzene (Surr)</i>	100		80 - 125		06/11/18 17:58	1
<i>Dibromofluoromethane (Surr)</i>	97		77 - 120		06/11/18 17:58	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	99		80 - 126		06/11/18 17:58	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		0.25		mg/L			06/12/18 23:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Trifluorotoluene (Surr)</i>	101		75 - 120		06/12/18 23:24	1
<i>4-Bromofluorobenzene (Surr)</i>	94		68 - 119		06/12/18 23:24	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		0.11		mg/L		06/13/18 08:56	06/15/18 02:41	1
RRO (nC25-nC36)	ND		0.24		mg/L		06/13/18 08:56	06/15/18 02:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	73		50 - 150	06/13/18 08:56	06/15/18 02:41	1
<i>n-Triacontane-d62</i>	93		50 - 150	06/13/18 08:56	06/15/18 02:41	1

# QC Sample Results

Client: Cox Environmental Services  
Project/Site: Gas N Go

TestAmerica Job ID: 580-77854-1

## Method: 8260C - Volatile Organic Compounds by GC/MS

**Lab Sample ID: MB 580-275914/5**

**Matrix: Water**

**Analysis Batch: 275914**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			06/11/18 12:44	1
Toluene	ND		2.0		ug/L			06/11/18 12:44	1
Ethylbenzene	ND		3.0		ug/L			06/11/18 12:44	1
m-Xylene & p-Xylene	ND		3.0		ug/L			06/11/18 12:44	1
o-Xylene	ND		2.0		ug/L			06/11/18 12:44	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 122		06/11/18 12:44	1
Trifluorotoluene (Surr)	104		80 - 120		06/11/18 12:44	1
4-Bromofluorobenzene (Surr)	97		80 - 125		06/11/18 12:44	1
Dibromofluoromethane (Surr)	98		77 - 120		06/11/18 12:44	1
1,2-Dichloroethane-d4 (Surr)	109		80 - 126		06/11/18 12:44	1

**Lab Sample ID: LCS 580-275914/6**

**Matrix: Water**

**Analysis Batch: 275914**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	9.66		ug/L		97	75 - 128
Toluene	10.0	9.77		ug/L		98	75 - 120
Ethylbenzene	10.0	9.39		ug/L		94	75 - 120
m-Xylene & p-Xylene	10.0	9.66		ug/L		97	75 - 120
o-Xylene	10.0	9.82		ug/L		98	74 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	98		80 - 122
Trifluorotoluene (Surr)	98		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 125
Dibromofluoromethane (Surr)	100		77 - 120
1,2-Dichloroethane-d4 (Surr)	107		80 - 126

**Lab Sample ID: LCSD 580-275914/7**

**Matrix: Water**

**Analysis Batch: 275914**

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

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	10.0	8.44		ug/L		84	75 - 128	13	14
Toluene	10.0	8.80		ug/L		88	75 - 120	10	13
Ethylbenzene	10.0	8.71		ug/L		87	75 - 120	8	14
m-Xylene & p-Xylene	10.0	8.85		ug/L		88	75 - 120	9	14
o-Xylene	10.0	8.82		ug/L		88	74 - 120	11	16

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 122
Trifluorotoluene (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 125
Dibromofluoromethane (Surr)	99		77 - 120

TestAmerica Seattle

# QC Sample Results

Client: Cox Environmental Services  
Project/Site: Gas N Go

TestAmerica Job ID: 580-77854-1

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCSD 580-275914/7**  
**Matrix: Water**  
**Analysis Batch: 275914**

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

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	106		80 - 126

**Lab Sample ID: MB 580-276016/5**  
**Matrix: Water**  
**Analysis Batch: 276016**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		3.0		ug/L			06/12/18 11:04	1
Toluene	ND		2.0		ug/L			06/12/18 11:04	1
Ethylbenzene	ND		3.0		ug/L			06/12/18 11:04	1
m-Xylene & p-Xylene	ND		3.0		ug/L			06/12/18 11:04	1
o-Xylene	ND		2.0		ug/L			06/12/18 11:04	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Toluene-d8 (Surr)	104		80 - 122		06/12/18 11:04	1
Trifluorotoluene (Surr)	99		80 - 120		06/12/18 11:04	1
4-Bromofluorobenzene (Surr)	102		80 - 125		06/12/18 11:04	1
Dibromofluoromethane (Surr)	100		77 - 120		06/12/18 11:04	1
1,2-Dichloroethane-d4 (Surr)	101		80 - 126		06/12/18 11:04	1

**Lab Sample ID: LCS 580-276016/6**  
**Matrix: Water**  
**Analysis Batch: 276016**

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

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
	Added	Result	Qualifier				Limits
Benzene	10.0	9.69		ug/L		97	75 - 128
Toluene	10.0	10.1		ug/L		101	75 - 120
Ethylbenzene	10.0	9.90		ug/L		99	75 - 120
m-Xylene & p-Xylene	10.0	10.1		ug/L		101	75 - 120
o-Xylene	10.0	10.2		ug/L		102	74 - 120

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	100		80 - 122
Trifluorotoluene (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 125
Dibromofluoromethane (Surr)	101		77 - 120
1,2-Dichloroethane-d4 (Surr)	100		80 - 126

**Lab Sample ID: LCSD 580-276016/7**  
**Matrix: Water**  
**Analysis Batch: 276016**

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

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Added	Result	Qualifier				Limits	RPD	Limit
Benzene	10.0	9.73		ug/L		97	75 - 128	0	14
Toluene	10.0	10.1		ug/L		101	75 - 120	1	13
Ethylbenzene	10.0	10.0		ug/L		100	75 - 120	1	14
m-Xylene & p-Xylene	10.0	10.2		ug/L		102	75 - 120	1	14

TestAmerica Seattle



# QC Sample Results

Client: Cox Environmental Services  
Project/Site: Gas N Go

TestAmerica Job ID: 580-77854-1

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCSD 580-276016/7**  
**Matrix: Water**  
**Analysis Batch: 276016**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
o-Xylene	10.0	10.3		ug/L		103	74 - 120	1	16
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCSD Qualifier</b>	<b>Limits</b>						
Toluene-d8 (Surr)	99		80 - 122						
Trifluorotoluene (Surr)	99		80 - 120						
4-Bromofluorobenzene (Surr)	101		80 - 125						
Dibromofluoromethane (Surr)	99		77 - 120						
1,2-Dichloroethane-d4 (Surr)	98		80 - 126						

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

**Lab Sample ID: MB 580-275793/5**  
**Matrix: Water**  
**Analysis Batch: 275793**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		0.25		mg/L			06/08/18 13:28	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>MB Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Trifluorotoluene (Surr)	108		75 - 120					06/08/18 13:28	1
4-Bromofluorobenzene (Surr)	88		68 - 119					06/08/18 13:28	1

**Lab Sample ID: LCS 580-275793/6**  
**Matrix: Water**  
**Analysis Batch: 275793**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C10	1.00	0.952		mg/L		95	77 - 123		
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCS Qualifier</b>	<b>Limits</b>						
Trifluorotoluene (Surr)	102		75 - 120						
4-Bromofluorobenzene (Surr)	92		68 - 119						

**Lab Sample ID: LCSD 580-275793/7**  
**Matrix: Water**  
**Analysis Batch: 275793**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C10	1.00	0.903		mg/L		90	77 - 123	5	20
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCSD Qualifier</b>	<b>Limits</b>						
Trifluorotoluene (Surr)	97		75 - 120						
4-Bromofluorobenzene (Surr)	76		68 - 119						

TestAmerica Seattle

# QC Sample Results

Client: Cox Environmental Services  
Project/Site: Gas N Go

TestAmerica Job ID: 580-77854-1

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

**Lab Sample ID: MB 580-276068/6**  
**Matrix: Water**  
**Analysis Batch: 276068**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		0.25		mg/L			06/12/18 16:10	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	98		75 - 120					06/12/18 16:10	1
4-Bromofluorobenzene (Surr)	88		68 - 119					06/12/18 16:10	1

**Lab Sample ID: LCS 580-276068/7**  
**Matrix: Water**  
**Analysis Batch: 276068**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C10	1.00	0.929		mg/L		93	77 - 123
Surrogate	%Recovery	LCS Qualifier	Limits				
Trifluorotoluene (Surr)	99		75 - 120				
4-Bromofluorobenzene (Surr)	107		68 - 119				

**Lab Sample ID: LCSD 580-276068/8**  
**Matrix: Water**  
**Analysis Batch: 276068**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C10	1.00	0.958		mg/L		96	77 - 123	3	20
Surrogate	%Recovery	LCSD Qualifier	Limits						
Trifluorotoluene (Surr)	101		75 - 120						
4-Bromofluorobenzene (Surr)	103		68 - 119						

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

**Lab Sample ID: MB 580-276104/1-A**  
**Matrix: Water**  
**Analysis Batch: 276270**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 276104**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	ND		0.11		mg/L		06/13/18 08:56	06/14/18 20:42	1
RRO (nC25-nC36)	ND		0.25		mg/L		06/13/18 08:56	06/14/18 20:42	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	68		50 - 150				06/13/18 08:56	06/14/18 20:42	1
n-Triacontane-d62	97		50 - 150				06/13/18 08:56	06/14/18 20:42	1

TestAmerica Seattle

# QC Sample Results

Client: Cox Environmental Services  
 Project/Site: Gas N Go

TestAmerica Job ID: 580-77854-1

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

Lab Sample ID: LCS 580-276104/2-A

Matrix: Water

Analysis Batch: 276270

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 276104

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
DRO (nC10-<nC25)	2.00	1.51		mg/L		75	75 - 125
RRO (nC25-nC36)	2.00	1.68		mg/L		84	60 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>o</i> -Terphenyl	78		50 - 150
<i>n</i> -Triacontane-d62	80		50 - 150



# Lab Chronicle

Client: Cox Environmental Services  
Project/Site: Gas N Go

TestAmerica Job ID: 580-77854-1

## Client Sample ID: MW-1

Date Collected: 06/01/18 10:20

Date Received: 06/06/18 12:50

## Lab Sample ID: 580-77854-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	275914	06/11/18 16:13	TL1	TAL SEA
Total/NA	Analysis	8260C	RA	1	276016	06/12/18 13:07	TL1	TAL SEA
Total/NA	Analysis	AK101		1	275793	06/08/18 22:03	JCV	TAL SEA
Total/NA	Prep	3510C			276104	06/13/18 08:56	JCM	TAL SEA
Total/NA	Analysis	AK102 & 103		1	276270	06/15/18 00:23	CJ	TAL SEA

## Client Sample ID: MW-2

Date Collected: 06/01/18 10:40

Date Received: 06/06/18 12:50

## Lab Sample ID: 580-77854-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	275914	06/11/18 16:39	TL1	TAL SEA
Total/NA	Analysis	AK101		1	275793	06/08/18 22:35	JCV	TAL SEA
Total/NA	Prep	3510C			276104	06/13/18 08:56	JCM	TAL SEA
Total/NA	Analysis	AK102 & 103		1	276270	06/15/18 00:50	CJ	TAL SEA

## Client Sample ID: MW-3

Date Collected: 06/01/18 09:15

Date Received: 06/06/18 12:50

## Lab Sample ID: 580-77854-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	275914	06/11/18 17:05	TL1	TAL SEA
Total/NA	Analysis	8260C	DL	10	276016	06/12/18 17:11	TL1	TAL SEA
Total/NA	Analysis	AK101		1	275793	06/08/18 23:07	JCV	TAL SEA
Total/NA	Prep	3510C			276104	06/13/18 08:56	JCM	TAL SEA
Total/NA	Analysis	AK102 & 103		1	276270	06/15/18 01:46	CJ	TAL SEA

## Client Sample ID: MW-3-1

Date Collected: 06/01/18 09:20

Date Received: 06/06/18 12:50

## Lab Sample ID: 580-77854-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	275914	06/11/18 17:31	TL1	TAL SEA
Total/NA	Analysis	8260C	DL	10	276016	06/12/18 17:36	TL1	TAL SEA
Total/NA	Analysis	AK101		1	275793	06/08/18 23:39	JCV	TAL SEA
Total/NA	Prep	3510C			276104	06/13/18 08:56	JCM	TAL SEA
Total/NA	Analysis	AK102 & 103		1	276270	06/15/18 02:13	CJ	TAL SEA



# Lab Chronicle

Client: Cox Environmental Services  
Project/Site: Gas N Go

TestAmerica Job ID: 580-77854-1

**Client Sample ID: MW-11**

**Date Collected: 06/01/18 11:30**

**Date Received: 06/06/18 12:50**

**Lab Sample ID: 580-77854-5**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	275914	06/11/18 17:58	TL1	TAL SEA
Total/NA	Analysis	AK101		1	276068	06/12/18 23:24	JCV	TAL SEA
Total/NA	Prep	3510C			276104	06/13/18 08:56	JCM	TAL SEA
Total/NA	Analysis	AK102 & 103		1	276270	06/15/18 02:41	CJ	TAL SEA

**Laboratory References:**

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



# Accreditation/Certification Summary

Client: Cox Environmental Services  
Project/Site: Gas N Go

TestAmerica Job ID: 580-77854-1

## Laboratory: TestAmerica Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-024	01-19-19

1

2

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11

# Sample Summary

Client: Cox Environmental Services  
Project/Site: Gas N Go

TestAmerica Job ID: 580-77854-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-77854-1	MW-1	Water	06/01/18 10:20	06/06/18 12:50
580-77854-2	MW-2	Water	06/01/18 10:40	06/06/18 12:50
580-77854-3	MW-3	Water	06/01/18 09:15	06/06/18 12:50
580-77854-4	MW-3-1	Water	06/01/18 09:20	06/06/18 12:50
580-77854-5	MW-11	Water	06/01/18 11:30	06/06/18 12:50

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Loc: 580  
77854

11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290  
9405 SW Nimbus Ave., Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210  
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

## CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: <u>COX ENVIRONMENTAL SERVICES</u>		INVOICE TO: <u>JCOX@COXENV.COM</u>		<b>TURNAROUND REQUEST</b> in Business Days * Organic & Inorganic Analyses <input checked="" type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 Petroleum Hydrocarbon Analyses <input checked="" type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 OTHER Specify: * Turnaround Requests less than standard may incur Rush Charges.				
REPORT TO: <u>JCOX@COXENV.COM</u>		ADDRESS: <u>JCOX@COXENV.COM</u>						
PHONE: <u>907.586.4447</u>		P.O. NUMBER:						
PROJECT NAME: <u>GRS N G10</u>		PRESERVATIVE						
PROJECT NUMBER:		REQUESTED ANALYSES						
SAMPLED BY: <u>J. COX</u>		AF102 AF101 BTX ONLY						
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	AF102	AF101	BTX ONLY	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1 MW-1	6.1.18 10:20	X	X	X	W	8		
2 MW-2	↓ 10:40	X	X	X	↓	8		
3 MW-3	9:15	X	X	X	↓	8		
4 MW-3-1	9:20	X	X	X	↓	8		
5 MW-11	11:30	X	X	X	↓	8		
6								
7								
8								
9								
10								
RELEASED BY: <u>JCOX</u>		DATE: <u>6.5.18</u>		RECEIVED BY: <u>Francisco Lung Jr</u>		DATE: <u>6/6/18</u>		
PRINT NAME: <u>JOLENE COX</u>		TIME: <u>15:00</u>		PRINT NAME: <u>Francisco Lung Jr</u>		TIME: <u>1730</u>		
FIRM: <u>CS</u>				FIRM: <u>TASEH</u>				
ADDITIONAL REMARKS:								

Therm. ID: IR4 Cor: 1.1 ° Unc: 0.4 °  
 Cooler Dsc: Lo Pine  
 Packing: Bubble FedEx: \_\_\_\_\_  
 Cust. Seal: Yes X No \_\_\_\_\_ UPS: \_\_\_\_\_  
 Wet/Packs/Dry Ice/None \_\_\_\_\_ Lab Cour: X  
 Other: \_\_\_\_\_





# Login Sample Receipt Checklist

Client: Cox Environmental Services

Job Number: 580-77854-1

**Login Number: 77854**  
**List Number: 1**  
**Creator: Gall, Brandon A**

**List Source: TestAmerica Seattle**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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 containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## Laboratory Data Review Checklist

**Completed by:** Jolene M Cox

**Title:** Principal Environmental Scientist

**Date:** July 3, 2018

**CS Report Name:** Gas N Go

**Report Date:** June 18, 2018

**Consultant Firm:** Cox Environmental Services

**Laboratory Name:** TestAmerica, Inc.

**Laboratory Report Number:** 580-77854-1

**ADEC File Number:** 1513.26.013

**ADEC RecKey Number:**

### 1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses? **YES**
- 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? **N/A**

### 2. Chain of Custody (COC)

- a. COC information completed, signed, and dated (including released/received by)? **YES**
- b. Correct analyses requested? **YES**

### 3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt ( $4^{\circ} \pm 2^{\circ} \text{C}$ )? **YES**
- b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)? **YES**
- c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)? **N/A**
- 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.? **As only three 125 mL aliquots of this sample were available, two of them were mixed in the separatory funnel to give a total volume of 250 mL needed for the preparation. The separatory funnel was directly treated with surrogate, and neither bottle received a DCM rinse. The gross and tare weights recorded are the sum of the bottles to be mixed.**
- e. Data quality or usability affected? **NO**

### 4. Case Narrative

- a. Present and understandable? **YES**
- b. Discrepancies, errors or QC failures identified by the lab? **NO**
- c. Were all corrective actions documented? **N/A**
- d. What is the effect on data quality/usability according to the case narrative? **NONE**

### 5. Samples Results

- a. Correct analyses performed/reported as requested on COC? **YES**
- b. All applicable holding times met? **YES**
- c. All soils reported on a dry weight basis? **YES**
- d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project? **YES**
- e. Data quality or usability affected? **NO**

## 6. QC Samples

- a. Method Blank
  - i. One method blank reported per matrix, analysis and 20 samples? **YES**
  - ii. All method blank results less than PQL? **YES**
  - iii. If above PQL, what samples are affected? **N/A**
  - iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined? **N/A**
  - v. Data quality or usability affected? **NO**
- b. Laboratory Control Sample/Duplicate (LCS/LCSD)
  - i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples (LCS/LCSD required per AK methods, LCS required per SW846)? **YES**
  - ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples? **N/A**
  - iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)? **YES**
  - iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)? **YES**
  - v. If %R or RPD is outside of acceptable limits, what samples are affected? **N/A**
  - vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined? **N/A**
  - vii. Data quality or usability affected? **NO**
- c. Surrogates – Organics Only
  - i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples? **YES**
  - ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)? **NO, Surrogate recovery for the following samples were outside control limits: MW-3 (580-77854-3) and MW-3-1 (580-77854-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.**
  - iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined? **YES**
  - iv. Data quality or usability affected? **NO**
- d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.):
  - i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples (if not, enter explanation below.)? **YES**
  - ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC (If not, a comment explaining why must be entered below)? **YES**
  - iii. All results less than PQL? **YES**
  - iv. If above PQL, what samples are affected? **N/A**
  - v. Data quality or usability affected? **NO**
- e. Field Duplicate
  - i. One field duplicate submitted per matrix, analysis and 10 project samples? **YES**
  - ii. Submitted blind to lab? **YES**
  - iii. Precision – All relative percent differences (RPD) less than specified DQOs (Recommended: 30% water, 50% soil)? **NO**  
$$\text{RPD (\%)} = \text{Absolute value of: } (R1-R2)/((R1+R2)/2) \times 100$$

Where R1 = Sample Concentration R2 = Field Duplicate Concentration
  - iv. Data quality or usability affected? **NO, the high concentration is used.**
- f. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below.)
  - i. All results less than PQL? **N/A**
  - ii. If above PQL, what samples are affected? **N/A**
  - iii. Data quality or usability affected? **NO**

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

- a. Defined and appropriate? **N/A**