Stantec

Technical Memorandum

To:	Anastasia Duarte, REHS/RS Retail Environmental Remediation Administrator, Pacific Division Speedway LLC 3450 South 344th Way, Suite 201 Auburn, WA 98001	From:	Bob Gilfilian, PE Principal Senior Engineer Stantec Consulting Services, Inc. 725 E Fireweed Lane, Suite 200 Anchorage, Alaska 99508
File:	UST Facility #1112, ADEC File 100.26.026	Date:	April 20, 2020

Reference: Speedway Store 5315 (Former Tesoro 2Go Mart 111) - Installation of Remediation Well RM-2

1 INTRODUCTION

On behalf Speedway LLC (former Tesoro), Stantec Consulting Inc. (Stantec) is pleased to submit this Technical Memorandum for the August 2019 installation of the Remediation Well RM-2 at Speedway Store 5315 (Former Tesoro 2Go Mart 111) located at 3679 College Road, Fairbanks, Alaska (see Figure 1 Site Location Map).

This Technical Memorandum describes the results of field screening and analytical sampling and well construction details. The findings presented herein were provided to you and Pete Campbell, P.E (ADEC Project Manager) during the annual work plan meeting with Tesoro and ADEC held on December 12, 2019, at the Stantec office in Anchorage, Alaska.

This Technical Memorandum describes the results of field efforts and analytical sampling conducted during the installation of the Remediation Well (RM-2) in the area adjacent to the former air sparge and soil vapor extraction blower knack boxes (see Figure 2 Site Map). This memo also includes a description of the well construction details. Jake Keldsen, EIT, Engineer in Training of Stantec, completed the well installation on July 30, 2019. Jake completed the field screening and sampling of soil boring cuttings to evaluate the presence of residual petroleum at the Tesoro 2Go Mart 111.

In addition, this memo includes a description of the well development and water sample test results. The well was developed and sampled by Jake Keldsen and Bob Gilfilian (Stantec Principal Engineer) on August 29, 2019, a month after well construction.

2 SOIL BORING AND SAMPLING METHODOLOGY

Drilling for the well installation was completed on July 30, 2019. Drilling was conducted by direct push using a Geoprobe 8040DT track mounted drilling rig operated by GeoTek Alaska from Anchorage, Alaska. Prior to drilling the bore hole, a vacuum truck was used to extract the upper 5-feet of overburden. Starting at depth of 5-feet, representative soil samples were extracted by macro-core with 5-foot disposable 1.6” diameter core sleeves. The well casing was subsequently set via 7.5-inch diameter hollow stem auger with expendable drive point.

2.1 FIELD SCREENING METHODOLOGY AND RESULTS

Field screening head space samples were collected from each soil sample extracted during the geotechnical investigation to a total depth of 40-feet below ground surface (bgs). The groundwater table interface was encountered at an approximate depth of 15-feet bgs. A portion of each soil sample, collected with macrocore by direct push, was transferred to a re-sealable polyethylene bag for screening by photoionization detector (PID). Calibration of the PID was conducted at the start of the day with a 100 part per million calibration standard. Samples were warmed and allowed to volatilize for at least 10 minutes prior to screening.

Reference: **Speedway Store 5315 (Former Tesoro 2Go Mart 111) - Installation of Remediation Well RM-2**

Field screening results are summarized on the well log in Attachment 1. Field screening results ranged from 0.0 to 930.5 parts per million by volume (ppmv). Fuel odor was observed alongside elevated field screening results.

2.2 ANALYTICAL SAMPLING METHODOLOGY AND RESULTS

The soil boring was sampled and field screened to a depth of 40 feet bgs. Representative analytical samples were collected from field screening locations where visual and olfactory evidence implied apparent petroleum contamination prior to the collection of field screening samples. Three analytical soil samples represented of the soil boring were collected at depths of 15.0 to 15.5-feet, 30.0 to 30.5-feet and 39.5 to 40.0-feet. Analytical samples were submitted to Eurofins TestAmerica Laboratories Inc. (TestAmerica) for analysis of select volatile organic compounds (VOCs) by United States Environmental Protection Agency (EPA) Method 8260C, polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270D Selective Ion Monitoring (SIM), gasoline range organics (GRO) by Alaska Test Method AK101 (AK101), and diesel range organics (DRO) by Alaska Test Method AK102 (AK102). The laboratory analytical report is provided in Attachment 2.

Analytical sample results were compared to 18 Alaska Administrative Code (AAC) 75 Method Two Migration-to-Groundwater Soil Cleanup Levels (SCLs). A summary of analytical detections and exceedances are provided below in Table 1. There were no exceedances of VOCs, PAHs, GRO, and DRO in the soil boring results.

Table 1 Soil Analytical Results
Samples collected on July 30, 2019

Sample Identification	Benzene[1] (µg/Kg)	1,2,4-Trimethylbenzene[1] (µg/Kg)	Naphthalene[2] (µg/Kg)	2-Methylnaphthalene[2] (µg/Kg)	1-Methylnaphthalene[2] (µg/Kg)	Phananthrene[2] (µg/Kg)	Fluoranthene[2] (µg/Kg)	Pyrene[2] (µg/Kg)	Benzo[a]anthracene[2] (µg/Kg)
RM-2 (15-15.5)	U (20)	33	13	29	17	9.0	8.6	7.1	5.3
RM-2 (30-30.5)	U (18)	U (25)	U (5.7)	U (5.7)	U (5.7)	U (5.7)	U (5.7)	U (5.7)	U (5.7)
RM-2 (39.5-40)	U (22)	U (29)	U (5.9)	U (5.9)	U (5.9)	U (5.9)	U (5.9)	U (5.9)	U (5.9)
DUP-01 (duplicate of RM-2)	U (18)	62	U (5.4)	14	6.9	6.1	7.1	5.7	U (5.4)
Trip Blank	**U (30)**	U (40)	NT	NT	NT	NT	NT	NT	NT
SCLs	**22**	**610**	**38**	**1,300**	**410**	**39,000**	**590,000**	**87,000**	**700**

Key:

1 – Analyzed by EPA Method 8260C.

2 - Analyzed by EPA Method 8270D SIM.

EPA – U.S. Environmental Protection Agency

µg/Kg - micrograms per kilogram

NT – Not tested

SCLs – Soil cleanup levels, per Alaska Department of Environmental Conservation 18 Alaska Administrative Code 75.345, Table B1, updated September 29, 2018.

U – Undetected above practical quantitation limit shown in parentheses

Bold indicates the concentration exceeds the SCL or, if not detected, the practical quantitation limit exceeds the SCL

2.2.1 Analytical Sampling Quality Assurance (QA) and Quality Control (QC)

TestAmerica met all laboratory QA/QC criteria for the sampling event with one exception: 1) the laboratory reporting limit for benzene exceeded the SCL in the trip blank. Specific data regarding this deficiency is provided in Attachment 2 in the Alaska Department of Environmental Conservation (ADEC) Laboratory Data Review Checklist.

One field duplicate was submitted blindly to the laboratory for analysis of precision of the reported results by relative percent difference (RPD). Sample DUP-01 was a duplicate of sample RM-2 (15-15.5). A summary of RPDs which could be calculated are provided in Table 2. For all other analytes, the results were not detected in one or both of the primary and duplicate samples. The RPD values exceeded the data quality objectives for 1,2,4-Trimethylbenzene, 2-Methylnaphthalene, and 1-Methylnaphthalene. This may be in part due to the limited sample volume generated by the macrocore sampling technique and soil conditions encountered. The highest reported concentrations will be relied upon for site management decision making. The holding times for VOCs, PAHs, GRO, and DRO in the soil samples were within established criteria.

Table 2 Laboratory Quality Control Objectives

Quality Control Designation	Tolerance	Results for This Event
Holding Times		
DRO/Soil/to analyze	40 days	16 days
DRO/Soil/to extract	14 days	14 days
GRO/Soil/to analyze	14 days	13 days
VOCs/Soil/to analyze	14 days	10 days
PAHs/Soil/to analyze	40 days	15 days
PAHs/Soil/to extract	14 days	14 days
Field Duplicates – Precision		
1,2,4-Trimethylbenzene	± 50%	-61.05%
2-Methylnaphthalene	± 50%	69.77%
1-Methylnaphthalene	± 50%	84.52%
Phenanthrene	± 50%	38.41%
Fluoranthene	± 50%	19.11%
Pyrene	± 50%	21.88%

Key:
% – percent
± – plus or minus
DRO – diesel range organics
GRO – gasoline range organics
PAH – polynuclear aromatic hydrocarbon
VOC – volatile organic compound

3 REMEDIATION WELL CONSTRUCTION, DEVELOPMENT, AND SAMPLING

The remediation well was set subsequent to soil sampling by 7.5-inch diameter hollow stem auger with an expendable drive point. Photographs taken at the site during the well drilling and subsequent well development are provided in Attachment 3.

Reference: **Speedway Store 5315 (Former Tesoro 2Go Mart 111) - Installation of Remediation Well RM-2**

3.1 REMEDIATION WELL CONSTRUCTION

The remediation well was constructed of 4-inch diameter Schedule 40 poly vinyl chloride (PVC). The well casing consisted of a 4-inch diameter Schedule 40 PVC threaded casing with a 20 foot long 0.010 slot Vee-Wire well screen. As shown on the completed well construction log (see Attachment 1), the cased well has a total depth of 35-feet. The bottom 20-foot section of the well was screened from 15 to 35-feet bgs. A pre-washed 10-20 mesh quartz sand filter pack was placed around the well screen from 13 to 35-feet bgs. Pea gravel was placed from 1 to 8-feet bgs between the outer well casing and the edge of the 12-inch diameter auger hole. Hydrated bentonite chips were placed in the boring annular space from 8 to 13-feet bgs. The well was completed at grade (top of existing concrete pad) and covered in a flush mount cover. Soil cuttings from the drilling operation were temporarily stored on-site in four properly labeled and securely sealed 55 gallon steel drums.

3.2 WELL DEVELOPMENT AND SAMPLING

Well development and sampling was conducted by Jake Keldsen and Bob Gilfilian (Stantec Principal Engineer) August 29, 2019. A 0.5 horsepower submersible pump manufactured by Grundfos (Model 1-SQ-160) was used for the developing and pump testing the well. The pump was set at a depth of 24.5-feet BGS. The pumped water was discharged into the inlet line for the proposed chemox injection well consisting of the former SVE #3 horizontal line located approximately 20-feet south of the southern fuel dispenser island (see Figure 2). The well was pumped for 66 minutes for an average rate of 6 gallons per minute (gpm). A total of 382 gallons was pumped from the well and water levels measured in the well was noted to drop slightly less than 0.5 feet.

Representative water samples were collected during the pump operation and tested in the field for the following parameters: pH, specific conductance, dissolved oxygen, redox potential, and temperature. A summary of the field measurements are presented below in Table 3.

Table 3 Constant Rate Test Data Well Pump RM-2 at TNS 111

Pump On: 8/29/19 @ 0930				**Static Water Level: 11.38'**							
Pump Off: 8/29/19 @ 1036				**Measuring Point: TOC**							
Duration of test: 1 Hour 6 min				**Staff: J Keldsen, B Gilfilian**							
Date	Clock Time (am)	Time since pump started t (min)	Meter Reading (')	Well Water Level Reading (feet)	Total Flow Volume (gal)	Dissolved Oxygen (mg/L)	Redox (mV)	pH	Specific Conductivity (uS/cm)	Temperature (Deg C)	Comments Observations
8/29/2019	9:30	0	0.00	11.38	0	NT	NT	NT	NT	NT	
8/29/2019	9:31	1	13.00	11.5	13	NT	NT	NT	NT	NT	5 gpm
8/29/2019	9:40	10	43.00	11.5	43	2	196	6.3	494	5.5	
8/29/2019	9:50	20	81.00	11.58	81	1	137	6.7	461	5.9	
8/29/2019	10:00	30	136.00	11.71	136	2.1	139	6.8	462	4.6	6 gpm
8/29/2019	10:10	40	207.00	11.81	207	NT	NT	NT	NT	NT	
8/29/2019	10:20	50	282.00	11.84	282	2.1	134	6.8	466	5.8	
8/29/2019	10:30	60	358.00	11.86	358	1.6	138	6.9	474	7	
8/29/2019	10:36	66	382.00	11.86	382	NT	NT	NT	NT	NT	
8/29/2019	10:36	66	Pump Off								
NOTES: Average flow rate measured 5.9 gpm NT - not tested End of test water samples collected for lab analyses (sodium, BTEX, GRO, and DRO)											

Reference: **Speedway Store 5315 (Former Tesoro 2Go Mart 111) - Installation of Remediation Well RM-2**

Upon completion of the pump test, a water sample was collected from the flowing discharged water and sent to SGS Laboratory for the following analytical tests: BTEX, GRO, DRO and sodium. A copy of the lab results is included in Attachment 4. The following is a summary of the lab results that shows none of the chemicals of concern (except ethylbenzene) exceed their representative clean-up levels.

Sodium 22900 ug/L
Diesel Range Organics 0.384J mg/L
Benzene 1.79 ug/L
Ethylbenzene 15.7 ug/L
Gasoline Range Organics 0.479 mg/L
o-Xylene 10.0 ug/L
P & M -Xylene 56.6 ug/L
Toluene 2.09 ug/L
Xylenes (total) 66.6 ug/L

On September 5, 2019, ADEC approved the transport, treatment and disposal of contaminated media of the 4 drums of soil cuttings by NRC Alaska LLC (NRC) in Fairbanks. Attachment 5 includes a copy of the ADEC signed approval form for off-site treatment of the drum of soil cuttings, and the non-hazardous waste manifest from NRC dated September 9, 2019, for the pickup of the soil cuttings drum.

Please feel free to contact me if you have any questions regarding the findings reported herein.

STANTEC CONSULTING SERVICES INC.

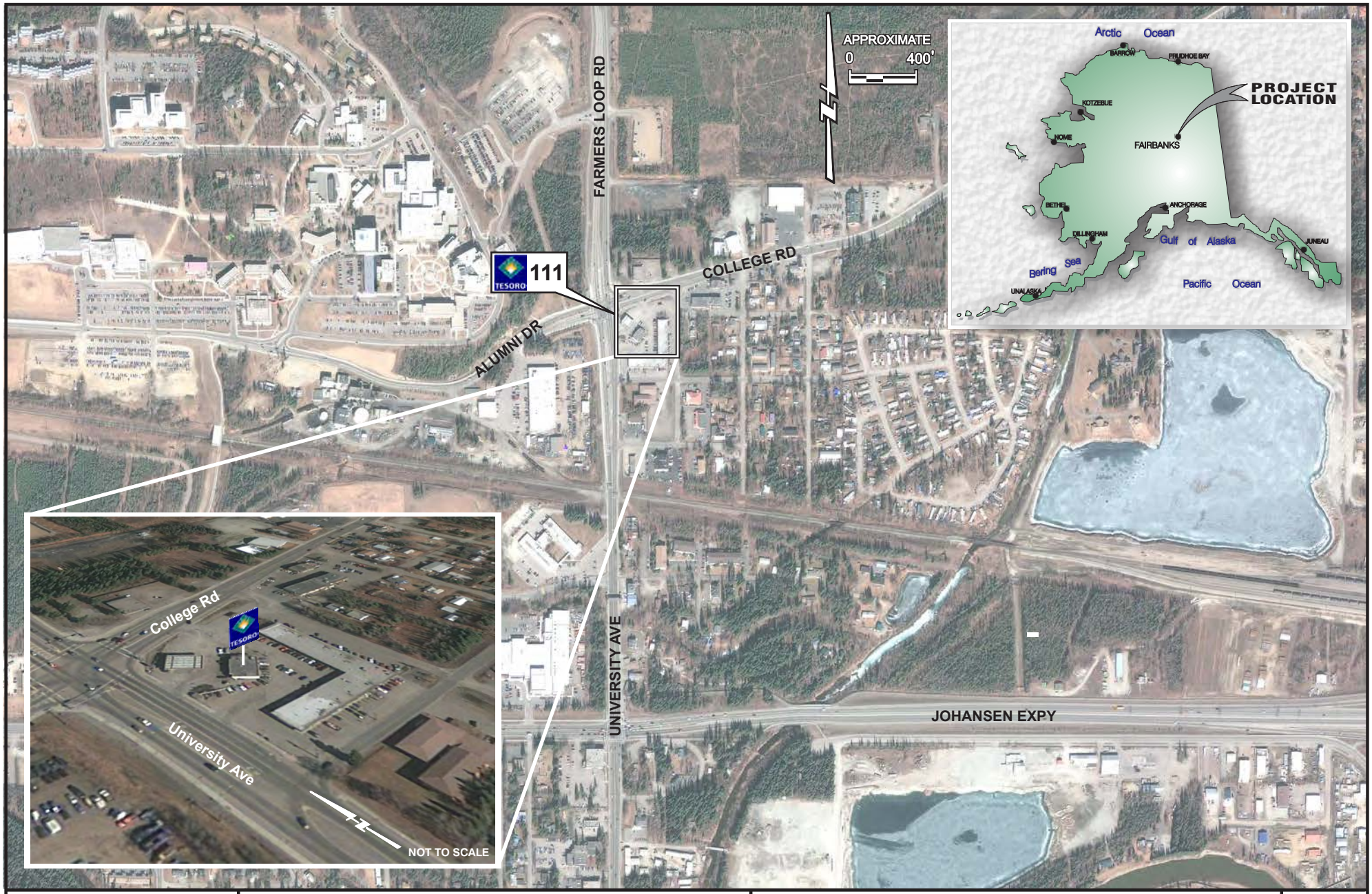
Bob Gilfilian

Bob Gilfilian, PE
Principal, Civil Engineer
725 E Fireweed Lane, Suite 200
Anchorage, AK 99508
Phone: (907) 277-9883
bob.gilfilian@stantec.com

Attachments:
Figure 1 Site Vicinity Map
Figure 2 Site Plan with RM-2 Well Location
Attachment 1 Soil Boring and Remediation Well Construction Log
Attachment 2 TestAmerica Laboratory Data Report for Soil Samples and Data Review Checklist
Attachment 3 Site Photographs
Attachment 4 SGS Laboratory Water Test Results for Water Samples Collected During Well Pump Test
Attachment 5 ADEC Approval to Haul Contaminated Soil dated NRC Manifest for Drums of Soil Cuttings

c. Pete Campbell, ADEC Contaminated Sites Program

FILE: S:\CAD\Proj\Tesoro\TGMart111_185751227\2019\Remedial RM-2 Well Installation\October 2019\Fig01 Location and Vicinity Map.cdr



Stantec

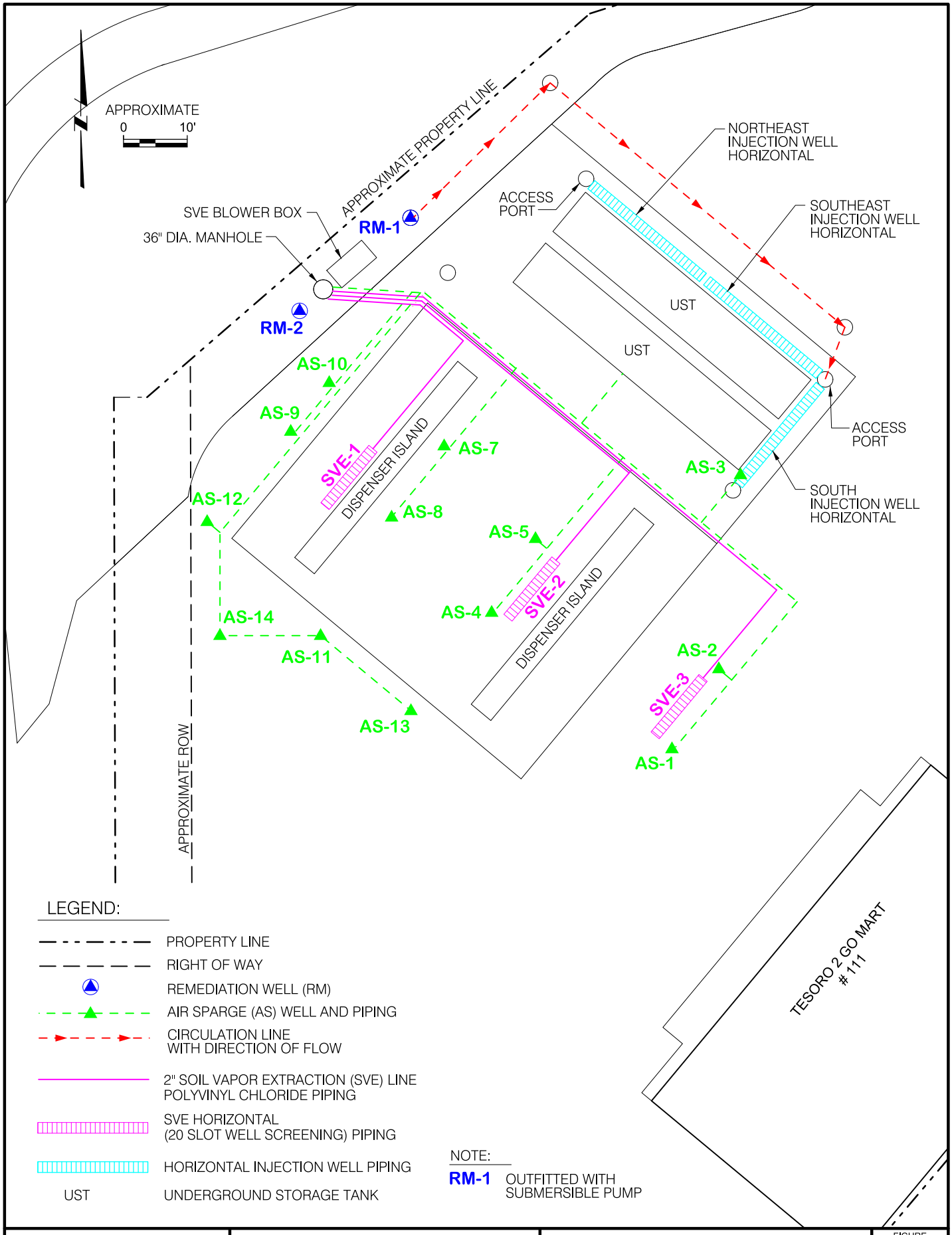
TESORO COMPANY
TESORO 2 GO MART #111

JULY - AUGUST 2019
REMEDIATION WELL RM-2 INSTALLATION

LOCATION AND VICINITY MAP

FIGURE
1

185751227.
200.205



FILE: C:\D\CAD\Proj\Tesoro\TGMart111_185751227\2019\Remedial Well RM-2 Installation\October 2019\FIG02 RM-2 Installation.dgn

TIME: 29-OCT-2019 12:40

Stantec

TESORO COMPANY
TESORO 2 GO MART #111

JULY - AUGUST 2019
REMEDIATION WELL RM-2 INSTALLATION

REMEDIATION SYSTEM LAYOUT

FIGURE
2

185751227.
200.205

ATTACHMENT 1

Soil Boring and Remediation Well Construction Log

PROJECT: **Tesoro Station 111**
LOCATION: **Fairbanks, AK**
PROJECT NUMBER: **185751227**

WELL / PROBEHOLE / BOREHOLE NO: **RM-2**
PAGE 1 OF 1

Stantec

DRILLING: STARTED: **7/30/19** COMPLETED: **7/30/19**
INSTALLATION: STARTED: **7/30/19** COMPLETED: **7/30/19**
DRILLING COMPANY: **Geotek Drilling**
DRILLING EQUIPMENT: **Geoprobe 8040DT**
DRILLING METHOD: **Direct Push**
SAMPLING EQUIPMENT: **DT45 Liner**

NORTHING (ft):
EASTING (ft):
GROUND ELEV (ft):
TOC ELEV (ft):
INITIAL DTW (ft): **15.5**
BOREHOLE DEPTH (ft): **40**
STATIC DTW (ft): **Not Encountered**
WELL DEPTH (ft): **35**
WELL CASING DIA. (in): **4**
BOREHOLE DIA.(in): **12**
LOGGED BY: **JK**
CHECKED BY:

Depth (feet)	Graphic Log	USCS	Description	Sample	Soil Sample	Measured Recovery (feet)	Headspace PID (units)
			CONCRETE Cleared With Vac Truck			N/A	N/A
						N/A	N/A
5		SW	**SAND WITH SILT AND COARSE GRAVEL** ; SW; 10YR 4/3 brown; medium-grained; medium dense; moist; subangular; well graded; Large Rocks Throughout Unit			4.0/5	0.2
							0.0
10		MLS	**SANDY SILT WITH COARSE GRAVEL** ; MLS; 10YR 4/2 dark grayish brown; low plasticity; firm; moist				0.3
		SW	**SAND WITH SILT AND COARSE GRAVEL** ; SW; 10YR 4/2 dark grayish brown; medium-grained; medium dense; moist; well graded			4.8/5	5.2
15		SP	**SAND WITH COARSE GRAVEL** ; SP; 10YR 4/1 dark gray; medium-grained; medium dense; wet; subangular; poorly graded; Strong Petroleum-Like Odor		RM-2 (15-15.5) & Dup-01 Collected @ 1245		68.0
						4.0/5	930.5
20							N/A
						1.0/5	N/A
25							121.3
						4.0/5	20.4
30		SP	**SAND** ; SP; 10YR 4/1 dark gray; fine-grained; medium dense; wet; subangular; poorly graded		RM-2 (30-30.5) Collected @ 1345		1.6
						4.0/5	2.3
35		GP	**GRAVEL WITH SOME SAND** ; GP; 10YR 4/1 dark gray; medium-grained; medium dense; wet; poorly graded				8.7
		SP	**SAND** ; SP; 10YR 4/1 dark gray; fine-grained; medium dense; wet; subangular; poorly graded		RM-2 (39.5-40) Collected @ 1400	4.0/5	0.9

Borehole terminated at 40 feet.

Well Construction

Depth (feet)	
	Capped 4" Schedule 40 PVC
	Pea Gravel
5	
10	Hydrated 3/8" Bentonite Chips
15	▽
20	Pre-Washed 10-20 Mesh Quartz Sand Filter Pack
25	4" 0.010" Factory Slotted Schedule 40 PVC
30	
35	Slough

GEO FORM 304 TESORO STATION 111.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 7/31/19

April 20, 2020
Reference: **Speedway Store 5315 (Former Tesoro 2Go Mart 111) - Installation of Remediation Well RM-2**

ATTACHMENT 2

Test America Laboratory Data Report for Soil Samples and ADEC DATA Review Checklist

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

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

Laboratory Job ID: 580-88121-1
Client Project/Site: Tesoro - 2Go Mart 111

For:
Stantec Consulting Services Inc
1835 S. Bragraw
Suite 350
Anchorage, Alaska 99508

Attn: Mike Zidek

M. Elaine Walker

Authorized for release by:
8/22/2019 3:13:20 PM

Elaine Walker, Project Manager II
(253)248-4972
elaine.walker@testamericainc.com

Table of Contents

Job ID: 580-88121-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative
580-88121-1

Receipt
Seventeen samples were received on 8/5/2019 12:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.5º C, 0.9º C and 0.9º C.

Receipt Exceptions

The following samples were activated for AK101 analysis by the client on 8/6/2019: G-1 (580-88121-1), MW-13 (580-88121-2), MW-17-2 (580-88121-3), MW-10 (580-88121-4), MW-11 (580-88121-5), MW-111 DUP (580-88121-6), TB-01 (580-88121-7), MW-16 (580-88121-8), MW-12 (580-88121-9), RM-1 (580-88121-10), MW 17-1 (580-88121-11), G-5 (580-88121-12), RM-2 (15-15.5) (580-88121-13), RM-2 (30-30.5) (580-88121-14), RM-2 (39.5-40) (580-88121-15), DUP-01 (580-88121-16) and TB-01 (580-88121-17). This analysis was not originally requested on the chain-of-custody (COC).

The client confirmed the Specific Fuels VOC listed was also needed on the following soil samples: RM-2 (15-15.5) (580-88121-13), RM-2 (30-30.5) (580-88121-14), RM-2 (39.5-40) (580-88121-15) and DUP-01 (580-88121-16).

GC/MS VOA
Method(s) 8260C: The following samples failed quality control limits for the surrogates Trifluorotoluene (Surr), Trifluorotoluene (Surr), and/or 1,2-Dichloroethane-d4 (Surr): MW-10 (580-88121-4), MW-11 (580-88121-5), MW-111 DUP (580-88121-6), MW-16 (580-88121-8), MW-12 (580-88121-9), RM-1 (580-88121-10), MW 17-1 (580-88121-11), G-5 (580-88121-12), RM-2 (15-15.5) (580-88121-13), RM-2 (30-30.5) (580-88121-14), RM-2 (39.5-40) (580-88121-15), DUP-01 (580-88121-16), TB-01 (580-88121-17), (CCVIS 580-307639/3), (CCVL 580-307639/6), (LCS 580-307639/4), (LCSD 580-307639/5) and (MB 580-307639/7). The reporting analytes are not chemically associated with either surrogate, therefore, the data have been reported.

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-17-2 (580-88121-3), MW-10 (580-88121-4), MW-11 (580-88121-5), MW-111 DUP (580-88121-6), RM-1 (580-88121-10), MW 17-1 (580-88121-11) and G-5 (580-88121-12). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following samples were re-analyzed due to surrogate failure in the initial analysis: MW-13 (580-88121-2), TB-01 (580-88121-7), MW-16 (580-88121-8) and MW-12 (580-88121-9).

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

GC/MS Semi VOA
Method(s) 8270D SIM: Surrogate recovery for the following samples were outside control limits: MW-13 (580-88121-2) and MW-12 (580-88121-9). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8270D SIM: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-17-2 (580-88121-3), MW-10 (580-88121-4), MW-11 (580-88121-5), MW-111 DUP (580-88121-6), RM-1 (580-88121-10), MW 17-1 (580-88121-11), and G-5 (580-88121-12). Elevated reporting limits (RLs) are provided.

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

GC VOA
Method(s) AK101: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW 17-1 (580-88121-11). Elevated reporting limits (RLs) are provided.

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

GC Semi VOA
Method(s) AK102 & 103: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was earlier than the typical diesel fuel pattern used by the laboratory for quantitative purposes: MW-17-2 (580-88121-3), MW-10 (580-88121-4), MW-11 (580-88121-5), MW-12 (580-88121-9), RM-1 (580-88121-10), MW 17-1 (580-88121-11) and G-5 (580-88121-12).

Job ID: 580-88121-1 (Continued)

Laboratory: Eurofins TestAmerica, Seattle (Continued)

Method(s) AK102 & 103: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: MW-111 DUP (580-88121-6) and MW-16 (580-88121-8).

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

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

VOA Prep
Method(s) 5035: The following samples were provided to the laboratory with a significantly different initial weight than that required by the reference method: RM-2 (15-15.5) (580-88121-13), RM-2 (30-30.5) (580-88121-14), RM-2 (39.5-40) (580-88121-15) and DUP-01 (580-88121-16). Deviations in the weight by more than 20% may affect reporting limits and potentially method performance. The method specifies 25g. The amount provided was above this range.

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

Presley, Kim

From: Keldsen, Jakob <Jakob.Keldsen@stantec.com>
Sent: Tuesday, August 06, 2019 5:08 PM
To: Presley, Kim; Quist, Douglas; Walker, M Elaine; Marshall, John; Zidek, Michael; Russell, Roxanne
Subject: RE: REPLY REQUESTED...Eurofins TestAmerica sample confirmation files from 580-88121-1 Tesoro - 2Go Mart 111

-External Email-

Kim,

Please run the VOCs analysis for the same specific fuels list as we do for the groundwater.

For the trip blank also run the analysis for GRO.

Thanks for taking time to clarify.

Jake Keldsen
Engineer in Training

Mobile: 317 370-1394
Jakob.Keldsen@stantec.com

Stantec

From: Kim Presley <kim.presley@testamericainc.com>
Sent: Tuesday, August 6, 2019 1:55 PM
To: Quist, Douglas <douglas.quist@stantec.com>; elaine.walker@testamericainc.com; Keldsen, Jakob <Jakob.Keldsen@stantec.com>; Marshall, John <john.marshall@stantec.com>; Zidek, Michael <michael.zidek@stantec.com>; Russell, Roxanne <Roxanne.Russell@stantec.com>
Subject: REPLY REQUESTED...Eurofins TestAmerica sample confirmation files from 580-88121-1 Tesoro - 2Go Mart 111

Please confirm the following:
1.) Volatile list of the soils? Do you need full list or the specific fuels list that you requested for the waters?
2.) For the soil Trip Blank only VOC analysis is needed per the COC?

Attached please find the sample confirmation files for job 580-88121-1; Tesoro - 2Go Mart 111

Please feel free to contact me or your PM Elaine Walker if you have any questions.

Thank you.

Kim A Presley

Project Manager Assistant

Eurofins TestAmerica, Seattle
Phone: 253-922-2310

E-mail: kim.presley@testamericainc.com
www.eurofinsus.com | www.testamericainc.com

Reference: [580-298848]
Attachments: 3

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Definitions/Glossary

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

GC/MS Semi 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: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: G-1

Date Collected: 07/29/19 12:00
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		3.0		ug/L			08/06/19 16:22	1
m-Xylene & p-Xylene	ND		3.0		ug/L			08/06/19 16:22	1
o-Xylene	ND		2.0		ug/L			08/06/19 16:22	1
Naphthalene	**7.1**		4.0		ug/L			08/06/19 16:22	1
Isopropylbenzene	**2.8**		2.0		ug/L			08/06/19 16:22	1
tert-Butylbenzene	ND		3.0		ug/L			08/06/19 16:22	1
1,2,4-Trimethylbenzene	ND		3.0		ug/L			08/06/19 16:22	1
sec-Butylbenzene	ND		3.0		ug/L			08/06/19 16:22	1
n-Butylbenzene	ND		3.0		ug/L			08/06/19 16:22	1
1,3,5-Trimethylbenzene	ND		3.0		ug/L			08/06/19 16:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*83*		*80 - 126*		*08/06/19 16:22*	*1*
4-Bromofluorobenzene (Surr)	*110*		*80 - 120*		*08/06/19 16:22*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*08/06/19 16:22*	*1*
Trifluorotoluene (Surr)	*107*		*80 - 120*		*08/06/19 16:22*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*08/06/19 16:22*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			08/08/19 15:44	1
Toluene	ND		2.0		ug/L			08/08/19 15:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 126*		*08/08/19 15:44*	*1*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*08/08/19 15:44*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*08/08/19 15:44*	*1*
Trifluorotoluene (Surr)	*103*		*80 - 120*		*08/08/19 15:44*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*08/08/19 15:44*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**0.70**		0.11		ug/L		08/05/19 15:55	08/07/19 12:02	1
2-Methylnaphthalene	ND		0.22		ug/L		08/05/19 15:55	08/07/19 12:02	1
1-Methylnaphthalene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:02	1
Acenaphthylene	ND		0.056		ug/L		08/05/19 15:55	08/07/19 12:02	1
Acenaphthene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:02	1
Fluorene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:02	1
Phenanthrene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:02	1
Anthracene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:02	1
Fluoranthene	ND		0.22		ug/L		08/05/19 15:55	08/07/19 12:02	1
Pyrene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:02	1
Benzo[a]anthracene	ND		0.056		ug/L		08/05/19 15:55	08/07/19 12:02	1
Chrysene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:02	1
Benzo[b]fluoranthene	ND		0.056		ug/L		08/05/19 15:55	08/07/19 12:02	1
Benzo[k]fluoranthene	ND		0.056		ug/L		08/05/19 15:55	08/07/19 12:02	1
Benzo[a]pyrene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:02	1
Indeno[1,2,3-cd]pyrene	ND		0.056		ug/L		08/05/19 15:55	08/07/19 12:02	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:02	1
Benzo[g,h,i]perylene	ND		0.056		ug/L		08/05/19 15:55	08/07/19 12:02	1

Client Sample ID: G-1

Lab Sample ID: 580-88121-1

Date Collected: 07/29/19 12:00

Matrix: Water

Date Received: 08/05/19 12:40

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*60*		*53 - 120*	*08/05/19 15:55*	*08/07/19 12:02*	*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			08/07/19 16:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*96*		*50 - 150*		*08/07/19 16:16*	*1*
4-Bromofluorobenzene (Surr)	*99*		*50 - 150*		*08/07/19 16:16*	*1*

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	**0.30**		0.12		mg/L		08/08/19 10:12	08/10/19 17:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*50 - 150*	*08/08/19 10:12*	*08/10/19 17:25*	*1*

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: MW-13

Date Collected: 07/29/19 16:00
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	**8.5**		3.0		ug/L			08/06/19 16:46	1
m-Xylene & p-Xylene	**19**		3.0		ug/L			08/06/19 16:46	1
o-Xylene	**2.4**		2.0		ug/L			08/06/19 16:46	1
Naphthalene	ND		4.0		ug/L			08/06/19 16:46	1
Isopropylbenzene	**5.0**		2.0		ug/L			08/06/19 16:46	1
tert-Butylbenzene	**3.3**		3.0		ug/L			08/06/19 16:46	1
1,2,4-Trimethylbenzene	**54**		3.0		ug/L			08/06/19 16:46	1
sec-Butylbenzene	**30**		3.0		ug/L			08/06/19 16:46	1
n-Butylbenzene	**140**		3.0		ug/L			08/06/19 16:46	1
1,3,5-Trimethylbenzene	**51**		3.0		ug/L			08/06/19 16:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*84*		*80 - 126*		*08/06/19 16:46*	*1*
4-Bromofluorobenzene (Surr)	*113*		*80 - 120*		*08/06/19 16:46*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*08/06/19 16:46*	*1*
Trifluorotoluene (Surr)	*109*		*80 - 120*		*08/06/19 16:46*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*08/06/19 16:46*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			08/07/19 18:17	1
Toluene	ND		2.0		ug/L			08/07/19 18:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 126*		*08/07/19 18:17*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*08/07/19 18:17*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*08/07/19 18:17*	*1*
Trifluorotoluene (Surr)	*103*		*80 - 120*		*08/07/19 18:17*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*08/07/19 18:17*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**0.15**		0.11		ug/L		08/05/19 15:55	08/07/19 12:28	1
2-Methylnaphthalene	ND		0.22		ug/L		08/05/19 15:55	08/07/19 12:28	1
1-Methylnaphthalene	**0.18**		0.11		ug/L		08/05/19 15:55	08/07/19 12:28	1
Acenaphthylene	ND		0.055		ug/L		08/05/19 15:55	08/07/19 12:28	1
Acenaphthene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:28	1
Fluorene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:28	1
Phenanthrene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:28	1
Anthracene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:28	1
Fluoranthene	ND		0.22		ug/L		08/05/19 15:55	08/07/19 12:28	1
Pyrene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:28	1
Benzo[a]anthracene	ND		0.055		ug/L		08/05/19 15:55	08/07/19 12:28	1
Chrysene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:28	1
Benzo[b]fluoranthene	ND		0.055		ug/L		08/05/19 15:55	08/07/19 12:28	1
Benzo[k]fluoranthene	ND		0.055		ug/L		08/05/19 15:55	08/07/19 12:28	1
Benzo[a]pyrene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:28	1
Indeno[1,2,3-cd]pyrene	ND		0.055		ug/L		08/05/19 15:55	08/07/19 12:28	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:28	1
Benzo[g,h,i]perylene	ND		0.055		ug/L		08/05/19 15:55	08/07/19 12:28	1

Client Sample ID: MW-13

Date Collected: 07/29/19 16:00
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-2

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*51*	*X*	*53 - 120*	*08/05/19 15:55*	*08/07/19 12:28*	*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	**0.45**		0.25		mg/L			08/07/19 16:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*92*		*50 - 150*		*08/07/19 16:40*	*1*
4-Bromofluorobenzene (Surr)	*99*		*50 - 150*		*08/07/19 16:40*	*1*

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	**1.1**		0.12		mg/L		08/08/19 10:12	08/10/19 17:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*99*		*50 - 150*	*08/08/19 10:12*	*08/10/19 17:48*	*1*

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: MW-17-2

Date Collected: 07/29/19 16:50
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**130**		4.0		ug/L			08/06/19 17:11	1
Isopropylbenzene	**15**		2.0		ug/L			08/06/19 17:11	1
tert-Butylbenzene	ND		3.0		ug/L			08/06/19 17:11	1
sec-Butylbenzene	ND		3.0		ug/L			08/06/19 17:11	1
n-Butylbenzene	**27**		3.0		ug/L			08/06/19 17:11	1
1,3,5-Trimethylbenzene	**81**		3.0		ug/L			08/06/19 17:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*83*		*80 - 126*		*08/06/19 17:11*	*1*
4-Bromofluorobenzene (Surr)	*120*		*80 - 120*		*08/06/19 17:11*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*08/06/19 17:11*	*1*
Trifluorotoluene (Surr)	*110*		*80 - 120*		*08/06/19 17:11*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*08/06/19 17:11*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		150		ug/L			08/07/19 18:42	50
Toluene	**1800**		100		ug/L			08/07/19 18:42	50
Ethylbenzene	**500**		150		ug/L			08/07/19 18:42	50
m-Xylene & p-Xylene	**2700**		150		ug/L			08/07/19 18:42	50
o-Xylene	**1200**		100		ug/L			08/07/19 18:42	50
1,2,4-Trimethylbenzene	**250**		150		ug/L			08/07/19 18:42	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 126*		*08/07/19 18:42*	*50*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*08/07/19 18:42*	*50*
Toluene-d8 (Surr)	*103*		*80 - 120*		*08/07/19 18:42*	*50*
Trifluorotoluene (Surr)	*103*		*80 - 120*		*08/07/19 18:42*	*50*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*08/07/19 18:42*	*50*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	**5.4**		0.22		ug/L		08/05/19 15:55	08/07/19 12:55	1
1-Methylnaphthalene	**6.2**		0.11		ug/L		08/05/19 15:55	08/07/19 12:55	1
Phenanthrene	**0.26**		0.11		ug/L		08/05/19 15:55	08/07/19 12:55	1
Anthracene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:55	1
Fluoranthene	ND		0.22		ug/L		08/05/19 15:55	08/07/19 12:55	1
Pyrene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:55	1
Benzo[a]anthracene	ND		0.055		ug/L		08/05/19 15:55	08/07/19 12:55	1
Chrysene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:55	1
Benzo[b]fluoranthene	ND		0.055		ug/L		08/05/19 15:55	08/07/19 12:55	1
Benzo[k]fluoranthene	ND		0.055		ug/L		08/05/19 15:55	08/07/19 12:55	1
Benzo[a]pyrene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:55	1
Indeno[1,2,3-cd]pyrene	ND		0.055		ug/L		08/05/19 15:55	08/07/19 12:55	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 12:55	1
Benzo[g,h,i]perylene	ND		0.055		ug/L		08/05/19 15:55	08/07/19 12:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*54*		*53 - 120*	*08/05/19 15:55*	*08/07/19 12:55*	*1*

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: MW-17-2

Date Collected: 07/29/19 16:50
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-3

Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**51**		5.5		ug/L		08/05/19 15:55	08/07/19 17:45	50
Acenaphthylene	ND		2.7		ug/L		08/05/19 15:55	08/07/19 17:45	50
Acenaphthene	ND		5.5		ug/L		08/05/19 15:55	08/07/19 17:45	50
Fluorene	ND		5.5		ug/L		08/05/19 15:55	08/07/19 17:45	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*58*		*53 - 120*	*08/05/19 15:55*	*08/07/19 17:45*	*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	**16**		0.25		mg/L			08/07/19 17:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*99*		*50 - 150*		*08/07/19 17:05*	*1*
4-Bromofluorobenzene (Surr)	*115*		*50 - 150*		*08/07/19 17:05*	*1*

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	**8.5**		0.12		mg/L		08/08/19 10:12	08/10/19 18:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*50 - 150*	*08/08/19 10:12*	*08/10/19 18:33*	*1*

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: MW-10

Date Collected: 07/29/19 17:40
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	**110**		2.0		ug/L			08/06/19 17:35	1
Naphthalene	**92**		4.0		ug/L			08/06/19 17:35	1
Isopropylbenzene	**17**		2.0		ug/L			08/06/19 17:35	1
tert-Butylbenzene	ND		3.0		ug/L			08/06/19 17:35	1
sec-Butylbenzene	ND		3.0		ug/L			08/06/19 17:35	1
n-Butylbenzene	**46**		3.0		ug/L			08/06/19 17:35	1
1,3,5-Trimethylbenzene	**97**		3.0		ug/L			08/06/19 17:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*79*	*X*	*80 - 126*		*08/06/19 17:35*	*1*
4-Bromofluorobenzene (Surr)	*119*		*80 - 120*		*08/06/19 17:35*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*08/06/19 17:35*	*1*
Trifluorotoluene (Surr)	*113*		*80 - 120*		*08/06/19 17:35*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 120*		*08/06/19 17:35*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		150		ug/L			08/07/19 19:06	50
Toluene	ND		100		ug/L			08/07/19 19:06	50
Ethylbenzene	**200**		150		ug/L			08/07/19 19:06	50
m-Xylene & p-Xylene	**710**		150		ug/L			08/07/19 19:06	50
1,2,4-Trimethylbenzene	**240**		150		ug/L			08/07/19 19:06	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 126*		*08/07/19 19:06*	*50*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*08/07/19 19:06*	*50*
Toluene-d8 (Surr)	*104*		*80 - 120*		*08/07/19 19:06*	*50*
Trifluorotoluene (Surr)	*104*		*80 - 120*		*08/07/19 19:06*	*50*
Dibromofluoromethane (Surr)	*96*		*80 - 120*		*08/07/19 19:06*	*50*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	**3.6**		0.21		ug/L		08/05/19 15:55	08/07/19 13:21	1
1-Methylnaphthalene	**5.0**		0.10		ug/L		08/05/19 15:55	08/07/19 13:21	1
Acenaphthylene	ND		0.052		ug/L		08/05/19 15:55	08/07/19 13:21	1
Acenaphthene	**0.20**		0.10		ug/L		08/05/19 15:55	08/07/19 13:21	1
Fluorene	**0.40**		0.10		ug/L		08/05/19 15:55	08/07/19 13:21	1
Phenanthrene	**0.23**		0.10		ug/L		08/05/19 15:55	08/07/19 13:21	1
Anthracene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 13:21	1
Fluoranthene	ND		0.21		ug/L		08/05/19 15:55	08/07/19 13:21	1
Pyrene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 13:21	1
Benzo[a]anthracene	ND		0.052		ug/L		08/05/19 15:55	08/07/19 13:21	1
Chrysene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 13:21	1
Benzo[b]fluoranthene	ND		0.052		ug/L		08/05/19 15:55	08/07/19 13:21	1
Benzo[k]fluoranthene	ND		0.052		ug/L		08/05/19 15:55	08/07/19 13:21	1
Benzo[a]pyrene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 13:21	1
Indeno[1,2,3-cd]pyrene	ND		0.052		ug/L		08/05/19 15:55	08/07/19 13:21	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 13:21	1
Benzo[g,h,i]perylene	ND		0.052		ug/L		08/05/19 15:55	08/07/19 13:21	1

Client Sample ID: MW-10
Date Collected: 07/29/19 17:40
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-4
Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*58*		*53 - 120*	*08/05/19 15:55*	*08/07/19 13:21*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**18**		5.2		ug/L		08/05/19 15:55	08/07/19 18:12	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*54*		*53 - 120*	*08/05/19 15:55*	*08/07/19 18:12*	*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	**5.6**		0.25		mg/L			08/07/19 17:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*100*		*50 - 150*		*08/07/19 17:29*	*1*
4-Bromofluorobenzene (Surr)	*120*		*50 - 150*		*08/07/19 17:29*	*1*

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	**13**		0.12		mg/L		08/08/19 10:12	08/10/19 18:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*108*		*50 - 150*	*08/08/19 10:12*	*08/10/19 18:56*	*1*

Client Sample ID: MW-11

Date Collected: 07/29/19 18:10
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-5

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	**35**		2.0		ug/L			08/06/19 18:00	1
tert-Butylbenzene	ND		3.0		ug/L			08/06/19 18:00	1
sec-Butylbenzene	ND		3.0		ug/L			08/06/19 18:00	1
n-Butylbenzene	**98**		3.0		ug/L			08/06/19 18:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*76*	*X*	*80 - 126*		*08/06/19 18:00*	*1*
4-Bromofluorobenzene (Surr)	*123*	*X*	*80 - 120*		*08/06/19 18:00*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*08/06/19 18:00*	*1*
Trifluorotoluene (Surr)	*116*		*80 - 120*		*08/06/19 18:00*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*08/06/19 18:00*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		150		ug/L			08/07/19 19:31	50
Toluene	**160**		100		ug/L			08/07/19 19:31	50
Ethylbenzene	**670**		150		ug/L			08/07/19 19:31	50
m-Xylene & p-Xylene	**4200**		150		ug/L			08/07/19 19:31	50
o-Xylene	**760**		100		ug/L			08/07/19 19:31	50
Naphthalene	ND		200		ug/L			08/07/19 19:31	50
1,2,4-Trimethylbenzene	**760**		150		ug/L			08/07/19 19:31	50
1,3,5-Trimethylbenzene	**230**		150		ug/L			08/07/19 19:31	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 126*		*08/07/19 19:31*	*50*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*08/07/19 19:31*	*50*
Toluene-d8 (Surr)	*104*		*80 - 120*		*08/07/19 19:31*	*50*
Trifluorotoluene (Surr)	*103*		*80 - 120*		*08/07/19 19:31*	*50*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*08/07/19 19:31*	*50*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	**0.25**		0.11		ug/L		08/05/19 15:55	08/07/19 13:47	1
Anthracene	**0.15**		0.11		ug/L		08/05/19 15:55	08/07/19 13:47	1
Fluoranthene	ND		0.22		ug/L		08/05/19 15:55	08/07/19 13:47	1
Pyrene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 13:47	1
Benzo[a]anthracene	ND		0.056		ug/L		08/05/19 15:55	08/07/19 13:47	1
Chrysene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 13:47	1
Benzo[b]fluoranthene	ND		0.056		ug/L		08/05/19 15:55	08/07/19 13:47	1
Benzo[k]fluoranthene	ND		0.056		ug/L		08/05/19 15:55	08/07/19 13:47	1
Benzo[a]pyrene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 13:47	1
Indeno[1,2,3-cd]pyrene	ND		0.056		ug/L		08/05/19 15:55	08/07/19 13:47	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 13:47	1
Benzo[g,h,i]perylene	ND		0.056		ug/L		08/05/19 15:55	08/07/19 13:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*59*		*53 - 120*	*08/05/19 15:55*	*08/07/19 13:47*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**100**		11		ug/L		08/05/19 15:55	08/07/19 18:38	100

Client Sample ID: MW-11
Date Collected: 07/29/19 18:10
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-5
Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	22		22		ug/L		08/05/19 15:55	08/07/19 18:38	100
1-Methylnaphthalene	25		11		ug/L		08/05/19 15:55	08/07/19 18:38	100
Acenaphthylene	ND		5.6		ug/L		08/05/19 15:55	08/07/19 18:38	100
Acenaphthene	ND		11		ug/L		08/05/19 15:55	08/07/19 18:38	100
Fluorene	ND		11		ug/L		08/05/19 15:55	08/07/19 18:38	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*55*		*53 - 120*	*08/05/19 15:55*	*08/07/19 18:38*	*100*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	15		0.25		mg/L			08/07/19 17:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*98*		*50 - 150*		*08/07/19 17:54*	*1*
4-Bromofluorobenzene (Surr)	*128*		*50 - 150*		*08/07/19 17:54*	*1*

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	9.8		0.12		mg/L		08/08/19 10:12	08/10/19 19:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*100*		*50 - 150*	*08/08/19 10:12*	*08/10/19 19:18*	*1*

Client Sample ID: MW-111 DUP

Date Collected: 07/29/19 08:00
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-6

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**110**		4.0		ug/L			08/06/19 18:24	1
Isopropylbenzene	**12**		2.0		ug/L			08/06/19 18:24	1
tert-Butylbenzene	ND		3.0		ug/L			08/06/19 18:24	1
1,2,4-Trimethylbenzene	**140**		3.0		ug/L			08/06/19 18:24	1
sec-Butylbenzene	ND		3.0		ug/L			08/06/19 18:24	1
n-Butylbenzene	**24**		3.0		ug/L			08/06/19 18:24	1
1,3,5-Trimethylbenzene	**72**		3.0		ug/L			08/06/19 18:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*76*	*X*	*80 - 126*		*08/06/19 18:24*	*1*
4-Bromofluorobenzene (Surr)	*125*	*X*	*80 - 120*		*08/06/19 18:24*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*08/06/19 18:24*	*1*
Trifluorotoluene (Surr)	*118*		*80 - 120*		*08/06/19 18:24*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*08/06/19 18:24*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		150		ug/L			08/07/19 19:57	50
Toluene	**1900**		100		ug/L			08/07/19 19:57	50
Ethylbenzene	**600**		150		ug/L			08/07/19 19:57	50
m-Xylene & p-Xylene	**3200**		150		ug/L			08/07/19 19:57	50
o-Xylene	**1300**		100		ug/L			08/07/19 19:57	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 126*		*08/07/19 19:57*	*50*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*08/07/19 19:57*	*50*
Toluene-d8 (Surr)	*106*		*80 - 120*		*08/07/19 19:57*	*50*
Trifluorotoluene (Surr)	*103*		*80 - 120*		*08/07/19 19:57*	*50*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*08/07/19 19:57*	*50*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	**6.4**		0.22		ug/L		08/05/19 15:55	08/07/19 14:14	1
1-Methylnaphthalene	**7.2**		0.11		ug/L		08/05/19 15:55	08/07/19 14:14	1
Phenanthrene	**0.20**		0.11		ug/L		08/05/19 15:55	08/07/19 14:14	1
Anthracene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 14:14	1
Fluoranthene	ND		0.22		ug/L		08/05/19 15:55	08/07/19 14:14	1
Pyrene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 14:14	1
Benzo[a]anthracene	ND		0.054		ug/L		08/05/19 15:55	08/07/19 14:14	1
Chrysene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 14:14	1
Benzo[b]fluoranthene	ND		0.054		ug/L		08/05/19 15:55	08/07/19 14:14	1
Benzo[k]fluoranthene	ND		0.054		ug/L		08/05/19 15:55	08/07/19 14:14	1
Benzo[a]pyrene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 14:14	1
Indeno[1,2,3-cd]pyrene	ND		0.054		ug/L		08/05/19 15:55	08/07/19 14:14	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 14:14	1
Benzo[g,h,i]perylene	ND		0.054		ug/L		08/05/19 15:55	08/07/19 14:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*55*		*53 - 120*	*08/05/19 15:55*	*08/07/19 14:14*	*1*

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: MW-111 DUP

Date Collected: 07/29/19 08:00
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-6

Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**49**		11		ug/L		08/05/19 15:55	08/07/19 19:04	100
Acenaphthylene	ND		5.4		ug/L		08/05/19 15:55	08/07/19 19:04	100
Acenaphthene	ND		11		ug/L		08/05/19 15:55	08/07/19 19:04	100
Fluorene	ND		11		ug/L		08/05/19 15:55	08/07/19 19:04	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*57*		*53 - 120*	*08/05/19 15:55*	*08/07/19 19:04*	*100*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	**12**		0.25		mg/L			08/07/19 18:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*98*		*50 - 150*		*08/07/19 18:18*	*1*
4-Bromofluorobenzene (Surr)	*101*		*50 - 150*		*08/07/19 18:18*	*1*

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	**9.4**		0.12		mg/L		08/08/19 10:12	08/10/19 19:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*104*		*50 - 150*	*08/08/19 10:12*	*08/10/19 19:41*	*1*

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: TB-01

Date Collected: 07/29/19 11:50
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-7

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		3.0		ug/L			08/06/19 15:58	1
m-Xylene & p-Xylene	ND		3.0		ug/L			08/06/19 15:58	1
o-Xylene	ND		2.0		ug/L			08/06/19 15:58	1
Naphthalene	ND		4.0		ug/L			08/06/19 15:58	1
Isopropylbenzene	ND		2.0		ug/L			08/06/19 15:58	1
tert-Butylbenzene	ND		3.0		ug/L			08/06/19 15:58	1
1,2,4-Trimethylbenzene	ND		3.0		ug/L			08/06/19 15:58	1
sec-Butylbenzene	ND		3.0		ug/L			08/06/19 15:58	1
n-Butylbenzene	ND		3.0		ug/L			08/06/19 15:58	1
1,3,5-Trimethylbenzene	ND		3.0		ug/L			08/06/19 15:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*83*		*80 - 126*		*08/06/19 15:58*	*1*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*		*08/06/19 15:58*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*08/06/19 15:58*	*1*
Trifluorotoluene (Surr)	*110*		*80 - 120*		*08/06/19 15:58*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*08/06/19 15:58*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			08/07/19 20:21	1
Toluene	ND		2.0		ug/L			08/07/19 20:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 126*		*08/07/19 20:21*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*08/07/19 20:21*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*08/07/19 20:21*	*1*
Trifluorotoluene (Surr)	*102*		*80 - 120*		*08/07/19 20:21*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*08/07/19 20:21*	*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			08/07/19 13:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*91*		*50 - 150*		*08/07/19 13:00*	*1*
4-Bromofluorobenzene (Surr)	*86*		*50 - 150*		*08/07/19 13:00*	*1*

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: MW-16

Date Collected: 07/30/19 09:20
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-8

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		3.0		ug/L			08/06/19 18:48	1
m-Xylene & p-Xylene	**3.0**		3.0		ug/L			08/06/19 18:48	1
o-Xylene	ND		2.0		ug/L			08/06/19 18:48	1
Naphthalene	ND		4.0		ug/L			08/06/19 18:48	1
Isopropylbenzene	ND		2.0		ug/L			08/06/19 18:48	1
tert-Butylbenzene	ND		3.0		ug/L			08/06/19 18:48	1
1,2,4-Trimethylbenzene	ND		3.0		ug/L			08/06/19 18:48	1
sec-Butylbenzene	ND		3.0		ug/L			08/06/19 18:48	1
n-Butylbenzene	ND		3.0		ug/L			08/06/19 18:48	1
1,3,5-Trimethylbenzene	ND		3.0		ug/L			08/06/19 18:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*74*	*X*	*80 - 126*		*08/06/19 18:48*	*1*
4-Bromofluorobenzene (Surr)	*118*		*80 - 120*		*08/06/19 18:48*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/06/19 18:48*	*1*
Trifluorotoluene (Surr)	*120*		*80 - 120*		*08/06/19 18:48*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*08/06/19 18:48*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			08/07/19 20:47	1
Toluene	ND		2.0		ug/L			08/07/19 20:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 126*		*08/07/19 20:47*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*08/07/19 20:47*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*08/07/19 20:47*	*1*
Trifluorotoluene (Surr)	*102*		*80 - 120*		*08/07/19 20:47*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*08/07/19 20:47*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 14:41	1
2-Methylnaphthalene	ND		0.22		ug/L		08/05/19 15:55	08/07/19 14:41	1
1-Methylnaphthalene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 14:41	1
Acenaphthylene	ND		0.055		ug/L		08/05/19 15:55	08/07/19 14:41	1
Acenaphthene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 14:41	1
Fluorene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 14:41	1
Phenanthrene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 14:41	1
Anthracene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 14:41	1
Fluoranthene	ND		0.22		ug/L		08/05/19 15:55	08/07/19 14:41	1
Pyrene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 14:41	1
Benzo[a]anthracene	ND		0.055		ug/L		08/05/19 15:55	08/07/19 14:41	1
Chrysene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 14:41	1
Benzo[b]fluoranthene	ND		0.055		ug/L		08/05/19 15:55	08/07/19 14:41	1
Benzo[k]fluoranthene	ND		0.055		ug/L		08/05/19 15:55	08/07/19 14:41	1
Benzo[a]pyrene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 14:41	1
Indeno[1,2,3-cd]pyrene	ND		0.055		ug/L		08/05/19 15:55	08/07/19 14:41	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 14:41	1
Benzo[g,h,i]perylene	ND		0.055		ug/L		08/05/19 15:55	08/07/19 14:41	1

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: MW-16

Date Collected: 07/30/19 09:20
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-8

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*54*		*53 - 120*	*08/05/19 15:55*	*08/07/19 14:41*	*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			08/07/19 18:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	*98*		*50 - 150*		*08/07/19 18:43*	*1*
4-Bromofluorobenzene (Surr)	*102*		*50 - 150*		*08/07/19 18:43*	*1*

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	**0.39**		0.12		mg/L		08/08/19 10:12	08/10/19 20:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	*100*		*50 - 150*	*08/08/19 10:12*	*08/10/19 20:03*	*1*

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: MW-12

Date Collected: 07/30/19 10:15
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-9

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		3.0		ug/L			08/06/19 19:13	1
m-Xylene & p-Xylene	**3.9**		3.0		ug/L			08/06/19 19:13	1
o-Xylene	ND		2.0		ug/L			08/06/19 19:13	1
Naphthalene	ND		4.0		ug/L			08/06/19 19:13	1
Isopropylbenzene	ND		2.0		ug/L			08/06/19 19:13	1
tert-Butylbenzene	ND		3.0		ug/L			08/06/19 19:13	1
1,2,4-Trimethylbenzene	**12**		3.0		ug/L			08/06/19 19:13	1
sec-Butylbenzene	ND		3.0		ug/L			08/06/19 19:13	1
n-Butylbenzene	**11**		3.0		ug/L			08/06/19 19:13	1
1,3,5-Trimethylbenzene	**7.2**		3.0		ug/L			08/06/19 19:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*74*	*X*	*80 - 126*		*08/06/19 19:13*	*1*
4-Bromofluorobenzene (Surr)	*120*		*80 - 120*		*08/06/19 19:13*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*08/06/19 19:13*	*1*
Trifluorotoluene (Surr)	*118*		*80 - 120*		*08/06/19 19:13*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*08/06/19 19:13*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0		ug/L			08/07/19 21:11	1
Toluene	ND		2.0		ug/L			08/07/19 21:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 126*		*08/07/19 21:11*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*08/07/19 21:11*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*08/07/19 21:11*	*1*
Trifluorotoluene (Surr)	*103*		*80 - 120*		*08/07/19 21:11*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*08/07/19 21:11*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 15:07	1
2-Methylnaphthalene	ND		0.22		ug/L		08/05/19 15:55	08/07/19 15:07	1
1-Methylnaphthalene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 15:07	1
Acenaphthylene	ND		0.056		ug/L		08/05/19 15:55	08/07/19 15:07	1
Acenaphthene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 15:07	1
Fluorene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 15:07	1
Phenanthrene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 15:07	1
Anthracene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 15:07	1
Fluoranthene	ND		0.22		ug/L		08/05/19 15:55	08/07/19 15:07	1
Pyrene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 15:07	1
Benzo[a]anthracene	ND		0.056		ug/L		08/05/19 15:55	08/07/19 15:07	1
Chrysene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 15:07	1
Benzo[b]fluoranthene	ND		0.056		ug/L		08/05/19 15:55	08/07/19 15:07	1
Benzo[k]fluoranthene	ND		0.056		ug/L		08/05/19 15:55	08/07/19 15:07	1
Benzo[a]pyrene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 15:07	1
Indeno[1,2,3-cd]pyrene	ND		0.056		ug/L		08/05/19 15:55	08/07/19 15:07	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 15:07	1
Benzo[g,h,i]perylene	ND		0.056		ug/L		08/05/19 15:55	08/07/19 15:07	1

Client Sample ID: MW-12

Date Collected: 07/30/19 10:15
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-9

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*50*	*X*	*53 - 120*	*08/05/19 15:55*	*08/07/19 15:07*	*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	0.26		0.25		mg/L			08/07/19 19:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	*96*		*50 - 150*		*08/07/19 19:07*	*1*
4-Bromofluorobenzene (Surr)	*92*		*50 - 150*		*08/07/19 19:07*	*1*

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	0.47		0.12		mg/L		08/08/19 10:12	08/10/19 20:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	*95*		*50 - 150*	*08/08/19 10:12*	*08/10/19 20:26*	*1*

Client Sample ID: RM-1

Date Collected: 07/30/19 11:45
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-10

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**47**		4.0		ug/L			08/06/19 19:37	1
Isopropylbenzene	**43**		2.0		ug/L			08/06/19 19:37	1
tert-Butylbenzene	ND		3.0		ug/L			08/06/19 19:37	1
sec-Butylbenzene	**13**		3.0		ug/L			08/06/19 19:37	1
n-Butylbenzene	**52**		3.0		ug/L			08/06/19 19:37	1
1,3,5-Trimethylbenzene	**100**		3.0		ug/L			08/06/19 19:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*76*	*X*	*80 - 126*		*08/06/19 19:37*	*1*
4-Bromofluorobenzene (Surr)	*121*	*X*	*80 - 120*		*08/06/19 19:37*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*08/06/19 19:37*	*1*
Trifluorotoluene (Surr)	*121*	*X*	*80 - 120*		*08/06/19 19:37*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*08/06/19 19:37*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		150		ug/L			08/07/19 21:36	50
Toluene	**400**		100		ug/L			08/07/19 21:36	50
Ethylbenzene	**230**		150		ug/L			08/07/19 21:36	50
m-Xylene & p-Xylene	**1200**		150		ug/L			08/07/19 21:36	50
o-Xylene	**350**		100		ug/L			08/07/19 21:36	50
1,2,4-Trimethylbenzene	**270**		150		ug/L			08/07/19 21:36	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 126*		*08/07/19 21:36*	*50*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*08/07/19 21:36*	*50*
Toluene-d8 (Surr)	*104*		*80 - 120*		*08/07/19 21:36*	*50*
Trifluorotoluene (Surr)	*104*		*80 - 120*		*08/07/19 21:36*	*50*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*08/07/19 21:36*	*50*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	**0.078**		0.051		ug/L		08/05/19 15:55	08/07/19 15:33	1
Acenaphthene	**0.24**		0.10		ug/L		08/05/19 15:55	08/07/19 15:33	1
Fluorene	**0.69**		0.10		ug/L		08/05/19 15:55	08/07/19 15:33	1
Phenanthrene	**0.33**		0.10		ug/L		08/05/19 15:55	08/07/19 15:33	1
Anthracene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 15:33	1
Fluoranthene	ND		0.21		ug/L		08/05/19 15:55	08/07/19 15:33	1
Pyrene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 15:33	1
Benzo[a]anthracene	ND		0.051		ug/L		08/05/19 15:55	08/07/19 15:33	1
Chrysene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 15:33	1
Benzo[b]fluoranthene	ND		0.051		ug/L		08/05/19 15:55	08/07/19 15:33	1
Benzo[k]fluoranthene	ND		0.051		ug/L		08/05/19 15:55	08/07/19 15:33	1
Benzo[a]pyrene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 15:33	1
Indeno[1,2,3-cd]pyrene	ND		0.051		ug/L		08/05/19 15:55	08/07/19 15:33	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 15:33	1
Benzo[g,h,i]perylene	ND		0.051		ug/L		08/05/19 15:55	08/07/19 15:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*54*		*53 - 120*	*08/05/19 15:55*	*08/07/19 15:33*	*1*

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: RM-1

Date Collected: 07/30/19 11:45
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-10

Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	20		5.1		ug/L		08/05/19 15:55	08/07/19 19:31	50
2-Methylnaphthalene	16		10		ug/L		08/05/19 15:55	08/07/19 19:31	50
1-Methylnaphthalene	18		5.1		ug/L		08/05/19 15:55	08/07/19 19:31	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*58*		*53 - 120*	*08/05/19 15:55*	*08/07/19 19:31*	*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	6.1		0.25		mg/L			08/07/19 19:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*99*		*50 - 150*		*08/07/19 19:32*	*1*
4-Bromofluorobenzene (Surr)	*138*		*50 - 150*		*08/07/19 19:32*	*1*

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	1.1		0.11		mg/L		08/08/19 10:12	08/10/19 20:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*106*		*50 - 150*	*08/08/19 10:12*	*08/10/19 20:48*	*1*

Client Sample ID: MW 17-1

Date Collected: 07/30/19 12:30
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-11

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	**100**		2.0		ug/L			08/06/19 20:01	1
tert-Butylbenzene	ND		3.0		ug/L			08/06/19 20:01	1
sec-Butylbenzene	**9.9**		3.0		ug/L			08/06/19 20:01	1
n-Butylbenzene	**120**		3.0		ug/L			08/06/19 20:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*74*	*X*	*80 - 126*		*08/06/19 20:01*	*1*
4-Bromofluorobenzene (Surr)	*115*		*80 - 120*		*08/06/19 20:01*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/06/19 20:01*	*1*
Trifluorotoluene (Surr)	*117*		*80 - 120*		*08/06/19 20:01*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*08/06/19 20:01*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**360**		150		ug/L			08/07/19 22:01	50
Ethylbenzene	**3400**		150		ug/L			08/07/19 22:01	50
o-Xylene	**3900**		100		ug/L			08/07/19 22:01	50
Naphthalene	**240**		200		ug/L			08/07/19 22:01	50
1,2,4-Trimethylbenzene	**1300**		150		ug/L			08/07/19 22:01	50
1,3,5-Trimethylbenzene	**280**		150		ug/L			08/07/19 22:01	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 126*		*08/07/19 22:01*	*50*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*08/07/19 22:01*	*50*
Toluene-d8 (Surr)	*103*		*80 - 120*		*08/07/19 22:01*	*50*
Trifluorotoluene (Surr)	*104*		*80 - 120*		*08/07/19 22:01*	*50*
Dibromofluoromethane (Surr)	*95*		*80 - 120*		*08/07/19 22:01*	*50*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	**9200**		200		ug/L			08/12/19 17:41	100
m-Xylene & p-Xylene	**11000**		300		ug/L			08/12/19 17:41	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 126*		*08/12/19 17:41*	*100*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*08/12/19 17:41*	*100*
Toluene-d8 (Surr)	*102*		*80 - 120*		*08/12/19 17:41*	*100*
Trifluorotoluene (Surr)	*103*		*80 - 120*		*08/12/19 17:41*	*100*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*08/12/19 17:41*	*100*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		0.054		ug/L		08/05/19 15:55	08/07/19 16:00	1
Acenaphthene	**0.14**		0.11		ug/L		08/05/19 15:55	08/07/19 16:00	1
Fluorene	**0.43**		0.11		ug/L		08/05/19 15:55	08/07/19 16:00	1
Phenanthrene	**0.42**		0.11		ug/L		08/05/19 15:55	08/07/19 16:00	1
Anthracene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 16:00	1
Fluoranthene	ND		0.22		ug/L		08/05/19 15:55	08/07/19 16:00	1
Pyrene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 16:00	1
Benzo[a]anthracene	ND		0.054		ug/L		08/05/19 15:55	08/07/19 16:00	1
Chrysene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 16:00	1

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: MW 17-1

Date Collected: 07/30/19 12:30
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-11

Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		0.054		ug/L		08/05/19 15:55	08/07/19 16:00	1
Benzo[k]fluoranthene	ND		0.054		ug/L		08/05/19 15:55	08/07/19 16:00	1
Benzo[a]pyrene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 16:00	1
Indeno[1,2,3-cd]pyrene	ND		0.054		ug/L		08/05/19 15:55	08/07/19 16:00	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		08/05/19 15:55	08/07/19 16:00	1
Benzo[g,h,i]perylene	ND		0.054		ug/L		08/05/19 15:55	08/07/19 16:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*59*		*53 - 120*	*08/05/19 15:55*	*08/07/19 16:00*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**130**		5.4		ug/L		08/05/19 15:55	08/09/19 15:08	50
2-Methylnaphthalene	**19**		11		ug/L		08/05/19 15:55	08/09/19 15:08	50
1-Methylnaphthalene	**15**		5.4		ug/L		08/05/19 15:55	08/09/19 15:08	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*58*		*53 - 120*	*08/05/19 15:55*	*08/09/19 15:08*	*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	**88**		5.0		mg/L			08/09/19 15:49	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*137*		*50 - 150*		*08/09/19 15:49*	*20*
4-Bromofluorobenzene (Surr)	*125*		*50 - 150*		*08/09/19 15:49*	*20*

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	**3.9**		0.12		mg/L		08/08/19 10:12	08/10/19 21:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*50 - 150*	*08/08/19 10:12*	*08/10/19 21:11*	*1*

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: G-5

Date Collected: 07/30/19 13:10
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-12

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**40**		4.0		ug/L			08/06/19 20:26	1
Isopropylbenzene	**20**		2.0		ug/L			08/06/19 20:26	1
tert-Butylbenzene	ND		3.0		ug/L			08/06/19 20:26	1
1,2,4-Trimethylbenzene	**140**		3.0		ug/L			08/06/19 20:26	1
sec-Butylbenzene	ND		3.0		ug/L			08/06/19 20:26	1
n-Butylbenzene	**19**		3.0		ug/L			08/06/19 20:26	1
1,3,5-Trimethylbenzene	**32**		3.0		ug/L			08/06/19 20:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*74*	*X*	*80 - 126*		*08/06/19 20:26*	*1*
4-Bromofluorobenzene (Surr)	*121*	*X*	*80 - 120*		*08/06/19 20:26*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*08/06/19 20:26*	*1*
Trifluorotoluene (Surr)	*120*		*80 - 120*		*08/06/19 20:26*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*08/06/19 20:26*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		150		ug/L			08/07/19 22:27	50
Toluene	ND		100		ug/L			08/07/19 22:27	50
Ethylbenzene	**180**		150		ug/L			08/07/19 22:27	50
m-Xylene & p-Xylene	**530**		150		ug/L			08/07/19 22:27	50
o-Xylene	**180**		100		ug/L			08/07/19 22:27	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 126*		*08/07/19 22:27*	*50*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*08/07/19 22:27*	*50*
Toluene-d8 (Surr)	*104*		*80 - 120*		*08/07/19 22:27*	*50*
Trifluorotoluene (Surr)	*102*		*80 - 120*		*08/07/19 22:27*	*50*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*08/07/19 22:27*	*50*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	**2.2**		0.21		ug/L		08/05/19 15:55	08/07/19 16:26	1
1-Methylnaphthalene	**2.9**		0.10		ug/L		08/05/19 15:55	08/07/19 16:26	1
Acenaphthylene	ND		0.052		ug/L		08/05/19 15:55	08/07/19 16:26	1
Acenaphthene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 16:26	1
Fluorene	**0.26**		0.10		ug/L		08/05/19 15:55	08/07/19 16:26	1
Phenanthrene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 16:26	1
Anthracene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 16:26	1
Fluoranthene	ND		0.21		ug/L		08/05/19 15:55	08/07/19 16:26	1
Pyrene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 16:26	1
Benzo[a]anthracene	ND		0.052		ug/L		08/05/19 15:55	08/07/19 16:26	1
Chrysene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 16:26	1
Benzo[b]fluoranthene	ND		0.052		ug/L		08/05/19 15:55	08/07/19 16:26	1
Benzo[k]fluoranthene	ND		0.052		ug/L		08/05/19 15:55	08/07/19 16:26	1
Benzo[a]pyrene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 16:26	1
Indeno[1,2,3-cd]pyrene	ND		0.052		ug/L		08/05/19 15:55	08/07/19 16:26	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 16:26	1
Benzo[g,h,i]perylene	ND		0.052		ug/L		08/05/19 15:55	08/07/19 16:26	1

Client Sample ID: G-5

Date Collected: 07/30/19 13:10
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-12

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*54*		*53 - 120*	*08/05/19 15:55*	*08/07/19 16:26*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**17**		0.52		ug/L		08/05/19 15:55	08/20/19 12:51	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*69*		*53 - 120*	*08/05/19 15:55*	*08/20/19 12:51*	*5*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	**2.9**		0.25		mg/L			08/09/19 13:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	*104*		*50 - 150*		*08/09/19 13:59*	*1*
4-Bromofluorobenzene (Surr)	*124*		*50 - 150*		*08/09/19 13:59*	*1*

Method: AK102 - DRO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	**1.2**		0.11		mg/L		08/08/19 10:12	08/10/19 21:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	*96*		*50 - 150*	*08/08/19 10:12*	*08/10/19 21:33*	*1*

Client Sample ID: RM-2 (15-15.5)

Date Collected: 07/30/19 12:45
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-13

Matrix: Solid
Percent Solids: 92.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		20		ug/Kg	☼	08/09/19 09:00	08/09/19 19:59	1
Toluene	ND		99		ug/Kg	☼	08/09/19 09:00	08/09/19 19:59	1
Ethylbenzene	ND		26		ug/Kg	☼	08/09/19 09:00	08/09/19 19:59	1
m-Xylene & p-Xylene	ND		130		ug/Kg	☼	08/09/19 09:00	08/09/19 19:59	1
o-Xylene	ND		40		ug/Kg	☼	08/09/19 09:00	08/09/19 19:59	1
Isopropylbenzene	ND		26		ug/Kg	☼	08/09/19 09:00	08/09/19 19:59	1
tert-Butylbenzene	ND		26		ug/Kg	☼	08/09/19 09:00	08/09/19 19:59	1
1,2,4-Trimethylbenzene	**33**		26		ug/Kg	☼	08/09/19 09:00	08/09/19 19:59	1
sec-Butylbenzene	ND		26		ug/Kg	☼	08/09/19 09:00	08/09/19 19:59	1
n-Butylbenzene	ND		99		ug/Kg	☼	08/09/19 09:00	08/09/19 19:59	1
Naphthalene	ND		66		ug/Kg	☼	08/09/19 09:00	08/09/19 19:59	1
1,3,5-Trimethylbenzene	ND		26		ug/Kg	☼	08/09/19 09:00	08/09/19 19:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*138*	*X*	*80 - 120*	*08/09/19 09:00*	*08/09/19 19:59*	*1*
Toluene-d8 (Surr)	*91*		*80 - 120*	*08/09/19 09:00*	*08/09/19 19:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 121*	*08/09/19 09:00*	*08/09/19 19:59*	*1*
4-Bromofluorobenzene (Surr)	*109*		*80 - 120*	*08/09/19 09:00*	*08/09/19 19:59*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*	*08/09/19 09:00*	*08/09/19 19:59*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**13**		5.1		ug/Kg	☼	08/13/19 09:17	08/14/19 17:33	1
2-Methylnaphthalene	**29**		5.1		ug/Kg	☼	08/13/19 09:17	08/14/19 17:33	1
1-Methylnaphthalene	**17**		5.1		ug/Kg	☼	08/13/19 09:17	08/14/19 17:33	1
Acenaphthylene	ND		5.1		ug/Kg	☼	08/13/19 09:17	08/14/19 17:33	1
Acenaphthene	ND		5.1		ug/Kg	☼	08/13/19 09:17	08/14/19 17:33	1
Fluorene	ND		5.1		ug/Kg	☼	08/13/19 09:17	08/14/19 17:33	1
Phenanthrene	**9.0**		5.1		ug/Kg	☼	08/13/19 09:17	08/14/19 17:33	1
Anthracene	ND		5.1		ug/Kg	☼	08/13/19 09:17	08/14/19 17:33	1
Fluoranthene	**8.6**		5.1		ug/Kg	☼	08/13/19 09:17	08/14/19 17:33	1
Pyrene	**7.1**		5.1		ug/Kg	☼	08/13/19 09:17	08/14/19 17:33	1
Benzo[a]anthracene	**5.3**		5.1		ug/Kg	☼	08/13/19 09:17	08/14/19 17:33	1
Chrysene	ND		5.1		ug/Kg	☼	08/13/19 09:17	08/14/19 17:33	1
Benzo[b]fluoranthene	ND		5.1		ug/Kg	☼	08/13/19 09:17	08/14/19 17:33	1
Benzo[k]fluoranthene	ND		5.1		ug/Kg	☼	08/13/19 09:17	08/14/19 17:33	1
Benzo[a]pyrene	ND		5.1		ug/Kg	☼	08/13/19 09:17	08/14/19 17:33	1
Indeno[1,2,3-cd]pyrene	ND		5.1		ug/Kg	☼	08/13/19 09:17	08/14/19 17:33	1
Dibenz(a,h)anthracene	ND		5.1		ug/Kg	☼	08/13/19 09:17	08/14/19 17:33	1
Benzo[g,h,i]perylene	ND		5.1		ug/Kg	☼	08/13/19 09:17	08/14/19 17:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*106*		*57 - 120*	*08/13/19 09:17*	*08/14/19 17:33*	*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		3.3		mg/Kg	☼	08/11/19 13:13	08/12/19 18:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*118*		*50 - 150*	*08/11/19 13:13*	*08/12/19 18:47*	*1*

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: RM-2 (15-15.5)
Date Collected: 07/30/19 12:45
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-13
Matrix: Solid
Percent Solids: 92.5

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*89*		*50 - 150*	*08/11/19 13:13*	*08/12/19 18:47*	*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		19		mg/Kg	☼	08/13/19 09:19	08/15/19 21:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	*113*		*50 - 150*	*08/13/19 09:19*	*08/15/19 21:38*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**92.5**		0.1		%			08/07/19 14:41	1
Percent Moisture	**7.5**		0.1		%			08/07/19 14:41	1

Client Sample ID: RM-2 (30-30.5)

Date Collected: 07/30/19 13:45
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-14

Matrix: Solid
Percent Solids: 83.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		18		ug/Kg	☼	08/09/19 09:00	08/09/19 20:24	1
Toluene	ND		92		ug/Kg	☼	08/09/19 09:00	08/09/19 20:24	1
Ethylbenzene	ND		25		ug/Kg	☼	08/09/19 09:00	08/09/19 20:24	1
m-Xylene & p-Xylene	ND		120		ug/Kg	☼	08/09/19 09:00	08/09/19 20:24	1
o-Xylene	ND		37		ug/Kg	☼	08/09/19 09:00	08/09/19 20:24	1
Isopropylbenzene	ND		25		ug/Kg	☼	08/09/19 09:00	08/09/19 20:24	1
tert-Butylbenzene	ND		25		ug/Kg	☼	08/09/19 09:00	08/09/19 20:24	1
1,2,4-Trimethylbenzene	ND		25		ug/Kg	☼	08/09/19 09:00	08/09/19 20:24	1
sec-Butylbenzene	ND		25		ug/Kg	☼	08/09/19 09:00	08/09/19 20:24	1
n-Butylbenzene	ND		92		ug/Kg	☼	08/09/19 09:00	08/09/19 20:24	1
Naphthalene	ND		62		ug/Kg	☼	08/09/19 09:00	08/09/19 20:24	1
1,3,5-Trimethylbenzene	ND		25		ug/Kg	☼	08/09/19 09:00	08/09/19 20:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*127*	*X*	*80 - 120*	*08/09/19 09:00*	*08/09/19 20:24*	*1*
Toluene-d8 (Surr)	*91*		*80 - 120*	*08/09/19 09:00*	*08/09/19 20:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 121*	*08/09/19 09:00*	*08/09/19 20:24*	*1*
4-Bromofluorobenzene (Surr)	*109*		*80 - 120*	*08/09/19 09:00*	*08/09/19 20:24*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*	*08/09/19 09:00*	*08/09/19 20:24*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		5.7		ug/Kg	☼	08/13/19 09:17	08/14/19 17:57	1
2-Methylnaphthalene	ND		5.7		ug/Kg	☼	08/13/19 09:17	08/14/19 17:57	1
1-Methylnaphthalene	ND		5.7		ug/Kg	☼	08/13/19 09:17	08/14/19 17:57	1
Acenaphthylene	ND		5.7		ug/Kg	☼	08/13/19 09:17	08/14/19 17:57	1
Acenaphthene	ND		5.7		ug/Kg	☼	08/13/19 09:17	08/14/19 17:57	1
Fluorene	ND		5.7		ug/Kg	☼	08/13/19 09:17	08/14/19 17:57	1
Phenanthrene	ND		5.7		ug/Kg	☼	08/13/19 09:17	08/14/19 17:57	1
Anthracene	ND		5.7		ug/Kg	☼	08/13/19 09:17	08/14/19 17:57	1
Fluoranthene	ND		5.7		ug/Kg	☼	08/13/19 09:17	08/14/19 17:57	1
Pyrene	ND		5.7		ug/Kg	☼	08/13/19 09:17	08/14/19 17:57	1
Benzo[a]anthracene	ND		5.7		ug/Kg	☼	08/13/19 09:17	08/14/19 17:57	1
Chrysene	ND		5.7		ug/Kg	☼	08/13/19 09:17	08/14/19 17:57	1
Benzo[b]fluoranthene	ND		5.7		ug/Kg	☼	08/13/19 09:17	08/14/19 17:57	1
Benzo[k]fluoranthene	ND		5.7		ug/Kg	☼	08/13/19 09:17	08/14/19 17:57	1
Benzo[a]pyrene	ND		5.7		ug/Kg	☼	08/13/19 09:17	08/14/19 17:57	1
Indeno[1,2,3-cd]pyrene	ND		5.7		ug/Kg	☼	08/13/19 09:17	08/14/19 17:57	1
Dibenz(a,h)anthracene	ND		5.7		ug/Kg	☼	08/13/19 09:17	08/14/19 17:57	1
Benzo[g,h,i]perylene	ND		5.7		ug/Kg	☼	08/13/19 09:17	08/14/19 17:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*100*		*57 - 120*	*08/13/19 09:17*	*08/14/19 17:57*	*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		3.1		mg/Kg	☼	08/11/19 13:13	08/12/19 19:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*106*		*50 - 150*	*08/11/19 13:13*	*08/12/19 19:11*	*1*

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: RM-2 (30-30.5)
Date Collected: 07/30/19 13:45
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-14
Matrix: Solid
Percent Solids: 83.6

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*50 - 150*	*08/11/19 13:13*	*08/12/19 19:11*	*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		22		mg/Kg	☼	08/13/19 09:19	08/15/19 22:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*130*		*50 - 150*	*08/13/19 09:19*	*08/15/19 22:00*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**83.6**		0.1		%			08/07/19 14:41	1
Percent Moisture	**16.4**		0.1		%			08/07/19 14:41	1

Client Sample ID: RM-2 (39.5-40)

Date Collected: 07/30/19 14:00
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-15

Matrix: Solid
Percent Solids: 81.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		22		ug/Kg	☼	08/09/19 09:00	08/09/19 20:49	1
Toluene	ND		110		ug/Kg	☼	08/09/19 09:00	08/09/19 20:49	1
Ethylbenzene	ND		29		ug/Kg	☼	08/09/19 09:00	08/09/19 20:49	1
m-Xylene & p-Xylene	ND		150		ug/Kg	☼	08/09/19 09:00	08/09/19 20:49	1
o-Xylene	ND		44		ug/Kg	☼	08/09/19 09:00	08/09/19 20:49	1
Isopropylbenzene	ND		29		ug/Kg	☼	08/09/19 09:00	08/09/19 20:49	1
tert-Butylbenzene	ND		29		ug/Kg	☼	08/09/19 09:00	08/09/19 20:49	1
1,2,4-Trimethylbenzene	ND		29		ug/Kg	☼	08/09/19 09:00	08/09/19 20:49	1
sec-Butylbenzene	ND		29		ug/Kg	☼	08/09/19 09:00	08/09/19 20:49	1
n-Butylbenzene	ND		110		ug/Kg	☼	08/09/19 09:00	08/09/19 20:49	1
Naphthalene	ND		73		ug/Kg	☼	08/09/19 09:00	08/09/19 20:49	1
1,3,5-Trimethylbenzene	ND		29		ug/Kg	☼	08/09/19 09:00	08/09/19 20:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*130*	*X*	*80 - 120*	*08/09/19 09:00*	*08/09/19 20:49*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*	*08/09/19 09:00*	*08/09/19 20:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 121*	*08/09/19 09:00*	*08/09/19 20:49*	*1*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*	*08/09/19 09:00*	*08/09/19 20:49*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*	*08/09/19 09:00*	*08/09/19 20:49*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		5.9		ug/Kg	☼	08/13/19 09:17	08/14/19 18:22	1
2-Methylnaphthalene	ND		5.9		ug/Kg	☼	08/13/19 09:17	08/14/19 18:22	1
1-Methylnaphthalene	ND		5.9		ug/Kg	☼	08/13/19 09:17	08/14/19 18:22	1
Acenaphthylene	ND		5.9		ug/Kg	☼	08/13/19 09:17	08/14/19 18:22	1
Acenaphthene	ND		5.9		ug/Kg	☼	08/13/19 09:17	08/14/19 18:22	1
Fluorene	ND		5.9		ug/Kg	☼	08/13/19 09:17	08/14/19 18:22	1
Phenanthrene	ND		5.9		ug/Kg	☼	08/13/19 09:17	08/14/19 18:22	1
Anthracene	ND		5.9		ug/Kg	☼	08/13/19 09:17	08/14/19 18:22	1
Fluoranthene	ND		5.9		ug/Kg	☼	08/13/19 09:17	08/14/19 18:22	1
Pyrene	ND		5.9		ug/Kg	☼	08/13/19 09:17	08/14/19 18:22	1
Benzo[a]anthracene	ND		5.9		ug/Kg	☼	08/13/19 09:17	08/14/19 18:22	1
Chrysene	ND		5.9		ug/Kg	☼	08/13/19 09:17	08/14/19 18:22	1
Benzo[b]fluoranthene	ND		5.9		ug/Kg	☼	08/13/19 09:17	08/14/19 18:22	1
Benzo[k]fluoranthene	ND		5.9		ug/Kg	☼	08/13/19 09:17	08/14/19 18:22	1
Benzo[a]pyrene	ND		5.9		ug/Kg	☼	08/13/19 09:17	08/14/19 18:22	1
Indeno[1,2,3-cd]pyrene	ND		5.9		ug/Kg	☼	08/13/19 09:17	08/14/19 18:22	1
Dibenz(a,h)anthracene	ND		5.9		ug/Kg	☼	08/13/19 09:17	08/14/19 18:22	1
Benzo[g,h,i]perylene	ND		5.9		ug/Kg	☼	08/13/19 09:17	08/14/19 18:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*81*		*57 - 120*	*08/13/19 09:17*	*08/14/19 18:22*	*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		3.6		mg/Kg	☼	08/11/19 13:13	08/12/19 19:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*107*		*50 - 150*	*08/11/19 13:13*	*08/12/19 19:36*	*1*

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: RM-2 (39.5-40)
Date Collected: 07/30/19 14:00
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-15
Matrix: Solid
Percent Solids: 81.7

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*50 - 150*	*08/11/19 13:13*	*08/12/19 19:36*	*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		17		mg/Kg	☼	08/13/19 09:19	08/15/19 22:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*113*		*50 - 150*	*08/13/19 09:19*	*08/15/19 22:22*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**81.7**		0.1		%			08/07/19 14:41	1
Percent Moisture	**18.3**		0.1		%			08/07/19 14:41	1

Client Sample ID: DUP-01

Date Collected: 07/30/19 00:01
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-16

Matrix: Solid
Percent Solids: 91.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		18		ug/Kg	☼	08/09/19 09:00	08/09/19 21:14	1
Toluene	ND		88		ug/Kg	☼	08/09/19 09:00	08/09/19 21:14	1
Ethylbenzene	ND		23		ug/Kg	☼	08/09/19 09:00	08/09/19 21:14	1
m-Xylene & p-Xylene	ND		120		ug/Kg	☼	08/09/19 09:00	08/09/19 21:14	1
o-Xylene	ND		35		ug/Kg	☼	08/09/19 09:00	08/09/19 21:14	1
Isopropylbenzene	ND		23		ug/Kg	☼	08/09/19 09:00	08/09/19 21:14	1
tert-Butylbenzene	ND		23		ug/Kg	☼	08/09/19 09:00	08/09/19 21:14	1
1,2,4-Trimethylbenzene	**62**		23		ug/Kg	☼	08/09/19 09:00	08/09/19 21:14	1
sec-Butylbenzene	ND		23		ug/Kg	☼	08/09/19 09:00	08/09/19 21:14	1
n-Butylbenzene	ND		88		ug/Kg	☼	08/09/19 09:00	08/09/19 21:14	1
Naphthalene	ND		59		ug/Kg	☼	08/09/19 09:00	08/09/19 21:14	1
1,3,5-Trimethylbenzene	ND		23		ug/Kg	☼	08/09/19 09:00	08/09/19 21:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*150*	*X*	*80 - 120*	*08/09/19 09:00*	*08/09/19 21:14*	*1*
Toluene-d8 (Surr)	*90*		*80 - 120*	*08/09/19 09:00*	*08/09/19 21:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 121*	*08/09/19 09:00*	*08/09/19 21:14*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*	*08/09/19 09:00*	*08/09/19 21:14*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*	*08/09/19 09:00*	*08/09/19 21:14*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		5.4		ug/Kg	☼	08/13/19 09:17	08/14/19 18:47	1
2-Methylnaphthalene	**14**		5.4		ug/Kg	☼	08/13/19 09:17	08/14/19 18:47	1
1-Methylnaphthalene	**6.9**		5.4		ug/Kg	☼	08/13/19 09:17	08/14/19 18:47	1
Acenaphthylene	ND		5.4		ug/Kg	☼	08/13/19 09:17	08/14/19 18:47	1
Acenaphthene	ND		5.4		ug/Kg	☼	08/13/19 09:17	08/14/19 18:47	1
Fluorene	ND		5.4		ug/Kg	☼	08/13/19 09:17	08/14/19 18:47	1
Phenanthrene	**6.1**		5.4		ug/Kg	☼	08/13/19 09:17	08/14/19 18:47	1
Anthracene	ND		5.4		ug/Kg	☼	08/13/19 09:17	08/14/19 18:47	1
Fluoranthene	**7.1**		5.4		ug/Kg	☼	08/13/19 09:17	08/14/19 18:47	1
Pyrene	**5.7**		5.4		ug/Kg	☼	08/13/19 09:17	08/14/19 18:47	1
Benzo[a]anthracene	ND		5.4		ug/Kg	☼	08/13/19 09:17	08/14/19 18:47	1
Chrysene	ND		5.4		ug/Kg	☼	08/13/19 09:17	08/14/19 18:47	1
Benzo[b]fluoranthene	ND		5.4		ug/Kg	☼	08/13/19 09:17	08/14/19 18:47	1
Benzo[k]fluoranthene	ND		5.4		ug/Kg	☼	08/13/19 09:17	08/14/19 18:47	1
Benzo[a]pyrene	ND		5.4		ug/Kg	☼	08/13/19 09:17	08/14/19 18:47	1
Indeno[1,2,3-cd]pyrene	ND		5.4		ug/Kg	☼	08/13/19 09:17	08/14/19 18:47	1
Dibenz(a,h)anthracene	ND		5.4		ug/Kg	☼	08/13/19 09:17	08/14/19 18:47	1
Benzo[g,h,i]perylene	ND		5.4		ug/Kg	☼	08/13/19 09:17	08/14/19 18:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*99*		*57 - 120*	*08/13/19 09:17*	*08/14/19 18:47*	*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		2.9		mg/Kg	☼	08/11/19 13:13	08/12/19 20:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*120*		*50 - 150*	*08/11/19 13:13*	*08/12/19 20:00*	*1*

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: DUP-01
Date Collected: 07/30/19 00:01
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-16
Matrix: Solid
Percent Solids: 91.8

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*50 - 150*	*08/11/19 13:13*	*08/12/19 20:00*	*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		17		mg/Kg	☼	08/13/19 09:19	08/15/19 22:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*111*		*50 - 150*	*08/13/19 09:19*	*08/15/19 22:44*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**91.8**		0.1		%			08/07/19 14:41	1
Percent Moisture	**8.2**		0.1		%			08/07/19 14:41	1

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: TB-01

Date Collected: 07/30/19 08:00
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-17

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		30		ug/Kg		08/09/19 09:00	08/09/19 21:39	1
Toluene	ND		150		ug/Kg		08/09/19 09:00	08/09/19 21:39	1
Ethylbenzene	ND		40		ug/Kg		08/09/19 09:00	08/09/19 21:39	1
m-Xylene & p-Xylene	ND		200		ug/Kg		08/09/19 09:00	08/09/19 21:39	1
o-Xylene	ND		60		ug/Kg		08/09/19 09:00	08/09/19 21:39	1
Isopropylbenzene	ND		40		ug/Kg		08/09/19 09:00	08/09/19 21:39	1
tert-Butylbenzene	ND		40		ug/Kg		08/09/19 09:00	08/09/19 21:39	1
1,2,4-Trimethylbenzene	ND		40		ug/Kg		08/09/19 09:00	08/09/19 21:39	1
sec-Butylbenzene	ND		40		ug/Kg		08/09/19 09:00	08/09/19 21:39	1
n-Butylbenzene	ND		150		ug/Kg		08/09/19 09:00	08/09/19 21:39	1
Naphthalene	ND		100		ug/Kg		08/09/19 09:00	08/09/19 21:39	1
1,3,5-Trimethylbenzene	ND		40		ug/Kg		08/09/19 09:00	08/09/19 21:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*146*	*X*	*80 - 120*	*08/09/19 09:00*	*08/09/19 21:39*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*	*08/09/19 09:00*	*08/09/19 21:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 121*	*08/09/19 09:00*	*08/09/19 21:39*	*1*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*	*08/09/19 09:00*	*08/09/19 21:39*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*	*08/09/19 09:00*	*08/09/19 21:39*	*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		5.0		mg/Kg		08/11/19 13:13	08/12/19 17:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*116*		*50 - 150*	*08/11/19 13:13*	*08/12/19 17:58*	*1*
4-Bromofluorobenzene (Surr)	*83*		*50 - 150*	*08/11/19 13:13*	*08/12/19 17:58*	*1*

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

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

Lab Sample ID: MB 580-307639/7
Matrix: Water
Analysis Batch: 307639

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			08/06/19 15:08	1
Ethylbenzene	ND		3.0		ug/L			08/06/19 15:08	1
m-Xylene & p-Xylene	ND		3.0		ug/L			08/06/19 15:08	1
o-Xylene	ND		2.0		ug/L			08/06/19 15:08	1
Isopropylbenzene	ND		2.0		ug/L			08/06/19 15:08	1
tert-Butylbenzene	ND		3.0		ug/L			08/06/19 15:08	1
1,2,4-Trimethylbenzene	ND		3.0		ug/L			08/06/19 15:08	1
Naphthalene	ND		4.0		ug/L			08/06/19 15:08	1
sec-Butylbenzene	ND		3.0		ug/L			08/06/19 15:08	1
n-Butylbenzene	ND		3.0		ug/L			08/06/19 15:08	1
1,3,5-Trimethylbenzene	ND		3.0		ug/L			08/06/19 15:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*80 - 126*		*08/06/19 15:08*	*1*
4-Bromofluorobenzene (Surr)	*113*		*80 - 120*		*08/06/19 15:08*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*08/06/19 15:08*	*1*
Trifluorotoluene (Surr)	*110*		*80 - 120*		*08/06/19 15:08*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*08/06/19 15:08*	*1*

Lab Sample ID: LCS 580-307639/4
Matrix: Water
Analysis Batch: 307639

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	9.76		ug/L		98	75 - 121
Ethylbenzene	10.0	9.99		ug/L		100	80 - 120
m-Xylene & p-Xylene	10.0	9.78		ug/L		98	80 - 120
o-Xylene	10.0	9.88		ug/L		99	80 - 120
Isopropylbenzene	10.0	10.3		ug/L		103	75 - 120
tert-Butylbenzene	10.0	9.88		ug/L		99	80 - 121
1,2,4-Trimethylbenzene	10.0	10.0		ug/L		100	80 - 120
Naphthalene	10.0	10.3		ug/L		103	44 - 144
sec-Butylbenzene	10.0	9.85		ug/L		99	78 - 120
n-Butylbenzene	10.0	9.83		ug/L		98	78 - 120
1,3,5-Trimethylbenzene	10.0	9.71		ug/L		97	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*80*		*80 - 126*
4-Bromofluorobenzene (Surr)	*111*		*80 - 120*
Toluene-d8 (Surr)	*96*		*80 - 120*
Trifluorotoluene (Surr)	*112*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 120*

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

Lab Sample ID: LCSD 580-307639/5
Matrix: Water
Analysis Batch: 307639

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	9.76		ug/L		98	75 - 121	0	14
Ethylbenzene			10.0	9.52		ug/L		95	80 - 120	5	14
m-Xylene & p-Xylene			10.0	9.46		ug/L		95	80 - 120	3	14
o-Xylene			10.0	9.59		ug/L		96	80 - 120	3	16
Isopropylbenzene			10.0	10.1		ug/L		101	75 - 120	1	20
tert-Butylbenzene			10.0	9.69		ug/L		97	80 - 121	2	14
1,2,4-Trimethylbenzene			10.0	9.67		ug/L		97	80 - 120	4	16
Naphthalene			10.0	10.8		ug/L		108	44 - 144	4	31
sec-Butylbenzene			10.0	9.66		ug/L		97	78 - 120	2	15
n-Butylbenzene			10.0	9.79		ug/L		98	78 - 120	0	14
1,3,5-Trimethylbenzene			10.0	9.62		ug/L		96	80 - 120	1	14

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*83*		*80 - 126*
4-Bromofluorobenzene (Surr)	*111*		*80 - 120*
Toluene-d8 (Surr)	*93*		*80 - 120*
Trifluorotoluene (Surr)	*110*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*80 - 120*

Lab Sample ID: MB 580-307824/7
Matrix: Water
Analysis Batch: 307824

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			08/07/19 16:37	1
Toluene	ND		2.0		ug/L			08/07/19 16:37	1
Ethylbenzene	ND		3.0		ug/L			08/07/19 16:37	1
m-Xylene & p-Xylene	ND		3.0		ug/L			08/07/19 16:37	1
o-Xylene	ND		2.0		ug/L			08/07/19 16:37	1
Isopropylbenzene	ND		2.0		ug/L			08/07/19 16:37	1
tert-Butylbenzene	ND		3.0		ug/L			08/07/19 16:37	1
1,2,4-Trimethylbenzene	ND		3.0		ug/L			08/07/19 16:37	1
Naphthalene	ND		4.0		ug/L			08/07/19 16:37	1
sec-Butylbenzene	ND		3.0		ug/L			08/07/19 16:37	1
n-Butylbenzene	ND		3.0		ug/L			08/07/19 16:37	1
1,3,5-Trimethylbenzene	ND		3.0		ug/L			08/07/19 16:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 126*		*08/07/19 16:37*	*1*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*		*08/07/19 16:37*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*08/07/19 16:37*	*1*
Trifluorotoluene (Surr)	*100*		*80 - 120*		*08/07/19 16:37*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*08/07/19 16:37*	*1*

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

Lab Sample ID: LCS 580-307824/4
Matrix: Water
Analysis Batch: 307824

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	10.8		ug/L		108	75 - 121		
Toluene			10.0	9.92		ug/L		99	80 - 120		
Ethylbenzene			10.0	10.3		ug/L		103	80 - 120		
m-Xylene & p-Xylene			10.0	9.96		ug/L		100	80 - 120		
o-Xylene			10.0	11.1		ug/L		111	80 - 120		
Isopropylbenzene			10.0	9.95		ug/L		100	75 - 120		
tert-Butylbenzene			10.0	10.2		ug/L		102	80 - 121		
1,2,4-Trimethylbenzene			10.0	10.0		ug/L		100	80 - 120		
Naphthalene			10.0	10.6		ug/L		106	44 - 144		
sec-Butylbenzene			10.0	10.0		ug/L		100	78 - 120		
n-Butylbenzene			10.0	10.1		ug/L		101	78 - 120		
1,3,5-Trimethylbenzene			10.0	9.98		ug/L		100	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 126*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*
Toluene-d8 (Surr)	*102*		*80 - 120*
Trifluorotoluene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*80 - 120*

Lab Sample ID: LCSD 580-307824/5
Matrix: Water
Analysis Batch: 307824

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	9.89		ug/L		99	75 - 121	9	14
Toluene			10.0	9.57		ug/L		96	80 - 120	4	19
Ethylbenzene			10.0	9.68		ug/L		97	80 - 120	6	14
m-Xylene & p-Xylene			10.0	9.37		ug/L		94	80 - 120	6	14
o-Xylene			10.0	10.4		ug/L		104	80 - 120	7	16
Isopropylbenzene			10.0	9.21		ug/L		92	75 - 120	8	20
tert-Butylbenzene			10.0	9.06		ug/L		91	80 - 121	12	14
1,2,4-Trimethylbenzene			10.0	8.74		ug/L		87	80 - 120	13	16
Naphthalene			10.0	8.70		ug/L		87	44 - 144	19	31
sec-Butylbenzene			10.0	8.80		ug/L		88	78 - 120	13	15
n-Butylbenzene			10.0	8.80		ug/L		88	78 - 120	14	14
1,3,5-Trimethylbenzene			10.0	8.84		ug/L		88	80 - 120	12	14

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 126*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*
Toluene-d8 (Surr)	*107*		*80 - 120*
Trifluorotoluene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 120*

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

Lab Sample ID: MB 580-307894/7
Matrix: Water
Analysis Batch: 307894

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			08/08/19 15:19	1
Toluene	ND		2.0		ug/L			08/08/19 15:19	1
m-Xylene & p-Xylene	ND		3.0		ug/L			08/08/19 15:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 126*		*08/08/19 15:19*	*1*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*08/08/19 15:19*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*08/08/19 15:19*	*1*
Trifluorotoluene (Surr)	*105*		*80 - 120*		*08/08/19 15:19*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*08/08/19 15:19*	*1*

Lab Sample ID: LCS 580-307894/4
Matrix: Water
Analysis Batch: 307894

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	10.1		ug/L		101	75 - 121
Toluene	10.0	9.35		ug/L		93	80 - 120
m-Xylene & p-Xylene	10.0	9.40		ug/L		94	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 126*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*
Toluene-d8 (Surr)	*103*		*80 - 120*
Trifluorotoluene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*

Lab Sample ID: LCSD 580-307894/5
Matrix: Water
Analysis Batch: 307894

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	10.4		ug/L		104	75 - 121	3	14
Toluene	10.0	9.55		ug/L		95	80 - 120	2	19
m-Xylene & p-Xylene	10.0	9.40		ug/L		94	80 - 120	0	14

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 126*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Toluene-d8 (Surr)	*106*		*80 - 120*
Trifluorotoluene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*80 - 120*

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

Lab Sample ID: MB 580-307906/1-A
Matrix: Solid
Analysis Batch: 308104

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 307906

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		30		ug/Kg		08/08/19 08:00	08/09/19 12:33	1
Toluene	ND		150		ug/Kg		08/08/19 08:00	08/09/19 12:33	1
Ethylbenzene	ND		40		ug/Kg		08/08/19 08:00	08/09/19 12:33	1
m-Xylene & p-Xylene	ND		200		ug/Kg		08/08/19 08:00	08/09/19 12:33	1
o-Xylene	ND		60		ug/Kg		08/08/19 08:00	08/09/19 12:33	1
Isopropylbenzene	ND		40		ug/Kg		08/08/19 08:00	08/09/19 12:33	1
tert-Butylbenzene	ND		40		ug/Kg		08/08/19 08:00	08/09/19 12:33	1
1,2,4-Trimethylbenzene	ND		40		ug/Kg		08/08/19 08:00	08/09/19 12:33	1
Naphthalene	ND		100		ug/Kg		08/08/19 08:00	08/09/19 12:33	1
sec-Butylbenzene	ND		40		ug/Kg		08/08/19 08:00	08/09/19 12:33	1
n-Butylbenzene	ND		150		ug/Kg		08/08/19 08:00	08/09/19 12:33	1
1,3,5-Trimethylbenzene	ND		40		ug/Kg		08/08/19 08:00	08/09/19 12:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 121*	*08/08/19 08:00*	*08/09/19 12:33*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*	*08/08/19 08:00*	*08/09/19 12:33*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*	*08/08/19 08:00*	*08/09/19 12:33*	*1*
Trifluorotoluene (Surr)	*111*		*80 - 120*	*08/08/19 08:00*	*08/09/19 12:33*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*	*08/08/19 08:00*	*08/09/19 12:33*	*1*

Lab Sample ID: LCS 580-307906/2-A
Matrix: Solid
Analysis Batch: 308104

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 307906

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	800	1010		ug/Kg		126	72 - 135
Toluene	800	824		ug/Kg		103	75 - 137
Ethylbenzene	800	861		ug/Kg		108	80 - 135
m-Xylene & p-Xylene	800	847		ug/Kg		106	80 - 132
o-Xylene	800	840		ug/Kg		105	80 - 125
Isopropylbenzene	800	882		ug/Kg		110	74 - 140
tert-Butylbenzene	800	839		ug/Kg		105	72 - 144
1,2,4-Trimethylbenzene	800	825		ug/Kg		103	73 - 127
Naphthalene	800	680		ug/Kg		85	49 - 147
sec-Butylbenzene	800	866		ug/Kg		108	77 - 143
n-Butylbenzene	800	803		ug/Kg		100	69 - 143
1,3,5-Trimethylbenzene	800	834		ug/Kg		104	72 - 136

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 121*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Toluene-d8 (Surr)	*90*		*80 - 120*
Trifluorotoluene (Surr)	*113*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*

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

Lab Sample ID: LCSD 580-307906/3-A
Matrix: Solid
Analysis Batch: 308104

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 307906

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			800	1020		ug/Kg		127	72 - 135	1	15
Toluene			800	835		ug/Kg		104	75 - 137	1	20
Ethylbenzene			800	872		ug/Kg		109	80 - 135	1	16
m-Xylene & p-Xylene			800	864		ug/Kg		108	80 - 132	2	20
o-Xylene			800	862		ug/Kg		108	80 - 125	3	14
Isopropylbenzene			800	906		ug/Kg		113	74 - 140	3	17
tert-Butylbenzene			800	864		ug/Kg		108	72 - 144	3	24
1,2,4-Trimethylbenzene			800	846		ug/Kg		106	73 - 127	2	20
Naphthalene			800	728		ug/Kg		91	49 - 147	7	35
sec-Butylbenzene			800	879		ug/Kg		110	77 - 143	2	24
n-Butylbenzene			800	820		ug/Kg		103	69 - 143	2	26
1,3,5-Trimethylbenzene			800	849		ug/Kg		106	72 - 136	2	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 121*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Toluene-d8 (Surr)	*90*		*80 - 120*
Trifluorotoluene (Surr)	*111*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*

Lab Sample ID: MB 580-308148/9
Matrix: Water
Analysis Batch: 308148

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		2.0		ug/L			08/12/19 17:16	1
m-Xylene & p-Xylene	ND		3.0		ug/L			08/12/19 17:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 126*		*08/12/19 17:16*	*1*
4-Bromofluorobenzene (Surr)	*88*		*80 - 120*		*08/12/19 17:16*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*08/12/19 17:16*	*1*
Trifluorotoluene (Surr)	*103*		*80 - 120*		*08/12/19 17:16*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*08/12/19 17:16*	*1*

Lab Sample ID: LCS 580-308148/6
Matrix: Water
Analysis Batch: 308148

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene			10.0	9.38		ug/L		94	80 - 120
m-Xylene & p-Xylene			10.0	9.13		ug/L		91	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 126*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*
Toluene-d8 (Surr)	*105*		*80 - 120*

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

Lab Sample ID: LCS 580-308148/6
Matrix: Water
Analysis Batch: 308148

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

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Trifluorotoluene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*107*		*80 - 120*

Lab Sample ID: LCSD 580-308148/7
Matrix: Water
Analysis Batch: 308148

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
Toluene			10.0	9.29		ug/L		93	80 - 120	1	19
m-Xylene & p-Xylene			10.0	9.21		ug/L		92	80 - 120	1	14

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 126*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*
Toluene-d8 (Surr)	*107*		*80 - 120*
Trifluorotoluene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 120*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 580-307523/1-A
Matrix: Water
Analysis Batch: 307718

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 307523

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 10:42	1
2-Methylnaphthalene	ND		0.20		ug/L		08/05/19 15:55	08/07/19 10:42	1
1-Methylnaphthalene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 10:42	1
Acenaphthylene	ND		0.050		ug/L		08/05/19 15:55	08/07/19 10:42	1
Acenaphthene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 10:42	1
Fluorene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 10:42	1
Phenanthrene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 10:42	1
Anthracene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 10:42	1
Fluoranthene	ND		0.20		ug/L		08/05/19 15:55	08/07/19 10:42	1
Pyrene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 10:42	1
Benzo[a]anthracene	ND		0.050		ug/L		08/05/19 15:55	08/07/19 10:42	1
Chrysene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 10:42	1
Benzo[b]fluoranthene	ND		0.050		ug/L		08/05/19 15:55	08/07/19 10:42	1
Benzo[k]fluoranthene	ND		0.050		ug/L		08/05/19 15:55	08/07/19 10:42	1
Benzo[a]pyrene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 10:42	1
Indeno[1,2,3-cd]pyrene	ND		0.050		ug/L		08/05/19 15:55	08/07/19 10:42	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		08/05/19 15:55	08/07/19 10:42	1
Benzo[g,h,i]perylene	ND		0.050		ug/L		08/05/19 15:55	08/07/19 10:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*60*		*53 - 120*	*08/05/19 15:55*	*08/07/19 10:42*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 580-307523/2-A
Matrix: Water
Analysis Batch: 307718

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 307523

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Naphthalene			4.00	2.70		ug/L		67	36 - 120		
2-Methylnaphthalene			4.00	2.79		ug/L		70	33 - 120		
1-Methylnaphthalene			4.00	2.74		ug/L		68	35 - 120		
Acenaphthylene			4.00	2.85		ug/L		71	42 - 120		
Acenaphthene			4.00	2.60		ug/L		65	42 - 120		
Fluorene			4.00	2.81		ug/L		70	49 - 120		
Phenanthrene			4.00	2.72		ug/L		68	54 - 120		
Anthracene			4.00	2.97		ug/L		74	56 - 120		
Fluoranthene			4.00	3.01		ug/L		75	52 - 129		
Pyrene			4.00	2.80		ug/L		70	50 - 127		
Benzo[a]anthracene			4.00	3.53		ug/L		88	61 - 129		
Chrysene			4.00	3.00		ug/L		75	47 - 126		
Benzo[b]fluoranthene			4.00	3.22		ug/L		80	53 - 133		
Benzo[k]fluoranthene			4.00	3.06		ug/L		76	51 - 132		
Benzo[a]pyrene			4.00	3.16		ug/L		79	56 - 130		
Indeno[1,2,3-cd]pyrene			4.00	3.54		ug/L		89	56 - 135		
Dibenz(a,h)anthracene			4.00	3.16		ug/L		79	60 - 133		
Benzo[g,h,i]perylene			4.00	3.11		ug/L		78	55 - 127		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14	*62*		*53 - 120*

Lab Sample ID: LCSD 580-307523/3-A
Matrix: Water
Analysis Batch: 307718

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 307523

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene			4.00	2.60		ug/L		65	36 - 120	4	27
2-Methylnaphthalene			4.00	2.71		ug/L		68	33 - 120	3	30
1-Methylnaphthalene			4.00	2.66		ug/L		66	35 - 120	3	34
Acenaphthylene			4.00	2.78		ug/L		70	42 - 120	2	26
Acenaphthene			4.00	2.58		ug/L		65	42 - 120	1	24
Fluorene			4.00	2.82		ug/L		70	49 - 120	0	21
Phenanthrene			4.00	2.86		ug/L		71	54 - 120	5	21
Anthracene			4.00	3.14		ug/L		79	56 - 120	6	29
Fluoranthene			4.00	3.23		ug/L		81	52 - 129	7	32
Pyrene			4.00	3.04		ug/L		76	50 - 127	8	35
Benzo[a]anthracene			4.00	3.84		ug/L		96	61 - 129	8	31
Chrysene			4.00	3.27		ug/L		82	47 - 126	9	23
Benzo[b]fluoranthene			4.00	3.64		ug/L		91	53 - 133	12	25
Benzo[k]fluoranthene			4.00	3.34		ug/L		84	51 - 132	9	25
Benzo[a]pyrene			4.00	3.49		ug/L		87	56 - 130	10	27
Indeno[1,2,3-cd]pyrene			4.00	3.88		ug/L		97	56 - 135	9	24
Dibenz(a,h)anthracene			4.00	3.49		ug/L		87	60 - 133	10	25
Benzo[g,h,i]perylene			4.00	3.45		ug/L		86	55 - 127	10	27

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Terphenyl-d14	*67*		*53 - 120*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 580-308183/1-A
Matrix: Solid
Analysis Batch: 308309

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 308183

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		5.0		ug/Kg		08/13/19 09:17	08/14/19 10:33	1
2-Methylnaphthalene	ND		5.0		ug/Kg		08/13/19 09:17	08/14/19 10:33	1
1-Methylnaphthalene	ND		5.0		ug/Kg		08/13/19 09:17	08/14/19 10:33	1
Acenaphthylene	ND		5.0		ug/Kg		08/13/19 09:17	08/14/19 10:33	1
Acenaphthene	ND		5.0		ug/Kg		08/13/19 09:17	08/14/19 10:33	1
Fluorene	ND		5.0		ug/Kg		08/13/19 09:17	08/14/19 10:33	1
Phenanthrene	ND		5.0		ug/Kg		08/13/19 09:17	08/14/19 10:33	1
Anthracene	ND		5.0		ug/Kg		08/13/19 09:17	08/14/19 10:33	1
Fluoranthene	ND		5.0		ug/Kg		08/13/19 09:17	08/14/19 10:33	1
Pyrene	ND		5.0		ug/Kg		08/13/19 09:17	08/14/19 10:33	1
Benzo[a]anthracene	ND		5.0		ug/Kg		08/13/19 09:17	08/14/19 10:33	1
Chrysene	ND		5.0		ug/Kg		08/13/19 09:17	08/14/19 10:33	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		08/13/19 09:17	08/14/19 10:33	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		08/13/19 09:17	08/14/19 10:33	1
Benzo[a]pyrene	ND		5.0		ug/Kg		08/13/19 09:17	08/14/19 10:33	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		08/13/19 09:17	08/14/19 10:33	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		08/13/19 09:17	08/14/19 10:33	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		08/13/19 09:17	08/14/19 10:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*89*		*57 - 120*	*08/13/19 09:17*	*08/14/19 10:33*	*1*

Lab Sample ID: LCS 580-308183/2-A
Matrix: Solid
Analysis Batch: 308309

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 308183

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	1000	895		ug/Kg		90	70 - 120
2-Methylnaphthalene	1000	911		ug/Kg		91	68 - 120
1-Methylnaphthalene	1000	932		ug/Kg		93	71 - 120
Acenaphthylene	1000	943		ug/Kg		94	68 - 120
Acenaphthene	1000	914		ug/Kg		91	68 - 120
Fluorene	1000	935		ug/Kg		94	73 - 120
Phenanthrene	1000	889		ug/Kg		89	66 - 120
Anthracene	1000	924		ug/Kg		92	73 - 125
Fluoranthene	1000	915		ug/Kg		92	74 - 125
Pyrene	1000	888		ug/Kg		89	70 - 120
Benzo[a]anthracene	1000	875		ug/Kg		88	66 - 120
Chrysene	1000	850		ug/Kg		85	63 - 120
Benzo[b]fluoranthene	1000	847		ug/Kg		85	63 - 132
Benzo[k]fluoranthene	1000	833		ug/Kg		83	63 - 131
Benzo[a]pyrene	1000	781		ug/Kg		78	72 - 124
Indeno[1,2,3-cd]pyrene	1000	900		ug/Kg		90	65 - 132
Dibenz(a,h)anthracene	1000	917		ug/Kg		92	70 - 133
Benzo[g,h,i]perylene	1000	843		ug/Kg		84	63 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14	*93*		*57 - 120*

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

Lab Sample ID: MB 580-307767/6
Matrix: Water
Analysis Batch: 307767

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			08/07/19 11:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*65*		*50 - 150*		*08/07/19 11:22*	*1*
4-Bromofluorobenzene (Surr)	*92*		*50 - 150*		*08/07/19 11:22*	*1*

Lab Sample ID: LCS 580-307767/7
Matrix: Water
Analysis Batch: 307767

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	0.844		mg/L		84	77 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Trifluorotoluene (Surr)	*93*		*50 - 150*
4-Bromofluorobenzene (Surr)	*94*		*50 - 150*

Lab Sample ID: LCSD 580-307767/8
Matrix: Water
Analysis Batch: 307767

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	0.875		mg/L		87	77 - 123	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Trifluorotoluene (Surr)	*97*		*50 - 150*
4-Bromofluorobenzene (Surr)	*97*		*50 - 150*

Lab Sample ID: MB 580-307937/36
Matrix: Water
Analysis Batch: 307937

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			08/09/19 05:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*110*		*50 - 150*		*08/09/19 05:32*	*1*
4-Bromofluorobenzene (Surr)	*96*		*50 - 150*		*08/09/19 05:32*	*1*

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

Lab Sample ID: LCS 580-307937/37
Matrix: Water
Analysis Batch: 307937

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	0.897		mg/L		90	77 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Trifluorotoluene (Surr)	*105*		*50 - 150*
4-Bromofluorobenzene (Surr)	*101*		*50 - 150*

Lab Sample ID: LCSD 580-307937/38
Matrix: Water
Analysis Batch: 307937

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	0.904		mg/L		90	77 - 123	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Trifluorotoluene (Surr)	*103*		*50 - 150*
4-Bromofluorobenzene (Surr)	*96*		*50 - 150*

Lab Sample ID: MB 580-308060/1-A
Matrix: Solid
Analysis Batch: 308156

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 308060

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		5.0		mg/Kg		08/11/19 13:13	08/12/19 16:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*102*		*50 - 150*	*08/11/19 13:13*	*08/12/19 16:45*	*1*
4-Bromofluorobenzene (Surr)	*96*		*50 - 150*	*08/11/19 13:13*	*08/12/19 16:45*	*1*

Lab Sample ID: LCS 580-308060/2-A
Matrix: Solid
Analysis Batch: 308156

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 308060

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) -C6-C10			40.0	35.5		mg/Kg		89	60 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Trifluorotoluene (Surr)	*91*		*50 - 150*
4-Bromofluorobenzene (Surr)	*91*		*50 - 150*

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

Lab Sample ID: LCSD 580-308060/3-A
Matrix: Solid
Analysis Batch: 308156

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 308060

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C10			40.0	39.1		mg/Kg		98	60 - 120	10	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Trifluorotoluene (Surr)	*101*		*50 - 150*
4-Bromofluorobenzene (Surr)	*98*		*50 - 150*

Method: AK102 - DRO

Lab Sample ID: MB 580-307850/1-A
Matrix: Water
Analysis Batch: 308021

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 307850

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	ND		0.11		mg/L		08/08/19 10:12	08/10/19 14:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*94*		*50 - 150*	*08/08/19 10:12*	*08/10/19 14:24*	*1*

Lab Sample ID: LCS 580-307850/2-A
Matrix: Water
Analysis Batch: 308021

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 307850

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
DRO (nC10-<nC25)			2.00	1.86		mg/L		93	75 - 125		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*102*		*50 - 150*

Lab Sample ID: LCSD 580-307850/3-A
Matrix: Water
Analysis Batch: 308021

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 307850

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
DRO (nC10-<nC25)			2.00	1.74		mg/L		87	75 - 125	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*108*		*50 - 150*

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

Lab Sample ID: MB 580-308184/1-A
Matrix: Solid
Analysis Batch: 308456

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 308184

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	ND		20		mg/Kg		08/13/19 09:11	08/15/19 13:11	1

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

Lab Sample ID: MB 580-308184/1-A
Matrix: Solid
Analysis Batch: 308456

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 308184

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	114		50 - 150	08/13/19 09:11	08/15/19 13:11	1

Lab Sample ID: LCS 580-308184/2-A
Matrix: Solid
Analysis Batch: 308456

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 308184

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
DRO (nC10-<nC25)			500	522		mg/Kg		104	75 - 125		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	107		50 - 150

Lab Sample ID: LCSD 580-308184/3-A
Matrix: Solid
Analysis Batch: 308456

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 308184

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
DRO (nC10-<nC25)			500	570		mg/Kg		114	75 - 125	9	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	92		50 - 150

Method: 2540G - SM 2540G

Lab Sample ID: 580-88121-15 DU
Matrix: Solid
Analysis Batch: 307790

Client Sample ID: RM-2 (39.5-40)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Solids	81.7			81.5		%				0.2	20
Percent Moisture	18.3			18.5		%				1	20

Lab Chronicle

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: G-1
Date Collected: 07/29/19 12:00
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	RA	1	307894	08/08/19 15:44	TL1	TAL SEA
Total/NA	Analysis	8260C		1	307639	08/06/19 16:22	T1W	TAL SEA
Total/NA	Prep	3510C			307523	08/05/19 15:55	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		1	307718	08/07/19 12:02	T1W	TAL SEA
Total/NA	Analysis	AK101		1	307767	08/07/19 16:16	DCV	TAL SEA
Total/NA	Prep	3510C			307850	08/08/19 10:12	T1L	TAL SEA
Total/NA	Analysis	AK102		1	308021	08/10/19 17:25	CJ	TAL SEA

Client Sample ID: MW-13
Date Collected: 07/29/19 16:00
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	RA	1	307824	08/07/19 18:17	DSO	TAL SEA
Total/NA	Analysis	8260C		1	307639	08/06/19 16:46	T1W	TAL SEA
Total/NA	Prep	3510C			307523	08/05/19 15:55	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		1	307718	08/07/19 12:28	T1W	TAL SEA
Total/NA	Analysis	AK101		1	307767	08/07/19 16:40	DCV	TAL SEA
Total/NA	Prep	3510C			307850	08/08/19 10:12	T1L	TAL SEA
Total/NA	Analysis	AK102		1	308021	08/10/19 17:48	CJ	TAL SEA

Client Sample ID: MW-17-2
Date Collected: 07/29/19 16:50
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	50	307824	08/07/19 18:42	DSO	TAL SEA
Total/NA	Analysis	8260C		1	307639	08/06/19 17:11	T1W	TAL SEA
Total/NA	Prep	3510C			307523	08/05/19 15:55	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		1	307718	08/07/19 12:55	T1W	TAL SEA
Total/NA	Prep	3510C	DL		307523	08/05/19 15:55	JCM	TAL SEA
Total/NA	Analysis	8270D SIM	DL	50	307718	08/07/19 17:45	T1W	TAL SEA
Total/NA	Analysis	AK101		1	307767	08/07/19 17:05	DCV	TAL SEA
Total/NA	Prep	3510C			307850	08/08/19 10:12	T1L	TAL SEA
Total/NA	Analysis	AK102		1	308021	08/10/19 18:33	CJ	TAL SEA

Client Sample ID: MW-10
Date Collected: 07/29/19 17:40
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	50	307824	08/07/19 19:06	DSO	TAL SEA
Total/NA	Analysis	8260C		1	307639	08/06/19 17:35	T1W	TAL SEA

Client Sample ID: MW-10

Lab Sample ID: 580-88121-4

Date Collected: 07/29/19 17:40

Matrix: Water

Date Received: 08/05/19 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			307523	08/05/19 15:55	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		1	307718	08/07/19 13:21	T1W	TAL SEA
Total/NA	Prep	3510C	DL		307523	08/05/19 15:55	JCM	TAL SEA
Total/NA	Analysis	8270D SIM	DL	50	307718	08/07/19 18:12	T1W	TAL SEA
Total/NA	Analysis	AK101		1	307767	08/07/19 17:29	DCV	TAL SEA
Total/NA	Prep	3510C			307850	08/08/19 10:12	T1L	TAL SEA
Total/NA	Analysis	AK102		1	308021	08/10/19 18:56	CJ	TAL SEA

Client Sample ID: MW-11

Lab Sample ID: 580-88121-5

Date Collected: 07/29/19 18:10

Matrix: Water

Date Received: 08/05/19 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	50	307824	08/07/19 19:31	DSO	TAL SEA
Total/NA	Analysis	8260C		1	307639	08/06/19 18:00	T1W	TAL SEA
Total/NA	Prep	3510C			307523	08/05/19 15:55	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		1	307718	08/07/19 13:47	T1W	TAL SEA
Total/NA	Prep	3510C	DL		307523	08/05/19 15:55	JCM	TAL SEA
Total/NA	Analysis	8270D SIM	DL	100	307718	08/07/19 18:38	T1W	TAL SEA
Total/NA	Analysis	AK101		1	307767	08/07/19 17:54	DCV	TAL SEA
Total/NA	Prep	3510C			307850	08/08/19 10:12	T1L	TAL SEA
Total/NA	Analysis	AK102		1	308021	08/10/19 19:18	CJ	TAL SEA

Client Sample ID: MW-111 DUP

Lab Sample ID: 580-88121-6

Date Collected: 07/29/19 08:00

Matrix: Water

Date Received: 08/05/19 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	50	307824	08/07/19 19:57	DSO	TAL SEA
Total/NA	Analysis	8260C		1	307639	08/06/19 18:24	T1W	TAL SEA
Total/NA	Prep	3510C			307523	08/05/19 15:55	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		1	307718	08/07/19 14:14	T1W	TAL SEA
Total/NA	Prep	3510C	DL		307523	08/05/19 15:55	JCM	TAL SEA
Total/NA	Analysis	8270D SIM	DL	100	307718	08/07/19 19:04	T1W	TAL SEA
Total/NA	Analysis	AK101		1	307767	08/07/19 18:18	DCV	TAL SEA
Total/NA	Prep	3510C			307850	08/08/19 10:12	T1L	TAL SEA
Total/NA	Analysis	AK102		1	308021	08/10/19 19:41	CJ	TAL SEA

Client Sample ID: TB-01

Lab Sample ID: 580-88121-7

Date Collected: 07/29/19 11:50

Matrix: Water

Date Received: 08/05/19 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	RA	1	307824	08/07/19 20:21	DSO	TAL SEA

Lab Chronicle

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: TB-01
Date Collected: 07/29/19 11:50
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	307639	08/06/19 15:58	T1W	TAL SEA
Total/NA	Analysis	AK101		1	307767	08/07/19 13:00	DCV	TAL SEA

Client Sample ID: MW-16
Date Collected: 07/30/19 09:20
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	RA	1	307824	08/07/19 20:47	DSO	TAL SEA
Total/NA	Analysis	8260C		1	307639	08/06/19 18:48	T1W	TAL SEA
Total/NA	Prep	3510C			307523	08/05/19 15:55	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		1	307718	08/07/19 14:41	T1W	TAL SEA
Total/NA	Analysis	AK101		1	307767	08/07/19 18:43	DCV	TAL SEA
Total/NA	Prep	3510C			307850	08/08/19 10:12	T1L	TAL SEA
Total/NA	Analysis	AK102		1	308021	08/10/19 20:03	CJ	TAL SEA

Client Sample ID: MW-12
Date Collected: 07/30/19 10:15
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	RA	1	307824	08/07/19 21:11	DSO	TAL SEA
Total/NA	Analysis	8260C		1	307639	08/06/19 19:13	T1W	TAL SEA
Total/NA	Prep	3510C			307523	08/05/19 15:55	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		1	307718	08/07/19 15:07	T1W	TAL SEA
Total/NA	Analysis	AK101		1	307767	08/07/19 19:07	DCV	TAL SEA
Total/NA	Prep	3510C			307850	08/08/19 10:12	T1L	TAL SEA
Total/NA	Analysis	AK102		1	308021	08/10/19 20:26	CJ	TAL SEA

Client Sample ID: RM-1
Date Collected: 07/30/19 11:45
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	50	307824	08/07/19 21:36	DSO	TAL SEA
Total/NA	Analysis	8260C		1	307639	08/06/19 19:37	T1W	TAL SEA
Total/NA	Prep	3510C			307523	08/05/19 15:55	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		1	307718	08/07/19 15:33	T1W	TAL SEA
Total/NA	Prep	3510C	DL		307523	08/05/19 15:55	JCM	TAL SEA
Total/NA	Analysis	8270D SIM	DL	50	307718	08/07/19 19:31	T1W	TAL SEA
Total/NA	Analysis	AK101		1	307767	08/07/19 19:32	DCV	TAL SEA
Total/NA	Prep	3510C			307850	08/08/19 10:12	T1L	TAL SEA
Total/NA	Analysis	AK102		1	308021	08/10/19 20:48	CJ	TAL SEA

Client Sample ID: MW 17-1

Lab Sample ID: 580-88121-11

Date Collected: 07/30/19 12:30

Matrix: Water

Date Received: 08/05/19 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	50	307824	08/07/19 22:01	DSO	TAL SEA
Total/NA	Analysis	8260C	DL2	100	308148	08/12/19 17:41	T1W	TAL SEA
Total/NA	Analysis	8260C		1	307639	08/06/19 20:01	T1W	TAL SEA
Total/NA	Prep	3510C			307523	08/05/19 15:55	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		1	307718	08/07/19 16:00	T1W	TAL SEA
Total/NA	Prep	3510C	DL		307523	08/05/19 15:55	JCM	TAL SEA
Total/NA	Analysis	8270D SIM	DL	50	307961	08/09/19 15:08	CJ	TAL SEA
Total/NA	Analysis	AK101		20	307937	08/09/19 15:49	DCV	TAL SEA
Total/NA	Prep	3510C			307850	08/08/19 10:12	T1L	TAL SEA
Total/NA	Analysis	AK102		1	308021	08/10/19 21:11	CJ	TAL SEA

Client Sample ID: G-5

Lab Sample ID: 580-88121-12

Date Collected: 07/30/19 13:10

Matrix: Water

Date Received: 08/05/19 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	50	307824	08/07/19 22:27	DSO	TAL SEA
Total/NA	Analysis	8260C		1	307639	08/06/19 20:26	T1W	TAL SEA
Total/NA	Prep	3510C			307523	08/05/19 15:55	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		1	307718	08/07/19 16:26	T1W	TAL SEA
Total/NA	Prep	3510C	DL		307523	08/05/19 15:55	JCM	TAL SEA
Total/NA	Analysis	8270D SIM	DL	5	308806	08/20/19 12:51	W1T	TAL SEA
Total/NA	Analysis	AK101		1	307937	08/09/19 13:59	DCV	TAL SEA
Total/NA	Prep	3510C			307850	08/08/19 10:12	T1L	TAL SEA
Total/NA	Analysis	AK102		1	308021	08/10/19 21:33	CJ	TAL SEA

Client Sample ID: RM-2 (15-15.5)

Lab Sample ID: 580-88121-13

Date Collected: 07/30/19 12:45

Matrix: Solid

Date Received: 08/05/19 12:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	307790	08/07/19 14:41	JCM	TAL SEA

Client Sample ID: RM-2 (15-15.5)

Lab Sample ID: 580-88121-13

Date Collected: 07/30/19 12:45

Matrix: Solid

Date Received: 08/05/19 12:40

Percent Solids: 92.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308078	08/09/19 09:00	ASJ	TAL SEA
Total/NA	Analysis	8260C		1	308104	08/09/19 19:59	W1T	TAL SEA
Total/NA	Prep	3546			308183	08/13/19 09:17	MWW	TAL SEA
Total/NA	Analysis	8270D SIM		1	308309	08/14/19 17:33	W1T	TAL SEA
Total/NA	Prep	5035			308060	08/11/19 13:13	DCV	TAL SEA
Total/NA	Analysis	AK101		1	308156	08/12/19 18:47	DCV	TAL SEA

Lab Chronicle

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: RM-2 (15-15.5)
Date Collected: 07/30/19 12:45
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-13
Matrix: Solid
Percent Solids: 92.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			308184	08/13/19 09:19	FCG	TAL SEA
Total/NA	Analysis	AK102 & 103		1	308456	08/15/19 21:38	T1W	TAL SEA

Client Sample ID: RM-2 (30-30.5)
Date Collected: 07/30/19 13:45
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	307790	08/07/19 14:41	JCM	TAL SEA

Client Sample ID: RM-2 (30-30.5)
Date Collected: 07/30/19 13:45
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-14
Matrix: Solid
Percent Solids: 83.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308078	08/09/19 09:00	ASJ	TAL SEA
Total/NA	Analysis	8260C		1	308104	08/09/19 20:24	W1T	TAL SEA
Total/NA	Prep	3546			308183	08/13/19 09:17	MWW	TAL SEA
Total/NA	Analysis	8270D SIM		1	308309	08/14/19 17:57	W1T	TAL SEA
Total/NA	Prep	5035			308060	08/11/19 13:13	DCV	TAL SEA
Total/NA	Analysis	AK101		1	308156	08/12/19 19:11	DCV	TAL SEA
Total/NA	Prep	3546			308184	08/13/19 09:19	FCG	TAL SEA
Total/NA	Analysis	AK102 & 103		1	308456	08/15/19 22:00	T1W	TAL SEA

Client Sample ID: RM-2 (39.5-40)
Date Collected: 07/30/19 14:00
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	307790	08/07/19 14:41	JCM	TAL SEA

Client Sample ID: RM-2 (39.5-40)
Date Collected: 07/30/19 14:00
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-15
Matrix: Solid
Percent Solids: 81.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308078	08/09/19 09:00	ASJ	TAL SEA
Total/NA	Analysis	8260C		1	308104	08/09/19 20:49	W1T	TAL SEA
Total/NA	Prep	3546			308183	08/13/19 09:17	MWW	TAL SEA
Total/NA	Analysis	8270D SIM		1	308309	08/14/19 18:22	W1T	TAL SEA
Total/NA	Prep	5035			308060	08/11/19 13:13	DCV	TAL SEA
Total/NA	Analysis	AK101		1	308156	08/12/19 19:36	DCV	TAL SEA
Total/NA	Prep	3546			308184	08/13/19 09:19	FCG	TAL SEA
Total/NA	Analysis	AK102 & 103		1	308456	08/15/19 22:22	T1W	TAL SEA

Lab Chronicle

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Client Sample ID: DUP-01
Date Collected: 07/30/19 00:01
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-16
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	307790	08/07/19 14:41	JCM	TAL SEA

Client Sample ID: DUP-01
Date Collected: 07/30/19 00:01
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-16
Matrix: Solid
Percent Solids: 91.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308078	08/09/19 09:00	ASJ	TAL SEA
Total/NA	Analysis	8260C		1	308104	08/09/19 21:14	W1T	TAL SEA
Total/NA	Prep	3546			308183	08/13/19 09:17	MWW	TAL SEA
Total/NA	Analysis	8270D SIM		1	308309	08/14/19 18:47	W1T	TAL SEA
Total/NA	Prep	5035			308060	08/11/19 13:13	DCV	TAL SEA
Total/NA	Analysis	AK101		1	308156	08/12/19 20:00	DCV	TAL SEA
Total/NA	Prep	3546			308184	08/13/19 09:19	FCG	TAL SEA
Total/NA	Analysis	AK102 & 103		1	308456	08/15/19 22:44	T1W	TAL SEA

Client Sample ID: TB-01
Date Collected: 07/30/19 08:00
Date Received: 08/05/19 12:40

Lab Sample ID: 580-88121-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308078	08/09/19 09:00	ASJ	TAL SEA
Total/NA	Analysis	8260C		1	308104	08/09/19 21:39	W1T	TAL SEA
Total/NA	Prep	5035			308060	08/11/19 13:13	DCV	TAL SEA
Total/NA	Analysis	AK101		1	308156	08/12/19 17:58	DCV	TAL SEA

Laboratory References:

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

Accreditation/Certification Summary

Client: Stantec Consulting Services Inc
Job ID: 580-88121-1
Project/Site: Tesoro - 2Go Mart 111

Laboratory: Eurofins TestAmerica, Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-024	01-19-22
Alaska (UST)	State Program	17-024	01-19-20
ANAB	Dept. of Defense ELAP	L2236	01-19-22
ANAB	DoD	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
California	State	2901	11-05-19
California	State Program	2901	11-05-19
Montana (UST)	State Program	N/A	04-30-20
Oregon	NELAP	WA100007	11-05-19
Oregon	NELAP	WA100007	11-05-19
US Fish & Wildlife	Federal	LE058448-0	07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P330-14-00126	02-10-20
USDA	US Federal Programs	P330-17-00039	02-10-20
Washington	State	C553	02-17-20
Washington	State Program	C553	02-17-20

Sample Summary

Client: Stantec Consulting Services Inc
Project/Site: Tesoro - 2Go Mart 111

Job ID: 580-88121-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-88121-1	G-1	Water	07/29/19 12:00	08/05/19 12:40	
580-88121-2	MW-13	Water	07/29/19 16:00	08/05/19 12:40	
580-88121-3	MW-17-2	Water	07/29/19 16:50	08/05/19 12:40	
580-88121-4	MW-10	Water	07/29/19 17:40	08/05/19 12:40	
580-88121-5	MW-11	Water	07/29/19 18:10	08/05/19 12:40	
580-88121-6	MW-111 DUP	Water	07/29/19 08:00	08/05/19 12:40	
580-88121-7	TB-01	Water	07/29/19 11:50	08/05/19 12:40	
580-88121-8	MW-16	Water	07/30/19 09:20	08/05/19 12:40	
580-88121-9	MW-12	Water	07/30/19 10:15	08/05/19 12:40	
580-88121-10	RM-1	Water	07/30/19 11:45	08/05/19 12:40	
580-88121-11	MW 17-1	Water	07/30/19 12:30	08/05/19 12:40	
580-88121-12	G-5	Water	07/30/19 13:10	08/05/19 12:40	
580-88121-13	RM-2 (15-15.5)	Solid	07/30/19 12:45	08/05/19 12:40	
580-88121-14	RM-2 (30-30.5)	Solid	07/30/19 13:45	08/05/19 12:40	
580-88121-15	RM-2 (39.5-40)	Solid	07/30/19 14:00	08/05/19 12:40	
580-88121-16	DUP-01	Solid	07/30/19 00:01	08/05/19 12:40	
580-88121-17	TB-01	Solid	07/30/19 08:00	08/05/19 12:40	

TestAmerica Anchorage
2000 W. International Airport Road
Suite A10
Anchorage, AK 99502
Phone: 907.563.9200 Fax: 907.563.9210

Chain of Custody Record

249588

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Mike Zidek	Site Contact:	Date: 7-29-19	COC No:
Company Name: Stantec	Tel/Fax: 907-529-4916	Lab Contact:	Carrier:	1 of 2 COCs
Address: 725 E Fireweed Ln, st 200	Analysis Turnaround Time			Sampler:
City/State/Zip: Anchorage, AK	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 907-276-4245	TAT if different from Below ____			Walk-in Client:
Fax:	☑ 2 weeks			
Project Name: T2GM #111	☐ 1 week			
Site:	☐ 2 days			
PO# 185751227 (Seq & Amc Duarte)	☐ 1 day			

530-88121 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	AK101	AK102	8270SIM	8260 (See below)
G-1	7-29-19	1200	G	W	10	N	N	3	2	2	3
MW-13	7-29-19	1600	G	W	10	N	N	3	2	2	3
MW 17-2	7-29-19	1650	G	W	10	N	N	3	2	2	3
MW-10	7-29-19	1740	G	W	10	N	N	3	2	2	3
MW-11	7-29-19	1810	G	W	10	N	N	3	2	2	3
TNS 111 DUP	7-29-19	0800	G	W	10	N	N	3	2	2	3
TB-01	7-29-19	1150	—	W	3	N	N	3	—	—	3
MW-16	7-30-19	0920	G	W	10	N	N	3	2	2	3
MW-12	7-30-19	1015	G	W	10	N	N	3	2	2	3
RM-1	7-30-19	1145	G	W	10	N	N	3	2	2	3
MW 17-1	7-30-19	1230	G	W	10	N	N	3	2	2	3
G-5	7-30-19	1310	G	W	10	N	N	3	2	2	3
Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other								2	2	—	2

Sample Specific Notes:

Therm. ID: A2 Cor: 0.5 ° Unc: 0.8
Cooler Dsc: Lg Blue
Packing: Bubble
Cust. Seal: Yes ☑ No ☐
Blue Ice, Wet, Dry, None
FedEx: UPS: Lab Cour: Other: G.S.

Therm. ID: A2 Cor: 0.9 ° Unc: 1.2
Cooler Dsc: Lrg Blue
Packing: Bubble
Cust. Seal: Yes ☑ No ☐
Blue Ice, Wet, Dry, None
FedEx: UPS: Lab Cour: Other: G.S.

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:
8260 Subset specific to fuels for reporting only: Benzene, sec-Butylbenzene, Ethylbenzene, Naphthalene, 1,2,4 and 1,3,5 TMB, n-Butylbenzene, tert-Butylbenzene, Isopropylbenzene, Toluene, m,p-Xylene, o-Xylene

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: Corr'd: | Therm ID No.:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
John Marshall	Stantec	7/31/19 0634			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by: B. Hall	Company: SEATA	Date/Time: 8.5.19 1240

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08/22/2019

TestAmerica Anchorage
2000 W. International Airport Road
Suite A10
Anchorage, AK 99502
Phone: 907.563.9200 Fax: 907.563.9210

Chain of Custody Record

249572

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager:	Site Contact:	Date:	COC No:
Company Name: Stantec Consulting	Tel/Fax:	Lab Contact:	Carrier:	2 of 2 COCs
Address: 725 E. Fireweed Ave. St. 200	Analysis Turnaround Time			Sampler:
City/State/Zip: Anchorage, AK	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below ____			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: TNS III	☐ 1 week			Job / SDG No.:
Site:	☐ 2 days			
PO# 1857 51227	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	GRO	DRO	PAHs	VOCs	Sample Specific Notes:
RM-2 (15-15.5)	7/30/19	1245	G	SL	2	N	N	X	X	X	X	
RM-2 (30-30.5)		1345						X	X	X	X	
RM-2 (39.5-40)		1400						X	X	X	X	
DUP-01		—			↓			X	X	X	X	
TB-01	↓	0800	↓	↓	1	↓	↓				X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples

☐ Return to Client ☐ Disposal by Lab

Therm. ID: A2 Cor: 0.9 ° Unc: 1.2
Cooler Dsc: Lrg Blue
Packing: Bubble
Cust. Seal: Yes X No
Blue Ice, Wet, Dry, None
FedEx:
UPS:
Lab Courier:
Other: G.S.

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temp. (°C): Obs'd: Corr'd:	Therm ID No.:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Stantec Consulting	7/31/19 0800	Gold Star AK		
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by: [signature]	Company: SEA TA	Date/Time: 8.5.19 1240

8/22/2019

Login Sample Receipt Checklist

Client: Stantec Consulting Services Inc

Job Number: 580-88121-1

Login Number: 88121
List Number: 1
Creator: Vallelunga, Diana L

List Source: Eurofins TestAmerica, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
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	

Sample Containers and Preservatives

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition
1199708001-A	HCL to pH < 2	OK			
1199708001-B	HCL to pH < 2	OK			
1199708001-C	HCL to pH < 2	OK			
1199708001-D	HCL to pH < 2	OK			
1199708001-E	HCL to pH < 2	OK			
1199708001-F	HCL to pH < 2	OK			
1199708001-G	HCL to pH < 2	OK			
1199708001-H	HCL to pH < 2	OK			
1199708001-I	HNO3 to pH < 2	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.
BU - The container was received with headspace greater than 6mm.
DM - The container was received damaged.
FR - The container was received frozen and not usable for Bacteria or BOD analyses.
IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.
NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.
PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.
PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.
QN - Insufficient sample quantity provided.

Laboratory Data Review Checklist

Completed By:

Erin O'Malley

Title:

Environmental Engineer

Date:

January 22, 2020

Consultant Firm:

Stantec Consulting Services Inc.

Laboratory Name:

Eurofins TestAmerica, Seattle

Laboratory Report Number:

580-88121-1 (Soil Samples Only)

Laboratory Report Date:

August 22, 2019

CS Site Name:

2Go Mart 111

ADEC File Number:

100.26.026

Hazard Identification Number:

24247

580-88121-1 (Soil Samples Only)

Laboratory Report Date:

August 22, 2019

CS Site Name:

2Go Mart 111

Note: Any N/A or No box checked must have an explanation in the comments box.

1. Laboratory

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

   Yes☒ No☐ N/A☐ 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☐ N/A☐ Comments:

2. Chain of Custody (CoC)

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

   Yes☒ No☐ N/A☐ Comments:

   b. Correct analyses requested?

   Yes☒ No☐ N/A☐ Comments:

   The following samples were activated for AK101 analysis by the client on 8/6/2019: RM-2 (15-15.5) (580-88121-13), RM-2 (30-30.5) (580-88121-14), RM-2 (39.5-40) (580-88121-15), DUP-01 (580-88121-16) and TB-01 (580-88121-17). This analysis was not originally requested on the chain-of-custody (COC).

   The client also confirmed the Specific Fuels VOC listed was also needed on the following soil samples: RM-2 (15-15.5) (580-88121-13), RM-2 (30-30.5) (580-88121-14), RM-2 (39.5-40) (580-88121-15) and DUP-01 (580-88121-16).

3. Laboratory Sample Receipt Documentation

   a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

   Yes☒ No☐ N/A☐ Comments:

580-88121-1 (Soil Samples Only)

Laboratory Report Date:

August 22, 2019

CS Site Name:

2Go Mart 111

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

Yes☒ No☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☐ Comments:

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☐ N/A☐ Comments:

Soil Prep Method 5035 (For Analytical Methods 8260C and AK101): The following samples were provided to the laboratory with a significantly different initial weight than that required by the reference method: RM-2 (15-15.5) (580-88121-13), RM-2 (30-30.5) (580-88121-14), RM-2 (39.5-40) (580-88121-15) and DUP-01 (580-88121-16). Deviations in the weight by more than 20% may affect reporting limits and potentially method performance. The method specifies 25g. The amount provided was above this range.

e. Data quality or usability affected?

Comments:

Yes, the issue noted above caused elevated PQLs, which in turn caused less accurate data.

4. Case Narrative

a. Present and understandable?

Yes☒ No☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☐ Comments:

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Laboratory Report Date:

August 22, 2019

CS Site Name:

2Go Mart 111

c. Were all corrective actions documented?

Yes☒ No☐ N/A☐ Comments:

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

Comments:

See below sections.

5. Samples Results

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

Yes☒ No☐ N/A☐ Comments:

b. All applicable holding times met?

Yes☒ No☐ N/A☐ Comments:

c. All soils reported on a dry weight basis?

Yes☒ No☐ N/A☐ Comments:

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

Yes☐ No☒ N/A☐ Comments:

Benzene LOQ exceeds the SCL in the trip blank. See Table 2.

e. Data quality or usability affected?

The benzene result in the trip blank, where the LOQ exceeded the SCL, is affected.

580-88121-1 (Soil Samples Only)

Laboratory Report Date:

August 22, 2019

CS Site Name:

2Go Mart 111

6. QC Samples

a. Method Blank

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

Yes☒ No☐ N/A☐ Comments:

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?

Yes☒ No☐ N/A☐ Comments:

iii. If above LOQ or project specified objectives, what samples are affected?

Comments:

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

Yes☐ No☐ N/A☒ Comments:

No data flags required.

v. Data quality or usability affected?

Comments:

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☒ No☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☒ Comments:

No metal/inorganics analyzed.

580-88121-1 (Soil Samples Only)

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August 22, 2019

CS Site Name:

2Go Mart 111

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

Yes☒ No☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☐ Comments:

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

Comments:

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

Yes☐ No☐ N/A☒ Comments:

No data flags required.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

No.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Note: Leave blank if not required for project

i. Organics – One MS/MSD reported per matrix, analysis and 20 samples?

Yes☐ No☐ N/A☐ Comments:

580-88121-1 (Soil Samples Only)

Laboratory Report Date:

August 22, 2019

CS Site Name:

2Go Mart 111

ii. Metals/Inorganics – one MS and one MSD reported per matrix, analysis and 20 samples?

Yes☐ No☐ N/A☐ Comments:

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

Yes☐ No☐ N/A☐ Comments:

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

Yes☐ No☐ N/A☐ Comments:

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

Comments:

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

Yes☐ No☐ N/A☐ Comments:

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

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

Yes☒ No☐ N/A☐ Comments:

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Laboratory Report Date:

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CS Site Name:

2Go Mart 111

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

Yes☐ No☒ N/A☐ Comments:

Method 8260C: The following samples failed quality control limits for the surrogates Trifluorotoluene (Surr), Trifluorotoluene (Surr), and/or 1,2-Dichloroethane-d4 (Surr): RM-2 (15-15.5) (580-88121-13), RM-2 (30-30.5) (580-88121-14), RM-2 (39.5-40) (580-88121-15), DUP-01 (580-88121-16), TB-01 (580-88121-17), (CCVIS 580-307639/3), (CCVL 580-307639/6), (LCS 580-307639/4), (LCSD 580-307639/5) and (MB 580-307639/7). The reporting analytes are not chemically associated with either surrogate, therefore, the data have been reported.

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

Yes☒ No☐ N/A☐ Comments:

iv. Data quality or usability affected?

Comments:

No. The reporting analytes are not chemically associated with either surrogate, therefore, the data have been reported.

e. Trip Blanks

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

Yes☒ No☐ N/A☐ Comments:

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☒ No☐ N/A☐ Comments:

iii. All results less than LOQ and project specified objectives?

Yes☒ No☐ N/A☐ Comments:

580-88121-1 (Soil Samples Only)

Laboratory Report Date:

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2Go Mart 111

iv. If above LOQ or project specified objectives, what samples are affected?

Comments:

v. Data quality or usability affected?

Comments:

No.

f. Field Duplicate

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

Yes☒ No☐ N/A☐ Comments:

ii. Submitted blind to lab?

Yes☒ No☐ N/A☐ Comments:

Dup-01 is a duplicate of RM-2 (15-15.5).

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

RPD (%) = 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☒ N/A☐ Comments:

No detections above SCLs. RPDs calculated for all analytes detected in parent/duplicate sample (not above SCLs). RPDs met DQOs for phenanthrene, fluoranthene, and pyrene, but did not meet DQOs for 1,2,4-trimethylbenzene, 2-methylnaphthalene, and 1-methylnaphthalene.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

No. Reported concentrations were consistently below the SCL for all analytes in both primary and duplicate samples. RPDs above 50% may be in part due to the soil conditions encountered and inability to collect a sample from the same location.

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Laboratory Report Date:

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CS Site Name:

2Go Mart 111

g. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below)?

Yes☐ No☐ N/A☒ Comments:

No decontamination or equipment blanks were required for this project.

i. All results less than LOQ and project specified objectives?

Yes☐ No☐ N/A☒ Comments:

No decontamination or equipment blanks submitted.

ii. If above LOQ or project specified objectives, what samples are affected?

Comments:

No decontamination or equipment blanks submitted.

iii. Data quality or usability affected?

Comments:

No decontamination or equipment blanks submitted.

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

a. Defined and appropriate?

Yes☒ No☐ N/A☐ Comments:

ATTACHMENT 3

Site Photographs

Photos:

Photo 1: Drilling RM-2 Well with Geoprobe 8040DT track mounted drilling rig operated by GeoTek Alaska, July 2019

Photo 2: Representative soil boring samples extracted by macro-core with 5-foot disposable 1.6" diameter core sleeves, July 2019

Photo 3: Top view of completed 4" diameter PVC well casing inside 12' diameter steel flush mounted protective casing in concrete slab and piping for well pump testing, August 2019

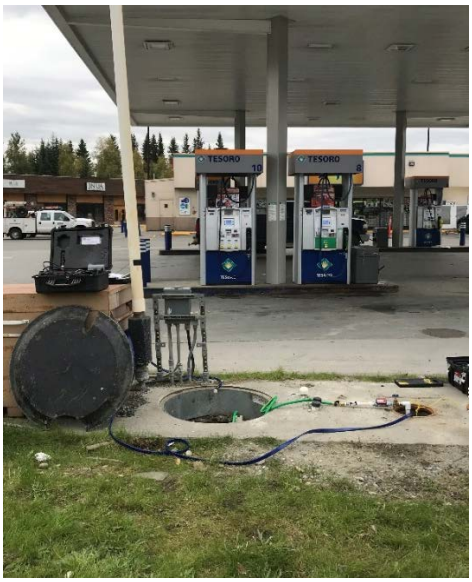

Photo 4: Looking south at fuel dispenser islands during well development of RM-2 (in foreground) with discharge hose to Chemox injection wells inside manhole to the right of knack box, August 2019

April 20, 2020
Reference: **Speedway Store 5315 (Former Tesoro 2Go Mart 111) - Installation of Remediation Well RM-2**

ATTACHMENT 4

SGS Laboratory Water Test Results for Water Samples Collected During Well Pump Test

Laboratory Report of Analysis

To: Stantec Consulting Services Inc.
725 E Fireweed Ln #200
Anchorage, AK 99503
(907)227-9883

Report Number: **1199708**

Client Project: **TNSIII**

Dear Bob Gilfilian,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Justin at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.

Justin Nelson Date
Project Manager
Justin.Nelson@sgs.com

Case Narrative

SGS Client: **Stantec Consulting Services Inc.**
SGS Project: **1199708**
Project Name/Site: **TNSIII**
Project Contact: **Bob Gilfilian**

Refer to sample receipt form for information on sample condition.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indenmification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8015C, 8021B, 8082A, 8260C, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification, and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

SGS North America Inc. 200 West Potter Drive, Anchorage, AK 99518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
RM-2	1199708001	08/29/2019	08/30/2019	Drinking Water

Method	Method Description
SW8021B	BTEX 8021
AK102	DRO Low Volume (W)
AK101	Gasoline Range Organics (W)
EP200.8	Metals in Water by ICP-MS

SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Detectable Results Summary

Client Sample ID: **RM-2**
Lab Sample ID: 1199708001

Metals by ICP/MS
Semivolatile Organic Fuels
Volatile Fuels

Parameter	Result	Units
Sodium	22900	ug/L
Diesel Range Organics	0.384J	mg/L
Benzene	1.79	ug/L
Ethylbenzene	15.7	ug/L
Gasoline Range Organics	0.479	mg/L
o-Xylene	10.0	ug/L
P & M -Xylene	56.6	ug/L
Toluene	2.09	ug/L
Xylenes (total)	66.6	ug/L

SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Results of **RM-2**

Client Sample ID: **RM-2**
Client Project ID: **TNSIII**
Lab Sample ID: 1199708001
Lab Project ID: 1199708

Collection Date: 08/29/19 10:30
Received Date: 08/30/19 09:36
Matrix: Drinking Water
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Sodium	22900		500	150	ug/L	1		09/06/19 19:10

Batch Information

Analytical Batch: MMS10615
Analytical Method: EP200.8
Analyst: BMZ
Analytical Date/Time: 09/06/19 19:10
Container ID: 1199708001-I

Prep Batch: MXX32771
Prep Method: E200.2
Prep Date/Time: 09/06/19 11:54
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 09/16/2019 4:55:52PM

J flagging is activated

Results of **RM-2**

Client Sample ID: **RM-2**
Client Project ID: **TNSIII**
Lab Sample ID: 1199708001
Lab Project ID: 1199708

Collection Date: 08/29/19 10:30
Received Date: 08/30/19 09:36
Matrix: Drinking Water
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.384	J	0.577	0.173	mg/L	1		09/11/19 17:39
Surrogates								
5a Androstane (surr)	75.1		50-150		%	1		09/11/19 17:39

Batch Information

Analytical Batch: XFC15315
Analytical Method: AK102
Analyst: CMS
Analytical Date/Time: 09/11/19 17:39
Container ID: 1199708001-A

Prep Batch: XXX42190
Prep Method: SW3520C
Prep Date/Time: 09/05/19 09:54
Prep Initial Wt./Vol.: 260 mL
Prep Extract Vol: 1 mL

Print Date: 09/16/2019 4:55:52PM

J flagging is activated

Results of **RM-2**

Client Sample ID: **RM-2**
Client Project ID: **TNSIII**
Lab Sample ID: 1199708001
Lab Project ID: 1199708

Collection Date: 08/29/19 10:30
Received Date: 08/30/19 09:36
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.479		0.100	0.0310	mg/L	1		09/06/19 07:37
Surrogates								
4-Bromofluorobenzene (surr)	111		50-150		%	1		09/06/19 07:37

Batch Information

Analytical Batch: VFC14914
Analytical Method: AK101
Analyst: NRB
Analytical Date/Time: 09/06/19 07:37
Container ID: 1199708001-C

Prep Batch: VXX34819
Prep Method: SW5030B
Prep Date/Time: 09/05/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	1.79		0.500	0.150	ug/L	1		09/06/19 07:37
Ethylbenzene	15.7		1.00	0.310	ug/L	1		09/06/19 07:37
o-Xylene	10.0		1.00	0.310	ug/L	1		09/06/19 07:37
P & M -Xylene	56.6		2.00	0.620	ug/L	1		09/06/19 07:37
Toluene	2.09		1.00	0.310	ug/L	1		09/06/19 07:37
Xylenes (total)	66.6		3.00	0.930	ug/L	1		09/06/19 07:37
Surrogates								
1,4-Difluorobenzene (surr)	99		77-115		%	1		09/06/19 07:37

Batch Information

Analytical Batch: VFC14914
Analytical Method: SW8021B
Analyst: NRB
Analytical Date/Time: 09/06/19 07:37
Container ID: 1199708001-C

Prep Batch: VXX34819
Prep Method: SW5030B
Prep Date/Time: 09/05/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 09/16/2019 4:55:52PM

J flagging is activated

Method Blank

Blank ID: MB for HBN 1799029 [MXX/32771]
Blank Lab ID: 1530034

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1199708001

Results by **EP200.8**

Parameter	Results	LOQ/CL	DL	Units
Sodium	250U	500	150	ug/L

Batch Information

Analytical Batch: MMS10615
Analytical Method: EP200.8
Instrument: Perkin Elmer Nexlon P5
Analyst: BMZ
Analytical Date/Time: 9/6/2019 5:44:17PM

Prep Batch: MXX32771
Prep Method: E200.2
Prep Date/Time: 9/6/2019 11:54:28AM
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

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t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199708 [MXX32771]
Blank Spike Lab ID: 1530035
Date Analyzed: 09/06/2019 17:47

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1199708001

Results by **EP200.8**

Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
Sodium	10000	10100	101	(85-115)

Batch Information

Analytical Batch: **MMS10615**
Analytical Method: **EP200.8**
Instrument: **Perkin Elmer Nexlon P5**
Analyst: **BMZ**

Prep Batch: **MXX32771**
Prep Method: **E200.2**
Prep Date/Time: **09/06/2019 11:54**
Spike Init Wt./Vol.: 10000 ug/L Extract Vol: 50 mL
Dupe Init Wt./Vol.: Extract Vol:

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Matrix Spike Summary

Original Sample ID: 1530039
MS Sample ID: 1530040 MS
MSD Sample ID:

QC for Samples: 1199708001

Analysis Date: 09/06/2019 18:02
Analysis Date: 09/06/2019 18:05
Analysis Date:
Matrix: Water (Surface, Eff., Ground)

Results by **EP200.8**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Sodium	3370	10000	13300	99				70-130		

Batch Information

Analytical Batch: MMS10615
Analytical Method: EP200.8
Instrument: Perkin Elmer NexIon P5
Analyst: BMZ
Analytical Date/Time: 9/6/2019 6:05:07PM

Prep Batch: MXX32771
Prep Method: DW Digest for Metals on ICP-MS
Prep Date/Time: 9/6/2019 11:54:28AM
Prep Initial Wt./Vol.: 20.00mL
Prep Extract Vol: 50.00mL

Print Date: 09/16/2019 4:55:57PM

Method Blank

Blank ID: MB for HBN 1799113 [VXX/34819]
Blank Lab ID: 1530497

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1199708001

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Benzene	0.000250U	0.000500	0.000150	mg/L
Ethylbenzene	0.000416J	0.00100	0.000310	mg/L
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L
o-Xylene	0.000350J	0.00100	0.000310	mg/L
P & M -Xylene	0.000905J	0.00200	0.000620	mg/L
Toluene	0.000500U	0.00100	0.000310	mg/L
Xylenes (total)	0.00126J	0.00300	0.000930	mg/L
Surrogates				
1,4-Difluorobenzene (surr)	92.3	77-115		%
4-Bromofluorobenzene (surr)	91.7	50-150		%

Batch Information

Analytical Batch: VFC14914
Analytical Method: AK101
Instrument: Agilent 7890 PID/FID
Analyst: NRB
Analytical Date/Time: 9/6/2019 6:27:00AM

Prep Batch: VXX34819
Prep Method: SW5030B
Prep Date/Time: 9/5/2019 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1199708 [VXX34819]
Blank Spike Lab ID: 1530498
Date Analyzed: 09/06/2019 05:00

Spike Duplicate ID: LCSD for HBN 1199708 [VXX34819]
Spike Duplicate Lab ID: 1530499
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1199708001

Results by **AK101**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Benzene	0.100	0.103	103	0.100	0.0937	94	(80-120)	9.90	(< 20)
Ethylbenzene	0.100	0.103	103	0.100	0.0923	92	(75-125)	10.80	(< 20)
o-Xylene	0.100	0.100	100	0.100	0.0920	92	(80-120)	8.50	(< 20)
P & M -Xylene	0.200	0.206	103	0.200	0.186	93	(75-130)	10.20	(< 20)
Toluene	0.100	0.104	104	0.100	0.0939	94	(75-120)	10.30	(< 20)
Xylenes (total)	0.300	0.306	102	0.300	0.278	93	(79-121)	9.70	(< 20)
Surrogates									
1,4-Difluorobenzene (surr)	0.0500	101	101	0.0500	100	100	(77-115)	0.46	

Batch Information

Analytical Batch: **VFC14914**
Analytical Method: **AK101**
Instrument: **Agilent 7890 PID/FID**
Analyst: **NRB**

Prep Batch: **VXX34819**
Prep Method: **SW5030B**
Prep Date/Time: **09/05/2019 06:00**
Spike Init Wt./Vol.: 0.100 mg/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 0.100 mg/L Extract Vol: 5 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1199708 [VXX34819]
Blank Spike Lab ID: 1530500
Date Analyzed: 09/06/2019 04:42

Spike Duplicate ID: LCSD for HBN 1199708 [VXX34819]
Spike Duplicate Lab ID: 1530501
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1199708001

Results by **AK101**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics	1.00	0.960	96	1.00	0.946	95	(60-120)	1.50	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	0.0500	96.7	97	0.0500	97.5	98	(50-150)	0.78	

Batch Information

Analytical Batch: **VFC14914**
Analytical Method: **AK101**
Instrument: **Agilent 7890 PID/FID**
Analyst: **NRB**

Prep Batch: **VXX34819**
Prep Method: **SW5030B**
Prep Date/Time: **09/05/2019 06:00**
Spike Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL

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Method Blank

Blank ID: MB for HBN 1799113 [VXX/34819]
Blank Lab ID: 1530497

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1199708001

Results by **SW8021B**

Parameter	Results	LOQ/CL	DL	Units
Benzene	0.250U	0.500	0.150	ug/L
Ethylbenzene	0.416J	1.00	0.310	ug/L
o-Xylene	0.350J	1.00	0.310	ug/L
P & M -Xylene	0.905J	2.00	0.620	ug/L
Toluene	0.500U	1.00	0.310	ug/L
Xylenes (total)	1.26J	3.00	0.930	ug/L
Surrogates				
1,4-Difluorobenzene (surr)	92.3	77-115		%

Batch Information

Analytical Batch: VFC14914
Analytical Method: SW8021B
Instrument: Agilent 7890 PID/FID
Analyst: NRB
Analytical Date/Time: 9/6/2019 6:27:00AM

Prep Batch: VXX34819
Prep Method: SW5030B
Prep Date/Time: 9/5/2019 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1199708 [VXX34819]
Blank Spike Lab ID: 1530498
Date Analyzed: 09/06/2019 05:00

Spike Duplicate ID: LCSD for HBN 1199708 [VXX34819]
Spike Duplicate Lab ID: 1530499
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1199708001

Results by **SW8021B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Benzene	100	103	103	100	93.7	94	(80-120)	9.90	(< 20)
Ethylbenzene	100	103	103	100	92.3	92	(75-125)	10.80	(< 20)
o-Xylene	100	100	100	100	92.0	92	(80-120)	8.50	(< 20)
P & M -Xylene	200	206	103	200	186	93	(75-130)	10.20	(< 20)
Toluene	100	104	104	100	93.9	94	(75-120)	10.30	(< 20)
Xylenes (total)	300	306	102	300	278	93	(79-121)	9.70	(< 20)
Surrogates									
1,4-Difluorobenzene (surr)	50	101	101	50	100	100	(77-115)	0.46	

Batch Information

Analytical Batch: **VFC14914**
Analytical Method: **SW8021B**
Instrument: **Agilent 7890 PID/FID**
Analyst: **NRB**

Prep Batch: **VXX34819**
Prep Method: **SW5030B**
Prep Date/Time: **09/05/2019 06:00**
Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL

Method Blank

Blank ID: MB for HBN 1798960 [XXX/42190]
Blank Lab ID: 1529794

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1199708001

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	0.300U	0.600	0.180	mg/L
Surrogates				
5a Androstane (surr)	86.3	60-120		%

Batch Information

Analytical Batch: XFC15314
Analytical Method: AK102
Instrument: Agilent 7890B R
Analyst: CMS
Analytical Date/Time: 9/11/2019 11:13:00AM

Prep Batch: XXX42190
Prep Method: SW3520C
Prep Date/Time: 9/5/2019 9:54:48AM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1199708 [XXX42190]
Blank Spike Lab ID: 1529795
Date Analyzed: 09/11/2019 11:53

Spike Duplicate ID: LCSD for HBN 1199708 [XXX42190]
Spike Duplicate Lab ID: 1529796
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1199708001

Results by **AK102**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Diesel Range Organics	20	19.2	96	20	21.4	107	(75-125)	10.90	(< 20)
Surrogates									
5a Androstane (surr)	0.4	96.3	96	0.4	108	108	(60-120)	11.10	

Batch Information

Analytical Batch: **XFC15314**
Analytical Method: **AK102**
Instrument: **Agilent 7890B R**
Analyst: **CMS**

Prep Batch: **XXX42190**
Prep Method: **SW3520C**
Prep Date/Time: **09/05/2019 09:54**
Spike Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL
Dupe Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL

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CHAIN OF CUSTODY RECORD

1199708

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Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.

Section 1

CLIENT: Tesoro / Stantec

CONTACT: Mike Zidell

PHONE #:

PROJECT NAME: TNS III

PROJECT/ PWSID/ PERMIT#:

REPORTS TO: Bob Gilfillan

E-MAIL: Bob.Gilfillan@stantec.com

Profile #:

INVOICE TO:

QUOTE #:

P.O. #: 4505751227

Section 2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	# CONTAINERS	Comp Grab MI (Multi-incremental)	Section 3 Preservative	Analysis* BTEX (8021)	GRO (8021)	DRO (AK102)	Sodium						NOTE: *The following analyses require specific method and/or compound list: BTEX, Metals, PFAS	REMARKS/LOC ID
QAKT 8/30/19	RM-2	8/29/19	1030	GW	9	G		X	X	X	X							

Section 3

	Date	Time	
Relinquished By: (1)	8/29/19	1053	Received By: 8-29-19 10:53
Relinquished By: (2)	8-29-19	1600	Received By:
Relinquished By: (3)			Received By:
Relinquished By: (4)	8.30.19	09:36	Received For Laboratory By:

ANC: 1F 11B
Temp: 0.1 D50

Section 4

DOD Project? Yes No

Cooler ID:

Data Deliverable Requirements:

Requested Turnaround Time and/or Special Instructions:

Profile # 364284 QM

Temp Blank °C: 0.6°C

or Ambient [ ]

Chain of Custody Seal: (Circle)

INTACT BROKEN ABSENT

Delivery Method: Hand Delivery[ ] Commerical Delivery [ ]

e-Sample Receipt Form

SGS Workorder #: **1199708**

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
Chain of Custody / Temperature Requirements		N/A Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	Yes	1F1B
COC accompanied samples?	Yes	
DOD: Were samples received in COC corresponding coolers?	N/A	
N/A **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required		
Temperature blank compliant* (i.e., 0-6 °C after CF)?	Yes	Cooler ID: 1 @ 0.1 °C Therm. ID: D50
If samples received without a temperature blank, the "cooler temperature" will be documented instead & "COOLER TEMP" will be noted to the right. "ambient" or "chilled" will be noted if neither is available.		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago?	N/A	
If <0°C, were sample containers ice free?	N/A	
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.		
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.
Were samples received within holding time?	Yes	
Do samples **match COC**** (i.e.,sample IDs,dates/times collected)?	Yes	
**Note: If times differ <1hr, record details & login per COC.		
***Note: If sample information on containers differs from COC, SGS will default to COC information		
Were analytical requests clear? (i.e., method is specified for analyses with multiple option for analysis (Ex: BTEX, Metals)	Yes	
	Yes	***Exemption permitted for metals (e.g,200.8/6020A).
Were proper containers (type/mass/volume/preservative***)used?	Yes	
Volatile / LL-Hg Requirements		
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	No	No Trip Blanks Received
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	Yes	
Were all soil VOAs field extracted with MeOH+BFB?	N/A	
Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.		
Additional notes (if applicable):		

e-Sample Receipt Form FBK

SGS Workorder #:	1199708	1199708

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
Chain of Custody / Temperature Requirements	Yes	Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	N/A	
COC accompanied samples?	Yes	
DOD: Were samples received in COC corresponding coolers?	N/A	
☐ **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required		
Temperature blank compliant* (i.e., 0-6 °C after CF)?	Yes	Cooler ID: 1 @ 0.6 °C Therm. ID: D51
If samples received without a temperature blank, the "cooler temperature" will be documented instead & "COOLER TEMP" will be noted to the right. "ambient" or "chilled" will be noted if neither is available.		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago?		
If <0°C, were sample containers ice free?		
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.		
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.
Do samples **match COC**** (i.e.,sample IDs,dates/times collected)?	N/C	
**Note: If times differ <1hr, record details & login per COC.		
***Note: If sample information on containers differs from COC, SGS will default to COC information		
Were samples in good condition (no leaks/cracks/breakage)?	Yes	GRO/BTEX 8021 combo method.
Were analytical requests clear? (i.e., method is specified for analyses with multiple option for analysis (Ex: BTEX, Metals)	Yes	
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	N/A	Trip blank not required by client.
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	N/C	
Were all soil VOAs field extracted with MeOH+BFB?	N/A	
For Rush/Short Hold Time, was RUSH/Short HT email sent?	N/A	
Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.		

Additional notes (if applicable):

SGS Profile #		0

April 20, 2020
Reference: **Speedway Store 5315 (Former Tesoro 2Go Mart 111) - Installation of Remediation Well RM-2**

ATTACHMENT 5

ADEC Approval to Haul Contaminated Soil dated NRC Manifest for Drums of Soil Cuttings

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites and Prevention and Emergency Response Programs

Transport, Treatment, & Disposal Approval Form for Contaminated Media

DEC HAZARD/SPILL ID #	NAME OF SPILL OR CONTAMINATED SITE	
24247	Tesoro 2Go Mart 111 (ADEC File# 100.26.026)	
SITE OR SPILL LOCATION		
3679 College Road, Fairbanks, AK 99701		
CURRENT LOCATION AND TYPE OF CONTAMINATED MEDIA	**SOURCE OF THE CONTAMINATION**	
Drum containerized fuel impacted soil (n = 4)	Soil boring (drill cuttings)	
COMPOUNDS OF CONCERN	**ESTIMATED VOLUME**	**DATE(S) GENERATED**
See attached table.	220 gallons (4 drums)	7/30/2019
POST TREATMENT ANALYSIS REQUIRED *(such as GRO, DRO, RRO, BTEX, and/or Chlorinated Solvents)*		
Not applicable, soil will be transported for disposal.		
COMMENTS		
Soils generated by auger drilling during installation of the new 4-inch diameter remediation well (ID RM-2) at Tesoro 2Go Mart 111 in July 2019.		

Facility Accepting the Contaminated Media

NAME OF THE FACILITY	PHYSICAL ADDRESS/PHONE NUMBER
NRC Alaska	1315 Queens Way, Fairbanks, AK / (907)328-7066

Responsible Party and Contractor Information

BUSINESS/NAME	ADDRESS/PHONE NUMBER
Tesoro Refining & Marketing Company LLC	3450 S 344th Way, Suite 135, Auburn, WA / (253)896-8801
Stantec Consulting Services Inc	725 E Fireweed Lane Suite 200, Anchorage, AK / (907)266-1126

Bob Gilfilian
Name of the Person Requesting Approval (printed)

Principal Engineer
Title/Association

Bob Gilfilian
Signature

9/5/2019
Date

907-227-9883
Phone Number

----------DEC USE ONLY----------

Based on the information provided, ADEC approves transport of the above-described media for treatment in accordance with the approved facility operations plan. The Responsible Party or their consultant must submit to the DEC Project Manager a copy of weight/volume receipts of the loads transported to the facility and a post treatment analytical report. If the media is contaminated soil, it shall be transported as a covered load in compliance with 18 AAC 60.015.

Pete Campbell
DEC Project Manager Name (printed)

EPS
Project Manager Title

Pete Campbell
Signature

9-5-2019
Date

907-262-3412
Phone Number

Table 1.

Soil Cuttings Analyte Detections July 30, 2019

Client Sample ID	Matrix	Collection Date	Analysis Method	Analyte	Result	Unit
RM-2 (15-15.5)	Solid	07/30/2019 12:45	8260C	1,2,4-Trimethylbenzene	33	ug/Kg
RM-2 (15-15.5)	Solid	07/30/2019 12:45	8270D SIM	Terphenyl-d14	1100	ug/Kg
RM-2 (15-15.5)	Solid	07/30/2019 12:45	8270D SIM	Naphthalene	13	ug/Kg
RM-2 (15-15.5)	Solid	07/30/2019 12:45	8270D SIM	2-Methylnaphthalene	29	ug/Kg
RM-2 (15-15.5)	Solid	07/30/2019 12:45	8270D SIM	1-Methylnaphthalene	17	ug/Kg
RM-2 (15-15.5)	Solid	07/30/2019 12:45	8270D SIM	Phenanthrene	9.0	ug/Kg
RM-2 (15-15.5)	Solid	07/30/2019 12:45	8270D SIM	Fluoranthene	8.6	ug/Kg
RM-2 (15-15.5)	Solid	07/30/2019 12:45	8270D SIM	Pyrene	7.1	ug/Kg
RM-2 (15-15.5)	Solid	07/30/2019 12:45	8270D SIM	Benzo[a]anthracene	5.3	ug/Kg
RM-2 (15-15.5)	Solid	07/30/2019 12:45	AK102 & 103	o-Terphenyl	11	mg/Kg
RM-2 (30-30.5)	Solid	07/30/2019 13:45	8270D SIM	Terphenyl-d14	1100	ug/Kg
RM-2 (30-30.5)	Solid	07/30/2019 13:45	AK102 & 103	o-Terphenyl	14	mg/Kg
RM-2 (39.5-40)	Solid	07/30/2019 14:00	8270D SIM	Terphenyl-d14	970	ug/Kg
RM-2 (39.5-40)	Solid	07/30/2019 14:00	AK102 & 103	o-Terphenyl	9.4	mg/Kg

*** IN CASE OF EMERGENCY CALL 800-899-4672 ***

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CESQG

Manifest Document No. 142984B

2. Page 1 of 1

3. Generator's Name and Mailing Address

TESORO REFINING & MARKETING CO
3450 SOUTH 344TH WAY, #201
AUBURN, WA 98001-5931

TESORO #30111
3679 COLLEGE ROAD
FAIRBANKS, AK 99709

4. Generator's Phone 907-521-5231

5. Transporter 1 Company Name: NRC ALASKA LLC

6. US EPA ID Number: AKR000004184

A. State Transporter's ID

B. Transporter 1 Phone 907-258-1558

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address

NRC ALASKA LLC
2020 VIKING DRIVE
ANCHORAGE, AK 99501

10. US EPA ID Number: AKR000004184

E. State Facility's ID

F. Facility's Phone 907-258-1558

	11. WASTE DESCRIPTION	Containers No.	Containers Type	13. Total Quantity	14. Unit Wt./Vol.
GENERATOR	HM MATERIAL NOT REGULATED BY D.O.T.	4	DM	3000	P
	b.				
	c.				
	d.				

G. Additional Descriptions for Materials Listed Above

) EA0707 IDW BORE CUTTINGS

H. Handling Codes for Wastes Listed Above

D25870

15. Special Handling Instructions and Additional Information

Shipper's Certification: This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name	Signature	Date: Month	Day	Year
X Leslie Petre	X	9	9	19

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date: Month	Day	Year
Brady Siedschlaw		9	9	19

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date: Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name	Signature	Date: Month	Day	Year

NON-HAZARDOUS WASTE