
To:	Anastasia Duarte, REHS/RS Speedway LLC 3450 South 344th Way, Suite 201 Auburn, WA 98001	From:	Bob Gilfilian, PE Stantec Consulting Services, Inc. 725 E Fireweed Lane, Suite 200 Anchorage, Alaska 99508
File:	UST Facility #2960, ADEC File 100.26.022	Date:	April 8, 2020

Reference: Speedway Store 5313 (Former Tesoro 2Go Mart (T2GM) 101/IFC) - Well Installation Report for Monitoring Wells MW 19-1 and MW 19-2

1 INTRODUCTION

On behalf of Speedway LLC (former Tesoro), Stantec Consulting Inc. (Stantec) is pleased to submit this Technical Memorandum for the June 2019 installation of the monitoring wells MW 19-1 and 19-2 at Speedway Store #5313 (former Tesoro 2Go Mart 101/IFC located at 3569 South Cushman Road, Fairbanks, Alaska (**Figure 1**)).

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.

Fifteen soil borings were completed as Optical Image Profiler (OIP) soil borings, manufactured by Geoprobe® in accordance with the work plan dated April 1, 2019. This plan was subsequently approved by Paul Horwath, P.E., ADEC Engineer. Jake Keldsen, EIT Field Engineer with Stantec, completed the OIP soil borings and monitoring wells in a three day period, June 24-26, 2019. Jake completed the field screening and analytical sampling to evaluate the presence of residual petroleum at the subject site. Two of the OIP soil boring were subsequently completed as monitoring wells. The locations of the two completed monitoring wells (MW 19-1 and 19-2) are shown on **Figure 2** (this figure was presented during the December 12, 2019, annual work plan meeting and includes the analytical test results from the October 2019 monitoring event).

2 SOIL BORING AND SAMPLING METHODOLOGY

Drilling and sampling for the June 2019 well installation was performed with a Geoprobe® 8040 track mounted drilling rig “direct push probe” equipped with OIP technology. The OIP uses a light emitting diode (LED) to provide a detailed photograph of the soil structure, log of ultraviolet induced petroleum fluorescence and simultaneously measures the soil formation’s electrical conductivity and permeability (via a hydraulic profiling tool). The OIP was calibrated at the beginning of each new soil boring profile with a sample of Non-Aqueous Phase Liquid (NAPL) collected from the onsite free product recovery system.

The three data sets produced by the probe, which can include visible spectrum imagery at user specified locations, enable a more detailed characterization of the subsurface as compared to typical soil boring methods. The OIP data will be utilized to estimate NAPL distribution, lithology transitions, and horizontal hydraulic conductivity within the vertical boring profile. The field data will provide a real time understanding of the soil lithology and presence of NAPL.

Soil samples were extracted by macrocore with 5-foot disposable 1.6” diameter core sleeves. Monitoring wells were subsequently set 7.5-inch diameter hollow stem auger with an 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 just below the groundwater interface. 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 each day with a 100 part per million calibration standards. Samples were warmed and allowed to volatilize for at least 10 minutes prior to screening. Field screening results along with the location of analytical sample locations are summarized on the two soil boring logs that are provided in **Attachment 1**. PID field screening results ranged from 0.5 to 2,043 parts per million by volume (ppmv) with the highest readings at or near the groundwater interface.

The following is a summary of the field notes completed by Jake during the installation of the OIP borings:

- 15 borings were completed along the northern edge of the site that includes the public right of way (ROW).
 - Scope of work expanded beyond 6 borings to delineate fluorescing locations.
 - Non fluorescing borings were executed (OIP-11 and OIP-15) along northern boundary delineating the area of concern (AOC) along East – West axis.
 - Northern boundary (north of the ROW) could not be delineated due to neighboring site boundary and underground utilities.
 - OIP locations were surveyed with the handheld Trimble GPS unit (see **Figure 3** for boring locations).
 - OIP data was analyzed with the Geoprobe software to assess the relationship between florescence and NAPL presence.
- 3 borings were reinvestigated due to probe malfunction and were given the “QA” qualifier in the location name.
 - These were OIP -4, OIP-3, and OIP-2 and indicated florescence in the QA borings.

A summary of the OIP data that was collected during the installation of the 15 soil borings is provided in **Attachment 2**. **Table I** provides a tabulation of the 15 OIP borings with the following data: depth of “top” of fluorescence (ultraviolet induced petroleum fluorescence); depth to “bottom” of fluorescence; highest depth of fluorescence; and highest percent (%) of area fluorescence. **Attachment 2** includes individual logs of each OIP boring. The logs provide graphs of % fluorescence, electrical conductivity and permeability (measured with a transducer that is shown as HTP) and a photograph of the soil structure at various depths. These logs include a printout of the field notes for each boring. In summary, the OIP borings discovered the greatest concentration of petroleum at or near the groundwater interface.

2.2 MONITOR WELL CONSTRUCTION

Based on the field results from the OIP investigation, Jake Keldsen determined the optimal locations for placement of the two proposed groundwater monitoring wells. These wells were placed at locations (see **Figure 2**) that met the requirements of the work plan as approved and requested by Paul Horwath. The following is a summary of the field notes completed by Jake during the construction of the monitoring wells MW 19-1 and MW 19-2:

- Both borings have identical well construction details:
 - Completed to 15’ below ground surface (BGS).
 - Screened from 15-5 with a 2” prepack PVC well casing.

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Reference: **Speedway Store 5313 (Former T2GM 101/IFC) - Well Installation Report for MW 19-1 and 19-2**

- Internal sand of prepack consist of 20-40 sand.
 - 10-20 sand was utilized to fill the annulus and placed 2' above the screen (3' BGS).
 - Hydrated Bentonite chips were installed from 3' – 1' BGS.
 - Pea Gravel was installed from 1' BGS to ~3' within the well monument.
 - Well Monuments consisted of 6" circular steel pipe painted bright yellow, are sunk 2' into the ground surface and are finished ~4' above ground.
- Both wells were developed to 10x well volumes and sampled on 6/26 (although neither achieved stability).
 - Both wells indicated ~7' of water column before and after development.
 - MW-19-1 had a slight reading of NAPL on the Interface Probe although neither exhibited NAPL during development.
 - Both wells exhibited a sheen and strong petroleum like odor and were clear of turbidity after development.
 - A duplicate sample was collected at the shallow soil boring of MW-19-1 as well as the water sample.
 - Soil and Water samples were shipped via Goldstreak to Test America Seattle.
 - There were 2 drums of purge water stored securely onsite and 1 drum of soil cuttings.

Several photographs taken during the drilling of the OIP borings and installation of the monitoring wells are provided in **Attachment 3**. In addition, on August 27, 2019, written approval was obtained from ADEC that allowed for the discharge of the two drums of purge water into the on-site water treatment aeration tank. On September 6, 2019, ADEC approved the transport, treatment and disposal of contaminated media of the drum of soil cuttings by NRC Alaska LLC (NRC) in Fairbanks. **Attachment 4** includes a copy of the August 27, 2019, email approval for the on-site treatment of the purge water, signed approval form for off-site treatment of the drum of soil cuttings, and the non-hazardous waste manifest from NRC dated September 6, 2019, for the pickup of the soil cuttings drum.

3 ANALYTICAL SAMPLING METHODOLOGY AND RESULTS

Soil and groundwater analytical samples were submitted to Eurofins TestAmerica, Inc. (TestAmerica) for analysis of the Alaska list of volatile organic compounds (VOCs) by United States Environmental Protection Agency (EPA) Method 8260C, the standard list of polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270D Selective Ion Monitoring (SIM), gasoline range organics (GRO) by Alaska Test Method (AK) 101, and diesel range organics (DRO) by AK102. The laboratory analytical report is provided in **Attachment 5**.

Soil analytical results were compared to 18 Alaska Administrative Code (AAC) 75 Method Two Migration-to-Groundwater Soil Cleanup Levels (SCLs). A summary of soil analytical detections and exceedances are provided in **Table 2** (see **Attachment 5**). Detected exceedances for VOCs, PAHs, GRO, and DRO were found at MW 19-1 and MW 19-2. As shown in **Table 2**, several additional analytes exhibited practical quantitation limits (PQLs) that exceeded their SCLs. These occurrences however pertained to analytes which were not predominantly contaminants of concern for the site.

Groundwater analytical results were compared to 18 AAC 75 Groundwater Cleanup Levels (GCLs). A summary of groundwater analytical detections and exceedances are provided in **Table 3** (see **Attachment 5**). Detected exceedances for VOCs, PAHs, GRO, and DRO were found at MW 19-1 and MW 19-2. As shown in **Table 3**, several additional

analytes exhibited PQLs that exceeded their GCLs. The groundwater GRO results for MW 19-1, MW 19-2, and Dup-01 were flagged by the laboratory with notes indicating the GRO concentrations reported were due to the presence of discrete peaks. In addition, the DRO results for MW 19-1, MW 19-2, and Dup-01 were flagged by the laboratory with notes indicating the samples contained hydrocarbon patterns in the diesel range, but the elution patterns were later than the typical diesel fuel pattern used by the laboratory for quantitative purposes.

3.1 ANALYTICAL SAMPLING QUALITY ASSURANCE (QA) AND QUALITY CONTROL (QC)

TestAmerica did not meet all laboratory QA/QC criteria during the analysis of soil and groundwater samples, as described in **Table 4** (see below), which provides a summary of the laboratory QC objectives and outcomes for soil and groundwater. To evaluate QA/QC criteria, duplicate soil and groundwater sample sets were collected to determine the precision of the field collection and laboratory analysis, and the laboratory holding times for soil and groundwater samples were evaluated to determine if there were any exceedances. **Table 4** shows the precision for the duplicate sample sets for analytes that were detected above the PQLs and SCLs/GCLs and the relative percent differences (RPDs) could be calculated (RPDs could not be calculated for analytes that were non-detect in one or both of the primary and duplicate samples). Laboratory QC data and the Alaska Department of Environmental Conservation (ADEC) Laboratory Data Review Checklist are included with the laboratory report in **Attachment 5**.

For the soil samples, sample Dup-01 is a duplicate of MW 19-1 (4.5-5). As shown in **Table 4**, the precision was not within the established QA criteria tolerances for any of the analytes in soil. This may be in part due to the soil conditions encountered and inability to collect a sample from the same location. The holding times for PAHs, GRO, and DRO in the soil samples were within established criteria but holding time issues were observed for VOCs. Due to laboratory QC failures for several VOCs in the initial extraction, all of the VOC samples were re-extracted out of holding time and re-analyzed. The re-extracted batch met laboratory QC criteria. Both sets of data were reported by the laboratory. The higher of the two reported values for each sample is listed in this report (**Table 2**).

For the groundwater samples, sample Dup-01 is a duplicate of MW 19-1. As shown in **Table 4**, the precision was within the established QA criteria tolerances for all the analytes in groundwater. The holding times for VOCs, PAHs, and GRO in the groundwater samples were within established criteria but holding time issues were observed for DRO. Due to laboratory QC failures in the initial extraction, all of the DRO samples were re-extracted out of holding time and re-analyzed. The re-extracted batch met laboratory QC criteria. Both sets of data were reported by the laboratory. The higher of the two reported values for each sample is listed in this report (**Table 3**).

Table 4 Laboratory Quality Control Objectives

Field Duplicates – Precision (Soil)			Field Duplicates – Precision (Water)		
Quality Control Designation	Tolerance	Results for This Event	Quality Control Designation	Tolerance	Results for This Event
Ethylbenzene/Soil	± 50%	-163.64%	Ethylbenzene/Water	± 30%	-7.69%
m-Xylene & p-Xylene/Soil	± 50%	-163.64%	m-Xylene & p-Xylene/Water	± 30%	-9.52%
o-Xylene/Soil	± 50%	-198.87%	o-Xylene/Water	± 30%	-7.41%
GRO/Soil	± 50%	-192.99%	GRO/Water	± 30%	8.00%
1,2,4-Trimethylbenzene/Soil	± 50%	-159.63%	1,2,4-Trimethylbenzene/Water	± 30%	-12.24%
1,3,5-Trimethylbenzene/Soil	± 50%	-173.46%	1,3,5-Trimethylbenzene/Water	± 30%	2.22%
Naphthalene/Soil	± 50%	-113.17%	Naphthalene/Water	± 30%	2.02%
1-Methylnaphthalene/Soil	± 50%	-174.27%	1-Methylnaphthalene/Water	± 30%	2.15%
2-Methylnaphthalene/Soil	± 50%	-176.00%	2-Methylnaphthalene/Water	± 30%	3.77%
n-Propylbenzene/Soil	± 50%	-172.09%	Benzene/Water	± 30%	-4.08%
Isopropylbenzene/Soil	± 50%	-175.69%	Toluene/Water	± 30%	0.00%
			DRO/Water	± 30%	5.13%
Holding Times					
DRO/Soil/to analyze	40 days	14 days	Key for Table 4 % percent ± plus or minus DRO diesel range organics GRO gasoline range organics NC Not calculated, the analyte was not detected above the practical quantitation limit in one or more samples PAH polynuclear aromatic hydrocarbon VOC volatile organic compound		
DRO/Soil/to extract	14 days	11 days			
GRO/Soil/to analyze	14 days	12 days			
VOCs/Soil/to analyze	14 days	14-22 days			
PAHs/Soil/to analyze	40 days	13-14 days			
PAHs/Soil/to extract	14 days	10 days			
DRO/Water/to analyze	40 days	14-21 days			
DRO/Water/to extract	14 days	13-16 days			
GRO/Water/to analyze	14 days	5 days			
VOCs/Water/to analyze	14 days	9-13 days			
PAHs/Water/to analyze	40 days	7-9 days			
PAHs/Water/to extract	7 days	6 days			

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Reference: **Speedway Store 5313 (Former T2GM 101/IFC) - Well Installation Report for MW 19-1 and 19-2**

4 CONCLUSIONS AND RECOMMENDATIONS

The purpose of this report was to provide a summary of the field and laboratory data collected during the drilling of the OIP soil borings and installation of new monitoring wells MW 19-1 and MW 19-2. On October 23, 2019, the annual groundwater monitoring event was conducted at the subject site and included sampling MW 19-1 and MW 19-2. The site plan shown in **Figure 2** shows the analytical test results for the groundwater samples that were collected during this monitoring event. MW 19-1 had a slight petroleum sheen but MW 19-2 had approximately 0.95-feet of free product.

During the December 12, 2019, annual work plan meeting with ADEC and Speedway, Stantec presented the above findings and proposed a work plan task to install a 6-inch diameter free product recovery well in the near proximity to MW 19-2. The new recovery well will be installed during the 3rd and 4th quarter of 2020. The well will be located just north of Recovery Well WRW on Speedway Store 5313 property and needs to be on the downgradient side of the existing groundwater interceptor trench similar to the position of Recovery Well CRW-2. The new recovery well will be designed similar to the current remediation system used in Recovery Well CRW-2. A separate work plan for the construction of the proposed free product recovery well will be prepared by Stantec and submitted to Speedway for acceptance, and subsequently, submitted to ADEC for approval prior to implementation.

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

STANTEC CONSULTING SERVICES INC.



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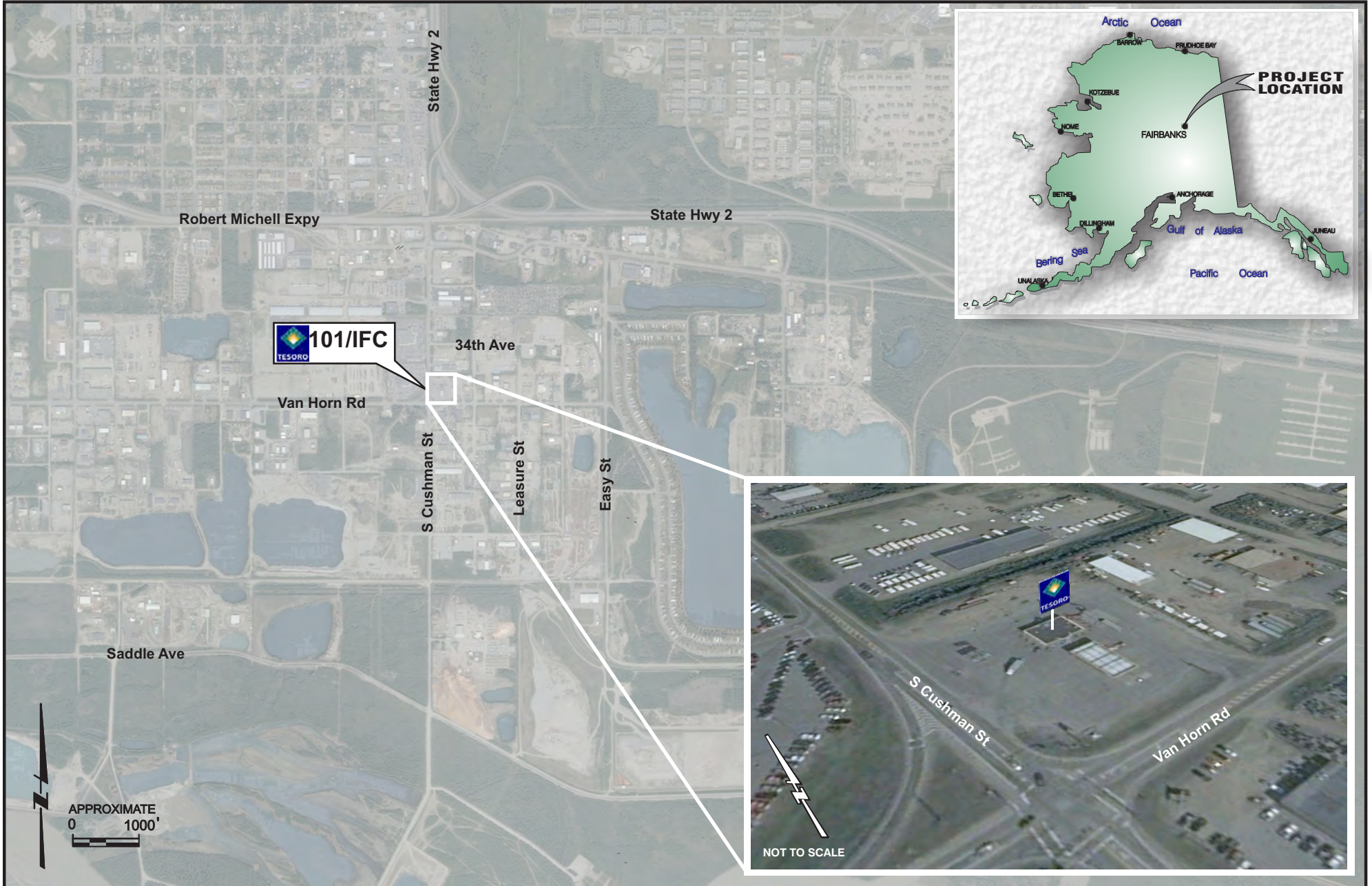
Anchorage, AK 99508

Cell Phone: (907) 277-9883

bob.gilfilian@stantec.com

Attachments: Figure 1 Location and Vicinity Map
Figure 2 Site Plan with Monitor Well Locations and October 2019 Sample Results
Figure 3 OIP Boring Location Map
Attachment 1 (Soil Boring Logs for MW 19-1 and MW 19-2)
Attachment 2 (Table 1 Summary OIP Data and Logs of 15 OIP Borings)
Attachment 3 (Site Photographs)
Attachment 4 (Email dated August 27, 2019; Approval To Haul dated September 6, 2019; NRC Manifest dated September 6, 2019) Attachment 5 (Table 2 Soil Analytical Detections and Exceedances; Table 3 Groundwater Analytical Detections and Exceedances; TestAmerica Laboratory Analytical Report; and Laboratory Data Report and Data Review Checklists)

c. Pete Campbell, ADEC Contaminated Sites Program



MW-14

Benzene	0.054 mg/L
Toluene	0.012 mg/L
Ethylbenzene	0.7 mg/L
Xylenes	4.3 mg/L
GRO	12 mg/L
DRO	15 H mg/L
GW Elev.	432.68 feet

MW-17

Benzene	0.0077 mg/L
Toluene	U (0.002) mg/L
Ethylbenzene	0.034 mg/L
Xylenes	0.109 mg/L
GRO	0.38 mg/L
DRO	14 mg/L
GW Elev.	432.35 feet

MW-4

Benzene	U (0.003) mg/L
Toluene	0.022 mg/L
Ethylbenzene	U (0.003) mg/L
Xylenes	U (0.003) mg/L
GRO	U (0.25) mg/L
DRO	0.33 H mg/L
GW Elev.	NC

CRW-2

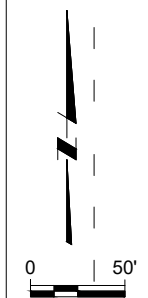
Benzene	0.011 mg/L
Toluene	0.0041 mg/L
Ethylbenzene	0.061 mg/L
Xylenes	0.275 mg/L
GRO	0.99 mg/L
DRO	1.4 mg/L
GW Elev.	NC

MW-8

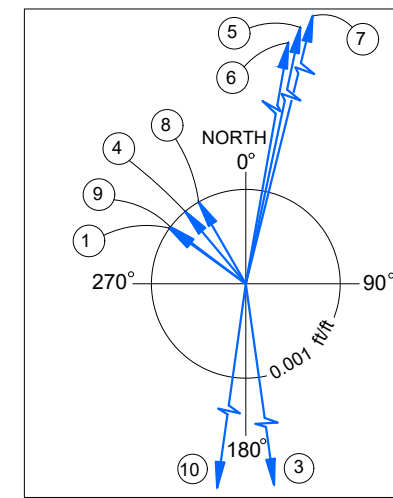
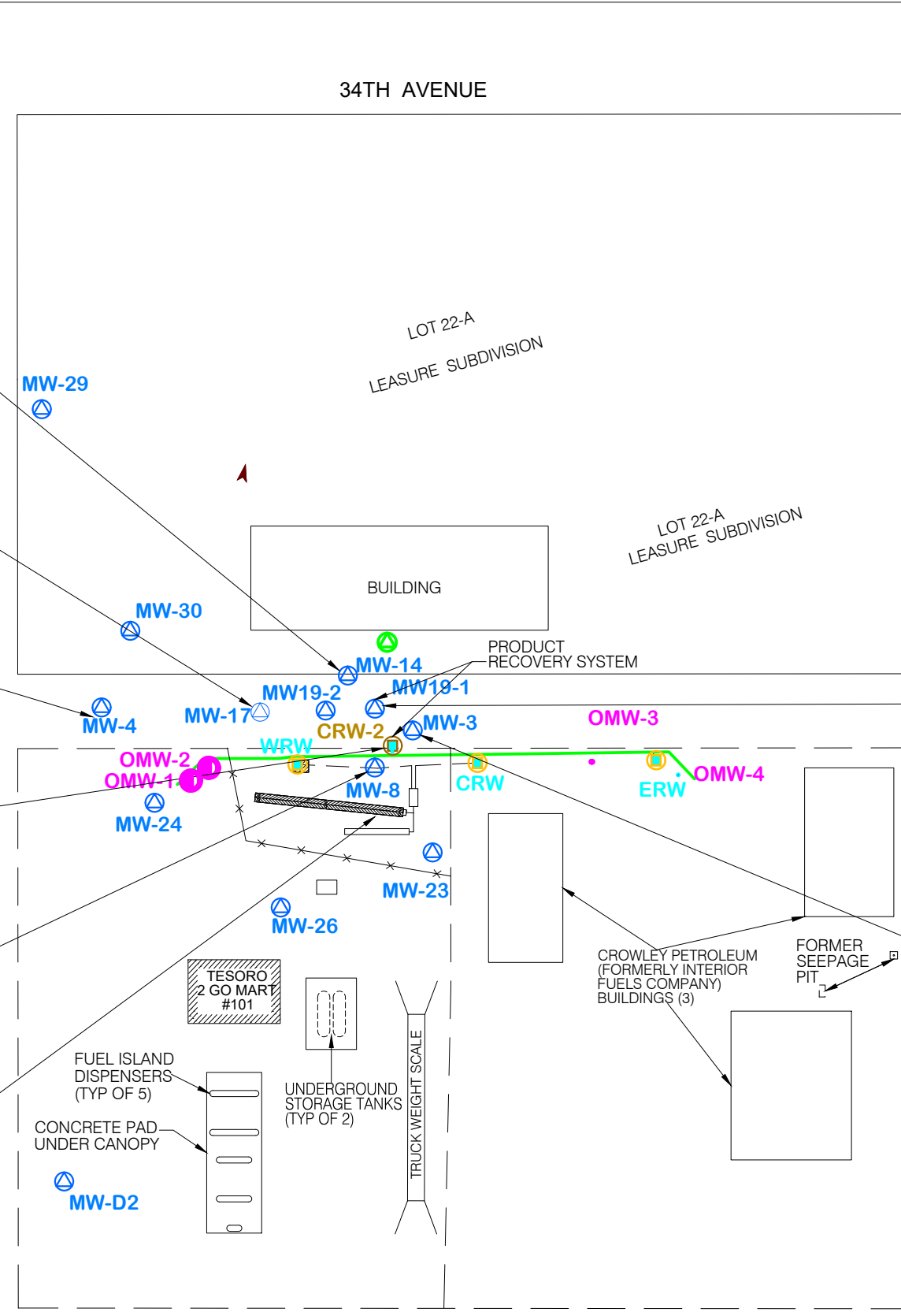
Benzene	U (0.003) mg/L
Toluene	U (0.002) mg/L
Ethylbenzene	0.0083 mg/L
Xylenes	0.08 mg/L
GRO	0.45 mg/L
DRO	12 mg/L
GW Elev.	432.41 feet

Drainfield

Benzene	U (0.003) mg/L
Toluene	U (0.002) mg/L
Ethylbenzene	U (0.003) mg/L
Xylenes	U (0.003) mg/L
GRO	U (0.25) mg/L
DRO	0.37 mg/L
GW Elev.	NC



SOUTH CUSHMAN STREET



GROUNDWATER FLOW SUMMARY

DATE	BEARING	GRADIENT (ft/ft)
1 JUNE 15, 2010	306°	0.001
2 MAY 26, 2011	NC	NC
3 MAY 24, 2012	172°	0.036
4 SEP. 24, 2013	320°	0.001
5 MAY 7, 2014	12°	0.037
6 MAY 26, 2015	10°	0.035
7 MAY 12, 2016	14°	0.119
8 JULY 18, 2017	330°	0.001
9 SEP. 7, 2018	307°	0.001
10 OCT.23, 2019	188°	0.045

LEGEND:

- — — PROPERTY LINE
- — — INTERCEPTOR TRENCH
- - - PAVED ROAD CENTERLINE
- x x x FENCE
- — — GROUNDWATER CONTOUR
- OBSERVATION WELL
- 10" RECOVERY WELL
- 6" RECOVERY WELL
- PRIVATE INDUSTRIAL WELL
- MONITORING WELL
- CRW CENTRAL RECOVERY WELL
- DRO DIESEL RANGE ORGANICS
- DW DRINKING WATER WELL
- EFF EFFLUENT SAMPLING WELL
- ERW EAST RECOVERY WELL
- GRO GASOLINE RANGE ORGANICS
- GW ELEV. GROUNDWATER ELEVATION IN FEET
- MW MONITORING WELL
- mg/L MILLIGRAMS PER LITER
- NC NOT CALCULATED
- OMW OBSERVATION WELL
- WRW WEST RECOVERY WELL

MW19-1

Benzene	0.085 mg/L
Toluene	0.12 mg/L
Ethylbenzene	0.56 mg/L
Xylenes	3.6 mg/L
GRO	8.6 mg/L
DRO	42 H mg/L
GW Elev.	432.39 feet

MW19-1 (Duplicate)

Benzene	0.098 mg/L
Toluene	0.15 mg/L
Ethylbenzene	0.52 mg/L
Xylenes	3 mg/L
GRO	9.8 mg/L
DRO	48 H mg/L

MW-3

Benzene	0.0047 mg/L
Toluene	0.0071 mg/L
Ethylbenzene	0.071 mg/L
Xylenes	1.23 mg/L
GRO	3.1 mg/L
DRO	210 mg/L
GW Elev.	432.36 feet

NOTES:

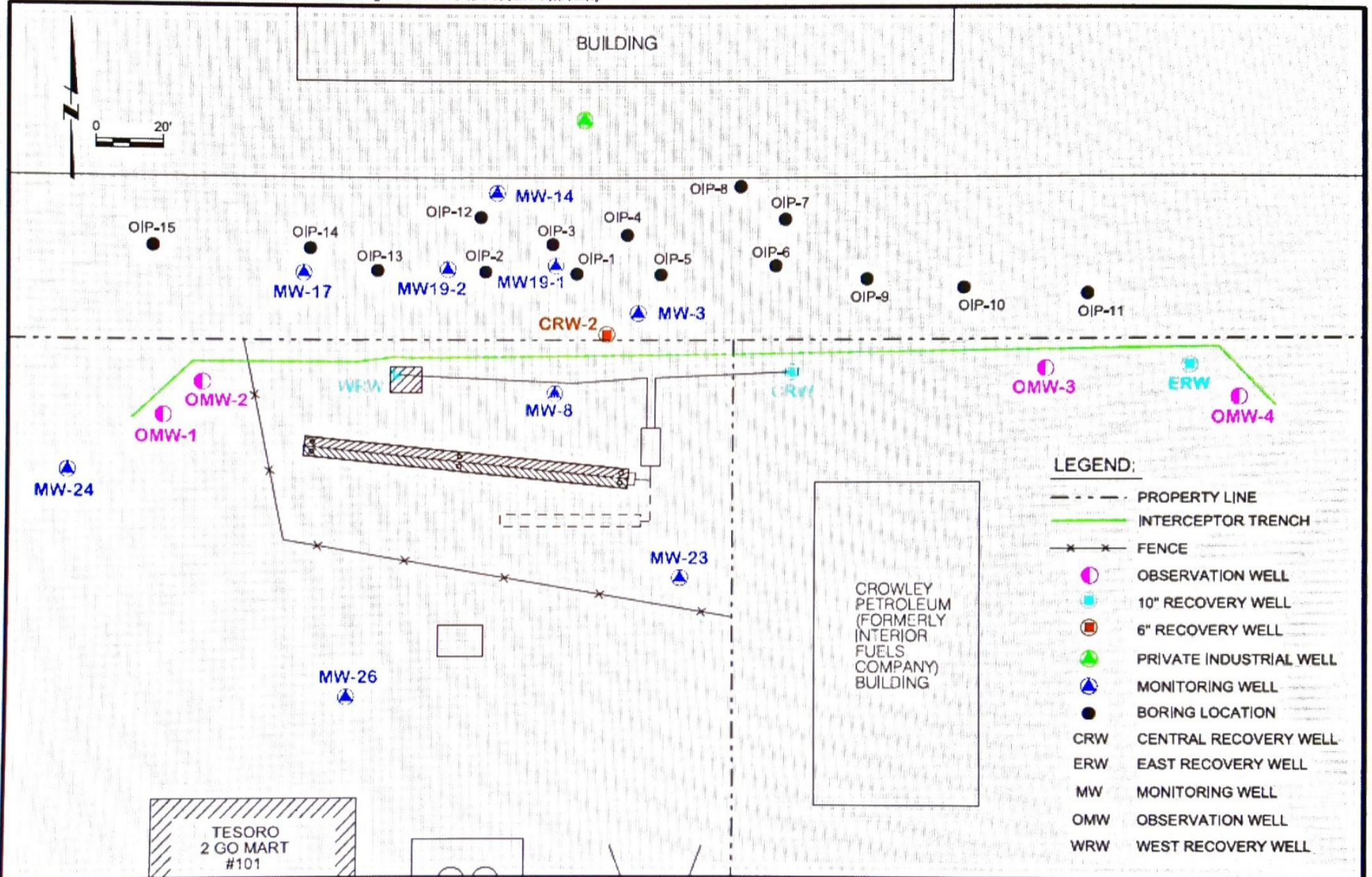
- RESULTS ARE FOR SAMPLES COLLECTED ON OCTOBER 23, 2019.
- BOLD / RED RESULTS INDICATE CONCENTRATION EXCEEDS THE CLEANUP LEVEL FOR THE SITE.



TESORO COMPANY
TESORO 2 GO MART #101 & IFC
OCTOBER 2019
MONITORING EVENT REPORT

SITE PLAN WITH
GROUNDWATER ANALYTICAL
DETECTIONS AND EXCEEDANCES

FIGURE
2
185751218.
200.205



LEGEND:

	PROPERTY LINE
	INTERCEPTOR TRENCH
	FENCE
	OBSERVATION WELL
	10" RECOVERY WELL
	6" RECOVERY WELL
	PRIVATE INDUSTRIAL WELL
	MONITORING WELL
	BORING LOCATION
CRW	CENTRAL RECOVERY WELL
ERW	EAST RECOVERY WELL
MW	MONITORING WELL
OMW	OBSERVATION WELL
WRW	WEST RECOVERY WELL



TESORO COMPANY
SPEEDWAY STORE 5313
(FORMER TESORO 2 GO MART #101 & IFC)

OIP BORING LOCATION MAP

ATTACHMENT 1

Well Logs for MW 19-1 & MW 19-2

PROJECT: **Tesorro Station 101**

LOCATION: **Fairbanks, AK**

PROJECT NUMBER:

WELL / PROBEHOLE / BOREHOLE NO:

MW-19-1



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DRILLING: STARTED: **6/25/19** COMPLETED: **6/25/19**

INSTALLATION: STARTED: **6/25/19** COMPLETED: **6/25/19**

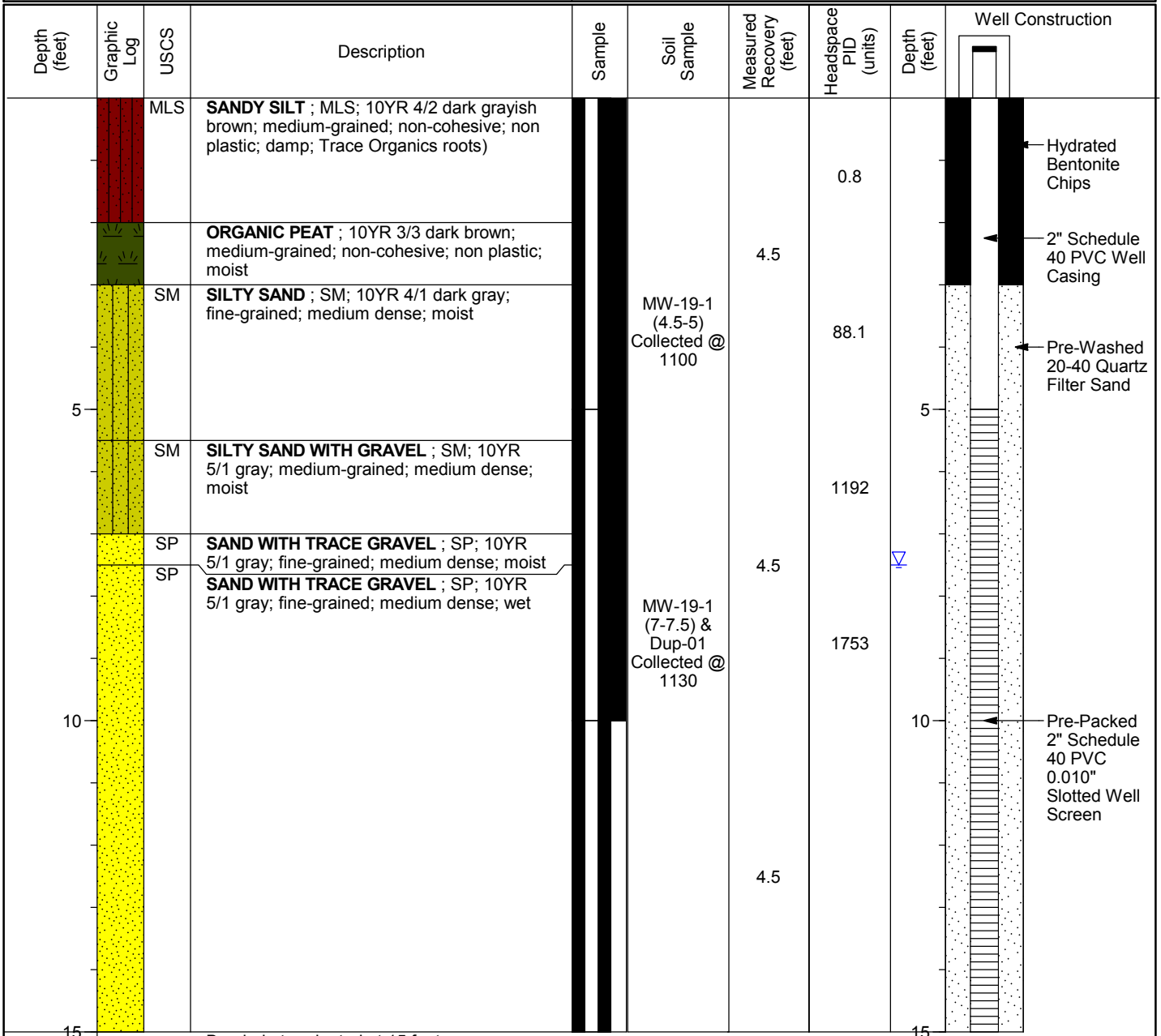
DRILLING COMPANY: **Discovery Drilling**

DRILLING EQUIPMENT: **Geoprobe 6712DT**

DRILLING METHOD: **DT 45**

SAMPLING EQUIPMENT: **PVC Liner**

NORTHING (ft): EASTING (ft):
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): **7.5** BOREHOLE DEPTH (ft): **15**
 STATIC DTW (ft): **Not Encountered** WELL DEPTH (ft): **15**
 WELL CASING DIA. (in): **2** BOREHOLE DIA.(in): **4.5**
 LOGGED BY: **JK** CHECKED BY:



GEO FORM 304 TESORO STATION 101.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 7/24/19

PROJECT: **Tesororo Station 101**

LOCATION: **Fairbanks, AK**

PROJECT NUMBER:

WELL / PROBEHOLE / BOREHOLE NO:

MW-19-2



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DRILLING: STARTED: **6/25/19** COMPLETED: **6/25/19**

INSTALLATION: STARTED: **6/25/19** COMPLETED: **6/25/19**

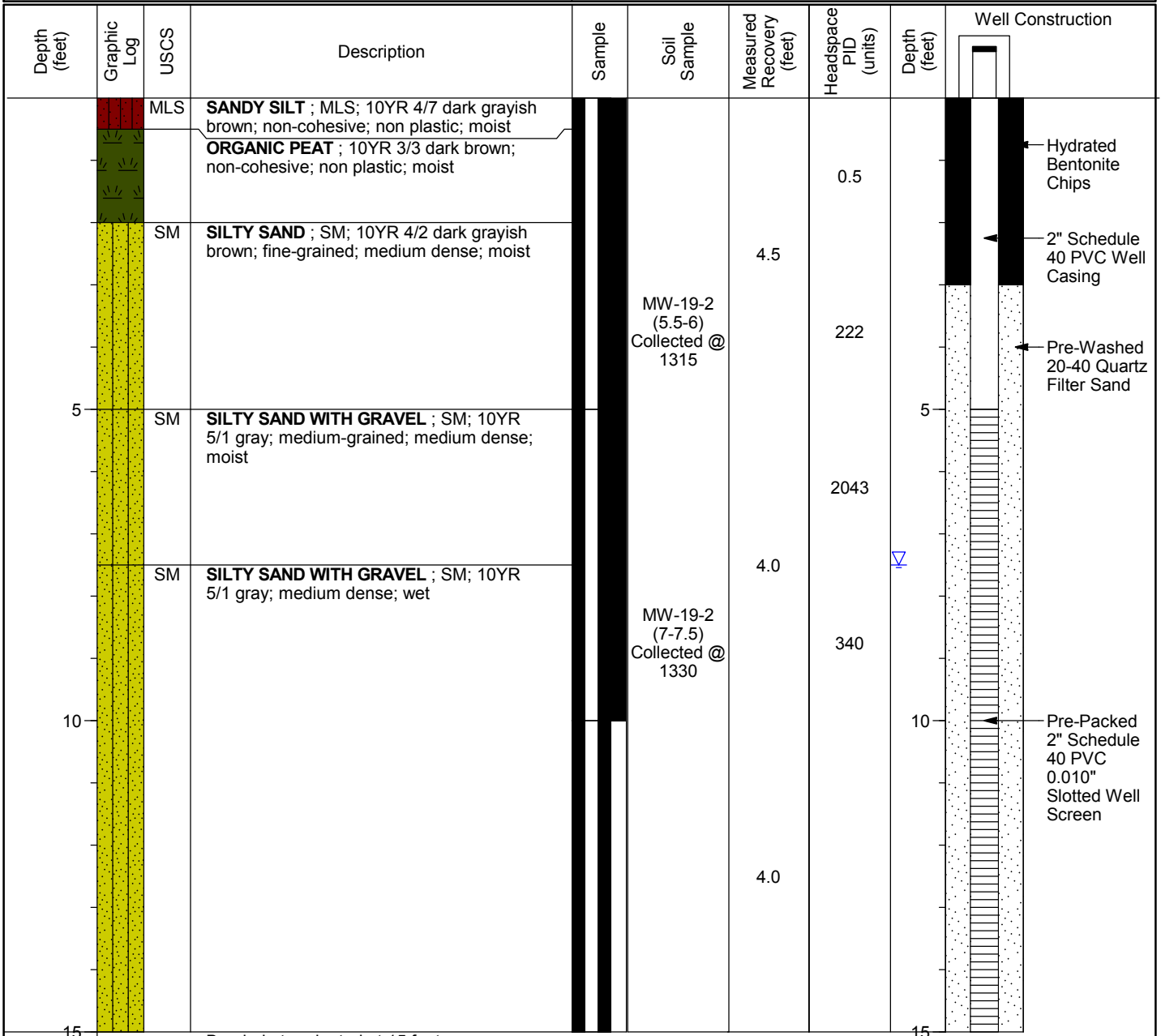
DRILLING COMPANY: **Discovery Drilling**

DRILLING EQUIPMENT: **Geoprobe 6712DT**

DRILLING METHOD: **DT 45**

SAMPLING EQUIPMENT: **PVC Liner**

NORTHING (ft): EASTING (ft):
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): **7.5** BOREHOLE DEPTH (ft): **15**
 STATIC DTW (ft): **Not Encountered** WELL DEPTH (ft): **15**
 WELL CASING DIA. (in): **2** BOREHOLE DIA.(in): **4.5**
 LOGGED BY: **JK** CHECKED BY:



GEO FORM 304 TESORO STATION 101.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 7/24/19

ATTACHMENT 2

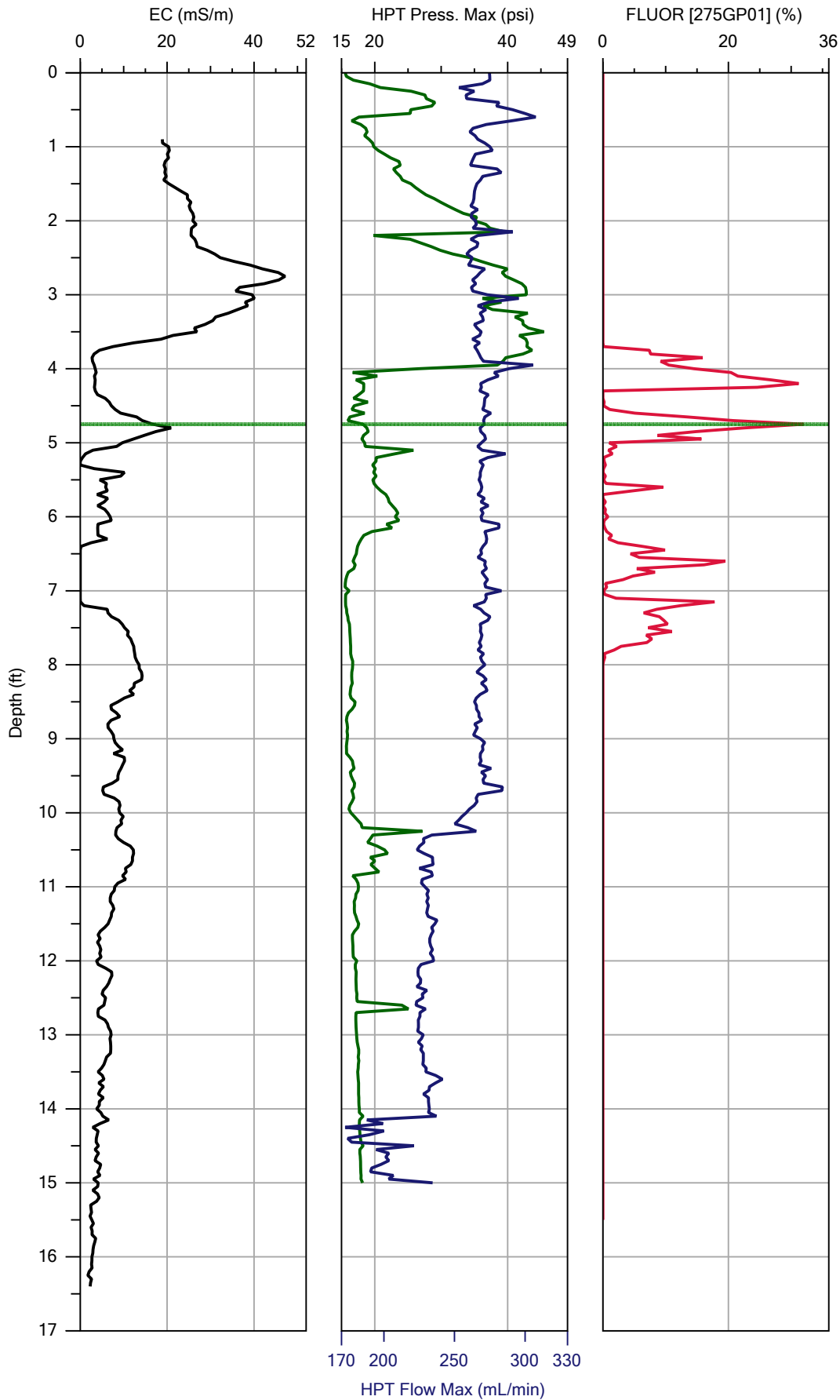
Table 1 OIP Data Summary Logs of 15 OIP Borings

**Table 1 OIHPT Drilling Summary
Tesoro 2 Go Mart #101**

Location	Date/Time	Top of Fluorescence (ft bgs)	Bottom of Fluorescence (ft bgs)	Depth of Highest Fluorescence (ft bgs)	Highest Fluorescence (% Area)	Log End Depth (ft bgs)
OIHPT_01	6/24/2019 10:10	3.70	7.90	4.75	30.3	15.50
OIHPT_02	6/24/2019 17:47	5.95	8.45	7.60	62.8	15.00
OIHPT_03	6/24/2019 17:24	5.75	9.40	6.80	82	15.00
OIHPT_04	6/24/2019 16:58	5.65	9.55	8.55	73.5	15.05
OIHPT_05	6/24/2019 13:19	3.40	8.25	6.25	66.1	15.05
OIHPT_06	6/24/2019 14:11	5.95	9.05	7.30	87.2	15.05
OIHPT_07	6/24/2019 14:45	7.75	10.35	9.65	87.6	15.40
OIHPT_08	6/24/2019 15:19	10.35	11.90	10.65	80	15.05
OIHPT_09	6/24/2019 15:48	6.60	8.15	7.55	75.9	15.05
OIHPT_10	6/24/2019 16:10	7.10	9.65	7.30	42.9	15.10
OIHPT_11	6/24/2019 16:31	--	--	--	--	15.05
OIHPT_12	6/25/2019 8:28	6.55	10.00	7.35	72.8	15.05
OIHPT_13	6/25/2019 8:55	5.30	9.25	7.75	67.3	15.00
OIHPT_14	6/25/2019 9:22	6.15	8.90	8.25	58.7	12.05
OIHPT_15	6/25/2019 9:48	--	--	--	--	15.05

Notes:

- No fluorescence observed during OIHPT direct push drilling
- ft bgs Feet below ground surface
- OIHPT Optical image and hydraulic profiling tool



DEPTH:
4.75 ft

TYPE:
UV

% AREA:
30.3

Captured

Analyzed

Overlaid



Company:	Discovery Drilling	Operator:	DJW - DAP	File:	OIHPT_1.OIHP
Project ID:	Tesoro 2 Go #101	Client:	Stantec	Date:	6/24/2019
				Location:	FBX

OIHPT_1.zip

SITE INFORMATION -- DIRECT IMAGE OIP+HPT PROBE

Geoprobe DI Acquisition Software for Windows
Version: 3.3 Build: 19087

EC PRE-LOG TESTS BYPASSED

COMPANY: Discovery Drilling
OPERATOR: DJW - DAP
PROJECT ID: Tesoro 2 Go #101
CLIENT: Stantec
UNITS: ENGLISH
PROBE AND ARRAY: OH6570 OIHPT UV275 VIS with Top Dipole
PROBE SERIAL NUMBER: F430HI
LOCATION: FBX
100 INCH STRING POT USED (CALIBRATION FACTOR 7749)
ROD LENGTH: 4 feet

FILTER SETTINGS

Filter:
FILTER NAME: 275GPFilterEF001
FILTER GUID: 539c6c5b-435b-4181-b36d-01535f2f7a4f
T1: H[85-220] S[140-255] V[90-255]
T2: H[85-220] S[0-139] V[150-255]

LOGGING MODE: 275

OIP PRE-LOG TEST

Frame grabber settings:
Brightness: 111
Contrast: 140
Hue: 0
Saturation: 200

PRE-LOG HPT REFERENCE TEST VALUES

PRE TEST TIME: Mon Jun 24 2019 09:39:59

PRE-LOG HPT REFERENCE TESTS BYPASSED

HPT IDEAL COEFFS: 2.2696e1,-2.2356
HPT SENSOR CAL NUMBERS: F116OH,0.0000,0.0000,0.0000,0.0000,2.5800,-2.6120e1
LOG START TIME: Mon Jun 24 2019 09:40:02

Probe advancement with HPT flow valve and/or pump switch turned off at 14.60 ft (4.450 m).

LOG END DEPTH: 15.50 ft (4.724 m)
LOG END TIME: Mon Jun 24 2019 10:10:41

LATITUDE: 0.000000000
LONGITUDE: 0.000000000
ELEVATION: 0.000 METERS 0.00 FEET
GPS Quality: None

OIP PRE/POST-LOG TEST RESULTS

Name	Light	Pre	Post	Dif
Visual Target	Visible	n/a	0.0	n/a
Black Box	UV	n/a	0.0	n/a
Diesel	UV	n/a	99.8	n/a
Motor Oil	UV	n/a	99.0	n/a

Frame grabber settings:

Brightness: 111
 Contrast: 140
 Hue: 0
 Saturation: 200

POST-LOG HPT REFERENCE TEST VALUES

POST TEST TIME: Mon Jun 24 2019 10:19:53

TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.661	0.0	101.090
TOP with FLOW>0	14.970	245.7	103.210
BOTTOM with FLOW=0	14.443	0.0	99.580
BOTTOM with FLOW>0	14.794	252.5	102.000

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
 ACTUAL FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa)

TRANSDUCER TEST PASSED

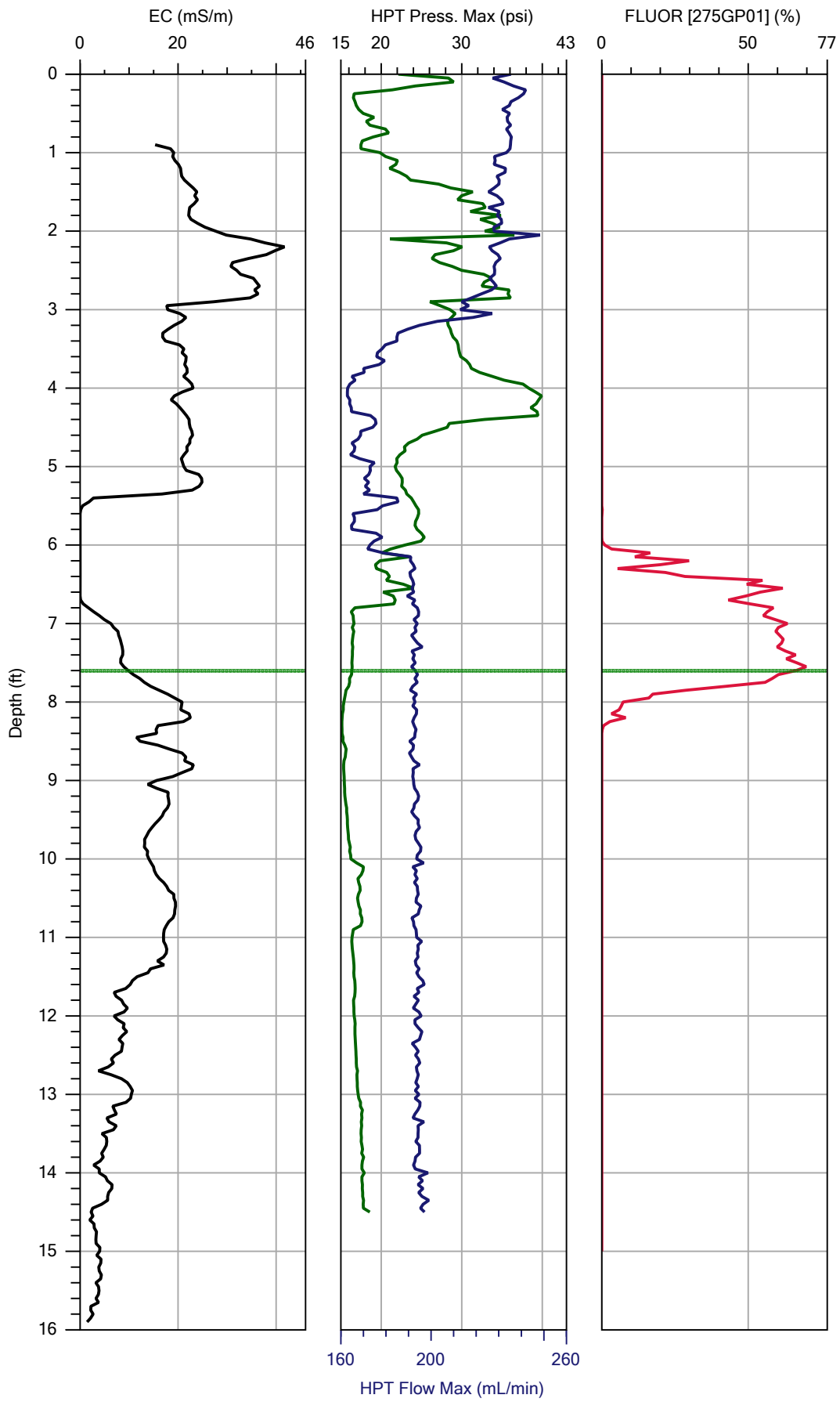
Post-Log EC Load Tests

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	59.4	8.0	PASS
High	360.0	377.3	4.8	PASS

***** USER NOTES *****

PRE QC TESTS WERE DONE AND PASSED. WE FORGOT TO HOOK UP THE STRINGPOT, SO HAD TO START NEW LOG.

USE BOTTOM 3 DISSIPATION TESTS FOR DATA.

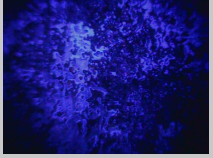


DEPTH:
7.60 ft

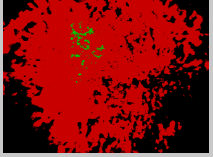
TYPE:
UV

% AREA:
62.8

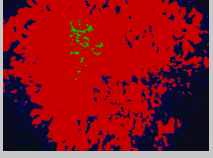
Captured



Analyzed



Overlaid




Company: Discovery Drilling
 Project ID: Tesoro 2 Go #101

Operator: DJW - DAP
 Client: Stantec

File: OIHPT_2_QA.OIHP
 Date: 6/24/2019
 Location: FBX

HPT Flow Max (mL/min)

OIHPT_2_QA.zip

SITE INFORMATION -- DIRECT IMAGE OIP+HPT PROBE

Geoprobe DI Acquisition Software for Windows
Version: 3.3 Build: 19087

Pre-Log EC Load Tests (Post-Log From OIHPT_3_QA.zip)

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	57.8	5.0	PASS
High	360.0	376.1	4.5	PASS

COMPANY: Discovery Drilling
 OPERATOR: DJW - DAP
 PROJECT ID: Tesoro 2 Go #101
 CLIENT: Stantec
 UNITS: ENGLISH
 PROBE AND ARRAY: OH6570 OIHPT UV275 VIS with Top Dipole
 PROBE SERIAL NUMBER: E436HI
 LOCATION: FBX
 100 INCH STRING POT USED (CALIBRATION FACTOR 7749)
 ROD LENGTH: 4 feet

FILTER SETTINGS

Filter:
 FILTER NAME: 275GPFILTEREF001
 FILTER GUID: 539c6c5b-435b-4181-b36d-01535f2f7a4f
 T1: H[85-220] S[140-255] V[90-255]
 T2: H[85-220] S[0-139] V[150-255]

LOGGING MODE: 275

OIP PRE-LOG TEST

Visual Target	Visible	Value
Black Box	UV	0.0
Diesel UV		94.2
Motor Oil	UV	88.8

Frame grabber settings:

Brightness: 111
 Contrast: 140
 Hue: 0
 Saturation: 200

PRE-LOG HPT REFERENCE TEST VALUES (Post-Log From OIHPT_3_QA.zip)

PRE TEST TIME: Mon Jun 24 2019 17:31:07

TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.522	0.0	100.130
TOP with FLOW>0	14.780	208.4	101.900
BOTTOM with FLOW=0	14.306	0.0	98.640
BOTTOM with FLOW>0	14.550	205.0	100.320

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa)

TRANSDUCER TEST PASSED

HPT IDEAL COEFFS: 2.2696e1,-2.2356
HPT SENSOR CAL NUMBERS: F115OH,0.0000,0.0000,0.0000,0.0000,2.5720,-2.6020e1
LOG START TIME: Mon Jun 24 2019 17:38:28

LOG END DEPTH: 15.00 ft (4.572 m)
LOG END TIME: Mon Jun 24 2019 17:47:25

LATITUDE: 0.000000000
LONGITUDE: 0.000000000
ELEVATION: 0.000 METERS 0.00 FEET
GPS Quality: None

OIP PRE/POST-LOG TEST RESULTS

Name	Light	Pre	Post	Dif
Visual Target	Visible	22.6	20.2	2.4
Black Box	UV	0.0	0.0	0.0
Diesel	UV	94.2	98.0	3.9
Motor Oil	UV	88.8	93.6	4.9

Frame grabber settings:
Brightness: 111
Contrast: 140
Hue: 0
Saturation: 200

POST-LOG HPT REFERENCE TEST VALUES

POST TEST TIME: Mon Jun 24 2019 17:52:40

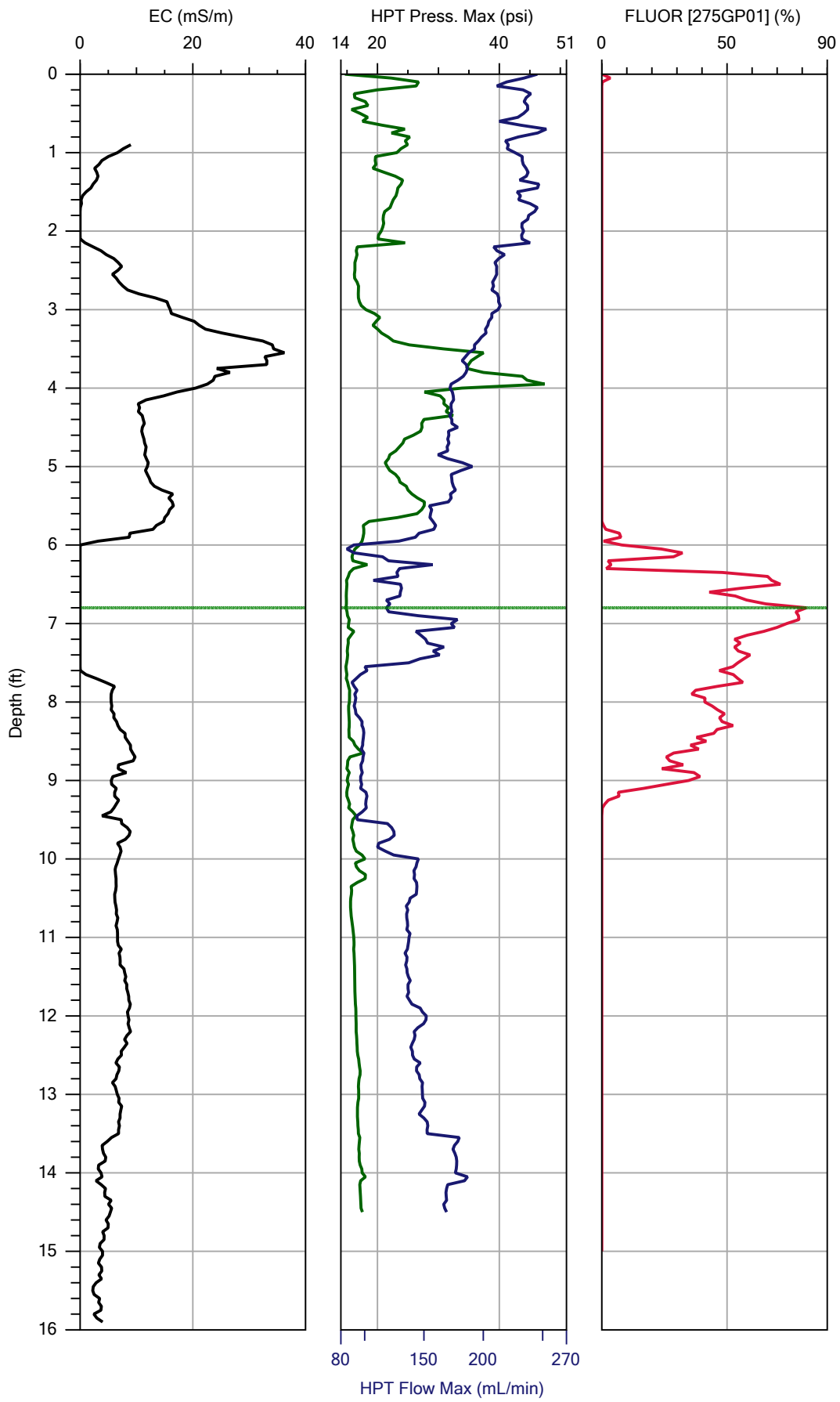
TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.508	0.0	100.030
TOP with FLOW>0	14.797	235.5	102.020
BOTTOM with FLOW=0	14.295	0.0	98.560
BOTTOM with FLOW>0	14.602	235.7	100.680

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.21 psi (1.5 kPa)

TRANSDUCER TEST PASSED

Post-Log EC Load Tests

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	57.5	4.5	PASS
High	360.0	376.4	4.5	PASS




DEPTH:
6.80 ft

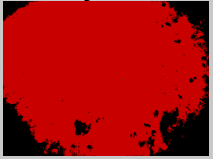
TYPE:
UV

% AREA:
82.0


Captured



Analyzed



Overlaid




Company: Discovery Drilling
 Project ID: Tesoro 2 Go #101

Operator: DJW - DAP
 Client: Stantec

File:	OIHPT_3_QA.OIHP
Date:	6/24/2019
Location:	FBX

OIHPT_3_QA.zip

SITE INFORMATION -- DIRECT IMAGE OIP+HPT PROBE

Geoprobe DI Acquisition Software for Windows
Version: 3.3 Build: 19087

Pre-Log EC Load Tests (Post-Log From OIHPT_4_QA.zip)

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	57.8	5.1	PASS
High	360.0	376.6	4.6	PASS

COMPANY: Discovery Drilling
 OPERATOR: DJW - DAP
 PROJECT ID: Tesoro 2 Go #101
 CLIENT: Stantec
 UNITS: ENGLISH
 PROBE AND ARRAY: OH6570 OIHPT UV275 VIS with Top Dipole
 PROBE SERIAL NUMBER: E436HI
 LOCATION: FBX
 100 INCH STRING POT USED (CALIBRATION FACTOR 7749)
 ROD LENGTH: 4 feet

FILTER SETTINGS

Filter:
 FILTER NAME: 275GPFILTEREF001
 FILTER GUID: 539c6c5b-435b-4181-b36d-01535f2f7a4f
 T1: H[85-220] S[140-255] V[90-255]
 T2: H[85-220] S[0-139] V[150-255]

LOGGING MODE: 275

OIP PRE-LOG TEST

Visual Target	Visible	27.1
Black Box	UV	0.0
Diesel UV	91.0	
Motor Oil	UV	94.3

Frame grabber settings:

Brightness: 111
 Contrast: 140
 Hue: 0
 Saturation: 200

PRE-LOG HPT REFERENCE TEST VALUES (Post-Log From OIHPT_4_QA.zip)

PRE TEST TIME: Mon Jun 24 2019 17:04:11

TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.490	0.0	99.910
TOP with FLOW>0	14.792	214.3	101.990
BOTTOM with FLOW=0	14.281	0.0	98.460
BOTTOM with FLOW>0	14.674	268.4	101.170

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.21 psi (1.4 kPa)

TRANSDUCER TEST PASSED

HPT IDEAL COEFFS: 2.2696e1,-2.2356
HPT SENSOR CAL NUMBERS: F115OH,0.0000,0.0000,0.0000,0.0000,2.5720,-2.6020e1
LOG START TIME: Mon Jun 24 2019 17:13:05

LOG END DEPTH: 15.00 ft (4.572 m)
LOG END TIME: Mon Jun 24 2019 17:24:13

LATITUDE: 0.000000000
LONGITUDE: 0.000000000
ELEVATION: 0.000 METERS 0.00 FEET
GPS Quality: None

OIP PRE/POST-LOG TEST RESULTS

Name	Light	Pre	Post	Dif
Visual Target	Visible	27.1	n/a	n/a
Black Box	UV	0.0	n/a	n/a
Diesel	UV	91.0	n/a	n/a
Motor Oil	UV	94.3	n/a	n/a

Frame grabber settings:
Brightness: 111
Contrast: 140
Hue: 0
Saturation: 200

POST-LOG HPT REFERENCE TEST VALUES

POST TEST TIME: Mon Jun 24 2019 17:31:07

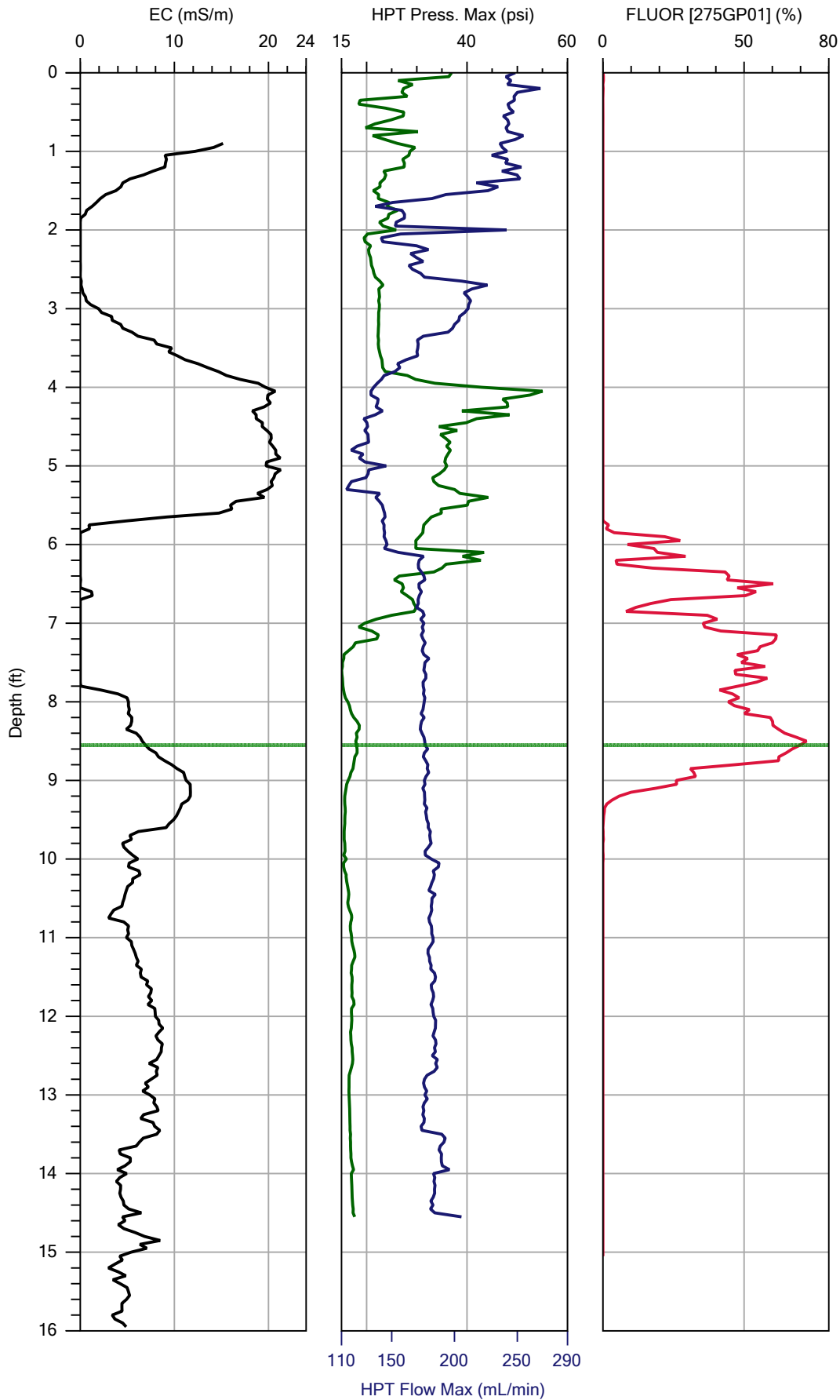
TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.522	0.0	100.130
TOP with FLOW>0	14.780	208.4	101.900
BOTTOM with FLOW=0	14.306	0.0	98.640
BOTTOM with FLOW>0	14.550	205.0	100.320

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa)

TRANSDUCER TEST PASSED

Post-Log EC Load Tests

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	57.8	5.0	PASS
High	360.0	376.1	4.5	PASS




DEPTH:
8.55 ft

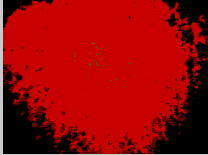
TYPE:
UV

% AREA:
73.5

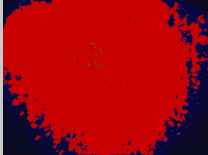
Captured



Analyzed



Overlaid




Company:	Discovery Drilling
Project ID:	Tesoro 2 Go #101

Operator:	DJW - DAP
Client:	Stantec

File:	OIHPT 4 QA.OIHP
Date:	6/24/2019
Location:	FBX

OIHPT_4_QA.zip

SITE INFORMATION -- DIRECT IMAGE OIP+HPT PROBE

Geoprobe DI Acquisition Software for Windows
Version: 3.3 Build: 19087

Pre-Log EC Load Tests (Post-Log From OIHPT_11.zip)

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	57.8	5.0	PASS
High	360.0	377.0	4.7	PASS

COMPANY: Discovery Drilling
 OPERATOR: DJW - DAP
 PROJECT ID: Tesoro 2 Go #101
 CLIENT: Stantec
 UNITS: ENGLISH
 PROBE AND ARRAY: OH6570 OIHPT UV275 VIS with Top Dipole
 PROBE SERIAL NUMBER: E436HI
 LOCATION: FBX
 100 INCH STRING POT USED (CALIBRATION FACTOR 7749)
 ROD LENGTH: 4 feet

FILTER SETTINGS

Filter:
 FILTER NAME: 275GPFILTEREF001
 FILTER GUID: 539c6c5b-435b-4181-b36d-01535f2f7a4f
 T1: H[85-220] S[140-255] V[90-255]
 T2: H[85-220] S[0-139] V[150-255]

LOGGING MODE: 275

OIP PRE-LOG TEST

Visual Target	Visible	Value
Black Box	UV	0.0
Diesel	UV	97.6
Motor Oil	UV	95.3

Frame grabber settings:

Brightness: 111
 Contrast: 140
 Hue: 0
 Saturation: 200

PRE-LOG HPT REFERENCE TEST VALUES (Post-Log From OIHPT_11.zip)

PRE TEST TIME: Mon Jun 24 2019 16:36:29

TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.492	0.0	99.920
TOP with FLOW>0	14.839	243.9	102.310
BOTTOM with FLOW=0	14.289	0.0	98.520
BOTTOM with FLOW>0	14.633	255.9	100.890

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.20 psi (1.4 kPa)

TRANSDUCER TEST PASSED

HPT IDEAL COEFFS: 2.2696e1,-2.2356
HPT SENSOR CAL NUMBERS: F115OH,0.0000,0.0000,0.0000,0.0000,2.5720,-2.6020e1
LOG START TIME: Mon Jun 24 2019 16:48:06

LOG END DEPTH: 15.05 ft (4.587 m)
LOG END TIME: Mon Jun 24 2019 16:58:57

LATITUDE: 0.000000000
LONGITUDE: 0.000000000
ELEVATION: 0.000 METERS 0.00 FEET
GPS Quality: None

OIP PRE/POST-LOG TEST RESULTS

Name	Light	Pre	Post	Dif
Visual Target	Visible	28.6	25.5	3.2
Black Box	UV	0.0	0.0	0.0
Diesel	UV	97.6	98.8	1.2
Motor Oil	UV	95.3	95.2	0.1

Frame grabber settings:
Brightness: 111
Contrast: 140
Hue: 0
Saturation: 200

POST-LOG HPT REFERENCE TEST VALUES

POST TEST TIME: Mon Jun 24 2019 17:04:11

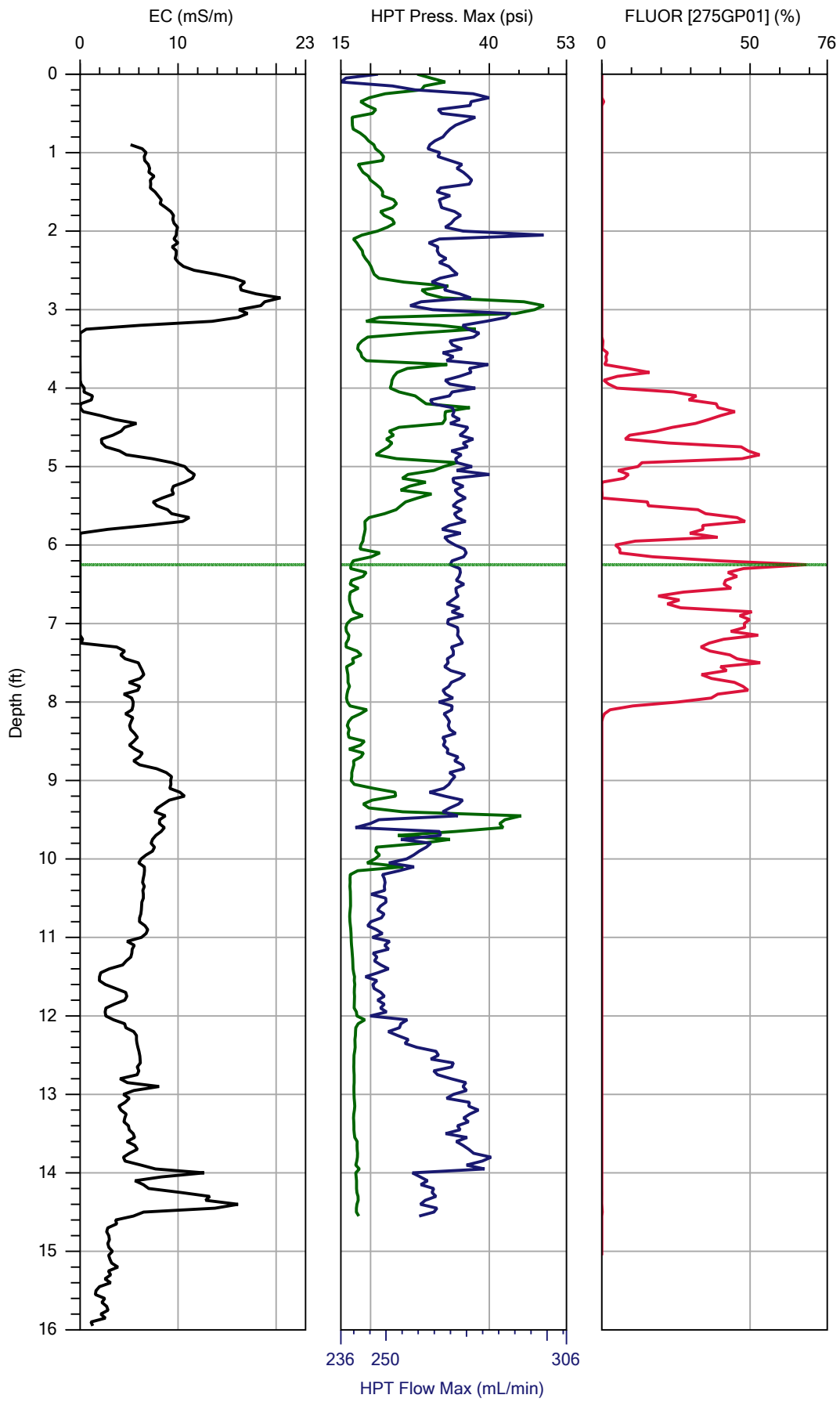
TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.490	0.0	99.910
TOP with FLOW>0	14.792	214.3	101.990
BOTTOM with FLOW=0	14.281	0.0	98.460
BOTTOM with FLOW>0	14.674	268.4	101.170

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.21 psi (1.4 kPa)

TRANSDUCER TEST PASSED

Post-Log EC Load Tests

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	57.8	5.1	PASS
High	360.0	376.6	4.6	PASS




DEPTH:
6.25 ft

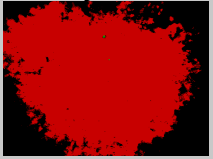
TYPE:
UV

% AREA:
66.1


Captured



Analyzed



Overlaid




Company:	Discovery Drilling	Operator:	DJW - DAP	File:	OIHPT_5.OIHP
Project ID:	Tesoro 2 Go #101	Client:	Stantec	Date:	6/24/2019
				Location:	FBX

OIHPT_5.zip

SITE INFORMATION -- DIRECT IMAGE OIP+HPT PROBE

Geoprobe DI Acquisition Software for Windows
Version: 3.3 Build: 19087

Pre-Log EC Load Tests

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	57.7	4.9	PASS
High	360.0	338.3	6.0	PASS

COMPANY: Discovery Drilling
 OPERATOR: DJW - DAP
 PROJECT ID: Tesoro 2 Go #101
 CLIENT: Stantec
 UNITS: ENGLISH
 PROBE AND ARRAY: OH6570 OIHPT UV275 VIS with Top Dipole
 PROBE SERIAL NUMBER: E436HI
 LOCATION: FBX
 100 INCH STRING POT USED (CALIBRATION FACTOR 7749)
 ROD LENGTH: 4 feet

FILTER SETTINGS

Filter:
 FILTER NAME: 275GPFILTEREF001
 FILTER GUID: 539c6c5b-435b-4181-b36d-01535f2f7a4f
 T1: H[85-220] S[140-255] V[90-255]
 T2: H[85-220] S[0-139] V[150-255]

LOGGING MODE: 275

OIP PRE-LOG TEST

Visual Target	Visible	Value
Black Box	UV	0.0
Diesel UV		97.3
Motor Oil	UV	92.1

Frame grabber settings:

Brightness: 111
 Contrast: 140
 Hue: 0
 Saturation: 200

PRE-LOG HPT REFERENCE TEST VALUES

PRE TEST TIME: Mon Jun 24 2019 12:49:06

TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.617	0.0	100.780
TOP with FLOW>0	15.025	264.4	103.590
BOTTOM with FLOW=0	14.398	0.0	99.270
BOTTOM with FLOW>0	14.813	259.4	102.130

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa)

TRANSDUCER TEST PASSED

HPT IDEAL COEFFS: 2.2696e1,-2.2356
HPT SENSOR CAL NUMBERS: F115OH,0.0000,0.0000,0.0000,0.0000,2.5720,-2.6020e1
LOG START TIME: Mon Jun 24 2019 12:53:01

LOG END DEPTH: 15.05 ft (4.587 m)
LOG END TIME: Mon Jun 24 2019 13:19:48

LATITUDE: 0.000000000
LONGITUDE: 0.000000000
ELEVATION: 0.000 METERS 0.00 FEET
GPS Quality: None

OIP PRE/POST-LOG TEST RESULTS

Name	Light	Pre	Post	Dif
Visual Target	Visible	22.4	22.4	0.0
Black Box	UV	0.0	0.0	0.0
Diesel	UV	97.3	100.0	2.7
Motor Oil	UV	92.1	94.7	2.6

Frame grabber settings:
Brightness: 111
Contrast: 140
Hue: 0
Saturation: 200

POST-LOG HPT REFERENCE TEST VALUES

POST TEST TIME: Mon Jun 24 2019 13:26:14

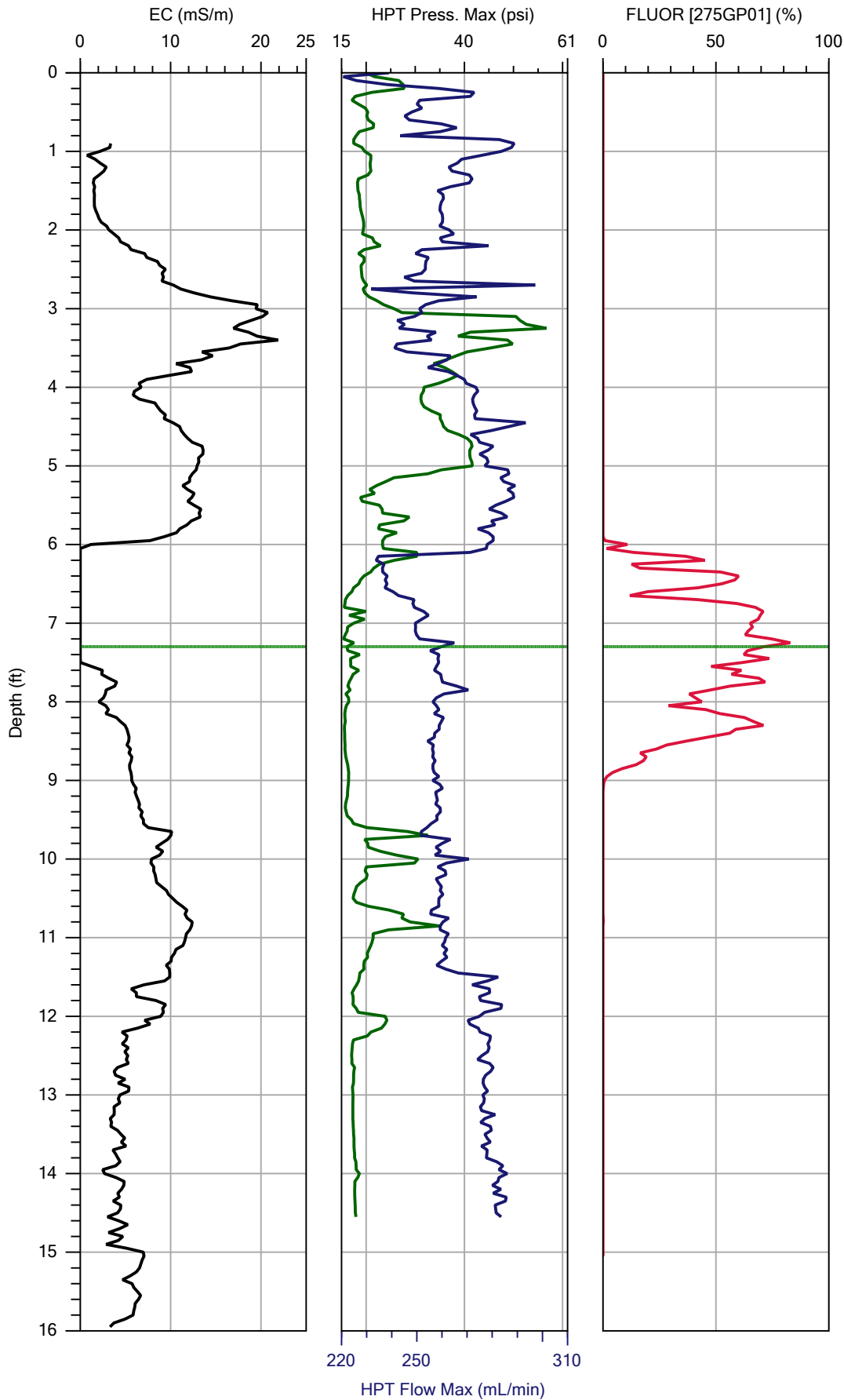
TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.550	0.0	100.320
TOP with FLOW>0	14.887	247.6	102.640
BOTTOM with FLOW=0	14.329	0.0	98.800
BOTTOM with FLOW>0	14.725	256.3	101.530

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa)

TRANSDUCER TEST PASSED

Post-Log EC Load Tests

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	59.2	7.7	PASS
High	360.0	377.8	4.9	PASS



DEPTH:
7.30 ft

TYPE:
UV

% AREA:
87.2

Captured

Analyzed

Overlaid



Company:	Discovery Drilling	Operator:	DJW - DAP	File:	OIHPT_6.OIHP
Project ID:	Tesoro 2 Go #101	Client:	Stantec	Date:	6/24/2019
				Location:	FBX

OIHPT_6.zip

SITE INFORMATION -- DIRECT IMAGE OIP+HPT PROBE

Geoprobe DI Acquisition Software for Windows
Version: 3.3 Build: 19087

Pre-Log EC Load Tests (Post-Log From OIHPT_5.zip)

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	59.2	7.7	PASS
High	360.0	377.8	4.9	PASS

COMPANY: Discovery Drilling
 OPERATOR: DJW - DAP
 PROJECT ID: Tesoro 2 Go #101
 CLIENT: Stantec
 UNITS: ENGLISH
 PROBE AND ARRAY: OH6570 OIHPT UV275 VIS with Top Dipole
 PROBE SERIAL NUMBER: E436HI
 LOCATION: FBX
 100 INCH STRING POT USED (CALIBRATION FACTOR 7749)
 ROD LENGTH: 4 feet

FILTER SETTINGS

Filter:
 FILTER NAME: 275GPFILTEREF001
 FILTER GUID: 539c6c5b-435b-4181-b36d-01535f2f7a4f
 T1: H[85-220] S[140-255] V[90-255]
 T2: H[85-220] S[0-139] V[150-255]

LOGGING MODE: 275

OIP PRE-LOG TEST

Visual Target	Visible	21.8
Black Box	UV	0.0
Diesel	UV	99.6
Motor Oil	UV	88.8

Frame grabber settings:

Brightness: 111
 Contrast: 140
 Hue: 0
 Saturation: 200

PRE-LOG HPT REFERENCE TEST VALUES (Post-Log From OIHPT_5.zip)

PRE TEST TIME: Mon Jun 24 2019 13:26:14

TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.550	0.0	100.320
TOP with FLOW>0	14.887	247.6	102.640
BOTTOM with FLOW=0	14.329	0.0	98.800
BOTTOM with FLOW>0	14.725	256.3	101.530

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa)

TRANSDUCER TEST PASSED

HPT IDEAL COEFFS: 2.2696e1,-2.2356
HPT SENSOR CAL NUMBERS: F115OH,0.0000,0.0000,0.0000,0.0000,2.5720,-2.6020e1
Probe advancement with HPT flow valve and/or pump switch turned off at 0.05 ft (0.015 m).

LOG START TIME: Mon Jun 24 2019 13:56:29

LOG END DEPTH: 15.05 ft (4.587 m)
LOG END TIME: Mon Jun 24 2019 14:11:56

LATITUDE: 0.000000000
LONGITUDE: 0.000000000
ELEVATION: 0.000 METERS 0.00 FEET
GPS Quality: None

OIP PRE/POST-LOG TEST RESULTS

Name	Light	Pre	Post	Dif
Visual Target	Visible	21.8	25.9	4.1
Black Box	UV	0.0	0.0	0.0
Diesel	UV	99.6	95.1	4.4
Motor Oil	UV	88.8	99.9	11.1

Frame grabber settings:
Brightness: 111
Contrast: 140
Hue: 0
Saturation: 200

POST-LOG HPT REFERENCE TEST VALUES

POST TEST TIME: Mon Jun 24 2019 14:18:19

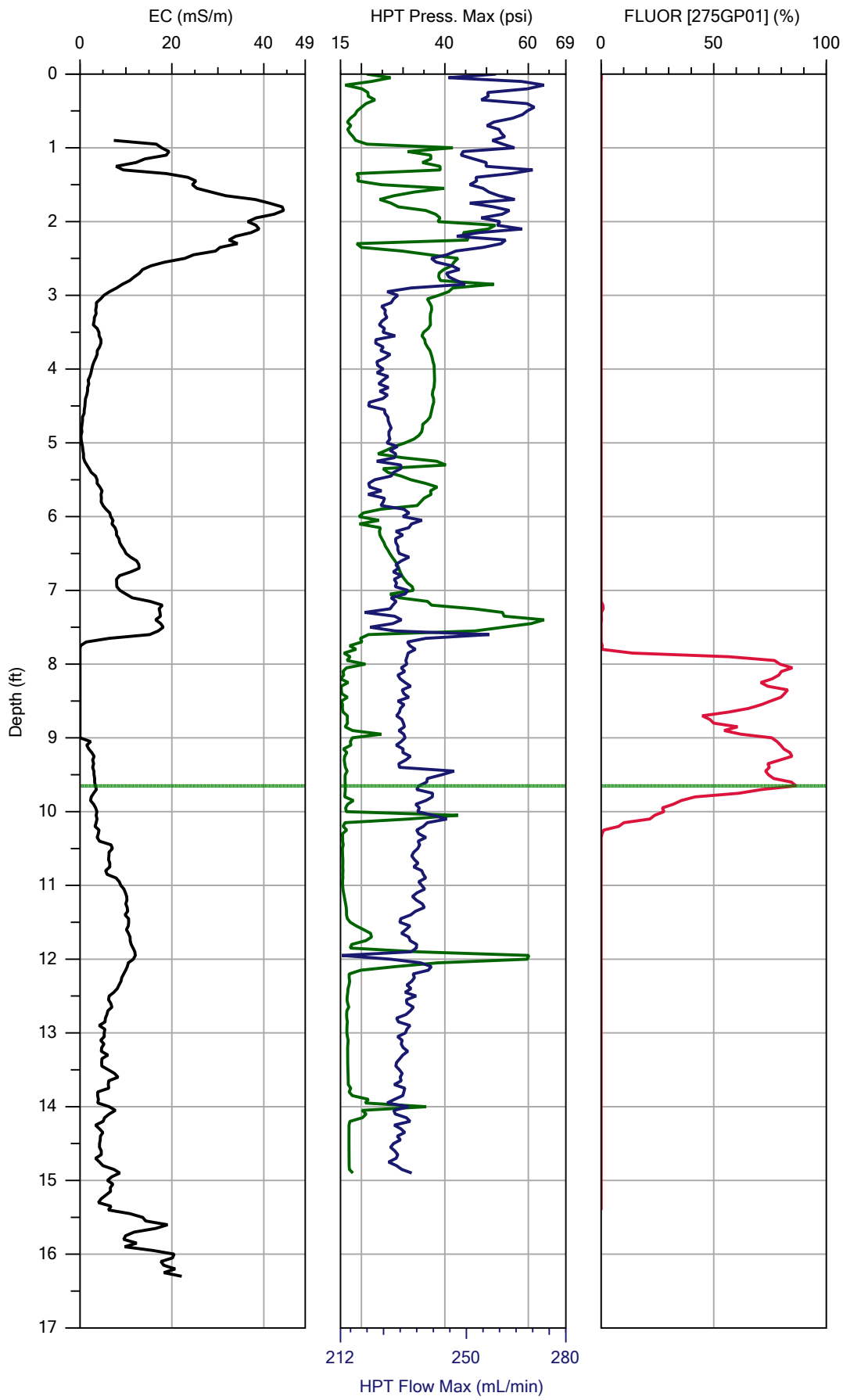
TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.561	0.0	100.400
TOP with FLOW>0	14.933	256.8	102.960
BOTTOM with FLOW=0	14.360	0.0	99.010
BOTTOM with FLOW>0	14.753	266.2	101.720

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.20 psi (1.4 kPa)

TRANSDUCER TEST PASSED

Post-Log EC Load Tests

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	58.5	6.3	PASS
High	360.0	377.2	4.8	PASS




DEPTH:
9.65 ft

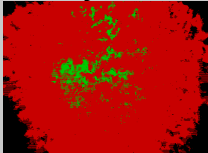
TYPE:
UV

% AREA:
87.6

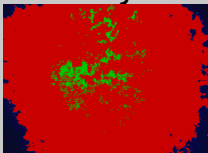
Captured



Analyzed



Overlaid




Company:	Discovery Drilling
Project ID:	Tesoro 2 Go #101

Operator:	DJW - DAP
Client:	Stantec

File:	OIHPT 7.OIHP
Date:	6/24/2019
Location:	FBX

OIHPT_7.zip

SITE INFORMATION -- DIRECT IMAGE OIP+HPT PROBE

Geoprobe DI Acquisition Software for Windows
Version: 3.3 Build: 19087

Pre-Log EC Load Tests (Post-Log From OIHPT_6.zip)

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	58.5	6.3	PASS
High	360.0	377.2	4.8	PASS

COMPANY: Discovery Drilling
 OPERATOR: DJW - DAP
 PROJECT ID: Tesoro 2 Go #101
 CLIENT: Stantec
 UNITS: ENGLISH
 PROBE AND ARRAY: OH6570 OIHPT UV275 VIS with Top Dipole
 PROBE SERIAL NUMBER: E436HI
 LOCATION: FBX
 100 INCH STRING POT USED (CALIBRATION FACTOR 7749)
 ROD LENGTH: 4 feet

FILTER SETTINGS

Filter:
 FILTER NAME: 275GPFILTEREF001
 FILTER GUID: 539c6c5b-435b-4181-b36d-01535f2f7a4f
 T1: H[85-220] S[140-255] V[90-255]
 T2: H[85-220] S[0-139] V[150-255]

LOGGING MODE: 275

OIP PRE-LOG TEST

Visual Target	Visible	Value
Black Box	UV	0.0
Diesel UV		99.1
Motor Oil	UV	95.1

Frame grabber settings:

Brightness: 111
 Contrast: 140
 Hue: 0
 Saturation: 200

PRE-LOG HPT REFERENCE TEST VALUES (Post-Log From OIHPT_6.zip)

PRE TEST TIME: Mon Jun 24 2019 14:18:19

TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.561	0.0	100.400
TOP with FLOW>0	14.933	256.8	102.960
BOTTOM with FLOW=0	14.360	0.0	99.010
BOTTOM with FLOW>0	14.753	266.2	101.720

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.20 psi (1.4 kPa)

TRANSDUCER TEST PASSED

HPT IDEAL COEFFS: 2.2696e1,-2.2356
HPT SENSOR CAL NUMBERS: F115OH,0.0000,0.0000,0.0000,0.0000,2.5720,-2.6020e1
LOG START TIME: Mon Jun 24 2019 14:31:08

LOG END DEPTH: 15.40 ft (4.694 m)
LOG END TIME: Mon Jun 24 2019 14:45:26

LATITUDE: 0.000000000
LONGITUDE: 0.000000000
ELEVATION: 0.000 METERS 0.00 FEET
GPS Quality: None

OIP PRE/POST-LOG TEST RESULTS

Name	Light	Pre	Post	Dif
Visual Target	Visible	24.1	29.1	5.0
Black Box	UV	0.0	0.0	0.0
Diesel	UV	99.1	96.5	2.6
Motor Oil	UV	95.1	95.0	0.1

Frame grabber settings:
Brightness: 111
Contrast: 140
Hue: 0
Saturation: 200

POST-LOG HPT REFERENCE TEST VALUES

POST TEST TIME: Mon Jun 24 2019 14:51:31

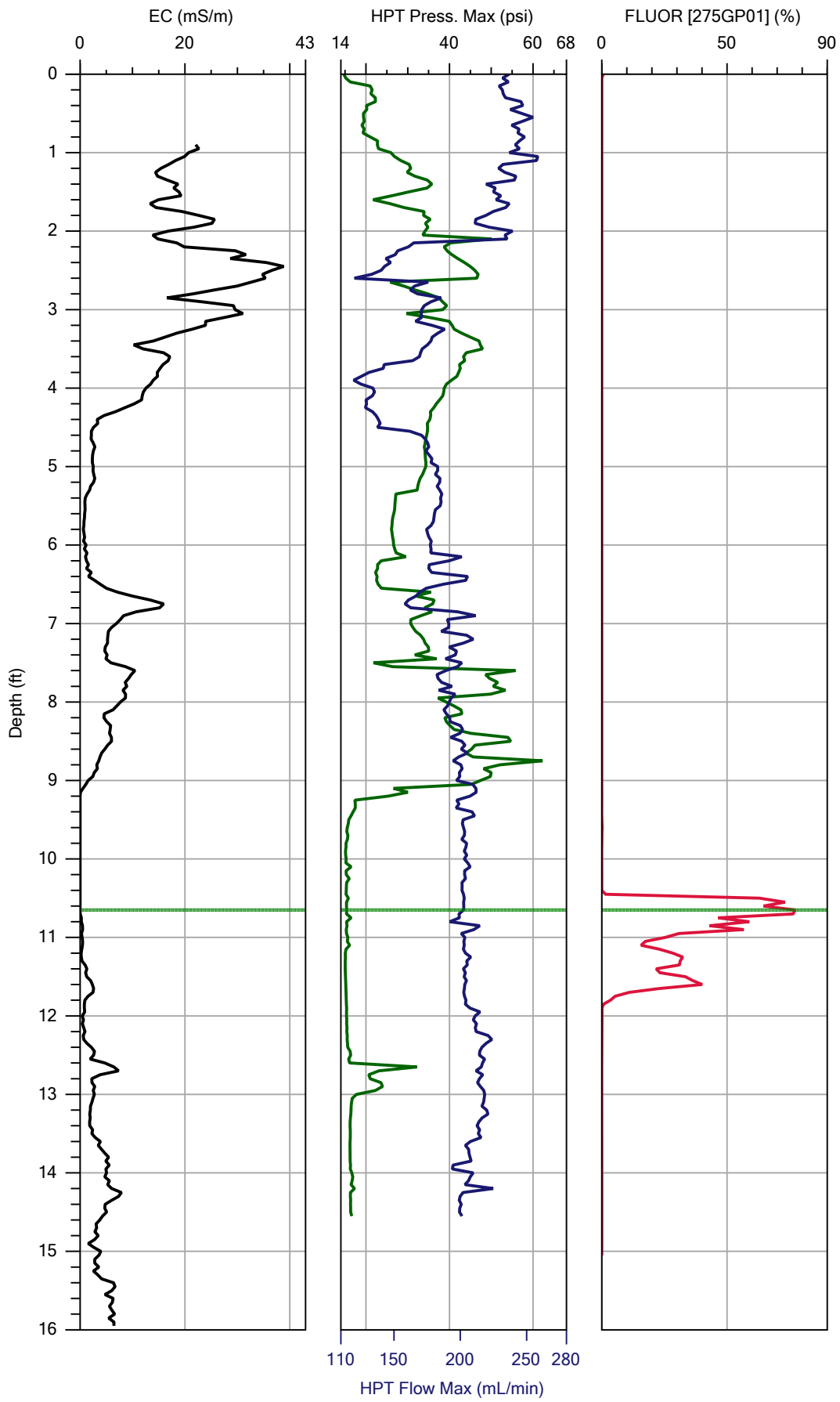
TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.512	0.0	100.060
TOP with FLOW>0	14.870	252.3	102.520
BOTTOM with FLOW=0	14.303	0.0	98.610
BOTTOM with FLOW>0	14.644	253.7	100.970

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.21 psi (1.4 kPa)

TRANSDUCER TEST PASSED

Post-Log EC Load Tests

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	58.4	6.2	PASS
High	360.0	376.7	4.6	PASS



DEPTH:
10.65 ft

TYPE:
UV

% AREA:
80.0

Captured

Analyzed

Overlaid



Company:	Discovery Drilling	Operator:	DJW - DAP	File:	OIHPT_8.OIHP
Project ID:	Tesoro 2 Go #101	Client:	Stantec	Date:	6/24/2019
				Location:	FBX

OIHPT_8.zip

SITE INFORMATION -- DIRECT IMAGE OIP+HPT PROBE

Geoprobe DI Acquisition Software for Windows
Version: 3.3 Build: 19087

Pre-Log EC Load Tests (Post-Log From OIHPT_7.zip)

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	58.4	6.2	PASS
High	360.0	376.7	4.6	PASS

COMPANY: Discovery Drilling
 OPERATOR: DJW - DAP
 PROJECT ID: Tesoro 2 Go #101
 CLIENT: Stantec
 UNITS: ENGLISH
 PROBE AND ARRAY: OH6570 OIHPT UV275 VIS with Top Dipole
 PROBE SERIAL NUMBER: E436HI
 LOCATION: FBX
 100 INCH STRING POT USED (CALIBRATION FACTOR 7749)
 ROD LENGTH: 4 feet

FILTER SETTINGS

Filter:
 FILTER NAME: 275GPFILTEREF001
 FILTER GUID: 539c6c5b-435b-4181-b36d-01535f2f7a4f
 T1: H[85-220] S[140-255] V[90-255]
 T2: H[85-220] S[0-139] V[150-255]

LOGGING MODE: 275

OIP PRE-LOG TEST

Visual Target	Visible	Value
Black Box	UV	0.0
Diesel UV		97.4
Motor Oil	UV	93.9

Frame grabber settings:

Brightness: 111
 Contrast: 140
 Hue: 0
 Saturation: 200

PRE-LOG HPT REFERENCE TEST VALUES (Post-Log From OIHPT_7.zip)

PRE TEST TIME: Mon Jun 24 2019 14:51:31

TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.512	0.0	100.060
TOP with FLOW>0	14.870	252.3	102.520
BOTTOM with FLOW=0	14.303	0.0	98.610
BOTTOM with FLOW>0	14.644	253.7	100.970

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.21 psi (1.4 kPa)

TRANSDUCER TEST PASSED

HPT IDEAL COEFFS: 2.2696e1,-2.2356
HPT SENSOR CAL NUMBERS: F115OH,0.0000,0.0000,0.0000,0.0000,2.5720,-2.6020e1
Probe advancement with HPT flow valve and/or pump switch turned off at 0.00 ft (0.000 m).

LOG START TIME: Mon Jun 24 2019 15:07:58

LOG END DEPTH: 15.05 ft (4.587 m)
LOG END TIME: Mon Jun 24 2019 15:19:47

LATITUDE: 0.000000000
LONGITUDE: 0.000000000
ELEVATION: 0.000 METERS 0.00 FEET
GPS Quality: None

OIP PRE/POST-LOG TEST RESULTS

Name	Light	Pre	Post	Dif
Visual Target	Visible	22.7	22.2	0.5
Black Box	UV	0.0	0.0	0.0
Diesel	UV	97.4	96.3	1.1
Motor Oil	UV	93.9	94.2	0.3

Frame grabber settings:
Brightness: 111
Contrast: 140
Hue: 0
Saturation: 200

POST-LOG HPT REFERENCE TEST VALUES

POST TEST TIME: Mon Jun 24 2019 15:25:59

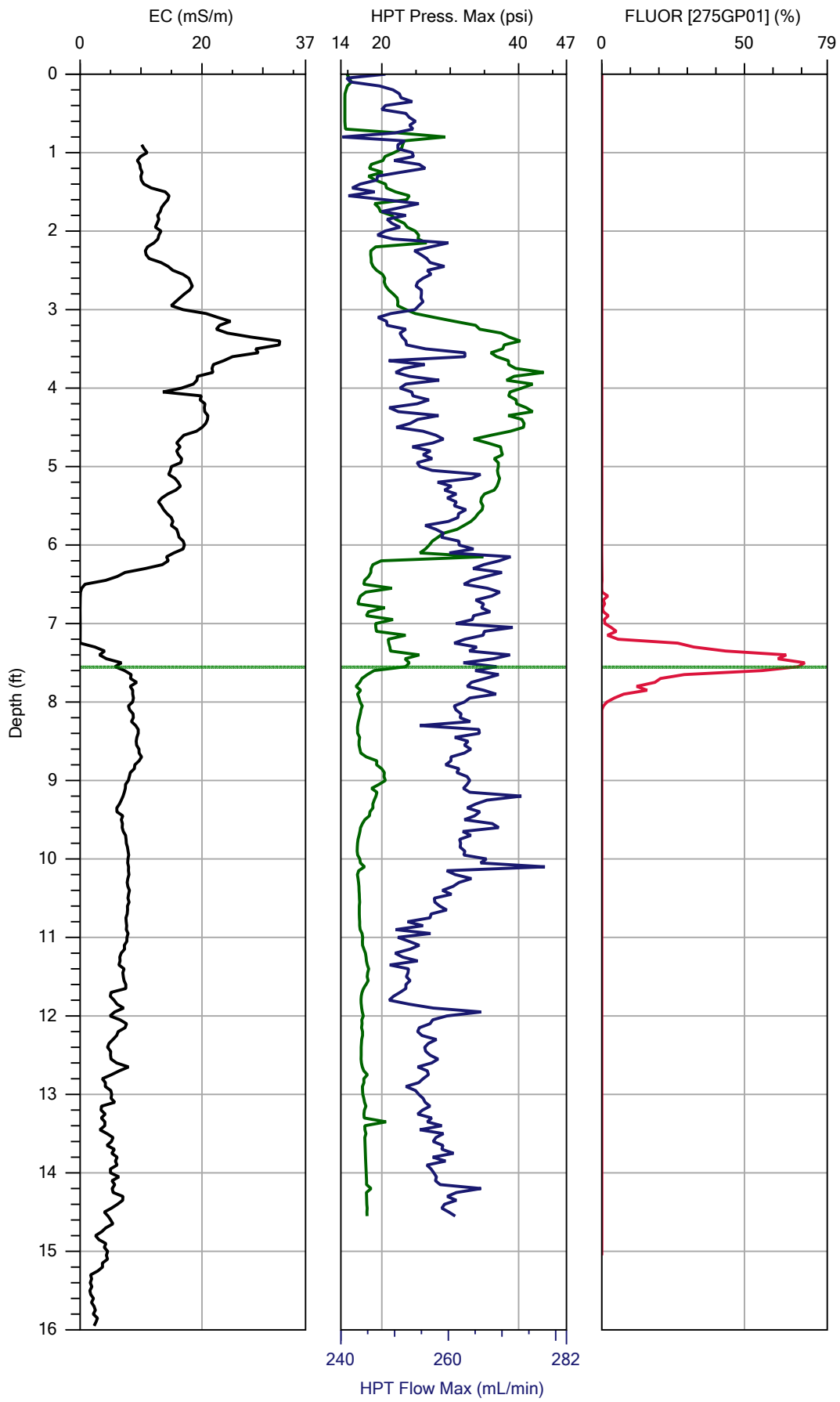
TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.528	0.0	100.170
TOP with FLOW>0	14.883	247.7	102.610
BOTTOM with FLOW=0	14.326	0.0	98.780
BOTTOM with FLOW>0	14.670	248.2	101.150

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.20 psi (1.4 kPa)

TRANSDUCER TEST PASSED

Post-Log EC Load Tests

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	58.2	5.8	PASS
High	360.0	376.3	4.5	PASS



DEPTH:
7.55 ft

TYPE:
UV

% AREA:
75.9

Captured

Analyzed

Overlaid



Company:	Discovery Drilling
Project ID:	Tesoro 2 Go #101

Operator:	DJW - DAP
Client:	Stantec

File:	OIHPT 9.OIHP
Date:	6/24/2019
Location:	FBX

OIHPT_9.zip

SITE INFORMATION -- DIRECT IMAGE OIP+HPT PROBE

Geoprobe DI Acquisition Software for Windows
Version: 3.3 Build: 19087

Pre-Log EC Load Tests (Post-Log From OIHPT_8.zip)

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	58.2	5.8	PASS
High	360.0	376.3	4.5	PASS

COMPANY: Discovery Drilling
 OPERATOR: DJW - DAP
 PROJECT ID: Tesoro 2 Go #101
 CLIENT: Stantec
 UNITS: ENGLISH
 PROBE AND ARRAY: OH6570 OIHPT UV275 VIS with Top Dipole
 PROBE SERIAL NUMBER: E436HI
 LOCATION: FBX
 100 INCH STRING POT USED (CALIBRATION FACTOR 7749)
 ROD LENGTH: 4 feet

FILTER SETTINGS

Filter:
 FILTER NAME: 275GPFILTEREF001
 FILTER GUID: 539c6c5b-435b-4181-b36d-01535f2f7a4f
 T1: H[85-220] S[140-255] V[90-255]
 T2: H[85-220] S[0-139] V[150-255]

LOGGING MODE: 275

OIP PRE-LOG TEST

Visual Target	Visible	Value
Black Box	UV	0.0
Diesel	UV	94.9
Motor Oil	UV	89.7

Frame grabber settings:

Brightness: 111
 Contrast: 140
 Hue: 0
 Saturation: 200

PRE-LOG HPT REFERENCE TEST VALUES (Post-Log From OIHPT_8.zip)

PRE TEST TIME: Mon Jun 24 2019 15:25:59

TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.528	0.0	100.170
TOP with FLOW>0	14.883	247.7	102.610
BOTTOM with FLOW=0	14.326	0.0	98.780
BOTTOM with FLOW>0	14.670	248.2	101.150

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.20 psi (1.4 kPa)

TRANSDUCER TEST PASSED

HPT IDEAL COEFFS: 2.2696e1,-2.2356
HPT SENSOR CAL NUMBERS: F115OH,0.0000,0.0000,0.0000,0.0000,2.5720,-2.6020e1
LOG START TIME: Mon Jun 24 2019 15:37:06

LOG END DEPTH: 15.05 ft (4.587 m)
LOG END TIME: Mon Jun 24 2019 15:48:59

LATITUDE: 0.000000000
LONGITUDE: 0.000000000
ELEVATION: 0.000 METERS 0.00 FEET
GPS Quality: None

OIP PRE/POST-LOG TEST RESULTS

Name	Light	Pre	Post	Dif
Visual Target	Visible	26.2	24.7	1.5
Black Box	UV	0.0	0.0	0.0
Diesel	UV	94.9	98.5	3.6
Motor Oil	UV	89.7	93.3	3.6

Frame grabber settings:
Brightness: 111
Contrast: 140
Hue: 0
Saturation: 200

POST-LOG HPT REFERENCE TEST VALUES

POST TEST TIME: Mon Jun 24 2019 15:54:56

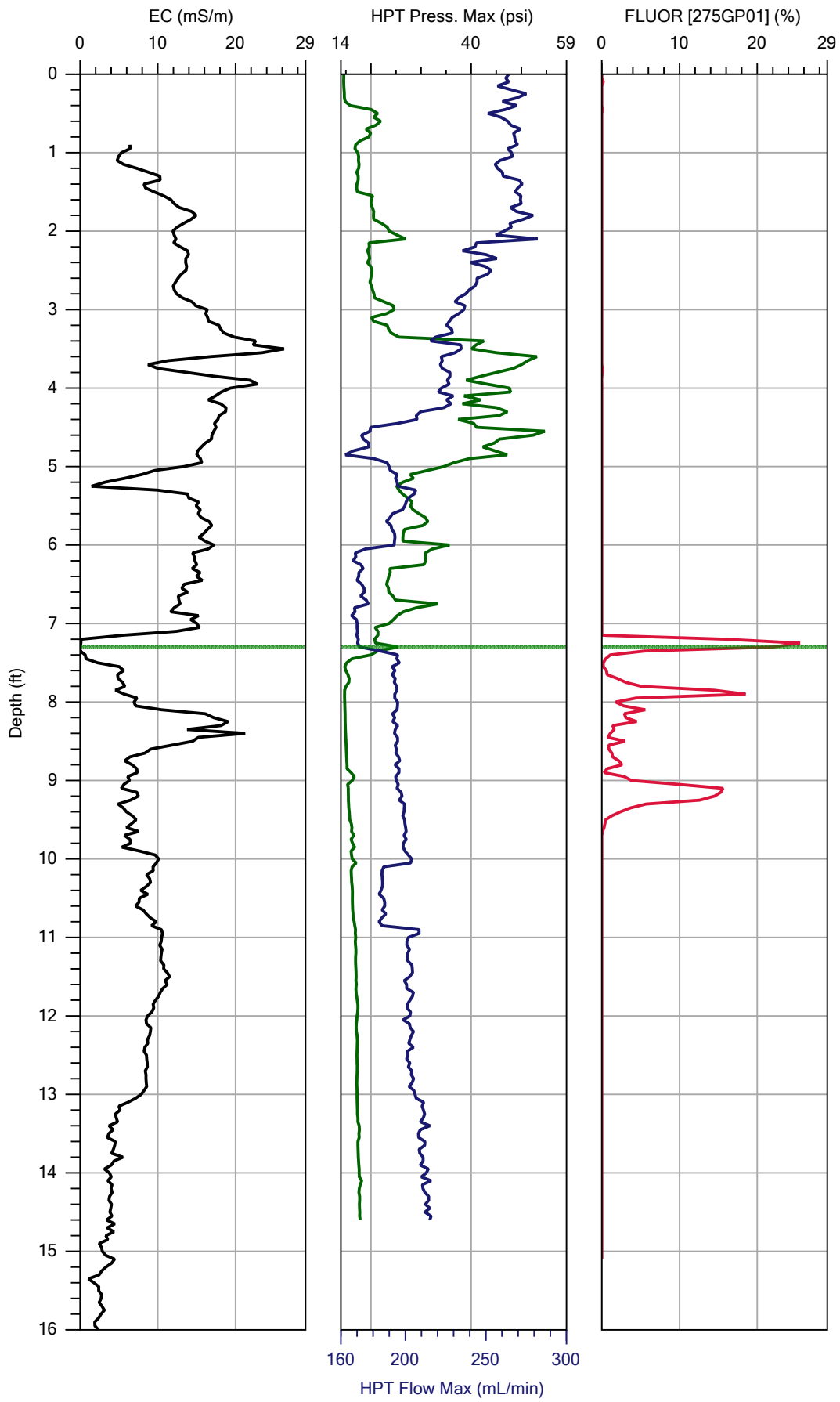
TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.538	0.0	100.230
TOP with FLOW>0	14.938	270.4	102.990
BOTTOM with FLOW=0	14.331	0.0	98.810
BOTTOM with FLOW>0	14.688	259.6	101.270

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.21 psi (1.4 kPa)

TRANSDUCER TEST PASSED

Post-Log EC Load Tests

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	57.5	4.6	PASS
High	360.0	376.3	4.5	PASS




DEPTH:
7.30 ft

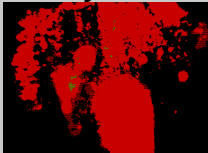
TYPE:
UV

% AREA:
42.9

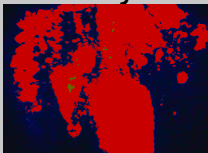
Captured



Analyzed



Overlaid




Company: Discovery Drilling
 Project ID: Tesoro 2 Go #101

Operator: DJW - DAP
 Client: Stantec

File: OIHPT_10.OIHP
 Date: 6/24/2019
 Location: FBX

OIHPT_10.zip

SITE INFORMATION -- DIRECT IMAGE OIP+HPT PROBE

Geoprobe DI Acquisition Software for Windows
Version: 3.3 Build: 19087

Pre-Log EC Load Tests (Post-Log From OIHPT_9.zip)

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	57.5	4.6	PASS
High	360.0	376.3	4.5	PASS

COMPANY: Discovery Drilling
 OPERATOR: DJW - DAP
 PROJECT ID: Tesoro 2 Go #101
 CLIENT: Stantec
 UNITS: ENGLISH
 PROBE AND ARRAY: OH6570 OIHPT UV275 VIS with Top Dipole
 PROBE SERIAL NUMBER: E436HI
 LOCATION: FBX
 100 INCH STRING POT USED (CALIBRATION FACTOR 7749)
 ROD LENGTH: 4 feet

FILTER SETTINGS

Filter:
 FILTER NAME: 275GPFILTEREF001
 FILTER GUID: 539c6c5b-435b-4181-b36d-01535f2f7a4f
 T1: H[85-220] S[140-255] V[90-255]
 T2: H[85-220] S[0-139] V[150-255]

LOGGING MODE: 275

OIP PRE-LOG TEST

Visual Target	Visible	Value
Black Box	UV	0.0
Diesel	UV	98.2
Motor Oil	UV	91.4

Frame grabber settings:

Brightness: 111
 Contrast: 140
 Hue: 0
 Saturation: 200

PRE-LOG HPT REFERENCE TEST VALUES (Post-Log From OIHPT_9.zip)

PRE TEST TIME: Mon Jun 24 2019 15:54:56

TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.538	0.0	100.230
TOP with FLOW>0	14.938	270.4	102.990
BOTTOM with FLOW=0	14.331	0.0	98.810
BOTTOM with FLOW>0	14.688	259.6	101.270

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.21 psi (1.4 kPa)

TRANSDUCER TEST PASSED

HPT IDEAL COEFFS: 2.2696e1,-2.2356
HPT SENSOR CAL NUMBERS: F115OH,0.0000,0.0000,0.0000,0.0000,2.5720,-2.6020e1
LOG START TIME: Mon Jun 24 2019 16:00:29

LOG END DEPTH: 15.10 ft (4.602 m)
LOG END TIME: Mon Jun 24 2019 16:10:45

LATITUDE: 0.000000000
LONGITUDE: 0.000000000
ELEVATION: 0.000 METERS 0.00 FEET
GPS Quality: None

OIP PRE/POST-LOG TEST RESULTS

Name	Light	Pre	Post	Dif
Visual Target	Visible	27.7	27.3	0.4
Black Box	UV	0.0	0.0	0.0
Diesel	UV	98.2	97.9	0.3
Motor Oil	UV	91.4	93.8	2.4

Frame grabber settings:
Brightness: 111
Contrast: 140
Hue: 0
Saturation: 200

POST-LOG HPT REFERENCE TEST VALUES

POST TEST TIME: Mon Jun 24 2019 16:15:41

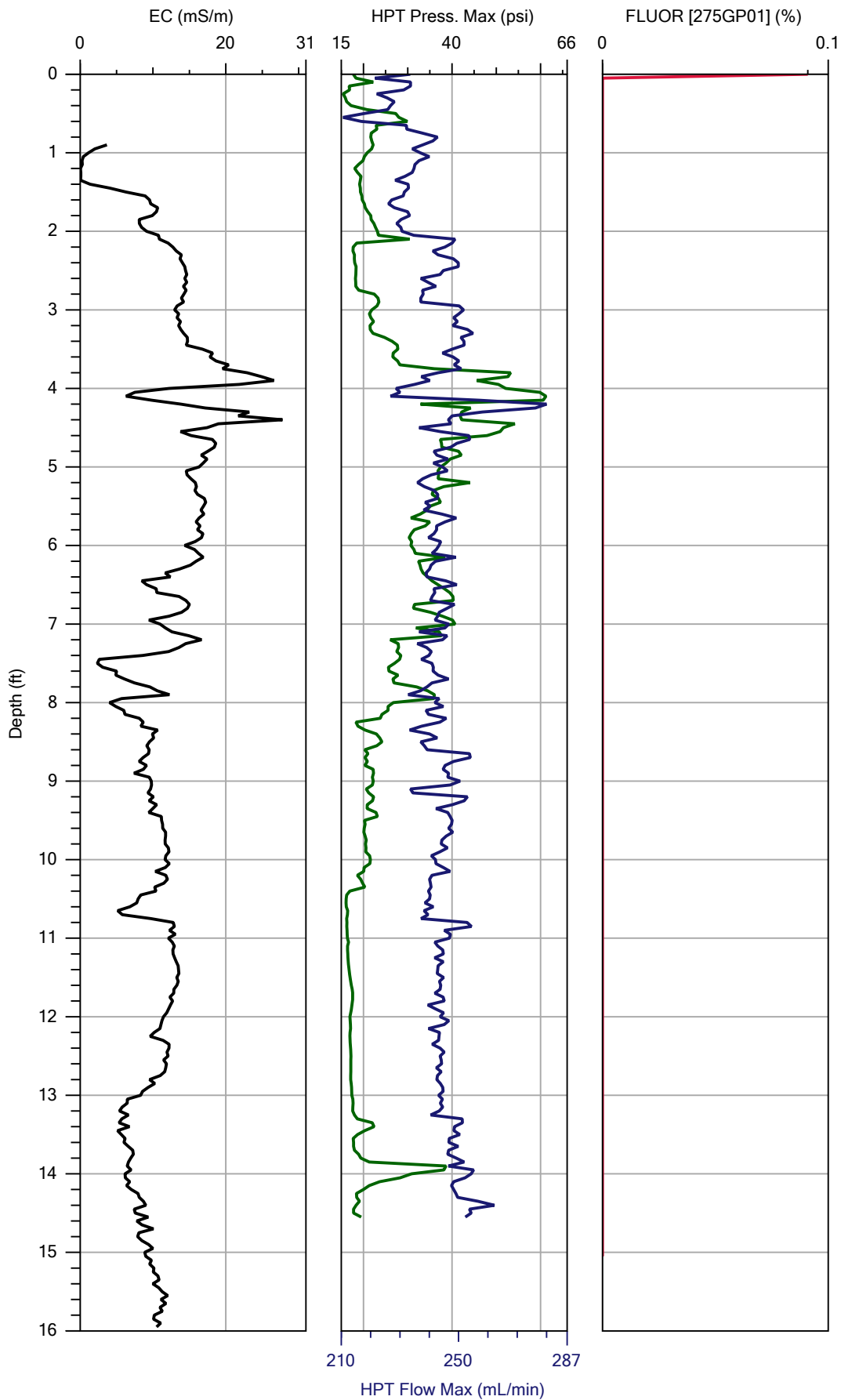
TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.509	0.0	100.030
TOP with FLOW>0	14.823	236.3	102.200
BOTTOM with FLOW=0	14.294	0.0	98.550
BOTTOM with FLOW>0	14.610	236.9	100.730

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa)

TRANSDUCER TEST PASSED

Post-Log EC Load Tests

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	57.8	5.0	PASS
High	360.0	377.4	4.8	PASS



DEPTH:
0.00

TYPE:
No Image

% AREA:

Captured

Analyzed

Overlaid



Company: Discovery Drilling	Operator: DJW - DAP	File: OIHPT_11.OIHP
Project ID: Tesoro 2 Go #101	Client: Stantec	Date: 6/24/2019
		Location: FBX

OIHPT_11.zip

SITE INFORMATION -- DIRECT IMAGE OIP+HPT PROBE

Geoprobe DI Acquisition Software for Windows
Version: 3.3 Build: 19087

Pre-Log EC Load Tests (Post-Log From OIHPT_10.zip)

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	57.8	5.0	PASS
High	360.0	377.4	4.8	PASS

COMPANY: Discovery Drilling
 OPERATOR: DJW - DAP
 PROJECT ID: Tesoro 2 Go #101
 CLIENT: Stantec
 UNITS: ENGLISH
 PROBE AND ARRAY: OH6570 OIHPT UV275 VIS with Top Dipole
 PROBE SERIAL NUMBER: E436HI
 LOCATION: FBX
 100 INCH STRING POT USED (CALIBRATION FACTOR 7749)
 ROD LENGTH: 4 feet

FILTER SETTINGS

Filter:
 FILTER NAME: 275GPFILTEREF001
 FILTER GUID: 539c6c5b-435b-4181-b36d-01535f2f7a4f
 T1: H[85-220] S[140-255] V[90-255]
 T2: H[85-220] S[0-139] V[150-255]

LOGGING MODE: 275

OIP PRE-LOG TEST

Visual Target	Visible	Value
Black Box	UV	0.0
Diesel	UV	96.9
Motor Oil	UV	94.9

Frame grabber settings:

Brightness: 111
 Contrast: 140
 Hue: 0
 Saturation: 200

PRE-LOG HPT REFERENCE TEST VALUES (Post-Log From OIHPT_10.zip)

PRE TEST TIME: Mon Jun 24 2019 16:15:41

TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.509	0.0	100.030
TOP with FLOW>0	14.823	236.3	102.200
BOTTOM with FLOW=0	14.294	0.0	98.550
BOTTOM with FLOW>0	14.610	236.9	100.730

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa)

TRANSDUCER TEST PASSED

HPT IDEAL COEFFS: 2.2696e1,-2.2356
HPT SENSOR CAL NUMBERS: F115OH,0.0000,0.0000,0.0000,0.0000,2.5720,-2.6020e1
LOG START TIME: Mon Jun 24 2019 16:21:41

LOG END DEPTH: 15.05 ft (4.587 m)
LOG END TIME: Mon Jun 24 2019 16:31:09

LATITUDE: 0.000000000
LONGITUDE: 0.000000000
ELEVATION: 0.000 METERS 0.00 FEET
GPS Quality: None

OIP PRE/POST-LOG TEST RESULTS

Name	Light	Pre	Post	Dif
Visual Target	Visible	19.6	29.3	9.7
Black Box	UV	0.0	0.0	0.0
Diesel	UV	96.9	91.5	5.4
Motor Oil	UV	94.9	93.2	1.7

Frame grabber settings:
Brightness: 111
Contrast: 140
Hue: 0
Saturation: 200

POST-LOG HPT REFERENCE TEST VALUES

POST TEST TIME: Mon Jun 24 2019 16:36:29

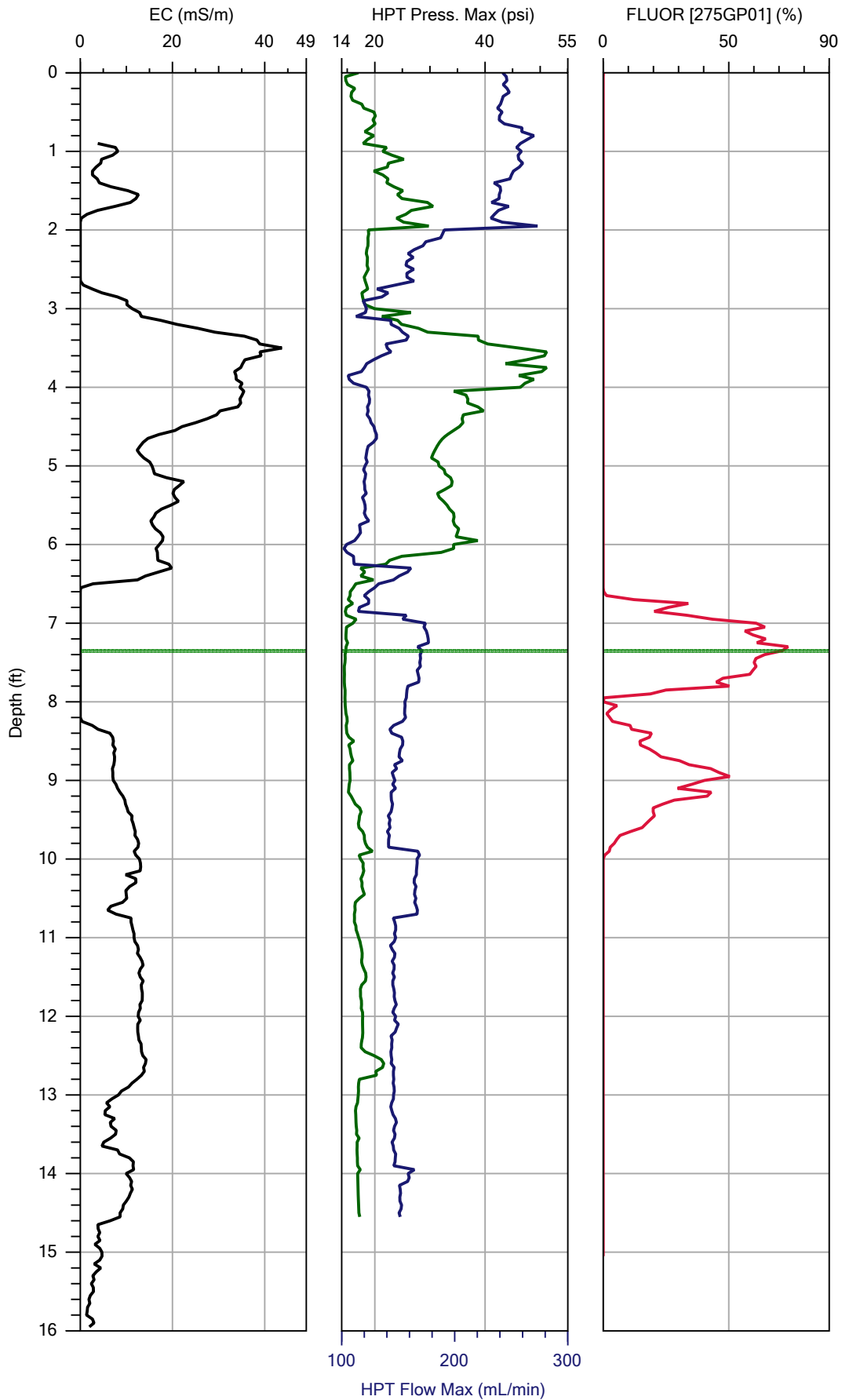
TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.492	0.0	99.920
TOP with FLOW>0	14.839	243.9	102.310
BOTTOM with FLOW=0	14.289	0.0	98.520
BOTTOM with FLOW>0	14.633	255.9	100.890

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.20 psi (1.4 kPa)

TRANSDUCER TEST PASSED

Post-Log EC Load Tests

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	57.8	5.0	PASS
High	360.0	377.0	4.7	PASS




DEPTH:
7.35 ft


TYPE:
UV

% AREA:
72.8

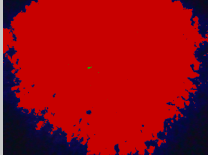
Captured



Analyzed



Overlaid




Company:	Discovery Drilling	Operator:	DJW - DAP	File:	OIHPT_12.OIHP
Project ID:	Tesoro 2 Go #101	Client:	Stantec	Date:	6/25/2019
				Location:	FBX

OIHPT_12.zip

SITE INFORMATION -- DIRECT IMAGE OIP+HPT PROBE

Geoprobe DI Acquisition Software for Windows
Version: 3.3 Build: 19087

Pre-Log EC Load Tests

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	56.7	3.1	PASS
High	360.0	373.6	3.8	PASS

COMPANY: Discovery Drilling
 OPERATOR: DJW - DAP
 PROJECT ID: Tesoro 2 Go #101
 CLIENT: Stantec
 UNITS: ENGLISH
 PROBE AND ARRAY: OH6570 OIHPT UV275 VIS with Top Dipole
 PROBE SERIAL NUMBER: E436HI
 LOCATION: FBX
 100 INCH STRING POT USED (CALIBRATION FACTOR 7749)
 ROD LENGTH: 4 feet

FILTER SETTINGS

Filter:
 FILTER NAME: 275GPFILTEREF001
 FILTER GUID: 539c6c5b-435b-4181-b36d-01535f2f7a4f
 T1: H[85-220] S[140-255] V[90-255]
 T2: H[85-220] S[0-139] V[150-255]

LOGGING MODE: 275

OIP PRE-LOG TEST

Visual Target	Visible	Value
Black Box	UV	0.0
Diesel UV		97.7
Motor Oil	UV	92.3

Frame grabber settings:

Brightness: 111
 Contrast: 140
 Hue: 0
 Saturation: 200

PRE-LOG HPT REFERENCE TEST VALUES

PRE TEST TIME: Tue Jun 25 2019 08:03:37

TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.581	0.0	100.530
TOP with FLOW>0	14.869	219.5	102.510
BOTTOM with FLOW=0	14.380	0.0	99.140
BOTTOM with FLOW>0	14.644	217.4	100.970

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.20 psi (1.4 kPa)

TRANSDUCER TEST PASSED

HPT IDEAL COEFFS: 2.2696e1,-2.2356
HPT SENSOR CAL NUMBERS: F115OH,0.0000,0.0000,0.0000,0.0000,2.5720,-2.6020e1
LOG START TIME: Tue Jun 25 2019 08:13:37

LOG END DEPTH: 15.05 ft (4.587 m)
LOG END TIME: Tue Jun 25 2019 08:28:32

LATITUDE: 0.000000000
LONGITUDE: 0.000000000
ELEVATION: 0.000 METERS 0.00 FEET
GPS Quality: None

OIP PRE/POST-LOG TEST RESULTS

Name	Light	Pre	Post	Dif
Visual Target	Visible	27.7	26.8	0.9
Black Box	UV	0.0	0.0	0.0
Diesel	UV	97.7	95.2	2.6
Motor Oil	UV	92.3	95.9	3.6

Frame grabber settings:
Brightness: 111
Contrast: 140
Hue: 0
Saturation: 200

POST-LOG HPT REFERENCE TEST VALUES

POST TEST TIME: Tue Jun 25 2019 08:33:49

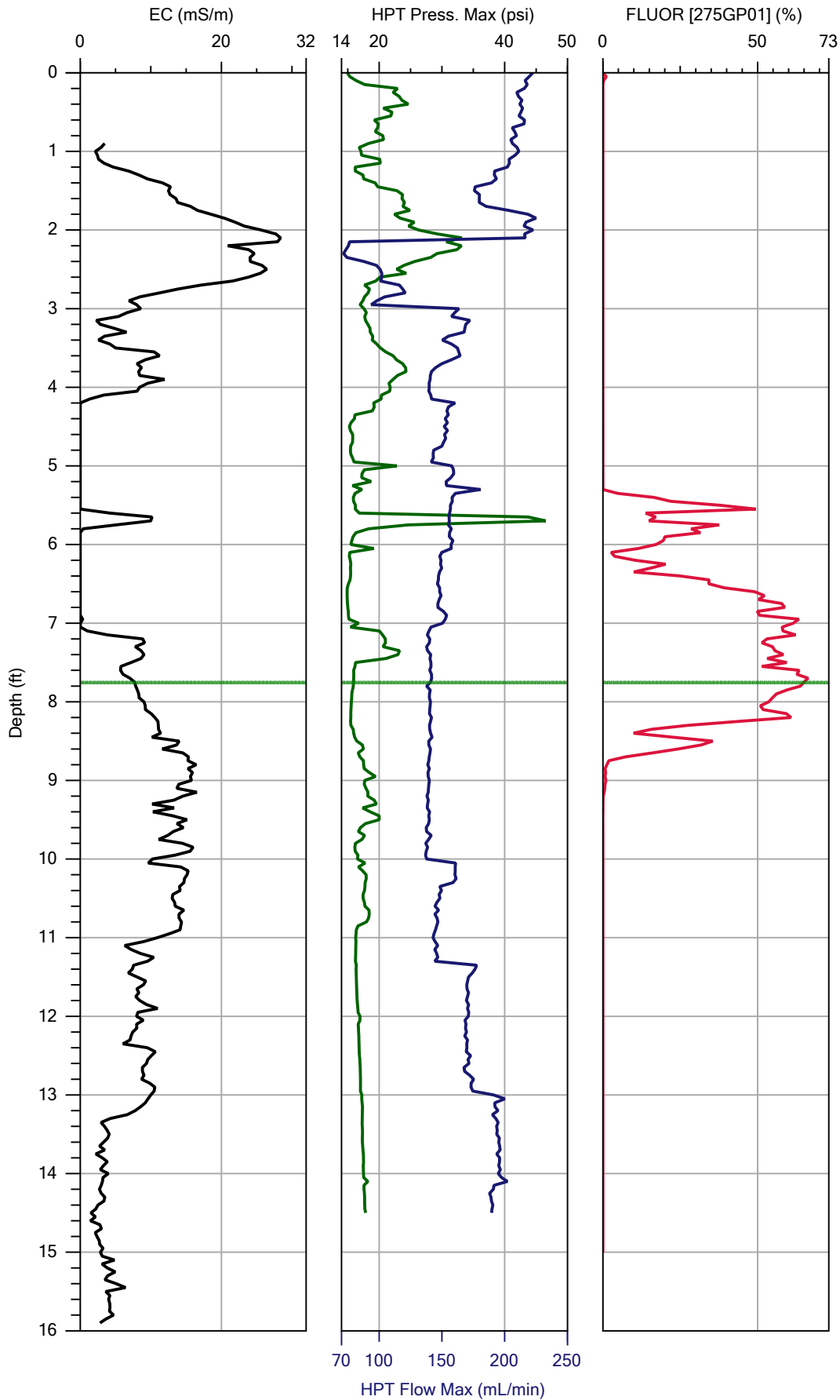
TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.578	0.0	100.510
TOP with FLOW>0	14.869	207.8	102.520
BOTTOM with FLOW=0	14.371	0.0	99.090
BOTTOM with FLOW>0	14.657	210.6	101.060

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.21 psi (1.4 kPa)

TRANSDUCER TEST PASSED

Post-Log EC Load Tests

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	57.4	4.4	PASS
High	360.0	374.8	4.1	PASS




DEPTH:
7.75 ft

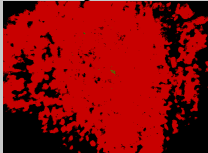
TYPE:
UV

% AREA:
67.3

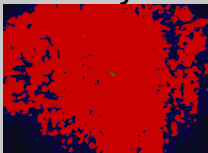
Captured



Analyzed



Overlaid




Company: Discovery Drilling
Project ID: Tesoro 2 Go #101

Operator: DJW - DAP
Client: Stantec

File:	OIHPT_13.OIHP
Date:	6/25/2019
Location:	FBX

OIHPT_13.zip

SITE INFORMATION -- DIRECT IMAGE OIP+HPT PROBE

Geoprobe DI Acquisition Software for Windows
Version: 3.3 Build: 19087

Pre-Log EC Load Tests (Post-Log From OIHPT_12.zip)

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	57.4	4.4	PASS
High	360.0	374.8	4.1	PASS

COMPANY: Discovery Drilling
 OPERATOR: DJW - DAP
 PROJECT ID: Tesoro 2 Go #101
 CLIENT: Stantec
 UNITS: ENGLISH
 PROBE AND ARRAY: OH6570 OIHPT UV275 VIS with Top Dipole
 PROBE SERIAL NUMBER: E436HI
 LOCATION: FBX
 100 INCH STRING POT USED (CALIBRATION FACTOR 7749)
 ROD LENGTH: 4 feet

FILTER SETTINGS

Filter:
 FILTER NAME: 275GPFILTEREF001
 FILTER GUID: 539c6c5b-435b-4181-b36d-01535f2f7a4f
 T1: H[85-220] S[140-255] V[90-255]
 T2: H[85-220] S[0-139] V[150-255]

LOGGING MODE: 275

OIP PRE-LOG TEST

Visual Target	Visible	Value
Black Box	UV	0.0
Diesel	UV	98.9
Motor Oil	UV	95.2

Frame grabber settings:

Brightness: 111
 Contrast: 140
 Hue: 0
 Saturation: 200

PRE-LOG HPT REFERENCE TEST VALUES (Post-Log From OIHPT_12.zip)

PRE TEST TIME: Tue Jun 25 2019 08:33:49

TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.578	0.0	100.510
TOP with FLOW>0	14.869	207.8	102.520
BOTTOM with FLOW=0	14.371	0.0	99.090
BOTTOM with FLOW>0	14.657	210.6	101.060

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.21 psi (1.4 kPa)

TRANSDUCER TEST PASSED

HPT IDEAL COEFFS: 2.2696e1,-2.2356
HPT SENSOR CAL NUMBERS: F115OH,0.0000,0.0000,0.0000,0.0000,2.5720,-2.6020e1
LOG START TIME: Tue Jun 25 2019 08:40:58

LOG END DEPTH: 15.00 ft (4.572 m)
LOG END TIME: Tue Jun 25 2019 08:55:08

LATITUDE: 0.000000000
LONGITUDE: 0.000000000
ELEVATION: 0.000 METERS 0.00 FEET
GPS Quality: None

OIP PRE/POST-LOG TEST RESULTS

Name	Light	Pre	Post	Dif
Visual Target	Visible	25.9	20.4	5.5
Black Box	UV	0.0	0.0	0.0
Diesel	UV	98.9	97.1	1.8
Motor Oil	UV	95.2	95.3	0.1

Frame grabber settings:
Brightness: 111
Contrast: 140
Hue: 0
Saturation: 200

POST-LOG HPT REFERENCE TEST VALUES

POST TEST TIME: Tue Jun 25 2019 09:01:24

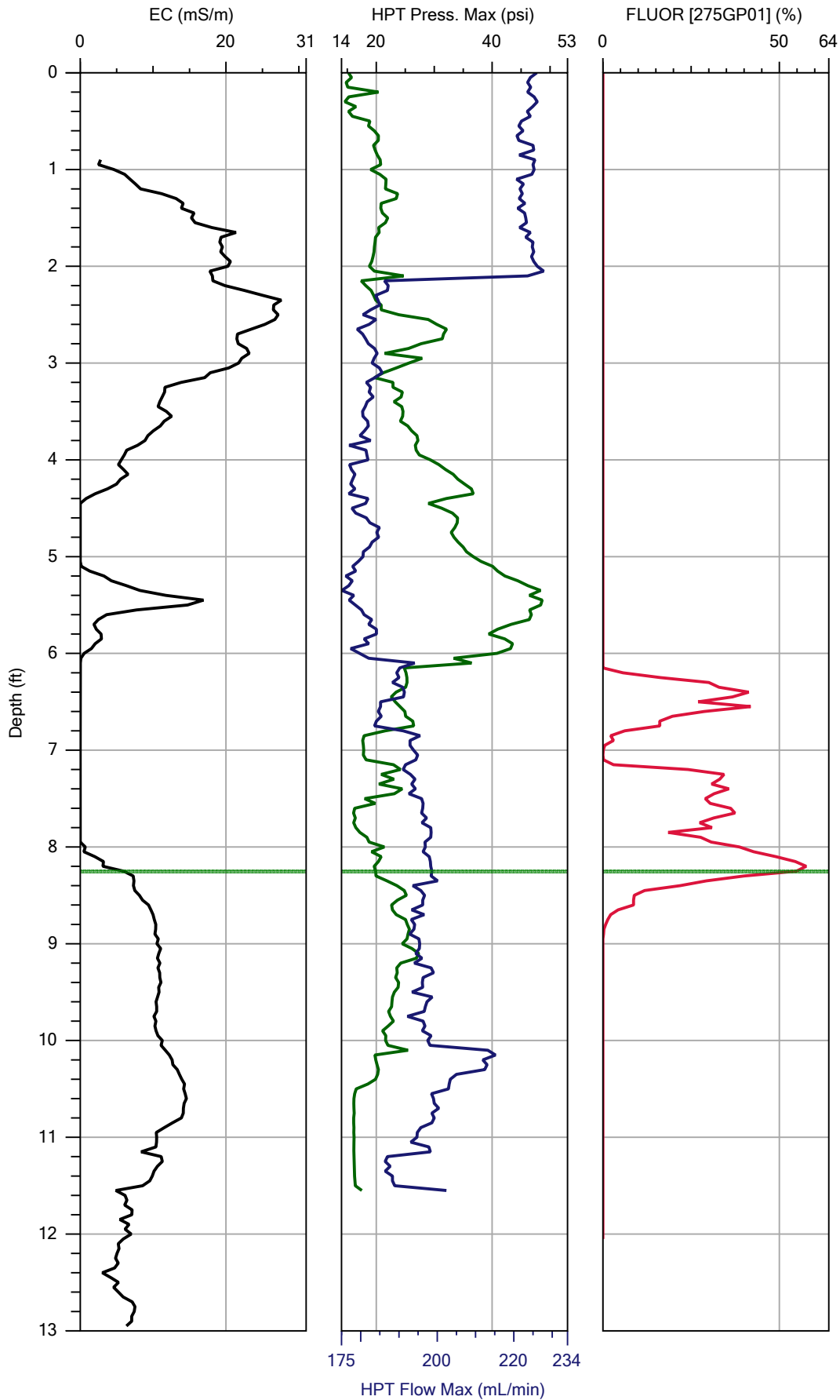
TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.527	0.0	100.160
TOP with FLOW>0	14.881	239.6	102.600
BOTTOM with FLOW=0	14.323	0.0	98.750
BOTTOM with FLOW>0	14.672	240.0	101.160

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.20 psi (1.4 kPa)

TRANSDUCER TEST PASSED

Post-Log EC Load Tests

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	57.3	4.2	PASS
High	360.0	375.6	4.3	PASS




DEPTH:
8.25 ft


TYPE:
UV

% AREA:
58.7

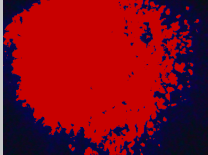
Captured



Analyzed



Overlaid




Company: Discovery Drilling
Project ID: Tesoro 2 Go #101

Operator: DJW - DAP
Client: Stantec

File:	OIHPT_14.OIHP
Date:	6/25/2019
Location:	FBX

OIHPT_14.zip

SITE INFORMATION -- DIRECT IMAGE OIP+HPT PROBE

Geoprobe DI Acquisition Software for Windows
Version: 3.3 Build: 19087

Pre-Log EC Load Tests (Post-Log From OIHPT_13.zip)

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	57.3	4.2	PASS
High	360.0	375.6	4.3	PASS

COMPANY: Discovery Drilling
 OPERATOR: DJW - DAP
 PROJECT ID: Tesoro 2 Go #101
 CLIENT: Stantec
 UNITS: ENGLISH
 PROBE AND ARRAY: OH6570 OIHPT UV275 VIS with Top Dipole
 PROBE SERIAL NUMBER: E436HI
 LOCATION: FBX
 100 INCH STRING POT USED (CALIBRATION FACTOR 7749)
 ROD LENGTH: 4 feet

FILTER SETTINGS

Filter:
 FILTER NAME: 275GPFILTEREF001
 FILTER GUID: 539c6c5b-435b-4181-b36d-01535f2f7a4f
 T1: H[85-220] S[140-255] V[90-255]
 T2: H[85-220] S[0-139] V[150-255]

LOGGING MODE: 275

OIP PRE-LOG TEST

Visual Target	Visible	18.3
Black Box	UV	0.0
Diesel	UV	98.6
Motor Oil	UV	90.1

Frame grabber settings:

Brightness: 111
 Contrast: 140
 Hue: 0
 Saturation: 200

PRE-LOG HPT REFERENCE TEST VALUES (Post-Log From OIHPT_13.zip)

PRE TEST TIME: Tue Jun 25 2019 09:01:24

TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.527	0.0	100.160
TOP with FLOW>0	14.881	239.6	102.600
BOTTOM with FLOW=0	14.323	0.0	98.750
BOTTOM with FLOW>0	14.672	240.0	101.160

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.20 psi (1.4 kPa)

TRANSDUCER TEST PASSED

HPT IDEAL COEFFS: 2.2696e1,-2.2356
HPT SENSOR CAL NUMBERS: F115OH,0.0000,0.0000,0.0000,0.0000,2.5720,-2.6020e1
LOG START TIME: Tue Jun 25 2019 09:12:39

LOG END DEPTH: 12.05 ft (3.673 m)
LOG END TIME: Tue Jun 25 2019 09:22:16

LATITUDE: 0.000000000
LONGITUDE: 0.000000000
ELEVATION: 0.000 METERS 0.00 FEET
GPS Quality: None

OIP PRE/POST-LOG TEST RESULTS

Name	Light	Pre	Post	Dif
Visual Target	Visible	18.3	24.1	5.9
Black Box	UV	0.0	0.0	0.0
Diesel	UV	98.6	98.7	0.1
Motor Oil	UV	90.1	94.8	4.8

Frame grabber settings:
Brightness: 111
Contrast: 140
Hue: 0
Saturation: 200

POST-LOG HPT REFERENCE TEST VALUES

POST TEST TIME: Tue Jun 25 2019 09:28:25

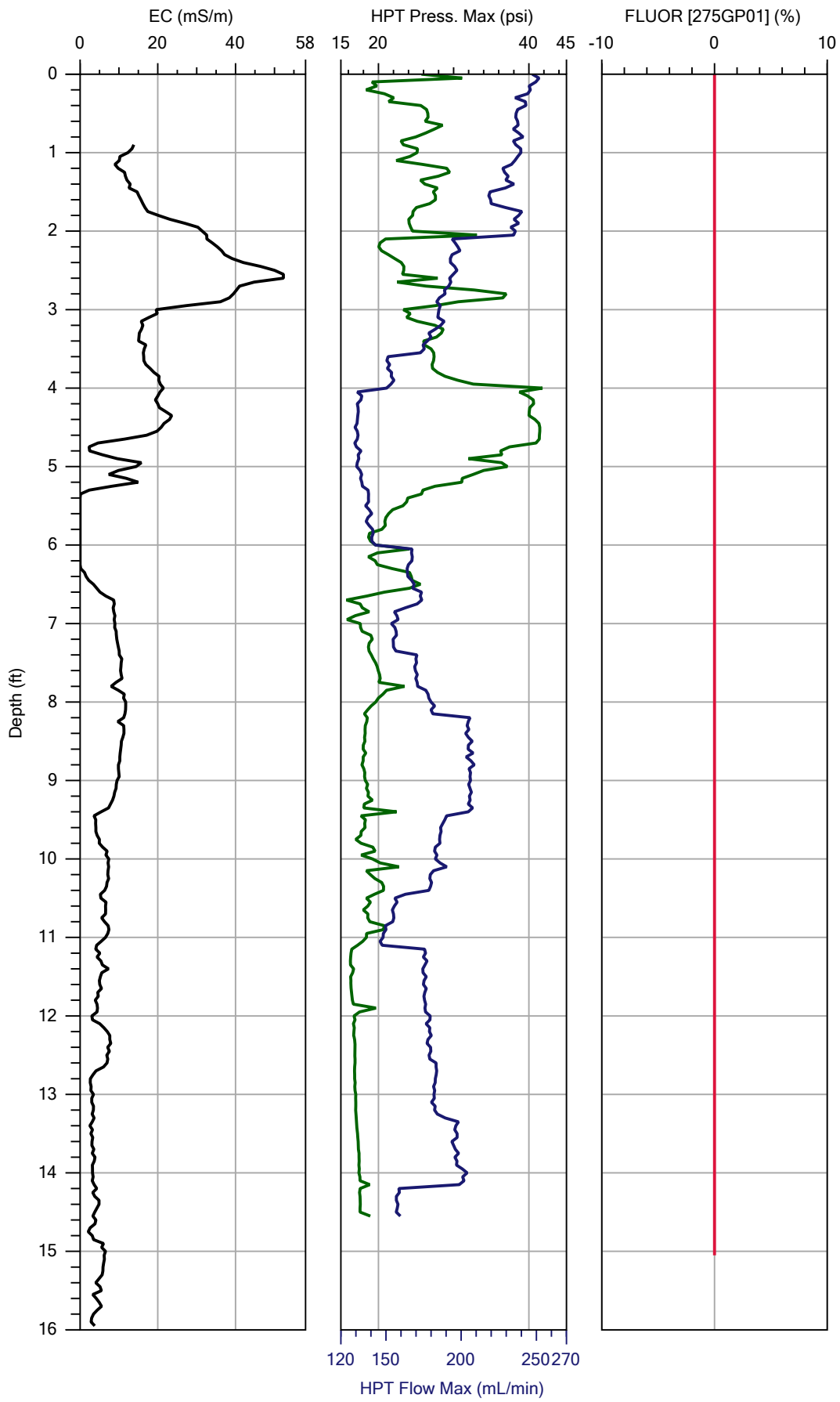
TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.550	0.0	100.320
TOP with FLOW>0	14.896	250.4	102.710
BOTTOM with FLOW=0	14.344	0.0	98.900
BOTTOM with FLOW>0	14.705	257.8	101.390

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.21 psi (1.4 kPa)

TRANSDUCER TEST PASSED

Post-Log EC Load Tests

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	57.6	4.8	PASS
High	360.0	375.7	4.4	PASS



DEPTH:
0.00

TYPE:
No Image

% AREA:

Captured

Analyzed

Overlaid



Company: Discovery Drilling
Project ID: Tesoro 2 Go #101

Operator: DJW - DAP
Client: Stantec

File:	OIHPT_15.OIHP
Date:	6/25/2019
Location:	FBX

OIHPT_15.zip

SITE INFORMATION -- DIRECT IMAGE OIP+HPT PROBE

Geoprobe DI Acquisition Software for Windows
Version: 3.3 Build: 19087

Pre-Log EC Load Tests (Post-Log From OIHPT_14.zip)

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	57.6	4.8	PASS
High	360.0	375.7	4.4	PASS

COMPANY: Discovery Drilling
 OPERATOR: DJW - DAP
 PROJECT ID: Tesoro 2 Go #101
 CLIENT: Stantec
 UNITS: ENGLISH
 PROBE AND ARRAY: OH6570 OIHPT UV275 VIS with Top Dipole
 PROBE SERIAL NUMBER: E436HI
 LOCATION: FBX
 100 INCH STRING POT USED (CALIBRATION FACTOR 7749)
 ROD LENGTH: 4 feet

FILTER SETTINGS

Filter:
 FILTER NAME: 275GPFILTEREF001
 FILTER GUID: 539c6c5b-435b-4181-b36d-01535f2f7a4f
 T1: H[85-220] S[140-255] V[90-255]
 T2: H[85-220] S[0-139] V[150-255]

LOGGING MODE: 275

OIP PRE-LOG TEST

Visual Target	Visible	Value
Black Box	UV	0.0
Diesel	UV	97.3
Motor Oil	UV	96.3

Frame grabber settings:

Brightness: 111
 Contrast: 140
 Hue: 0
 Saturation: 200

PRE-LOG HPT REFERENCE TEST VALUES (Post-Log From OIHPT_14.zip)

PRE TEST TIME: Tue Jun 25 2019 09:28:25

TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.550	0.0	100.320
TOP with FLOW>0	14.896	250.4	102.710
BOTTOM with FLOW=0	14.344	0.0	98.900
BOTTOM with FLOW>0	14.705	257.8	101.390

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.21 psi (1.4 kPa)

TRANSDUCER TEST PASSED

HPT IDEAL COEFFS: 2.2696e1,-2.2356
HPT SENSOR CAL NUMBERS: F115OH,0.0000,0.0000,0.0000,0.0000,2.5720,-2.6020e1
LOG START TIME: Tue Jun 25 2019 09:37:09

LOG END DEPTH: 15.05 ft (4.587 m)
LOG END TIME: Tue Jun 25 2019 09:48:28

LATITUDE: 0.000000000
LONGITUDE: 0.000000000
ELEVATION: 0.000 METERS 0.00 FEET
GPS Quality: None

OIP PRE/POST-LOG TEST RESULTS

Name	Light	Pre	Post	Dif
Visual Target	Visible	23.2	24.5	1.3
Black Box	UV	0.0	0.1	0.0
Diesel	UV	97.3	99.8	2.4
Motor Oil	UV	96.3	92.3	4.0

Frame grabber settings:
Brightness: 111
Contrast: 140
Hue: 0
Saturation: 200

POST-LOG HPT REFERENCE TEST VALUES

POST TEST TIME: Tue Jun 25 2019 09:53:39

TEST	HPT PRESSURE (psi)	FLOW (mL/min)	HPT PRESSURE (kPa)
TOP with FLOW=0	14.518	0.0	100.100
TOP with FLOW>0	14.640	116.1	100.940
BOTTOM with FLOW=0	14.320	0.0	98.730
BOTTOM with FLOW>0	14.453	137.1	99.650

EXPECTED FLOW=0 HPT DIFF.: 0.22 psi (1.5 kPa) +/- 10%
ACTUAL FLOW=0 HPT DIFF.: 0.20 psi (1.4 kPa)

TRANSDUCER TEST PASSED

Post-Log EC Load Tests

Test	Target (mS/m)	Actual (mS/m)	% Diff	P/F
Low	55.0	57.7	4.9	PASS
High	360.0	375.4	4.3	PASS

ATTACHMENT 3

Site Photographs

Photos:

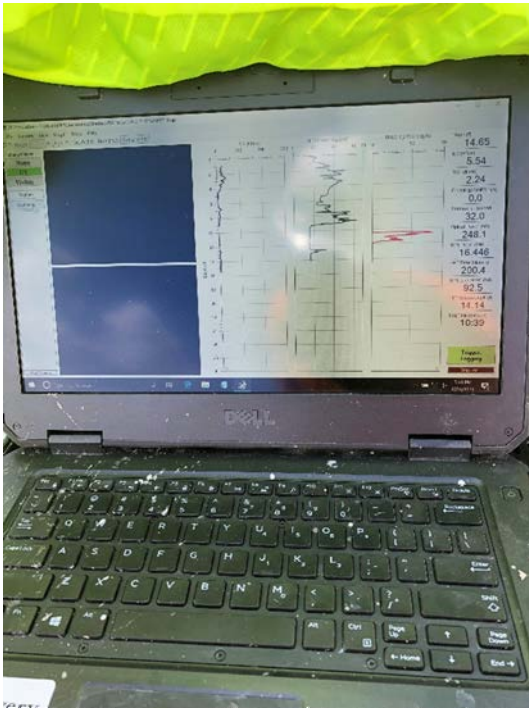


Photo 1: Display on field lap top computer showing real time data during OIP drilling.



Photo 2: Direct push Geoprobe® 8040 track mounted drilling rig equipped with OIP technology.



Photo 3: Soil collected via sleeves during drilling OIP borings.



Photo 4: Looking west at completed MW 19-1 (in foreground) and MW 19-2 in protective aboveground steel casings.

ATTACHMENT 4

ADEC Email Approval to Treat On-Site Purge Water

Dated August 27, 2019

ADEC Approval to Transport Contaminated Soil

Dated September 6, 2019

NRC Manifest for Non Hazardous Material

Dated September 6, 2019

From: [Campbell, Peter C. \(DEC\)](#)
To: [Gilfilian, Bob](#)
Cc: [Zidek, Michael](#); [Keldsen, Jakob](#)
Subject: RE: Treatment & disposal well purge water Tesoro store 101
Date: Tuesday, August 27, 2019 6:17:59 PM

Thank you Bob, that seems reasonable.

Pete Campbell
ADEC Soldotna
907-262-3412

From: Gilfilian, Bob [mailto:Bob.Gilfilian@stantec.com]
Sent: Tuesday, August 27, 2019 12:28 PM
To: Campbell, Peter C (DEC) <peter.campbell@alaska.gov>
Cc: Zidek, Michael <michael.zidek@stantec.com>; Gilfilian, Bob <Bob.Gilfilian@stantec.com>; Keldsen, Jakob <Jakob.Keldsen@stantec.com>
Subject: Treatment & disposal well purge water Tesoro store 101

Hello Pete,

We are working in Fairbanks this week and want to inform you of our plans to treat and dispose of well development purge water. In accordance with a work plan approved by Paul, 2 monitoring wells were drilled over a month ago at the Tesoro store number 101 in Fairbanks. We briefly discussed the drilling of the wells and an OIP investigation when we met with you and Paul Horwath prior to Paul's departure.

We have several gallons of purge water that we would like to discharge into our on-site treatment tank. This treatment tank is used to collect discharge from our onsite groundwater capture well and treats the effluent with aeration and discharge to an existing infiltration system. Normally we run our purge water through a GAC system and land spread the water on site but in this case I think it would be more effective by discharging our purge water into the aeration treatment tank that works exceptionally well.

We will proceed with this plan while we are in Fairbanks unless we hear otherwise from you. Please give me a call at 907-227-9883 or send me a response to this email if you have any questions regarding this procedure.

Thank you,
Bob



**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	
23946		Tesoro 2Go Mart 101 (ADEC File #100.26.022)	
SITE OR SPILL LOCATION			
3569 South Cushman, Fairbanks, AK 99701			
CURRENT LOCATION AND TYPE OF CONTAMINATED MEDIA		SOURCE OF THE CONTAMINATION	
Drum containerized IDW soil (n = 1)		Drill cuttings from multiple borings.	
COMPOUNDS OF CONCERN	ESTIMATED VOLUME	DATE(S) GENERATED	
VOCs, PAHs, GRO, and DRO	55 gallons	June 25, 2019	
POST TREATMENT ANALYSIS REQUIRED (such as GRO, DRO, RRO, BTEX, and/or Chlorinated Solvents)			
Not applicable			
COMMENTS			
Multiple compounds associated with fuel contamination found above cleanup levels, but are not hazardous.			

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)266-1109

Bob Gilfilian

Name of the Person Requesting Approval (printed)

Bob Gilfilian

Signature

Principal Engineer

Title/Association

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.

Peter Campbell

DEC Project Manager Name (printed)

EPS

Project Manager Title

Peter Campbell

Signature

9-6-19

Date

907-262-3412

Phone Number

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. 142984A	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 #101 3589 SOUTH CUSHMAN FAIRBANKS, AK 99701		
4. Generator's Phone 907-458-1122				
5. Transporter 1 Company Name NRC ALASKA LLC	6. US EPA ID Number AKR000004184	A. State Transporter's ID		
7. Transporter 2 Company Name		B. Transporter 1 Phone 907-258-1558		
9. Designated Facility Name and Site Address NRC ALASKA LLC 2020 VIKING DRIVE ANCHORAGE, AK 99501		8. US EPA ID Number	C. State Transporter's ID	
		10. US EPA ID Number AKR000004184	D. Transporter 2 Phone	
		E. State Facility's ID		
		F. Facility's Phone 907-258-1558		
11. WASTE DESCRIPTION		Containers	13. Total Quantity	14. Unit Wt./Vol.
a. Flux		No.	Type	
MATERIAL NOT REGULATED BY D.O.T.		1	DM	200
b.				
c.				
d.				
G. Additional Descriptions for Materials Listed Above EA0707 IDW BORE CUTTINGS		H. Handling Codes for Wastes Listed Above D25868		
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 Leslie Petve		Signature <i>[Signature]</i>		Date Month Day Year 9 9 19
17. Transporter 1 Acknowledgement of Receipt of Materials				
Printed/Typed Name Isabel Sieckler		Signature <i>[Signature]</i>		Date Month Day Year 9 9 19
18. Transporter 2 Acknowledgement of Receipt of Materials				
Printed/Typed Name		Signature		Date Month Day Year
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

GENERATOR

TRANSPORTER

FACILITY

ATTACHMENT 5

Table 2 Soil Analytical Test Results

Table 3 Groundwater Analytical Test Results

TestAmerica Laboratory Analytical Test Report

ADEC Checklist for QA/AC

Table 2 Soil Analytical Results
Samples collected on June 25, 2019

Sample Identification	Dichloro difluoro methane ¹ (µg/Kg)	Chloro methane ¹ (µg/Kg)	Vinyl Chloride ¹ (µg/Kg)	Bromo methane ¹ (µg/Kg)	1,1-Dichloro ethene ¹ (µg/Kg)	Methylene Chloride ¹ (µg/Kg)	trans-1,2-Dichloro ethene ¹ (µg/Kg)	1,1-Dichloro ethane ¹ (µg/Kg)	2- Butanone ¹ (µg/Kg)	cis-1,2-Dichloro ethene ¹ (µg/Kg)	Chloro form ¹ (µg/Kg)	Carbon Tetra chloride ¹ (µg/Kg)	Benzene ¹ (µg/Kg)	1,2-Dichloro ethane ^{1,2} (µg/Kg)	Trichloro ethene ¹ (µg/Kg)	1,2-Dichloro propane ¹ (µg/Kg)	Dibromo methane ¹ (µg/Kg)	Bromo dichloro methane ¹ (µg/Kg)	cis-1,3-Dichloro propene ^{1,2} (µg/Kg)	4-Methyl-2-pentanone ^{1,2} (µg/Kg)	Toluene ^{1,2} (µg/Kg)	trans-1,3-Dichloro propene ^{1,2} (µg/Kg)
MW 19-1 (4.5-5)	U (360)	U (180)	U (270)	U (360)	U (71)	U (440)	U (110)	U (71)	U (1,100)	U (110)	U (71)	U (36)	59	U (760) H	U (110)	U (36)	U (110)	U (110)	U (760) H	U (15,000) H	U (5,700) H	U (1,500) H
MW 19-1 (7-7.5)	U (4,400)	U (2,200)	U (3,300)	U (4,400)	U (890)	U (5,500)	U (1,300)	U (890)	U (13,000)	U (1,300)	U (890)	U (440)	U (660)	U (1,100) H	U (1,300)	U (440)	U (1,300)	U (1,300)	U (1,100) H	U (22,000) H	7,500	U (2,200) H
MW 19-2 (5.5-6)	U (3,600)	U (1,800)	U (2,700)	U (3,600)	U (730)	U (4,500)	U (1,100)	U (730)	U (11,000)	U (1,100)	U (730)	U (360)	U (540)	U (360)	U (1,100)	U (360)	U (1,100)	U (1,100)	U (360)	U (7,300)	U (2,700)	U (730)
MW 19-2 (7-7.5)	U (8,000)	U (4,000)	U (6,000)	U (8,000)	U (1,600)	U (10,000)	U (2,400)	U (1,600)	U (24,000)	U (2,400)	U (1,600)	U (800)	U (1,200)	U (800)	U (2,400)	U (800)	U (2,400)	U (2,400)	U (800)	U (16,000)	U (6,000)	U (1,600)
Dup-01 (duplicate of MW 19-1 (4.5-5))	U (4,200)	U (2,100)	U (3,100)	U (4,200)	U (830)	U (5,200)	U (1,300)	U (830)	U (13,000)	U (1,300)	U (830)	U (420)	U (630)	U (1,000) H	U (1,300)	U (420)	U (1,300)	U (1,300)	U (1,000) H	U (21,000) H	4,700	U (2,100) H
Trip Blank	U (200)	U (100)	U (150)	U (200)	U (40)	U (250)	U (60)	U (40)	U (600)	U (60)	U (40)	U (20)	U (30)	U (20)	U (60)	U (20)	U (60)	U (60)	U (20)	U (400)	U (150)	U (40)
SCLs	3,900	610	0.80	24	1,200	330	1,300	92	15,000	120	7.1	21	22	5.5	11	30	25	4.3	18	18,000	6,700	18

Sample Identification	1,1,2-Trichloro ethane ^{1,2} (µg/Kg)	Tetrachloro ethene ^{1,2} (µg/Kg)	2-Hexanone ^{1,2} (µg/Kg)	Dibromo chloro methane ^{1,2} (µg/Kg)	1,2-Dibromo ethane ^{1,2} (µg/Kg)	Chloro benzene ¹ (µg/Kg)	Ethyl benzene ^{1,2} (µg/Kg)	1,1,1,2-Tetra chloro ethane ¹ (µg/Kg)	m-Xylene & p-Xylene ¹ (µg/Kg)	o-Xylene ^{1,2} (µg/Kg)	Bromo form ^{1,2} (µg/Kg)	Isopropyl benzene ^{1,2} (µg/Kg)	Bromo benzene ¹ (µg/Kg)	N-Propyl benzene ¹ (µg/Kg)	1,1,2,2-Tetrachloro ethane ^{1,2} (µg/Kg)	1,3-Dichloro benzene ¹ (µg/Kg)	1,4-Dichloro benzene ¹ (µg/Kg)	n-Butyl benzene ^{1,2} (µg/Kg)	1,2,4-Trichloro benzene ¹ (µg/Kg)	1,2,3-Trichloro benzene ¹ (µg/Kg)	Hexachloro butadiene ¹ (µg/Kg)	Methyl tert-butyl ether ¹ (µg/Kg)
MW 19-1 (4.5-5)	U (760) H	U (1,500) H	U (3,800) H	U (1,500) H	U (760) H	U (71)	3,000	U (71)	15,000	190	U (7,600) H	1,100	U (180)	2,100	U (760) H	U (110)	U (110)	1,100	U (110)	U (270)	U (270)	U (71)
MW 19-1 (7-7.5)	U (1,100) H	U (2,200) H	U (5,500) H	U (2,200) H	U (1,100) H	U (890)	44,000	U (890)	220,000	96,000	U (11,000) H	22,000	U (2,200)	47,000	U (1,100) H	U (1,300)	U (1,300)	27,000	U (1,300)	U (3,300)	U (3,300)	U (890)
MW 19-2 (5.5-6)	U (360)	U (730)	U (1,800)	U (730)	U (360)	U (730)	14,000	U (730)	69,000	23,000	U (3,600)	8,500	U (1,800)	29,000	U (360)	U (1,100)	U (1,100)	14,000	U (1,100)	U (2,700)	U (2,700)	U (730)
MW 19-2 (7-7.5)	U (800)	U (1,600)	U (4,000)	U (1,600)	U (800)	U (1,600)	41,000	U (1,600)	180,000	77,000	U (8,000)	19,000	U (4,000)	34,000	U (800)	U (2,400)	U (2,400)	18,000	U (2,400)	U (6,000)	U (6,000)	U (1,600)
Dup-01 (duplicate of MW 19-1 (4.5-5))	U (1,000) H	U (2,100) H	U (5,200) H	U (2,100) H	U (1,000) H	U (830)	30,000	U (830)	150,000	67,000	U (10,000) H	17,000	U (2,100)	28,000	U (1,000) H	U (1,300)	U (1,300)	19,000	U (1,300)	U (3,100)	U (3,100)	U (830)
Trip Blank	U (20)	U (40)	U (100)	U (40)	U (20)	U (40)	U (40)	U (40)	U (200)	U (60)	U (200)	U (40)	U (100)	U (40)	U (20)	U (60)	U (60)	U (150)	U (60)	U (150)	U (150)	U (40)
SCLs	1.4	190	110	2.7	0.24	460	130	22	1,500	1,500	100	5,600	360	9,100	3.0	2,300	37	23,000	82	150	20	400

Sample Identification	1,2,3-Trichloro propane ¹ (µg/Kg)	1,2,4-Trimethyl benzene ¹ (µg/Kg)	1,3,5-Trimethyl benzene ¹ (µg/Kg)	Naphthalene ³ (µg/Kg)	2-Methyl naphthalene ³ (µg/Kg)	1-Methyl naphthalene ³ (µg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)
MW 19-1 (4.5-5)	U (71)	11,000	2,700	6,100	3,000	2,200	82	U (280)
MW 19-1 (7-7.5)	U (890)	130,000	55,000	22,000	38,000	32,000	4,800	6,700
MW 19-2 (5.5-6)	U (730)	60,000	37,000	14,000	25,000	20,000	3,000	4,700
MW 19-2 (7-7.5)	U (1,600)	100,000	39,000	18,000	31,000	25,000	2,800	6,100
Dup-01 (duplicate of MW 19-1 (4.5-5))	U (830)	98,000	38,000	22,000	47,000	32,000	4,600	8,700
Trip Blank	U (40)	U (40)	U (40)	NT	NT	NT	NT	NT
SCLs	0.031	610	660	38	1,300	410	300	250

Key:

1 – Analyzed by EPA Method 8260C.

2 – Due to laboratory QC failure in the initial extraction, these samples were re-extracted out of holding time and re-analyzed. The re-extracted batch met laboratory QC criteria.

Both sets of data were reported by the laboratory. If detected, the higher of the two concentrations for each sample is listed in this table.

If non-detect, the higher of the two practical quantitation limits for each sample is listed in this table. If one concentration is detected and the other is non-detect, the detected concentration is listed in this table.

3 – Analyzed by EPA Method 8270D Selective Ion Monitoring (SIM).

AK – Alaska Test Method

DRO – Diesel range organics, analyzed by AK102.

EPA – U.S. Environmental Protection Agency

H – Sample was prepped or analyzed beyond the specific holding time

GRO – Gasoline range organics, analyzed by AK101.

µg/Kg - micrograms per kilogram

NT – Not tested

SCLs – Soil cleanup levels, per Alaska Department of Environmental Conservation 18 Alaska Administrative Code 75.345, Tables B1 and B2, updated September 29, 2018.

U – Undetected above practical quantitation limit shown in parentheses

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

Table 3 Groundwater Analytical Results

Samples collected on June 26, 2019

Sample Identification	Vinyl Chloride ¹ (mg/L)	Chloroform ¹ (mg/L)	Benzene ¹ (mg/L)	1,2-Dichloroethane ¹ (mg/L)	Trichloroethene ¹ (mg/L)	Bromo dichloro methane ¹ (mg/L)	Toluene ¹ (mg/L)	1,1,2-Trichloroethane ¹ (mg/L)	1,2-Dibromoethane ¹ (mg/L)	Ethylbenzene ¹ (mg/L)	m-Xylene & p-Xylene ¹ (mg/L)	o-Xylene ¹ (mg/L)	1,1,1,2-Tetrachloroethane ¹ (mg/L)	Hexachlorobutadiene ¹ (mg/L)	1,2,3-Trichloropropane ¹ (mg/L)	1,2,4-Trimethylbenzene ¹ (mg/L)	1,3,5-Trimethylbenzene ¹ (mg/L)	Naphthalene ³ (mg/L)	2-Methyl naphthalene ² (mg/L)	1-Methyl naphthalene ² (mg/L)	GRO (mg/L)	DRO ² (mg/L)
MW 19-1	U (0.001)	U (0.005)	0.048	U (0.002)	U (0.003)	U (0.002)	0.14	U (0.001)	U (0.002)	0.25	1.0	0.52	U (0.003)	U (0.006)	U (0.002)	0.23	0.091	0.1	0.054	0.047	5.2	2.0 H
MW 19-2	U (0.001)	U (0.005)	0.074	U (0.002)	U (0.003)	U (0.002)	0.017	U (0.001)	U (0.002)	0.42	1.7	0.74	U (0.003)	U (0.006)	U (0.002)	0.43	0.14	0.16	0.074	0.07	7.4	5.0 H
Dup-01 (duplicate of MW 19-1)	U (0.001)	U (0.005)	0.05	U (0.002)	U (0.003)	U (0.002)	0.14	U (0.001)	U (0.002)	0.27	1.1	0.56	U (0.003)	U (0.006)	U (0.002)	0.26	0.089	0.098	0.052	0.046	4.8	1.9
Trip Blank	U (0.001)	U (0.005)	U (0.003)	U (0.002)	U (0.003)	U (0.002)	U (0.002)	U (0.001)	U (0.002)	U (0.003)	U (0.003)	U (0.002)	U (0.003)	U (0.006)	U (0.002)	U (0.003)	U (0.003)	U (0.004)¹	NT	NT	NT	NT
GCLs	0.00019	0.0022	0.0046	0.0017	0.0028	0.0013	1.1	0.00041	0.000075	0.015	0.19	0.19	0.00076	0.0014	0.0000075	0.056	0.06	0.0017	0.036	0.011	2.2	1.5

Key:

1 – Analyzed by EPA Method 8260C.

2 – Due to laboratory QC failure in the initial extraction, these samples were re-extracted out of holding time and re-analyzed. The re-extracted batch met laboratory QC criteria. Both sets of data were reported by the laboratory. The higher of the two concentrations for each sample is listed in this table.

3 – Analyzed by EPA method 8270D Selective Ion Monitoring (SIM).

AK – Alaska Test Method

DRO – Diesel range organics, analyzed by AK102.

EPA – U.S. Environmental Protection Agency

GCLs – Groundwater cleanup levels, per Alaska Department of Environmental Conservation 18 Alaska Administrative Code 75.345, Table C, updated September 29, 2018.

GRO – Gasoline range organics, analyzed by AK101.

H – Sample was prepped or analyzed beyond the specific holding time

mg/L – milligrams per liter

NT – Not tested

U – Undetected above practical quantitation limit shown in parentheses

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

ANALYTICAL REPORT

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

Laboratory Job ID: 580-87288-1
Client Project/Site: TNS 101 / IFC

For:
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1835 S. Bragraw
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Anchorage, Alaska 99508

Attn: Robert Gilifilian

M. Elaine Walker

Authorized for release by:
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Results relate only to the items tested and the sample(s) as received by the laboratory.



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Case Narrative

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Job ID: 580-87288-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative 580-87288-1

Receipt

Ten samples were received on 6/27/2019 11:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.0° C.

GC/MS VOA

Method(s) 5035: The following samples were provided to the laboratory with a significantly different initial weight than that required by the reference method: MW-19-1 (4.5-5) (580-87288-1), MW-19-1 (7-7.5) (580-87288-2), MW-19-2 (5.5-6) (580-87288-3), MW-19-2 (7-7.5) (580-87288-4) and Dup-01 (580-87288-5). 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.

Method(s) 8260C: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for analytical batch 580-304834 recovered outside control limits for the following analyte: Carbon disulfide. Carbon disulfide has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

Method(s) 8260C: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 580-304834 recovered outside control limits for the following analyte: Hexachlorobutadiene. This analyte was biased high in the LCS and was not detected in the associated samples; 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-19-1 (4.5-5) (580-87288-1), MW-19-1 (7-7.5) (580-87288-2), MW-19-2 (5.5-6) (580-87288-3), MW-19-2 (7-7.5) (580-87288-4) and Dup-01 (580-87288-5). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-19-1 (580-87288-7) and MW-19-2 (580-87288-8). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: Reanalysis of the following samples were performed outside of the analytical holding time MW-19-1 (4.5-5) (580-87288-1), MW-19-1 (7-7.5) (580-87288-2), MW-19-2 (5.5-6) (580-87288-3), MW-19-2 (7-7.5) (580-87288-4), Dup-01 (580-87288-5) and TB-01 (580-87288-6). Both sets of data have been reported.

Method(s) 8260C: Surrogate recovery for the following sample was outside control limits: TB-01 (580-87288-6). Re-extraction and/or re-analysis was performed with concurring results. Both sets of data have been reported.

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: The following analyte(s) recovered outside control limits for the LCS associated with preparation batch 580-304799 and analytical batch 580-304981: Fluorene. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Method(s) 8270D SIM: Surrogate recovery for the following sample was outside control limits: Dup-01 (580-87288-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8270D SIM: Surrogate recovery for the following sample was outside control limits: MW-19-2 (580-87288-8). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8270D SIM: The following sample was diluted due to the nature of the sample matrix: MW-19-1 (4.5-5) (580-87288-1). Elevated reporting limits (RLs) are provided.

Method(s) 8270D SIM: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-19-1 (7-7.5) (580-87288-2), MW-19-2 (5.5-6) (580-87288-3), MW-19-2 (7-7.5) (580-87288-4) and Dup-01 (580-87288-5). Elevated reporting limits (RLs) are provided.

Case Narrative

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Job ID: 580-87288-1 (Continued)

Laboratory: Eurofins TestAmerica, Seattle (Continued)

Method(s) 8270D SIM: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-19-1 (580-87288-7), MW-19-2 (580-87288-8) and Dup-01 (580-87288-10). 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: Surrogate 4-Bromofluorobenzene (Surr) recovery for the following samples were outside control limits: MW-19-1 (4.5-5) (580-87288-1), MW-19-1 (7-7.5) (580-87288-2), MW-19-2 (5.5-6) (580-87288-3), MW-19-2 (7-7.5) (580-87288-4) and Dup-01 (580-87288-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) AK101: The following samples were analyzed at reduced volume due to high concentrations of target analytes: MW-19-1 (7-7.5) (580-87288-2), MW-19-2 (5.5-6) (580-87288-3), MW-19-2 (7-7.5) (580-87288-4) and Dup-01 (580-87288-5). The calculation was done using an initial volume adjustment rather than a dilution factor. The reporting limits have been elevated by the appropriate factor.

Method(s) AK101: Surrogate 4-Bromofluorobenzene (Surr) recovery for the following samples were outside control limits: MW-19-1 (580-87288-7), MW-19-2 (580-87288-8) and Dup-01 (580-87288-10). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) AK101: The Gasoline Range Organics (GRO) concentration reported for the following samples is due to the presence of discrete peaks: MW-19-1 (580-87288-7), MW-19-2 (580-87288-8) and Dup-01 (580-87288-10). Gasoline Range Organics (GRO)-C6-C10

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 sample was diluted due to the nature of the sample matrix: MW-19-1 (4.5-5) (580-87288-1). Elevated reporting limits (RLs) are provided.

Method(s) AK102 & 103: Surrogate recovery for the following sample was outside control limits: MW-19-1 (4.5-5) (580-87288-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) AK102 & 103: Reanalysis of the following samples were performed outside of the analytical holding time due to LCS/LCSD failures in the initial run : MW-19-1 (580-87288-7), MW-19-2 (580-87288-8) and Dup-01 (580-87288-10). Boths sets of data have been reported.

Method(s) AK102 & 103: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern were earlier than the typical diesel fuel pattern used by the laboratory for quantitative purposes: MW-19-1 (580-87288-7), MW-19-2 (580-87288-8) and Dup-01 (580-87288-10).

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.

Definitions/Glossary

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD is outside acceptance limits.
E	Result exceeded calibration range.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
X	Surrogate is outside control limits

GC VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

GC Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
H	Sample was prepped or analyzed beyond the specified holding time

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
⊞	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Stantec Consulting Services Inc
 Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-1 (4.5-5)

Lab Sample ID: 580-87288-1

Date Collected: 06/25/19 11:00

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 63.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		360	82	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Chloromethane	ND		180	18	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Vinyl chloride	ND		270	47	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Bromomethane	ND		360	24	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Chloroethane	ND		710	18	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Trichlorofluoromethane	ND		360	20	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
1,1-Dichloroethene	ND		71	22	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Carbon disulfide	ND		110	22	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Acetone	ND		1400	310	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Methylene Chloride	ND		440	110	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
trans-1,2-Dichloroethene	ND		110	26	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
1,1-Dichloroethane	ND		71	16	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
2,2-Dichloropropane	ND		71	22	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
2-Butanone	ND		1100	330	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
cis-1,2-Dichloroethene	ND		110	22	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Bromochloromethane	ND *		71	11	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Chloroform	ND		71	7.5	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
1,1,1-Trichloroethane	ND *		71	17	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Carbon tetrachloride	ND		36	14	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
1,1-Dichloropropene	ND *		71	9.4	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Benzene	59		53	6.8	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
1,2-Dichloroethane	ND *		36	9.8	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Trichloroethene	ND		110	39	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
1,2-Dichloropropane	ND		36	12	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Dibromomethane	ND		110	13	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Bromodichloromethane	ND		110	24	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
cis-1,3-Dichloropropene	ND *		36	7.1	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
4-Methyl-2-pentanone	ND *		710	140	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Toluene	ND *		270	24	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
trans-1,3-Dichloropropene	ND *		71	12	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
1,1,2-Trichloroethane	ND *		36	13	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Tetrachloroethene	ND *		71	9.4	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
1,3-Dichloropropane	ND *		110	25	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
2-Hexanone	ND *		180	63	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Dibromochloromethane	ND *		71	20	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
1,2-Dibromoethane	ND *		36	6.8	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Chlorobenzene	ND		71	8.5	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Ethylbenzene	3000 *		71	16	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
1,1,1,2-Tetrachloroethane	ND		71	19	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
o-Xylene	190 *		110	24	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Styrene	ND *		71	11	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Bromoform	ND *		360	47	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Isopropylbenzene	1100 *		71	15	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Bromobenzene	ND		180	30	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
N-Propylbenzene	2100		71	12	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
1,1,1,2,2-Tetrachloroethane	ND *		36	14	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
4-Chlorotoluene	ND		71	17	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
t-Butylbenzene	ND		71	14	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
sec-Butylbenzene	650		71	15	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-1 (4.5-5)

Lab Sample ID: 580-87288-1

Date Collected: 06/25/19 11:00

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 63.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		110	24	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
4-Isopropyltoluene	730		71	18	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
1,4-Dichlorobenzene	ND		110	19	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
n-Butylbenzene	1100 *		270	14	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
1,2-Dichlorobenzene	ND		71	15	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
1,2-Dibromo-3-Chloropropane	ND		440	27	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
1,2,4-Trichlorobenzene	ND		110	27	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
1,2,3-Trichlorobenzene	ND		270	57	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Hexachlorobutadiene	ND		270	59	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Naphthalene	4200		180	50	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
Methyl tert-butyl ether	ND		71	11	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
1,2,3-Trichloropropane	ND		71	20	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
1,3,5-Trimethylbenzene	2700		71	14	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1
2-Chlorotoluene	ND		71	16	ug/Kg	☼	07/09/19 08:00	07/09/19 14:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	97		80 - 120	07/09/19 08:00	07/09/19 14:41	1
<i>4-Bromofluorobenzene (Surr)</i>	99		80 - 120	07/09/19 08:00	07/09/19 14:41	1
<i>Dibromofluoromethane (Surr)</i>	102		80 - 120	07/09/19 08:00	07/09/19 14:41	1
<i>Trifluorotoluene (Surr)</i>	68 X		80 - 120	07/09/19 08:00	07/09/19 14:41	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	109		80 - 121	07/09/19 08:00	07/09/19 14:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	15000		7600	570	ug/Kg	☼	07/09/19 08:00	07/09/19 18:31	1
1,2,4-Trimethylbenzene	11000		1500	520	ug/Kg	☼	07/09/19 08:00	07/09/19 18:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	102		80 - 120	07/09/19 08:00	07/09/19 18:31	1
<i>4-Bromofluorobenzene (Surr)</i>	103		80 - 120	07/09/19 08:00	07/09/19 18:31	1
<i>Dibromofluoromethane (Surr)</i>	98		80 - 120	07/09/19 08:00	07/09/19 18:31	1
<i>Trifluorotoluene (Surr)</i>	103		80 - 120	07/09/19 08:00	07/09/19 18:31	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	111		80 - 121	07/09/19 08:00	07/09/19 18:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND	H	7600	1800	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Chloromethane	ND	H	3800	390	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Vinyl chloride	ND	H	5700	1000	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Bromomethane	ND	H	7600	510	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Chloroethane	ND	H	15000	380	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Trichlorofluoromethane	ND	H	7600	440	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
1,1-Dichloroethene	ND	H	1500	470	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Carbon disulfide	ND	H	2300	460	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Acetone	ND	H	31000	6700	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Methylene Chloride	ND	H	9600	2500	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
trans-1,2-Dichloroethene	ND	H	2300	560	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
1,1-Dichloroethane	ND	H	1500	350	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
2,2-Dichloropropane	ND	H	1500	460	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
2-Butanone	ND	H	23000	7100	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-1 (4.5-5)

Lab Sample ID: 580-87288-1

Date Collected: 06/25/19 11:00

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 63.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND	H	2300	480	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Bromochloromethane	ND	H	1500	240	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Chloroform	ND	H	1500	160	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
1,1,1-Trichloroethane	ND	H	1500	370	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Carbon tetrachloride	ND	H	760	310	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
1,1-Dichloropropene	ND	H	1500	200	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Benzene	ND	H	1100	150	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
1,2-Dichloroethane	ND	H	760	210	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Trichloroethene	ND	H	2300	840	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
1,2-Dichloropropane	ND	H	760	250	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Dibromomethane	ND	H	2300	280	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Bromodichloromethane	ND	H	2300	510	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
cis-1,3-Dichloropropene	ND	H	760	150	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
4-Methyl-2-pentanone	ND	H	15000	3100	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Toluene	ND	H	5700	520	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
trans-1,3-Dichloropropene	ND	H	1500	270	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
1,1,2-Trichloroethane	ND	H	760	280	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Tetrachloroethene	ND	H	1500	200	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
1,3-Dichloropropane	ND	H	2300	530	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
2-Hexanone	ND	H	3800	1400	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Dibromochloromethane	ND	H	1500	430	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
1,2-Dibromoethane	ND	H	760	150	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Chlorobenzene	ND	H	1500	180	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Ethylbenzene	1600	H	1500	350	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
1,1,1,2-Tetrachloroethane	ND	H	1500	410	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
m-Xylene & p-Xylene	8300	H	7600	570	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
o-Xylene	ND	H	2300	510	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Styrene	ND	H	1500	230	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Bromoform	ND	H	7600	1000	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Isopropylbenzene	ND	H	1500	330	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Bromobenzene	ND	H	3800	650	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
N-Propylbenzene	ND	H	1500	260	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
1,1,2,2-Tetrachloroethane	ND	H	760	290	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
4-Chlorotoluene	ND	H	1500	370	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
t-Butylbenzene	ND	H	1500	290	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
1,2,4-Trimethylbenzene	6600	H	1500	520	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
sec-Butylbenzene	ND	H	1500	330	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
1,3-Dichlorobenzene	ND	H	2300	510	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
4-Isopropyltoluene	ND	H	1500	390	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
1,4-Dichlorobenzene	ND	H	2300	410	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
n-Butylbenzene	ND	H	5700	310	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
1,2-Dichlorobenzene	ND	H	1500	330	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
1,2-Dibromo-3-Chloropropane	ND	H	9600	580	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
1,2,4-Trichlorobenzene	ND	H	2300	590	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
1,2,3-Trichlorobenzene	ND	H	5700	1200	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Hexachlorobutadiene	ND	H	5700	1300	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Naphthalene	ND	H	3800	1100	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Methyl tert-butyl ether	ND	H	1500	230	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
1,2,3-Trichloropropane	ND	H	1500	440	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-1 (4.5-5)

Lab Sample ID: 580-87288-1

Date Collected: 06/25/19 11:00

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 63.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1600	H	1500	290	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
2-Chlorotoluene	ND	H	1500	340	ug/Kg	☼	07/16/19 08:00	07/16/19 13:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 120				07/16/19 08:00	07/16/19 13:48	1
4-Bromofluorobenzene (Surr)	100		80 - 120				07/16/19 08:00	07/16/19 13:48	1
Dibromofluoromethane (Surr)	104		80 - 120				07/16/19 08:00	07/16/19 13:48	1
Trifluorotoluene (Surr)	88		80 - 120				07/16/19 08:00	07/16/19 13:48	1
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				07/16/19 08:00	07/16/19 13:48	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	6100		38	12	ug/Kg	☼	07/05/19 09:28	07/08/19 18:44	5
2-Methylnaphthalene	3000		38	15	ug/Kg	☼	07/05/19 09:28	07/08/19 18:44	5
1-Methylnaphthalene	2200		38	4.7	ug/Kg	☼	07/05/19 09:28	07/08/19 18:44	5
Acenaphthylene	ND		38	3.8	ug/Kg	☼	07/05/19 09:28	07/08/19 18:44	5
Acenaphthene	ND		38	4.5	ug/Kg	☼	07/05/19 09:28	07/08/19 18:44	5
Fluorene	ND *		38	3.8	ug/Kg	☼	07/05/19 09:28	07/08/19 18:44	5
Phenanthrene	ND		38	12	ug/Kg	☼	07/05/19 09:28	07/08/19 18:44	5
Anthracene	ND		38	4.5	ug/Kg	☼	07/05/19 09:28	07/08/19 18:44	5
Fluoranthene	ND		38	11	ug/Kg	☼	07/05/19 09:28	07/08/19 18:44	5
Pyrene	ND		38	7.3	ug/Kg	☼	07/05/19 09:28	07/08/19 18:44	5
Benzo[a]anthracene	ND		38	5.7	ug/Kg	☼	07/05/19 09:28	07/08/19 18:44	5
Chrysene	ND		38	11	ug/Kg	☼	07/05/19 09:28	07/08/19 18:44	5
Benzo[b]fluoranthene	ND		38	4.4	ug/Kg	☼	07/05/19 09:28	07/08/19 18:44	5
Benzo[k]fluoranthene	ND		38	4.5	ug/Kg	☼	07/05/19 09:28	07/08/19 18:44	5
Benzo[a]pyrene	ND		38	6.3	ug/Kg	☼	07/05/19 09:28	07/08/19 18:44	5
Indeno[1,2,3-cd]pyrene	ND		38	4.5	ug/Kg	☼	07/05/19 09:28	07/08/19 18:44	5
Dibenz(a,h)anthracene	ND		38	5.4	ug/Kg	☼	07/05/19 09:28	07/08/19 18:44	5
Benzo[g,h,i]perylene	ND		38	3.8	ug/Kg	☼	07/05/19 09:28	07/08/19 18:44	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14	70		57 - 120				07/05/19 09:28	07/08/19 18:44	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	82		8.4	3.5	mg/Kg	☼	07/05/19 10:19	07/07/19 04:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	134		50 - 150				07/05/19 10:19	07/07/19 04:27	1
4-Bromofluorobenzene (Surr)	180	X	50 - 150				07/05/19 10:19	07/07/19 04:27	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		280	120	mg/Kg	☼	07/06/19 11:27	07/09/19 17:54	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	51		50 - 150				07/06/19 11:27	07/09/19 17:54	10

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Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-1 (4.5-5)

Lab Sample ID: 580-87288-1

Date Collected: 06/25/19 11:00

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 63.4

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	63.4		0.1	0.1	%			07/08/19 13:13	1
Percent Moisture	36.6		0.1	0.1	%			07/08/19 13:13	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-1 (7-7.5)

Lab Sample ID: 580-87288-2

Date Collected: 06/25/19 11:30

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 87.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		4400	1000	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Chloromethane	ND		2200	220	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Vinyl chloride	ND		3300	580	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Bromomethane	ND		4400	300	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Chloroethane	ND		8900	220	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Trichlorofluoromethane	ND		4400	250	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
1,1-Dichloroethene	ND		890	270	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Carbon disulfide	ND		1300	270	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Acetone	ND		18000	3900	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Methylene Chloride	ND		5500	1400	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
trans-1,2-Dichloroethene	ND		1300	320	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
1,1-Dichloroethane	ND		890	200	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
2,2-Dichloropropane	ND		890	270	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
2-Butanone	ND		13000	4100	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
cis-1,2-Dichloroethene	ND		1300	280	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Bromochloromethane	ND *		890	140	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Chloroform	ND		890	93	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
1,1,1-Trichloroethane	ND *		890	210	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Carbon tetrachloride	ND		440	180	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
1,1-Dichloropropene	ND *		890	120	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Benzene	ND		660	84	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
1,2-Dichloroethane	ND *		440	120	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Trichloroethene	ND		1300	490	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
1,2-Dichloropropane	ND		440	150	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Dibromomethane	ND		1300	160	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Bromodichloromethane	ND		1300	300	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
cis-1,3-Dichloropropene	ND *		440	89	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
4-Methyl-2-pentanone	ND *		8900	1800	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Toluene	7500 *		3300	300	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
trans-1,3-Dichloropropene	ND *		890	160	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
1,1,2-Trichloroethane	ND *		440	160	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Tetrachloroethene	ND *		890	120	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
1,3-Dichloropropane	ND *		1300	310	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
2-Hexanone	ND *		2200	790	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Dibromochloromethane	ND *		890	250	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
1,2-Dibromoethane	ND *		440	84	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Chlorobenzene	ND		890	110	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Ethylbenzene	44000 *		890	200	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
1,1,1,2-Tetrachloroethane	ND		890	230	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
o-Xylene	96000 *		1300	300	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Styrene	ND *		890	140	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Bromoform	ND *		4400	580	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Isopropylbenzene	22000 *		890	190	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Bromobenzene	ND		2200	380	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
N-Propylbenzene	47000		890	150	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
1,1,1,2,2-Tetrachloroethane	ND *		440	170	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
4-Chlorotoluene	ND		890	220	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
t-Butylbenzene	ND		890	170	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
1,2,4-Trimethylbenzene	130000		890	300	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-1 (7-7.5)

Lab Sample ID: 580-87288-2

Date Collected: 06/25/19 11:30

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 87.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	14000		890	190	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
1,3-Dichlorobenzene	ND		1300	290	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
4-Isopropyltoluene	12000		890	230	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
1,4-Dichlorobenzene	ND		1300	240	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
n-Butylbenzene	27000 *		3300	180	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
1,2-Dichlorobenzene	ND		890	190	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
1,2-Dibromo-3-Chloropropane	ND		5500	340	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
1,2,4-Trichlorobenzene	ND		1300	340	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
1,2,3-Trichlorobenzene	ND		3300	710	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Hexachlorobutadiene	ND		3300	740	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Naphthalene	79000		2200	630	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
Methyl tert-butyl ether	ND		890	130	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
1,2,3-Trichloropropane	ND		890	250	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
1,3,5-Trimethylbenzene	55000		890	170	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1
2-Chlorotoluene	ND		890	190	ug/Kg	☼	07/09/19 08:00	07/09/19 15:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	97		80 - 120	07/09/19 08:00	07/09/19 15:07	1
<i>4-Bromofluorobenzene (Surr)</i>	114		80 - 120	07/09/19 08:00	07/09/19 15:07	1
<i>Dibromofluoromethane (Surr)</i>	101		80 - 120	07/09/19 08:00	07/09/19 15:07	1
<i>Trifluorotoluene (Surr)</i>	82		80 - 120	07/09/19 08:00	07/09/19 15:07	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	100		80 - 121	07/09/19 08:00	07/09/19 15:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	220000		11000	830	ug/Kg	☼	07/09/19 08:00	07/09/19 18:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	108		80 - 120	07/09/19 08:00	07/09/19 18:57	1
<i>4-Bromofluorobenzene (Surr)</i>	112		80 - 120	07/09/19 08:00	07/09/19 18:57	1
<i>Dibromofluoromethane (Surr)</i>	104		80 - 120	07/09/19 08:00	07/09/19 18:57	1
<i>Trifluorotoluene (Surr)</i>	108		80 - 120	07/09/19 08:00	07/09/19 18:57	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	115		80 - 121	07/09/19 08:00	07/09/19 18:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND	H	11000	2500	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Chloromethane	ND	H	5500	560	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Vinyl chloride	ND	H	8300	1500	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Bromomethane	ND	H	11000	740	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Chloroethane	ND	H	22000	550	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Trichlorofluoromethane	ND	H	11000	630	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
1,1-Dichloroethene	ND	H	2200	680	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Carbon disulfide	ND	H	3300	670	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Acetone	ND	H	44000	9600	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Methylene Chloride	ND	H	14000	3600	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
trans-1,2-Dichloroethene	ND	H	3300	810	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
1,1-Dichloroethane	ND	H	2200	510	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
2,2-Dichloropropane	ND	H	2200	670	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
2-Butanone	ND	H	33000	10000	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1

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Client Sample Results

Client: Stantec Consulting Services Inc
 Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-1 (7-7.5)

Lab Sample ID: 580-87288-2

Date Collected: 06/25/19 11:30

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 87.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND	H	3300	700	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Bromochloromethane	ND	H	2200	340	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Chloroform	ND	H	2200	230	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
1,1,1-Trichloroethane	ND	H	2200	530	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Carbon tetrachloride	ND	H	1100	450	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
1,1-Dichloropropene	ND	H	2200	290	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Benzene	ND	H	1700	210	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
1,2-Dichloroethane	ND	H	1100	300	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Trichloroethene	ND	H	3300	1200	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
1,2-Dichloropropane	ND	H	1100	370	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Dibromomethane	ND	H	3300	410	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Bromodichloromethane	ND	H	3300	740	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
cis-1,3-Dichloropropene	ND	H	1100	220	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
4-Methyl-2-pentanone	ND	H	22000	4500	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Toluene	ND	H	8300	750	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
trans-1,3-Dichloropropene	ND	H	2200	390	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
1,1,2-Trichloroethane	ND	H	1100	410	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Tetrachloroethene	ND	H	2200	290	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
1,3-Dichloropropane	ND	H	3300	760	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
2-Hexanone	ND	H	5500	2000	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Dibromochloromethane	ND	H	2200	630	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
1,2-Dibromoethane	ND	H	1100	210	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Chlorobenzene	ND	H	2200	270	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Ethylbenzene	34000	H	2200	500	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
1,1,1,2-Tetrachloroethane	ND	H	2200	590	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
m-Xylene & p-Xylene	160000	H	11000	830	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
o-Xylene	72000	H	3300	740	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Styrene	ND	H	2200	340	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Bromoform	ND	H	11000	1500	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Isopropylbenzene	19000	H	2200	480	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Bromobenzene	ND	H	5500	950	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
N-Propylbenzene	35000	H	2200	380	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
1,1,2,2-Tetrachloroethane	ND	H	1100	420	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
4-Chlorotoluene	ND	H	2200	540	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
t-Butylbenzene	ND	H	2200	430	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
1,2,4-Trimethylbenzene	110000	H	2200	750	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
sec-Butylbenzene	13000	H	2200	480	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
1,3-Dichlorobenzene	ND	H	3300	740	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
4-Isopropyltoluene	12000	H	2200	570	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
1,4-Dichlorobenzene	ND	H	3300	600	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
n-Butylbenzene	22000	H	8300	440	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
1,2-Dichlorobenzene	ND	H	2200	480	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
1,2-Dibromo-3-Chloropropane	ND	H	14000	840	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
1,2,4-Trichlorobenzene	ND	H	3300	850	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
1,2,3-Trichlorobenzene	ND	H	8300	1800	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Hexachlorobutadiene	ND	H	8300	1900	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Naphthalene	48000	H	5500	1600	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Methyl tert-butyl ether	ND	H	2200	330	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
1,2,3-Trichloropropane	ND	H	2200	640	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-1 (7-7.5)

Lab Sample ID: 580-87288-2

Date Collected: 06/25/19 11:30

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 87.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	43000	H	2200	420	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
2-Chlorotoluene	ND	H	2200	490	ug/Kg	☼	07/16/19 08:00	07/16/19 14:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120				07/16/19 08:00	07/16/19 14:14	1
4-Bromofluorobenzene (Surr)	102		80 - 120				07/16/19 08:00	07/16/19 14:14	1
Dibromofluoromethane (Surr)	103		80 - 120				07/16/19 08:00	07/16/19 14:14	1
Trifluorotoluene (Surr)	96		80 - 120				07/16/19 08:00	07/16/19 14:14	1
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				07/16/19 08:00	07/16/19 14:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	660		5.6	0.56	ug/Kg	☼	07/05/19 09:28	07/08/19 19:10	1
Acenaphthene	1600		5.6	0.68	ug/Kg	☼	07/05/19 09:28	07/08/19 19:10	1
Fluorene	1900 *		5.6	0.56	ug/Kg	☼	07/05/19 09:28	07/08/19 19:10	1
Phenanthrene	920		5.6	1.8	ug/Kg	☼	07/05/19 09:28	07/08/19 19:10	1
Anthracene	47		5.6	0.68	ug/Kg	☼	07/05/19 09:28	07/08/19 19:10	1
Fluoranthene	ND		5.6	1.6	ug/Kg	☼	07/05/19 09:28	07/08/19 19:10	1
Pyrene	ND		5.6	1.1	ug/Kg	☼	07/05/19 09:28	07/08/19 19:10	1
Benzo[a]anthracene	ND		5.6	0.86	ug/Kg	☼	07/05/19 09:28	07/08/19 19:10	1
Chrysene	ND		5.6	1.7	ug/Kg	☼	07/05/19 09:28	07/08/19 19:10	1
Benzo[b]fluoranthene	ND		5.6	0.66	ug/Kg	☼	07/05/19 09:28	07/08/19 19:10	1
Benzo[k]fluoranthene	ND		5.6	0.68	ug/Kg	☼	07/05/19 09:28	07/08/19 19:10	1
Benzo[a]pyrene	ND		5.6	0.95	ug/Kg	☼	07/05/19 09:28	07/08/19 19:10	1
Indeno[1,2,3-cd]pyrene	ND		5.6	0.68	ug/Kg	☼	07/05/19 09:28	07/08/19 19:10	1
Dibenz(a,h)anthracene	ND		5.6	0.81	ug/Kg	☼	07/05/19 09:28	07/08/19 19:10	1
Benzo[g,h,i]perylene	ND		5.6	0.56	ug/Kg	☼	07/05/19 09:28	07/08/19 19:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14	68		57 - 120				07/05/19 09:28	07/08/19 19:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	22000		110	36	ug/Kg	☼	07/05/19 09:28	07/09/19 11:16	20
2-Methylnaphthalene	38000		110	46	ug/Kg	☼	07/05/19 09:28	07/09/19 11:16	20
1-Methylnaphthalene	32000		110	14	ug/Kg	☼	07/05/19 09:28	07/09/19 11:16	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14	65		57 - 120				07/05/19 09:28	07/09/19 11:16	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	4800		110	47	mg/Kg	☼	07/05/19 10:19	07/07/19 04:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	253	X	50 - 150				07/05/19 10:19	07/07/19 04:57	1
4-Bromofluorobenzene (Surr)	609	X	50 - 150				07/05/19 10:19	07/07/19 04:57	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)	6700		21	9.3	mg/Kg	☼	07/06/19 11:27	07/09/19 18:16	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
 Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-1 (7-7.5)

Lab Sample ID: 580-87288-2

Date Collected: 06/25/19 11:30

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 87.7

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	141		50 - 150	07/06/19 11:27	07/09/19 18:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.7		0.1	0.1	%			07/08/19 13:13	1
Percent Moisture	12.3		0.1	0.1	%			07/08/19 13:13	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-2 (5.5-6)

Lab Sample ID: 580-87288-3

Date Collected: 06/25/19 13:15

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 91.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		3600	830	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Chloromethane	ND		1800	180	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Vinyl chloride	ND		2700	480	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Bromomethane	ND		3600	240	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Chloroethane	ND		7300	180	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Trichlorofluoromethane	ND		3600	210	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
1,1-Dichloroethene	ND		730	220	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Carbon disulfide	ND		1100	220	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Acetone	ND		15000	3200	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Methylene Chloride	ND		4500	1200	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
trans-1,2-Dichloroethene	ND		1100	260	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
1,1-Dichloroethane	ND		730	170	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
2,2-Dichloropropane	ND		730	220	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
2-Butanone	ND		11000	3400	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
cis-1,2-Dichloroethene	ND		1100	230	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Bromochloromethane	ND *		730	110	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Chloroform	ND		730	76	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
1,1,1-Trichloroethane	ND *		730	170	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Carbon tetrachloride	ND		360	150	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
1,1-Dichloropropene	ND *		730	96	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Benzene	ND		540	69	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
1,2-Dichloroethane	ND *		360	100	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Trichloroethene	ND		1100	400	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
1,2-Dichloropropane	ND		360	120	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Dibromomethane	ND		1100	130	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Bromodichloromethane	ND		1100	240	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
cis-1,3-Dichloropropene	ND *		360	73	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
4-Methyl-2-pentanone	ND *		7300	1500	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Toluene	ND *		2700	240	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
trans-1,3-Dichloropropene	ND *		730	130	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
1,1,2-Trichloroethane	ND *		360	130	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Tetrachloroethene	ND *		730	96	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
1,3-Dichloropropane	ND *		1100	250	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
2-Hexanone	ND *		1800	650	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Dibromochloromethane	ND *		730	200	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
1,2-Dibromoethane	ND *		360	69	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Chlorobenzene	ND		730	87	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Ethylbenzene	14000 *		730	170	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
1,1,1,2-Tetrachloroethane	ND		730	190	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
m-Xylene & p-Xylene	69000		3600	270	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
o-Xylene	23000 *		1100	240	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Styrene	ND *		730	110	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Bromoform	ND *		3600	480	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Isopropylbenzene	8500 *		730	160	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Bromobenzene	ND		1800	310	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
N-Propylbenzene	29000		730	130	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
1,1,1,2,2-Tetrachloroethane	ND *		360	140	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
4-Chlorotoluene	ND		730	180	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
t-Butylbenzene	ND		730	140	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-2 (5.5-6)

Lab Sample ID: 580-87288-3

Date Collected: 06/25/19 13:15

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 91.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	60000		730	240	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
sec-Butylbenzene	7100		730	160	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
1,3-Dichlorobenzene	ND		1100	240	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
4-Isopropyltoluene	6500		730	190	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
1,4-Dichlorobenzene	ND		1100	200	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
n-Butylbenzene	14000 *		2700	150	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
1,2-Dichlorobenzene	ND		730	160	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
1,2-Dibromo-3-Chloropropane	ND		4500	280	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
1,2,4-Trichlorobenzene	ND		1100	280	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
1,2,3-Trichlorobenzene	ND		2700	580	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Hexachlorobutadiene	ND		2700	610	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Naphthalene	29000		1800	510	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
Methyl tert-butyl ether	ND		730	110	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
1,2,3-Trichloropropane	ND		730	210	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
1,3,5-Trimethylbenzene	37000		730	140	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1
2-Chlorotoluene	ND		730	160	ug/Kg	☼	07/09/19 08:00	07/09/19 15:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	87		80 - 120	07/09/19 08:00	07/09/19 15:33	1
<i>4-Bromofluorobenzene (Surr)</i>	110		80 - 120	07/09/19 08:00	07/09/19 15:33	1
<i>Dibromofluoromethane (Surr)</i>	97		80 - 120	07/09/19 08:00	07/09/19 15:33	1
<i>Trifluorotoluene (Surr)</i>	95		80 - 120	07/09/19 08:00	07/09/19 15:33	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	97		80 - 121	07/09/19 08:00	07/09/19 15:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND	H	3600	830	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Chloromethane	ND	H	1800	180	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Vinyl chloride	ND	H	2700	480	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Bromomethane	ND	H	3600	240	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Chloroethane	ND	H	7300	180	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Trichlorofluoromethane	ND	H	3600	210	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
1,1-Dichloroethene	ND	H	730	220	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Carbon disulfide	ND	H	1100	220	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Acetone	ND	H	15000	3200	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Methylene Chloride	ND	H	4500	1200	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
trans-1,2-Dichloroethene	ND	H	1100	260	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
1,1-Dichloroethane	ND	H	730	170	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
2,2-Dichloropropane	ND	H	730	220	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
2-Butanone	ND	H	11000	3400	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
cis-1,2-Dichloroethene	ND	H	1100	230	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Bromochloromethane	ND	H	730	110	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Chloroform	ND	H	730	76	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
1,1,1-Trichloroethane	ND	H	730	170	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Carbon tetrachloride	ND	H	360	150	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
1,1-Dichloropropene	ND	H	730	96	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Benzene	ND	H	540	69	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
1,2-Dichloroethane	ND	H	360	100	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Trichloroethene	ND	H	1100	400	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
1,2-Dichloropropane	ND	H	360	120	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-2 (5.5-6)

Lab Sample ID: 580-87288-3

Date Collected: 06/25/19 13:15

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 91.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	ND	H	1100	130	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Bromodichloromethane	ND	H	1100	240	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
cis-1,3-Dichloropropene	ND	H	360	73	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
4-Methyl-2-pentanone	ND	H	7300	1500	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Toluene	ND	H	2700	240	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
trans-1,3-Dichloropropene	ND	H	730	130	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
1,1,2-Trichloroethane	ND	H	360	130	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Tetrachloroethene	ND	H	730	96	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
1,3-Dichloropropane	ND	H	1100	250	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
2-Hexanone	ND	H	1800	650	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Dibromochloromethane	ND	H	730	200	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
1,2-Dibromoethane	ND	H	360	69	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Chlorobenzene	ND	H	730	87	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Ethylbenzene	7100	H	730	170	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
1,1,1,2-Tetrachloroethane	ND	H	730	190	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
m-Xylene & p-Xylene	32000	H	3600	270	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
o-Xylene	11000	H	1100	240	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Styrene	ND	H	730	110	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Bromoform	ND	H	3600	480	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Isopropylbenzene	4500	H	730	160	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Bromobenzene	ND	H	1800	310	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
N-Propylbenzene	8600	H	730	130	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
1,1,2,2-Tetrachloroethane	ND	H	360	140	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
4-Chlorotoluene	ND	H	730	180	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
t-Butylbenzene	ND	H	730	140	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
1,2,4-Trimethylbenzene	30000	H	730	240	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
sec-Butylbenzene	4000	H	730	160	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
1,3-Dichlorobenzene	ND	H	1100	240	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
4-Isopropyltoluene	3700	H	730	190	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
1,4-Dichlorobenzene	ND	H	1100	200	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
n-Butylbenzene	7200	H	2700	150	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
1,2-Dichlorobenzene	ND	H	730	160	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
1,2-Dibromo-3-Chloropropane	ND	H	4500	280	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
1,2,4-Trichlorobenzene	ND	H	1100	280	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
1,2,3-Trichlorobenzene	ND	H	2700	580	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Hexachlorobutadiene	ND	H	2700	610	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Naphthalene	16000	H	1800	510	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
Methyl tert-butyl ether	ND	H	730	110	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
1,2,3-Trichloropropane	ND	H	730	210	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
1,3,5-Trimethylbenzene	11000	H	730	140	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1
2-Chlorotoluene	ND	H	730	160	ug/Kg	☼	07/16/19 08:00	07/16/19 14:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120	07/16/19 08:00	07/16/19 14:40	1
4-Bromofluorobenzene (Surr)	104		80 - 120	07/16/19 08:00	07/16/19 14:40	1
Dibromofluoromethane (Surr)	96		80 - 120	07/16/19 08:00	07/16/19 14:40	1
Trifluorotoluene (Surr)	89		80 - 120	07/16/19 08:00	07/16/19 14:40	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 121	07/16/19 08:00	07/16/19 14:40	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-2 (5.5-6)

Lab Sample ID: 580-87288-3

Date Collected: 06/25/19 13:15

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 91.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	290		4.8	0.48	ug/Kg	☼	07/05/19 09:28	07/08/19 19:36	1
Acenaphthene	620		4.8	0.57	ug/Kg	☼	07/05/19 09:28	07/08/19 19:36	1
Fluorene	730 *		4.8	0.48	ug/Kg	☼	07/05/19 09:28	07/08/19 19:36	1
Phenanthrene	460		4.8	1.6	ug/Kg	☼	07/05/19 09:28	07/08/19 19:36	1
Anthracene	27		4.8	0.57	ug/Kg	☼	07/05/19 09:28	07/08/19 19:36	1
Fluoranthene	ND		4.8	1.3	ug/Kg	☼	07/05/19 09:28	07/08/19 19:36	1
Pyrene	ND		4.8	0.93	ug/Kg	☼	07/05/19 09:28	07/08/19 19:36	1
Benzo[a]anthracene	ND		4.8	0.73	ug/Kg	☼	07/05/19 09:28	07/08/19 19:36	1
Chrysene	ND		4.8	1.4	ug/Kg	☼	07/05/19 09:28	07/08/19 19:36	1
Benzo[b]fluoranthene	ND		4.8	0.57	ug/Kg	☼	07/05/19 09:28	07/08/19 19:36	1
Benzo[k]fluoranthene	ND		4.8	0.57	ug/Kg	☼	07/05/19 09:28	07/08/19 19:36	1
Benzo[a]pyrene	ND		4.8	0.80	ug/Kg	☼	07/05/19 09:28	07/08/19 19:36	1
Indeno[1,2,3-cd]pyrene	ND		4.8	0.57	ug/Kg	☼	07/05/19 09:28	07/08/19 19:36	1
Dibenz(a,h)anthracene	ND		4.8	0.69	ug/Kg	☼	07/05/19 09:28	07/08/19 19:36	1
Benzo[g,h,i]perylene	ND		4.8	0.48	ug/Kg	☼	07/05/19 09:28	07/08/19 19:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14	72		57 - 120				07/05/19 09:28	07/08/19 19:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	14000		96	31	ug/Kg	☼	07/05/19 09:28	07/09/19 11:42	20
2-Methylnaphthalene	25000		96	39	ug/Kg	☼	07/05/19 09:28	07/09/19 11:42	20
1-Methylnaphthalene	20000		96	12	ug/Kg	☼	07/05/19 09:28	07/09/19 11:42	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14	72		57 - 120				07/05/19 09:28	07/09/19 11:42	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	3000		91	38	mg/Kg	☼	07/05/19 10:19	07/07/19 05:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	377	X	50 - 150				07/05/19 10:19	07/07/19 05:27	1
4-Bromofluorobenzene (Surr)	594	X	50 - 150				07/05/19 10:19	07/07/19 05:27	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)	4700		18	7.8	mg/Kg	☼	07/06/19 11:27	07/09/19 18:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	111		50 - 150				07/06/19 11:27	07/09/19 18:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	91.0		0.1	0.1	%			07/08/19 13:13	1
Percent Moisture	9.0		0.1	0.1	%			07/08/19 13:13	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-2 (7-7.5)

Lab Sample ID: 580-87288-4

Date Collected: 06/25/19 13:30

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 86.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		8000	1800	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Chloromethane	ND		4000	410	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Vinyl chloride	ND		6000	1100	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Bromomethane	ND		8000	540	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Chloroethane	ND		16000	400	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Trichlorofluoromethane	ND		8000	460	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
1,1-Dichloroethene	ND		1600	490	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Carbon disulfide	ND		2400	490	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Acetone	ND		32000	7000	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Methylene Chloride	ND		10000	2600	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
trans-1,2-Dichloroethene	ND		2400	590	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
1,1-Dichloroethane	ND		1600	370	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
2,2-Dichloropropane	ND		1600	490	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
2-Butanone	ND		24000	7400	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
cis-1,2-Dichloroethene	ND		2400	510	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Bromochloromethane	ND *		1600	250	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Chloroform	ND		1600	170	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
1,1,1-Trichloroethane	ND *		1600	390	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Carbon tetrachloride	ND		800	330	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
1,1-Dichloropropene	ND *		1600	210	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Benzene	ND		1200	150	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
1,2-Dichloroethane	ND *		800	220	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Trichloroethene	ND		2400	890	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
1,2-Dichloropropane	ND		800	270	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Dibromomethane	ND		2400	300	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Bromodichloromethane	ND		2400	540	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
cis-1,3-Dichloropropene	ND *		800	160	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
4-Methyl-2-pentanone	ND *		16000	3200	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Toluene	ND *		6000	540	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
trans-1,3-Dichloropropene	ND *		1600	280	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
1,1,2-Trichloroethane	ND *		800	300	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Tetrachloroethene	ND *		1600	210	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
1,3-Dichloropropane	ND *		2400	550	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
2-Hexanone	ND *		4000	1400	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Dibromochloromethane	ND *		1600	450	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
1,2-Dibromoethane	ND *		800	150	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Chlorobenzene	ND		1600	190	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Ethylbenzene	41000 *		1600	370	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
1,1,1,2-Tetrachloroethane	ND		1600	430	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
m-Xylene & p-Xylene	180000		8000	600	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
o-Xylene	77000 *		2400	540	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Styrene	ND *		1600	250	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Bromoform	ND *		8000	1100	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Isopropylbenzene	19000 *		1600	350	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Bromobenzene	ND		4000	690	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
N-Propylbenzene	34000		1600	280	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
1,1,1,2,2-Tetrachloroethane	ND *		800	310	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
4-Chlorotoluene	ND		1600	390	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
t-Butylbenzene	ND		1600	310	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-2 (7-7.5)

Lab Sample ID: 580-87288-4

Date Collected: 06/25/19 13:30

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 86.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	100000		1600	540	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
sec-Butylbenzene	11000		1600	350	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
1,3-Dichlorobenzene	ND		2400	530	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
4-Isopropyltoluene	9100		1600	410	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
1,4-Dichlorobenzene	ND		2400	430	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
n-Butylbenzene	18000 *		6000	320	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
1,2-Dichlorobenzene	ND		1600	350	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
1,2-Dibromo-3-Chloropropane	ND		10000	610	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
1,2,4-Trichlorobenzene	ND		2400	620	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
1,2,3-Trichlorobenzene	ND		6000	1300	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Hexachlorobutadiene	ND		6000	1300	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Naphthalene	74000		4000	1100	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
Methyl tert-butyl ether	ND		1600	240	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
1,2,3-Trichloropropane	ND		1600	460	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
1,3,5-Trimethylbenzene	39000		1600	310	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1
2-Chlorotoluene	ND		1600	350	ug/Kg	☼	07/09/19 08:00	07/09/19 15:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	101		80 - 120	07/09/19 08:00	07/09/19 15:58	1
<i>4-Bromofluorobenzene (Surr)</i>	97		80 - 120	07/09/19 08:00	07/09/19 15:58	1
<i>Dibromofluoromethane (Surr)</i>	99		80 - 120	07/09/19 08:00	07/09/19 15:58	1
<i>Trifluorotoluene (Surr)</i>	104		80 - 120	07/09/19 08:00	07/09/19 15:58	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	108		80 - 121	07/09/19 08:00	07/09/19 15:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND	H	8000	1800	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Chloromethane	ND	H	4000	410	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Vinyl chloride	ND	H	6000	1100	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Bromomethane	ND	H	8000	540	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Chloroethane	ND	H	16000	400	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Trichlorofluoromethane	ND	H	8000	460	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
1,1-Dichloroethene	ND	H	1600	490	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Carbon disulfide	ND	H	2400	490	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Acetone	ND	H	32000	7000	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Methylene Chloride	ND	H	10000	2600	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
trans-1,2-Dichloroethene	ND	H	2400	590	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
1,1-Dichloroethane	ND	H	1600	370	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
2,2-Dichloropropane	ND	H	1600	490	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
2-Butanone	ND	H	24000	7400	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
cis-1,2-Dichloroethene	ND	H	2400	510	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Bromochloromethane	ND	H	1600	250	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Chloroform	ND	H	1600	170	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
1,1,1-Trichloroethane	ND	H	1600	390	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Carbon tetrachloride	ND	H	800	330	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
1,1-Dichloropropene	ND	H	1600	210	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Benzene	ND	H	1200	150	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
1,2-Dichloroethane	ND	H	800	220	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Trichloroethene	ND	H	2400	890	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
1,2-Dichloropropane	ND	H	800	270	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-2 (7-7.5)

Lab Sample ID: 580-87288-4

Date Collected: 06/25/19 13:30

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 86.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	ND	H	2400	300	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Bromodichloromethane	ND	H	2400	540	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
cis-1,3-Dichloropropene	ND	H	800	160	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
4-Methyl-2-pentanone	ND	H	16000	3200	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Toluene	ND	H	6000	540	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
trans-1,3-Dichloropropene	ND	H	1600	280	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
1,1,2-Trichloroethane	ND	H	800	300	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Tetrachloroethene	ND	H	1600	210	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
1,3-Dichloropropane	ND	H	2400	550	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
2-Hexanone	ND	H	4000	1400	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Dibromochloromethane	ND	H	1600	450	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
1,2-Dibromoethane	ND	H	800	150	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Chlorobenzene	ND	H	1600	190	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Ethylbenzene	33000	H	1600	370	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
1,1,1,2-Tetrachloroethane	ND	H	1600	430	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
m-Xylene & p-Xylene	130000	H	8000	600	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
o-Xylene	59000	H	2400	540	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Styrene	ND	H	1600	250	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Bromoform	ND	H	8000	1100	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Isopropylbenzene	15000	H	1600	350	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Bromobenzene	ND	H	4000	690	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
N-Propylbenzene	26000	H	1600	280	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
1,1,2,2-Tetrachloroethane	ND	H	800	310	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
4-Chlorotoluene	ND	H	1600	390	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
t-Butylbenzene	ND	H	1600	310	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
1,2,4-Trimethylbenzene	76000	H	1600	540	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
sec-Butylbenzene	8700	H	1600	350	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
1,3-Dichlorobenzene	ND	H	2400	530	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
4-Isopropyltoluene	7200	H	1600	410	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
1,4-Dichlorobenzene	ND	H	2400	430	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
n-Butylbenzene	13000	H	6000	320	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
1,2-Dichlorobenzene	ND	H	1600	350	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
1,2-Dibromo-3-Chloropropane	ND	H	10000	610	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
1,2,4-Trichlorobenzene	ND	H	2400	620	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
1,2,3-Trichlorobenzene	ND	H	6000	1300	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Hexachlorobutadiene	ND	H	6000	1300	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Naphthalene	56000	H	4000	1100	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
Methyl tert-butyl ether	ND	H	1600	240	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
1,2,3-Trichloropropane	ND	H	1600	460	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
1,3,5-Trimethylbenzene	28000	H	1600	310	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1
2-Chlorotoluene	ND	H	1600	350	ug/Kg	☼	07/16/19 08:00	07/16/19 15:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120	07/16/19 08:00	07/16/19 15:06	1
4-Bromofluorobenzene (Surr)	102		80 - 120	07/16/19 08:00	07/16/19 15:06	1
Dibromofluoromethane (Surr)	98		80 - 120	07/16/19 08:00	07/16/19 15:06	1
Trifluorotoluene (Surr)	97		80 - 120	07/16/19 08:00	07/16/19 15:06	1
1,2-Dichloroethane-d4 (Surr)	100		80 - 121	07/16/19 08:00	07/16/19 15:06	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-2 (7-7.5)

Lab Sample ID: 580-87288-4

Date Collected: 06/25/19 13:30

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 86.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	400		5.1	0.51	ug/Kg	☼	07/05/19 09:28	07/08/19 20:03	1
Acenaphthene	840		5.1	0.61	ug/Kg	☼	07/05/19 09:28	07/08/19 20:03	1
Fluorene	960 *		5.1	0.51	ug/Kg	☼	07/05/19 09:28	07/08/19 20:03	1
Phenanthrene	570		5.1	1.7	ug/Kg	☼	07/05/19 09:28	07/08/19 20:03	1
Anthracene	23		5.1	0.61	ug/Kg	☼	07/05/19 09:28	07/08/19 20:03	1
Fluoranthene	8.0		5.1	1.4	ug/Kg	☼	07/05/19 09:28	07/08/19 20:03	1
Pyrene	7.3		5.1	0.99	ug/Kg	☼	07/05/19 09:28	07/08/19 20:03	1
Benzo[a]anthracene	ND		5.1	0.78	ug/Kg	☼	07/05/19 09:28	07/08/19 20:03	1
Chrysene	ND		5.1	1.5	ug/Kg	☼	07/05/19 09:28	07/08/19 20:03	1
Benzo[b]fluoranthene	ND		5.1	0.60	ug/Kg	☼	07/05/19 09:28	07/08/19 20:03	1
Benzo[k]fluoranthene	ND		5.1	0.61	ug/Kg	☼	07/05/19 09:28	07/08/19 20:03	1
Benzo[a]pyrene	ND		5.1	0.86	ug/Kg	☼	07/05/19 09:28	07/08/19 20:03	1
Indeno[1,2,3-cd]pyrene	ND		5.1	0.61	ug/Kg	☼	07/05/19 09:28	07/08/19 20:03	1
Dibenz(a,h)anthracene	ND		5.1	0.74	ug/Kg	☼	07/05/19 09:28	07/08/19 20:03	1
Benzo[g,h,i]perylene	ND		5.1	0.51	ug/Kg	☼	07/05/19 09:28	07/08/19 20:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14	72		57 - 120				07/05/19 09:28	07/08/19 20:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	18000		100	33	ug/Kg	☼	07/05/19 09:28	07/09/19 12:08	20
2-Methylnaphthalene	31000		100	42	ug/Kg	☼	07/05/19 09:28	07/09/19 12:08	20
1-Methylnaphthalene	25000		100	13	ug/Kg	☼	07/05/19 09:28	07/09/19 12:08	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14	63		57 - 120				07/05/19 09:28	07/09/19 12:08	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	2800		80	34	mg/Kg	☼	07/05/19 10:19	07/07/19 05:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	225	X	50 - 150				07/05/19 10:19	07/07/19 05:57	1
4-Bromofluorobenzene (Surr)	421	X	50 - 150				07/05/19 10:19	07/07/19 05:57	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)	6100		21	9.5	mg/Kg	☼	07/06/19 11:27	07/09/19 19:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	109		50 - 150				07/06/19 11:27	07/09/19 19:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.7		0.1	0.1	%			07/08/19 13:13	1
Percent Moisture	13.3		0.1	0.1	%			07/08/19 13:13	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: Dup-01

Lab Sample ID: 580-87288-5

Date Collected: 06/25/19 00:01

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 87.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		4200	960	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Chloromethane	ND		2100	210	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Vinyl chloride	ND		3100	550	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Bromomethane	ND		4200	280	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Chloroethane	ND		8300	210	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Trichlorofluoromethane	ND		4200	240	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
1,1-Dichloroethene	ND		830	260	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Carbon disulfide	ND		1300	250	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Acetone	ND		17000	3600	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Methylene Chloride	ND		5200	1300	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
trans-1,2-Dichloroethene	ND		1300	300	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
1,1-Dichloroethane	ND		830	190	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
2,2-Dichloropropane	ND		830	250	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
2-Butanone	ND		13000	3900	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
cis-1,2-Dichloroethene	ND		1300	260	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Bromochloromethane	ND *		830	130	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Chloroform	ND		830	88	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
1,1,1-Trichloroethane	ND *		830	200	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Carbon tetrachloride	ND		420	170	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
1,1-Dichloropropene	ND *		830	110	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Benzene	ND		630	79	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
1,2-Dichloroethane	ND *		420	110	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Trichloroethene	ND		1300	460	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
1,2-Dichloropropane	ND		420	140	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Dibromomethane	ND		1300	150	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Bromodichloromethane	ND		1300	280	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
cis-1,3-Dichloropropene	ND *		420	83	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
4-Methyl-2-pentanone	ND *		8300	1700	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Toluene	4700 *		3100	280	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
trans-1,3-Dichloropropene	ND *		830	150	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
1,1,2-Trichloroethane	ND *		420	150	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Tetrachloroethene	ND *		830	110	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
1,3-Dichloropropane	ND *		1300	290	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
2-Hexanone	ND *		2100	740	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Dibromochloromethane	ND *		830	240	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
1,2-Dibromoethane	ND *		420	79	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Chlorobenzene	ND		830	100	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Ethylbenzene	30000 *		830	190	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
1,1,1,2-Tetrachloroethane	ND		830	220	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
m-Xylene & p-Xylene	150000 E		4200	310	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
o-Xylene	67000 *		1300	280	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Styrene	ND *		830	130	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Bromoform	ND *		4200	550	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Isopropylbenzene	17000 *		830	180	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Bromobenzene	ND		2100	360	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
N-Propylbenzene	28000		830	140	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
1,1,1,2,2-Tetrachloroethane	ND *		420	160	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
4-Chlorotoluene	ND		830	200	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
t-Butylbenzene	ND		830	160	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: Dup-01

Lab Sample ID: 580-87288-5

Date Collected: 06/25/19 00:01

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 87.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	98000		830	280	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
sec-Butylbenzene	11000		830	180	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
1,3-Dichlorobenzene	ND		1300	280	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
4-Isopropyltoluene	9800		830	210	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
1,4-Dichlorobenzene	ND		1300	230	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
n-Butylbenzene	19000 *		3100	170	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
1,2-Dichlorobenzene	ND		830	180	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
1,2-Dibromo-3-Chloropropane	ND		5200	320	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
1,2,4-Trichlorobenzene	ND		1300	320	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
1,2,3-Trichlorobenzene	ND		3100	670	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Hexachlorobutadiene	ND		3100	700	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Naphthalene	40000		2100	590	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
Methyl tert-butyl ether	ND		830	130	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
1,2,3-Trichloropropane	ND		830	240	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
1,3,5-Trimethylbenzene	38000		830	160	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1
2-Chlorotoluene	ND		830	180	ug/Kg	☼	07/09/19 08:00	07/09/19 16:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	114		80 - 120	07/09/19 08:00	07/09/19 16:23	1
<i>4-Bromofluorobenzene (Surr)</i>	114		80 - 120	07/09/19 08:00	07/09/19 16:23	1
<i>Dibromofluoromethane (Surr)</i>	107		80 - 120	07/09/19 08:00	07/09/19 16:23	1
<i>Trifluorotoluene (Surr)</i>	106		80 - 120	07/09/19 08:00	07/09/19 16:23	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	118		80 - 121	07/09/19 08:00	07/09/19 16:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND	H	10000	2400	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Chloromethane	ND	H	5200	530	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Vinyl chloride	ND	H	7800	1400	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Bromomethane	ND	H	10000	700	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Chloroethane	ND	H	21000	520	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Trichlorofluoromethane	ND	H	10000	590	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
1,1-Dichloroethene	ND	H	2100	640	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Carbon disulfide	ND	H	3100	630	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Acetone	ND	H	42000	9100	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Methylene Chloride	ND	H	13000	3400	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
trans-1,2-Dichloroethene	ND	H	3100	760	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
1,1-Dichloroethane	ND	H	2100	480	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
2,2-Dichloropropane	ND	H	2100	630	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
2-Butanone	ND	H	31000	9700	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
cis-1,2-Dichloroethene	ND	H	3100	660	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Bromochloromethane	ND	H	2100	320	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Chloroform	ND	H	2100	220	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
1,1,1-Trichloroethane	ND	H	2100	500	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Carbon tetrachloride	ND	H	1000	420	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
1,1-Dichloropropene	ND	H	2100	280	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Benzene	ND	H	1600	200	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
1,2-Dichloroethane	ND	H	1000	290	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Trichloroethene	ND	H	3100	1200	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
1,2-Dichloropropane	ND	H	1000	340	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: Dup-01

Lab Sample ID: 580-87288-5

Date Collected: 06/25/19 00:01

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 87.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	ND	H	3100	390	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Bromodichloromethane	ND	H	3100	700	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
cis-1,3-Dichloropropene	ND	H	1000	210	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
4-Methyl-2-pentanone	ND	H	21000	4200	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Toluene	ND	H	7800	700	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
trans-1,3-Dichloropropene	ND	H	2100	370	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
1,1,2-Trichloroethane	ND	H	1000	390	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Tetrachloroethene	ND	H	2100	280	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
1,3-Dichloropropane	ND	H	3100	720	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
2-Hexanone	ND	H	5200	1900	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Dibromochloromethane	ND	H	2100	590	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
1,2-Dibromoethane	ND	H	1000	200	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Chlorobenzene	ND	H	2100	250	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Ethylbenzene	17000	H	2100	470	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
1,1,1,2-Tetrachloroethane	ND	H	2100	550	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
m-Xylene & p-Xylene	79000	H	10000	780	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
o-Xylene	37000	H	3100	700	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Styrene	ND	H	2100	320	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Bromoform	ND	H	10000	1400	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Isopropylbenzene	9700	H	2100	450	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Bromobenzene	ND	H	5200	890	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
N-Propylbenzene	19000	H	2100	360	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
1,1,2,2-Tetrachloroethane	ND	H	1000	400	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
4-Chlorotoluene	ND	H	2100	510	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
t-Butylbenzene	ND	H	2100	400	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
1,2,4-Trimethylbenzene	59000	H	2100	700	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
sec-Butylbenzene	7300	H	2100	450	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
1,3-Dichlorobenzene	ND	H	3100	690	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
4-Isopropyltoluene	6600	H	2100	530	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
1,4-Dichlorobenzene	ND	H	3100	560	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
n-Butylbenzene	12000	H	7800	420	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
1,2-Dichlorobenzene	ND	H	2100	450	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
1,2-Dibromo-3-Chloropropane	ND	H	13000	790	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
1,2,4-Trichlorobenzene	ND	H	3100	800	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
1,2,3-Trichlorobenzene	ND	H	7800	1700	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Hexachlorobutadiene	ND	H	7800	1700	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Naphthalene	27000	H	5200	1500	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
Methyl tert-butyl ether	ND	H	2100	310	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
1,2,3-Trichloropropane	ND	H	2100	600	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
1,3,5-Trimethylbenzene	23000	H	2100	400	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1
2-Chlorotoluene	ND	H	2100	460	ug/Kg	☼	07/16/19 08:00	07/16/19 15:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120	07/16/19 08:00	07/16/19 15:31	1
4-Bromofluorobenzene (Surr)	104		80 - 120	07/16/19 08:00	07/16/19 15:31	1
Dibromofluoromethane (Surr)	100		80 - 120	07/16/19 08:00	07/16/19 15:31	1
Trifluorotoluene (Surr)	95		80 - 120	07/16/19 08:00	07/16/19 15:31	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 121	07/16/19 08:00	07/16/19 15:31	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: Dup-01

Lab Sample ID: 580-87288-5

Date Collected: 06/25/19 00:01

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 87.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	1000		4.6	0.46	ug/Kg	☼	07/05/19 09:28	07/08/19 20:30	1
Phenanthrene	1000		4.6	1.5	ug/Kg	☼	07/05/19 09:28	07/08/19 20:30	1
Anthracene	240		4.6	0.55	ug/Kg	☼	07/05/19 09:28	07/08/19 20:30	1
Fluoranthene	6.3		4.6	1.3	ug/Kg	☼	07/05/19 09:28	07/08/19 20:30	1
Pyrene	6.7		4.6	0.89	ug/Kg	☼	07/05/19 09:28	07/08/19 20:30	1
Benzo[a]anthracene	ND		4.6	0.70	ug/Kg	☼	07/05/19 09:28	07/08/19 20:30	1
Chrysene	ND		4.6	1.4	ug/Kg	☼	07/05/19 09:28	07/08/19 20:30	1
Benzo[b]fluoranthene	ND		4.6	0.54	ug/Kg	☼	07/05/19 09:28	07/08/19 20:30	1
Benzo[k]fluoranthene	ND		4.6	0.55	ug/Kg	☼	07/05/19 09:28	07/08/19 20:30	1
Benzo[a]pyrene	ND		4.6	0.77	ug/Kg	☼	07/05/19 09:28	07/08/19 20:30	1
Indeno[1,2,3-cd]pyrene	ND		4.6	0.55	ug/Kg	☼	07/05/19 09:28	07/08/19 20:30	1
Dibenz(a,h)anthracene	ND		4.6	0.66	ug/Kg	☼	07/05/19 09:28	07/08/19 20:30	1
Benzo[g,h,i]perylene	ND		4.6	0.46	ug/Kg	☼	07/05/19 09:28	07/08/19 20:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	0.02	X	57 - 120	07/05/19 09:28	07/08/19 20:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	22000		92	30	ug/Kg	☼	07/05/19 09:28	07/09/19 12:35	20
1-Methylnaphthalene	32000		92	12	ug/Kg	☼	07/05/19 09:28	07/09/19 12:35	20
Acenaphthene	1200		92	11	ug/Kg	☼	07/05/19 09:28	07/09/19 12:35	20
Fluorene	1200	*	92	9.2	ug/Kg	☼	07/05/19 09:28	07/09/19 12:35	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	0.1	X	57 - 120	07/05/19 09:28	07/09/19 12:35	20

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	47000		230	94	ug/Kg	☼	07/05/19 09:28	07/09/19 13:29	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	0.2	X	57 - 120	07/05/19 09:28	07/09/19 13:29	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	4600		100	44	mg/Kg	☼	07/05/19 10:19	07/07/19 06:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	267	X	50 - 150	07/05/19 10:19	07/07/19 06:28	1
4-Bromofluorobenzene (Surr)	520	X	50 - 150	07/05/19 10:19	07/07/19 06:28	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)	8700		22	9.8	mg/Kg	☼	07/06/19 11:27	07/09/19 19:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	143		50 - 150	07/06/19 11:27	07/09/19 19:22	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: Dup-01
Date Collected: 06/25/19 00:01
Date Received: 06/27/19 11:30

Lab Sample ID: 580-87288-5
Matrix: Solid
Percent Solids: 87.9

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.9		0.1	0.1	%			07/08/19 13:13	1
Percent Moisture	12.1		0.1	0.1	%			07/08/19 13:13	1

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

Client Sample Results

Client: Stantec Consulting Services Inc
 Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: TB-01

Lab Sample ID: 580-87288-6

Date Collected: 06/25/19 00:01

Matrix: Solid

Date Received: 06/27/19 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		200	46	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Chloromethane	ND		100	10	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Vinyl chloride	ND		150	26	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Bromomethane	ND		200	13	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Chloroethane	ND		400	10	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Trichlorofluoromethane	ND		200	11	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
1,1-Dichloroethene	ND		40	12	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Carbon disulfide	ND		60	12	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Acetone	ND		800	170	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Methylene Chloride	ND		250	65	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
trans-1,2-Dichloroethene	ND		60	15	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
1,1-Dichloroethane	ND		40	9.2	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
2,2-Dichloropropane	ND		40	12	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
2-Butanone	ND		600	190	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
cis-1,2-Dichloroethene	ND		60	13	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Bromochloromethane	ND *		40	6.2	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Chloroform	ND		40	4.2	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
1,1,1-Trichloroethane	ND *		40	9.6	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Carbon tetrachloride	ND		20	8.1	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
1,1-Dichloropropene	ND *		40	5.3	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Benzene	ND		30	3.8	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
1,2-Dichloroethane	ND *		20	5.5	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Trichloroethene	ND		60	22	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
1,2-Dichloropropane	ND		20	6.6	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Dibromomethane	ND		60	7.4	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Bromodichloromethane	ND		60	13	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
cis-1,3-Dichloropropene	ND *		20	4.0	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
4-Methyl-2-pentanone	ND *		400	81	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Toluene	ND *		150	14	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
trans-1,3-Dichloropropene	ND *		40	7.0	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
1,1,2-Trichloroethane	ND *		20	7.4	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Tetrachloroethene	ND *		40	5.3	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
1,3-Dichloropropane	ND *		60	14	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
2-Hexanone	ND *		100	36	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Dibromochloromethane	ND *		40	11	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
1,2-Dibromoethane	ND *		20	3.8	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Chlorobenzene	ND		40	4.8	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Ethylbenzene	ND *		40	9.1	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
1,1,1,2-Tetrachloroethane	ND		40	11	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
m-Xylene & p-Xylene	ND		200	15	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
o-Xylene	ND *		60	13	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Styrene	ND *		40	6.1	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Bromoform	ND *		200	26	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Isopropylbenzene	ND *		40	8.6	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Bromobenzene	ND		100	17	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
N-Propylbenzene	ND		40	6.9	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
1,1,2,2-Tetrachloroethane	ND *		20	7.6	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
4-Chlorotoluene	ND		40	9.8	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
t-Butylbenzene	ND		40	7.7	ug/Kg		07/09/19 08:00	07/09/19 14:16	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: TB-01

Lab Sample ID: 580-87288-6

Date Collected: 06/25/19 00:01

Matrix: Solid

Date Received: 06/27/19 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		40	14	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
sec-Butylbenzene	ND		40	8.6	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
1,3-Dichlorobenzene	ND		60	13	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
4-Isopropyltoluene	ND		40	10	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
1,4-Dichlorobenzene	ND		60	11	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
n-Butylbenzene	ND	*	150	8.0	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
1,2-Dichlorobenzene	ND		40	8.7	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
1,2-Dibromo-3-Chloropropane	ND		250	15	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
1,2,4-Trichlorobenzene	ND		60	15	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
1,2,3-Trichlorobenzene	ND		150	32	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Hexachlorobutadiene	ND		150	33	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Naphthalene	ND		100	28	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
Methyl tert-butyl ether	ND		40	6.0	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
1,2,3-Trichloropropane	ND		40	12	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
1,3,5-Trimethylbenzene	ND		40	7.6	ug/Kg		07/09/19 08:00	07/09/19 14:16	1
2-Chlorotoluene	ND		40	8.8	ug/Kg		07/09/19 08:00	07/09/19 14:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	157	X	80 - 120	07/09/19 08:00	07/09/19 14:16	1
4-Bromofluorobenzene (Surr)	87		80 - 120	07/09/19 08:00	07/09/19 14:16	1
Dibromofluoromethane (Surr)	99		80 - 120	07/09/19 08:00	07/09/19 14:16	1
Trifluorotoluene (Surr)	72	X	80 - 120	07/09/19 08:00	07/09/19 14:16	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 121	07/09/19 08:00	07/09/19 14:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND	H *	200	46	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Chloromethane	ND	H	100	10	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Vinyl chloride	ND	H	150	26	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Bromomethane	ND	H	200	13	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Chloroethane	ND	H	400	10	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Trichlorofluoromethane	ND	H	200	11	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
1,1-Dichloroethene	ND	H	40	12	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Carbon disulfide	ND	H	60	12	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Acetone	ND	H	800	170	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Methylene Chloride	ND	H	250	65	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
trans-1,2-Dichloroethene	ND	H	60	15	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
1,1-Dichloroethane	ND	H	40	9.2	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
2,2-Dichloropropane	ND	H	40	12	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
2-Butanone	ND	H	600	190	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
cis-1,2-Dichloroethene	ND	H	60	13	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Bromochloromethane	ND	H	40	6.2	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Chloroform	ND	H	40	4.2	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
1,1,1-Trichloroethane	ND	H	40	9.6	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Carbon tetrachloride	ND	H	20	8.1	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
1,1-Dichloropropene	ND	H	40	5.3	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Benzene	ND	H	30	3.8	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
1,2-Dichloroethane	ND	H	20	5.5	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Trichloroethene	ND	H	60	22	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
1,2-Dichloropropane	ND	H	20	6.6	ug/Kg		07/17/19 08:00	07/17/19 13:49	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: TB-01

Lab Sample ID: 580-87288-6

Date Collected: 06/25/19 00:01

Matrix: Solid

Date Received: 06/27/19 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	ND	H	60	7.4	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Bromodichloromethane	ND	H	60	13	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
cis-1,3-Dichloropropene	ND	H	20	4.0	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
4-Methyl-2-pentanone	ND	H	400	81	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Toluene	ND	H	150	14	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
trans-1,3-Dichloropropene	ND	H	40	7.0	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
1,1,2-Trichloroethane	ND	H	20	7.4	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Tetrachloroethene	ND	H	40	5.3	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
1,3-Dichloropropane	ND	H	60	14	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
2-Hexanone	ND	H	100	36	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Dibromochloromethane	ND	H	40	11	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
1,2-Dibromoethane	ND	H	20	3.8	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Chlorobenzene	ND	H	40	4.8	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Ethylbenzene	ND	H	40	9.1	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
1,1,1,2-Tetrachloroethane	ND	H	40	11	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
m-Xylene & p-Xylene	ND	H	200	15	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
o-Xylene	ND	H	60	13	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Styrene	ND	H	40	6.1	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Bromoform	ND	H	200	26	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Isopropylbenzene	ND	H	40	8.6	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Bromobenzene	ND	H	100	17	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
N-Propylbenzene	ND	H	40	6.9	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
1,1,2,2-Tetrachloroethane	ND	H	20	7.6	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
4-Chlorotoluene	ND	H	40	9.8	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
t-Butylbenzene	ND	H	40	7.7	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
1,2,4-Trimethylbenzene	ND	H	40	14	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
sec-Butylbenzene	ND	H	40	8.6	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
1,3-Dichlorobenzene	ND	H	60	13	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
4-Isopropyltoluene	ND	H	40	10	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
1,4-Dichlorobenzene	ND	H	60	11	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
n-Butylbenzene	ND	H	150	8.0	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
1,2-Dichlorobenzene	ND	H	40	8.7	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
1,2-Dibromo-3-Chloropropane	ND	H	250	15	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
1,2,4-Trichlorobenzene	ND	H	60	15	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
1,2,3-Trichlorobenzene	ND	H	150	32	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Hexachlorobutadiene	ND	H	150	33	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Naphthalene	ND	H	100	28	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
Methyl tert-butyl ether	ND	H	40	6.0	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
1,2,3-Trichloropropane	ND	H	40	12	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
1,3,5-Trimethylbenzene	ND	H	40	7.6	ug/Kg		07/17/19 08:00	07/17/19 13:49	1
2-Chlorotoluene	ND	H	40	8.8	ug/Kg		07/17/19 08:00	07/17/19 13:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	104		80 - 120	07/17/19 08:00	07/17/19 13:49	1
4-Bromofluorobenzene (Surr)	101		80 - 120	07/17/19 08:00	07/17/19 13:49	1
Dibromofluoromethane (Surr)	95		80 - 120	07/17/19 08:00	07/17/19 13:49	1
Trifluorotoluene (Surr)	67	X	80 - 120	07/17/19 08:00	07/17/19 13:49	1
1,2-Dichloroethane-d4 (Surr)	98		80 - 121	07/17/19 08:00	07/17/19 13:49	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
 Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-1

Lab Sample ID: 580-87288-7

Date Collected: 06/26/19 12:45

Matrix: Water

Date Received: 06/27/19 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		10	2.3	ug/L			07/05/19 21:59	1
Chloromethane	ND		20	5.4	ug/L			07/05/19 21:59	1
Vinyl chloride	ND		1.0	0.22	ug/L			07/05/19 21:59	1
Bromomethane	ND		6.0	1.1	ug/L			07/05/19 21:59	1
Chloroethane	ND		5.0	1.1	ug/L			07/05/19 21:59	1
Trichlorofluoromethane	ND		3.0	0.63	ug/L			07/05/19 21:59	1
1,1-Dichloroethene	ND		4.0	0.78	ug/L			07/05/19 21:59	1
Carbon disulfide	ND	*	3.0	0.53	ug/L			07/05/19 21:59	1
Acetone	ND		50	7.8	ug/L			07/05/19 21:59	1
Methylene Chloride	ND		5.0	1.4	ug/L			07/05/19 21:59	1
trans-1,2-Dichloroethene	ND		3.0	0.39	ug/L			07/05/19 21:59	1
1,1-Dichloroethane	ND		2.0	0.22	ug/L			07/05/19 21:59	1
2,2-Dichloropropane	ND		3.0	0.32	ug/L			07/05/19 21:59	1
2-Butanone	ND		20	4.7	ug/L			07/05/19 21:59	1
cis-1,2-Dichloroethene	ND		3.0	0.69	ug/L			07/05/19 21:59	1
Bromochloromethane	ND		2.0	0.29	ug/L			07/05/19 21:59	1
Chloroform	ND		5.0	0.50	ug/L			07/05/19 21:59	1
1,1,1-Trichloroethane	ND		3.0	0.39	ug/L			07/05/19 21:59	1
Carbon tetrachloride	ND		3.0	0.30	ug/L			07/05/19 21:59	1
1,1-Dichloropropene	ND		3.0	0.29	ug/L			07/05/19 21:59	1
Benzene	48		3.0	0.53	ug/L			07/05/19 21:59	1
1,2-Dichloroethane	ND		2.0	0.53	ug/L			07/05/19 21:59	1
Trichloroethene	ND		3.0	0.85	ug/L			07/05/19 21:59	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			07/05/19 21:59	1
Dibromomethane	ND		2.0	0.34	ug/L			07/05/19 21:59	1
Bromodichloromethane	ND		2.0	0.14	ug/L			07/05/19 21:59	1
cis-1,3-Dichloropropene	ND		1.0	0.20	ug/L			07/05/19 21:59	1
4-Methyl-2-pentanone	ND		15	2.5	ug/L			07/05/19 21:59	1
Toluene	140		2.0	0.39	ug/L			07/05/19 21:59	1
trans-1,3-Dichloropropene	ND		1.0	0.16	ug/L			07/05/19 21:59	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			07/05/19 21:59	1
Tetrachloroethene	ND		3.0	0.41	ug/L			07/05/19 21:59	1
1,3-Dichloropropane	ND		2.0	0.35	ug/L			07/05/19 21:59	1
2-Hexanone	ND		20	4.0	ug/L			07/05/19 21:59	1
Dibromochloromethane	ND		2.0	0.50	ug/L			07/05/19 21:59	1
1,2-Dibromoethane	ND		2.0	0.40	ug/L			07/05/19 21:59	1
Chlorobenzene	ND		2.0	0.44	ug/L			07/05/19 21:59	1
1,1,1,2-Tetrachloroethane	ND		2.0	0.18	ug/L			07/05/19 21:59	1
Styrene	ND		5.0	1.0	ug/L			07/05/19 21:59	1
Bromoform	ND		3.0	0.56	ug/L			07/05/19 21:59	1
Isopropylbenzene	56		2.0	0.51	ug/L			07/05/19 21:59	1
Bromobenzene	ND		2.0	0.43	ug/L			07/05/19 21:59	1
N-Propylbenzene	73		3.0	0.50	ug/L			07/05/19 21:59	1
1,1,2,2-Tetrachloroethane	ND		3.0	0.52	ug/L			07/05/19 21:59	1
4-Chlorotoluene	ND		2.0	0.51	ug/L			07/05/19 21:59	1
t-Butylbenzene	ND		3.0	0.58	ug/L			07/05/19 21:59	1
sec-Butylbenzene	13		3.0	0.49	ug/L			07/05/19 21:59	1
1,3-Dichlorobenzene	ND		2.0	0.18	ug/L			07/05/19 21:59	1
4-Isopropyltoluene	12		3.0	0.28	ug/L			07/05/19 21:59	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-1

Lab Sample ID: 580-87288-7

Date Collected: 06/26/19 12:45

Matrix: Water

Date Received: 06/27/19 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		4.0	0.98	ug/L			07/05/19 21:59	1
n-Butylbenzene	54		3.0	0.44	ug/L			07/05/19 21:59	1
1,2-Dichlorobenzene	ND		2.0	0.46	ug/L			07/05/19 21:59	1
1,2-Dibromo-3-Chloropropane	ND		10	1.8	ug/L			07/05/19 21:59	1
1,2,4-Trichlorobenzene	ND		2.0	0.33	ug/L			07/05/19 21:59	1
1,2,3-Trichlorobenzene	ND		5.0	1.1	ug/L			07/05/19 21:59	1
Hexachlorobutadiene	ND *		6.0	0.79	ug/L			07/05/19 21:59	1
Methyl tert-butyl ether	ND		2.0	0.44	ug/L			07/05/19 21:59	1
1,2,3-Trichloropropane	ND		2.0	0.41	ug/L			07/05/19 21:59	1
1,3,5-Trimethylbenzene	91		3.0	0.55	ug/L			07/05/19 21:59	1
2-Chlorotoluene	ND		3.0	0.51	ug/L			07/05/19 21:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	109		80 - 120		07/05/19 21:59	1
4-Bromofluorobenzene (Surr)	104		80 - 120		07/05/19 21:59	1
Dibromofluoromethane (Surr)	97		80 - 120		07/05/19 21:59	1
Trifluorotoluene (Surr)	95		80 - 120		07/05/19 21:59	1
1,2-Dichloroethane-d4 (Surr)	100		80 - 126		07/05/19 21:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	250		30	5.0	ug/L			07/08/19 22:54	10
m-Xylene & p-Xylene	1000		30	7.5	ug/L			07/08/19 22:54	10
1,2,4-Trimethylbenzene	230		30	6.1	ug/L			07/08/19 22:54	10
Naphthalene	140		40	9.3	ug/L			07/08/19 22:54	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 120		07/08/19 22:54	10
4-Bromofluorobenzene (Surr)	101		80 - 120		07/08/19 22:54	10
Dibromofluoromethane (Surr)	95		80 - 120		07/08/19 22:54	10
Trifluorotoluene (Surr)	103		80 - 120		07/08/19 22:54	10
1,2-Dichloroethane-d4 (Surr)	99		80 - 126		07/08/19 22:54	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	520		20	3.9	ug/L			07/09/19 20:27	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120		07/09/19 20:27	10
4-Bromofluorobenzene (Surr)	99		80 - 120		07/09/19 20:27	10
Dibromofluoromethane (Surr)	96		80 - 120		07/09/19 20:27	10
Trifluorotoluene (Surr)	101		80 - 120		07/09/19 20:27	10
1,2-Dichloroethane-d4 (Surr)	98		80 - 126		07/09/19 20:27	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	0.18		0.051	0.0091	ug/L		07/02/19 09:44	07/03/19 19:26	1
Acenaphthene	0.23		0.10	0.014	ug/L		07/02/19 09:44	07/03/19 19:26	1
Fluorene	0.72		0.10	0.017	ug/L		07/02/19 09:44	07/03/19 19:26	1
Phenanthrene	0.39		0.10	0.032	ug/L		07/02/19 09:44	07/03/19 19:26	1
Anthracene	ND		0.10	0.022	ug/L		07/02/19 09:44	07/03/19 19:26	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-1

Lab Sample ID: 580-87288-7

Date Collected: 06/26/19 12:45

Matrix: Water

Date Received: 06/27/19 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		0.20	0.051	ug/L		07/02/19 09:44	07/03/19 19:26	1
Pyrene	ND		0.10	0.034	ug/L		07/02/19 09:44	07/03/19 19:26	1
Benzo[a]anthracene	ND		0.051	0.014	ug/L		07/02/19 09:44	07/03/19 19:26	1
Chrysene	ND		0.10	0.016	ug/L		07/02/19 09:44	07/03/19 19:26	1
Benzo[b]fluoranthene	ND		0.051	0.011	ug/L		07/02/19 09:44	07/03/19 19:26	1
Benzo[k]fluoranthene	ND		0.051	0.012	ug/L		07/02/19 09:44	07/03/19 19:26	1
Benzo[a]pyrene	ND		0.10	0.011	ug/L		07/02/19 09:44	07/03/19 19:26	1
Indeno[1,2,3-cd]pyrene	ND		0.051	0.014	ug/L		07/02/19 09:44	07/03/19 19:26	1
Dibenz(a,h)anthracene	ND		0.10	0.026	ug/L		07/02/19 09:44	07/03/19 19:26	1
Benzo[g,h,i]perylene	ND		0.051	0.012	ug/L		07/02/19 09:44	07/03/19 19:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14	69		53 - 120				07/02/19 09:44	07/03/19 19:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	100		1.0	0.32	ug/L		07/02/19 09:44	07/05/19 17:17	10
2-Methylnaphthalene	54		2.0	0.40	ug/L		07/02/19 09:44	07/05/19 17:17	10
1-Methylnaphthalene	47		1.0	0.19	ug/L		07/02/19 09:44	07/05/19 17:17	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14	79		53 - 120				07/02/19 09:44	07/05/19 17:17	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	5.2		0.25	0.10	mg/L			07/01/19 18:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	117		50 - 150					07/01/19 18:55	1
4-Bromofluorobenzene (Surr)	236	X	50 - 150					07/01/19 18:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	1.8	*	0.12	0.079	mg/L		07/09/19 09:34	07/10/19 18:31	1
DRO (nC10-<nC25)	2.0	H	0.11	0.078	mg/L		07/12/19 10:48	07/17/19 13:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150				07/09/19 09:34	07/10/19 18:31	1
o-Terphenyl	88		50 - 150				07/12/19 10:48	07/17/19 13:49	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-2

Lab Sample ID: 580-87288-8

Date Collected: 06/26/19 14:15

Matrix: Water

Date Received: 06/27/19 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		10	2.3	ug/L			07/05/19 22:24	1
Chloromethane	ND		20	5.4	ug/L			07/05/19 22:24	1
Vinyl chloride	ND		1.0	0.22	ug/L			07/05/19 22:24	1
Bromomethane	ND		6.0	1.1	ug/L			07/05/19 22:24	1
Chloroethane	ND		5.0	1.1	ug/L			07/05/19 22:24	1
Trichlorofluoromethane	ND		3.0	0.63	ug/L			07/05/19 22:24	1
1,1-Dichloroethene	ND		4.0	0.78	ug/L			07/05/19 22:24	1
Carbon disulfide	ND	*	3.0	0.53	ug/L			07/05/19 22:24	1
Acetone	ND		50	7.8	ug/L			07/05/19 22:24	1
Methylene Chloride	ND		5.0	1.4	ug/L			07/05/19 22:24	1
trans-1,2-Dichloroethene	ND		3.0	0.39	ug/L			07/05/19 22:24	1
1,1-Dichloroethane	ND		2.0	0.22	ug/L			07/05/19 22:24	1
2,2-Dichloropropane	ND		3.0	0.32	ug/L			07/05/19 22:24	1
2-Butanone	ND		20	4.7	ug/L			07/05/19 22:24	1
cis-1,2-Dichloroethene	ND		3.0	0.69	ug/L			07/05/19 22:24	1
Bromochloromethane	ND		2.0	0.29	ug/L			07/05/19 22:24	1
Chloroform	ND		5.0	0.50	ug/L			07/05/19 22:24	1
1,1,1-Trichloroethane	ND		3.0	0.39	ug/L			07/05/19 22:24	1
Carbon tetrachloride	ND		3.0	0.30	ug/L			07/05/19 22:24	1
1,1-Dichloropropene	ND		3.0	0.29	ug/L			07/05/19 22:24	1
Benzene	74		3.0	0.53	ug/L			07/05/19 22:24	1
1,2-Dichloroethane	ND		2.0	0.53	ug/L			07/05/19 22:24	1
Trichloroethene	ND		3.0	0.85	ug/L			07/05/19 22:24	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			07/05/19 22:24	1
Dibromomethane	ND		2.0	0.34	ug/L			07/05/19 22:24	1
Bromodichloromethane	ND		2.0	0.14	ug/L			07/05/19 22:24	1
cis-1,3-Dichloropropene	ND		1.0	0.20	ug/L			07/05/19 22:24	1
4-Methyl-2-pentanone	ND		15	2.5	ug/L			07/05/19 22:24	1
Toluene	17		2.0	0.39	ug/L			07/05/19 22:24	1
trans-1,3-Dichloropropene	ND		1.0	0.16	ug/L			07/05/19 22:24	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			07/05/19 22:24	1
Tetrachloroethene	ND		3.0	0.41	ug/L			07/05/19 22:24	1
1,3-Dichloropropane	ND		2.0	0.35	ug/L			07/05/19 22:24	1
2-Hexanone	ND		20	4.0	ug/L			07/05/19 22:24	1
Dibromochloromethane	ND		2.0	0.50	ug/L			07/05/19 22:24	1
1,2-Dibromoethane	ND		2.0	0.40	ug/L			07/05/19 22:24	1
Chlorobenzene	ND		2.0	0.44	ug/L			07/05/19 22:24	1
1,1,1,2-Tetrachloroethane	ND		2.0	0.18	ug/L			07/05/19 22:24	1
Styrene	ND		5.0	1.0	ug/L			07/05/19 22:24	1
Bromoform	ND		3.0	0.56	ug/L			07/05/19 22:24	1
Isopropylbenzene	96		2.0	0.51	ug/L			07/05/19 22:24	1
Bromobenzene	ND		2.0	0.43	ug/L			07/05/19 22:24	1
N-Propylbenzene	120		3.0	0.50	ug/L			07/05/19 22:24	1
1,1,2,2-Tetrachloroethane	ND		3.0	0.52	ug/L			07/05/19 22:24	1
4-Chlorotoluene	ND		2.0	0.51	ug/L			07/05/19 22:24	1
t-Butylbenzene	ND		3.0	0.58	ug/L			07/05/19 22:24	1
sec-Butylbenzene	23		3.0	0.49	ug/L			07/05/19 22:24	1
1,3-Dichlorobenzene	ND		2.0	0.18	ug/L			07/05/19 22:24	1
4-Isopropyltoluene	20		3.0	0.28	ug/L			07/05/19 22:24	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-2

Lab Sample ID: 580-87288-8

Date Collected: 06/26/19 14:15

Matrix: Water

Date Received: 06/27/19 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		4.0	0.98	ug/L			07/05/19 22:24	1
n-Butylbenzene	84		3.0	0.44	ug/L			07/05/19 22:24	1
1,2-Dichlorobenzene	ND		2.0	0.46	ug/L			07/05/19 22:24	1
1,2-Dibromo-3-Chloropropane	ND		10	1.8	ug/L			07/05/19 22:24	1
1,2,4-Trichlorobenzene	ND		2.0	0.33	ug/L			07/05/19 22:24	1
1,2,3-Trichlorobenzene	ND		5.0	1.1	ug/L			07/05/19 22:24	1
Hexachlorobutadiene	ND *		6.0	0.79	ug/L			07/05/19 22:24	1
Methyl tert-butyl ether	ND		2.0	0.44	ug/L			07/05/19 22:24	1
1,2,3-Trichloropropane	ND		2.0	0.41	ug/L			07/05/19 22:24	1
1,3,5-Trimethylbenzene	140		3.0	0.55	ug/L			07/05/19 22:24	1
2-Chlorotoluene	ND		3.0	0.51	ug/L			07/05/19 22:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	107		80 - 120		07/05/19 22:24	1
4-Bromofluorobenzene (Surr)	105		80 - 120		07/05/19 22:24	1
Dibromofluoromethane (Surr)	92		80 - 120		07/05/19 22:24	1
Trifluorotoluene (Surr)	95		80 - 120		07/05/19 22:24	1
1,2-Dichloroethane-d4 (Surr)	98		80 - 126		07/05/19 22:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	420		30	5.0	ug/L			07/08/19 23:19	10
1,2,4-Trimethylbenzene	430		30	6.1	ug/L			07/08/19 23:19	10
Naphthalene	270		40	9.3	ug/L			07/08/19 23:19	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120		07/08/19 23:19	10
4-Bromofluorobenzene (Surr)	103		80 - 120		07/08/19 23:19	10
Dibromofluoromethane (Surr)	95		80 - 120		07/08/19 23:19	10
Trifluorotoluene (Surr)	102		80 - 120		07/08/19 23:19	10
1,2-Dichloroethane-d4 (Surr)	100		80 - 126		07/08/19 23:19	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	1700		150	38	ug/L			07/09/19 20:52	50
o-Xylene	740		100	20	ug/L			07/09/19 20:52	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 120		07/09/19 20:52	50
4-Bromofluorobenzene (Surr)	97		80 - 120		07/09/19 20:52	50
Dibromofluoromethane (Surr)	98		80 - 120		07/09/19 20:52	50
Trifluorotoluene (Surr)	102		80 - 120		07/09/19 20:52	50
1,2-Dichloroethane-d4 (Surr)	103		80 - 126		07/09/19 20:52	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	0.29		0.10	0.031	ug/L		07/02/19 09:44	07/03/19 19:51	1
Anthracene	ND		0.10	0.022	ug/L		07/02/19 09:44	07/03/19 19:51	1
Fluoranthene	ND		0.20	0.051	ug/L		07/02/19 09:44	07/03/19 19:51	1
Pyrene	ND		0.10	0.033	ug/L		07/02/19 09:44	07/03/19 19:51	1
Benzo[a]anthracene	ND		0.051	0.014	ug/L		07/02/19 09:44	07/03/19 19:51	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-2

Lab Sample ID: 580-87288-8

Date Collected: 06/26/19 14:15

Matrix: Water

Date Received: 06/27/19 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	ND		0.10	0.016	ug/L		07/02/19 09:44	07/03/19 19:51	1
Benzo[b]fluoranthene	ND		0.051	0.011	ug/L		07/02/19 09:44	07/03/19 19:51	1
Benzo[k]fluoranthene	ND		0.051	0.012	ug/L		07/02/19 09:44	07/03/19 19:51	1
Benzo[a]pyrene	ND		0.10	0.011	ug/L		07/02/19 09:44	07/03/19 19:51	1
Indeno[1,2,3-cd]pyrene	ND		0.051	0.014	ug/L		07/02/19 09:44	07/03/19 19:51	1
Dibenz(a,h)anthracene	ND		0.10	0.026	ug/L		07/02/19 09:44	07/03/19 19:51	1
Benzo[g,h,i]perylene	ND		0.051	0.012	ug/L		07/02/19 09:44	07/03/19 19:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	51	X	53 - 120	07/02/19 09:44	07/03/19 19:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	160		1.0	0.31	ug/L		07/02/19 09:44	07/05/19 17:41	10
2-Methylnaphthalene	74		2.0	0.39	ug/L		07/02/19 09:44	07/05/19 17:41	10
1-Methylnaphthalene	70		1.0	0.19	ug/L		07/02/19 09:44	07/05/19 17:41	10
Acenaphthylene	ND		0.51	0.091	ug/L		07/02/19 09:44	07/05/19 17:41	10
Acenaphthene	ND		1.0	0.14	ug/L		07/02/19 09:44	07/05/19 17:41	10
Fluorene	ND		1.0	0.17	ug/L		07/02/19 09:44	07/05/19 17:41	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	79		53 - 120	07/02/19 09:44	07/05/19 17:41	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	7.4		0.25	0.10	mg/L			07/01/19 19:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	117		50 - 150		07/01/19 19:22	1
4-Bromofluorobenzene (Surr)	325	X	50 - 150		07/01/19 19:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	4.7	*	0.11	0.076	mg/L		07/09/19 09:34	07/10/19 18:54	1
DRO (nC10-<nC25)	5.0	H	0.11	0.077	mg/L		07/12/19 10:48	07/17/19 14:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	87		50 - 150	07/09/19 09:34	07/10/19 18:54	1
o-Terphenyl	85		50 - 150	07/12/19 10:48	07/17/19 14:11	1

Client Sample Results

Client: Stantec Consulting Services Inc
 Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: TB-01

Lab Sample ID: 580-87288-9

Date Collected: 06/26/19 00:01

Matrix: Water

Date Received: 06/27/19 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		10	2.3	ug/L			07/05/19 15:05	1
Chloromethane	ND		20	5.4	ug/L			07/05/19 15:05	1
Vinyl chloride	ND		1.0	0.22	ug/L			07/05/19 15:05	1
Bromomethane	ND		6.0	1.1	ug/L			07/05/19 15:05	1
Chloroethane	ND		5.0	1.1	ug/L			07/05/19 15:05	1
Trichlorofluoromethane	ND		3.0	0.63	ug/L			07/05/19 15:05	1
1,1-Dichloroethene	ND		4.0	0.78	ug/L			07/05/19 15:05	1
Carbon disulfide	ND	*	3.0	0.53	ug/L			07/05/19 15:05	1
Acetone	ND		50	7.8	ug/L			07/05/19 15:05	1
Methylene Chloride	ND		5.0	1.4	ug/L			07/05/19 15:05	1
trans-1,2-Dichloroethene	ND		3.0	0.39	ug/L			07/05/19 15:05	1
1,1-Dichloroethane	ND		2.0	0.22	ug/L			07/05/19 15:05	1
2,2-Dichloropropane	ND		3.0	0.32	ug/L			07/05/19 15:05	1
2-Butanone	ND		20	4.7	ug/L			07/05/19 15:05	1
cis-1,2-Dichloroethene	ND		3.0	0.69	ug/L			07/05/19 15:05	1
Bromochloromethane	ND		2.0	0.29	ug/L			07/05/19 15:05	1
Chloroform	ND		5.0	0.50	ug/L			07/05/19 15:05	1
1,1,1-Trichloroethane	ND		3.0	0.39	ug/L			07/05/19 15:05	1
Carbon tetrachloride	ND		3.0	0.30	ug/L			07/05/19 15:05	1
1,1-Dichloropropene	ND		3.0	0.29	ug/L			07/05/19 15:05	1
Benzene	ND		3.0	0.53	ug/L			07/05/19 15:05	1
1,2-Dichloroethane	ND		2.0	0.53	ug/L			07/05/19 15:05	1
Trichloroethene	ND		3.0	0.85	ug/L			07/05/19 15:05	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			07/05/19 15:05	1
Dibromomethane	ND		2.0	0.34	ug/L			07/05/19 15:05	1
Bromodichloromethane	ND		2.0	0.14	ug/L			07/05/19 15:05	1
cis-1,3-Dichloropropene	ND		1.0	0.20	ug/L			07/05/19 15:05	1
4-Methyl-2-pentanone	ND		15	2.5	ug/L			07/05/19 15:05	1
Toluene	ND		2.0	0.39	ug/L			07/05/19 15:05	1
trans-1,3-Dichloropropene	ND		1.0	0.16	ug/L			07/05/19 15:05	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			07/05/19 15:05	1
Tetrachloroethene	ND		3.0	0.41	ug/L			07/05/19 15:05	1
1,3-Dichloropropane	ND		2.0	0.35	ug/L			07/05/19 15:05	1
2-Hexanone	ND		20	4.0	ug/L			07/05/19 15:05	1
Dibromochloromethane	ND		2.0	0.50	ug/L			07/05/19 15:05	1
1,2-Dibromoethane	ND		2.0	0.40	ug/L			07/05/19 15:05	1
Chlorobenzene	ND		2.0	0.44	ug/L			07/05/19 15:05	1
Ethylbenzene	ND		3.0	0.50	ug/L			07/05/19 15:05	1
1,1,1,2-Tetrachloroethane	ND		2.0	0.18	ug/L			07/05/19 15:05	1
m-Xylene & p-Xylene	ND		3.0	0.75	ug/L			07/05/19 15:05	1
o-Xylene	ND		2.0	0.39	ug/L			07/05/19 15:05	1
Styrene	ND		5.0	1.0	ug/L			07/05/19 15:05	1
Bromoform	ND		3.0	0.56	ug/L			07/05/19 15:05	1
Isopropylbenzene	ND		2.0	0.51	ug/L			07/05/19 15:05	1
Bromobenzene	ND		2.0	0.43	ug/L			07/05/19 15:05	1
N-Propylbenzene	ND		3.0	0.50	ug/L			07/05/19 15:05	1
1,1,2,2-Tetrachloroethane	ND		3.0	0.52	ug/L			07/05/19 15:05	1
4-Chlorotoluene	ND		2.0	0.51	ug/L			07/05/19 15:05	1
t-Butylbenzene	ND		3.0	0.58	ug/L			07/05/19 15:05	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
 Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: TB-01

Lab Sample ID: 580-87288-9

Date Collected: 06/26/19 00:01

Matrix: Water

Date Received: 06/27/19 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			07/05/19 15:05	1
sec-Butylbenzene	ND		3.0	0.49	ug/L			07/05/19 15:05	1
1,3-Dichlorobenzene	ND		2.0	0.18	ug/L			07/05/19 15:05	1
4-Isopropyltoluene	ND		3.0	0.28	ug/L			07/05/19 15:05	1
1,4-Dichlorobenzene	ND		4.0	0.98	ug/L			07/05/19 15:05	1
n-Butylbenzene	ND		3.0	0.44	ug/L			07/05/19 15:05	1
1,2-Dichlorobenzene	ND		2.0	0.46	ug/L			07/05/19 15:05	1
1,2-Dibromo-3-Chloropropane	ND		10	1.8	ug/L			07/05/19 15:05	1
1,2,4-Trichlorobenzene	ND		2.0	0.33	ug/L			07/05/19 15:05	1
1,2,3-Trichlorobenzene	ND		5.0	1.1	ug/L			07/05/19 15:05	1
Hexachlorobutadiene	ND	*	6.0	0.79	ug/L			07/05/19 15:05	1
Naphthalene	ND		4.0	0.93	ug/L			07/05/19 15:05	1
Methyl tert-butyl ether	ND		2.0	0.44	ug/L			07/05/19 15:05	1
1,2,3-Trichloropropane	ND		2.0	0.41	ug/L			07/05/19 15:05	1
1,3,5-Trimethylbenzene	ND		3.0	0.55	ug/L			07/05/19 15:05	1
2-Chlorotoluene	ND		3.0	0.51	ug/L			07/05/19 15:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	109		80 - 120		07/05/19 15:05	1
4-Bromofluorobenzene (Surr)	100		80 - 120		07/05/19 15:05	1
Dibromofluoromethane (Surr)	98		80 - 120		07/05/19 15:05	1
Trifluorotoluene (Surr)	98		80 - 120		07/05/19 15:05	1
1,2-Dichloroethane-d4 (Surr)	109		80 - 126		07/05/19 15:05	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: Dup-01

Lab Sample ID: 580-87288-10

Date Collected: 06/26/19 00:01

Matrix: Water

Date Received: 06/27/19 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		10	2.3	ug/L			07/05/19 16:18	1
Chloromethane	ND		20	5.4	ug/L			07/05/19 16:18	1
Vinyl chloride	ND		1.0	0.22	ug/L			07/05/19 16:18	1
Bromomethane	ND		6.0	1.1	ug/L			07/05/19 16:18	1
Chloroethane	ND		5.0	1.1	ug/L			07/05/19 16:18	1
Trichlorofluoromethane	ND		3.0	0.63	ug/L			07/05/19 16:18	1
1,1-Dichloroethene	ND		4.0	0.78	ug/L			07/05/19 16:18	1
Carbon disulfide	ND	*	3.0	0.53	ug/L			07/05/19 16:18	1
Acetone	ND		50	7.8	ug/L			07/05/19 16:18	1
Methylene Chloride	ND		5.0	1.4	ug/L			07/05/19 16:18	1
trans-1,2-Dichloroethene	ND		3.0	0.39	ug/L			07/05/19 16:18	1
1,1-Dichloroethane	ND		2.0	0.22	ug/L			07/05/19 16:18	1
2,2-Dichloropropane	ND		3.0	0.32	ug/L			07/05/19 16:18	1
2-Butanone	ND		20	4.7	ug/L			07/05/19 16:18	1
cis-1,2-Dichloroethene	ND		3.0	0.69	ug/L			07/05/19 16:18	1
Bromochloromethane	ND		2.0	0.29	ug/L			07/05/19 16:18	1
Chloroform	ND		5.0	0.50	ug/L			07/05/19 16:18	1
1,1,1-Trichloroethane	ND		3.0	0.39	ug/L			07/05/19 16:18	1
Carbon tetrachloride	ND		3.0	0.30	ug/L			07/05/19 16:18	1
1,1-Dichloropropene	ND		3.0	0.29	ug/L			07/05/19 16:18	1
Benzene	50		3.0	0.53	ug/L			07/05/19 16:18	1
1,2-Dichloroethane	ND		2.0	0.53	ug/L			07/05/19 16:18	1
Trichloroethene	ND		3.0	0.85	ug/L			07/05/19 16:18	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			07/05/19 16:18	1
Dibromomethane	ND		2.0	0.34	ug/L			07/05/19 16:18	1
Bromodichloromethane	ND		2.0	0.14	ug/L			07/05/19 16:18	1
cis-1,3-Dichloropropene	ND		1.0	0.20	ug/L			07/05/19 16:18	1
4-Methyl-2-pentanone	ND		15	2.5	ug/L			07/05/19 16:18	1
Toluene	140		2.0	0.39	ug/L			07/05/19 16:18	1
trans-1,3-Dichloropropene	ND		1.0	0.16	ug/L			07/05/19 16:18	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			07/05/19 16:18	1
Tetrachloroethene	ND		3.0	0.41	ug/L			07/05/19 16:18	1
1,3-Dichloropropane	ND		2.0	0.35	ug/L			07/05/19 16:18	1
2-Hexanone	ND		20	4.0	ug/L			07/05/19 16:18	1
Dibromochloromethane	ND		2.0	0.50	ug/L			07/05/19 16:18	1
1,2-Dibromoethane	ND		2.0	0.40	ug/L			07/05/19 16:18	1
Chlorobenzene	ND		2.0	0.44	ug/L			07/05/19 16:18	1
1,1,1,2-Tetrachloroethane	ND		2.0	0.18	ug/L			07/05/19 16:18	1
Styrene	ND		5.0	1.0	ug/L			07/05/19 16:18	1
Bromoform	ND		3.0	0.56	ug/L			07/05/19 16:18	1
Isopropylbenzene	57		2.0	0.51	ug/L			07/05/19 16:18	1
Bromobenzene	ND		2.0	0.43	ug/L			07/05/19 16:18	1
N-Propylbenzene	71		3.0	0.50	ug/L			07/05/19 16:18	1
1,1,2,2-Tetrachloroethane	ND		3.0	0.52	ug/L			07/05/19 16:18	1
4-Chlorotoluene	ND		2.0	0.51	ug/L			07/05/19 16:18	1
t-Butylbenzene	ND		3.0	0.58	ug/L			07/05/19 16:18	1
sec-Butylbenzene	13		3.0	0.49	ug/L			07/05/19 16:18	1
1,3-Dichlorobenzene	ND		2.0	0.18	ug/L			07/05/19 16:18	1
4-Isopropyltoluene	12		3.0	0.28	ug/L			07/05/19 16:18	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: Dup-01

Lab Sample ID: 580-87288-10

Date Collected: 06/26/19 00:01

Matrix: Water

Date Received: 06/27/19 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		4.0	0.98	ug/L			07/05/19 16:18	1
n-Butylbenzene	54		3.0	0.44	ug/L			07/05/19 16:18	1
1,2-Dichlorobenzene	ND		2.0	0.46	ug/L			07/05/19 16:18	1
1,2-Dibromo-3-Chloropropane	ND		10	1.8	ug/L			07/05/19 16:18	1
1,2,4-Trichlorobenzene	ND		2.0	0.33	ug/L			07/05/19 16:18	1
1,2,3-Trichlorobenzene	ND		5.0	1.1	ug/L			07/05/19 16:18	1
Hexachlorobutadiene	ND *		6.0	0.79	ug/L			07/05/19 16:18	1
Methyl tert-butyl ether	ND		2.0	0.44	ug/L			07/05/19 16:18	1
1,2,3-Trichloropropane	ND		2.0	0.41	ug/L			07/05/19 16:18	1
1,3,5-Trimethylbenzene	89		3.0	0.55	ug/L			07/05/19 16:18	1
2-Chlorotoluene	ND		3.0	0.51	ug/L			07/05/19 16:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 120		07/05/19 16:18	1
4-Bromofluorobenzene (Surr)	106		80 - 120		07/05/19 16:18	1
Dibromofluoromethane (Surr)	98		80 - 120		07/05/19 16:18	1
Trifluorotoluene (Surr)	94		80 - 120		07/05/19 16:18	1
1,2-Dichloroethane-d4 (Surr)	106		80 - 126		07/05/19 16:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	270		30	5.0	ug/L			07/09/19 22:07	10
m-Xylene & p-Xylene	1100		30	7.5	ug/L			07/09/19 22:07	10
o-Xylene	560		20	3.9	ug/L			07/09/19 22:07	10
1,2,4-Trimethylbenzene	260		30	6.1	ug/L			07/09/19 22:07	10
Naphthalene	150		40	9.3	ug/L			07/09/19 22:07	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 120		07/09/19 22:07	10
4-Bromofluorobenzene (Surr)	100		80 - 120		07/09/19 22:07	10
Dibromofluoromethane (Surr)	95		80 - 120		07/09/19 22:07	10
Trifluorotoluene (Surr)	102		80 - 120		07/09/19 22:07	10
1,2-Dichloroethane-d4 (Surr)	99		80 - 126		07/09/19 22:07	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	0.18		0.051	0.0091	ug/L		07/02/19 09:44	07/03/19 20:15	1
Acenaphthene	0.23		0.10	0.014	ug/L		07/02/19 09:44	07/03/19 20:15	1
Fluorene	0.64		0.10	0.017	ug/L		07/02/19 09:44	07/03/19 20:15	1
Phenanthrene	0.37		0.10	0.031	ug/L		07/02/19 09:44	07/03/19 20:15	1
Anthracene	ND		0.10	0.022	ug/L		07/02/19 09:44	07/03/19 20:15	1
Fluoranthene	ND		0.20	0.051	ug/L		07/02/19 09:44	07/03/19 20:15	1
Pyrene	ND		0.10	0.033	ug/L		07/02/19 09:44	07/03/19 20:15	1
Benzo[a]anthracene	ND		0.051	0.014	ug/L		07/02/19 09:44	07/03/19 20:15	1
Chrysene	ND		0.10	0.016	ug/L		07/02/19 09:44	07/03/19 20:15	1
Benzo[b]fluoranthene	ND		0.051	0.011	ug/L		07/02/19 09:44	07/03/19 20:15	1
Benzo[k]fluoranthene	ND		0.051	0.012	ug/L		07/02/19 09:44	07/03/19 20:15	1
Benzo[a]pyrene	ND		0.10	0.011	ug/L		07/02/19 09:44	07/03/19 20:15	1
Indeno[1,2,3-cd]pyrene	ND		0.051	0.014	ug/L		07/02/19 09:44	07/03/19 20:15	1
Dibenz(a,h)anthracene	ND		0.10	0.026	ug/L		07/02/19 09:44	07/03/19 20:15	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: Dup-01

Lab Sample ID: 580-87288-10

Date Collected: 06/26/19 00:01

Matrix: Water

Date Received: 06/27/19 11:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzofg,h,i]perylene	ND		0.051	0.012	ug/L		07/02/19 09:44	07/03/19 20:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14	69		53 - 120				07/02/19 09:44	07/03/19 20:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	98		1.0	0.31	ug/L		07/02/19 09:44	07/05/19 18:30	10
2-Methylnaphthalene	52		2.0	0.39	ug/L		07/02/19 09:44	07/05/19 18:30	10
1-Methylnaphthalene	46		1.0	0.19	ug/L		07/02/19 09:44	07/05/19 18:30	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14	83		53 - 120				07/02/19 09:44	07/05/19 18:30	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	4.8		0.25	0.10	mg/L			07/01/19 19:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	113		50 - 150					07/01/19 19:49	1
4-Bromofluorobenzene (Surr)	217	X	50 - 150					07/01/19 19:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	1.9	*	0.12	0.079	mg/L		07/09/19 09:34	07/10/19 19:15	1
DRO (nC10-<nC25)	1.7	H	0.11	0.077	mg/L		07/12/19 10:48	07/17/19 14:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	92		50 - 150				07/09/19 09:34	07/10/19 19:15	1
o-Terphenyl	75		50 - 150				07/12/19 10:48	07/17/19 14:33	1

QC Sample Results

Client: Stantec Consulting Services Inc
 Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: MB 580-304834/5
Matrix: Water
Analysis Batch: 304834

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		10	2.3	ug/L			07/05/19 13:52	1
Chloromethane	ND		20	5.4	ug/L			07/05/19 13:52	1
Vinyl chloride	ND		1.0	0.22	ug/L			07/05/19 13:52	1
Bromomethane	ND		6.0	1.1	ug/L			07/05/19 13:52	1
Chloroethane	ND		5.0	1.1	ug/L			07/05/19 13:52	1
Trichlorofluoromethane	ND		3.0	0.63	ug/L			07/05/19 13:52	1
1,1-Dichloroethene	ND		4.0	0.78	ug/L			07/05/19 13:52	1
Carbon disulfide	ND		3.0	0.53	ug/L			07/05/19 13:52	1
Acetone	ND		50	7.8	ug/L			07/05/19 13:52	1
Methylene Chloride	ND		5.0	1.4	ug/L			07/05/19 13:52	1
trans-1,2-Dichloroethene	ND		3.0	0.39	ug/L			07/05/19 13:52	1
1,1-Dichloroethane	ND		2.0	0.22	ug/L			07/05/19 13:52	1
2,2-Dichloropropane	ND		3.0	0.32	ug/L			07/05/19 13:52	1
2-Butanone	ND		20	4.7	ug/L			07/05/19 13:52	1
cis-1,2-Dichloroethene	ND		3.0	0.69	ug/L			07/05/19 13:52	1
Bromochloromethane	ND		2.0	0.29	ug/L			07/05/19 13:52	1
Chloroform	ND		5.0	0.50	ug/L			07/05/19 13:52	1
1,1,1-Trichloroethane	ND		3.0	0.39	ug/L			07/05/19 13:52	1
Carbon tetrachloride	ND		3.0	0.30	ug/L			07/05/19 13:52	1
1,1-Dichloropropene	ND		3.0	0.29	ug/L			07/05/19 13:52	1
Benzene	ND		3.0	0.53	ug/L			07/05/19 13:52	1
1,2-Dichloroethane	ND		2.0	0.53	ug/L			07/05/19 13:52	1
Trichloroethene	ND		3.0	0.85	ug/L			07/05/19 13:52	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			07/05/19 13:52	1
Dibromomethane	ND		2.0	0.34	ug/L			07/05/19 13:52	1
Bromodichloromethane	ND		2.0	0.14	ug/L			07/05/19 13:52	1
cis-1,3-Dichloropropene	ND		1.0	0.20	ug/L			07/05/19 13:52	1
4-Methyl-2-pentanone	ND		15	2.5	ug/L			07/05/19 13:52	1
Toluene	ND		2.0	0.39	ug/L			07/05/19 13:52	1
trans-1,3-Dichloropropene	ND		1.0	0.16	ug/L			07/05/19 13:52	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			07/05/19 13:52	1
Tetrachloroethene	ND		3.0	0.41	ug/L			07/05/19 13:52	1
1,3-Dichloropropane	ND		2.0	0.35	ug/L			07/05/19 13:52	1
2-Hexanone	ND		20	4.0	ug/L			07/05/19 13:52	1
Dibromochloromethane	ND		2.0	0.50	ug/L			07/05/19 13:52	1
1,2-Dibromoethane	ND		2.0	0.40	ug/L			07/05/19 13:52	1
Chlorobenzene	ND		2.0	0.44	ug/L			07/05/19 13:52	1
Ethylbenzene	ND		3.0	0.50	ug/L			07/05/19 13:52	1
1,1,1,2-Tetrachloroethane	ND		2.0	0.18	ug/L			07/05/19 13:52	1
m-Xylene & p-Xylene	ND		3.0	0.75	ug/L			07/05/19 13:52	1
o-Xylene	ND		2.0	0.39	ug/L			07/05/19 13:52	1
Styrene	ND		5.0	1.0	ug/L			07/05/19 13:52	1
Bromoform	ND		3.0	0.56	ug/L			07/05/19 13:52	1
Isopropylbenzene	ND		2.0	0.51	ug/L			07/05/19 13:52	1
Bromobenzene	ND		2.0	0.43	ug/L			07/05/19 13:52	1
N-Propylbenzene	ND		3.0	0.50	ug/L			07/05/19 13:52	1
1,1,2,2-Tetrachloroethane	ND		3.0	0.52	ug/L			07/05/19 13:52	1
4-Chlorotoluene	ND		2.0	0.51	ug/L			07/05/19 13:52	1

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: MB 580-304834/5
Matrix: Water
Analysis Batch: 304834

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
t-Butylbenzene	ND		3.0	0.58	ug/L			07/05/19 13:52	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			07/05/19 13:52	1
sec-Butylbenzene	ND		3.0	0.49	ug/L			07/05/19 13:52	1
1,3-Dichlorobenzene	ND		2.0	0.18	ug/L			07/05/19 13:52	1
4-Isopropyltoluene	ND		3.0	0.28	ug/L			07/05/19 13:52	1
1,4-Dichlorobenzene	ND		4.0	0.98	ug/L			07/05/19 13:52	1
n-Butylbenzene	ND		3.0	0.44	ug/L			07/05/19 13:52	1
1,2-Dichlorobenzene	ND		2.0	0.46	ug/L			07/05/19 13:52	1
1,2-Dibromo-3-Chloropropane	ND		10	1.8	ug/L			07/05/19 13:52	1
1,2,4-Trichlorobenzene	ND		2.0	0.33	ug/L			07/05/19 13:52	1
1,2,3-Trichlorobenzene	ND		5.0	1.1	ug/L			07/05/19 13:52	1
Hexachlorobutadiene	ND		6.0	0.79	ug/L			07/05/19 13:52	1
Naphthalene	ND		4.0	0.93	ug/L			07/05/19 13:52	1
Methyl tert-butyl ether	ND		2.0	0.44	ug/L			07/05/19 13:52	1
1,2,3-Trichloropropane	ND		2.0	0.41	ug/L			07/05/19 13:52	1
1,3,5-Trimethylbenzene	ND		3.0	0.55	ug/L			07/05/19 13:52	1
2-Chlorotoluene	ND		3.0	0.51	ug/L			07/05/19 13:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	109		80 - 120		07/05/19 13:52	1
4-Bromofluorobenzene (Surr)	101		80 - 120		07/05/19 13:52	1
Dibromofluoromethane (Surr)	97		80 - 120		07/05/19 13:52	1
Trifluorotoluene (Surr)	96		80 - 120		07/05/19 13:52	1
1,2-Dichloroethane-d4 (Surr)	103		80 - 126		07/05/19 13:52	1

Lab Sample ID: LCS 580-304834/6
Matrix: Water
Analysis Batch: 304834

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	10.0	10.5		ug/L		105	20 - 150
Chloromethane	10.0	9.63	J	ug/L		96	52 - 135
Vinyl chloride	10.0	9.99		ug/L		100	65 - 130
Bromomethane	10.0	9.99		ug/L		100	66 - 125
Chloroethane	10.0	9.38		ug/L		94	65 - 132
Trichlorofluoromethane	10.0	11.0		ug/L		110	64 - 136
1,1-Dichloroethene	10.0	9.63		ug/L		96	70 - 129
Carbon disulfide	10.0	6.40	*	ug/L		64	69 - 122
Acetone	50.0	55.9		ug/L		112	43 - 150
Methylene Chloride	10.0	10.4		ug/L		104	77 - 125
trans-1,2-Dichloroethene	10.0	10.0		ug/L		100	77 - 124
1,1-Dichloroethane	10.0	9.90		ug/L		99	70 - 129
2,2-Dichloropropane	10.0	9.88		ug/L		99	62 - 140
2-Butanone	50.0	49.5		ug/L		99	65 - 127
cis-1,2-Dichloroethene	10.0	9.68		ug/L		97	76 - 129
Bromochloromethane	10.0	9.46		ug/L		95	78 - 120
Chloroform	10.0	10.2		ug/L		102	73 - 127
1,1,1-Trichloroethane	10.0	10.8		ug/L		108	74 - 130

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Stantec Consulting Services Inc
 Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCS 580-304834/6
Matrix: Water
Analysis Batch: 304834

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	10.0	10.5		ug/L		105	72 - 129
1,1-Dichloropropene	10.0	10.1		ug/L		101	80 - 120
Benzene	10.0	9.45		ug/L		95	75 - 121
1,2-Dichloroethane	10.0	10.5		ug/L		105	76 - 131
Trichloroethene	10.0	9.83		ug/L		98	70 - 120
1,2-Dichloropropane	10.0	9.83		ug/L		98	72 - 126
Dibromomethane	10.0	10.1		ug/L		101	80 - 120
Bromodichloromethane	10.0	9.95		ug/L		100	75 - 124
cis-1,3-Dichloropropene	10.0	10.4		ug/L		104	77 - 120
4-Methyl-2-pentanone	50.0	53.8		ug/L		108	69 - 124
Toluene	10.0	11.0		ug/L		110	80 - 120
trans-1,3-Dichloropropene	10.0	11.1		ug/L		111	80 - 122
1,1,2-Trichloroethane	10.0	10.5		ug/L		105	80 - 121
Tetrachloroethene	10.0	10.3		ug/L		103	76 - 120
1,3-Dichloropropane	10.0	10.5		ug/L		105	79 - 120
2-Hexanone	50.0	50.4		ug/L		101	65 - 125
Dibromochloromethane	10.0	10.3		ug/L		103	71 - 120
1,2-Dibromoethane	10.0	10.4		ug/L		104	79 - 120
Chlorobenzene	10.0	10.2		ug/L		102	80 - 120
Ethylbenzene	10.0	10.5		ug/L		105	80 - 120
1,1,1,2-Tetrachloroethane	10.0	10.6		ug/L		106	79 - 120
m-Xylene & p-Xylene	10.0	10.5		ug/L		105	80 - 120
o-Xylene	10.0	10.9		ug/L		109	80 - 120
Styrene	10.0	10.0		ug/L		100	76 - 121
Bromoform	10.0	10.5		ug/L		105	61 - 132
Isopropylbenzene	10.0	10.9		ug/L		109	75 - 120
Bromobenzene	10.0	10.7		ug/L		107	80 - 120
N-Propylbenzene	10.0	11.2		ug/L		112	80 - 120
1,1,1,2,2-Tetrachloroethane	10.0	9.72		ug/L		97	74 - 124
4-Chlorotoluene	10.0	10.3		ug/L		103	80 - 120
t-Butylbenzene	10.0	10.9		ug/L		109	80 - 121
1,2,4-Trimethylbenzene	10.0	11.0		ug/L		110	80 - 120
sec-Butylbenzene	10.0	10.8		ug/L		108	78 - 120
1,3-Dichlorobenzene	10.0	11.2		ug/L		112	80 - 120
4-Isopropyltoluene	10.0	10.9		ug/L		109	77 - 120
1,4-Dichlorobenzene	10.0	11.0		ug/L		110	80 - 120
n-Butylbenzene	10.0	11.3		ug/L		113	78 - 120
1,2-Dichlorobenzene	10.0	10.9		ug/L		109	80 - 120
1,2-Dibromo-3-Chloropropane	10.0	11.0		ug/L		110	65 - 125
1,2,4-Trichlorobenzene	10.0	12.4		ug/L		124	57 - 140
1,2,3-Trichlorobenzene	10.0	12.8		ug/L		128	23 - 150
Hexachlorobutadiene	10.0	13.0	*	ug/L		130	74 - 125
Naphthalene	10.0	12.5		ug/L		125	44 - 144
Methyl tert-butyl ether	10.0	10.2		ug/L		102	72 - 130
1,2,3-Trichloropropane	10.0	10.3		ug/L		103	76 - 124
1,3,5-Trimethylbenzene	10.0	11.0		ug/L		110	80 - 120
2-Chlorotoluene	10.0	9.76		ug/L		98	80 - 120

QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCS 580-304834/6

Matrix: Water

Analysis Batch: 304834

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Toluene-d8 (Surr)</i>	102		80 - 120
<i>4-Bromofluorobenzene (Surr)</i>	100		80 - 120
<i>Dibromofluoromethane (Surr)</i>	96		80 - 120
<i>Trifluorotoluene (Surr)</i>	97		80 - 120
<i>1,2-Dichloroethane-d4 (Surr)</i>	105		80 - 126

Lab Sample ID: LCSD 580-304834/7

Matrix: Water

Analysis Batch: 304834

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

<i>Analyte</i>	<i>Spike Added</i>	<i>LCSD Result</i>	<i>LCSD Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec. Limits</i>	<i>RPD</i>	<i>RPD Limit</i>
Dichlorodifluoromethane	10.0	10.1		ug/L		101	20 - 150	4	35
Chloromethane	10.0	9.70	J	ug/L		97	52 - 135	1	23
Vinyl chloride	10.0	9.93		ug/L		99	65 - 130	1	28
Bromomethane	10.0	9.94		ug/L		99	66 - 125	1	27
Chloroethane	10.0	9.74		ug/L		97	65 - 132	4	35
Trichlorofluoromethane	10.0	10.5		ug/L		105	64 - 136	4	27
1,1-Dichloroethene	10.0	9.54		ug/L		95	70 - 129	1	27
Carbon disulfide	10.0	6.02	*	ug/L		60	69 - 122	6	20
Acetone	50.0	55.4		ug/L		111	43 - 150	1	35
Methylene Chloride	10.0	10.5		ug/L		105	77 - 125	0	18
trans-1,2-Dichloroethene	10.0	9.54		ug/L		95	77 - 124	5	21
1,1-Dichloroethane	10.0	9.89		ug/L		99	70 - 129	0	26
2,2-Dichloropropane	10.0	10.0		ug/L		100	62 - 140	1	23
2-Butanone	50.0	44.5		ug/L		89	65 - 127	11	29
cis-1,2-Dichloroethene	10.0	9.62		ug/L		96	76 - 129	1	15
Bromochloromethane	10.0	9.76		ug/L		98	78 - 120	3	20
Chloroform	10.0	9.94		ug/L		99	73 - 127	2	22
1,1,1-Trichloroethane	10.0	10.6		ug/L		106	74 - 130	2	18
Carbon tetrachloride	10.0	10.4		ug/L		104	72 - 129	1	19
1,1-Dichloropropene	10.0	10.1		ug/L		101	80 - 120	0	14
Benzene	10.0	9.17		ug/L		92	75 - 121	3	14
1,2-Dichloroethane	10.0	10.2		ug/L		102	76 - 131	3	18
Trichloroethene	10.0	10.0		ug/L		100	70 - 120	2	21
1,2-Dichloropropane	10.0	9.83		ug/L		98	72 - 126	0	26
Dibromomethane	10.0	8.82		ug/L		88	80 - 120	14	22
Bromodichloromethane	10.0	9.98		ug/L		100	75 - 124	0	22
cis-1,3-Dichloropropene	10.0	10.2		ug/L		102	77 - 120	3	20
4-Methyl-2-pentanone	50.0	51.6		ug/L		103	69 - 124	4	22
Toluene	10.0	10.7		ug/L		107	80 - 120	2	19
trans-1,3-Dichloropropene	10.0	11.1		ug/L		111	80 - 122	0	25
1,1,2-Trichloroethane	10.0	10.9		ug/L		109	80 - 121	4	21
Tetrachloroethene	10.0	10.3		ug/L		103	76 - 120	0	20
1,3-Dichloropropane	10.0	10.1		ug/L		101	79 - 120	4	26
2-Hexanone	50.0	50.2		ug/L		100	65 - 125	0	30
Dibromochloromethane	10.0	10.6		ug/L		106	71 - 120	3	24
1,2-Dibromoethane	10.0	10.3		ug/L		103	79 - 120	1	20
Chlorobenzene	10.0	10.4		ug/L		104	80 - 120	3	15

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QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCSD 580-304834/7
Matrix: Water
Analysis Batch: 304834

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
Ethylbenzene	10.0	10.6		ug/L		106	80 - 120	1	14
1,1,1,2-Tetrachloroethane	10.0	10.7		ug/L		107	79 - 120	1	20
m-Xylene & p-Xylene	10.0	10.6		ug/L		106	80 - 120	1	14
o-Xylene	10.0	10.8		ug/L		108	80 - 120	1	16
Styrene	10.0	10.1		ug/L		101	76 - 121	0	16
Bromoform	10.0	10.9		ug/L		109	61 - 132	4	20
Isopropylbenzene	10.0	11.2		ug/L		112	75 - 120	2	20
Bromobenzene	10.0	10.6		ug/L		106	80 - 120	2	13
N-Propylbenzene	10.0	11.4		ug/L		114	80 - 120	1	13
1,1,2,2-Tetrachloroethane	10.0	9.84		ug/L		98	74 - 124	1	18
4-Chlorotoluene	10.0	10.4		ug/L		104	80 - 120	1	14
t-Butylbenzene	10.0	11.0		ug/L		110	80 - 121	1	14
1,2,4-Trimethylbenzene	10.0	11.2		ug/L		112	80 - 120	1	16
sec-Butylbenzene	10.0	11.1		ug/L		111	78 - 120	3	15
1,3-Dichlorobenzene	10.0	11.0		ug/L		110	80 - 120	2	14
4-Isopropyltoluene	10.0	11.0		ug/L		110	77 - 120	1	13
1,4-Dichlorobenzene	10.0	10.6		ug/L		106	80 - 120	3	17
n-Butylbenzene	10.0	10.8		ug/L		108	78 - 120	4	14
1,2-Dichlorobenzene	10.0	10.8		ug/L		108	80 - 120	1	15
1,2-Dibromo-3-Chloropropane	10.0	10.3		ug/L		103	65 - 125	6	27
1,2,4-Trichlorobenzene	10.0	12.1		ug/L		121	57 - 140	3	27
1,2,3-Trichlorobenzene	10.0	12.5		ug/L		125	23 - 150	3	35
Hexachlorobutadiene	10.0	13.0	*	ug/L		130	74 - 125	0	22
Naphthalene	10.0	11.6		ug/L		116	44 - 144	7	31
Methyl tert-butyl ether	10.0	10.4		ug/L		104	72 - 130	2	18
1,2,3-Trichloropropane	10.0	9.42		ug/L		94	76 - 124	9	30
1,3,5-Trimethylbenzene	10.0	11.1		ug/L		111	80 - 120	1	14
2-Chlorotoluene	10.0	10.6		ug/L		106	80 - 120	8	15

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
Toluene-d8 (Surr)	103		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
Trifluorotoluene (Surr)	97		80 - 120
1,2-Dichloroethane-d4 (Surr)	103		80 - 126

Lab Sample ID: MB 580-305029/4
Matrix: Water
Analysis Batch: 305029

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		10	2.3	ug/L			07/08/19 16:39	1
Chloromethane	ND		20	5.4	ug/L			07/08/19 16:39	1
Vinyl chloride	ND		1.0	0.22	ug/L			07/08/19 16:39	1
Bromomethane	ND		6.0	1.1	ug/L			07/08/19 16:39	1
Chloroethane	ND		5.0	1.1	ug/L			07/08/19 16:39	1
Trichlorofluoromethane	ND		3.0	0.63	ug/L			07/08/19 16:39	1
1,1-Dichloroethene	ND		4.0	0.78	ug/L			07/08/19 16:39	1

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QC Sample Results

Client: Stantec Consulting Services Inc
 Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: MB 580-305029/4
Matrix: Water
Analysis Batch: 305029

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		3.0	0.53	ug/L			07/08/19 16:39	1
Acetone	ND		50	7.8	ug/L			07/08/19 16:39	1
Methylene Chloride	ND		5.0	1.4	ug/L			07/08/19 16:39	1
trans-1,2-Dichloroethene	ND		3.0	0.39	ug/L			07/08/19 16:39	1
1,1-Dichloroethane	ND		2.0	0.22	ug/L			07/08/19 16:39	1
2,2-Dichloropropane	ND		3.0	0.32	ug/L			07/08/19 16:39	1
2-Butanone	ND		20	4.7	ug/L			07/08/19 16:39	1
cis-1,2-Dichloroethene	ND		3.0	0.69	ug/L			07/08/19 16:39	1
Bromochloromethane	ND		2.0	0.29	ug/L			07/08/19 16:39	1
Chloroform	ND		5.0	0.50	ug/L			07/08/19 16:39	1
1,1,1-Trichloroethane	ND		3.0	0.39	ug/L			07/08/19 16:39	1
Carbon tetrachloride	ND		3.0	0.30	ug/L			07/08/19 16:39	1
1,1-Dichloropropene	ND		3.0	0.29	ug/L			07/08/19 16:39	1
Benzene	ND		3.0	0.53	ug/L			07/08/19 16:39	1
1,2-Dichloroethane	ND		2.0	0.53	ug/L			07/08/19 16:39	1
Trichloroethene	ND		3.0	0.85	ug/L			07/08/19 16:39	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			07/08/19 16:39	1
Dibromomethane	ND		2.0	0.34	ug/L			07/08/19 16:39	1
Bromodichloromethane	ND		2.0	0.14	ug/L			07/08/19 16:39	1
cis-1,3-Dichloropropene	ND		1.0	0.20	ug/L			07/08/19 16:39	1
4-Methyl-2-pentanone	ND		15	2.5	ug/L			07/08/19 16:39	1
Toluene	ND		2.0	0.39	ug/L			07/08/19 16:39	1
trans-1,3-Dichloropropene	ND		1.0	0.16	ug/L			07/08/19 16:39	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			07/08/19 16:39	1
Tetrachloroethene	ND		3.0	0.41	ug/L			07/08/19 16:39	1
1,3-Dichloropropane	ND		2.0	0.35	ug/L			07/08/19 16:39	1
2-Hexanone	ND		20	4.0	ug/L			07/08/19 16:39	1
Dibromochloromethane	ND		2.0	0.50	ug/L			07/08/19 16:39	1
1,2-Dibromoethane	ND		2.0	0.40	ug/L			07/08/19 16:39	1
Chlorobenzene	ND		2.0	0.44	ug/L			07/08/19 16:39	1
Ethylbenzene	ND		3.0	0.50	ug/L			07/08/19 16:39	1
1,1,1,2-Tetrachloroethane	ND		2.0	0.18	ug/L			07/08/19 16:39	1
m-Xylene & p-Xylene	ND		3.0	0.75	ug/L			07/08/19 16:39	1
o-Xylene	ND		2.0	0.39	ug/L			07/08/19 16:39	1
Styrene	ND		5.0	1.0	ug/L			07/08/19 16:39	1
Bromoform	ND		3.0	0.56	ug/L			07/08/19 16:39	1
Isopropylbenzene	ND		2.0	0.51	ug/L			07/08/19 16:39	1
Bromobenzene	ND		2.0	0.43	ug/L			07/08/19 16:39	1
N-Propylbenzene	ND		3.0	0.50	ug/L			07/08/19 16:39	1
1,1,2,2-Tetrachloroethane	ND		3.0	0.52	ug/L			07/08/19 16:39	1
4-Chlorotoluene	ND		2.0	0.51	ug/L			07/08/19 16:39	1
t-Butylbenzene	ND		3.0	0.58	ug/L			07/08/19 16:39	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			07/08/19 16:39	1
sec-Butylbenzene	ND		3.0	0.49	ug/L			07/08/19 16:39	1
1,3-Dichlorobenzene	ND		2.0	0.18	ug/L			07/08/19 16:39	1
4-Isopropyltoluene	ND		3.0	0.28	ug/L			07/08/19 16:39	1
1,4-Dichlorobenzene	ND		4.0	0.98	ug/L			07/08/19 16:39	1
n-Butylbenzene	ND		3.0	0.44	ug/L			07/08/19 16:39	1
1,2-Dichlorobenzene	ND		2.0	0.46	ug/L			07/08/19 16:39	1

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: MB 580-305029/4
Matrix: Water
Analysis Batch: 305029

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2-Dibromo-3-Chloropropane	ND		10	1.8	ug/L			07/08/19 16:39	1
1,2,4-Trichlorobenzene	ND		2.0	0.33	ug/L			07/08/19 16:39	1
1,2,3-Trichlorobenzene	ND		5.0	1.1	ug/L			07/08/19 16:39	1
Hexachlorobutadiene	ND		6.0	0.79	ug/L			07/08/19 16:39	1
Naphthalene	ND		4.0	0.93	ug/L			07/08/19 16:39	1
Methyl tert-butyl ether	ND		2.0	0.44	ug/L			07/08/19 16:39	1
1,2,3-Trichloropropane	ND		2.0	0.41	ug/L			07/08/19 16:39	1
1,3,5-Trimethylbenzene	ND		3.0	0.55	ug/L			07/08/19 16:39	1
2-Chlorotoluene	ND		3.0	0.51	ug/L			07/08/19 16:39	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Toluene-d8 (Surr)	105		80 - 120		07/08/19 16:39	1
4-Bromofluorobenzene (Surr)	92		80 - 120		07/08/19 16:39	1
Dibromofluoromethane (Surr)	96		80 - 120		07/08/19 16:39	1
Trifluorotoluene (Surr)	101		80 - 120		07/08/19 16:39	1
1,2-Dichloroethane-d4 (Surr)	100		80 - 126		07/08/19 16:39	1

Lab Sample ID: LCS 580-305029/5
Matrix: Water
Analysis Batch: 305029

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	10.0	9.07	J	ug/L		91	52 - 135
Vinyl chloride	10.0	9.47		ug/L		95	65 - 130
Bromomethane	10.0	10.3		ug/L		103	66 - 125
Chloroethane	10.0	9.78		ug/L		98	65 - 132
Trichlorofluoromethane	10.0	9.92		ug/L		99	64 - 136
1,1-Dichloroethene	10.0	10.4		ug/L		104	70 - 129
Carbon disulfide	10.0	9.71		ug/L		97	69 - 122
Acetone	50.0	51.1		ug/L		102	43 - 150
Methylene Chloride	10.0	10.4		ug/L		104	77 - 125
trans-1,2-Dichloroethene	10.0	9.67		ug/L		97	77 - 124
1,1-Dichloroethane	10.0	10.2		ug/L		102	70 - 129
2,2-Dichloropropane	10.0	10.7		ug/L		107	62 - 140
2-Butanone	50.0	54.2		ug/L		108	65 - 127
cis-1,2-Dichloroethene	10.0	10.5		ug/L		105	76 - 129
Bromochloromethane	10.0	10.5		ug/L		105	78 - 120
Chloroform	10.0	10.9		ug/L		109	73 - 127
1,1,1-Trichloroethane	10.0	10.3		ug/L		103	74 - 130
Carbon tetrachloride	10.0	10.0		ug/L		100	72 - 129
1,1-Dichloropropene	10.0	9.89		ug/L		99	80 - 120
Benzene	10.0	10.8		ug/L		108	75 - 121
1,2-Dichloroethane	10.0	10.9		ug/L		109	76 - 131
Trichloroethene	10.0	11.0		ug/L		110	70 - 120
1,2-Dichloropropane	10.0	10.4		ug/L		104	72 - 126
Dibromomethane	10.0	11.2		ug/L		112	80 - 120
Bromodichloromethane	10.0	12.0		ug/L		120	75 - 124

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCS 580-305029/5
Matrix: Water
Analysis Batch: 305029

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,3-Dichloropropene	10.0	11.2		ug/L		112	77 - 120
4-Methyl-2-pentanone	50.0	60.1		ug/L		120	69 - 124
Toluene	10.0	10.5		ug/L		105	80 - 120
trans-1,3-Dichloropropene	10.0	11.8		ug/L		118	80 - 122
Tetrachloroethene	10.0	10.7		ug/L		107	76 - 120
1,3-Dichloropropane	10.0	11.6		ug/L		116	79 - 120
2-Hexanone	50.0	58.5		ug/L		117	65 - 125
Ethylbenzene	10.0	11.3		ug/L		113	80 - 120
m-Xylene & p-Xylene	10.0	11.4		ug/L		114	80 - 120
Styrene	10.0	11.4		ug/L		114	76 - 121
Bromoform	10.0	11.5		ug/L		115	61 - 132
Isopropylbenzene	10.0	11.4		ug/L		114	75 - 120
N-Propylbenzene	10.0	11.4		ug/L		114	80 - 120
1,1,2,2-Tetrachloroethane	10.0	11.7		ug/L		117	74 - 124
4-Chlorotoluene	10.0	11.5		ug/L		115	80 - 120
t-Butylbenzene	10.0	11.4		ug/L		114	80 - 121
1,2,4-Trimethylbenzene	10.0	11.3		ug/L		113	80 - 120
sec-Butylbenzene	10.0	11.2		ug/L		112	78 - 120
1,3-Dichlorobenzene	10.0	11.1		ug/L		111	80 - 120
4-Isopropyltoluene	10.0	10.8		ug/L		108	77 - 120
1,4-Dichlorobenzene	10.0	10.9		ug/L		109	80 - 120
n-Butylbenzene	10.0	11.5		ug/L		115	78 - 120
1,2,4-Trichlorobenzene	10.0	12.9		ug/L		129	57 - 140
1,2,3-Trichlorobenzene	10.0	13.2		ug/L		132	23 - 150
Hexachlorobutadiene	10.0	11.9		ug/L		119	74 - 125
Naphthalene	10.0	12.9		ug/L		129	44 - 144
Methyl tert-butyl ether	10.0	10.3		ug/L		103	72 - 130
1,3,5-Trimethylbenzene	10.0	11.2		ug/L		112	80 - 120
2-Chlorotoluene	10.0	11.5		ug/L		115	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Trifluorotoluene (Surr)	99		80 - 120
1,2-Dichloroethane-d4 (Surr)	98		80 - 126

Lab Sample ID: LCSD 580-305029/6
Matrix: Water
Analysis Batch: 305029

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
Dichlorodifluoromethane	10.0	8.17	J	ug/L		82	20 - 150	4	35
Chloromethane	10.0	8.90	J	ug/L		89	52 - 135	2	23
Vinyl chloride	10.0	9.57		ug/L		96	65 - 130	1	28
Bromomethane	10.0	10.0		ug/L		100	66 - 125	3	27
Chloroethane	10.0	9.52		ug/L		95	65 - 132	3	35
Trichlorofluoromethane	10.0	9.60		ug/L		96	64 - 136	3	27

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCSD 580-305029/6
Matrix: Water
Analysis Batch: 305029

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
1,1-Dichloroethene	10.0	10.5		ug/L		105	70 - 129	1	27
Carbon disulfide	10.0	9.61		ug/L		96	69 - 122	1	20
Acetone	50.0	41.7	J	ug/L		83	43 - 150	20	35
Methylene Chloride	10.0	9.88		ug/L		99	77 - 125	5	18
trans-1,2-Dichloroethene	10.0	9.53		ug/L		95	77 - 124	2	21
1,1-Dichloroethane	10.0	9.81		ug/L		98	70 - 129	4	26
2,2-Dichloropropane	10.0	10.4		ug/L		104	62 - 140	3	23
2-Butanone	50.0	46.3		ug/L		93	65 - 127	16	29
cis-1,2-Dichloroethene	10.0	9.96		ug/L		100	76 - 129	5	15
Bromochloromethane	10.0	9.51		ug/L		95	78 - 120	10	20
Chloroform	10.0	9.98		ug/L		100	73 - 127	9	22
1,1,1-Trichloroethane	10.0	9.95		ug/L		100	74 - 130	4	18
Carbon tetrachloride	10.0	9.66		ug/L		97	72 - 129	4	19
1,1-Dichloropropene	10.0	9.41		ug/L		94	80 - 120	5	14
Benzene	10.0	10.2		ug/L		102	75 - 121	5	14
1,2-Dichloroethane	10.0	9.89		ug/L		99	76 - 131	10	18
Trichloroethene	10.0	10.3		ug/L		103	70 - 120	6	21
1,2-Dichloropropane	10.0	9.58		ug/L		96	72 - 126	8	26
Dibromomethane	10.0	9.88		ug/L		99	80 - 120	12	22
Bromodichloromethane	10.0	10.5		ug/L		105	75 - 124	13	22
cis-1,3-Dichloropropene	10.0	10.6		ug/L		106	77 - 120	6	20
4-Methyl-2-pentanone	50.0	50.1		ug/L		100	69 - 124	18	22
Toluene	10.0	9.52		ug/L		95	80 - 120	10	19
trans-1,3-Dichloropropene	10.0	10.5		ug/L		105	80 - 122	11	25
1,1,2-Trichloroethane	10.0	10.7		ug/L		107	80 - 121	13	21
Tetrachloroethene	10.0	10.0		ug/L		100	76 - 120	7	20
1,3-Dichloropropane	10.0	10.2		ug/L		102	79 - 120	13	26
2-Hexanone	50.0	48.4		ug/L		97	65 - 125	19	30
Dibromochloromethane	10.0	10.7		ug/L		107	71 - 120	12	24
1,2-Dibromoethane	10.0	10.6		ug/L		106	79 - 120	13	20
Chlorobenzene	10.0	10.9		ug/L		109	80 - 120	11	15
Ethylbenzene	10.0	10.4		ug/L		104	80 - 120	9	14
1,1,1,2-Tetrachloroethane	10.0	10.9		ug/L		109	79 - 120	12	20
m-Xylene & p-Xylene	10.0	10.2		ug/L		102	80 - 120	11	14
o-Xylene	10.0	11.1		ug/L		111	80 - 120	11	16
Styrene	10.0	9.97		ug/L		100	76 - 121	13	16
Bromoform	10.0	10.0		ug/L		100	61 - 132	14	20
Isopropylbenzene	10.0	10.1		ug/L		101	75 - 120	11	20
Bromobenzene	10.0	11.1		ug/L		111	80 - 120	8	13
N-Propylbenzene	10.0	10.4		ug/L		104	80 - 120	9	13
1,1,1,2,2-Tetrachloroethane	10.0	10.3		ug/L		103	74 - 124	13	18
4-Chlorotoluene	10.0	10.5		ug/L		105	80 - 120	9	14
t-Butylbenzene	10.0	10.5		ug/L		105	80 - 121	8	14
1,2,4-Trimethylbenzene	10.0	10.3		ug/L		103	80 - 120	8	16
sec-Butylbenzene	10.0	10.3		ug/L		103	78 - 120	8	15
1,3-Dichlorobenzene	10.0	9.73		ug/L		97	80 - 120	13	14
4-Isopropyltoluene	10.0	9.78		ug/L		98	77 - 120	9	13
1,4-Dichlorobenzene	10.0	9.91		ug/L		99	80 - 120	9	17
n-Butylbenzene	10.0	10.5		ug/L		105	78 - 120	9	14

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QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCSD 580-305029/6
Matrix: Water
Analysis Batch: 305029

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
1,2-Dichlorobenzene	10.0	11.2		ug/L		112	80 - 120	11	15
1,2-Dibromo-3-Chloropropane	10.0	10.9		ug/L		109	65 - 125	18	27
1,2,4-Trichlorobenzene	10.0	11.0		ug/L		110	57 - 140	15	27
1,2,3-Trichlorobenzene	10.0	11.3		ug/L		113	23 - 150	15	35
Hexachlorobutadiene	10.0	11.3		ug/L		113	74 - 125	6	22
Naphthalene	10.0	10.8		ug/L		108	44 - 144	18	31
Methyl tert-butyl ether	10.0	9.24		ug/L		92	72 - 130	10	18
1,2,3-Trichloropropane	10.0	10.5		ug/L		105	76 - 124	19	30
1,3,5-Trimethylbenzene	10.0	10.3		ug/L		103	80 - 120	8	14
2-Chlorotoluene	10.0	10.6		ug/L		106	80 - 120	8	15

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
Toluene-d8 (Surr)	103		80 - 120
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	98		80 - 120
Trifluorotoluene (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	98		80 - 126

Lab Sample ID: MB 580-305132/1-A
Matrix: Solid
Analysis Batch: 305167

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 305132

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		200	46	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Chloromethane	ND		100	10	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Vinyl chloride	ND		150	26	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Bromomethane	ND		200	13	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Chloroethane	ND		400	10	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Trichlorofluoromethane	ND		200	11	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
1,1-Dichloroethene	ND		40	12	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Carbon disulfide	ND		60	12	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Acetone	ND		800	170	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Methylene Chloride	ND		250	65	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
trans-1,2-Dichloroethene	ND		60	15	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
1,1-Dichloroethane	ND		40	9.2	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
2,2-Dichloropropane	ND		40	12	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
2-Butanone	ND		600	190	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
cis-1,2-Dichloroethene	ND		60	13	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Bromochloromethane	ND		40	6.2	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Chloroform	ND		40	4.2	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
1,1,1-Trichloroethane	ND		40	9.6	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Carbon tetrachloride	ND		20	8.1	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
1,1-Dichloropropene	ND		40	5.3	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Benzene	ND		30	3.8	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
1,2-Dichloroethane	ND		20	5.5	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Trichloroethene	ND		60	22	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
1,2-Dichloropropane	ND		20	6.6	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Dibromomethane	ND		60	7.4	ug/Kg		07/09/19 08:00	07/09/19 12:08	1

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QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: MB 580-305132/1-A
Matrix: Solid
Analysis Batch: 305167

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 305132

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		60	13	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
cis-1,3-Dichloropropene	ND		20	4.0	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
4-Methyl-2-pentanone	ND		400	81	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Toluene	ND		150	14	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
trans-1,3-Dichloropropene	ND		40	7.0	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
1,1,2-Trichloroethane	ND		20	7.4	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Tetrachloroethene	ND		40	5.3	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
1,3-Dichloropropane	ND		60	14	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
2-Hexanone	ND		100	36	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Dibromochloromethane	ND		40	11	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
1,2-Dibromoethane	ND		20	3.8	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Chlorobenzene	ND		40	4.8	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Ethylbenzene	ND		40	9.1	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
1,1,1,2-Tetrachloroethane	ND		40	11	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
m-Xylene & p-Xylene	ND		200	15	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
o-Xylene	ND		60	13	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Styrene	ND		40	6.1	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Bromoform	ND		200	26	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Isopropylbenzene	ND		40	8.6	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Bromobenzene	ND		100	17	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
N-Propylbenzene	ND		40	6.9	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
1,1,2,2-Tetrachloroethane	ND		20	7.6	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
4-Chlorotoluene	ND		40	9.8	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
t-Butylbenzene	ND		40	7.7	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
1,2,4-Trimethylbenzene	ND		40	14	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
sec-Butylbenzene	ND		40	8.6	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
1,3-Dichlorobenzene	ND		60	13	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
4-Isopropyltoluene	ND		40	10	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
1,4-Dichlorobenzene	ND		60	11	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
n-Butylbenzene	ND		150	8.0	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
1,2-Dichlorobenzene	ND		40	8.7	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
1,2-Dibromo-3-Chloropropane	ND		250	15	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
1,2,4-Trichlorobenzene	ND		60	15	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
1,2,3-Trichlorobenzene	ND		150	32	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Hexachlorobutadiene	ND		150	33	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Naphthalene	ND		100	28	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
Methyl tert-butyl ether	ND		40	6.0	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
1,2,3-Trichloropropane	ND		40	12	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
1,3,5-Trimethylbenzene	ND		40	7.6	ug/Kg		07/09/19 08:00	07/09/19 12:08	1
2-Chlorotoluene	ND		40	8.8	ug/Kg		07/09/19 08:00	07/09/19 12:08	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120	07/09/19 08:00	07/09/19 12:08	1
4-Bromofluorobenzene (Surr)	101		80 - 120	07/09/19 08:00	07/09/19 12:08	1
Dibromofluoromethane (Surr)	97		80 - 120	07/09/19 08:00	07/09/19 12:08	1
Trifluorotoluene (Surr)	118		80 - 120	07/09/19 08:00	07/09/19 12:08	1
1,2-Dichloroethane-d4 (Surr)	111		80 - 121	07/09/19 08:00	07/09/19 12:08	1

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QC Sample Results

Client: Stantec Consulting Services Inc
 Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCS 580-305132/2-A
Matrix: Solid
Analysis Batch: 305167

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 305132
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Dichlorodifluoromethane	800	770		ug/Kg		96	10 - 150
Chloromethane	800	671		ug/Kg		84	43 - 150
Vinyl chloride	800	651		ug/Kg		81	13 - 150
Bromomethane	800	704		ug/Kg		88	42 - 150
Chloroethane	800	897		ug/Kg		112	31 - 150
Trichlorofluoromethane	800	951		ug/Kg		119	48 - 150
1,1-Dichloroethene	800	899		ug/Kg		112	58 - 150
Carbon disulfide	800	861		ug/Kg		108	68 - 150
Acetone	4000	4140		ug/Kg		103	25 - 150
Methylene Chloride	800	835		ug/Kg		104	54 - 149
trans-1,2-Dichloroethene	800	825		ug/Kg		103	61 - 150
1,1-Dichloroethane	800	842		ug/Kg		105	70 - 135
2,2-Dichloropropane	800	786		ug/Kg		98	62 - 150
2-Butanone	4000	3410		ug/Kg		85	55 - 143
cis-1,2-Dichloroethene	800	777		ug/Kg		97	68 - 143
Bromochloromethane	800	702		ug/Kg		88	76 - 131
Chloroform	800	707		ug/Kg		88	74 - 133
1,1,1-Trichloroethane	800	855		ug/Kg		107	69 - 150
Carbon tetrachloride	800	855		ug/Kg		107	66 - 150
1,1-Dichloropropene	800	918		ug/Kg		115	69 - 150
Benzene	800	826		ug/Kg		103	72 - 135
1,2-Dichloroethane	800	781		ug/Kg		98	68 - 132
Trichloroethene	800	814		ug/Kg		102	69 - 144
1,2-Dichloropropane	800	821		ug/Kg		103	65 - 136
Dibromomethane	800	757		ug/Kg		95	72 - 130
Bromodichloromethane	800	814		ug/Kg		102	73 - 125
cis-1,3-Dichloropropene	800	1120	*	ug/Kg		141	80 - 122
4-Methyl-2-pentanone	4000	5340	*	ug/Kg		133	68 - 125
Toluene	800	1150	*	ug/Kg		144	75 - 137
trans-1,3-Dichloropropene	800	1080	*	ug/Kg		135	80 - 121
1,1,2-Trichloroethane	800	1060	*	ug/Kg		133	80 - 123
Tetrachloroethene	800	1230	*	ug/Kg		153	71 - 145
1,3-Dichloropropane	800	1050	*	ug/Kg		131	75 - 120
2-Hexanone	4000	5230	*	ug/Kg		131	70 - 127
Dibromochloromethane	800	1090	*	ug/Kg		136	75 - 125
1,2-Dibromoethane	800	1070	*	ug/Kg		134	77 - 123
Chlorobenzene	800	801		ug/Kg		100	80 - 123
Ethylbenzene	800	969		ug/Kg		121	80 - 135
1,1,1,2-Tetrachloroethane	800	838		ug/Kg		105	79 - 128
m-Xylene & p-Xylene	800	792		ug/Kg		99	80 - 132
o-Xylene	800	1150	*	ug/Kg		143	80 - 125
Styrene	800	1120	*	ug/Kg		140	79 - 129
Bromoform	800	950		ug/Kg		119	71 - 129
Isopropylbenzene	800	1200	*	ug/Kg		151	74 - 140
Bromobenzene	800	757		ug/Kg		95	78 - 126
N-Propylbenzene	800	826		ug/Kg		103	74 - 143
1,1,2,2-Tetrachloroethane	800	1040	*	ug/Kg		130	66 - 127
4-Chlorotoluene	800	799		ug/Kg		100	78 - 126

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QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCS 580-305132/2-A

Matrix: Solid

Analysis Batch: 305167

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 305132

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
t-Butylbenzene	800	840		ug/Kg		105	72 - 144
1,2,4-Trimethylbenzene	800	803		ug/Kg		100	73 - 127
sec-Butylbenzene	800	881		ug/Kg		110	77 - 143
1,3-Dichlorobenzene	800	792		ug/Kg		99	78 - 122
4-Isopropyltoluene	800	838		ug/Kg		105	71 - 142
1,4-Dichlorobenzene	800	777		ug/Kg		97	77 - 123
n-Butylbenzene	800	859		ug/Kg		107	69 - 143
1,2-Dichlorobenzene	800	757		ug/Kg		95	78 - 126
1,2-Dibromo-3-Chloropropane	800	778		ug/Kg		97	62 - 135
1,2,4-Trichlorobenzene	800	773		ug/Kg		97	68 - 131
1,2,3-Trichlorobenzene	800	763		ug/Kg		95	62 - 136
Hexachlorobutadiene	800	824		ug/Kg		103	65 - 150
Naphthalene	800	699		ug/Kg		87	49 - 147
Methyl tert-butyl ether	800	807		ug/Kg		101	68 - 132
1,2,3-Trichloropropane	800	720		ug/Kg		90	70 - 127
1,3,5-Trimethylbenzene	800	812		ug/Kg		102	72 - 136
2-Chlorotoluene	800	814		ug/Kg		102	77 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	135	X	80 - 120
4-Bromofluorobenzene (Surr)	145	X	80 - 120
Dibromofluoromethane (Surr)	84		80 - 120
Trifluorotoluene (Surr)	98		80 - 120
1,2-Dichloroethane-d4 (Surr)	98		80 - 121

Lab Sample ID: LCSD 580-305132/3-A

Matrix: Solid

Analysis Batch: 305167

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 305132

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Dichlorodifluoromethane	800	820		ug/Kg		103	10 - 150	6	40
Chloromethane	800	564		ug/Kg		70	43 - 150	17	26
Vinyl chloride	800	612		ug/Kg		77	13 - 150	6	40
Bromomethane	800	642		ug/Kg		80	42 - 150	9	22
Chloroethane	800	737		ug/Kg		92	31 - 150	20	31
Trichlorofluoromethane	800	930		ug/Kg		116	48 - 150	2	40
1,1-Dichloroethene	800	894		ug/Kg		112	58 - 150	1	29
Carbon disulfide	800	868		ug/Kg		109	68 - 150	1	27
Acetone	4000	5000		ug/Kg		125	25 - 150	19	39
Methylene Chloride	800	811		ug/Kg		101	54 - 149	3	30
trans-1,2-Dichloroethene	800	793		ug/Kg		99	61 - 150	4	22
1,1-Dichloroethane	800	684		ug/Kg		85	70 - 135	21	21
2,2-Dichloropropane	800	710		ug/Kg		89	62 - 150	10	20
2-Butanone	4000	3270		ug/Kg		82	55 - 143	4	31
cis-1,2-Dichloroethene	800	633		ug/Kg		79	68 - 143	20	20
Bromochloromethane	800	604	*	ug/Kg		75	76 - 131	15	15
Chloroform	800	633		ug/Kg		79	74 - 133	11	13
1,1,1-Trichloroethane	800	728	*	ug/Kg		91	69 - 150	16	14

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QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCSD 580-305132/3-A
Matrix: Solid
Analysis Batch: 305167

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 305132

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
		Result	Qualifier						
Carbon tetrachloride	800	830		ug/Kg		104	66 - 150	3	12
1,1-Dichloropropene	800	783	*	ug/Kg		98	69 - 150	16	11
Benzene	800	815		ug/Kg		102	72 - 135	1	15
1,2-Dichloroethane	800	643	*	ug/Kg		80	68 - 132	19	17
Trichloroethene	800	810		ug/Kg		101	69 - 144	1	21
1,2-Dichloropropane	800	830		ug/Kg		104	65 - 136	1	13
Dibromomethane	800	772		ug/Kg		96	72 - 130	2	14
Bromodichloromethane	800	795		ug/Kg		99	73 - 125	2	15
cis-1,3-Dichloropropene	800	782	*	ug/Kg		98	80 - 122	36	16
4-Methyl-2-pentanone	4000	4030	*	ug/Kg		101	68 - 125	28	20
Toluene	800	842	*	ug/Kg		105	75 - 137	31	20
trans-1,3-Dichloropropene	800	803	*	ug/Kg		100	80 - 121	29	21
1,1,2-Trichloroethane	800	793	*	ug/Kg		99	80 - 123	29	20
Tetrachloroethene	800	904	*	ug/Kg		113	71 - 145	30	16
1,3-Dichloropropane	800	793	*	ug/Kg		99	75 - 120	28	18
2-Hexanone	4000	4040	*	ug/Kg		101	70 - 127	26	21
Dibromochloromethane	800	798	*	ug/Kg		100	75 - 125	31	18
1,2-Dibromoethane	800	787	*	ug/Kg		98	77 - 123	31	20
Chlorobenzene	800	761		ug/Kg		95	80 - 123	5	18
Ethylbenzene	800	770	*	ug/Kg		96	80 - 135	23	16
1,1,1,2-Tetrachloroethane	800	770		ug/Kg		96	79 - 128	8	17
m-Xylene & p-Xylene	800	812		ug/Kg		101	80 - 132	2	20
o-Xylene	800	784	*	ug/Kg		98	80 - 125	38	14
Styrene	800	794	*	ug/Kg		99	79 - 129	34	15
Bromoform	800	764	*	ug/Kg		95	71 - 129	22	17
Isopropylbenzene	800	828	*	ug/Kg		103	74 - 140	37	17
Bromobenzene	800	768		ug/Kg		96	78 - 126	1	19
N-Propylbenzene	800	830		ug/Kg		104	74 - 143	0	21
1,1,1,2,2-Tetrachloroethane	800	735	*	ug/Kg		92	66 - 127	34	18
4-Chlorotoluene	800	817		ug/Kg		102	78 - 126	2	16
t-Butylbenzene	800	847		ug/Kg		106	72 - 144	1	24
1,2,4-Trimethylbenzene	800	815		ug/Kg		102	73 - 127	1	20
sec-Butylbenzene	800	897		ug/Kg		112	77 - 143	2	24
1,3-Dichlorobenzene	800	800		ug/Kg		100	78 - 122	1	20
4-Isopropyltoluene	800	847		ug/Kg		106	71 - 142	1	23
1,4-Dichlorobenzene	800	797		ug/Kg		100	77 - 123	3	20
n-Butylbenzene	800	603	*	ug/Kg		75	69 - 143	35	26
1,2-Dichlorobenzene	800	668		ug/Kg		83	78 - 126	13	21
1,2-Dibromo-3-Chloropropane	800	694		ug/Kg		87	62 - 135	11	25
1,2,4-Trichlorobenzene	800	845		ug/Kg		106	68 - 131	9	29
1,2,3-Trichlorobenzene	800	849		ug/Kg		106	62 - 136	11	34
Hexachlorobutadiene	800	885		ug/Kg		111	65 - 150	7	36
Naphthalene	800	775		ug/Kg		97	49 - 147	10	35
Methyl tert-butyl ether	800	771		ug/Kg		96	68 - 132	4	25
1,2,3-Trichloropropane	800	742		ug/Kg		93	70 - 127	3	16
1,3,5-Trimethylbenzene	800	817		ug/Kg		102	72 - 136	1	21
2-Chlorotoluene	800	829		ug/Kg		104	77 - 127	2	16

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QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCSD 580-305132/3-A
Matrix: Solid
Analysis Batch: 305167

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 305132

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
<i>Toluene-d8 (Surr)</i>	101		80 - 120
<i>4-Bromofluorobenzene (Surr)</i>	101		80 - 120
<i>Dibromofluoromethane (Surr)</i>	76	X	80 - 120
<i>Trifluorotoluene (Surr)</i>	98		80 - 120
<i>1,2-Dichloroethane-d4 (Surr)</i>	82		80 - 121

Lab Sample ID: MB 580-305172/6
Matrix: Water
Analysis Batch: 305172

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		10	2.3	ug/L			07/09/19 17:57	1
Chloromethane	ND		20	5.4	ug/L			07/09/19 17:57	1
Vinyl chloride	ND		1.0	0.22	ug/L			07/09/19 17:57	1
Bromomethane	ND		6.0	1.1	ug/L			07/09/19 17:57	1
Chloroethane	ND		5.0	1.1	ug/L			07/09/19 17:57	1
Trichlorofluoromethane	ND		3.0	0.63	ug/L			07/09/19 17:57	1
1,1-Dichloroethene	ND		4.0	0.78	ug/L			07/09/19 17:57	1
Carbon disulfide	ND		3.0	0.53	ug/L			07/09/19 17:57	1
Acetone	ND		50	7.8	ug/L			07/09/19 17:57	1
Methylene Chloride	ND		5.0	1.4	ug/L			07/09/19 17:57	1
trans-1,2-Dichloroethene	ND		3.0	0.39	ug/L			07/09/19 17:57	1
1,1-Dichloroethane	ND		2.0	0.22	ug/L			07/09/19 17:57	1
2,2-Dichloropropane	ND		3.0	0.32	ug/L			07/09/19 17:57	1
2-Butanone	ND		20	4.7	ug/L			07/09/19 17:57	1
cis-1,2-Dichloroethene	ND		3.0	0.69	ug/L			07/09/19 17:57	1
Bromochloromethane	ND		2.0	0.29	ug/L			07/09/19 17:57	1
Chloroform	ND		5.0	0.50	ug/L			07/09/19 17:57	1
1,1,1-Trichloroethane	ND		3.0	0.39	ug/L			07/09/19 17:57	1
Carbon tetrachloride	ND		3.0	0.30	ug/L			07/09/19 17:57	1
1,1-Dichloropropene	ND		3.0	0.29	ug/L			07/09/19 17:57	1
Benzene	ND		3.0	0.53	ug/L			07/09/19 17:57	1
1,2-Dichloroethane	ND		2.0	0.53	ug/L			07/09/19 17:57	1
Trichloroethene	ND		3.0	0.85	ug/L			07/09/19 17:57	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			07/09/19 17:57	1
Dibromomethane	ND		2.0	0.34	ug/L			07/09/19 17:57	1
Bromodichloromethane	ND		2.0	0.14	ug/L			07/09/19 17:57	1
cis-1,3-Dichloropropene	ND		1.0	0.20	ug/L			07/09/19 17:57	1
4-Methyl-2-pentanone	ND		15	2.5	ug/L			07/09/19 17:57	1
Toluene	ND		2.0	0.39	ug/L			07/09/19 17:57	1
trans-1,3-Dichloropropene	ND		1.0	0.16	ug/L			07/09/19 17:57	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			07/09/19 17:57	1
Tetrachloroethene	ND		3.0	0.41	ug/L			07/09/19 17:57	1
1,3-Dichloropropane	ND		2.0	0.35	ug/L			07/09/19 17:57	1
2-Hexanone	ND		20	4.0	ug/L			07/09/19 17:57	1
Dibromochloromethane	ND		2.0	0.50	ug/L			07/09/19 17:57	1
1,2-Dibromoethane	ND		2.0	0.40	ug/L			07/09/19 17:57	1
Chlorobenzene	ND		2.0	0.44	ug/L			07/09/19 17:57	1

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QC Sample Results

Client: Stantec Consulting Services Inc
 Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: MB 580-305172/6
Matrix: Water
Analysis Batch: 305172

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		3.0	0.50	ug/L			07/09/19 17:57	1
1,1,1,2-Tetrachloroethane	ND		2.0	0.18	ug/L			07/09/19 17:57	1
m-Xylene & p-Xylene	ND		3.0	0.75	ug/L			07/09/19 17:57	1
o-Xylene	ND		2.0	0.39	ug/L			07/09/19 17:57	1
Styrene	ND		5.0	1.0	ug/L			07/09/19 17:57	1
Bromoform	ND		3.0	0.56	ug/L			07/09/19 17:57	1
Isopropylbenzene	ND		2.0	0.51	ug/L			07/09/19 17:57	1
Bromobenzene	ND		2.0	0.43	ug/L			07/09/19 17:57	1
N-Propylbenzene	ND		3.0	0.50	ug/L			07/09/19 17:57	1
1,1,2,2-Tetrachloroethane	ND		3.0	0.52	ug/L			07/09/19 17:57	1
4-Chlorotoluene	ND		2.0	0.51	ug/L			07/09/19 17:57	1
t-Butylbenzene	ND		3.0	0.58	ug/L			07/09/19 17:57	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			07/09/19 17:57	1
sec-Butylbenzene	ND		3.0	0.49	ug/L			07/09/19 17:57	1
1,3-Dichlorobenzene	ND		2.0	0.18	ug/L			07/09/19 17:57	1
4-Isopropyltoluene	ND		3.0	0.28	ug/L			07/09/19 17:57	1
1,4-Dichlorobenzene	ND		4.0	0.98	ug/L			07/09/19 17:57	1
n-Butylbenzene	ND		3.0	0.44	ug/L			07/09/19 17:57	1
1,2-Dichlorobenzene	ND		2.0	0.46	ug/L			07/09/19 17:57	1
1,2-Dibromo-3-Chloropropane	ND		10	1.8	ug/L			07/09/19 17:57	1
1,2,4-Trichlorobenzene	ND		2.0	0.33	ug/L			07/09/19 17:57	1
1,2,3-Trichlorobenzene	ND		5.0	1.1	ug/L			07/09/19 17:57	1
Hexachlorobutadiene	ND		6.0	0.79	ug/L			07/09/19 17:57	1
Naphthalene	ND		4.0	0.93	ug/L			07/09/19 17:57	1
Methyl tert-butyl ether	ND		2.0	0.44	ug/L			07/09/19 17:57	1
1,2,3-Trichloropropane	ND		2.0	0.41	ug/L			07/09/19 17:57	1
1,3,5-Trimethylbenzene	ND		3.0	0.55	ug/L			07/09/19 17:57	1
2-Chlorotoluene	ND		3.0	0.51	ug/L			07/09/19 17:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	102		80 - 120		07/09/19 17:57	1
<i>4-Bromofluorobenzene (Surr)</i>	95		80 - 120		07/09/19 17:57	1
<i>Dibromofluoromethane (Surr)</i>	94		80 - 120		07/09/19 17:57	1
<i>Trifluorotoluene (Surr)</i>	103		80 - 120		07/09/19 17:57	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	97		80 - 126		07/09/19 17:57	1

Lab Sample ID: LCS 580-305172/3
Matrix: Water
Analysis Batch: 305172

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	10.0	10.5		ug/L		105	80 - 120
m-Xylene & p-Xylene	10.0	10.1		ug/L		101	80 - 120
o-Xylene	10.0	10.9		ug/L		109	80 - 120
1,2,4-Trimethylbenzene	10.0	9.99		ug/L		100	80 - 120
Naphthalene	10.0	10.4		ug/L		104	44 - 144

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QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCS 580-305172/3
Matrix: Water
Analysis Batch: 305172

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

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

Lab Sample ID: LCSD 580-305172/4
Matrix: Water
Analysis Batch: 305172

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

<i>Analyte</i>	<i>Spike Added</i>	<i>LCSD Result</i>	<i>LCSD Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec. Limits</i>	<i>RPD</i>	<i>RPD Limit</i>
Ethylbenzene	10.0	10.1		ug/L		101	80 - 120	3	14
m-Xylene & p-Xylene	10.0	10.0		ug/L		100	80 - 120	1	14
o-Xylene	10.0	10.8		ug/L		108	80 - 120	1	16
1,2,4-Trimethylbenzene	10.0	9.71		ug/L		97	80 - 120	3	16
Naphthalene	10.0	10.8		ug/L		108	44 - 144	3	31

<i>Surrogate</i>	<i>LCSD %Recovery</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
<i>Toluene-d8 (Surr)</i>	105		80 - 120
<i>4-Bromofluorobenzene (Surr)</i>	99		80 - 120
<i>Dibromofluoromethane (Surr)</i>	96		80 - 120
<i>Trifluorotoluene (Surr)</i>	102		80 - 120
<i>1,2-Dichloroethane-d4 (Surr)</i>	98		80 - 126

Lab Sample ID: MB 580-305782/1-A
Matrix: Solid
Analysis Batch: 305794

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 305782

<i>Analyte</i>	<i>MB Result</i>	<i>MB Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Dichlorodifluoromethane	ND		200	46	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Chloromethane	ND		100	10	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Vinyl chloride	ND		150	26	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Bromomethane	ND		200	13	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Chloroethane	ND		400	10	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Trichlorofluoromethane	ND		200	11	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
1,1-Dichloroethene	ND		40	12	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Carbon disulfide	ND		60	12	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Acetone	ND		800	170	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Methylene Chloride	ND		250	65	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
trans-1,2-Dichloroethene	ND		60	15	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
1,1-Dichloroethane	ND		40	9.2	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
2,2-Dichloropropane	ND		40	12	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
2-Butanone	ND		600	190	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
cis-1,2-Dichloroethene	ND		60	13	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Bromochloromethane	ND		40	6.2	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Chloroform	ND		40	4.2	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
1,1,1-Trichloroethane	ND		40	9.6	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Carbon tetrachloride	ND		20	8.1	ug/Kg		07/16/19 08:00	07/16/19 11:53	1

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Stantec Consulting Services Inc
 Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: MB 580-305782/1-A
Matrix: Solid
Analysis Batch: 305794

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 305782

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1-Dichloropropene	ND		40	5.3	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Benzene	ND		30	3.8	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
1,2-Dichloroethane	ND		20	5.5	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Trichloroethene	ND		60	22	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
1,2-Dichloropropane	ND		20	6.6	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Dibromomethane	ND		60	7.4	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Bromodichloromethane	ND		60	13	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
cis-1,3-Dichloropropene	ND		20	4.0	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
4-Methyl-2-pentanone	ND		400	81	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Toluene	ND		150	14	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
trans-1,3-Dichloropropene	ND		40	7.0	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
1,1,2-Trichloroethane	ND		20	7.4	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Tetrachloroethene	ND		40	5.3	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
1,3-Dichloropropane	ND		60	14	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
2-Hexanone	ND		100	36	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Dibromochloromethane	ND		40	11	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
1,2-Dibromoethane	ND		20	3.8	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Chlorobenzene	ND		40	4.8	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Ethylbenzene	ND		40	9.1	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
1,1,1,2-Tetrachloroethane	ND		40	11	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
m-Xylene & p-Xylene	ND		200	15	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
o-Xylene	ND		60	13	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Styrene	ND		40	6.1	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Bromoform	ND		200	26	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Isopropylbenzene	ND		40	8.6	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Bromobenzene	ND		100	17	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
N-Propylbenzene	ND		40	6.9	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
1,1,1,2,2-Tetrachloroethane	ND		20	7.6	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
4-Chlorotoluene	ND		40	9.8	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
t-Butylbenzene	ND		40	7.7	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
1,2,4-Trimethylbenzene	ND		40	14	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
sec-Butylbenzene	ND		40	8.6	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
1,3-Dichlorobenzene	ND		60	13	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
4-Isopropyltoluene	ND		40	10	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
1,4-Dichlorobenzene	ND		60	11	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
n-Butylbenzene	ND		150	8.0	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
1,2-Dichlorobenzene	ND		40	8.7	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
1,2-Dibromo-3-Chloropropane	ND		250	15	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
1,2,4-Trichlorobenzene	ND		60	15	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
1,2,3-Trichlorobenzene	ND		150	32	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Hexachlorobutadiene	ND		150	33	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Naphthalene	ND		100	28	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
Methyl tert-butyl ether	ND		40	6.0	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
1,2,3-Trichloropropane	ND		40	12	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
1,3,5-Trimethylbenzene	ND		40	7.6	ug/Kg		07/16/19 08:00	07/16/19 11:53	1
2-Chlorotoluene	ND		40	8.8	ug/Kg		07/16/19 08:00	07/16/19 11:53	1

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QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: MB 580-305782/1-A
Matrix: Solid
Analysis Batch: 305794

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 305782

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Toluene-d8 (Surr)	100		80 - 120	07/16/19 08:00	07/16/19 11:53	1
4-Bromofluorobenzene (Surr)	104		80 - 120	07/16/19 08:00	07/16/19 11:53	1
Dibromofluoromethane (Surr)	100		80 - 120	07/16/19 08:00	07/16/19 11:53	1
Trifluorotoluene (Surr)	99		80 - 120	07/16/19 08:00	07/16/19 11:53	1
1,2-Dichloroethane-d4 (Surr)	100		80 - 121	07/16/19 08:00	07/16/19 11:53	1

Lab Sample ID: LCS 580-305782/2-A
Matrix: Solid
Analysis Batch: 305794

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 305782

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	Limits
		Result	Qualifier				
Dichlorodifluoromethane	800	882		ug/Kg		110	10 - 150
Chloromethane	800	813		ug/Kg		102	43 - 150
Vinyl chloride	800	855		ug/Kg		107	13 - 150
Bromomethane	800	875		ug/Kg		109	42 - 150
Chloroethane	800	949		ug/Kg		119	31 - 150
Trichlorofluoromethane	800	896		ug/Kg		112	48 - 150
1,1-Dichloroethene	800	877		ug/Kg		110	58 - 150
Carbon disulfide	800	873		ug/Kg		109	68 - 150
Acetone	4000	3350		ug/Kg		84	25 - 150
Methylene Chloride	800	864		ug/Kg		108	54 - 149
trans-1,2-Dichloroethene	800	908		ug/Kg		114	61 - 150
1,1-Dichloroethane	800	833		ug/Kg		104	70 - 135
2,2-Dichloropropane	800	856		ug/Kg		107	62 - 150
2-Butanone	4000	4020		ug/Kg		100	55 - 143
cis-1,2-Dichloroethene	800	876		ug/Kg		109	68 - 143
Bromochloromethane	800	824		ug/Kg		103	76 - 131
Chloroform	800	812		ug/Kg		102	74 - 133
1,1,1-Trichloroethane	800	844		ug/Kg		105	69 - 150
Carbon tetrachloride	800	829		ug/Kg		104	66 - 150
1,1-Dichloropropene	800	865		ug/Kg		108	69 - 150
Benzene	800	825		ug/Kg		103	72 - 135
1,2-Dichloroethane	800	827		ug/Kg		103	68 - 132
Trichloroethene	800	807		ug/Kg		101	69 - 144
1,2-Dichloropropane	800	835		ug/Kg		104	65 - 136
Dibromomethane	800	811		ug/Kg		101	72 - 130
Bromodichloromethane	800	793		ug/Kg		99	73 - 125
cis-1,3-Dichloropropene	800	760		ug/Kg		95	80 - 122
4-Methyl-2-pentanone	4000	3970		ug/Kg		99	68 - 125
Toluene	800	857		ug/Kg		107	75 - 137
trans-1,3-Dichloropropene	800	771		ug/Kg		96	80 - 121
1,1,2-Trichloroethane	800	823		ug/Kg		103	80 - 123
Tetrachloroethene	800	848		ug/Kg		106	71 - 145
1,3-Dichloropropane	800	827		ug/Kg		103	75 - 120
2-Hexanone	4000	4140		ug/Kg		103	70 - 127
Dibromochloromethane	800	813		ug/Kg		102	75 - 125
1,2-Dibromoethane	800	827		ug/Kg		103	77 - 123
Chlorobenzene	800	836		ug/Kg		105	80 - 123

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QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCS 580-305782/2-A
Matrix: Solid
Analysis Batch: 305794

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 305782

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	800	792		ug/Kg		99	80 - 135
1,1,1,2-Tetrachloroethane	800	831		ug/Kg		104	79 - 128
m-Xylene & p-Xylene	800	807		ug/Kg		101	80 - 132
o-Xylene	800	781		ug/Kg		98	80 - 125
Styrene	800	778		ug/Kg		97	79 - 129
Bromoform	800	774		ug/Kg		97	71 - 129
Isopropylbenzene	800	891		ug/Kg		111	74 - 140
Bromobenzene	800	739		ug/Kg		92	78 - 126
N-Propylbenzene	800	792		ug/Kg		99	74 - 143
1,1,2,2-Tetrachloroethane	800	848		ug/Kg		106	66 - 127
4-Chlorotoluene	800	777		ug/Kg		97	78 - 126
t-Butylbenzene	800	848		ug/Kg		106	72 - 144
1,2,4-Trimethylbenzene	800	772		ug/Kg		96	73 - 127
sec-Butylbenzene	800	822		ug/Kg		103	77 - 143
1,3-Dichlorobenzene	800	762		ug/Kg		95	78 - 122
4-Isopropyltoluene	800	863		ug/Kg		108	71 - 142
1,4-Dichlorobenzene	800	809		ug/Kg		101	77 - 123
n-Butylbenzene	800	815		ug/Kg		102	69 - 143
1,2-Dichlorobenzene	800	781		ug/Kg		98	78 - 126
1,2-Dibromo-3-Chloropropane	800	849		ug/Kg		106	62 - 135
1,2,4-Trichlorobenzene	800	800		ug/Kg		100	68 - 131
1,2,3-Trichlorobenzene	800	796		ug/Kg		100	62 - 136
Hexachlorobutadiene	800	900		ug/Kg		113	65 - 150
Naphthalene	800	789		ug/Kg		99	49 - 147
Methyl tert-butyl ether	800	784		ug/Kg		98	68 - 132
1,2,3-Trichloropropane	800	855		ug/Kg		107	70 - 127
1,3,5-Trimethylbenzene	800	786		ug/Kg		98	72 - 136
2-Chlorotoluene	800	791		ug/Kg		99	77 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	98		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
Trifluorotoluene (Surr)	102		80 - 120
1,2-Dichloroethane-d4 (Surr)	100		80 - 121

Lab Sample ID: LCSD 580-305782/3-A
Matrix: Solid
Analysis Batch: 305794

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 305782

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dichlorodifluoromethane	800	802		ug/Kg		100	10 - 150	9	40
Chloromethane	800	821		ug/Kg		103	43 - 150	1	26
Vinyl chloride	800	886		ug/Kg		111	13 - 150	4	40
Bromomethane	800	882		ug/Kg		110	42 - 150	1	22
Chloroethane	800	890		ug/Kg		111	31 - 150	6	31
Trichlorofluoromethane	800	911		ug/Kg		114	48 - 150	2	40
1,1-Dichloroethene	800	899		ug/Kg		112	58 - 150	2	29

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QC Sample Results

Client: Stantec Consulting Services Inc
 Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCSD 580-305782/3-A
Matrix: Solid
Analysis Batch: 305794

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 305782

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD
									Limit
Carbon disulfide	800	904		ug/Kg		113	68 - 150	3	27
Acetone	4000	2870		ug/Kg		72	25 - 150	15	39
Methylene Chloride	800	875		ug/Kg		109	54 - 149	1	30
trans-1,2-Dichloroethene	800	905		ug/Kg		113	61 - 150	0	22
1,1-Dichloroethane	800	852		ug/Kg		106	70 - 135	2	21
2,2-Dichloropropane	800	886		ug/Kg		111	62 - 150	3	20
2-Butanone	4000	3900		ug/Kg		97	55 - 143	3	31
cis-1,2-Dichloroethene	800	905		ug/Kg		113	68 - 143	3	20
Bromochloromethane	800	856		ug/Kg		107	76 - 131	4	15
Chloroform	800	833		ug/Kg		104	74 - 133	2	13
1,1,1-Trichloroethane	800	877		ug/Kg		110	69 - 150	4	14
Carbon tetrachloride	800	858		ug/Kg		107	66 - 150	3	12
1,1-Dichloropropene	800	890		ug/Kg		111	69 - 150	3	11
Benzene	800	841		ug/Kg		105	72 - 135	2	15
1,2-Dichloroethane	800	862		ug/Kg		108	68 - 132	4	17
Trichloroethene	800	823		ug/Kg		103	69 - 144	2	21
1,2-Dichloropropane	800	835		ug/Kg		104	65 - 136	0	13
Dibromomethane	800	831		ug/Kg		104	72 - 130	2	14
Bromodichloromethane	800	817		ug/Kg		102	73 - 125	3	15
cis-1,3-Dichloropropene	800	795		ug/Kg		99	80 - 122	5	16
4-Methyl-2-pentanone	4000	4130		ug/Kg		103	68 - 125	4	20
Toluene	800	872		ug/Kg		109	75 - 137	2	20
trans-1,3-Dichloropropene	800	789		ug/Kg		99	80 - 121	2	21
1,1,2-Trichloroethane	800	832		ug/Kg		104	80 - 123	1	20
Tetrachloroethene	800	857		ug/Kg		107	71 - 145	1	16
1,3-Dichloropropane	800	835		ug/Kg		104	75 - 120	1	18
2-Hexanone	4000	4260		ug/Kg		106	70 - 127	3	21
Dibromochloromethane	800	830		ug/Kg		104	75 - 125	2	18
1,2-Dibromoethane	800	846		ug/Kg		106	77 - 123	2	20
Chlorobenzene	800	864		ug/Kg		108	80 - 123	3	18
Ethylbenzene	800	816		ug/Kg		102	80 - 135	3	16
1,1,1,2-Tetrachloroethane	800	854		ug/Kg		107	79 - 128	3	17
m-Xylene & p-Xylene	800	827		ug/Kg		103	80 - 132	2	20
o-Xylene	800	808		ug/Kg		101	80 - 125	3	14
Styrene	800	804		ug/Kg		101	79 - 129	3	15
Bromoform	800	801		ug/Kg		100	71 - 129	3	17
Isopropylbenzene	800	905		ug/Kg		113	74 - 140	2	17
Bromobenzene	800	799		ug/Kg		100	78 - 126	8	19
N-Propylbenzene	800	843		ug/Kg		105	74 - 143	6	21
1,1,2,2-Tetrachloroethane	800	888		ug/Kg		111	66 - 127	5	18
4-Chlorotoluene	800	831		ug/Kg		104	78 - 126	7	16
t-Butylbenzene	800	921		ug/Kg		115	72 - 144	8	24
1,2,4-Trimethylbenzene	800	829		ug/Kg		104	73 - 127	7	20
sec-Butylbenzene	800	888		ug/Kg		111	77 - 143	8	24
1,3-Dichlorobenzene	800	807		ug/Kg		101	78 - 122	6	20
4-Isopropyltoluene	800	922		ug/Kg		115	71 - 142	7	23
1,4-Dichlorobenzene	800	873		ug/Kg		109	77 - 123	8	20
n-Butylbenzene	800	875		ug/Kg		109	69 - 143	7	26
1,2-Dichlorobenzene	800	823		ug/Kg		103	78 - 126	5	21

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QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCSD 580-305782/3-A
Matrix: Solid
Analysis Batch: 305794

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 305782

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	800	909		ug/Kg		114	62 - 135	7	25
1,2,4-Trichlorobenzene	800	820		ug/Kg		102	68 - 131	2	29
1,2,3-Trichlorobenzene	800	816		ug/Kg		102	62 - 136	2	34
Hexachlorobutadiene	800	905		ug/Kg		113	65 - 150	1	36
Naphthalene	800	820		ug/Kg		102	49 - 147	4	35
Methyl tert-butyl ether	800	808		ug/Kg		101	68 - 132	3	25
1,2,3-Trichloropropane	800	967		ug/Kg		121	70 - 127	12	16
1,3,5-Trimethylbenzene	800	850		ug/Kg		106	72 - 136	8	21
2-Chlorotoluene	800	846		ug/Kg		106	77 - 127	7	16

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
Toluene-d8 (Surr)	97		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Trifluorotoluene (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	101		80 - 121

Lab Sample ID: MB 580-305879/1-A
Matrix: Solid
Analysis Batch: 305919

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 305879

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		200	46	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Chloromethane	ND		100	10	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Vinyl chloride	ND		150	26	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Bromomethane	ND		200	13	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Chloroethane	ND		400	10	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Trichlorofluoromethane	ND		200	11	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
1,1-Dichloroethene	ND		40	12	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Carbon disulfide	ND		60	12	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Acetone	ND		800	170	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Methylene Chloride	ND		250	65	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
trans-1,2-Dichloroethene	ND		60	15	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
1,1-Dichloroethane	ND		40	9.2	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
2,2-Dichloropropane	ND		40	12	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
2-Butanone	ND		600	190	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
cis-1,2-Dichloroethene	ND		60	13	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Bromochloromethane	ND		40	6.2	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Chloroform	ND		40	4.2	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
1,1,1-Trichloroethane	ND		40	9.6	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Carbon tetrachloride	ND		20	8.1	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
1,1-Dichloropropene	ND		40	5.3	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Benzene	ND		30	3.8	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
1,2-Dichloroethane	ND		20	5.5	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Trichloroethene	ND		60	22	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
1,2-Dichloropropane	ND		20	6.6	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Dibromomethane	ND		60	7.4	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Bromodichloromethane	ND		60	13	ug/Kg		07/17/19 08:00	07/17/19 12:32	1

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QC Sample Results

Client: Stantec Consulting Services Inc
 Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: MB 580-305879/1-A
Matrix: Solid
Analysis Batch: 305919

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 305879

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		20	4.0	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
4-Methyl-2-pentanone	ND		400	81	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Toluene	ND		150	14	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
trans-1,3-Dichloropropene	ND		40	7.0	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
1,1,2-Trichloroethane	ND		20	7.4	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Tetrachloroethene	ND		40	5.3	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
1,3-Dichloropropane	ND		60	14	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
2-Hexanone	ND		100	36	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Dibromochloromethane	ND		40	11	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
1,2-Dibromoethane	ND		20	3.8	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Chlorobenzene	ND		40	4.8	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Ethylbenzene	ND		40	9.1	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
1,1,1,2-Tetrachloroethane	ND		40	11	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
m-Xylene & p-Xylene	ND		200	15	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
o-Xylene	ND		60	13	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Styrene	ND		40	6.1	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Bromoform	ND		200	26	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Isopropylbenzene	ND		40	8.6	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Bromobenzene	ND		100	17	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
N-Propylbenzene	ND		40	6.9	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
1,1,2,2-Tetrachloroethane	ND		20	7.6	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
4-Chlorotoluene	ND		40	9.8	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
t-Butylbenzene	ND		40	7.7	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
1,2,4-Trimethylbenzene	ND		40	14	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
sec-Butylbenzene	ND		40	8.6	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
1,3-Dichlorobenzene	ND		60	13	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
4-Isopropyltoluene	ND		40	10	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
1,4-Dichlorobenzene	ND		60	11	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
n-Butylbenzene	ND		150	8.0	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
1,2-Dichlorobenzene	ND		40	8.7	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
1,2-Dibromo-3-Chloropropane	ND		250	15	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
1,2,4-Trichlorobenzene	ND		60	15	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
1,2,3-Trichlorobenzene	ND		150	32	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Hexachlorobutadiene	ND		150	33	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Naphthalene	ND		100	28	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
Methyl tert-butyl ether	ND		40	6.0	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
1,2,3-Trichloropropane	ND		40	12	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
1,3,5-Trimethylbenzene	ND		40	7.6	ug/Kg		07/17/19 08:00	07/17/19 12:32	1
2-Chlorotoluene	ND		40	8.8	ug/Kg		07/17/19 08:00	07/17/19 12:32	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 120	07/17/19 08:00	07/17/19 12:32	1
4-Bromofluorobenzene (Surr)	101		80 - 120	07/17/19 08:00	07/17/19 12:32	1
Dibromofluoromethane (Surr)	96		80 - 120	07/17/19 08:00	07/17/19 12:32	1
Trifluorotoluene (Surr)	101		80 - 120	07/17/19 08:00	07/17/19 12:32	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 121	07/17/19 08:00	07/17/19 12:32	1

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QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCS 580-305879/2-A
Matrix: Solid
Analysis Batch: 305919

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 305879
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Dichlorodifluoromethane	800	759		ug/Kg		95	10 - 150
Chloromethane	800	797		ug/Kg		100	43 - 150
Vinyl chloride	800	819		ug/Kg		102	13 - 150
Bromomethane	800	846		ug/Kg		106	42 - 150
Chloroethane	800	866		ug/Kg		108	31 - 150
Trichlorofluoromethane	800	840		ug/Kg		105	48 - 150
1,1-Dichloroethene	800	858		ug/Kg		107	58 - 150
Carbon disulfide	800	844		ug/Kg		106	68 - 150
Acetone	4000	3000		ug/Kg		75	25 - 150
Methylene Chloride	800	851		ug/Kg		106	54 - 149
trans-1,2-Dichloroethene	800	862		ug/Kg		108	61 - 150
1,1-Dichloroethane	800	825		ug/Kg		103	70 - 135
2,2-Dichloropropane	800	824		ug/Kg		103	62 - 150
2-Butanone	4000	3860		ug/Kg		96	55 - 143
cis-1,2-Dichloroethene	800	855		ug/Kg		107	68 - 143
Bromochloromethane	800	815		ug/Kg		102	76 - 131
Chloroform	800	784		ug/Kg		98	74 - 133
1,1,1-Trichloroethane	800	826		ug/Kg		103	69 - 150
Carbon tetrachloride	800	817		ug/Kg		102	66 - 150
1,1-Dichloropropene	800	846		ug/Kg		106	69 - 150
Benzene	800	808		ug/Kg		101	72 - 135
1,2-Dichloroethane	800	833		ug/Kg		104	68 - 132
Trichloroethene	800	797		ug/Kg		100	69 - 144
1,2-Dichloropropane	800	831		ug/Kg		104	65 - 136
Dibromomethane	800	817		ug/Kg		102	72 - 130
Bromodichloromethane	800	770		ug/Kg		96	73 - 125
cis-1,3-Dichloropropene	800	771		ug/Kg		96	80 - 122
4-Methyl-2-pentanone	4000	4200		ug/Kg		105	68 - 125
Toluene	800	868		ug/Kg		108	75 - 137
trans-1,3-Dichloropropene	800	786		ug/Kg		98	80 - 121
1,1,2-Trichloroethane	800	842		ug/Kg		105	80 - 123
Tetrachloroethene	800	851		ug/Kg		106	71 - 145
1,3-Dichloropropane	800	851		ug/Kg		106	75 - 120
2-Hexanone	4000	4430		ug/Kg		111	70 - 127
Dibromochloromethane	800	827		ug/Kg		103	75 - 125
1,2-Dibromoethane	800	844		ug/Kg		106	77 - 123
Chlorobenzene	800	847		ug/Kg		106	80 - 123
Ethylbenzene	800	825		ug/Kg		103	80 - 135
1,1,1,2-Tetrachloroethane	800	848		ug/Kg		106	79 - 128
m-Xylene & p-Xylene	800	818		ug/Kg		102	80 - 132
o-Xylene	800	802		ug/Kg		100	80 - 125
Styrene	800	801		ug/Kg		100	79 - 129
Bromoform	800	784		ug/Kg		98	71 - 129
Isopropylbenzene	800	897		ug/Kg		112	74 - 140
Bromobenzene	800	755		ug/Kg		94	78 - 126
N-Propylbenzene	800	802		ug/Kg		100	74 - 143
1,1,2,2-Tetrachloroethane	800	900		ug/Kg		112	66 - 127
4-Chlorotoluene	800	778		ug/Kg		97	78 - 126

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QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCS 580-305879/2-A
Matrix: Solid
Analysis Batch: 305919

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 305879

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
t-Butylbenzene	800	866		ug/Kg		108	72 - 144
1,2,4-Trimethylbenzene	800	790		ug/Kg		99	73 - 127
sec-Butylbenzene	800	845		ug/Kg		106	77 - 143
1,3-Dichlorobenzene	800	774		ug/Kg		97	78 - 122
4-Isopropyltoluene	800	876		ug/Kg		109	71 - 142
1,4-Dichlorobenzene	800	846		ug/Kg		106	77 - 123
n-Butylbenzene	800	835		ug/Kg		104	69 - 143
1,2-Dichlorobenzene	800	798		ug/Kg		100	78 - 126
1,2-Dibromo-3-Chloropropane	800	845		ug/Kg		106	62 - 135
1,2,4-Trichlorobenzene	800	799		ug/Kg		100	68 - 131
1,2,3-Trichlorobenzene	800	777		ug/Kg		97	62 - 136
Hexachlorobutadiene	800	856		ug/Kg		107	65 - 150
Naphthalene	800	791		ug/Kg		99	49 - 147
Methyl tert-butyl ether	800	773		ug/Kg		97	68 - 132
1,2,3-Trichloropropane	800	919		ug/Kg		115	70 - 127
1,3,5-Trimethylbenzene	800	791		ug/Kg		99	72 - 136
2-Chlorotoluene	800	811		ug/Kg		101	77 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	97		80 - 120
Trifluorotoluene (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	100		80 - 121

Lab Sample ID: LCSD 580-305879/3-A
Matrix: Solid
Analysis Batch: 305919

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 305879

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Dichlorodifluoromethane	800	721		ug/Kg		90	10 - 150	5	40
Chloromethane	800	766		ug/Kg		96	43 - 150	4	26
Vinyl chloride	800	874		ug/Kg		109	13 - 150	7	40
Bromomethane	800	847		ug/Kg		106	42 - 150	0	22
Chloroethane	800	861		ug/Kg		108	31 - 150	1	31
Trichlorofluoromethane	800	886		ug/Kg		111	48 - 150	5	40
1,1-Dichloroethene	800	865		ug/Kg		108	58 - 150	1	29
Carbon disulfide	800	852		ug/Kg		106	68 - 150	1	27
Acetone	4000	2630		ug/Kg		66	25 - 150	13	39
Methylene Chloride	800	855		ug/Kg		107	54 - 149	0	30
trans-1,2-Dichloroethene	800	916		ug/Kg		115	61 - 150	6	22
1,1-Dichloroethane	800	839		ug/Kg		105	70 - 135	2	21
2,2-Dichloropropane	800	852		ug/Kg		107	62 - 150	3	20
2-Butanone	4000	3340		ug/Kg		83	55 - 143	14	31
cis-1,2-Dichloroethene	800	868		ug/Kg		109	68 - 143	2	20
Bromochloromethane	800	829		ug/Kg		104	76 - 131	2	15
Chloroform	800	821		ug/Kg		103	74 - 133	5	13
1,1,1-Trichloroethane	800	849		ug/Kg		106	69 - 150	3	14

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QC Sample Results

Client: Stantec Consulting Services Inc
 Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCSD 580-305879/3-A

Matrix: Solid

Analysis Batch: 305919

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 305879

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD
									Limit
Carbon tetrachloride	800	815		ug/Kg		102	66 - 150	0	12
1,1-Dichloropropene	800	858		ug/Kg		107	69 - 150	1	11
Benzene	800	814		ug/Kg		102	72 - 135	1	15
1,2-Dichloroethane	800	834		ug/Kg		104	68 - 132	0	17
Trichloroethene	800	802		ug/Kg		100	69 - 144	1	21
1,2-Dichloropropane	800	801		ug/Kg		100	65 - 136	4	13
Dibromomethane	800	782		ug/Kg		98	72 - 130	4	14
Bromodichloromethane	800	770		ug/Kg		96	73 - 125	0	15
cis-1,3-Dichloropropene	800	770		ug/Kg		96	80 - 122	0	16
4-Methyl-2-pentanone	4000	4050		ug/Kg		101	68 - 125	4	20
Toluene	800	875		ug/Kg		109	75 - 137	1	20
trans-1,3-Dichloropropene	800	780		ug/Kg		98	80 - 121	1	21
1,1,2-Trichloroethane	800	830		ug/Kg		104	80 - 123	1	20
Tetrachloroethene	800	881		ug/Kg		110	71 - 145	3	16
1,3-Dichloropropane	800	826		ug/Kg		103	75 - 120	3	18
2-Hexanone	4000	4140		ug/Kg		104	70 - 127	7	21
Dibromochloromethane	800	838		ug/Kg		105	75 - 125	1	18
1,2-Dibromoethane	800	841		ug/Kg		105	77 - 123	0	20
Chlorobenzene	800	865		ug/Kg		108	80 - 123	2	18
Ethylbenzene	800	832		ug/Kg		104	80 - 135	1	16
1,1,1,2-Tetrachloroethane	800	874		ug/Kg		109	79 - 128	3	17
m-Xylene & p-Xylene	800	831		ug/Kg		104	80 - 132	2	20
o-Xylene	800	811		ug/Kg		101	80 - 125	1	14
Styrene	800	813		ug/Kg		102	79 - 129	2	15
Bromoform	800	794		ug/Kg		99	71 - 129	1	17
Isopropylbenzene	800	931		ug/Kg		116	74 - 140	4	17
Bromobenzene	800	747		ug/Kg		93	78 - 126	1	19
N-Propylbenzene	800	784		ug/Kg		98	74 - 143	2	21
1,1,1,2,2-Tetrachloroethane	800	910		ug/Kg		114	66 - 127	1	18
4-Chlorotoluene	800	768		ug/Kg		96	78 - 126	1	16
t-Butylbenzene	800	850		ug/Kg		106	72 - 144	2	24
1,2,4-Trimethylbenzene	800	781		ug/Kg		98	73 - 127	1	20
sec-Butylbenzene	800	823		ug/Kg		103	77 - 143	3	24
1,3-Dichlorobenzene	800	763		ug/Kg		95	78 - 122	1	20
4-Isopropyltoluene	800	868		ug/Kg		108	71 - 142	1	23
1,4-Dichlorobenzene	800	824		ug/Kg		103	77 - 123	3	20
n-Butylbenzene	800	829		ug/Kg		104	69 - 143	1	26
1,2-Dichlorobenzene	800	783		ug/Kg		98	78 - 126	2	21
1,2-Dibromo-3-Chloropropane	800	774		ug/Kg		97	62 - 135	9	25
1,2,4-Trichlorobenzene	800	741		ug/Kg		93	68 - 131	8	29
1,2,3-Trichlorobenzene	800	715		ug/Kg		89	62 - 136	8	34
Hexachlorobutadiene	800	847		ug/Kg		106	65 - 150	1	36
Naphthalene	800	726		ug/Kg		91	49 - 147	9	35
Methyl tert-butyl ether	800	797		ug/Kg		100	68 - 132	3	25
1,2,3-Trichloropropane	800	876		ug/Kg		109	70 - 127	5	16
1,3,5-Trimethylbenzene	800	784		ug/Kg		98	72 - 136	1	21
2-Chlorotoluene	800	792		ug/Kg		99	77 - 127	2	16

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QC Sample Results

Client: Stantec Consulting Services Inc
 Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCSD 580-305879/3-A
Matrix: Solid
Analysis Batch: 305919

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 305879

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	102		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Trifluorotoluene (Surr)	102		80 - 120
1,2-Dichloroethane-d4 (Surr)	102		80 - 121

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

Lab Sample ID: MB 580-304597/1-A
Matrix: Water
Analysis Batch: 304767

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 304597

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10	0.031	ug/L		07/02/19 09:43	07/03/19 16:11	1
2-Methylnaphthalene	ND		0.20	0.039	ug/L		07/02/19 09:43	07/03/19 16:11	1
1-Methylnaphthalene	ND		0.10	0.019	ug/L		07/02/19 09:43	07/03/19 16:11	1
Acenaphthylene	ND		0.050	0.0090	ug/L		07/02/19 09:43	07/03/19 16:11	1
Acenaphthene	ND		0.10	0.014	ug/L		07/02/19 09:43	07/03/19 16:11	1
Fluorene	ND		0.10	0.017	ug/L		07/02/19 09:43	07/03/19 16:11	1
Phenanthrene	ND		0.10	0.031	ug/L		07/02/19 09:43	07/03/19 16:11	1
Anthracene	ND		0.10	0.022	ug/L		07/02/19 09:43	07/03/19 16:11	1
Fluoranthene	ND		0.20	0.050	ug/L		07/02/19 09:43	07/03/19 16:11	1
Pyrene	ND		0.10	0.033	ug/L		07/02/19 09:43	07/03/19 16:11	1
Benzo[a]anthracene	ND		0.050	0.014	ug/L		07/02/19 09:43	07/03/19 16:11	1
Chrysene	ND		0.10	0.016	ug/L		07/02/19 09:43	07/03/19 16:11	1
Benzo[b]fluoranthene	ND		0.050	0.011	ug/L		07/02/19 09:43	07/03/19 16:11	1
Benzo[k]fluoranthene	ND		0.050	0.012	ug/L		07/02/19 09:43	07/03/19 16:11	1
Benzo[a]pyrene	ND		0.10	0.011	ug/L		07/02/19 09:43	07/03/19 16:11	1
Indeno[1,2,3-cd]pyrene	ND		0.050	0.014	ug/L		07/02/19 09:43	07/03/19 16:11	1
Dibenz(a,h)anthracene	ND		0.10	0.026	ug/L		07/02/19 09:43	07/03/19 16:11	1
Benzo[g,h,i]perylene	ND		0.050	0.012	ug/L		07/02/19 09:43	07/03/19 16:11	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	78		53 - 120	07/02/19 09:43	07/03/19 16:11	1

Lab Sample ID: LCS 580-304597/2-A
Matrix: Water
Analysis Batch: 304767

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 304597

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	4.00	1.96		ug/L		49	36 - 120
2-Methylnaphthalene	4.00	1.85		ug/L		46	33 - 120
1-Methylnaphthalene	4.00	1.94		ug/L		49	35 - 120
Acenaphthylene	4.00	2.39		ug/L		60	42 - 120
Acenaphthene	4.00	2.26		ug/L		57	42 - 120
Fluorene	4.00	2.56		ug/L		64	49 - 120
Phenanthrene	4.00	2.71		ug/L		68	54 - 120
Anthracene	4.00	2.94		ug/L		74	56 - 120

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QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCS 580-304597/2-A
Matrix: Water
Analysis Batch: 304767

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 304597

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoranthene	4.00	3.24		ug/L		81	52 - 129
Pyrene	4.00	3.15		ug/L		79	50 - 127
Benzo[a]anthracene	4.00	3.08		ug/L		77	61 - 129
Chrysene	4.00	3.15		ug/L		79	47 - 126
Benzo[b]fluoranthene	4.00	3.30		ug/L		82	53 - 133
Benzo[k]fluoranthene	4.00	3.26		ug/L		82	51 - 132
Benzo[a]pyrene	4.00	3.04		ug/L		76	56 - 130
Indeno[1,2,3-cd]pyrene	4.00	3.18		ug/L		80	56 - 135
Dibenz(a,h)anthracene	4.00	3.31		ug/L		83	60 - 133
Benzo[g,h,i]perylene	4.00	3.14		ug/L		78	55 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Terphenyl-d14	80		53 - 120

Lab Sample ID: LCSD 580-304597/3-A
Matrix: Water
Analysis Batch: 304767

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 304597

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Naphthalene	4.00	2.29		ug/L		57	36 - 120	16	27
2-Methylnaphthalene	4.00	2.18		ug/L		54	33 - 120	16	30
1-Methylnaphthalene	4.00	2.28		ug/L		57	35 - 120	16	34
Acenaphthylene	4.00	2.90		ug/L		72	42 - 120	19	26
Acenaphthene	4.00	2.65		ug/L		66	42 - 120	16	24
Fluorene	4.00	2.92		ug/L		73	49 - 120	13	21
Phenanthrene	4.00	3.00		ug/L		75	54 - 120	10	21
Anthracene	4.00	3.21		ug/L		80	56 - 120	9	29
Fluoranthene	4.00	3.50		ug/L		87	52 - 129	8	32
Pyrene	4.00	3.37		ug/L		84	50 - 127	7	35
Benzo[a]anthracene	4.00	3.29		ug/L		82	61 - 129	7	31
Chrysene	4.00	3.35		ug/L		84	47 - 126	6	23
Benzo[b]fluoranthene	4.00	3.50		ug/L		88	53 - 133	6	25
Benzo[k]fluoranthene	4.00	3.45		ug/L		86	51 - 132	6	25
Benzo[a]pyrene	4.00	3.26		ug/L		82	56 - 130	7	27
Indeno[1,2,3-cd]pyrene	4.00	3.37		ug/L		84	56 - 135	6	24
Dibenz(a,h)anthracene	4.00	3.48		ug/L		87	60 - 133	5	25
Benzo[g,h,i]perylene	4.00	3.32		ug/L		83	55 - 127	6	27

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Terphenyl-d14	84		53 - 120

Lab Sample ID: MB 580-304799/1-A
Matrix: Solid
Analysis Batch: 304981

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 304799

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		5.0	1.6	ug/Kg		07/05/19 09:28	07/08/19 12:36	1
2-Methylnaphthalene	ND		5.0	2.1	ug/Kg		07/05/19 09:28	07/08/19 12:36	1

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QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: MB 580-304799/1-A
Matrix: Solid
Analysis Batch: 304981

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 304799

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1-Methylnaphthalene	ND		5.0	0.63	ug/Kg		07/05/19 09:28	07/08/19 12:36	1
Acenaphthylene	ND		5.0	0.50	ug/Kg		07/05/19 09:28	07/08/19 12:36	1
Acenaphthene	ND		5.0	0.60	ug/Kg		07/05/19 09:28	07/08/19 12:36	1
Fluorene	ND		5.0	0.50	ug/Kg		07/05/19 09:28	07/08/19 12:36	1
Phenanthrene	ND		5.0	1.6	ug/Kg		07/05/19 09:28	07/08/19 12:36	1
Anthracene	ND		5.0	0.60	ug/Kg		07/05/19 09:28	07/08/19 12:36	1
Fluoranthene	ND		5.0	1.4	ug/Kg		07/05/19 09:28	07/08/19 12:36	1
Pyrene	ND		5.0	0.97	ug/Kg		07/05/19 09:28	07/08/19 12:36	1
Benzo[a]anthracene	ND		5.0	0.76	ug/Kg		07/05/19 09:28	07/08/19 12:36	1
Chrysene	ND		5.0	1.5	ug/Kg		07/05/19 09:28	07/08/19 12:36	1
Benzo[b]fluoranthene	ND		5.0	0.59	ug/Kg		07/05/19 09:28	07/08/19 12:36	1
Benzo[k]fluoranthene	ND		5.0	0.60	ug/Kg		07/05/19 09:28	07/08/19 12:36	1
Benzo[a]pyrene	ND		5.0	0.84	ug/Kg		07/05/19 09:28	07/08/19 12:36	1
Indeno[1,2,3-cd]pyrene	ND		5.0	0.60	ug/Kg		07/05/19 09:28	07/08/19 12:36	1
Dibenz(a,h)anthracene	ND		5.0	0.72	ug/Kg		07/05/19 09:28	07/08/19 12:36	1
Benzo[g,h,i]perylene	ND		5.0	0.50	ug/Kg		07/05/19 09:28	07/08/19 12:36	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Terphenyl-d14	82		57 - 120	07/05/19 09:28	07/08/19 12:36	1

Lab Sample ID: LCS 580-304799/2-A
Matrix: Solid
Analysis Batch: 304981

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 304799

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2-Methylnaphthalene	1000	786		ug/Kg		79	68 - 120
1-Methylnaphthalene	1000	756		ug/Kg		76	71 - 120
Acenaphthylene	1000	734		ug/Kg		73	68 - 120
Acenaphthene	1000	719		ug/Kg		72	68 - 120
Fluorene	1000	689	*	ug/Kg		69	73 - 120
Phenanthrene	1000	720		ug/Kg		72	66 - 120
Anthracene	1000	790		ug/Kg		79	73 - 125
Fluoranthene	1000	747		ug/Kg		75	74 - 125
Pyrene	1000	729		ug/Kg		73	70 - 120
Benzo[a]anthracene	1000	861		ug/Kg		86	66 - 120
Chrysene	1000	693		ug/Kg		69	63 - 120
Benzo[b]fluoranthene	1000	843		ug/Kg		84	63 - 132
Benzo[k]fluoranthene	1000	770		ug/Kg		77	63 - 131
Benzo[a]pyrene	1000	815		ug/Kg		82	72 - 124
Indeno[1,2,3-cd]pyrene	1000	886		ug/Kg		89	65 - 132
Dibenz(a,h)anthracene	1000	816		ug/Kg		82	70 - 133
Benzo[g,h,i]perylene	1000	772		ug/Kg		77	63 - 128

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
Terphenyl-d14	74		57 - 120

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Stantec Consulting Services Inc
 Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: MB 580-304481/5
Matrix: Water
Analysis Batch: 304481

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	0.10	mg/L			07/01/19 10:04	1

Surrogate	%Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	118		50 - 150		07/01/19 10:04	1
4-Bromofluorobenzene (Surr)	112		50 - 150		07/01/19 10:04	1

Lab Sample ID: LCS 580-304481/6
Matrix: Water
Analysis Batch: 304481

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	1.01		mg/L		101	77 - 123

Surrogate	%Recovery	LCS Qualifier	Limits
Trifluorotoluene (Surr)	115		50 - 150
4-Bromofluorobenzene (Surr)	103		50 - 150

Lab Sample ID: LCSD 580-304481/7
Matrix: Water
Analysis Batch: 304481

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Gasoline Range Organics (GRO) -C6-C10	1.00	1.00		mg/L		100	77 - 123	1	20

Surrogate	%Recovery	LCSD Qualifier	Limits
Trifluorotoluene (Surr)	110		50 - 150
4-Bromofluorobenzene (Surr)	104		50 - 150

Lab Sample ID: MB 580-304803/1-A
Matrix: Solid
Analysis Batch: 304826

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 304803

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		5.0	2.1	mg/Kg		07/05/19 10:19	07/05/19 14:44	1

Surrogate	%Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	127		50 - 150	07/05/19 10:19	07/05/19 14:44	1
4-Bromofluorobenzene (Surr)	89		50 - 150	07/05/19 10:19	07/05/19 14:44	1

QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCS 580-304803/2-A
Matrix: Solid
Analysis Batch: 304826

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 304803
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics (GRO) -C6-C10	40.0	37.0		mg/Kg		93	60 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Trifluorotoluene (Surr)	116		50 - 150
4-Bromofluorobenzene (Surr)	93		50 - 150

Lab Sample ID: LCSD 580-304803/3-A
Matrix: Solid
Analysis Batch: 304826

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 304803
%Rec.

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO) -C6-C10	40.0	34.2		mg/Kg		86	60 - 120	8	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Trifluorotoluene (Surr)	110		50 - 150
4-Bromofluorobenzene (Surr)	93		50 - 150

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

Lab Sample ID: MB 580-304885/1-A
Matrix: Solid
Analysis Batch: 305096

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 304885

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	ND		20	8.9	mg/Kg		07/06/19 11:26	07/09/19 13:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	96		50 - 150	07/06/19 11:26	07/09/19 13:09	1

Lab Sample ID: LCS 580-304885/2-A
Matrix: Solid
Analysis Batch: 305096

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 304885
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
DRO (nC10-<nC25)	500	509		mg/Kg		102	75 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	94		50 - 150

Lab Sample ID: LCSD 580-304885/3-A
Matrix: Solid
Analysis Batch: 305096

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 304885
%Rec.

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
DRO (nC10-<nC25)	500	503		mg/Kg		101	75 - 125	1	20

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QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCSD 580-304885/3-A
Matrix: Solid
Analysis Batch: 305096

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 304885

	LCSD %Recovery	LCSD Qualifier	Limits
<i>o</i> -Terphenyl	91		50 - 150

Lab Sample ID: MB 580-305078/1-A
Matrix: Water
Analysis Batch: 305231

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 305078

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	ND		0.11	0.075	mg/L		07/09/19 09:34	07/10/19 12:41	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	71		50 - 150				07/09/19 09:34	07/10/19 12:41	1

Lab Sample ID: LCS 580-305078/2-A
Matrix: Water
Analysis Batch: 305231

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 305078

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
DRO (nC10-<nC25)	2.00	1.41	*	mg/L		71	75 - 125
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
<i>o</i> -Terphenyl	76		50 - 150				

Lab Sample ID: LCSD 580-305078/3-A
Matrix: Water
Analysis Batch: 305231

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 305078

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
DRO (nC10-<nC25)	2.00	1.24	*	mg/L		62	75 - 125	13	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
<i>o</i> -Terphenyl	74		50 - 150						

Lab Sample ID: MB 580-305498/1-A
Matrix: Water
Analysis Batch: 305875

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 305498

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (nC10-<nC25)	ND		0.11	0.075	mg/L		07/12/19 10:47	07/17/19 12:21	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	73		50 - 150				07/12/19 10:47	07/17/19 12:21	1

QC Sample Results

Client: Stantec Consulting Services Inc
 Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

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

Lab Sample ID: LCS 580-305498/2-A
Matrix: Water
Analysis Batch: 305875

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 305498

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
DRO (nC10-<nC25)	2.00	1.52		mg/L		76	75 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>o</i> -Terphenyl	93		50 - 150

Lab Sample ID: LCSD 580-305498/3-A
Matrix: Water
Analysis Batch: 305875

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 305498

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
DRO (nC10-<nC25)	2.00	1.62		mg/L		81	75 - 125	6	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
<i>o</i> -Terphenyl	91		50 - 150

Lab Chronicle

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-1 (4.5-5)

Lab Sample ID: 580-87288-1

Date Collected: 06/25/19 11:00

Matrix: Solid

Date Received: 06/27/19 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304990	07/08/19 13:13	K1H	TAL SEA

Client Sample ID: MW-19-1 (4.5-5)

Lab Sample ID: 580-87288-1

Date Collected: 06/25/19 11:00

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 63.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			305132	07/09/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C		1	305167	07/09/19 14:41	CJ	TAL SEA
Total/NA	Prep	5035	DL		305132	07/09/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C	DL	1	305167	07/09/19 18:31	CJ	TAL SEA
Total/NA	Prep	5035	DL2		305782	07/16/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C	DL2	1	305794	07/16/19 13:48	TL1	TAL SEA
Total/NA	Prep	3546			304799	07/05/19 09:28	FCG	TAL SEA
Total/NA	Analysis	8270D SIM		5	304981	07/08/19 18:44	W1T	TAL SEA
Total/NA	Prep	5035			304803	07/05/19 10:19	DCV	TAL SEA
Total/NA	Analysis	AK101		1	304900	07/07/19 04:27	DCV	TAL SEA
Total/NA	Prep	3546			304885	07/06/19 11:27	FCG	TAL SEA
Total/NA	Analysis	AK102 & 103		10	305096	07/09/19 17:54	W1T	TAL SEA

Client Sample ID: MW-19-1 (7-7.5)

Lab Sample ID: 580-87288-2

Date Collected: 06/25/19 11:30

Matrix: Solid

Date Received: 06/27/19 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304990	07/08/19 13:13	K1H	TAL SEA

Client Sample ID: MW-19-1 (7-7.5)

Lab Sample ID: 580-87288-2

Date Collected: 06/25/19 11:30

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 87.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			305132	07/09/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C		1	305167	07/09/19 15:07	CJ	TAL SEA
Total/NA	Prep	5035	DL		305132	07/09/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C	DL	1	305167	07/09/19 18:57	CJ	TAL SEA
Total/NA	Prep	5035	DL2		305782	07/16/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C	DL2	1	305794	07/16/19 14:14	TL1	TAL SEA
Total/NA	Prep	3546			304799	07/05/19 09:28	FCG	TAL SEA
Total/NA	Analysis	8270D SIM		1	304981	07/08/19 19:10	W1T	TAL SEA
Total/NA	Prep	3546	DL		304799	07/05/19 09:28	FCG	TAL SEA
Total/NA	Analysis	8270D SIM	DL	20	305071	07/09/19 11:16	W1T	TAL SEA
Total/NA	Prep	5035	DL		304803	07/05/19 10:19	DCV	TAL SEA
Total/NA	Analysis	AK101	DL	1	304900	07/07/19 04:57	DCV	TAL SEA

Lab Chronicle

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-1 (7-7.5)

Lab Sample ID: 580-87288-2

Date Collected: 06/25/19 11:30

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 87.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			304885	07/06/19 11:27	FCG	TAL SEA
Total/NA	Analysis	AK102 & 103		1	305096	07/09/19 18:16	W1T	TAL SEA

Client Sample ID: MW-19-2 (5.5-6)

Lab Sample ID: 580-87288-3

Date Collected: 06/25/19 13:15

Matrix: Solid

Date Received: 06/27/19 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304990	07/08/19 13:13	K1H	TAL SEA

Client Sample ID: MW-19-2 (5.5-6)

Lab Sample ID: 580-87288-3

Date Collected: 06/25/19 13:15

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 91.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			305132	07/09/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C		1	305167	07/09/19 15:33	CJ	TAL SEA
Total/NA	Prep	5035	RA		305782	07/16/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C	RA	1	305794	07/16/19 14:40	TL1	TAL SEA
Total/NA	Prep	3546			304799	07/05/19 09:28	FCG	TAL SEA
Total/NA	Analysis	8270D SIM		1	304981	07/08/19 19:36	W1T	TAL SEA
Total/NA	Prep	3546	DL		304799	07/05/19 09:28	FCG	TAL SEA
Total/NA	Analysis	8270D SIM	DL	20	305071	07/09/19 11:42	W1T	TAL SEA
Total/NA	Prep	5035	DL		304803	07/05/19 10:19	DCV	TAL SEA
Total/NA	Analysis	AK101	DL	1	304900	07/07/19 05:27	DCV	TAL SEA
Total/NA	Prep	3546			304885	07/06/19 11:27	FCG	TAL SEA
Total/NA	Analysis	AK102 & 103		1	305096	07/09/19 18:38	W1T	TAL SEA

Client Sample ID: MW-19-2 (7-7.5)

Lab Sample ID: 580-87288-4

Date Collected: 06/25/19 13:30

Matrix: Solid

Date Received: 06/27/19 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304990	07/08/19 13:13	K1H	TAL SEA

Client Sample ID: MW-19-2 (7-7.5)

Lab Sample ID: 580-87288-4

Date Collected: 06/25/19 13:30

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 86.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			305132	07/09/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C		1	305167	07/09/19 15:58	CJ	TAL SEA
Total/NA	Prep	5035	RA		305782	07/16/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C	RA	1	305794	07/16/19 15:06	TL1	TAL SEA
Total/NA	Prep	3546			304799	07/05/19 09:28	FCG	TAL SEA
Total/NA	Analysis	8270D SIM		1	304981	07/08/19 20:03	W1T	TAL SEA

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Lab Chronicle

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-2 (7-7.5)

Lab Sample ID: 580-87288-4

Date Collected: 06/25/19 13:30

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 86.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546	DL		304799	07/05/19 09:28	FCG	TAL SEA
Total/NA	Analysis	8270D SIM	DL	20	305071	07/09/19 12:08	W1T	TAL SEA
Total/NA	Prep	5035	DL		304803	07/05/19 10:19	DCV	TAL SEA
Total/NA	Analysis	AK101	DL	1	304900	07/07/19 05:57	DCV	TAL SEA
Total/NA	Prep	3546			304885	07/06/19 11:27	FCG	TAL SEA
Total/NA	Analysis	AK102 & 103		1	305096	07/09/19 19:00	W1T	TAL SEA

Client Sample ID: Dup-01

Lab Sample ID: 580-87288-5

Date Collected: 06/25/19 00:01

Matrix: Solid

Date Received: 06/27/19 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304990	07/08/19 13:13	K1H	TAL SEA

Client Sample ID: Dup-01

Lab Sample ID: 580-87288-5

Date Collected: 06/25/19 00:01

Matrix: Solid

Date Received: 06/27/19 11:30

Percent Solids: 87.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			305132	07/09/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C		1	305167	07/09/19 16:23	CJ	TAL SEA
Total/NA	Prep	5035	DL		305782	07/16/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C	DL	1	305794	07/16/19 15:31	TL1	TAL SEA
Total/NA	Prep	3546			304799	07/05/19 09:28	FCG	TAL SEA
Total/NA	Analysis	8270D SIM		1	304981	07/08/19 20:30	W1T	TAL SEA
Total/NA	Prep	3546	DL		304799	07/05/19 09:28	FCG	TAL SEA
Total/NA	Analysis	8270D SIM	DL	20	305071	07/09/19 12:35	W1T	TAL SEA
Total/NA	Prep	3546	DL2		304799	07/05/19 09:28	FCG	TAL SEA
Total/NA	Analysis	8270D SIM	DL2	50	305071	07/09/19 13:29	W1T	TAL SEA
Total/NA	Prep	5035	DL		304803	07/05/19 10:19	DCV	TAL SEA
Total/NA	Analysis	AK101	DL	1	304900	07/07/19 06:28	DCV	TAL SEA
Total/NA	Prep	3546			304885	07/06/19 11:27	FCG	TAL SEA
Total/NA	Analysis	AK102 & 103		1	305096	07/09/19 19:22	W1T	TAL SEA

Client Sample ID: TB-01

Lab Sample ID: 580-87288-6

Date Collected: 06/25/19 00:01

Matrix: Solid

Date Received: 06/27/19 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			305132	07/09/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C		1	305167	07/09/19 14:16	CJ	TAL SEA
Total/NA	Prep	5035	RA		305879	07/17/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C	RA	1	305919	07/17/19 13:49	CJ	TAL SEA

Lab Chronicle

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: MW-19-1

Date Collected: 06/26/19 12:45

Date Received: 06/27/19 11:30

Lab Sample ID: 580-87288-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	10	305029	07/08/19 22:54	CJ	TAL SEA
Total/NA	Analysis	8260C	RADL	10	305172	07/09/19 20:27	T1W	TAL SEA
Total/NA	Analysis	8260C		1	304834	07/05/19 21:59	T1W	TAL SEA
Total/NA	Prep	3510C			304597	07/02/19 09:44	PRO	TAL SEA
Total/NA	Analysis	8270D SIM		1	304767	07/03/19 19:26	TL1	TAL SEA
Total/NA	Prep	3510C	DL		304597	07/02/19 09:44	PRO	TAL SEA
Total/NA	Analysis	8270D SIM	DL	10	304823	07/05/19 17:17	W1T	TAL SEA
Total/NA	Analysis	AK101		1	304481	07/01/19 18:55	DCV	TAL SEA
Total/NA	Prep	3510C			305078	07/09/19 09:34	PRO	TAL SEA
Total/NA	Analysis	AK102 & 103		1	305231	07/10/19 18:31	TL1	TAL SEA
Total/NA	Prep	3510C			305498	07/12/19 10:48	PRO	TAL SEA
Total/NA	Analysis	AK102 & 103		1	305875	07/17/19 13:49	T1W	TAL SEA

Client Sample ID: MW-19-2

Date Collected: 06/26/19 14:15

Date Received: 06/27/19 11:30

Lab Sample ID: 580-87288-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	10	305029	07/08/19 23:19	CJ	TAL SEA
Total/NA	Analysis	8260C	DL2	50	305172	07/09/19 20:52	T1W	TAL SEA
Total/NA	Analysis	8260C		1	304834	07/05/19 22:24	T1W	TAL SEA
Total/NA	Prep	3510C			304597	07/02/19 09:44	PRO	TAL SEA
Total/NA	Analysis	8270D SIM		1	304767	07/03/19 19:51	TL1	TAL SEA
Total/NA	Prep	3510C	DL		304597	07/02/19 09:44	PRO	TAL SEA
Total/NA	Analysis	8270D SIM	DL	10	304823	07/05/19 17:41	W1T	TAL SEA
Total/NA	Analysis	AK101		1	304481	07/01/19 19:22	DCV	TAL SEA
Total/NA	Prep	3510C			305078	07/09/19 09:34	PRO	TAL SEA
Total/NA	Analysis	AK102 & 103		1	305231	07/10/19 18:54	TL1	TAL SEA
Total/NA	Prep	3510C			305498	07/12/19 10:48	PRO	TAL SEA
Total/NA	Analysis	AK102 & 103		1	305875	07/17/19 14:11	T1W	TAL SEA

Client Sample ID: TB-01

Date Collected: 06/26/19 00:01

Date Received: 06/27/19 11:30

Lab Sample ID: 580-87288-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	304834	07/05/19 15:05	T1W	TAL SEA

Client Sample ID: Dup-01

Date Collected: 06/26/19 00:01

Date Received: 06/27/19 11:30

Lab Sample ID: 580-87288-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	10	305172	07/09/19 22:07	T1W	TAL SEA

Eurofins TestAmerica, Seattle

Laboratory Data Review Checklist

Completed By:

Erin O'Malley

Title:

Environmental Engineer

Date:

January 14, 2020

Consultant Firm:

Stantec Consulting Services Inc.

Laboratory Name:

Eurofins TestAmerica, Seattle

Laboratory Report Number:

580-87288-1

Laboratory Report Date:

August 1, 2019

CS Site Name:

2Go Mart 101/IFC

ADEC File Number:

100.26.022

Hazard Identification Number:

26295

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Laboratory Report Date:

August 1, 2019

CS Site Name:

2Go Mart 101/IFC

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:

3. Laboratory Sample Receipt Documentation

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

Yes No N/A Comments:

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

Yes No N/A Comments:

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

Yes No N/A Comments:

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- 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 soil samples were provided to the laboratory with a significantly different initial weight than that required by the reference method: MW-19-1 (4.5-5) (580-87288-1), MW-19-1 (7-7.5) (580-87288-2), MW-19-2 (5.5-6) (580-87288-3), MW-19-2 (7-7.5) (580-87288-4) and Dup-01 (580-87288-5). 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.

Method AK101 (soil): The following samples were analyzed at reduced volume due to high concentrations of target analytes: MW-19-1 (7-7.5) (580-87288-2), MW-19-2 (5.5-6) (580-87288-3), MW-19-2 (7-7.5) (580-87288-4) and Dup-01 (580-87288-5). The calculation was done using an initial volume adjustment rather than a dilution factor. The reporting limits have been elevated by the appropriate factor.

Method 8260C (soil): The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-19-1 (4.5-5) (580-87288-1), MW-19-1 (7-7.5) (580-87288-2), MW-19-2 (5.5-6) (580-87288-3), MW-19-2 (7-7.5) (580-87288-4) and Dup-01 (580-87288-5). Elevated PQLs are provided.

Method 8270D SIM (soil): The following sample was diluted due to the nature of the sample matrix: MW-19-1 (4.5-5) (580-87288-1). Elevated PQLs are provided.

Method 8270D SIM (soil): The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-19-1 (7-7.5) (580-87288-2), MW-19-2 (5.5-6) (580-87288-3), MW-19-2 (7-7.5) (580-87288-4) and Dup-01 (580-87288-5). Elevated PQLs are provided.

Method AK102 & 103 (soil): The following sample was diluted due to the nature of the sample matrix: MW-19-1 (4.5-5) (580-87288-1). Elevated PQLs are provided.

Method 8260C (water): The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-19-1 (580-87288-7) and MW-19-2 (580-87288-8). Elevated PQLs are provided.

Method 8270D SIM (water): The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-19-1 (580-87288-7), MW-19-2 (580-87288-8) and Dup-01 (580-87288-10). Elevated PQLs are provided.

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e. Data quality or usability affected?

Comments:

Yes, the issues noted above for Method 8260C for soil caused significantly elevated PQLs, which in turn caused less accurate data. No effect was caused by the elevated PQLs for the other methods listed above because the PQLs were only slightly elevated or the concentrations were still detected above the PQLs even with the elevated PQLs.

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:

c. Were all corrective actions documented?

Yes No N/A Comments:

Not all included in the case narrative, but what wasn't included in the case narrative, was included in the analytical results with data flags, which were identified in the definitions page.

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:

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b. All applicable holding times met?

Yes No N/A Comments:

Method 8260C (soil): Re-analysis of the following samples were performed outside of the analytical holding time due to QC failure in the initial analysis: MW-19-1 (4.5-5) (580-87288-1), MW-19-1 (7-7.5) (580-87288-2), MW-19-2 (5.5-6) (580-87288-3), MW-19-2 (7-7.5) (580-87288-4), Dup-01 (580-87288-5) and TB-01 (580-87288-6). Both sets of data for these samples are reported.

Method AK102 & 103 (water): Re-extraction and re-analysis of the following samples were performed outside of the analytical holding time due to LCS/LCSD failures in the initial analysis: MW-19-1 (580-87288-7), MW-19-2 (580-87288-8) and Dup-01 (580-87288-10). Both sets of data for these samples are reported.

Quality control issues further described below.

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:

There are a number of LOQs that exceed the SCLs and GCLs for all samples. See Tables 1 and 2, respectively.

e. Data quality or usability affected?

All non-detect results where the LOQ exceeds the SCL/GCL are affected.

The VOC soil results and DRO groundwater results, where the samples were extracted or analyzed outside of analytical holding time, are usable as qualified. Both sets of data were reported and the highest concentration for each sample was used in the project report.

6. QC Samples

a. Method Blank

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

Yes No N/A Comments:

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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 samples affected.

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.

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- 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:

Method 8270D SIM (soil): The following analyte recovered outside control limits for the LCS associated with preparation batch 580-304799 and analytical batch 580-304981: Fluorene.

Method AK102 & 103 (water): Re-extraction and re-analysis of the following samples were performed outside of the analytical holding time due to LCS/LCSD failures in the initial analysis: MW-19-1 (580-87288-7), MW-19-2 (580-87288-8) and Dup-01 (580-87288-10). No QC failure in the re-analysis. Both sets of data for these samples are reported.

Method 8260C (water): The LCS/LCSD for analytical batch 580-304834 recovered outside control limits for the following analyte: Carbon disulfide.

Method 8260C (water): The LCS and LCSD for analytical batch 580-304834 recovered outside control limits for the following analyte: Hexachlorobutadiene.

- 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:

Method 8260C (soil): Re-analysis of the following samples were performed outside of the analytical holding time due to LCS/LCSD RPD QC failure in the initial analysis: MW-19-1 (4.5-5) (580-87288-1), MW-19-1 (7-7.5) (580-87288-2), MW-19-2 (5.5-6) (580-87288-3), MW-19-2 (7-7.5) (580-87288-4), Dup-01 (580-87288-5) and TB-01 (580-87288-6). No QC failure in the re-analysis. Both sets of data for these samples are reported.

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

Comments:

Method 8270D SIM (soil): Fluorene in all soil samples analyzed for PAHs.

Method 8260C (soil): All soil samples (specific analytes listed in laboratory report).

Method AK102 & 103 (water): DRO in all groundwater samples analyzed for DRO.

Method 8260C (water): Carbon disulfide in all water samples.

Method 8260C (water): Hexachlorobutadiene in all water samples.

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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:

No. Data usable as qualified.

Method 8270D SIM (soil): Fluorene LCS recovery outside control limits in analytical batch 580-304981 is not indicative of a systematic control problem because this was a random marginal exceedance. Data usable as qualified.

Method 8260C (water): LCS/LCSD recovery issues analytical batch 580-304834 Carbon disulfide: Carbon disulfide has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

Method 8260C (water): LCS/LCSD recovery issues analytical batch 580-304834 Hexachlorobutadiene: This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

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:

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:

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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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- 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 (soil): Surrogate recovery for the following sample was outside control limits: TB-01 (580-87288-6). Re-extraction and/or re-analysis was performed with concurring results. Both sets of data have been reported.

Method 8270D SIM (soil): Surrogate recovery for the following sample was outside control limits: Dup-01 (580-87288-5).

Method AK101 (soil): Surrogate 4-Bromofluorobenzene (Surr) recovery for the following samples were outside control limits: MW-19-1 (4.5-5) (580-87288-1), MW-19-1 (7-7.5) (580-87288-2), MW-19-2 (5.5-6) (580-87288-3), MW-19-2 (7-7.5) (580-87288-4) and Dup-01 (580-87288-5).

Method AK102 & 103 (soil): Surrogate recovery for the following sample was outside control limits: MW-19-1 (4.5-5) (580-87288-1).

Method 8270D SIM (water): Surrogate recovery for the following sample was outside control limits: MW-19-2 (580-87288-8).

Method AK101 (water): Surrogate 4-Bromofluorobenzene (Surr) recovery for the following samples were outside control limits: MW-19-1 (580-87288-7), MW-19-2 (580-87288-8) and Dup-01 (580-87288-10).

- 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. Data usable as qualified.

Method 8270D SIM (soil), Method AK101 (soil), Method AK102 & 103 (soil), Method 8270D SIM (water), and Method AK101 (water): Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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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:

- 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:

For soil, Dup-01 is a duplicate of MW 19-1 (4.5-5). For groundwater, Dup-1 is a duplicate of MW 19-1.

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

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

Where R_1 = Sample Concentration
 R_2 = Field Duplicate Concentration

Yes No N/A Comments:

For soil, RPDs did not meet DQOs for any detected analytes above SCLs.
For groundwater, RPDs met the DQOs for all detected analytes above GCLs.

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

Comments:

Unlikely. Reported concentrations were generally consistently above or 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.

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.

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

a. Defined and appropriate?

Yes No N/A

Comments:

Lab Chronicle

Client: Stantec Consulting Services Inc
 Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Client Sample ID: Dup-01

Lab Sample ID: 580-87288-10

Date Collected: 06/26/19 00:01

Matrix: Water

Date Received: 06/27/19 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	304834	07/05/19 16:18	T1W	TAL SEA
Total/NA	Prep	3510C			304597	07/02/19 09:44	PRO	TAL SEA
Total/NA	Analysis	8270D SIM		1	304767	07/03/19 20:15	TL1	TAL SEA
Total/NA	Prep	3510C	DL		304597	07/02/19 09:44	PRO	TAL SEA
Total/NA	Analysis	8270D SIM	DL	10	304823	07/05/19 18:30	W1T	TAL SEA
Total/NA	Analysis	AK101		1	304481	07/01/19 19:49	DCV	TAL SEA
Total/NA	Prep	3510C			305078	07/09/19 09:34	PRO	TAL SEA
Total/NA	Analysis	AK102 & 103		1	305231	07/10/19 19:15	TL1	TAL SEA
Total/NA	Prep	3510C			305498	07/12/19 10:48	PRO	TAL SEA
Total/NA	Analysis	AK102 & 103		1	305875	07/17/19 14:33	T1W	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
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Laboratory: Eurofins TestAmerica, Seattle

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	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	9	2901	11-05-19
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-05-19
Oregon	NELAP		WA100007	11-05-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
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	10	C553	02-17-20

Sample Summary

Client: Stantec Consulting Services Inc
Project/Site: TNS 101 / IFC

Job ID: 580-87288-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-87288-1	MW-19-1 (4.5-5)	Solid	06/25/19 11:00	06/27/19 11:30	
580-87288-2	MW-19-1 (7-7.5)	Solid	06/25/19 11:30	06/27/19 11:30	
580-87288-3	MW-19-2 (5.5-6)	Solid	06/25/19 13:15	06/27/19 11:30	
580-87288-4	MW-19-2 (7-7.5)	Solid	06/25/19 13:30	06/27/19 11:30	
580-87288-5	Dup-01	Solid	06/25/19 00:01	06/27/19 11:30	
580-87288-6	TB-01	Solid	06/25/19 00:01	06/27/19 11:30	
580-87288-7	MW-19-1	Water	06/26/19 12:45	06/27/19 11:30	
580-87288-8	MW-19-2	Water	06/26/19 14:15	06/27/19 11:30	
580-87288-9	TB-01	Water	06/26/19 00:01	06/27/19 11:30	
580-87288-10	Dup-01	Water	06/26/19 00:01	06/27/19 11:30	

Regulatory Program: DW NPDES RCRA Other:

Client Contact

Project Manager: Bob Fullerton

Site Contact:

Date: 6/26/19

COC No. of COCS

Company Name: **Stantec Consulting**

Address: 725 E. Forward Lane Ste 200

City/State/Zip: Anchorage AK

Carrier: Goldstrack

Sampler: 1 of COCS

Phone: 317-370-1844

Fax: TNS 101/IEC

Lab Contact:

Loc: 580
87288

Project Name: TNS 101/IEC

Site: 145751214

Carrier: Goldstrack

Job / SDG No.:

P.O.#: 145751214

Analysis Turnaround Time

Filtered Sample (Y/N)

Perform MS/MSD (Y/N)

For Lab Use Only:
 Walk-in Client:
 Lab Sampling:

Sample Identification

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)
MW-19-1 (4.5-5)	6/25/19	1100	G	SL	2	X	X
MW-19-1 (7-7.5)	6/25/19	130	G	SL	2	X	X
MW-19-2 (5.5-6)	6/25/19	1315	G	SL	2	X	X
MW-19-2 (7-7.5)	6/25/19	1330	G	SL	2	X	X
Dup-01	6/25/19	-	G	SL	2	X	X
TB-01	6/25/19	-	G	TB	1	X	X
MW-19-1	6/26/19	1415	G	GW	10	X	X
MW-19-2	6/26/19	1415	G	GW	10	X	X
TB-01	6/26/19	-	G	GW	10	X	X
Dup-01	6/26/19	-	G	GW	10	X	X

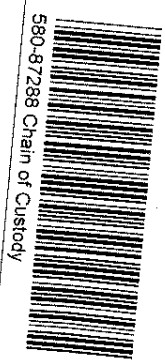
Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Other

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.

Special Instructions/QC Requirements & Comments:
 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



Therm. ID: **11** Cor: **0.01** Inc: **0.3**
 Cooler Desc: **Ly Bag**
 Packing: **5/5/19** FedEx:
 Cust. Seal: Yes No
 Blue Ice: Dry: None
 Lab Cour: **L**
 Other:

Custody Seal Intact: Yes No

Relinquished by: *[Signature]* Company: **Stantec** Date/Time: **6/26/19 1615**

Relinquished by: *[Signature]* Company: **Goldstrack** Date/Time: **6/27/19 1015**

Relinquished by: *[Signature]* Company: **THSEH** Date/Time: **6/27/19 1015**

Relinquished by: *[Signature]* Company: **THSEH** Date/Time: **6/27/19 1015**

Login Sample Receipt Checklist

Client: Stantec Consulting Services Inc

Job Number: 580-87288-1

Login Number: 87288

List Source: Eurofins TestAmerica, Seattle

List Number: 1

Creator: Hobbs, Kenneth F

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	