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Two Union Square
601 Union Street, Suite 600
Seattle, WA 98101
tel: 206.292.2078 fax: 206.682.7867

January 10, 2020

Mr. John Mefford
Washington State Department of Ecology
1250 West Alder Street
Union Gap, WA 98903-0009

SUBJECT: LANDFARMING PILOT TEST SUMMARY REPORT
Big B Mini Mart
1611 Canyon Road
Ellensburg, Washington

Dear Mr. Mefford:

Floyd|Snider has prepared this letter to summarize the results of the landfarming pilot test performed between July and November 2019. The pilot test was conducted in response to a Washington State Department of Ecology email dated February 20, 2019 and pursuant to Agreed Order No. DE 16307, concerning the need for an interim action (IA) pilot test of landfarming at the Big B Mini Mart Site (Site) located in Ellensburg, Washington. Landfarming is a key component of the preferred cleanup action described in the final Remedial Investigation and Feasibility Study (RI/FS) for the Big B Site. The results from the pilot test provided useful information on the performance of on-site landfarming at the Site and confirmed its effectiveness as a key remedial component of the preferred cleanup action as described in the RI/FS for this Site.

DESCRIPTION OF PILOT TEST ACTIVITIES

The IA consisted of two key activities: (1) excavation of contaminated soils in an area known to contain residual light non-aqueous-phase liquids (LNAPL) following underground storage tank (UST) decommissioning in 2016; and (2) landfarming of the excavated soils within the Site boundary as shown on Figure 1. The excavated area was approximately 2,200 square feet in size as measured at the top of slope. The southern boundary of the excavated area was located adjacent to the existing east-west section of the previously installed LNAPL recovery trench.

The activities conducted during the pilot test were as follows:

- A Site development permit and critical area waiver were obtained from the City of Ellensburg; copies of the permit and wavier are included in Attachment 1.
- Underground utilities were located on the same day as the Site mobilization.
- LNAPL thickness measurements were collected in on- and off-property wells and piezometers.

- Monitoring well MW-5A was abandoned by a licensed driller on July 19, 2019. The excavation did not extend onto BNSF Railway property and, therefore, MW-4A was not abandoned.
- Any existing piezometers that would have interfered with construction activities were removed.
- Temporary erosion and stormwater controls were set up as required by permit. This included using Visqueen sheeting and hay bales beneath and surrounding the land farm test plot, placing filter socks in the stormwater drains, and covering the stockpiled soil with plastic sheeting. These best management practices (BMPs) were implemented to keep soil confined to the property and to prevent soil from entering stormwater drains, either on- or off-site.
- The top 3 feet of clean overburden soils was removed. Approximately 150 cubic yards (CY) of clean overburden was stockpiled adjacent to the excavation and covered. Five soil samples were collected from the overburden stockpile. Stockpile sample results are shown on Table 1.
- Contaminated soil was excavated between 3 and approximately 7 feet below ground surface (bgs). Groundwater was encountered at approximately 5.5 feet bgs. Wet excavated soil was allowed to drain back into the excavation prior to being placed in the landfarming area.
- The excavation was left open to monitor for free product seepage indicating the presence of LNAPL in adjacent soils. Free product was observed seeping in from the southwestern corner of the excavation. Sorbent pads were used to collect accumulated product in the excavation pit. Only a thin layer of LNAPL accumulated in the excavation pit, and seepage was no longer observed after 1 week.
- Significant odor was not noted during excavation; therefore, engineering controls to abate the odors were not necessary. In addition, volatile organic compounds were not detected at the site perimeter using a photoionization detector during the baseline sampling event.
- The sidewalls of the excavation were cut back at a 1:1 slope and were later backfilled in mid-November 2019 to the water table elevation with the clean overburden following receipt of the laboratory results confirming that the overburden stockpile contained concentrations of contaminants of concern (COCs) less than Model Toxics Control Act (MTCA) Method A cleanup levels.
- Cobbles were absent on this portion of the property; therefore, excavated soil was not placed through the mechanical grate that was brought to the Site to remove cobbles had they been encountered.
- Approximately 240 CY of contaminated soil was transported to the landfarming area shown on Figure 1. The soil was placed on plastic, which in turn was placed on top of

the existing asphalt surface. The soil in the landfarming area was uniformly spread out to a thickness of between 12 and 18 inches.

- The area was then bermed with hay bales and covered with plastic sheeting that was secured with sandbags.
- Once spread out, the soil in the landfarming area was divided into five equal windrowed decision units (DU), DU-01 through DU-05 (Figure 1). A representative baseline sample was collected on August 2, 2019, from the center point of each decision unit at a depth of approximately half of the thickness of treatment layer (6 to 9 inches).
- The five baseline samples were analyzed for the site COCs, including gasoline-range organics, diesel-range organics (DRO), benzene, toluene, ethylbenzene, xylene compounds, and naphthalene, as well as the soil nutrients nitrogen, phosphorus, and potassium (NPK).
- The soil was rototilled and/or turned over by backhoe on a weekly basis.
- Approximately 30 CY of cow manure was mixed in with the impacted soil on August 3, 2019, to provide a natural source of NPK and aerobic bacteria.
- Based on lack of available nitrogen in the soil after the first month of landfarming, liquid nitrogen was sprayed onto the soil followed by application of fertilizer granules in September and again in October.
- Soil pH was measured and found to be within optimal range of between 6 and 8.04 standard units; pH measurements are included in the laboratory reports (Attachment 2).
- Moisture was checked weekly and was added by spray hose if the soil appeared to be drying out. The soil moisture content ranged between 10 and 35 percent by weight based on the soil moisture content in samples analyzed by the laboratory.
- During the time on-site, the BMPs for prevention of runoff from the Site was inspected and remedied as needed (e.g., a filter sock was placed in the storm drain along Canyon Road and any accumulated debris was removed). No evidence of either soil or rainwater runoff was noted.

SOIL SAMPLE RESULTS

Samples were collected on a monthly basis to determine progress and effectiveness of landfarming activities. Baseline samples were collected on August 2, 2019, prior to tilling and adding amendments. Results indicated that the excavation was successful in removing highly impacted soil: DRO was present at concentrations greatly exceeding the MTCA Method A cleanup level of 2,000 milligrams per kilogram (mg/kg) in three of the five DUs. No other COCs were noted in the baseline samples, consistent with the results of the RI/FS, which indicated a release of diesel from the former UST in this area.

Performance sampling was conducted in accordance with the approved work plan submitted in April 2019. The first performance sampling event in September 2019 indicated significant reductions in DRO in four of the five DUs; DU-04 showed a slight increase in DRO. The second performance sampling event in October 2019 showed that DU-02, DU-04, and DU-05 contained DRO concentrations that were much less than the MTCA Method A DRO cleanup level. The soil in these DUs also had no petroleum odor noted during the sampling event. The remaining two DUs (DU-01 and DU-03) had DRO concentrations slightly exceeding the cleanup level. The final performance sampling event occurred in November 2019 and involved sampling only DU-1 and DU-3, and sampling results indicated DRO concentrations were much less than the MTCA Method cleanup level. Final concentrations from each DU's last sampling event (October or November 2019) ranged from 300 mg/kg to 1,200 mg/kg DRO. Soil analytical data are shown on Table 1 and laboratory results are included as Attachment 2.

Review of the chromatograms also indicates a trend toward progressively more-degraded hydrocarbons. For example, the chromatograms for DU-02 from August through October show this trend (pages A2-38, A2-81, and A2-121 of Attachment 2). Note the evenly distributed *n*-alkanes and the lighter end carbons are being reduced. The lighter carbon reduction is likely attributed to volatilization; however, the reduction of alkanes are attributed to oxidation via biological or chemical processes. Biological degradation of *n*-alkanes, interestingly, preferentially reduces *n*-alkanes with an even number of carbon atoms; carbon-12, -14, and -16 (C12, C14, and C16) are typically metabolized the fastest. After which, the remaining *n*-alkanes are reduced. When biological activity is present, the envelope of the *n*-alkanes will begin to appear ragged. The compounds remaining will appear as a hump with a few discernible peaks.

The soil in the landfarming area was placed back into the remaining excavation at an elevation lying above the water table in December 2019 and compacted. These soils will be subject to bioventing as part of the final cleanup plan for this Site.

LNAPL OBSERVATIONS

LNAPL thicknesses were recorded in wells and remaining piezometers during the final sampling event on November 7, 2019. On the Site, LNAPL was observed in monitoring wells MW-4A and MW-9; piezometer PZ-2; and the east, west, and north sumps. On the neighboring Astro Site, LNAPL was observed in piezometers PZ-23 and PZ-25. LNAPL varied in thickness from 0.04 to 0.22 feet. LNAPL thicknesses as measured in November 2019 are shown on Figure 2 and LNAPL plots that show LNAPL thicknesses starting prior to the 2016 UST removal are included as Attachment 3. The plots do not include locations on the Astro Site because the IA was not designed to remove LNAPL from those wells, nor do they include the sumps because LNAPL thicknesses in the sumps were affected by the skimmers. Recent LNAPL measurements and these plots indicate that LNAPL thickness has decreased significantly since the original IA activities conducted in October 2016. Areas of remaining LNAPL will be subject to excavation as part of the final cleanup plan for the Site.

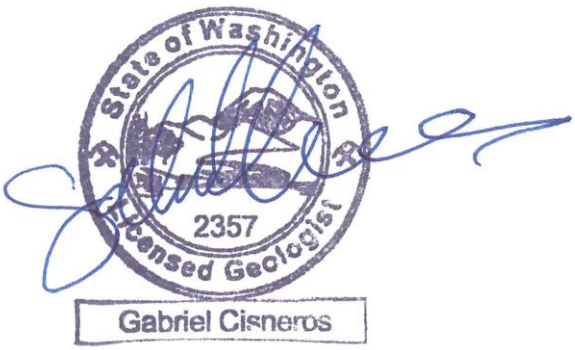
CONCLUSIONS AND NEXT STEPS

The results of the IA indicate that landfarming activities are a suitable remedial action for treatment of contaminated soils at the Site. The main conclusions of this study are as follows:

- The results show that, within 3 months, MTCA Method A cleanup levels can be achieved in soil excavated from areas of free product.
- Odor during excavation was not noted to be significant. This is consistent with the prior experience at the Site when there also was a lack of appreciable odor during decommissioning of the USTs.
- Liquid nitrogen and fertilizer granules were necessary to facilitate biodegradation and should be added immediately after the soil is spread out. Further use of manure is not recommended because it cannot supply the levels of nitrogen needed and may skew analytical results if used in large quantities.
- There is ample space on the north lot of the property to perform landfarming area on a larger scale.

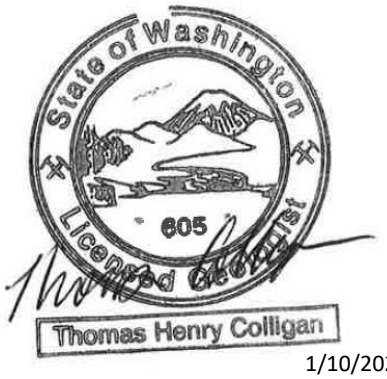
Details of how the final cleanup action will performed and how sampling will be conducted to confirm compliance will be provided in the draft Cleanup Action Plan with further details provided in the Engineering Design Report.

Sincerely,



Gabe Cisneros, LG
Geologist

1/10/2020



Tom Colligan, LHG
Sr. Hydrogeologist & Associate Principal

1/10/2020

Encl.:	Table 1	Soil Analytical Data
	Figure 1	Site Map, Excavation Extent, and Decision Units
	Figure 2	November 2019 LNAPL Thicknesses and Extent
	Attachment 1	Permits
	Attachment 2	Laboratory Reports
	Attachment 3	LNAPL Depth Plots
Copies:	Valerie K. Fairwell, Cascadia Law Group PLLC	
	Surgit Singh, Big B LLC	
	Scott MacDonald, BNSF Railway Company	

Table

Table 1
Soil Analytical Data

Analysis Method		USEPA 8021B/8260C [1]					NWTPH-Gx	NWTPH-Dx	
Analyte		Benzene	Toluene	Ethylbenzene	Xylene (total)	Naphthalene	Gasoline-Range Organics	Diesel-Range Organics [2]	Oil-Range Organics [2]
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MTCA Method A Cleanup Level		0.03	7	6	9	5	30/100 [3]	2,000	2,000
Sample ID	Date								
Clean Overburden Stockpile									
Stockpile-01-080219 [4]	08/02/2019	--	--	--	--	--	22 U	55 U	110 U
Stockpile-02-080219 [4]	08/02/2019	--	--	--	--	--	22 U	56 U	110 U
Stockpile-03-080219 [4]	08/02/2019	--	--	--	--	--	19 U	200	190
Stockpile-04-080219 [4]	08/02/2019	--	--	--	--	--	22 U	110	55 U
Stockpile-05-080219 [4]	08/02/2019	--	--	--	--	--	23 U	56 U	110 U
Decision Unit (DU)									
DU-01	08/02/2019	0.27 U	0.27 U	0.34 U	0.34 U	0.67 U	67 U	**7,400**	53 U
	09/04/2019	0.020 U	0.020 U	0.024 U	0.024 U	0.049 U	49 U	**3,300**	49 U
	10/04/2019	--	--	--	--	--	--	**2,200**	50 U
	11/07/2019	--	--	--	--	--	--	860	52 U
DU-02	08/02/2019	0.36 U	0.36 U	0.45 U	0.45 U	0.90 U	90 U	**11,000**	48 U
	09/04/2019	0.015 U	0.015 U	0.019 U	0.019 U	0.038 U	38 U	**4,700**	50 U
	10/04/2019	--	--	--	--	--	--	1,200	54 U
DU-03	08/02/2019	0.35 U	0.35 U	0.44 U	0.44 U	0.87 U	220 U	**13,000**	57 U
	09/04/2019	0.017 U	0.017 U	0.021 U	0.021 U	0.042 U	42 U	**3,700**	60 U
	10/04/2019	--	--	--	--	--	--	**2,400**	55 U
	11/07/2019	--	--	--	--	--	--	650	55 U
DU-04	08/02/2019	0.21 U	0.21 U	0.26 U	0.26 U	0.52 U	52 U	1,400	56 U
	09/04/2019	0.020 U	0.020 U	0.025 U	0.025 U	0.050 U	50 U	**2,500**	50 U
	10/04/2019	--	--	--	--	--	--	760	56 U
DU-05	08/02/2019	0.21 U	0.21 U	0.26 U	0.26 U	0.52 U	52 U	**2,200**	60 U
	09/04/2019	0.022 U	0.022 U	0.028 U	0.028 U	0.056 U	5.6 U	300	60 U
	10/04/2019	--	--	--	--	--	--	300	55 U

Notes:

All results presented in this table are rounded to two significant figures.

-- Not analyzed.

BOLD/RED Detected at a concentration that exceeds the MTCA Method A cleanup level.

1 Volatile organic compounds were analyzed only if there were gasoline detections with the NWTPH-HCID screening results.

2 Silica gel cleanup was not used.

3 Criterion is for benzene present/no detectable benzene.

4 NWTPH-HCID screening result, which has been adjusted to reflect dry weight.

Abbreviations:

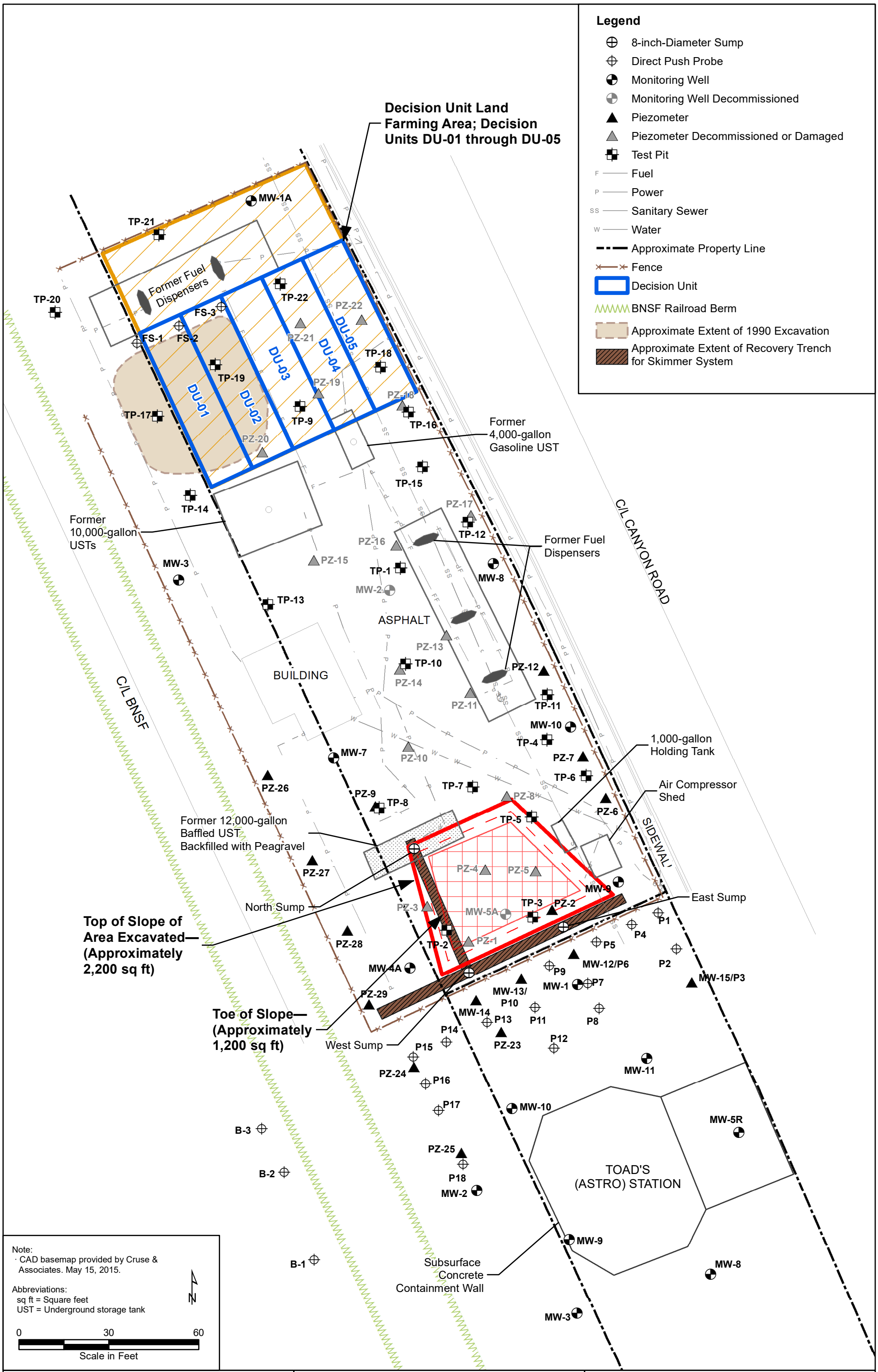
mg/kg Milligrams per kilogram

MTCA Model Toxics Control Act

Qualifier:

U Analyte was not detected at the given reporting limit.

Figures



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Landfarming Pilot Test Summary Report
Big B Mini Mart
Ellensburg, Washington

Figure 1
Site Map, Excavation Extent, and Decision Units

I:\GIS\Projects\CL-Ellensburg\MXD\Landfarming Pilot Test Summary Report\Figure 1 Site Map, Excavation Extent, and Decision Units.mxd
12/18/2019

Legend

- 8-inch-Diameter Sump
- Direct Push Probe
- Monitoring Well
- Monitoring Well Decommissioned
- Piezometer
- Piezometer Decommissioned or Damaged
- Test Pit
- F — Fuel
- P — Power
- SS — Sanitary Sewer
- W — Water
- Approximate Property Line
- Fence
- Decision Unit
- Extent of LNAPL on 11/07/2019 (Dashed Where Inferred)
- 0.15 LNAPL Thickness in Feet
- BNSF Railroad Berm
- Approximate Extent of 1990 Excavation
- Approximate Extent of Recovery Trench for Skimmer System

MW-1A
TP-21
TP-20
Former Fuel Dispensers
FS-3
FS-1
FS-2
TP-22
PZ-21
DU-05
PZ-22
DU-04
DU-03
TP-18
TP-19
DU-01
DU-02
PZ-19
TP-17
TP-9
PZ-18
TP-16
PZ-20
Former 4,000-gallon Gasoline UST
TP-15
TP-14
PZ-17
TP-12
Former 10,000-gallon USTs
PZ-16
Former Fuel Dispensers
PZ-15
MW-3
TP-1
MW-8
MW-2
TP-13
ASPHALT
PZ-13
PZ-12
N/A
TP-10
BUILDING
PZ-14
PZ-11
TP-11
MW-10
N/A
C/L BNSF
TP-4
1,000-gallon Holding Tank
MW-7
PZ-10
PZ-7
N/A
TP-6
PZ-26
TP-7
Air Compressor Shed
PZ-6
N/A
PZ-9
N/A
TP-8
PZ-8
TP-5
Former 12,000-gallon Baffled UST Backfilled with Peagravel
SIDEWALK
PZ-27
N/A
PZ-4
PZ-5
MW-9
0.04
East Sump
0.09
North Sump
0.04
PZ-3
TP-3
PZ-2
0.15
MW-5A
Top of Slope of Area Excavated— (Approximately 1,200 sq ft)
PZ-28
N/A
PZ-1
TP-2
P1
P4
P5
MW-12/P6
N/A
P2
MW-4A
0.05
P9
MW-15/P3
P7
Toe of Slope
MW-14
N/A
MW-13/
P10
N/A
MW-1
N/A
PZ-29
N/A
P13
P11
P8
P14
PZ-23
0.22
P12
West Sump
0.16
P15
PZ-24
N/A
MW-11
P16
P17
MW-10
MW-5R
B-3
PZ-25
0.11
TOAD'S (ASTRO) STATION
B-2
P18
MW-2
N/A
MW-9
B-1
MW-8
Subsurface Concrete Containment Wall
MW-3

Note:
· CAD basemap provided by Cruse & Associates. May 15, 2015.

Abbreviations:
LNAPL = Light non-aqueous phase liquid
N/A = LNAPL Not Detected
sq ft = Square feet
UST = Underground storage tank

N

0 30 60
Scale in Feet

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Landfarming Pilot Test Summary Report
Big B Mini Mart
Ellensburg, Washington

Figure 2
November 2019 LNAPL Thickness and Extent

I:\GIS\Projects\CL-Ellensburg\MXD\Landfarming Pilot Test Summary Report\Figure 2 November 2019 LNAPL Thickness and Extent.mxd
12/18/2019

Attachment 1
Permits

COMMUNITY DEVELOPMENT DEPARTMENT
501 N. Anderson St., Ellensburg WA 98926
Land Use Permitting (509) 962-7231 Construction Permitting (509) 962-7239
Kirsten Sackett, Director
Phone: (509) 962-7232 Fax: (509) 925-8655 E-Mail: sackettk@ci.ellensburg.wa.us

CRITICAL AREA DETERMINATION
CRITICAL AREA PRESENT BUT NO IMPACT - WAIVER

Date of Review Request: 6/11/2019
Date of Final Decision: 7/19/2019
Final Decision: Critical Area Present but No Impact - Waiver

Project Applicant: Northwest Environmental Solutions (NES), agent, for Surjit Singh, Big B, LLC; owner.

Project File #: P19-072

Project Description: The applicant submitted this Critical Areas Form (a Type I Review) and a Site Development Permit (P19-073) for a limited soil excavation on the Big B property located at 1611 Canyon Rd. in Ellensburg. A total of 450 cubic yards of soil will be excavated and spread out in a separate land farming area to reduce the levels of petroleum hydrocarbons over a three (3) month period. Then the soil will be put back in the hole. The norther portion of the subject parcel is located within the 100-Year FEMA Flood Zone A, specifically Firm Panel 5302340002C. The soil excavation work will take place approximately 100 feet south of the edge of the flood zone boundary. This work is being performed as part of an Interim Action and under an Agreed Order with the Washington Department of Ecology. Ecology was the lead agency on the project SEPA and issued a Determination of Non-Significance (DNS) on June 18, 2019.

Project Location: 1611 S. Canyon Rd, Ellensburg, WA, parcel # 958654; on the east side of Canyon Road, across the road from the Exxon/Circle K Store and Starbucks.

Rationale for Waiver:

1. ECC 15.620.060(A) states "Submittal. Prior to the city's consideration of any proposed activity not found to be exempt under ECC 15.610.020 or allowed pursuant to ECC 15.610.030, the applicant shall submit to the department complete information regarding the critical area on the application for the underlying development, on forms provided by the city." The applicant's agent provided such.
2. The City verified and reviewed the information per the critical area review process steps outlined in ECC 15.610.060(B)(1-5).
3. Per ECC 15.610.060(B)(6)(b), **"Critical Areas Present – No Impact"**, if the director determines there are critical areas within or adjacent to the project area, but that the best available science shows that the proposed activity is unlikely to degrade the functions or

values of the critical area, the director may **waive** the requirement for a Critical Area report. A waiver may be granted if there is substantial evidence that all of the following requirements will be met:

i. There will be **no** alteration of the critical area or buffer;
ii. The development proposal will not impact the critical area in a manner contrary to the purpose, intent, and requirements of this chapter; and
iii. The proposal is consistent with other applicable regulations and standards. A summary of this analysis and the findings shall be included in any staff report or decision on the underlying permit.

4. Per the Site Plan/Work Plan map submitted by the applicant, the area of the property where the soil excavation will occur is located approximately 100 feet south of the 100-Year FEMA Flood Zone on the property. This is verified by FEMA Firm Panel 5302340002C. None of the land farming for this project would occur within this Flood Zone.
5. Therefore, the applicant's project may proceed under a **Critical Area Present, but No Impact – Waiver.**

FINAL DECISION

Critical Area Present but No Impact – Waiver. The project the applicant has proposed is permitted on a parcel within FEMA 100-Year Flood Zone, under ECC 15.610.060(B)(6)(b) with the following **condition:**

1. If future remedial activities and/or development permits expand this project closer to the border of the 100-Year Flood Zone shown on FEMA FIRM Panel 5302340002C, further Critical Area review may be required under ECC 15.600.

Kirsten Sackett, Administrator

July 19, 2019

COMMUNITY DEVELOPMENT DEPARTMENT
501 N. Anderson St., Ellensburg WA 98926
Land Use Permitting (509) 962-7231 Construction Permitting (509) 962-7239
Kirsten Sackett, Director
Phone: (509) 962-7232 Fax: (509) 925-8655 E-Mail: sackettk@ci.ellensburg.wa.us

SITE DEVELOPMENT PERMIT (ECC 15.250.020)
BIG B SOIL EXCAVATION PROJECT (A TYPE II PROJECT)

Final Decision: Approved, with conditions

Date of Final Decision: July 17, 2019

Proposal Name: Big B soil excavation project to remediate petroleum hydrocarbons

Applicant: Northwest Environmental Solutions (NES), agent, for Surjit Singh, Big B, LLC; owner.

Project File #: P19-073

Project Location: 1611 S. Canyon Rd, Ellensburg, WA, parcel # 958654; across the road from the Exxon/Circle K Store and Starbucks.

Proposal Description: The project involves a limited soil excavation on the Big B property located at 1611 Canyon Rd. in Ellensburg. A total of 450 cubic yards of soil will be excavated and spread out in a separate land farming area to reduce the levels of petroleum hydrocarbons over a three (3) month period. Then the soil will be put back in the hole. This is being performed as part of an Interim Action and under an Agreed Order with the Washington Department of Ecology. Ecology was the lead agency on the project SEPA and issued a Determination of Non-Significance (DNS) on June 18, 2019.

Decision: The Big B Site Development Project Permit for its Soil Excavation Project is hereby **approved** subject to the following **conditions:**

1. Applicant shall comply with the conditions in the Critical Area (P19-072) Determination.
2. Per the Conditions of the City of Ellensburg Public Works Dept. Memos of 5/3/19 and 7/9/19, the project will need to comply with the following:
    a. Storm water conditions are: wind erosion, de-watering and keeping all runoff of any kind contained to the site at all times with no discharge to the storm system. If there is any discharge offsite, the City needs to be notified immediately, so it can be reported to the Dept. of Ecology. See details for silt fencing (attached).
    b. Any alterations to existing utilities may require a separate permit. Caution is to be taken when excavating around the side sewer and the large private 21" concrete Twin Cities Food discharge main.
    c. The applicant can view the City of Ellensburg's Development Standards on the City's website, http://www.ci.ellensburg.wa.us/index.aspx?NID=339, for more information.

3. Per the Conditions of the City of Ellensburg Electrical Dept. Memo of 7/15/19, the project will need to comply with the following:

a. City 24/7 access to the overhead distribution line, riser and vault must be maintained at all times. The City of Ellensburg Electrical Utility currently serves the above referenced location with an overhead service from a single phase 50kVA pole mount transformer located at the south east corner of the lot. The City has a 3-phase overhead distribution along the east side of this property adjacent to Canyon Rd. The city also has an underground riser and vault on the northern portion of the lot adjacent to the proposed land farming area.

4. Applicant shall comply with the comment of the Fire Marshall, which states Emergency vehicle access must be provided during the project.
5. Per ECC 5.60.120, the hours of construction activity shall be no earlier than 6 am and no later than 10 pm.

Kirsten Sackett, Community Development Director

7-17-19
Date

Appeals: Pursuant to ECC 15.230.070, the City of Ellensburg establishes the appeal procedures which are contained in ECC 15.210.040(A) which shall be made to the Hearing Examiner, as applicable to the matter being appealed.

Figure 7.24: Silt Fence

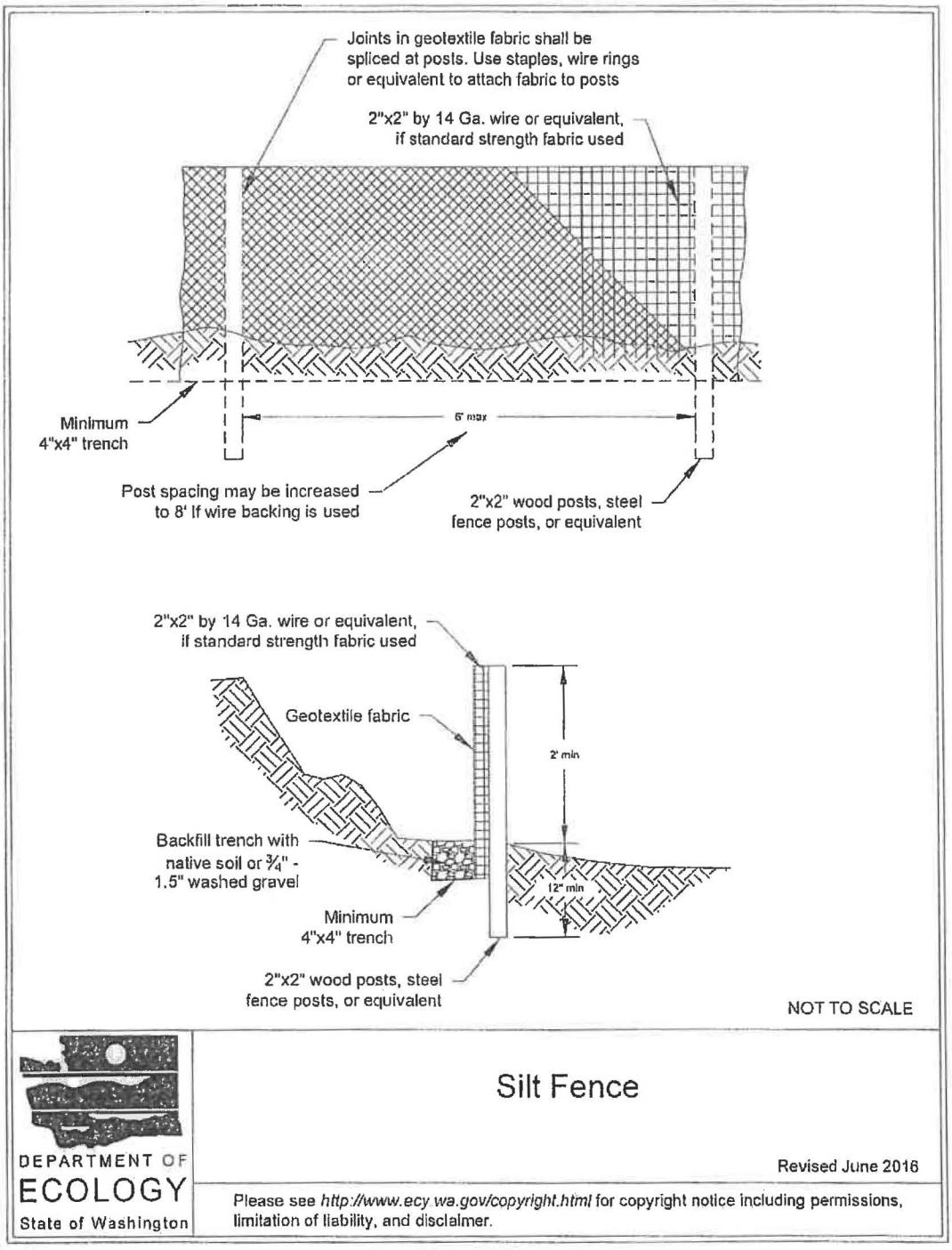
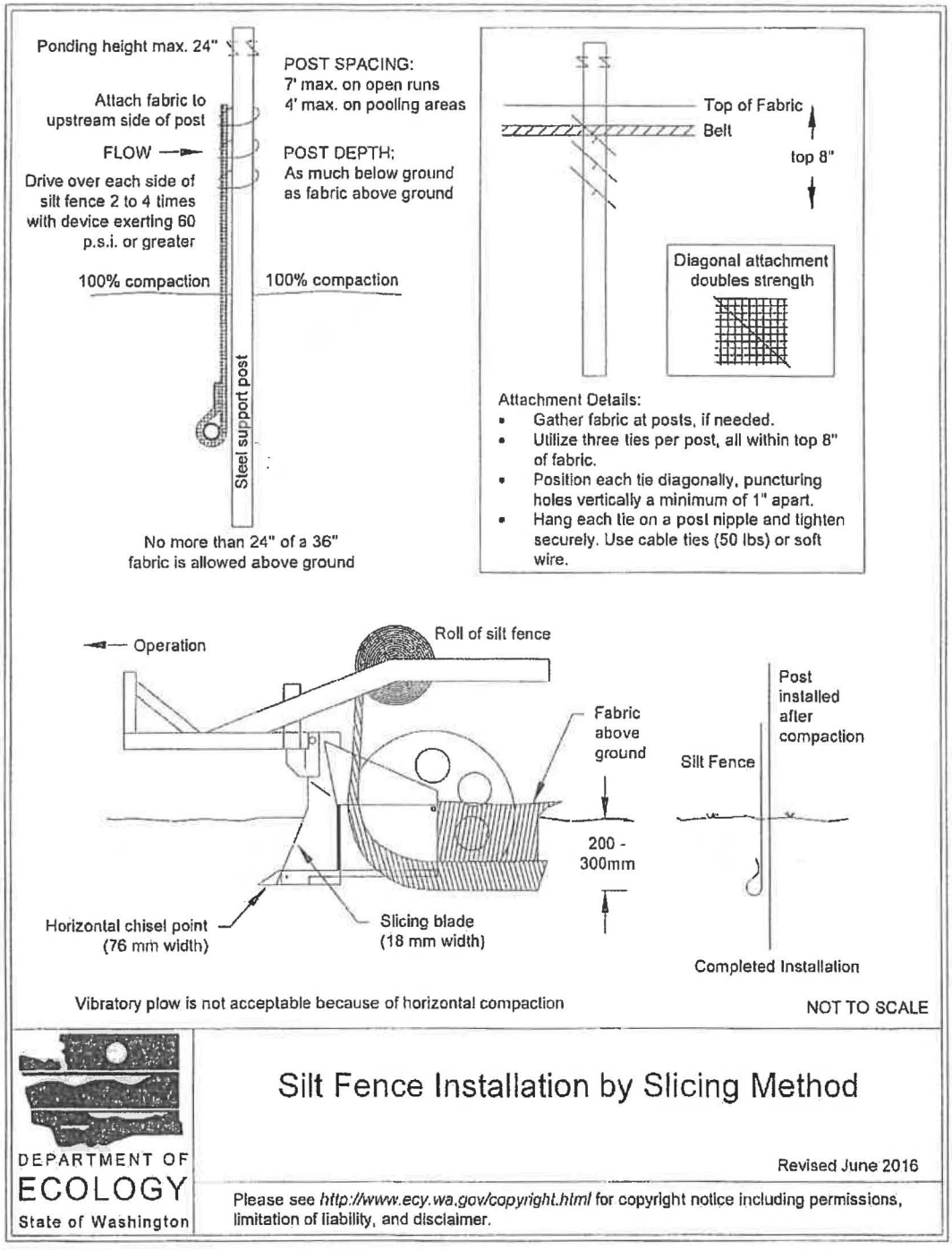


Figure 7.25: Silt Fence Installation by Slicing Method



Attachment 2
Laboratory Reports

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Floyd | Snider
Gabe Cisneros
601 Union St., Suite 600
Seattle, WA 98101

RE: CL-Ellensburg
Work Order Number: 1908043

August 19, 2019

Attention Gabe Cisneros:

Fremont Analytical, Inc. received 11 sample(s) on 8/2/2019 for the analyses presented in the following report.

Ammonia by SM 4500 NH3 E
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.
Gasoline by NWTPH-Gx
Hydrocarbon Identification by NWTPH-HCID
Ion Chromatography by EPA Method 300.0
Sample Moisture (Percent Moisture)
Total Metals by EPA Method 6020B
Total Phosphorus by EPA Method 6020
Volatile Organic Compounds by EPA Method 8260D

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)

CLIENT: Floyd | Snider
Project: CL-Ellensburg
Work Order: 1908043

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1908043-001	DU-01-080219	08/02/2019 10:00 AM	08/02/2019 3:20 PM
1908043-002	DU-02-080219	08/02/2019 10:05 AM	08/02/2019 3:20 PM
1908043-003	DU-03-080219	08/02/2019 10:10 AM	08/02/2019 3:20 PM
1908043-004	DU-04-080219	08/02/2019 10:15 AM	08/02/2019 3:20 PM
1908043-005	DU-05-080219	08/02/2019 10:20 AM	08/02/2019 3:20 PM
1908043-006	Stockpile-01-080219	08/02/2019 11:00 AM	08/02/2019 3:20 PM
1908043-007	Stockpile-02-080219	08/02/2019 11:05 AM	08/02/2019 3:20 PM
1908043-008	Stockpile-03-080219	08/02/2019 11:10 AM	08/02/2019 3:20 PM
1908043-009	Stockpile-04-080219	08/02/2019 11:15 AM	08/02/2019 3:20 PM
1908043-010	Stockpile-05-080219	08/02/2019 11:20 AM	08/02/2019 3:20 PM
1908043-011	Trip Blank	07/19/2019 3:51 PM	08/02/2019 3:20 PM

Case Narrative

WO#: **1908043**
Date: **8/19/2019**

CLIENT: Floyd | Snider
Project: CL-Ellensburg

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

8/19/19: Rev1 includes quantification of HCID detections.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Client: Floyd | Snider
Collection Date: 8/2/2019 10:00:00 AM
Project: CL-Ellensburg
Lab ID: 1908043-001
Matrix: Soil
Client Sample ID: **DU-01-080219**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 25389		Analyst: DW
Diesel (Fuel Oil)	7,430	211	D	mg/Kg-dry	10	8/6/2019 5:44:03 PM
Heavy Oil	ND	52.6		mg/Kg-dry	1	8/6/2019 1:07:57 PM
Surr: 2-Fluorobiphenyl	96.4	50 - 150		%Rec	1	8/6/2019 1:07:57 PM
Surr: o-Terphenyl	111	50 - 150		%Rec	1	8/6/2019 1:07:57 PM
Gasoline by NWTPH-Gx				Batch ID: 25413		Analyst: CR
Gasoline	ND	66.9	D	mg/Kg-dry	20	8/8/2019 12:28:32 PM
Surr: Toluene-d8	92.1	65 - 135	D	%Rec	20	8/8/2019 12:28:32 PM
Surr: 4-Bromofluorobenzene	161	65 - 135	DS	%Rec	20	8/8/2019 12:28:32 PM

NOTES:
S - Outlying surrogate recovery attributed to TPH interference. The method is in control as indicated by the Method Blank (MB) & Laboratory Control Sample (LCS).

Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25413		Analyst: KT
Benzene	ND	0.268	D	mg/Kg-dry	20	8/7/2019 8:22:22 PM
Toluene	ND	0.268	D	mg/Kg-dry	20	8/7/2019 8:22:22 PM
Ethylbenzene	ND	0.335	D	mg/Kg-dry	20	8/7/2019 8:22:22 PM
m,p-Xylene	ND	0.669	D	mg/Kg-dry	20	8/7/2019 8:22:22 PM
o-Xylene	ND	0.335	D	mg/Kg-dry	20	8/7/2019 8:22:22 PM
Naphthalene	ND	0.669	D	mg/Kg-dry	20	8/7/2019 8:22:22 PM
Surr: Dibromofluoromethane	102	56.5 - 129	D	%Rec	20	8/7/2019 8:22:22 PM
Surr: Toluene-d8	94.7	64.5 - 151	D	%Rec	20	8/7/2019 8:22:22 PM
Surr: 1-Bromo-4-fluorobenzene	107	54.8 - 168	D	%Rec	20	8/7/2019 8:22:22 PM

NOTES:
Diluted due to matrix.

Ion Chromatography by EPA Method 300.0				Batch ID: 25429		Analyst: SS
Nitrite (as N)	ND	1.08		mg/Kg-dry	1	8/8/2019 8:49:00 PM
Nitrate (as N)	ND	1.08		mg/Kg-dry	1	8/8/2019 8:49:00 PM
Total Phosphorus by EPA Method 6020				Batch ID: 25388		Analyst: CO
Phosphorus	456	16.3		mg/Kg-dry	1	8/6/2019 1:50:56 PM

Analytical Report

Work Order: **1908043**
Date Reported: **8/19/2019**

Client: Floyd | Snider
Project: CL-Ellensburg
Lab ID: 1908043-001
Client Sample ID: **DU-01-080219**

Collection Date: 8/2/2019 10:00:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020B				Batch ID: 25388		Analyst: CO
Potassium	607	40.8		mg/Kg-dry	1	8/9/2019 12:32:57 PM
Sample Moisture (Percent Moisture)				Batch ID: R53048		Analyst: CJ
Percent Moisture	8.65	0.500		wt%	1	8/5/2019 1:19:28 PM
Ammonia by SM 4500 NH3 E				Batch ID: 25392		Analyst: SS
Nitrogen, Ammonia	ND	1.09		mg/Kg-dry	1	8/6/2019 10:20:00 AM

Client: Floyd | Snider
Collection Date: 8/2/2019 10:05:00 AM
Project: CL-Ellensburg
Lab ID: 1908043-002
Matrix: Soil
Client Sample ID: **DU-02-080219**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 25389		Analyst: DW
Diesel (Fuel Oil)	11,100	192	D	mg/Kg-dry	10	8/6/2019 6:14:25 PM
Heavy Oil	ND	48.1		mg/Kg-dry	1	8/6/2019 2:08:08 PM
Surr: 2-Fluorobiphenyl	74.4	50 - 150		%Rec	1	8/6/2019 2:08:08 PM
Surr: o-Terphenyl	116	50 - 150		%Rec	1	8/6/2019 2:08:08 PM
Gasoline by NWTPH-Gx				Batch ID: 25413		Analyst: CR
Gasoline	ND	89.5	D	mg/Kg-dry	20	8/8/2019 1:28:48 PM
Surr: Toluene-d8	92.4	65 - 135	D	%Rec	20	8/8/2019 1:28:48 PM
Surr: 4-Bromofluorobenzene	150	65 - 135	DS	%Rec	20	8/8/2019 1:28:48 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25413		Analyst: KT
Benzene	ND	0.358	D	mg/Kg-dry	20	8/7/2019 8:52:29 PM
Toluene	ND	0.358	D	mg/Kg-dry	20	8/7/2019 8:52:29 PM
Ethylbenzene	ND	0.448	D	mg/Kg-dry	20	8/7/2019 8:52:29 PM
m,p-Xylene	ND	0.895	D	mg/Kg-dry	20	8/7/2019 8:52:29 PM
o-Xylene	ND	0.448	D	mg/Kg-dry	20	8/7/2019 8:52:29 PM
Naphthalene	ND	0.895	D	mg/Kg-dry	20	8/7/2019 8:52:29 PM
Surr: Dibromofluoromethane	98.8	56.5 - 129	D	%Rec	20	8/7/2019 8:52:29 PM
Surr: Toluene-d8	93.5	64.5 - 151	D	%Rec	20	8/7/2019 8:52:29 PM
Surr: 1-Bromo-4-fluorobenzene	105	54.8 - 168	D	%Rec	20	8/7/2019 8:52:29 PM
Sample Moisture (Percent Moisture)				Batch ID: R53048		Analyst: CJ
Percent Moisture	10.0	0.500		wt%	1	8/5/2019 1:19:28 PM

NOTES:
S - Outlying surrogate recovery attributed to TPH interference. The method is in control as indicated by the Method Blank (MB) & Laboratory Control Sample (LCS).

NOTES:
Diluted due to matrix.

Client: Floyd | Snider
Collection Date: 8/2/2019 10:10:00 AM
Project: CL-Ellensburg
Lab ID: 1908043-003
Matrix: Soil
Client Sample ID: **DU-03-080219**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 25389		Analyst: DW
Diesel (Fuel Oil)	12,800	230	D	mg/Kg-dry	10	8/6/2019 6:44:41 PM
Heavy Oil	ND	57.4		mg/Kg-dry	1	8/6/2019 2:38:11 PM
Surr: 2-Fluorobiphenyl	55.3	50 - 150		%Rec	1	8/6/2019 2:38:11 PM
Surr: o-Terphenyl	116	50 - 150		%Rec	1	8/6/2019 2:38:11 PM
Gasoline by NWTPH-Gx				Batch ID: 25413		Analyst: CR
Gasoline	ND	218	D	mg/Kg-dry	50	8/8/2019 1:58:57 PM
Surr: Toluene-d8	92.5	65 - 135	D	%Rec	50	8/8/2019 1:58:57 PM
Surr: 4-Bromofluorobenzene	135	65 - 135	DS	%Rec	50	8/8/2019 1:58:57 PM

NOTES:
S - Outlying surrogate recovery attributed to TPH interference. The method is in control as indicated by the Method Blank (MB) & Laboratory Control Sample (LCS).

Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25413		Analyst: KT
Benzene	ND	0.348	D	mg/Kg-dry	20	8/7/2019 9:22:36 PM
Toluene	ND	0.348	D	mg/Kg-dry	20	8/7/2019 9:22:36 PM
Ethylbenzene	ND	0.435	D	mg/Kg-dry	20	8/7/2019 9:22:36 PM
m,p-Xylene	ND	0.871	D	mg/Kg-dry	20	8/7/2019 9:22:36 PM
o-Xylene	ND	0.435	D	mg/Kg-dry	20	8/7/2019 9:22:36 PM
Naphthalene	ND	0.871	D	mg/Kg-dry	20	8/7/2019 9:22:36 PM
Surr: Dibromofluoromethane	97.4	56.5 - 129	D	%Rec	20	8/7/2019 9:22:36 PM
Surr: Toluene-d8	95.2	64.5 - 151	D	%Rec	20	8/7/2019 9:22:36 PM
Surr: 1-Bromo-4-fluorobenzene	104	54.8 - 168	D	%Rec	20	8/7/2019 9:22:36 PM

NOTES:
Diluted due to matrix.

Sample Moisture (Percent Moisture)				Batch ID: R53048		Analyst: CJ
Percent Moisture	14.1	0.500		wt%	1	8/5/2019 1:19:28 PM

Analytical Report

Work Order: **1908043**
Date Reported: **8/19/2019**

Client: Floyd | Snider
Project: CL-Ellensburg
Lab ID: 1908043-004
Client Sample ID: **DU-04-080219**

Collection Date: 8/2/2019 10:15:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 25389		Analyst: DW
Diesel (Fuel Oil)	1,350	22.3		mg/Kg-dry	1	8/6/2019 9:16:03 PM
Heavy Oil	ND	55.8		mg/Kg-dry	1	8/6/2019 3:08:23 PM
Surr: 2-Fluorobiphenyl	100	50 - 150		%Rec	1	8/6/2019 3:08:23 PM
Surr: o-Terphenyl	99.8	50 - 150		%Rec	1	8/6/2019 3:08:23 PM
Gasoline by NWTPH-Gx				Batch ID: 25413		Analyst: CR
Gasoline	ND	51.8	D	mg/Kg-dry	10	8/8/2019 2:29:05 PM
Surr: Toluene-d8	91.4	65 - 135	D	%Rec	10	8/8/2019 2:29:05 PM
Surr: 4-Bromofluorobenzene	119	65 - 135	D	%Rec	10	8/8/2019 2:29:05 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25413		Analyst: KT
Benzene	ND	0.207	D	mg/Kg-dry	10	8/7/2019 9:52:43 PM
Toluene	ND	0.207	D	mg/Kg-dry	10	8/7/2019 9:52:43 PM
Ethylbenzene	ND	0.259	D	mg/Kg-dry	10	8/7/2019 9:52:43 PM
m,p-Xylene	ND	0.518	D	mg/Kg-dry	10	8/7/2019 9:52:43 PM
o-Xylene	ND	0.259	D	mg/Kg-dry	10	8/7/2019 9:52:43 PM
Naphthalene	ND	0.518	D	mg/Kg-dry	10	8/7/2019 9:52:43 PM
Surr: Dibromofluoromethane	96.1	56.5 - 129	D	%Rec	10	8/7/2019 9:52:43 PM
Surr: Toluene-d8	92.2	64.5 - 151	D	%Rec	10	8/7/2019 9:52:43 PM
Surr: 1-Bromo-4-fluorobenzene	107	54.8 - 168	D	%Rec	10	8/7/2019 9:52:43 PM
Sample Moisture (Percent Moisture)				Batch ID: R53048		Analyst: CJ
Percent Moisture	19.6	0.500		wt%	1	8/5/2019 1:19:28 PM

NOTES:
Diluted due to matrix.

Analytical Report

Work Order: **1908043**
Date Reported: **8/19/2019**

Client: Floyd | Snider
Collection Date: 8/2/2019 10:20:00 AM
Project: CL-Ellensburg
Lab ID: 1908043-005
Matrix: Soil
Client Sample ID: **DU-05-080219**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 25389		Analyst: DW
Diesel (Fuel Oil)	2,150	23.9		mg/Kg-dry	1	8/6/2019 3:38:29 PM
Heavy Oil	ND	59.7		mg/Kg-dry	1	8/6/2019 3:38:29 PM
Surr: 2-Fluorobiphenyl	104	50 - 150		%Rec	1	8/6/2019 3:38:29 PM
Surr: o-Terphenyl	107	50 - 150		%Rec	1	8/6/2019 3:38:29 PM
Gasoline by NWTPH-Gx				Batch ID: 25413		Analyst: CR
Gasoline	ND	52.3	D	mg/Kg-dry	10	8/8/2019 2:59:12 PM
Surr: Toluene-d8	92.9	65 - 135	D	%Rec	10	8/8/2019 2:59:12 PM
Surr: 4-Bromofluorobenzene	120	65 - 135	D	%Rec	10	8/8/2019 2:59:12 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25413		Analyst: KT
Benzene	ND	0.209	D	mg/Kg-dry	10	8/7/2019 10:22:50 PM
Toluene	ND	0.209	D	mg/Kg-dry	10	8/7/2019 10:22:50 PM
Ethylbenzene	ND	0.262	D	mg/Kg-dry	10	8/7/2019 10:22:50 PM
m,p-Xylene	ND	0.523	D	mg/Kg-dry	10	8/7/2019 10:22:50 PM
o-Xylene	ND	0.262	D	mg/Kg-dry	10	8/7/2019 10:22:50 PM
Naphthalene	ND	0.523	D	mg/Kg-dry	10	8/7/2019 10:22:50 PM
Surr: Dibromofluoromethane	96.6	56.5 - 129	D	%Rec	10	8/7/2019 10:22:50 PM
Surr: Toluene-d8	92.6	64.5 - 151	D	%Rec	10	8/7/2019 10:22:50 PM
Surr: 1-Bromo-4-fluorobenzene	107	54.8 - 168	D	%Rec	10	8/7/2019 10:22:50 PM

NOTES:
Diluted due to matrix.

Sample Moisture (Percent Moisture)				Batch ID: R53048		Analyst: CJ
Percent Moisture	18.2	0.500		wt%	1	8/5/2019 1:19:28 PM

Analytical Report

Work Order: **1908043**
Date Reported: **8/19/2019**

Client: Floyd | Snider
Collection Date: 8/2/2019 11:00:00 AM
Project: CL-Ellensburg
Lab ID: 1908043-006
Matrix: Soil
Client Sample ID: **Stockpile-01-080219**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Hydrocarbon Identification by NWTPH-HCID				Batch ID: 25389		Analyst: DW
Gasoline	ND	21.9		mg/Kg-dry	1	8/6/2019 11:16:22 PM
Mineral Spirits	ND	32.8		mg/Kg-dry	1	8/6/2019 11:16:22 PM
Kerosene	ND	54.7		mg/Kg-dry	1	8/6/2019 11:16:22 PM
Diesel (Fuel Oil)	ND	54.7		mg/Kg-dry	1	8/6/2019 11:16:22 PM
Heavy Oil	ND	109		mg/Kg-dry	1	8/6/2019 11:16:22 PM
Mineral Oil	ND	109		mg/Kg-dry	1	8/6/2019 11:16:22 PM
Surr: 2-Fluorobiphenyl	101	50 - 150		%Rec	1	8/6/2019 11:16:22 PM
Surr: o-Terphenyl	107	50 - 150		%Rec	1	8/6/2019 11:16:22 PM
Sample Moisture (Percent Moisture)				Batch ID: R53048		Analyst: CJ
Percent Moisture	14.1	0.500		wt%	1	8/5/2019 1:19:28 PM

Analytical Report

Work Order: **1908043**
Date Reported: **8/19/2019**

Client: Floyd | Snider
Collection Date: 8/2/2019 11:05:00 AM
Project: CL-Ellensburg
Lab ID: 1908043-007
Matrix: Soil
Client Sample ID: **Stockpile-02-080219**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Hydrocarbon Identification by NWTPH-HCID				Batch ID: 25389		Analyst: DW
Gasoline	ND	22.2		mg/Kg-dry	1	8/6/2019 11:46:17 PM
Mineral Spirits	ND	33.3		mg/Kg-dry	1	8/6/2019 11:46:17 PM
Kerosene	ND	55.5		mg/Kg-dry	1	8/6/2019 11:46:17 PM
Diesel (Fuel Oil)	ND	55.5		mg/Kg-dry	1	8/6/2019 11:46:17 PM
Heavy Oil	ND	111		mg/Kg-dry	1	8/6/2019 11:46:17 PM
Mineral Oil	ND	111		mg/Kg-dry	1	8/6/2019 11:46:17 PM
Surr: 2-Fluorobiphenyl	98.8	50 - 150		%Rec	1	8/6/2019 11:46:17 PM
Surr: o-Terphenyl	103	50 - 150		%Rec	1	8/6/2019 11:46:17 PM
Sample Moisture (Percent Moisture)				Batch ID: R53048		Analyst: CJ
Percent Moisture	15.4	0.500		wt%	1	8/5/2019 1:19:28 PM

Analytical Report

Work Order: **1908043**
Date Reported: **8/19/2019**

Client: Floyd | Snider
Collection Date: 8/2/2019 11:10:00 AM
Project: CL-Ellensburg
Lab ID: 1908043-008
Matrix: Soil
Client Sample ID: **Stockpile-03-080219**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 25389		Analyst: DW
Diesel (Fuel Oil)	204	19.2		mg/Kg-dry	1	8/7/2019 12:16:21 AM
Heavy Oil	194	47.9		mg/Kg-dry	1	8/7/2019 12:16:21 AM
Surr: 2-Fluorobiphenyl	96.7	50 - 150		%Rec	1	8/7/2019 12:16:21 AM
Surr: o-Terphenyl	103	50 - 150		%Rec	1	8/7/2019 12:16:21 AM
Hydrocarbon Identification by NWTPH-HCID				Batch ID: 25389		Analyst: DW
Gasoline	ND	19.2		mg/Kg-dry	1	8/7/2019 12:16:21 AM
Mineral Spirits	ND	28.8		mg/Kg-dry	1	8/7/2019 12:16:21 AM
Kerosene	ND	47.9		mg/Kg-dry	1	8/7/2019 12:16:21 AM
Diesel (Fuel Oil)	DETECT	47.9		mg/Kg-dry	1	8/7/2019 12:16:21 AM
Heavy Oil	DETECT	95.9		mg/Kg-dry	1	8/7/2019 12:16:21 AM
Mineral Oil	ND	95.9		mg/Kg-dry	1	8/7/2019 12:16:21 AM
Surr: 2-Fluorobiphenyl	96.7	50 - 150		%Rec	1	8/7/2019 12:16:21 AM
Surr: o-Terphenyl	103	50 - 150		%Rec	1	8/7/2019 12:16:21 AM
Sample Moisture (Percent Moisture)				Batch ID: R53048		Analyst: CJ
Percent Moisture	11.0	0.500		wt%	1	8/5/2019 1:19:28 PM

Analytical Report

Work Order: **1908043**
Date Reported: **8/19/2019**

Client: Floyd | Snider
Collection Date: 8/2/2019 11:15:00 AM
Project: CL-Ellensburg
Lab ID: 1908043-009
Matrix: Soil
Client Sample ID: **Stockpile-04-080219**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 25389		Analyst: DW
Diesel (Fuel Oil)	114	22.1		mg/Kg-dry	1	8/7/2019 12:46:17 AM
Heavy Oil	ND	55.3		mg/Kg-dry	1	8/7/2019 12:46:17 AM
Surr: 2-Fluorobiphenyl	107	50 - 150		%Rec	1	8/7/2019 12:46:17 AM
Surr: o-Terphenyl	112	50 - 150		%Rec	1	8/7/2019 12:46:17 AM
Hydrocarbon Identification by NWTPH-HCID				Batch ID: 25389		Analyst: DW
Gasoline	ND	22.1		mg/Kg-dry	1	8/7/2019 12:46:17 AM
Mineral Spirits	ND	33.2		mg/Kg-dry	1	8/7/2019 12:46:17 AM
Kerosene	ND	55.3		mg/Kg-dry	1	8/7/2019 12:46:17 AM
Diesel (Fuel Oil)	DETECT	55.3		mg/Kg-dry	1	8/7/2019 12:46:17 AM
Heavy Oil	ND	111		mg/Kg-dry	1	8/7/2019 12:46:17 AM
Mineral Oil	ND	111		mg/Kg-dry	1	8/7/2019 12:46:17 AM
Surr: 2-Fluorobiphenyl	107	50 - 150		%Rec	1	8/7/2019 12:46:17 AM
Surr: o-Terphenyl	112	50 - 150		%Rec	1	8/7/2019 12:46:17 AM
Sample Moisture (Percent Moisture)				Batch ID: R53048		Analyst: CJ
Percent Moisture	11.3	0.500		wt%	1	8/5/2019 1:19:28 PM

Analytical Report

Work Order: **1908043**
Date Reported: **8/19/2019**

Client: Floyd | Snider
Project: CL-Ellensburg
Lab ID: 1908043-010
Client Sample ID: **Stockpile-05-080219**

Collection Date: 8/2/2019 11:20:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Hydrocarbon Identification by NWTPH-HCID				Batch ID: 25389		Analyst: DW
Gasoline	ND	22.5		mg/Kg-dry	1	8/7/2019 1:16:15 AM
Mineral Spirits	ND	33.7		mg/Kg-dry	1	8/7/2019 1:16:15 AM
Kerosene	ND	56.2		mg/Kg-dry	1	8/7/2019 1:16:15 AM
Diesel (Fuel Oil)	ND	56.2		mg/Kg-dry	1	8/7/2019 1:16:15 AM
Heavy Oil	ND	112		mg/Kg-dry	1	8/7/2019 1:16:15 AM
Mineral Oil	ND	112		mg/Kg-dry	1	8/7/2019 1:16:15 AM
Surr: 2-Fluorobiphenyl	114	50 - 150		%Rec	1	8/7/2019 1:16:15 AM
Surr: o-Terphenyl	120	50 - 150		%Rec	1	8/7/2019 1:16:15 AM
Sample Moisture (Percent Moisture)				Batch ID: R53048		Analyst: CJ
Percent Moisture	11.8	0.500		wt%	1	8/5/2019 1:19:28 PM

Work Order: 1908043
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Ammonia by SM 4500 NH3 E

Sample ID: **MB-25392**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **8/5/2019**	RunNo: **53078**
Client ID: **MBLKS**	Batch ID: **25392**		Analysis Date: **8/6/2019**	SeqNo: **1048767**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	ND	1.00									

Sample ID: **LCS-25392**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **8/5/2019**	RunNo: **53078**
Client ID: **LCSS**	Batch ID: **25392**		Analysis Date: **8/6/2019**	SeqNo: **1048768**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	19.7	1.00	20.00	0	98.4	85	115				

Sample ID: **1908043-001ADUP**	SampType: **DUP**	Units: **mg/Kg-dry**	Prep Date: **8/5/2019**	RunNo: **53078**
Client ID: **DU-01-080219**	Batch ID: **25392**		Analysis Date: **8/6/2019**	SeqNo: **1048770**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	ND	1.09						0		30	

Sample ID: **1908043-001AMS**	SampType: **MS**	Units: **mg/Kg-dry**	Prep Date: **8/5/2019**	RunNo: **53078**
Client ID: **DU-01-080219**	Batch ID: **25392**		Analysis Date: **8/6/2019**	SeqNo: **1048771**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	17.7	1.10	22.00	0.7112	77.2	80	120				S

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

Sample ID: **1908043-001AMSD**	SampType: **MSD**	Units: **mg/Kg-dry**	Prep Date: **8/5/2019**	RunNo: **53078**
Client ID: **DU-01-080219**	Batch ID: **25392**		Analysis Date: **8/6/2019**	SeqNo: **1048772**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	21.6	1.09	21.74	0.7112	96.2	80	120	17.70	19.9	20	

Work Order: 1908043
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID: **MB-25429**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **8/8/2019**	RunNo: **53154**
Client ID: **MBLKS**	Batch ID: **25429**		Analysis Date: **8/8/2019**	SeqNo: **1050394**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	ND	1.00									
Nitrate (as N)	ND	1.00									

Sample ID: **LCS-25429**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **8/8/2019**	RunNo: **53154**
Client ID: **LCSS**	Batch ID: **25429**		Analysis Date: **8/8/2019**	SeqNo: **1050395**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	7.36	1.00	7.500	0	98.1	90	110				
Nitrate (as N)	7.28	1.00	7.500	0	97.1	90	110				

Sample ID: **1908043-001ADUP**	SampType: **DUP**	Units: **mg/Kg-dry**	Prep Date: **8/8/2019**	RunNo: **53154**
Client ID: **DU-01-080219**	Batch ID: **25429**		Analysis Date: **8/8/2019**	SeqNo: **1050397**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	ND	1.09						0		30	
Nitrate (as N)	ND	1.09						0		30	

Sample ID: **1908043-001AMS**	SampType: **MS**	Units: **mg/Kg-dry**	Prep Date: **8/8/2019**	RunNo: **53154**
Client ID: **DU-01-080219**	Batch ID: **25429**		Analysis Date: **8/8/2019**	SeqNo: **1050398**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	7.90	1.08	8.109	0	97.5	80	120				
Nitrate (as N)	7.82	1.08	8.109	0	96.4	80	120				

Sample ID: **1908043-001AMSD**	SampType: **MSD**	Units: **mg/Kg-dry**	Prep Date: **8/8/2019**	RunNo: **53154**
Client ID: **DU-01-080219**	Batch ID: **25429**		Analysis Date: **8/8/2019**	SeqNo: **1050399**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	7.91	1.08	8.096	0	97.7	80	120	7.904	0.115	30	

Work Order: 1908043
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID: **1908043-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **8/8/2019** RunNo: **53154**
Client ID: **DU-01-080219** Batch ID: **25429** Analysis Date: **8/8/2019** SeqNo: **1050399**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)	7.89	1.08	8.096	0	97.5	80	120	7.817	0.943	30	

Work Order: 1908043
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Total Phosphorus by EPA Method 6020

Sample ID: **MB-25388**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **8/5/2019**		RunNo: **53133**		
Client ID: **MBLKS**	Batch ID: **25388**					Analysis Date: **8/6/2019**		SeqNo: **1050008**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	ND	14.3									

Sample ID: **LCS-25388**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **8/5/2019**		RunNo: **53133**		
Client ID: **LCSS**	Batch ID: **25388**					Analysis Date: **8/6/2019**		SeqNo: **1050009**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	417	16.0	400.0	0	104	80	120				

Sample ID: **1908048-001ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **8/5/2019**		RunNo: **53133**		
Client ID: **BATCH**	Batch ID: **25388**					Analysis Date: **8/6/2019**		SeqNo: **1050011**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	552	20.2						723.9	26.9	20	R

NOTES:
R - High RPD observed. The method is in control as indicated by the LCS.

Sample ID: **1908048-001AMS**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **8/5/2019**		RunNo: **53133**		
Client ID: **BATCH**	Batch ID: **25388**					Analysis Date: **8/6/2019**		SeqNo: **1050013**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	990	20.9	522.4	723.9	51.0	75	125				S

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: **1908048-001AMSD**	SampType: **MSD**			Units: **mg/Kg-dry**		Prep Date: **8/5/2019**		RunNo: **53133**		
Client ID: **BATCH**	Batch ID: **25388**					Analysis Date: **8/6/2019**		SeqNo: **1050016**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	1,040	20.6	514.1	723.9	62.0	75	125	990.5	5.12	20	S

Work Order: 1908043
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Total Phosphorus by EPA Method 6020

Sample ID: **1908048-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **8/5/2019** RunNo: **53133**
Client ID: **BATCH** Batch ID: **25388** Analysis Date: **8/6/2019** SeqNo: **1050016**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Work Order: 1908043
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: **MB-25388**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **8/5/2019**			RunNo: **53067**		
Client ID: **MBLKS**	Batch ID: **25388**					Analysis Date: **8/9/2019**			SeqNo: **1050468**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	ND	35.7									

Sample ID: **LCS-25388**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **8/5/2019**			RunNo: **53067**		
Client ID: **LCSS**	Batch ID: **25388**					Analysis Date: **8/9/2019**			SeqNo: **1050469**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	421	40.0	400.0	0	105	80	120				

Sample ID: **1908048-001ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **8/5/2019**			RunNo: **53067**		
Client ID: **BATCH**	Batch ID: **25388**					Analysis Date: **8/9/2019**			SeqNo: **1050471**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	827	50.6						683.2	19.0	20	

Sample ID: **1908048-001AMS**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **8/5/2019**			RunNo: **53067**		
Client ID: **BATCH**	Batch ID: **25388**					Analysis Date: **8/9/2019**			SeqNo: **1050473**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	1,060	52.2	522.4	683.2	71.4	75	125				S

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: **1908048-001AMSD**	SampType: **MSD**			Units: **mg/Kg-dry**		Prep Date: **8/5/2019**			RunNo: **53067**		
Client ID: **BATCH**	Batch ID: **25388**					Analysis Date: **8/9/2019**			SeqNo: **1050474**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	1,040	51.4	514.1	683.2	69.0	75	125	1,056	1.76	20	S

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Work Order: 1908043
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID: **MB-25389**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **8/5/2019**		RunNo: **53093**		
Client ID: **MBLKS**	Batch ID: **25389**					Analysis Date: **8/6/2019**		SeqNo: **1049029**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	20.0									
Heavy Oil	ND	50.0									
Surr: 2-Fluorobiphenyl	18.7		20.00		93.5	50	150				
Surr: o-Terphenyl	19.9		20.00		99.6	50	150				

Sample ID: **LCS-25389**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **8/5/2019**		RunNo: **53093**		
Client ID: **LCSS**	Batch ID: **25389**					Analysis Date: **8/6/2019**		SeqNo: **1049030**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	459	20.0	500.0	0	91.8	65	135				
Surr: 2-Fluorobiphenyl	20.4		20.00		102	50	150				
Surr: o-Terphenyl	20.7		20.00		103	50	150				

Sample ID: **1908043-001ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **8/5/2019**		RunNo: **53093**		
Client ID: **DU-01-080219**	Batch ID: **25389**					Analysis Date: **8/6/2019**		SeqNo: **1049043**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	5,930	196						7,432	22.4	30	D
Heavy Oil	ND	490						0		30	D
Surr: 2-Fluorobiphenyl	10.7		19.62		54.5	50	150		0		D
Surr: o-Terphenyl	15.3		19.62		78.0	50	150		0		D

Sample ID: **1908043-001AMS**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **8/5/2019**		RunNo: **53093**		
Client ID: **DU-01-080219**	Batch ID: **25389**					Analysis Date: **8/6/2019**		SeqNo: **1049044**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	7,530	189	473.1	7,432	20.6	65	135				DS
Surr: 2-Fluorobiphenyl	20.1		18.92		106	50	150				D
Surr: o-Terphenyl	19.2		18.92		102	50	150				D

Work Order: 1908043
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID: **1908043-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **8/5/2019** RunNo: **53093**
Client ID: **DU-01-080219** Batch ID: **25389** Analysis Date: **8/6/2019** SeqNo: **1049044**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
S - Analyte concentration was too high for accurate spike recovery(ies).

Sample ID: **1908043-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **8/5/2019** RunNo: **53093**
Client ID: **DU-01-080219** Batch ID: **25389** Analysis Date: **8/6/2019** SeqNo: **1049045**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	7,260	212	530.9	7,432	-33.3	65	135	7,529	3.71	30	DS
Surr: 2-Fluorobiphenyl	11.1		21.24		52.5	50	150		0		D
Surr: o-Terphenyl	17.0		21.24		80.0	50	150		0		D

NOTES:
S - Analyte concentration was too high for accurate spike recovery(ies).

Sample ID: **1908047-001ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **8/5/2019** RunNo: **53093**
Client ID: **BATCH** Batch ID: **25389** Analysis Date: **8/7/2019** SeqNo: **1049055**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	27.3						0		30	
Heavy Oil	364	68.2						381.0	4.54	30	
Surr: 2-Fluorobiphenyl	27.8		27.29		102	50	150		0		
Surr: o-Terphenyl	29.1		27.29		106	50	150		0		

Work Order: 1908043
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Hydrocarbon Identification by NWTPH-HCID

Sample ID: **MB-25389**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **8/5/2019**	RunNo: **53099**
Client ID: **MBLKS**	Batch ID: **25389**		Analysis Date: **8/6/2019**	SeqNo: **1049190**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	20.0									
Mineral Spirits	ND	30.0									
Kerosene	ND	50.0									
Diesel (Fuel Oil)	ND	50.0									
Heavy Oil	ND	100									
Mineral Oil	ND	100									
Surr: 2-Fluorobiphenyl	18.7		20.00		93.5	50	150				
Surr: o-Terphenyl	19.9		20.00		99.6	50	150				

Sample ID: **LCS-25389**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **8/5/2019**	RunNo: **53099**
Client ID: **LCSS**	Batch ID: **25389**		Analysis Date: **8/6/2019**	SeqNo: **1049191**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	459	50.0	500.0	0	91.8	65	135				
Surr: 2-Fluorobiphenyl	20.4		20.00		102	50	150				
Surr: o-Terphenyl	20.7		20.00		103	50	150				

Work Order: 1908043
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID: **LCS-25413** SampType: **LCS** Units: **mg/Kg** Prep Date: **8/7/2019** RunNo: **53148**
Client ID: **LCSS** Batch ID: **25413** Analysis Date: **8/8/2019** SeqNo: **1050415**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	24.2	5.00	25.00	0	96.9	65	135				
Surr: Toluene-d8	1.22		1.250		97.6	65	135				
Surr: 4-Bromofluorobenzene	1.27		1.250		101	65	135				

Sample ID: **MB-25413** SampType: **MBLK** Units: **mg/Kg** Prep Date: **8/7/2019** RunNo: **53148**
Client ID: **MBLKS** Batch ID: **25413** Analysis Date: **8/8/2019** SeqNo: **1050417**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	5.00									
Surr: Toluene-d8	1.18		1.250		94.1	65	135				
Surr: 4-Bromofluorobenzene	1.15		1.250		92.4	65	135				

Sample ID: **1908043-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **8/7/2019** RunNo: **53148**
Client ID: **DU-01-080219** Batch ID: **25413** Analysis Date: **8/8/2019** SeqNo: **1050405**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	66.9						0		30	D
Surr: Toluene-d8	15.6		16.74		93.2	65	135		0		D
Surr: 4-Bromofluorobenzene	27.7		16.74		166	65	135		0		DS

NOTES:
S - Outlying surrogate recovery attributed to TPH interference. The method is in control as indicated by the Method Blank (MB) & Laboratory Control Sample (LCS).

Sample ID: **LCSD-25413** SampType: **LCSD** Units: **mg/Kg** Prep Date: **8/7/2019** RunNo: **53148**
Client ID: **LCSS02** Batch ID: **25413** Analysis Date: **8/8/2019** SeqNo: **1050416**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	26.5	5.00	25.00	0	106	65	135	24.23	8.95	20	
Surr: Toluene-d8	1.22		1.250		97.8	65	135		0		
Surr: 4-Bromofluorobenzene	1.26		1.250		101	65	135		0		

Work Order: 1908043
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-25413** SampType: **LCS** Units: **mg/Kg** Prep Date: **8/7/2019** RunNo: **53113**
Client ID: **LCSS** Batch ID: **25413** Analysis Date: **8/7/2019** SeqNo: **1049528**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.954	0.0200	1.000	0	95.4	64.3	133				
Toluene	0.986	0.0200	1.000	0	98.6	67	144				
Ethylbenzene	0.998	0.0250	1.000	0	99.8	74	129				
m,p-Xylene	2.02	0.0500	2.000	0	101	70	124				
o-Xylene	1.02	0.0250	1.000	0	102	68.1	139				
Naphthalene	0.971	0.0500	1.000	0	97.1	46.5	167				
Surr: Dibromofluoromethane	1.22		1.250		97.3	56.5	129				
Surr: Toluene-d8	1.23		1.250		98.1	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.26		1.250		101	54.8	168				

Sample ID: **MB-25413** SampType: **MBLK** Units: **mg/Kg** Prep Date: **8/7/2019** RunNo: **53113**
Client ID: **MBLKS** Batch ID: **25413** Analysis Date: **8/7/2019** SeqNo: **1049529**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0200									
Toluene	ND	0.0200									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Naphthalene	ND	0.0500									
Surr: Dibromofluoromethane	1.19		1.250		95.4	56.5	129				
Surr: Toluene-d8	1.20		1.250		95.9	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.22		1.250		97.5	54.8	168				

Sample ID: **1908024-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **8/7/2019** RunNo: **53113**
Client ID: **BATCH** Batch ID: **25413** Analysis Date: **8/7/2019** SeqNo: **1049514**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0248						0		30	
Toluene	ND	0.0248						0		30	

Work Order: 1908043
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **1908024-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **8/7/2019** RunNo: **53113**
Client ID: **BATCH** Batch ID: **25413** Analysis Date: **8/7/2019** SeqNo: **1049514**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	ND	0.0310						0		30	
m,p-Xylene	ND	0.0621						0		30	
o-Xylene	ND	0.0310						0		30	
Naphthalene	ND	0.0621						0		30	
Surr: Dibromofluoromethane	1.51		1.552		97.3	56.5	129		0		
Surr: Toluene-d8	1.46		1.552		93.9	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.51		1.552		97.4	54.8	168		0		

Sample ID: **1908043-002BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **8/7/2019** RunNo: **53113**
Client ID: **DU-02-080219** Batch ID: **25413** Analysis Date: **8/7/2019** SeqNo: **1049517**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	16.5	0.358	17.91	0	92.0	63.5	133				D
Toluene	16.7	0.358	17.91	0	93.4	63.4	132				D
Ethylbenzene	18.0	0.448	17.91	0	100	54.5	134				D
m,p-Xylene	36.0	0.895	35.81	0	101	53.1	132				D
o-Xylene	18.4	0.448	17.91	0	102	53.3	139				D
Naphthalene	19.6	0.895	17.91	0	110	52.3	124				D
Surr: Dibromofluoromethane	21.6		22.38		96.3	56.5	129				D
Surr: Toluene-d8	21.0		22.38		94.0	64.5	151				D
Surr: 1-Bromo-4-fluorobenzene	22.6		22.38		101	54.8	168				D

Sample ID: **1908043-002BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **8/7/2019** RunNo: **53113**
Client ID: **DU-02-080219** Batch ID: **25413** Analysis Date: **8/8/2019** SeqNo: **1049518**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	16.7	0.358	17.91	0	93.0	63.5	133	16.47	1.06	30	D
Toluene	17.0	0.358	17.91	0	95.0	63.4	132	16.73	1.60	30	D
Ethylbenzene	18.5	0.448	17.91	0	104	54.5	134	17.95	3.19	30	D
m,p-Xylene	36.5	0.895	35.81	0	102	53.1	132	36.04	1.38	30	D

Work Order: 1908043
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **1908043-002BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **8/7/2019** RunNo: **53113**
Client ID: **DU-02-080219** Batch ID: **25413** Analysis Date: **8/8/2019** SeqNo: **1049518**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	18.4	0.448	17.91	0	103	53.3	139	18.35	0.0829	30	D
Naphthalene	19.2	0.895	17.91	0	107	52.3	124	19.61	2.04	30	D
Surr: Dibromofluoromethane	21.4		22.38		95.6	56.5	129		0		D
Surr: Toluene-d8	20.9		22.38		93.5	64.5	151		0		D
Surr: 1-Bromo-4-fluorobenzene	23.0		22.38		103	54.8	168		0		D

Work Order: 1908043
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID: **1908031-004ADUP** SampType: **DUP** Units: **wt%** Prep Date: **8/5/2019** RunNo: **53048**
Client ID: **BATCH** Batch ID: **R53048** Analysis Date: **8/5/2019** SeqNo: **1048106**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	15.7	0.500						15.23	3.28	20	

Sample ID: **1908043-010ADUP** SampType: **DUP** Units: **wt%** Prep Date: **8/5/2019** RunNo: **53048**
Client ID: **Stockpile-05-080219** Batch ID: **R53048** Analysis Date: **8/5/2019** SeqNo: **1048120**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	13.1	0.500						11.80	10.8	20	

Sample Log-In Check List

Client Name:	**FS**	Work Order Number:	**1908043**
Logged by:	**Clare Griggs**	Date Received:	**8/2/2019 3:20:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Required ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler	8.9
Sample	9.4
Temp Blank	6.6

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Chain of Custody Record & Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

cg 8/2/19

Date: 8/2/19 Page: 1 of: 1

Laboratory Project No (Internal): 1908043

Project Name: CL-Ellensburg

Special Remarks: Total Nitrogen = Nitrite + Nitrate + Ammonia
NPK = Nitrogen + phosphorous + potassium

Client: ~~Gabe Cisneros~~ Floyd Snider

Project No:

Address: 601 Union St. Ste. 600

Collected by: Gabe Cisneros

City, State, Zip: Seattle, WA 98101

Location: 1611 Canyon Rd, Ellensburg, WA

Telephone: 206-292-2078

Report To (PM): Gabe Cisneros

Sample Disposal: ☐ Return to client ☐ Disposal by lab (after 30 days)

Fax:

PM Email: gabe.cisneros@floydsnider.com

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	1 NAPHTHALENE 8260	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8) Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	NPK & see Anions	Ammonia		Comments
1 DU-01-080219	8/2/19	1000				X	X			X					X		X	X		8260 Method
2 DU-02-080219		1005				X	X			X										
3 DU-03-080219		1010				X	X			X										
4 DU-04-080219		1015				X	X			X										
5 DU-05-080219		1020				X	X			X										
6 Stockpile-01-080219		1100						X												Follow up analyses may be done if there are detections
7 Stockpile-02-080219		1105						X												
8 Stockpile-03-080219		1110						X												
9 Stockpile-04-080219		1115						X												
10 Stockpile-05-080219		1120						X												

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, ~~S = Soil~~, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite Ammonia

Turn-around Time:
- [x] Standard
- [ ] 3 Day
- [ ] 2 Day
- [ ] Next Day
- Same Day ____ (specify)

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x [signature]	8/2/19 1520	x [signature]	8/2/19 1520
Relinquished	Date/Time	Received	Date/Time
x		x	

Chain of Custody Record & Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 8/2/19 Page: 1 of: 1

Laboratory Project No (internal): 1908043

Special Remarks:
Total Nitrogen = Nitrite + Nitrate + Ammonia
NPK = Nitrogen + phosphorous + potassium

Sample Disposal: ☐ Return to client ☐ Disposal by lab (after 30 days)

Client:	~~Gabe Cisneros~~ Floyd Snider
Address:	601 Union St. Ste. 600
City, State, Zip:	Seattle, WA 98101
Telephone:	206-292-2078
Fax:	
Project Name:	C.L-Ellensburg
Project No:	
Collected by:	Gabe Cisneros
Location:	1611 Canyon Rd, Ellensburg, WA
Report To (PM):	Gabe Cisneros
PM Email:	gabe.cisneros@floydsnider.com

edits per GC 8/12/19 PM

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	1 NAPHTHALENE 8260	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8) Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	NPK & See Anions	Ammonia	Quantify HCID	Comments
1 DU-01-080219	8/2/19	1000				X	X			X					X		X	X		8260 Method
2 DU-02-080219		1005				X	X			X										
3 DU-03-080219		1010				X	X			X										
4 DU-04-080219		1015				X	X			X										
5 DU-05-080219		1020				X	X			X										
6 Stockpile-01-080219		1100						X												Follow up analyses may be done if these are detections
7 Stockpile-02-080219		1105						X												
8 Stockpile-03-080219		1110						X										X		
9 Stockpile-04-080219		1115						X										X		
10 Stockpile-05-080219		1120						X												

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite Ammonia

Turn-around Time:
- ☒ Standard
- ☐ 3 Day
- ☐ 2 Day
- ☐ Next Day
- Same Day ____ (specify)

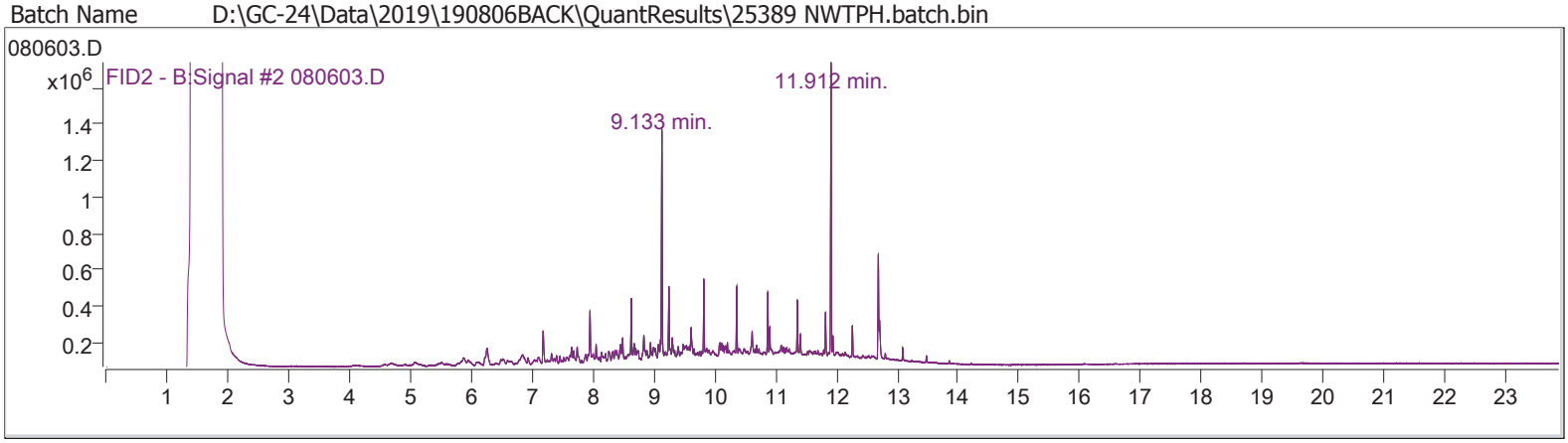
I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x	8/2/19 1520	x	8/2/19 1520
Relinquished	Date/Time	Received	Date/Time
x		x	

Quantitation Results Report

Agilent Technologies

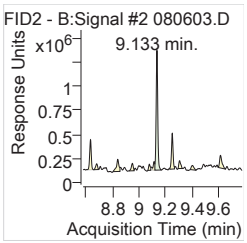
Data File	080603.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	8/6/2019 8:38:02 AM
Sample Name:	DX-CCV-		dualfid
Vial	2	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	6/17/2019 9:49:03 AM
Batch Name	D:\GC-24\Data\2019\190806BACK\QuantResults\25389 NWTPH.batch.bin		



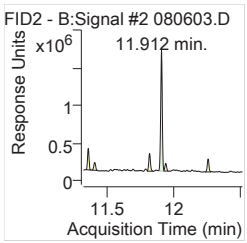
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.133	1056148	18.254	ug/mL		-0.043
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.912	1334637	18.388	ug/mL		-0.011
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.912	30489537	510.360	ug/mL	m	
Heavy Oil	17.500	0	0.000	ug/mL	md	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

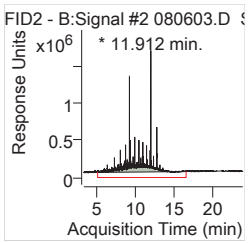
2-Fluorobiphenyl



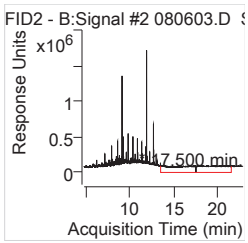
O-Terphenyl



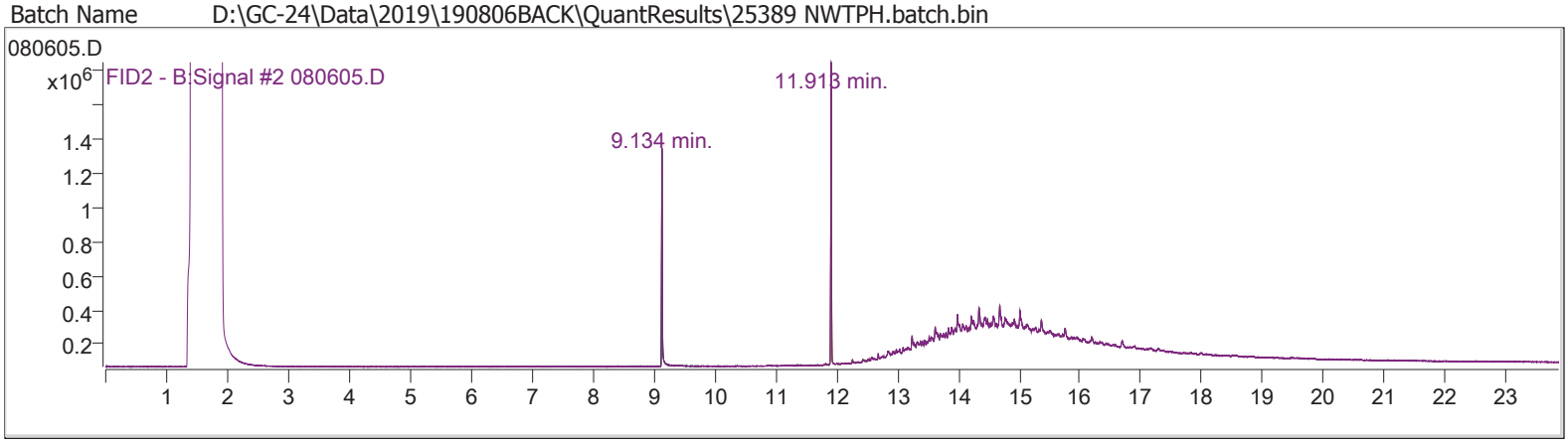
Diesel



Heavy Oil



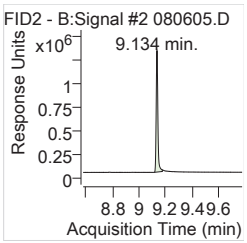
Data File	080605.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	8/6/2019 9:07:58 AM
Sample Name:	OIL-CCV-		dualfid
Vial	1	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	6/17/2019 9:49:03 AM
Batch Name	D:\GC-24\Data\2019\190806BACK\QuantResults\25389 NWTPH.batch.bin		



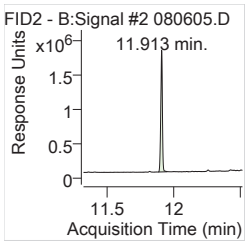
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.134	1133680	19.551	ug/mL		-0.043
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.913	1524142	21.050	ug/mL		-0.010
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	10.750	0	0.000	ug/mL	md	
Heavy Oil	14.681	51784754	1009.045	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

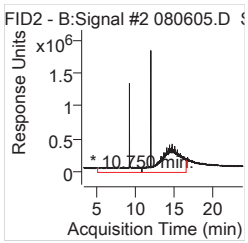
2-Fluorobiphenyl



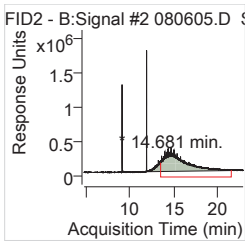
O-Terphenyl



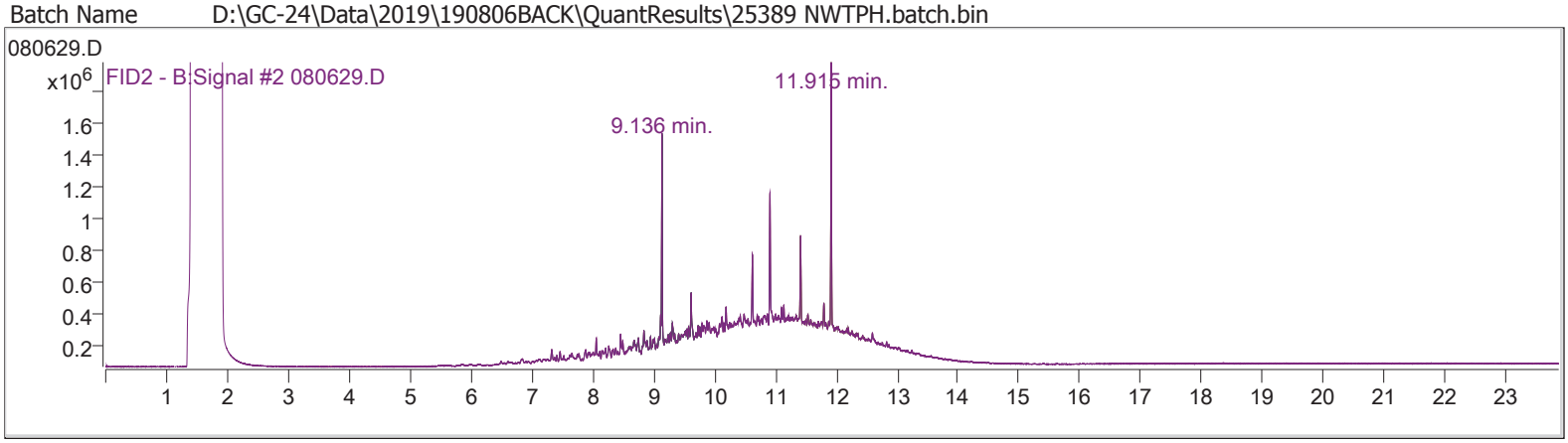
Diesel



Heavy Oil



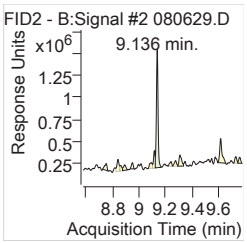
Data File	080629.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	8/6/2019 3:08:23 PM
Sample Name:	1908043-004A		dualfid
Vial	111	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m	Last Calib Update	6/17/2019 9:49:03 AM
	O-DXEX-S		
Batch Name	D:\GC-24\Data\2019\190806BACK\QuantResults\25389 NWTPH.batch.bin		



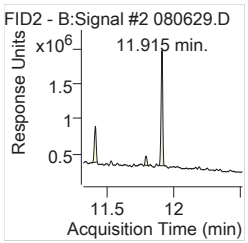
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.136	1166717	20.105	ug/mL		-0.041
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.915	1447427	19.972	ug/mL		-0.007
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.915	71424146	1195.245	ug/mL	m	
Heavy Oil	18.360	519757	0.000	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

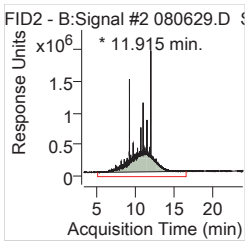
2-Fluorobiphenyl



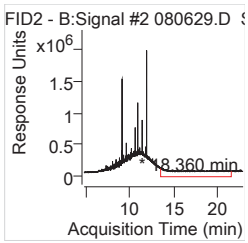
O-Terphenyl



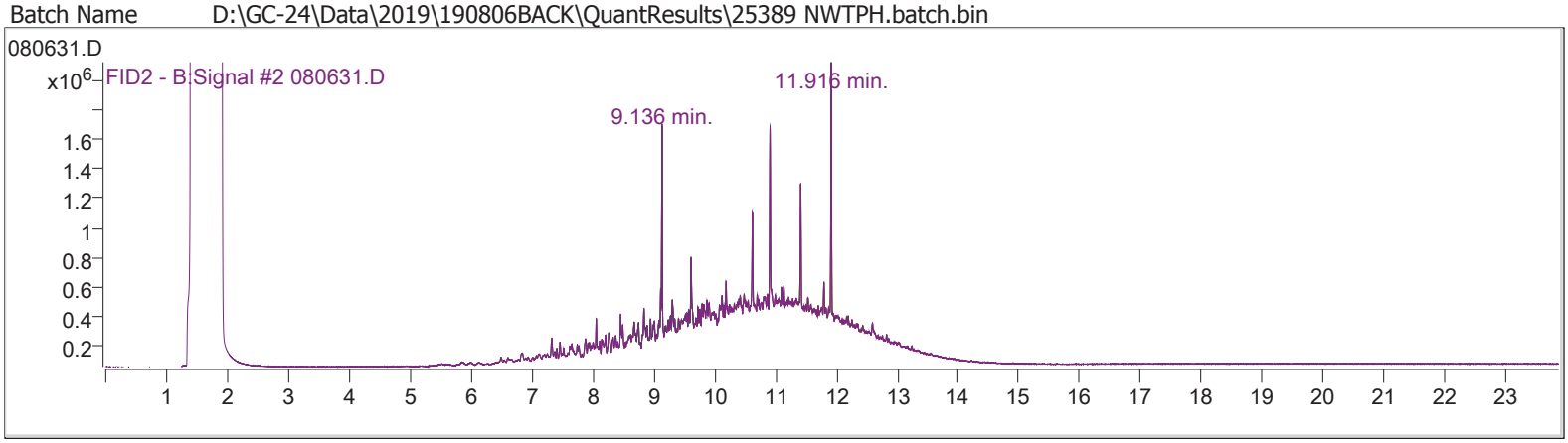
Diesel



Heavy Oil



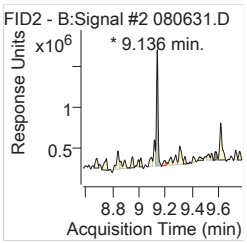
Data File	080631.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	8/6/2019 3:38:29 PM
Sample Name:	1908043-005A		dualfid
Vial	112	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m	Last Calib Update	6/17/2019 9:49:03 AM
	O-DXEX-S		
Batch Name	D:\GC-24\Data\2019\190806BACK\QuantResults\25389 NWTPH.batch.bin		



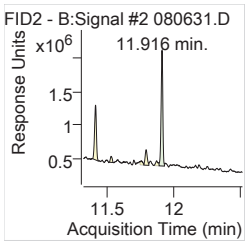
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.136	1204666	20.740	ug/mL	m	-0.040
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.916	1543139	21.317	ug/mL		-0.007
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.916	107813330	1804.080	ug/mL	m	
Heavy Oil	18.350	646134	0.000	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

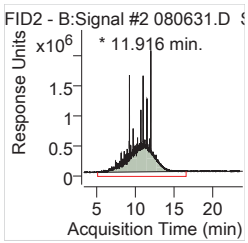
2-Fluorobiphenyl



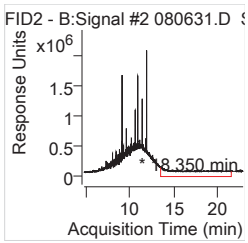
O-Terphenyl



Diesel



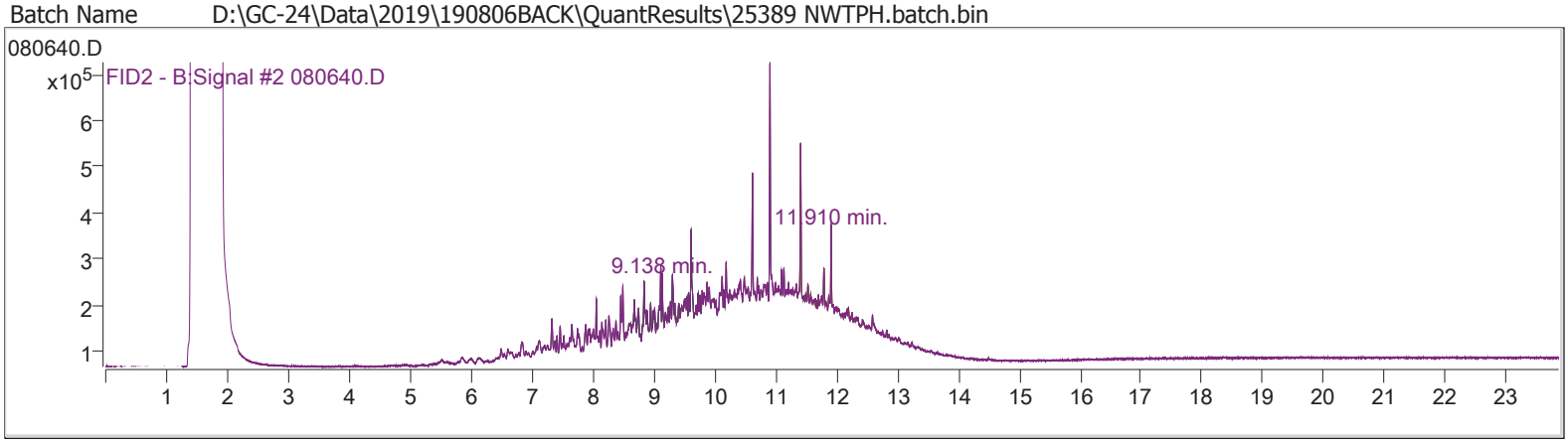
Heavy Oil



Quantitation Results Report

Agilent Technologies

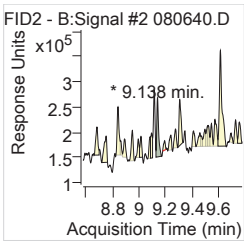
Data File	080640.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	8/6/2019 5:44:03 PM
Sample Name:	1908043-001A 10X		dualfid
Vial	127	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m	Last Calib Update	6/17/2019 9:49:03 AM
	O-DXEX-S		
Batch Name	D:\GC-24\Data\2019\190806BACK\QuantResults\25389 NWTPH.batch.bin		



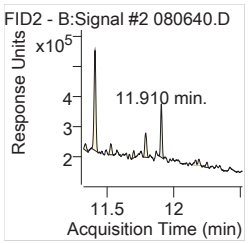
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.138	112063	2.449	ug/mL	m	-0.039
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.910	141778	1.631	ug/mL		-0.013
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	10.906	42210100	706.459	ug/mL	m	
Heavy Oil	19.623	628859	0.000	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

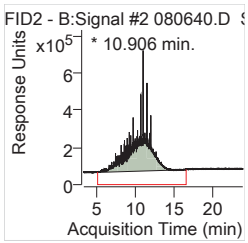
2-Fluorobiphenyl



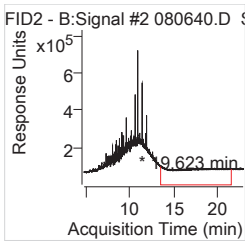
O-Terphenyl



Diesel



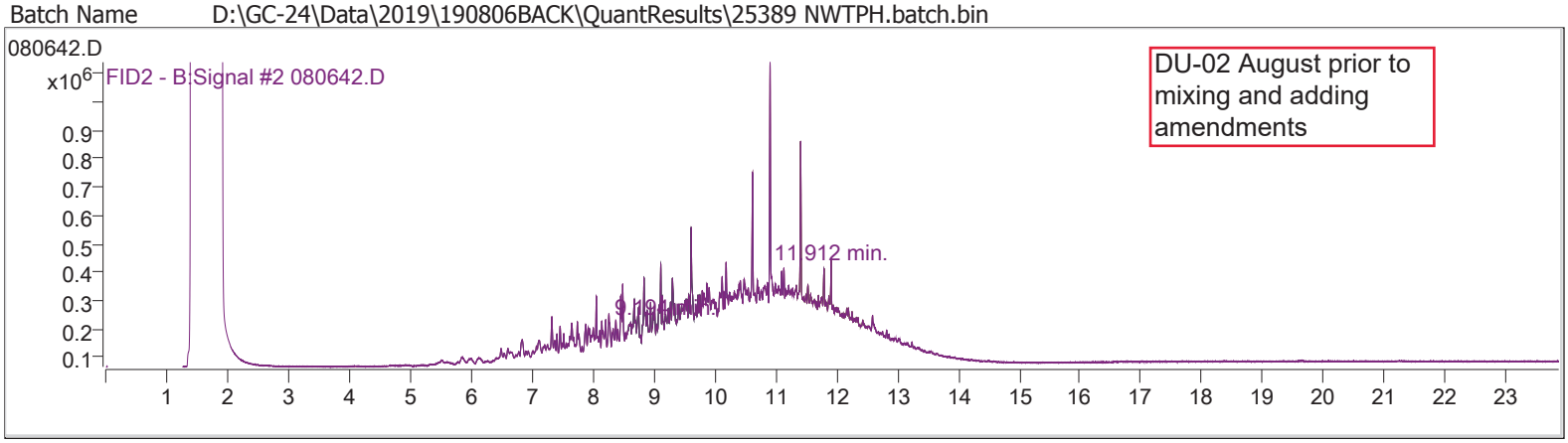
Heavy Oil



Quantitation Results Report

Agilent Technologies

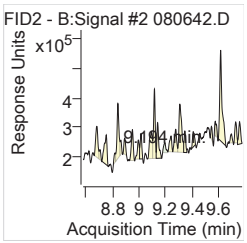
Data File	080642.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	8/6/2019 6:14:25 PM
Sample Name:	1908043-002A 10X		dualfid
Vial	131	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	6/17/2019 9:49:03 AM
Batch Name	D:\GC-24\Data\2019\190806BACK\QuantResults\25389 NWTPH.batch.bin		



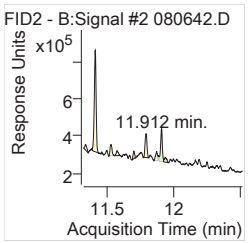
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.194	40999	1.260	ug/mL		0.017
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.912	167392	1.991	ug/mL		-0.011
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	10.910	69038383	1155.329	ug/mL	m	
Heavy Oil	19.630	714005	0.000	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

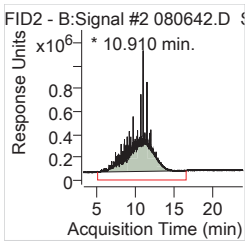
2-Fluorobiphenyl



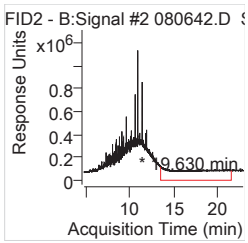
O-Terphenyl



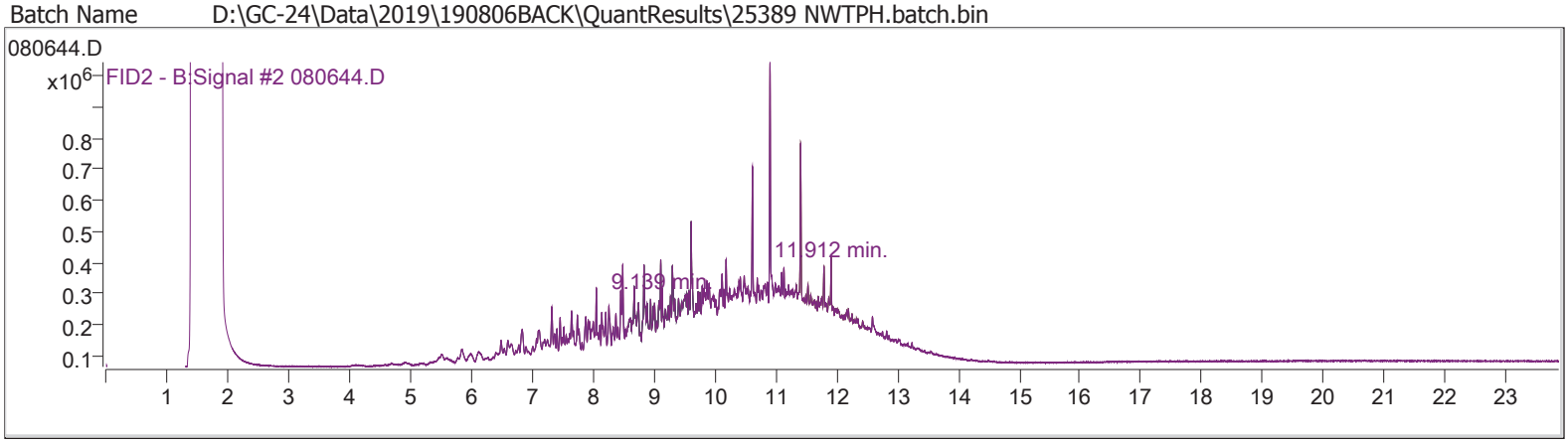
Diesel



Heavy Oil



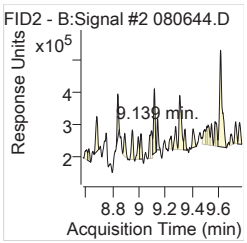
Data File	080644.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	8/6/2019 6:44:41 PM
Sample Name:	1908043-003A 10X		dualfid
Vial	132	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m	Last Calib Update	6/17/2019 9:49:03 AM
	O-DXEX-S		
Batch Name	D:\GC-24\Data\2019\190806BACK\QuantResults\25389 NWTPH.batch.bin		



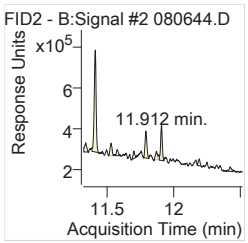
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.139	69908	1.744	ug/mL		-0.038
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.912	150310	1.751	ug/mL		-0.011
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	10.909	66473227	1112.410	ug/mL	m	
Heavy Oil	19.630	678177	0.000	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

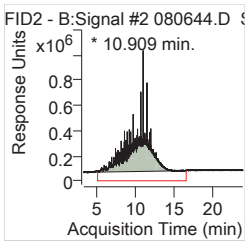
2-Fluorobiphenyl



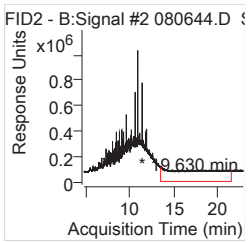
O-Terphenyl



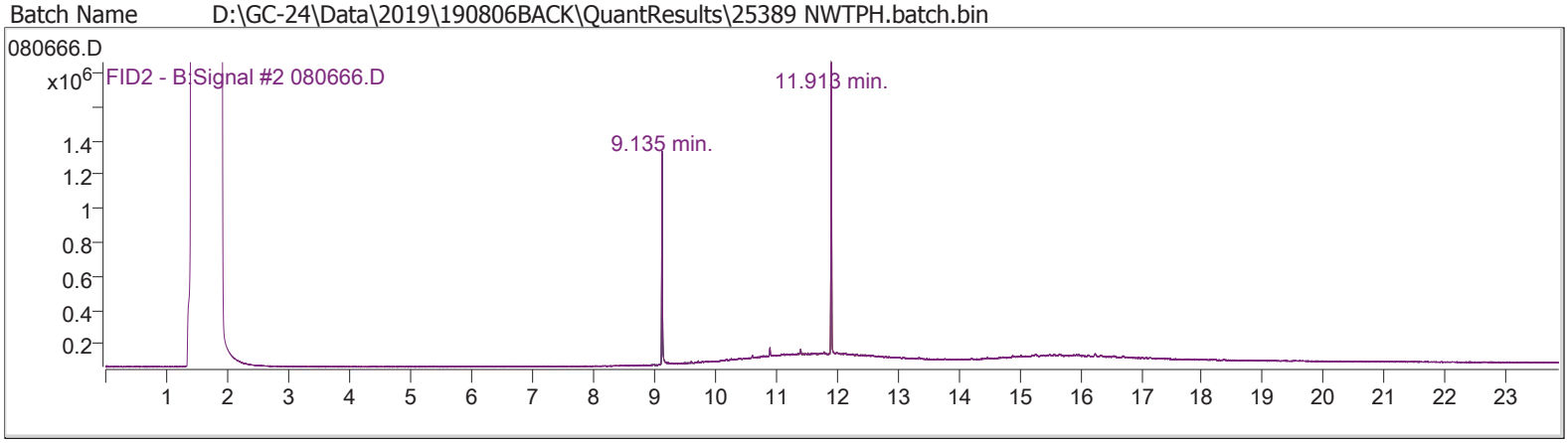
Diesel



Heavy Oil



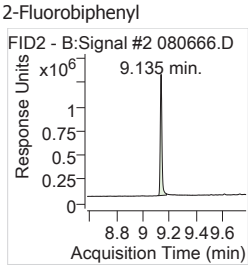
Data File	080666.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	8/7/2019 12:16:21 AM
Sample Name:	1908043-008A		dualfid
Vial	115	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	6/17/2019 9:49:03 AM
Batch Name	D:\GC-24\Data\2019\190806BACK\QuantResults\25389 NWTPH.batch.bin		



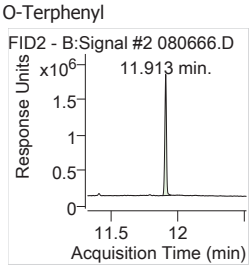
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.135	1120244	19.327	ug/mL		-0.042
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.913	1493258	20.616	ug/mL		-0.009
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.913	12964320	217.142	ug/mL	m	
Heavy Oil	16.248	11688053	202.433	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

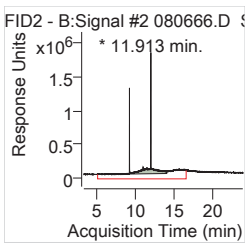
2-Fluorobiphenyl



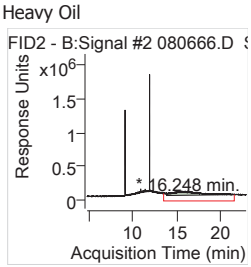
O-Terphenyl



Diesel

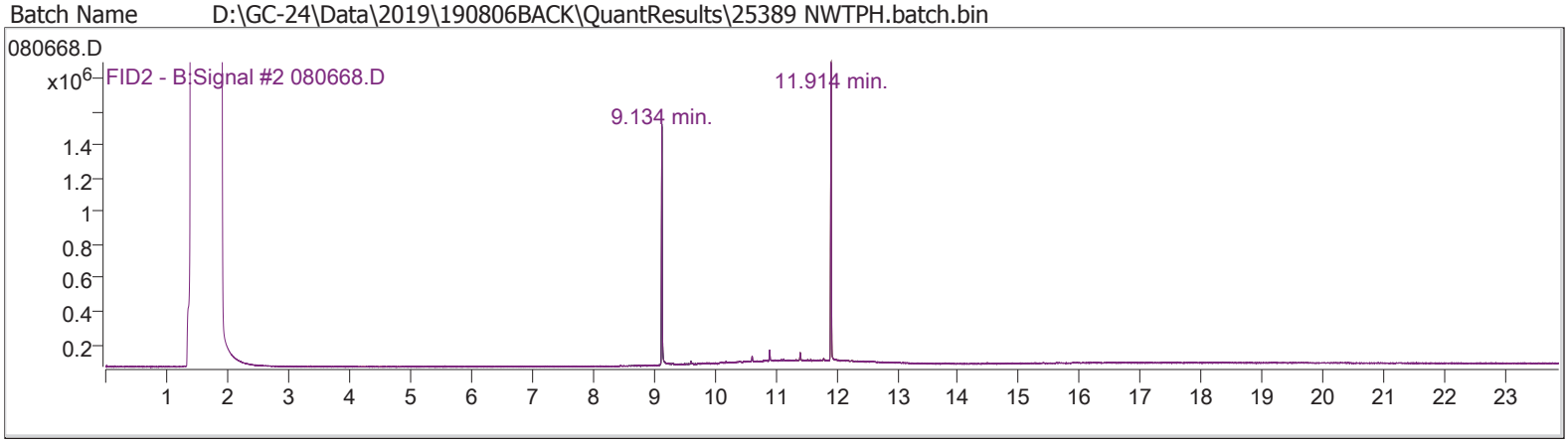


Heavy Oil



Agilent Technologies

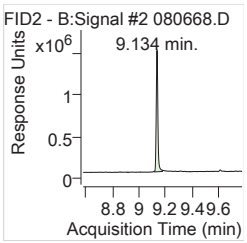
Data File	080668.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	8/7/2019 12:46:17 AM
Sample Name:	1908043-009A		dualfid
Vial	116	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	6/17/2019 9:49:03 AM
Batch Name	D:\GC-24\Data\2019\190806BACK\QuantResults\25389 NWTPH.batch.bin		



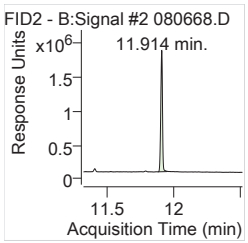
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.134	1243293	21.386	ug/mL		-0.042
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.914	1626487	22.488	ug/mL		-0.009
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.913	6394971	107.229	ug/mL	m	
Heavy Oil	18.358	2827657	24.192	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

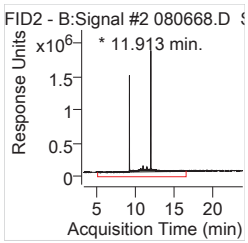
2-Fluorobiphenyl



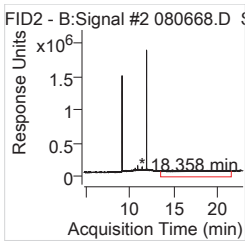
O-Terphenyl



Diesel



Heavy Oil



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Floyd | Snider
Gabe Cisneros
601 Union St., Suite 600
Seattle, WA 98101

RE: CL-Ellensburg
Work Order Number: 1909032

September 12, 2019

Attention Gabe Cisneros:

Fremont Analytical, Inc. received 6 sample(s) on 9/4/2019 for the analyses presented in the following report.

Ammonia by SM 4500 NH3 E
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.
Gasoline by NWTPH-Gx
Ion Chromatography by EPA Method 300.0
pH by EPA Method 9045
Sample Moisture (Percent Moisture)
Total Metals by EPA Method 6020B
Total Phosphorus by EPA Method 6020
Volatile Organic Compounds by EPA Method 8260D

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)

Date: *09/12/2019*

CLIENT: Floyd | Snider
Project: CL-Ellensburg
Work Order: 1909032

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1909032-001	DU-01-090419	09/04/2019 12:00 AM	09/04/2019 4:30 PM
1909032-002	DU-02-090419	09/04/2019 12:00 AM	09/04/2019 4:30 PM
1909032-003	DU-03-090419	09/04/2019 12:00 AM	09/04/2019 4:30 PM
1909032-004	DU-04-090419	09/04/2019 12:00 AM	09/04/2019 4:30 PM
1909032-005	DU-05-090419	09/04/2019 12:00 AM	09/04/2019 4:30 PM
1909032-006	Trip Blank	08/26/2019 10:35 AM	09/04/2019 4:30 PM

Case Narrative

WO#: **1909032**
Date: **9/12/2019**

CLIENT: Floyd | Snider
Project: CL-Ellensburg

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Client: Floyd | Snider
Project: CL-Ellensburg
Lab ID: 1909032-001
Client Sample ID: **DU-01-090419**

Collection Date: 9/4/2019
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 25727		Analyst: DW
Diesel (Fuel Oil)	3,270	197	D	mg/Kg-dry	10	9/11/2019 12:27:56 PM
Heavy Oil	ND	49.3		mg/Kg-dry	1	9/10/2019 6:34:32 PM
Surr: 2-Fluorobiphenyl	117	50 - 150		%Rec	1	9/10/2019 6:34:32 PM
Surr: o-Terphenyl	95.5	50 - 150		%Rec	1	9/10/2019 6:34:32 PM
Gasoline by NWTPH-Gx				Batch ID: 25723		Analyst: KT
Gasoline	ND	48.8	D	mg/Kg-dry	10	9/10/2019 11:39:31 AM
Surr: Toluene-d8	102	65 - 135	D	%Rec	10	9/10/2019 11:39:31 AM
Surr: 4-Bromofluorobenzene	108	65 - 135	D	%Rec	10	9/10/2019 11:39:31 AM
NOTES: Diluted due to matrix.						
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25723		Analyst: KT
Benzene	ND	0.0195		mg/Kg-dry	1	9/6/2019 7:36:43 PM
Toluene	ND	0.0195		mg/Kg-dry	1	9/6/2019 7:36:43 PM
Ethylbenzene	ND	0.0244		mg/Kg-dry	1	9/6/2019 7:36:43 PM
m,p-Xylene	ND	0.0488		mg/Kg-dry	1	9/6/2019 7:36:43 PM
o-Xylene	ND	0.0244		mg/Kg-dry	1	9/6/2019 7:36:43 PM
Naphthalene	ND	0.0488		mg/Kg-dry	1	9/6/2019 7:36:43 PM
Surr: Dibromofluoromethane	107	56.5 - 129		%Rec	1	9/6/2019 7:36:43 PM
Surr: Toluene-d8	103	64.5 - 151		%Rec	1	9/6/2019 7:36:43 PM
Surr: 1-Bromo-4-fluorobenzene	103	54.8 - 168		%Rec	1	9/6/2019 7:36:43 PM
Ion Chromatography by EPA Method 300.0				Batch ID: 25746		Analyst: SS
Nitrite (as N)	ND	1.03		mg/Kg-dry	1	9/10/2019 11:02:00 AM
Nitrate (as N)	ND	1.03		mg/Kg-dry	1	9/10/2019 11:02:00 AM
Total Phosphorus by EPA Method 6020				Batch ID: 25708		Analyst: WC
Phosphorus	558	17.8		mg/Kg-dry	1	9/11/2019 2:34:40 PM
Total Metals by EPA Method 6020B				Batch ID: 25708		Analyst: WC
Potassium	1,630	44.5		mg/Kg-dry	1	9/11/2019 2:34:40 PM

Analytical Report

Work Order: **1909032**
Date Reported: **9/12/2019**

Client: Floyd | Snider
Project: CL-Ellensburg
Lab ID: 1909032-001
Client Sample ID: **DU-01-090419**

Collection Date: 9/4/2019
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R53665		Analyst: CJ
Percent Moisture	10.0	0.500		wt%	1	9/5/2019 8:30:35 AM
Ammonia by SM 4500 NH3 E				Batch ID: 25747		Analyst: SS
Nitrogen, Ammonia	ND	1.10		mg/Kg-dry	1	9/11/2019 9:45:00 AM
pH by EPA Method 9045				Batch ID: R53797		Analyst: WF
Hydrogen Ion (pH)	7.91			pH	1	9/10/2019 2:22:12 PM

Client: Floyd | Snider
Project: CL-Ellensburg
Lab ID: 1909032-002
Client Sample ID: **DU-02-090419**

Collection Date: 9/4/2019
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 25727		Analyst: DW
Diesel (Fuel Oil)	4,680	199	D	mg/Kg-dry	10	9/11/2019 12:57:46 PM
Heavy Oil	ND	49.9		mg/Kg-dry	1	9/10/2019 7:04:26 PM
Surr: 2-Fluorobiphenyl	134	50 - 150		%Rec	1	9/10/2019 7:04:26 PM
Surr: o-Terphenyl	110	50 - 150		%Rec	1	9/10/2019 7:04:26 PM
Gasoline by NWTPH-Gx				Batch ID: 25723		Analyst: KT
Gasoline	ND	37.9	D	mg/Kg-dry	10	9/10/2019 11:09:21 AM
Surr: Toluene-d8	102	65 - 135	D	%Rec	10	9/10/2019 11:09:21 AM
Surr: 4-Bromofluorobenzene	105	65 - 135	D	%Rec	10	9/10/2019 11:09:21 AM
NOTES: Diluted due to matrix.						
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25723		Analyst: KT
Benzene	ND	0.0152		mg/Kg-dry	1	9/6/2019 8:06:49 PM
Toluene	ND	0.0152		mg/Kg-dry	1	9/6/2019 8:06:49 PM
Ethylbenzene	ND	0.0189		mg/Kg-dry	1	9/6/2019 8:06:49 PM
m,p-Xylene	ND	0.0379		mg/Kg-dry	1	9/6/2019 8:06:49 PM
o-Xylene	ND	0.0189		mg/Kg-dry	1	9/6/2019 8:06:49 PM
Naphthalene	ND	0.0379		mg/Kg-dry	1	9/6/2019 8:06:49 PM
Surr: Dibromofluoromethane	105	56.5 - 129		%Rec	1	9/6/2019 8:06:49 PM
Surr: Toluene-d8	103	64.5 - 151		%Rec	1	9/6/2019 8:06:49 PM
Surr: 1-Bromo-4-fluorobenzene	103	54.8 - 168		%Rec	1	9/6/2019 8:06:49 PM
Ion Chromatography by EPA Method 300.0				Batch ID: 25746		Analyst: SS
Nitrite (as N)	ND	1.19		mg/Kg-dry	1	9/10/2019 11:26:00 AM
Nitrate (as N)	ND	1.19		mg/Kg-dry	1	9/10/2019 11:26:00 AM
Total Phosphorus by EPA Method 6020				Batch ID: 25725		Analyst: WC
Phosphorus	698	18.7		mg/Kg-dry	1	9/11/2019 8:20:11 PM
Total Metals by EPA Method 6020B				Batch ID: 25725		Analyst: WC
Potassium	1,370	46.8		mg/Kg-dry	1	9/11/2019 8:20:11 PM

Analytical Report

Work Order: **1909032**
Date Reported: **9/12/2019**

Client: Floyd | Snider
Project: CL-Ellensburg
Lab ID: 1909032-002
Client Sample ID: **DU-02-090419**

Collection Date: 9/4/2019
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R53690		Analyst: SBM
Percent Moisture	15.9	0.500		wt%	1	9/5/2019 4:36:12 PM
Ammonia by SM 4500 NH3 E				Batch ID: 25747		Analyst: SS
Nitrogen, Ammonia	ND	1.18		mg/Kg-dry	1	9/11/2019 9:45:00 AM
pH by EPA Method 9045				Batch ID: R53797		Analyst: WF
Hydrogen Ion (pH)	7.85			pH	1	9/10/2019 2:22:12 PM

Client: Floyd | Snider
Collection Date: 9/4/2019
Project: CL-Ellensburg
Lab ID: 1909032-003
Matrix: Soil
Client Sample ID: **DU-03-090419**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 25727		Analyst: DW
Diesel (Fuel Oil)	3,720	238	D	mg/Kg-dry	10	9/11/2019 1:27:38 PM
Heavy Oil	ND	59.5		mg/Kg-dry	1	9/10/2019 7:34:23 PM
Surr: 2-Fluorobiphenyl	105	50 - 150		%Rec	1	9/10/2019 7:34:23 PM
Surr: o-Terphenyl	108	50 - 150		%Rec	1	9/10/2019 7:34:23 PM
Gasoline by NWTPH-Gx				Batch ID: 25723		Analyst: KT
Gasoline	ND	42.2	D	mg/Kg-dry	10	9/10/2019 10:39:12 AM
Surr: Toluene-d8	101	65 - 135	D	%Rec	10	9/10/2019 10:39:12 AM
Surr: 4-Bromofluorobenzene	103	65 - 135	D	%Rec	10	9/10/2019 10:39:12 AM
NOTES: Diluted due to matrix.						
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25723		Analyst: KT
Benzene	ND	0.0169		mg/Kg-dry	1	9/6/2019 8:36:58 PM
Toluene	ND	0.0169		mg/Kg-dry	1	9/6/2019 8:36:58 PM
Ethylbenzene	ND	0.0211		mg/Kg-dry	1	9/6/2019 8:36:58 PM
m,p-Xylene	ND	0.0422		mg/Kg-dry	1	9/6/2019 8:36:58 PM
o-Xylene	ND	0.0211		mg/Kg-dry	1	9/6/2019 8:36:58 PM
Naphthalene	ND	0.0422		mg/Kg-dry	1	9/6/2019 8:36:58 PM
Surr: Dibromofluoromethane	103	56.5 - 129		%Rec	1	9/6/2019 8:36:58 PM
Surr: Toluene-d8	101	64.5 - 151		%Rec	1	9/6/2019 8:36:58 PM
Surr: 1-Bromo-4-fluorobenzene	101	54.8 - 168		%Rec	1	9/6/2019 8:36:58 PM
Ion Chromatography by EPA Method 300.0				Batch ID: 25746		Analyst: SS
Nitrite (as N)	ND	1.17		mg/Kg-dry	1	9/10/2019 11:49:00 AM
Nitrate (as N)	ND	1.17		mg/Kg-dry	1	9/10/2019 11:49:00 AM
Total Phosphorus by EPA Method 6020				Batch ID: 25725		Analyst: WC
Phosphorus	709	19.5		mg/Kg-dry	1	9/11/2019 8:24:58 PM
Total Metals by EPA Method 6020B				Batch ID: 25725		Analyst: WC
Potassium	1,020	48.9		mg/Kg-dry	1	9/11/2019 8:24:58 PM

Analytical Report

Work Order: **1909032**
Date Reported: **9/12/2019**

Client: Floyd | Snider
Project: CL-Ellensburg
Lab ID: 1909032-003
Client Sample ID: **DU-03-090419**

Collection Date: 9/4/2019
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R53690		Analyst: SBM
Percent Moisture	18.1	0.500		wt%	1	9/5/2019 4:36:12 PM
Ammonia by SM 4500 NH3 E				Batch ID: 25747		Analyst: SS
Nitrogen, Ammonia	ND	1.18		mg/Kg-dry	1	9/11/2019 9:45:00 AM
pH by EPA Method 9045				Batch ID: R53797		Analyst: WF
Hydrogen Ion (pH)	7.67			pH	1	9/10/2019 2:22:12 PM

Client: Floyd | Snider
Collection Date: 9/4/2019
Project: CL-Ellensburg
Lab ID: 1909032-004
Matrix: Soil
Client Sample ID: **DU-04-090419**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 25727		Analyst: DW
Diesel (Fuel Oil)	2,480	223	D	mg/Kg-dry	10	9/11/2019 1:57:33 PM
Heavy Oil	ND	55.8		mg/Kg-dry	1	9/10/2019 8:04:12 PM
Surr: 2-Fluorobiphenyl	117	50 - 150		%Rec	1	9/10/2019 8:04:12 PM
Surr: o-Terphenyl	115	50 - 150		%Rec	1	9/10/2019 8:04:12 PM
Gasoline by NWTPH-Gx				Batch ID: 25723		Analyst: KT
Gasoline	ND	50.1	D	mg/Kg-dry	10	9/10/2019 10:09:04 AM
Surr: Toluene-d8	101	65 - 135	D	%Rec	10	9/10/2019 10:09:04 AM
Surr: 4-Bromofluorobenzene	98.7	65 - 135	D	%Rec	10	9/10/2019 10:09:04 AM
NOTES: Diluted due to matrix.						
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25723		Analyst: KT
Benzene	ND	0.0200		mg/Kg-dry	1	9/6/2019 9:07:06 PM
Toluene	ND	0.0200		mg/Kg-dry	1	9/6/2019 9:07:06 PM
Ethylbenzene	ND	0.0250		mg/Kg-dry	1	9/6/2019 9:07:06 PM
m,p-Xylene	ND	0.0501		mg/Kg-dry	1	9/6/2019 9:07:06 PM
o-Xylene	ND	0.0250		mg/Kg-dry	1	9/6/2019 9:07:06 PM
Naphthalene	ND	0.0501		mg/Kg-dry	1	9/6/2019 9:07:06 PM
Surr: Dibromofluoromethane	105	56.5 - 129		%Rec	1	9/6/2019 9:07:06 PM
Surr: Toluene-d8	102	64.5 - 151		%Rec	1	9/6/2019 9:07:06 PM
Surr: 1-Bromo-4-fluorobenzene	101	54.8 - 168		%Rec	1	9/6/2019 9:07:06 PM
Ion Chromatography by EPA Method 300.0				Batch ID: 25746		Analyst: SS
Nitrite (as N)	ND	1.22		mg/Kg-dry	1	9/10/2019 12:12:00 PM
Nitrate (as N)	5.77	1.22		mg/Kg-dry	1	9/10/2019 12:12:00 PM
Total Phosphorus by EPA Method 6020				Batch ID: 25725		Analyst: WC
Phosphorus	843	19.6		mg/Kg-dry	1	9/11/2019 8:29:44 PM
Total Metals by EPA Method 6020B				Batch ID: 25725		Analyst: WC
Potassium	1,600	49.0		mg/Kg-dry	1	9/11/2019 8:29:44 PM

Analytical Report

Work Order: **1909032**
Date Reported: **9/12/2019**

Client: Floyd | Snider
Project: CL-Ellensburg
Lab ID: 1909032-004
Client Sample ID: **DU-04-090419**

Collection Date: 9/4/2019
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R53690		Analyst: SBM
Percent Moisture	18.4	0.500		wt%	1	9/5/2019 4:36:12 PM
Ammonia by SM 4500 NH3 E				Batch ID: 25747		Analyst: SS
Nitrogen, Ammonia	ND	1.19		mg/Kg-dry	1	9/11/2019 9:45:00 AM
pH by EPA Method 9045				Batch ID: R53797		Analyst: WF
Hydrogen Ion (pH)	7.81			pH	1	9/10/2019 2:22:12 PM

Client: Floyd | Snider
Collection Date: 9/4/2019
Project: CL-Ellensburg
Lab ID: 1909032-005
Matrix: Soil
Client Sample ID: **DU-05-090419**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 25735		Analyst: DW
Diesel (Fuel Oil)	304	23.8		mg/Kg-dry	1	9/9/2019 10:58:59 PM
Heavy Oil	ND	59.5		mg/Kg-dry	1	9/9/2019 10:58:59 PM
Surr: 2-Fluorobiphenyl	63.4	50 - 150		%Rec	1	9/9/2019 10:58:59 PM
Surr: o-Terphenyl	72.3	50 - 150		%Rec	1	9/9/2019 10:58:59 PM
Gasoline by NWTPH-Gx				Batch ID: 25723		Analyst: KT
Gasoline	ND	5.59		mg/Kg-dry	1	9/10/2019 9:38:56 AM
Surr: Toluene-d8	101	65 - 135		%Rec	1	9/10/2019 9:38:56 AM
Surr: 4-Bromofluorobenzene	98.1	65 - 135		%Rec	1	9/10/2019 9:38:56 AM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25723		Analyst: KT
Benzene	ND	0.0223		mg/Kg-dry	1	9/6/2019 9:37:17 PM
Toluene	ND	0.0223		mg/Kg-dry	1	9/6/2019 9:37:17 PM
Ethylbenzene	ND	0.0279		mg/Kg-dry	1	9/6/2019 9:37:17 PM
m,p-Xylene	ND	0.0559		mg/Kg-dry	1	9/6/2019 9:37:17 PM
o-Xylene	ND	0.0279		mg/Kg-dry	1	9/6/2019 9:37:17 PM
Naphthalene	ND	0.0559		mg/Kg-dry	1	9/6/2019 9:37:17 PM
Surr: Dibromofluoromethane	102	56.5 - 129		%Rec	1	9/6/2019 9:37:17 PM
Surr: Toluene-d8	101	64.5 - 151		%Rec	1	9/6/2019 9:37:17 PM
Surr: 1-Bromo-4-fluorobenzene	101	54.8 - 168		%Rec	1	9/6/2019 9:37:17 PM
Ion Chromatography by EPA Method 300.0				Batch ID: 25746		Analyst: SS
Nitrite (as N)	2.82	2.37	D	mg/Kg-dry	2	9/10/2019 12:35:00 PM
Nitrate (as N)	68.6	5.92	D	mg/Kg-dry	5	9/9/2019 6:17:00 PM
Total Phosphorus by EPA Method 6020				Batch ID: 25725		Analyst: WC
Phosphorus	962	19.5		mg/Kg-dry	1	9/11/2019 8:34:31 PM
Total Metals by EPA Method 6020B				Batch ID: 25725		Analyst: WC
Potassium	3,270	48.7		mg/Kg-dry	1	9/11/2019 8:34:31 PM
Sample Moisture (Percent Moisture)				Batch ID: R53690		Analyst: SBM
Percent Moisture	18.5	0.500		wt%	1	9/5/2019 4:36:12 PM

Analytical Report

Work Order: **1909032**
Date Reported: **9/12/2019**

Client: Floyd | Snider
Project: CL-Ellensburg
Lab ID: 1909032-005
Client Sample ID: **DU-05-090419**

Collection Date: 9/4/2019
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ammonia by SM 4500 NH3 E				Batch ID: 25747		Analyst: SS
Nitrogen, Ammonia	1.92	1.21		mg/Kg-dry	1	9/11/2019 9:45:00 AM
pH by EPA Method 9045				Batch ID: R53797		Analyst: WF
Hydrogen Ion (pH)	7.92			pH	1	9/10/2019 2:22:12 PM

Work Order: 1909032
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Ammonia by SM 4500 NH3 E

Sample ID: **MB-25747**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **9/9/2019**	RunNo: **53818**
Client ID: **MBLKS**	Batch ID: **25747**		Analysis Date: **9/11/2019**	SeqNo: **1065280**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	ND	1.00									

Sample ID: **LCS-25747**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **9/9/2019**	RunNo: **53818**
Client ID: **LCSS**	Batch ID: **25747**		Analysis Date: **9/11/2019**	SeqNo: **1065281**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	19.6	1.00	20.00	0	97.9	85	115				

Sample ID: **1909032-004ADUP**	SampType: **DUP**	Units: **mg/Kg-dry**	Prep Date: **9/9/2019**	RunNo: **53818**
Client ID: **DU-04-090419**	Batch ID: **25747**		Analysis Date: **9/11/2019**	SeqNo: **1065286**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	ND	1.21						0		30	

Sample ID: **1909032-004AMS**	SampType: **MS**	Units: **mg/Kg-dry**	Prep Date: **9/9/2019**	RunNo: **53818**
Client ID: **DU-04-090419**	Batch ID: **25747**		Analysis Date: **9/11/2019**	SeqNo: **1065287**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	16.8	1.20	24.07	0.3588	68.5	80	120				S

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: **1909032-004AMSD**	SampType: **MSD**	Units: **mg/Kg-dry**	Prep Date: **9/9/2019**	RunNo: **53818**
Client ID: **DU-04-090419**	Batch ID: **25747**		Analysis Date: **9/11/2019**	SeqNo: **1065288**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	14.6	1.22	24.31	0.3588	58.5	80	120	16.85	14.4	20	S

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Work Order: 1909032
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID: **MB-25746** SampType: **MBLK** Units: **mg/Kg** Prep Date: **9/9/2019** RunNo: **53777**
Client ID: **MBLKS** Batch ID: **25746** Analysis Date: **9/9/2019** SeqNo: **1064481**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	ND	1.00									
Nitrate (as N)	ND	1.00									

Sample ID: **LCS-25746** SampType: **LCS** Units: **mg/Kg** Prep Date: **9/9/2019** RunNo: **53777**
Client ID: **LCSS** Batch ID: **25746** Analysis Date: **9/9/2019** SeqNo: **1064482**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	7.83	1.00	7.500	0	104	90	110				
Nitrate (as N)	7.45	1.00	7.500	0	99.3	90	110				

Sample ID: **1909032-001ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **9/9/2019** RunNo: **53777**
Client ID: **DU-01-090419** Batch ID: **25746** Analysis Date: **9/9/2019** SeqNo: **1064484**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	ND	5.43						0		30	D
Nitrate (as N)	ND	5.43						0		30	D

Sample ID: **1909032-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **9/9/2019** RunNo: **53777**
Client ID: **DU-01-090419** Batch ID: **25746** Analysis Date: **9/9/2019** SeqNo: **1064485**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	10.3	5.50	8.255	0	125	80	120				DS
Nitrate (as N)	9.63	5.50	8.255	0	117	80	120				D

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Work Order: 1909032
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID: **1909032-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **9/9/2019** RunNo: **53777**
Client ID: **DU-01-090419** Batch ID: **25746** Analysis Date: **9/9/2019** SeqNo: **1064486**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	10.2	5.40	8.103	0	126	80	120	10.29	0.804	30	DS
Nitrate (as N)	9.40	5.40	8.103	0	116	80	120	9.631	2.44	30	D

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Work Order: 1909032
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Total Phosphorus by EPA Method 6020

Sample ID: **MB-25708**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **9/5/2019**		RunNo: **53817**		
Client ID: **MBLKS**	Batch ID: **25708**					Analysis Date: **9/11/2019**		SeqNo: **1065269**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	ND	16.1									

Sample ID: **LCS-25708**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **9/5/2019**		RunNo: **53817**		
Client ID: **LCSS**	Batch ID: **25708**					Analysis Date: **9/11/2019**		SeqNo: **1065270**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	396	16.0	400.0	0	99.0	80	120				

Sample ID: **1908417-014ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **9/5/2019**		RunNo: **53817**		
Client ID: **BATCH**	Batch ID: **25708**					Analysis Date: **9/11/2019**		SeqNo: **1065272**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	514	18.5						640.4	21.9	20	R

NOTES:
R - High RPD observed. The method is in control as indicated by the LCS.

Sample ID: **1908417-014AMS**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **9/5/2019**		RunNo: **53817**		
Client ID: **BATCH**	Batch ID: **25708**					Analysis Date: **9/11/2019**		SeqNo: **1065276**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	951	18.5	462.5	640.4	67.1	75	125				S

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: **1908417-014AMSD**	SampType: **MSD**			Units: **mg/Kg-dry**		Prep Date: **9/5/2019**		RunNo: **53817**		
Client ID: **BATCH**	Batch ID: **25708**					Analysis Date: **9/11/2019**		SeqNo: **1065277**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	864	18.6	466.2	640.4	47.9	75	125	950.6	9.57	20	S

Work Order: 1909032
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Total Phosphorus by EPA Method 6020

Sample ID: **1908417-014AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **9/5/2019** RunNo: **53817**
Client ID: **BATCH** Batch ID: **25708** Analysis Date: **9/11/2019** SeqNo: **1065277**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: **MB-25725** SampType: **MBLK** Units: **mg/Kg** Prep Date: **9/6/2019** RunNo: **53832**
Client ID: **MBLKS** Batch ID: **25725** Analysis Date: **9/11/2019** SeqNo: **1065699**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	ND	15.9									

Sample ID: **LCS-25725** SampType: **LCS** Units: **mg/Kg** Prep Date: **9/6/2019** RunNo: **53832**
Client ID: **LCSS** Batch ID: **25725** Analysis Date: **9/11/2019** SeqNo: **1065700**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	389	16.1	403.2	0	96.5	80	120				

Sample ID: **1909040-001ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **9/6/2019** RunNo: **53832**
Client ID: **BATCH** Batch ID: **25725** Analysis Date: **9/11/2019** SeqNo: **1065704**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	354	16.3						388.7	9.48	20	

Sample ID: **1909040-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **9/6/2019** RunNo: **53832**
Client ID: **BATCH** Batch ID: **25725** Analysis Date: **9/11/2019** SeqNo: **1065706**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	711	16.4	409.6	388.7	78.7	75	125				

Work Order: 1909032
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Total Phosphorus by EPA Method 6020

Sample ID: **1909040-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **9/6/2019** RunNo: **53832**
Client ID: **BATCH** Batch ID: **25725** Analysis Date: **9/11/2019** SeqNo: **1065707**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	795	16.5	412.8	388.7	98.4	75	125	710.9	11.1	20	

Work Order: 1909032
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

pH by EPA Method 9045

Sample ID: **MB-R53797**	SampType: **MBLK**	Units: **pH**	Prep Date: **9/10/2019**	RunNo: **53797**
Client ID: **MBLKS**	Batch ID: **R53797**		Analysis Date: **9/10/2019**	SeqNo: **1064836**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hydrogen Ion (pH)	6.44										

Sample ID: **LCS-R53797**	SampType: **LCS**	Units: **pH**	Prep Date: **9/10/2019**	RunNo: **53797**
Client ID: **LCSS**	Batch ID: **R53797**		Analysis Date: **9/10/2019**	SeqNo: **1064837**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hydrogen Ion (pH)	7.04		7.000	0	101	95	105				

Sample ID: **1909084-001ADUP**	SampType: **DUP**	Units: **pH**	Prep Date: **9/10/2019**	RunNo: **53797**
Client ID: **BATCH**	Batch ID: **R53797**		Analysis Date: **9/10/2019**	SeqNo: **1064839**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hydrogen Ion (pH)	7.81							7.550	3.39	10	

Work Order: 1909032
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: **MB-25725**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **9/6/2019**	RunNo: **53751**
Client ID: **MBLKS**	Batch ID: **25725**		Analysis Date: **9/9/2019**	SeqNo: **1063859**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	ND	39.7									

Sample ID: **LCS-25725**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **9/6/2019**	RunNo: **53751**
Client ID: **LCSS**	Batch ID: **25725**		Analysis Date: **9/9/2019**	SeqNo: **1063860**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	391	40.3	403.2	0	97.0	80	120				

Sample ID: **1909040-001ADUP**	SampType: **DUP**	Units: **mg/Kg-dry**	Prep Date: **9/6/2019**	RunNo: **53751**
Client ID: **BATCH**	Batch ID: **25725**		Analysis Date: **9/9/2019**	SeqNo: **1063862**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	444	40.6						666.0	40.1	20	R

NOTES:
R - High RPD observed. The method is in control as indicated by the LCS.

Sample ID: **1909040-001AMS**	SampType: **MS**	Units: **mg/Kg-dry**	Prep Date: **9/6/2019**	RunNo: **53751**
Client ID: **BATCH**	Batch ID: **25725**		Analysis Date: **9/9/2019**	SeqNo: **1063866**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	925	41.0	409.6	666.0	63.1	75	125				S

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: **1909040-001AMSD**	SampType: **MSD**	Units: **mg/Kg-dry**	Prep Date: **9/6/2019**	RunNo: **53751**
Client ID: **BATCH**	Batch ID: **25725**		Analysis Date: **9/9/2019**	SeqNo: **1063867**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	844	41.3	412.8	666.0	43.2	75	125	924.6	9.09	20	S

Work Order: 1909032
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: **1909040-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **9/6/2019** RunNo: **53751**
Client ID: **BATCH** Batch ID: **25725** Analysis Date: **9/9/2019** SeqNo: **1063867**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: **MB-25708** SampType: **MBLK** Units: **mg/Kg** Prep Date: **9/5/2019** RunNo: **53793**
Client ID: **MBLKS** Batch ID: **25708** Analysis Date: **9/10/2019** SeqNo: **1064791**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	ND	40.3									

Sample ID: **LCS-25708** SampType: **LCS** Units: **mg/Kg** Prep Date: **9/5/2019** RunNo: **53793**
Client ID: **LCSS** Batch ID: **25708** Analysis Date: **9/10/2019** SeqNo: **1064792**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	437	40.0	400.0	0	109	80	120				

Sample ID: **1908417-014ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **9/5/2019** RunNo: **53793**
Client ID: **BATCH** Batch ID: **25708** Analysis Date: **9/10/2019** SeqNo: **1064796**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	2,050	46.2						2,190	6.58	20	

Sample ID: **1908417-014AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **9/5/2019** RunNo: **53793**
Client ID: **BATCH** Batch ID: **25708** Analysis Date: **9/10/2019** SeqNo: **1064798**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	2,900	46.2	462.5	2,190	153	75	125				ES

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.
E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1909032
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: **1908417-014AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **9/5/2019** RunNo: **53793**
Client ID: **BATCH** Batch ID: **25708** Analysis Date: **9/10/2019** SeqNo: **1064799**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	2,360	46.6	466.2	2,190	35.6	75	125	2,895	20.5	20	ERS

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.
R - High RPD observed. The method is in control as indicated by the LCS.
E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1909032
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID: **MB-25727**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **9/6/2019**		RunNo: **53758**		
Client ID: **MBLKS**	Batch ID: **25727**					Analysis Date: **9/9/2019**		SeqNo: **1063983**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	20.0									
Heavy Oil	ND	50.0									
Surr: 2-Fluorobiphenyl	19.7		20.00		98.7	50	150				
Surr: o-Terphenyl	20.6		20.00		103	50	150				

Sample ID: **LCS-25727**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **9/6/2019**		RunNo: **53758**		
Client ID: **LCSS**	Batch ID: **25727**					Analysis Date: **9/9/2019**		SeqNo: **1063984**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	571	20.0	500.0	0	114	65	135				
Surr: 2-Fluorobiphenyl	24.2		20.00		121	50	150				
Surr: o-Terphenyl	23.5		20.00		117	50	150				

Sample ID: **1908347-002ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **9/6/2019**		RunNo: **53758**		
Client ID: **BATCH**	Batch ID: **25727**					Analysis Date: **9/9/2019**		SeqNo: **1063986**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	21.0						0		30	H
Heavy Oil	ND	52.4						0		30	H
Surr: 2-Fluorobiphenyl	22.4		20.98		107	50	150		0		H
Surr: o-Terphenyl	23.5		20.98		112	50	150		0		H

Sample ID: **1909007-001AMS**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **9/6/2019**		RunNo: **53758**		
Client ID: **BATCH**	Batch ID: **25727**					Analysis Date: **9/9/2019**		SeqNo: **1063988**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	4,840	23.9	598.0	5,160	-53.2	65	135				SE
Surr: 2-Fluorobiphenyl	80.1		23.92		335	50	150				S
Surr: o-Terphenyl	37.8		23.92		158	50	150				S

Work Order: 1909032
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID: **1909007-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **9/6/2019** RunNo: **53758**
Client ID: **BATCH** Batch ID: **25727** Analysis Date: **9/9/2019** SeqNo: **1063988**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
S - Analyte concentration was too high for accurate spike recovery(ies).
S - Outlying surrogate recovery attributed to TPH interference. The method is in control as indicated by the Method Blank (MB) & Laboratory Control Sample (LCS).

Sample ID: **1909007-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **9/6/2019** RunNo: **53758**
Client ID: **BATCH** Batch ID: **25727** Analysis Date: **9/9/2019** SeqNo: **1063989**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	3,780	23.4	585.4	5,160	-235	65	135	4,842	24.6	30	SE
Surr: 2-Fluorobiphenyl	60.6		23.42		259	50	150		0		S
Surr: o-Terphenyl	27.4		23.42		117	50	150		0		

NOTES:
S - Analyte concentration was too high for accurate spike recovery(ies).
S - Outlying surrogate recovery attributed to TPH interference. The method is in control as indicated by the Method Blank (MB) & Laboratory Control Sample (LCS).

Sample ID: **MB-25735** SampType: **MBLK** Units: **mg/Kg** Prep Date: **9/6/2019** RunNo: **53774**
Client ID: **MBLKS** Batch ID: **25735** Analysis Date: **9/9/2019** SeqNo: **1064330**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	20.0									
Heavy Oil	ND	50.0									
Surr: 2-Fluorobiphenyl	15.2		20.00		76.0	50	150				
Surr: o-Terphenyl	17.2		20.00		85.8	50	150				

Sample ID: **LCS-25735** SampType: **LCS** Units: **mg/Kg** Prep Date: **9/6/2019** RunNo: **53774**
Client ID: **LCSS** Batch ID: **25735** Analysis Date: **9/9/2019** SeqNo: **1064331**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	518	20.0	500.0	0	104	65	135				
Surr: 2-Fluorobiphenyl	17.6		20.00		88.2	50	150				
Surr: o-Terphenyl	17.1		20.00		85.7	50	150				

Work Order: 1909032
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID: **LCS-25735** SampType: **LCS** Units: **mg/Kg** Prep Date: **9/6/2019** RunNo: **53774**
Client ID: **LCSS** Batch ID: **25735** Analysis Date: **9/9/2019** SeqNo: **1064331**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: **1909065-001ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **9/6/2019** RunNo: **53774**
Client ID: **BATCH** Batch ID: **25735** Analysis Date: **9/9/2019** SeqNo: **1064333**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	26.3						0		30	
Heavy Oil	ND	65.6						0		30	
Surr: 2-Fluorobiphenyl	16.3		26.26		61.9	50	150		0		
Surr: o-Terphenyl	17.9		26.26		68.2	50	150		0		

Sample ID: **1909065-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **9/6/2019** RunNo: **53774**
Client ID: **BATCH** Batch ID: **25735** Analysis Date: **9/9/2019** SeqNo: **1064334**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	602	26.7	666.8	0	90.3	65	135				
Surr: 2-Fluorobiphenyl	19.5		26.67		73.0	50	150				
Surr: o-Terphenyl	19.6		26.67		73.5	50	150				

Sample ID: **1909065-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **9/6/2019** RunNo: **53774**
Client ID: **BATCH** Batch ID: **25735** Analysis Date: **9/9/2019** SeqNo: **1064335**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	602	24.9	623.5	0	96.5	65	135	602.1	0.0761	30	
Surr: 2-Fluorobiphenyl	16.3		24.94		65.5	50	150		0		
Surr: o-Terphenyl	16.5		24.94		66.3	50	150		0		

Work Order: 1909032
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID: **LCS-25723**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **9/6/2019**	RunNo: **53715**
Client ID: **LCSS**	Batch ID: **25723**		Analysis Date: **9/6/2019**	SeqNo: **1063274**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	26.2	5.00	25.00	0	105	65	135				
Surr: Toluene-d8	1.27		1.250		102	65	135				
Surr: 4-Bromofluorobenzene	1.21		1.250		96.9	65	135				

Sample ID: **LCSD-25723**	SampType: **LCSD**	Units: **mg/Kg**	Prep Date: **9/6/2019**	RunNo: **53715**
Client ID: **LCSS02**	Batch ID: **25723**		Analysis Date: **9/6/2019**	SeqNo: **1063275**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	28.9	5.00	25.00	0	116	65	135	26.25	9.77	20	
Surr: Toluene-d8	1.28		1.250		102	65	135		0		
Surr: 4-Bromofluorobenzene	1.21		1.250		97.0	65	135		0		

Sample ID: **MB-25723**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **9/6/2019**	RunNo: **53715**
Client ID: **MBLKS**	Batch ID: **25723**		Analysis Date: **9/6/2019**	SeqNo: **1063284**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	5.00									
Surr: Toluene-d8	1.26		1.250		101	65	135				
Surr: 4-Bromofluorobenzene	1.16		1.250		92.5	65	135				

Sample ID: **1909046-021BDUP**	SampType: **DUP**	Units: **mg/Kg-dry**	Prep Date: **9/6/2019**	RunNo: **53715**
Client ID: **BATCH**	Batch ID: **25723**		Analysis Date: **9/6/2019**	SeqNo: **1063279**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	6.80						0		30	
Surr: Toluene-d8	1.71		1.699		101	65	135		0		
Surr: 4-Bromofluorobenzene	1.57		1.699		92.3	65	135		0		

Work Order: 1909032
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID: **1909032-005BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **9/6/2019** RunNo: **53715**
Client ID: **DU-05-090419** Batch ID: **25723** Analysis Date: **9/6/2019** SeqNo: **1063522**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	5.56						0		30	
Surr: Toluene-d8	1.42		1.391		102	65	135		0		
Surr: 4-Bromofluorobenzene	1.36		1.391		97.8	65	135		0		

Work Order: 1909032
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-25723** SampType: **LCS** Units: **mg/Kg** Prep Date: **9/6/2019** RunNo: **53714**
Client ID: **LCSS** Batch ID: **25723** Analysis Date: **9/6/2019** SeqNo: **1063263**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.03	0.0200	1.000	0	103	64.3	133				
Toluene	1.04	0.0200	1.000	0	104	67	144				
Ethylbenzene	1.05	0.0250	1.000	0	105	74	129				
m,p-Xylene	2.10	0.0500	2.000	0	105	70	124				
o-Xylene	1.05	0.0250	1.000	0	105	68.1	139				
Naphthalene	0.895	0.0500	1.000	0	89.5	46.5	167				
Surr: Dibromofluoromethane	1.28		1.250		102	56.5	129				
Surr: Toluene-d8	1.27		1.250		102	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.24		1.250		99.5	54.8	168				

Sample ID: **LCSD-25723** SampType: **LCSD** Units: **mg/Kg** Prep Date: **9/6/2019** RunNo: **53714**
Client ID: **LCSS02** Batch ID: **25723** Analysis Date: **9/6/2019** SeqNo: **1063264**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.02	0.0200	1.000	0	102	74.6	124	1.032	0.774	20	
Toluene	1.04	0.0200	1.000	0	104	67	144	1.044	0.456	20	
Ethylbenzene	1.03	0.0250	1.000	0	103	74	129	1.048	1.67	20	
m,p-Xylene	2.07	0.0500	2.000	0	104	70	124	2.103	1.38	20	
o-Xylene	1.02	0.0250	1.000	0	102	68.1	139	1.045	2.21	20	
Naphthalene	0.910	0.0500	1.000	0	91.0	46.5	167	0.8949	1.72	20	
Surr: Dibromofluoromethane	1.28		1.250		102	56.5	129		0		
Surr: Toluene-d8	1.27		1.250		102	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.24		1.250		99.0	54.8	168		0		

Sample ID: **MB-25723** SampType: **MBLK** Units: **mg/Kg** Prep Date: **9/6/2019** RunNo: **53714**
Client ID: **MBLKS** Batch ID: **25723** Analysis Date: **9/6/2019** SeqNo: **1063265**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0200									
Toluene	ND	0.0200									

Work Order: 1909032
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-25723** SampType: **MBLK** Units: **mg/Kg** Prep Date: **9/6/2019** RunNo: **53714**
Client ID: **MBLKS** Batch ID: **25723** Analysis Date: **9/6/2019** SeqNo: **1063265**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Naphthalene	ND	0.0500									
Surr: Dibromofluoromethane	1.25		1.250		100	56.5	129				
Surr: Toluene-d8	1.26		1.250		101	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.23		1.250		98.6	54.8	168				

Sample ID: **1909046-021BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **9/6/2019** RunNo: **53714**
Client ID: **BATCH** Batch ID: **25723** Analysis Date: **9/6/2019** SeqNo: **1063256**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0272						0		30	
Toluene	ND	0.0272						0		30	
Ethylbenzene	ND	0.0340						0		30	
m,p-Xylene	ND	0.0680						0		30	
o-Xylene	ND	0.0340						0		30	
Naphthalene	0.300	0.0680						0.2755	8.60	30	
Surr: Dibromofluoromethane	1.75		1.699		103	56.5	129		0		
Surr: Toluene-d8	1.74		1.699		102	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.66		1.699		97.8	54.8	168		0		

Sample ID: **1909032-005BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **9/6/2019** RunNo: **53714**
Client ID: **DU-05-090419** Batch ID: **25723** Analysis Date: **9/6/2019** SeqNo: **1063504**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0223						0		30	
Toluene	ND	0.0223						0		30	
Ethylbenzene	ND	0.0279						0		30	
m,p-Xylene	ND	0.0559						0		30	

Work Order: 1909032
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **1909032-005BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **9/6/2019** RunNo: **53714**
Client ID: **DU-05-090419** Batch ID: **25723** Analysis Date: **9/6/2019** SeqNo: **1063504**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	ND	0.0279						0		30	
Naphthalene	ND	0.0559						0		30	
Surr: Dibromofluoromethane	1.42		1.397		102	56.5	129		0		
Surr: Toluene-d8	1.42		1.397		101	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.39		1.397		99.2	54.8	168		0		

Sample ID: **1909007-001BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **9/6/2019** RunNo: **53714**
Client ID: **BATCH** Batch ID: **25723** Analysis Date: **9/7/2019** SeqNo: **1063497**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	11.4	0.213	10.66	0	107	63.5	133				D
Toluene	11.5	0.213	10.66	0	108	63.4	132				D
Ethylbenzene	11.3	0.266	10.66	0.1353	105	54.5	134				D
m,p-Xylene	23.0	0.533	21.32	0.5241	105	53.1	132				D
o-Xylene	11.2	0.266	10.66	0.1416	104	53.3	139				D
Naphthalene	10.6	0.533	10.66	0	99.7	52.3	124				D
Surr: Dibromofluoromethane	14.0		13.32		105	56.5	129				D
Surr: Toluene-d8	13.6		13.32		102	64.5	151				D
Surr: 1-Bromo-4-fluorobenzene	13.4		13.32		101	54.8	168				D

Sample ID: **1909007-001BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **9/6/2019** RunNo: **53714**
Client ID: **BATCH** Batch ID: **25723** Analysis Date: **9/7/2019** SeqNo: **1063498**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	11.7	0.213	10.66	0	110	63.5	133	11.42	2.33	30	D
Toluene	11.7	0.213	10.66	0	110	63.4	132	11.46	1.91	30	D
Ethylbenzene	11.7	0.266	10.66	0.1353	108	54.5	134	11.32	3.19	30	D
m,p-Xylene	23.5	0.533	21.32	0.5241	108	53.1	132	22.96	2.49	30	D
o-Xylene	11.5	0.266	10.66	0.1416	107	53.3	139	11.20	2.99	30	D
Naphthalene	11.0	0.533	10.66	0	103	52.3	124	10.62	3.69	30	D

Work Order: 1909032
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **1909007-001BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **9/6/2019** RunNo: **53714**
Client ID: **BATCH** Batch ID: **25723** Analysis Date: **9/7/2019** SeqNo: **1063498**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	14.0		13.32		105	56.5	129		0		D
Surr: Toluene-d8	13.5		13.32		101	64.5	151		0		D
Surr: 1-Bromo-4-fluorobenzene	13.7		13.32		103	54.8	168		0		D

Work Order: 1909032
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID: **1909029-003ADUP** SampType: **DUP** Units: **wt%** Prep Date: **9/5/2019** RunNo: **53665**
Client ID: **BATCH** Batch ID: **R53665** Analysis Date: **9/5/2019** SeqNo: **1062362**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	16.1	0.500						13.38	18.2	20	

Sample ID: **1909031-010ADUP** SampType: **DUP** Units: **wt%** Prep Date: **9/5/2019** RunNo: **53665**
Client ID: **BATCH** Batch ID: **R53665** Analysis Date: **9/5/2019** SeqNo: **1062375**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	16.3	0.500						14.43	11.9	20	

Sample ID: **1909046-024ADUP** SampType: **DUP** Units: **wt%** Prep Date: **9/5/2019** RunNo: **53690**
Client ID: **BATCH** Batch ID: **R53690** Analysis Date: **9/5/2019** SeqNo: **1062799**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	11.1	0.500						12.15	8.87	20	

Sample ID: **1909032-005ADUP** SampType: **DUP** Units: **wt%** Prep Date: **9/5/2019** RunNo: **53690**
Client ID: **DU-05-090419** Batch ID: **R53690** Analysis Date: **9/5/2019** SeqNo: **1062806**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	18.2	0.500						18.54	1.93	20	

Sample Log-In Check List

Client Name:	**FS**	Work Order Number:	**1909032**
Logged by:	**Carissa True**	Date Received:	**9/4/2019 4:30:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Required ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☑	No ☐	NA ☐

Person Notified:	Gabe	Date:	9/4/2019
By Whom:	Carissa True	Via:	☑ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	Confirmation of analysis.		
Client Instructions:	See revised COC		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler 1	9.4
Sample 1	2.5
Temp Blank 1	6.9

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 9/4/19 Page: 1 of: 1

Laboratory Project No (internal): 1909032

Project Name: CL-Ellensburg

Special Remarks: Total Nitrogen = Nitrite + Nitrate + Ammonia
NPK = Nitrogen phosphorus + Potassium

Project No:

Client: Floyd|Snider

Collected by: Gabe Cisneros

Address: 601 Union Street Ste. 600

Location: 1611 Canyon Rd, Ellensburg, WA

City, State, Zip: Seattle 98101

Report To (PM):

Sample Disposal: ☐ Return to client ☐ Disposal by lab (after 30 days)

Telephone: 206-292-2078

PM Email: gabe.cisneros@floydsnider.com

Fax:

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX + Naphth. 8260	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T)	Dissolved (D)	Anions (IC)***	EDB (8011)	NPK = See Notes	Ammonia	pH	Comments
1	DU-01-090419 ~~090319~~ gc	9/4/19		S	X					X				X			X		X	X	X	8260 Method
2	DU-02-090419				X					X				X			X		X	X	X	
3	DU-03-090419				X					X				X			X		X	X	X	
4	DU-04-090419				X					X				X			X		X	X	X	
5	DU-05-090419	↓		↓	X					X				X			X		X	X	X	
6																						
7																						
8																						
9																						
10																						

Changes made by Gabe Cisneros 9/5/19

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite + Ammonia

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

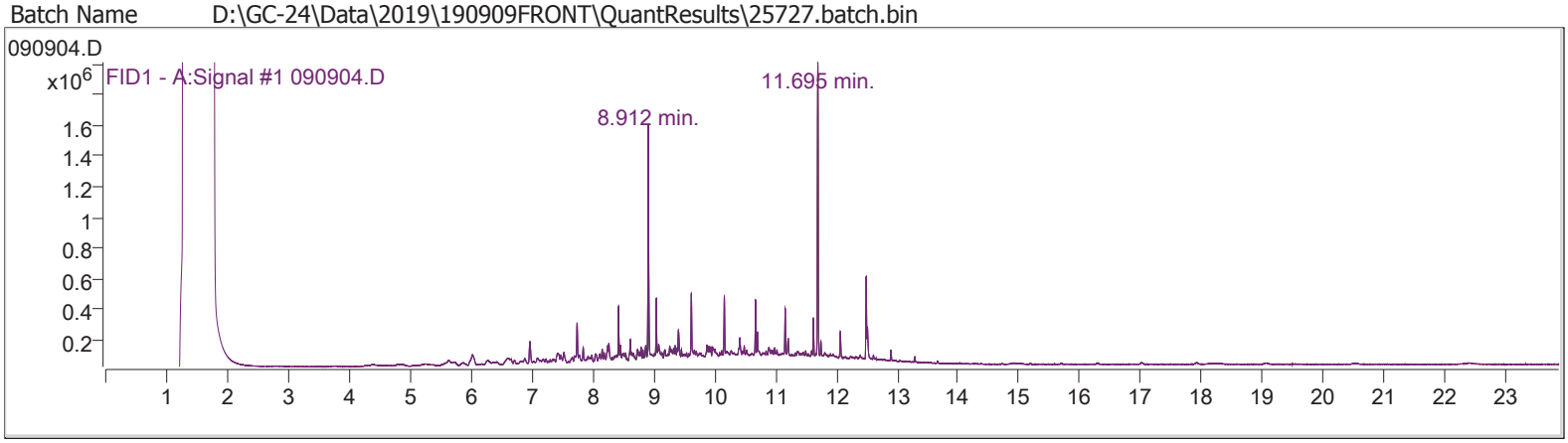
Relinquished	Date/Time	Received	Date/Time
x	9/4/19 1630	x Kayla Potter	9/4/19 1630
Relinquished	Date/Time	Received	Date/Time
x		x	

Turn-around Time:
- ☒ Standard
- ☐ 3 Day
- ☐ 2 Day
- ☐ Next Day
- Same Day ____ (specify)

Quantitation Results Report

Agilent Technologies

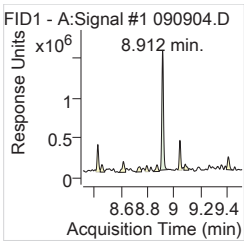
Data File	090904.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	9/9/2019 9:55:16 AM
Sample Name:	DX-CCV-		dualfid
Vial	2	Multiplier	1.00
DA Method File	DX-190613-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	6/14/2019 8:56:41 AM
Batch Name	D:\GC-24\Data\2019\190909FRONT\QuantResults\25727.batch.bin		



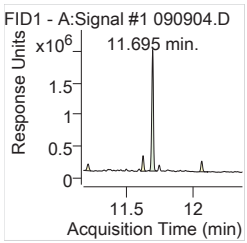
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	8.912	1331320	22.357	ug/mL		0.000
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.695	1677935	21.466	ug/mL		-0.078
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.695	32704019	499.678	ug/mL	m	
Heavy Oil	17.500	0	0.000	ug/mL	md	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

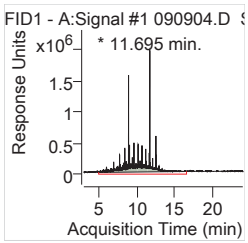
2-Fluorobiphenyl



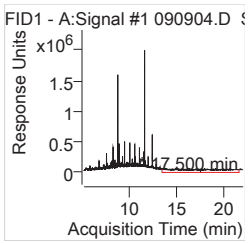
O-Terphenyl



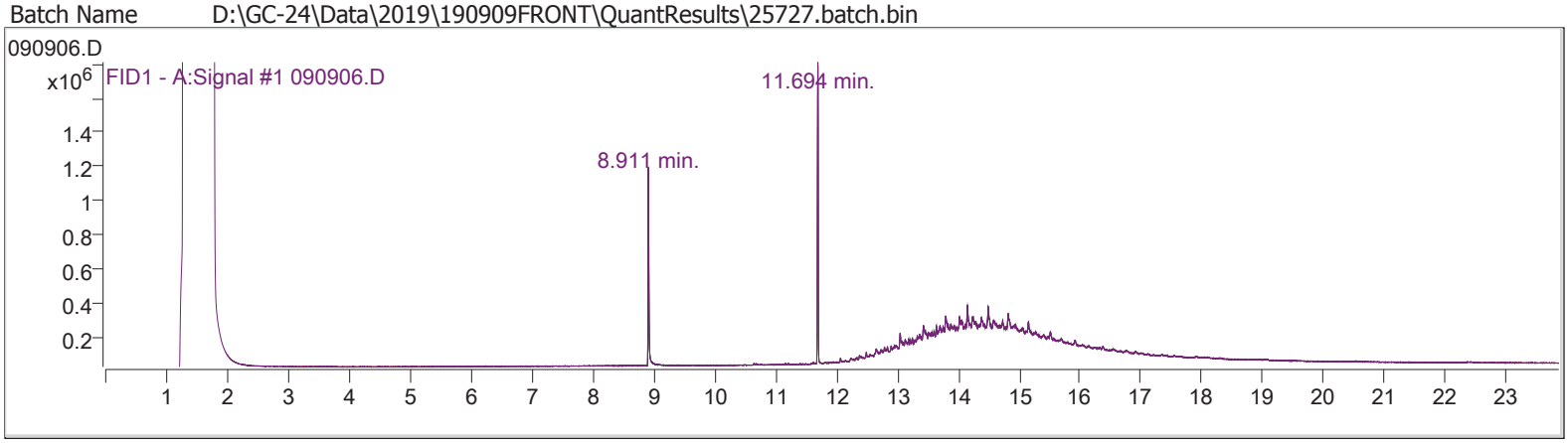
Diesel



Heavy Oil



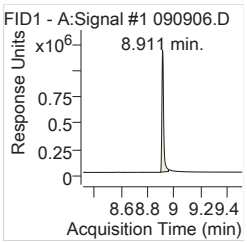
Data File	090906.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	9/9/2019 10:25:13 AM
Sample Name:	OIL-CCV-		dualfid
Vial	1	Multiplier	1.00
DA Method File	DX-190613-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	6/14/2019 8:56:41 AM
Batch Name	D:\GC-24\Data\2019\190909FRONT\QuantResults\25727.batch.bin		



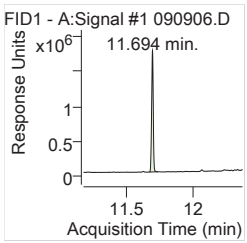
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	8.911	1075096	18.194	ug/mL		0.000
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.694	1494274	19.064	ug/mL		-0.079
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	10.750	0	0.000	ug/mL	md	
Heavy Oil	14.151	52052907	853.295	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

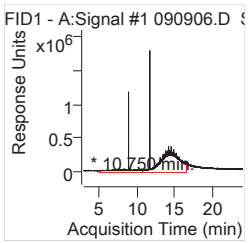
2-Fluorobiphenyl



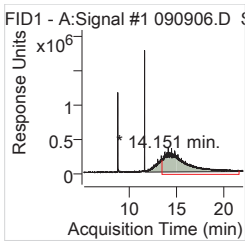
O-Terphenyl



Diesel



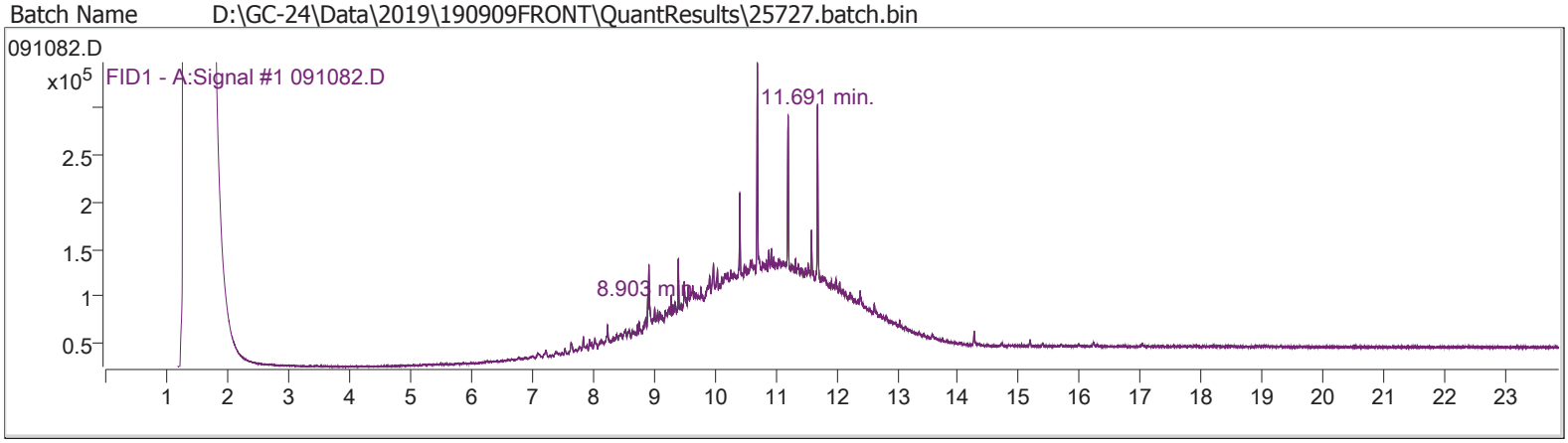
Heavy Oil



Quantitation Results Report

Agilent Technologies

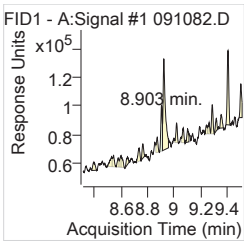
Data File	091082.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	9/11/2019 12:27:56 PM
Sample Name:	1909032-001A 10X		dualfid
Vial	6	Multiplier	1.00
DA Method File	DX-190613-NWTPH_FINAL.m	Last Calib Update	6/14/2019 8:56:41 AM
	O-DXEX-S		
Batch Name	D:\GC-24\Data\2019\190909FRONT\QuantResults\25727.batch.bin		



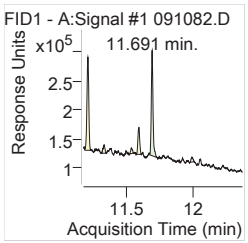
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	8.903	24066	1.118	ug/mL		-0.008
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.691	160752	1.627	ug/mL		-0.082
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	10.702	21929554	332.224	ug/mL	m	
Heavy Oil	17.025	1076232	0.000	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

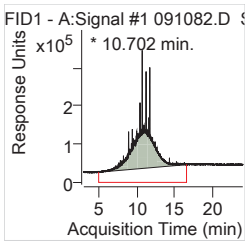
2-Fluorobiphenyl



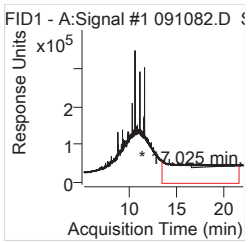
O-Terphenyl



Diesel



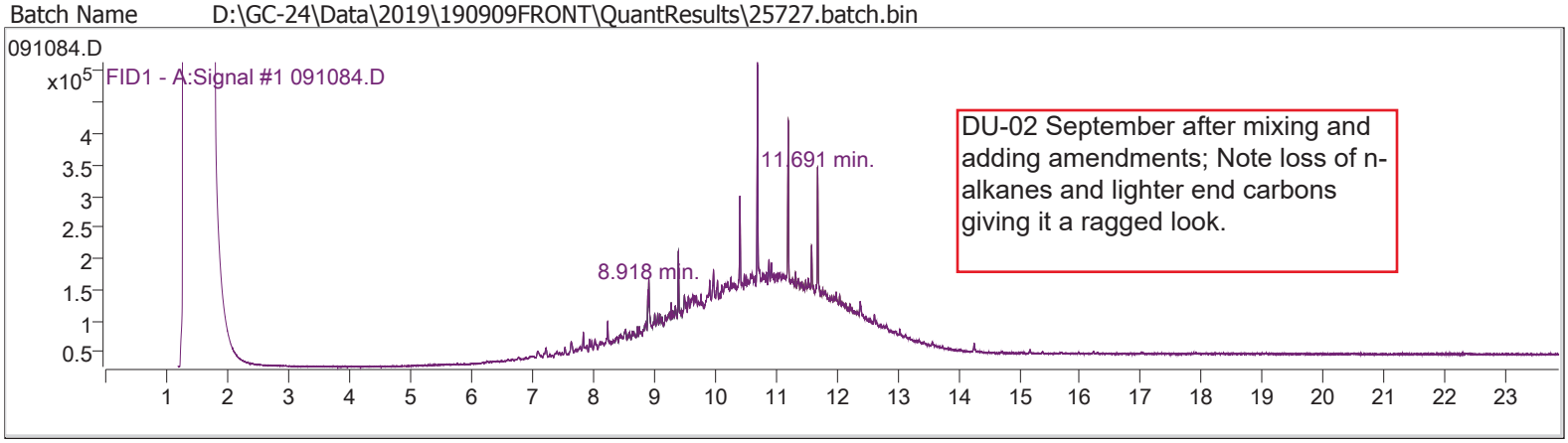
Heavy Oil



Quantitation Results Report

Agilent Technologies

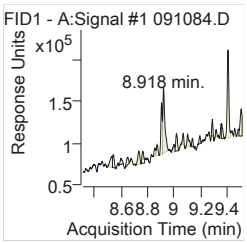
Data File	091084.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	9/11/2019 12:57:46 PM
Sample Name:	1909032-002A 10X		dualfid
Vial	7	Multiplier	1.00
DA Method File	DX-190613-NWTPH_FINAL.m	Last Calib Update	6/14/2019 8:56:41 AM
	O-DXEX-S		
Batch Name	D:\GC-24\Data\2019\190909FRONT\QuantResults\25727.batch.bin		



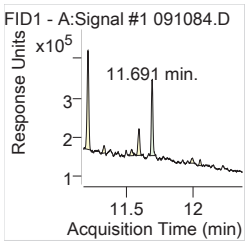
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	8.918	85973	2.124	ug/mL		0.007
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.691	165802	1.693	ug/mL		-0.082
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	10.703	30728899	468.981	ug/mL	m	
Heavy Oil	17.020	1020612	0.000	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

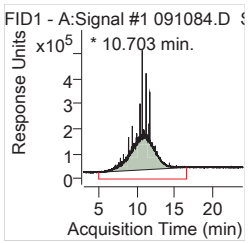
2-Fluorobiphenyl



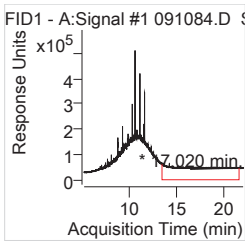
O-Terphenyl



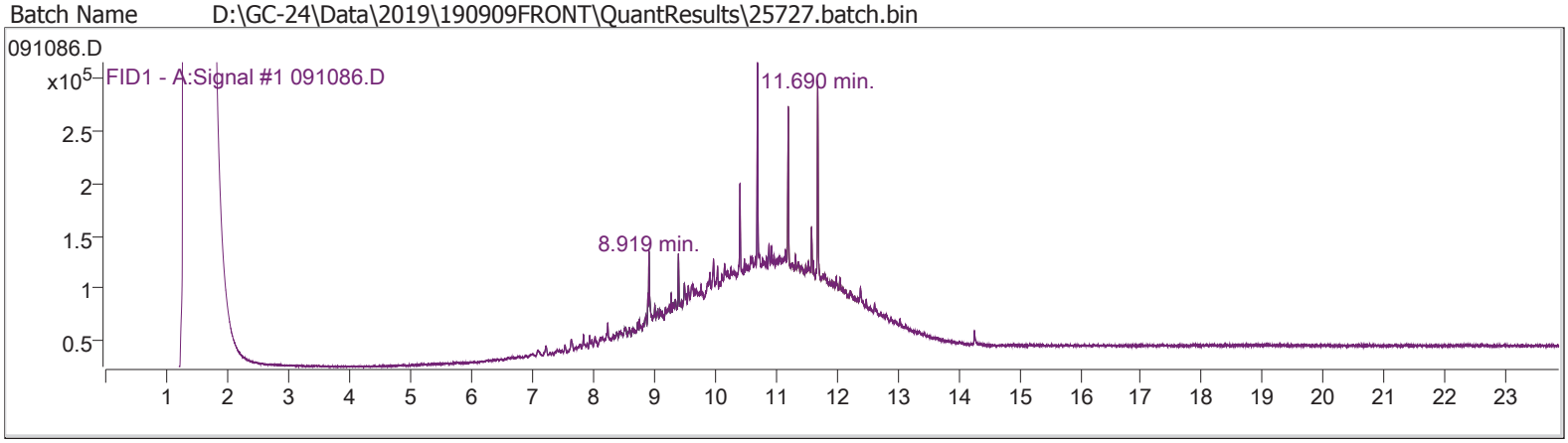
Diesel



Heavy Oil



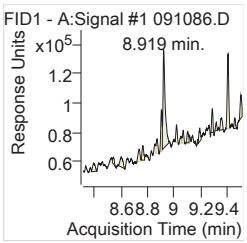
Data File	091086.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	9/11/2019 1:27:38 PM
Sample Name:	1909032-003A 10X		dualfid
Vial	8	Multiplier	1.00
DA Method File	DX-190613-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	6/14/2019 8:56:41 AM
Batch Name	D:\GC-24\Data\2019\190909FRONT\QuantResults\25727.batch.bin		



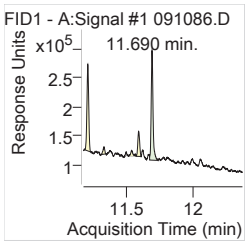
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	8.919	75493	1.953	ug/mL		0.008
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.690	180081	1.880	ug/mL		-0.083
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	10.702	20665423	312.577	ug/mL	m	
Heavy Oil	19.059	848899	0.000	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

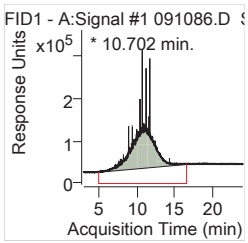
2-Fluorobiphenyl



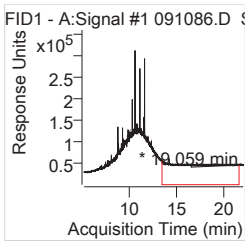
O-Terphenyl



Diesel



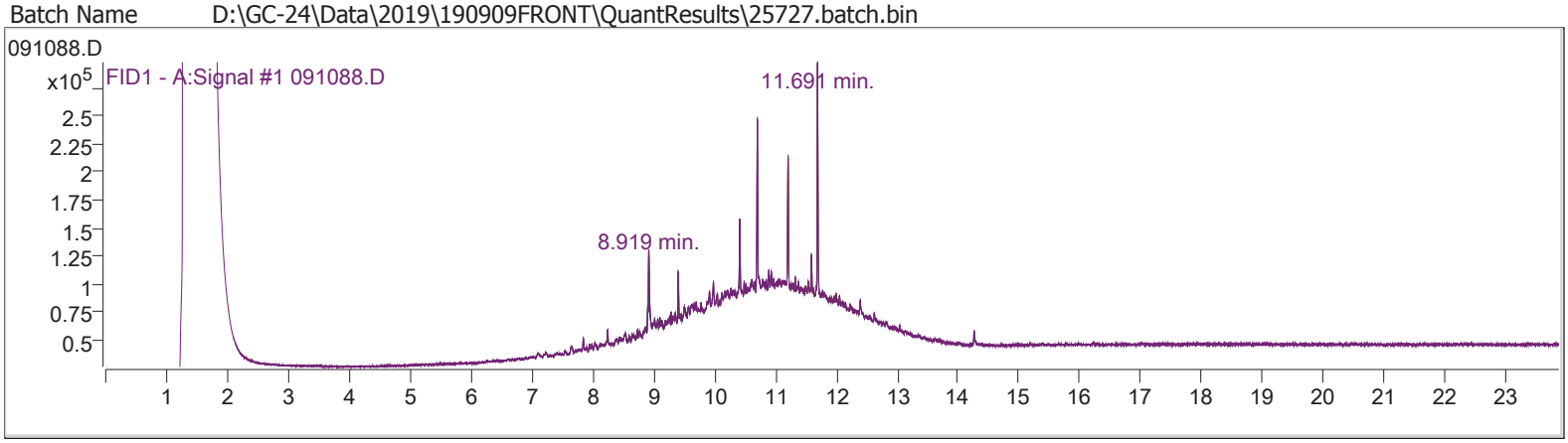
Heavy Oil



Quantitation Results Report

Agilent Technologies

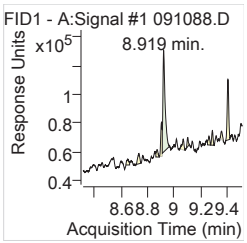
Data File	091088.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	9/11/2019 1:57:33 PM
Sample Name:	1909032-004A 10X		dualfid
Vial	9	Multiplier	1.00
DA Method File	DX-190613-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	6/14/2019 8:56:41 AM
Batch Name	D:\GC-24\Data\2019\190909FRONT\QuantResults\25727.batch.bin		



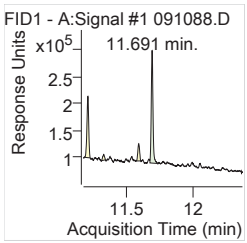
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	8.919	82528	2.068	ug/mL		0.008
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.691	187061	1.971	ug/mL		-0.082
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.691	14813767	221.633	ug/mL	m	
Heavy Oil	17.026	1029409	0.000	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

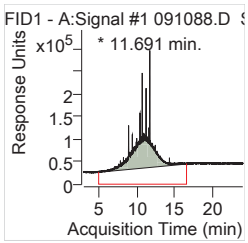
2-Fluorobiphenyl



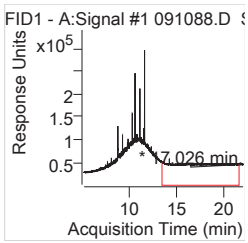
O-Terphenyl



Diesel



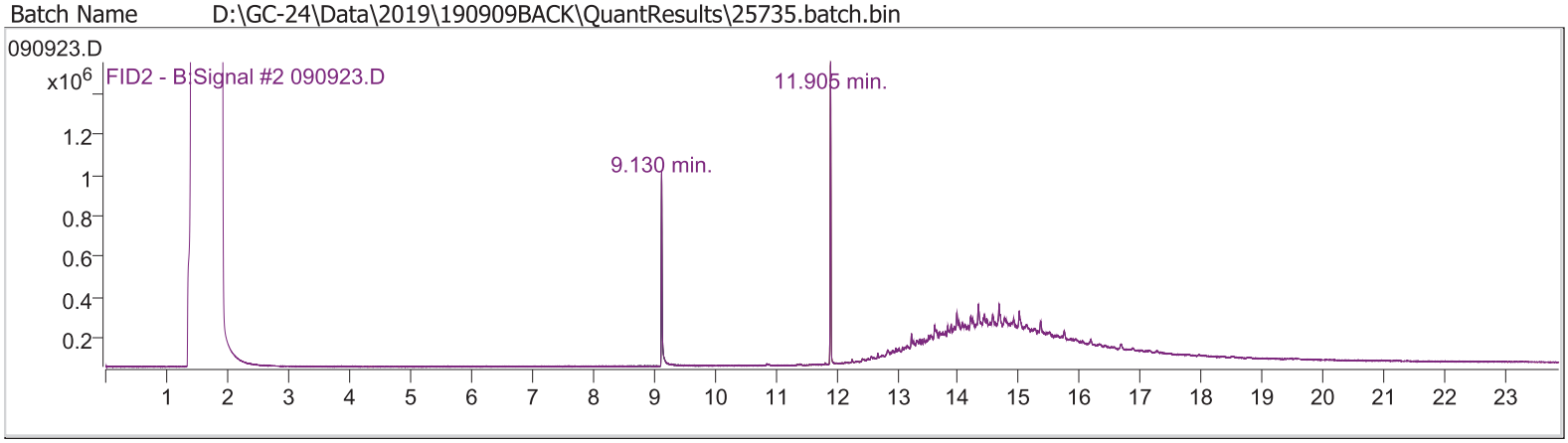
Heavy Oil



Quantitation Results Report

Agilent Technologies

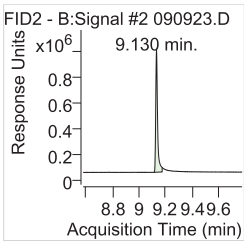
Data File	090923.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	9/9/2019 2:54:02 PM
Sample Name:	OIL-CCV-25715B		dualfid
Vial	1	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	6/17/2019 9:49:03 AM
Batch Name	D:\GC-24\Data\2019\190909BACK\QuantResults\25735.batch.bin		



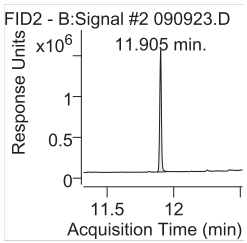
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.130	924918	16.057	ug/mL		-0.046
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.905	1302529	17.937	ug/mL		-0.018
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	10.750	0	0.000	ug/mL	md	
Heavy Oil	14.672	44447037	861.435	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

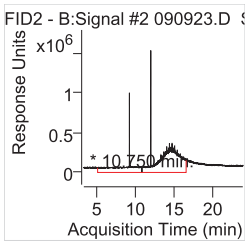
2-Fluorobiphenyl



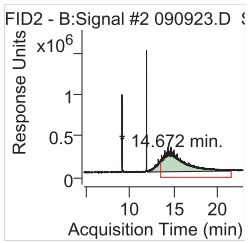
O-Terphenyl



Diesel



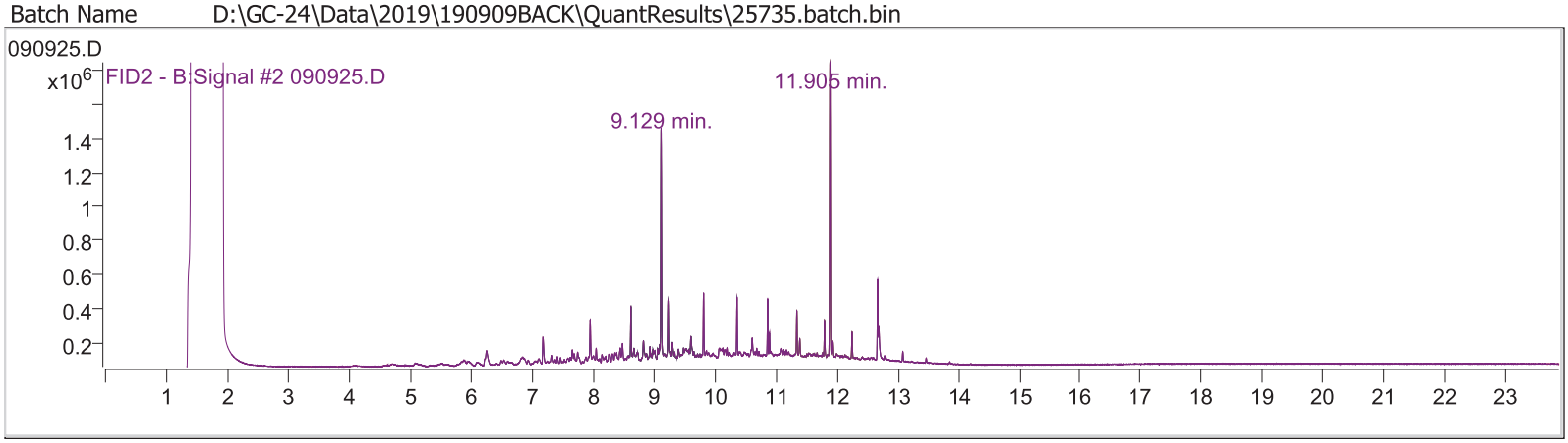
Heavy Oil



Quantitation Results Report

Agilent Technologies

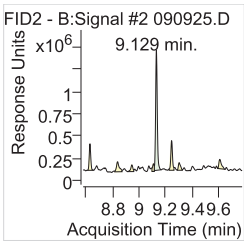
Data File	090925.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	9/9/2019 3:23:51 PM
Sample Name:	DX-CCV-25715B		dualfid
Vial	2	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	6/17/2019 9:49:03 AM
Batch Name	D:\GC-24\Data\2019\190909BACK\QuantResults\25735.batch.bin		



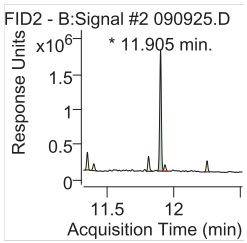
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.129	1158440	19.966	ug/mL		-0.047
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.905	1478144	20.404	ug/mL	m	-0.018
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.905	27998194	468.677	ug/mL	m	
Heavy Oil	17.500	0	0.000	ug/mL	md	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

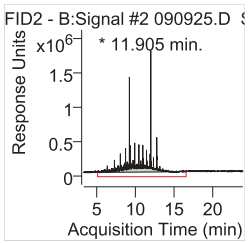
2-Fluorobiphenyl



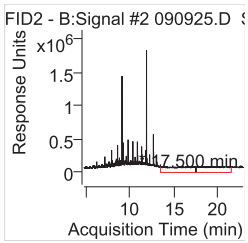
O-Terphenyl



Diesel



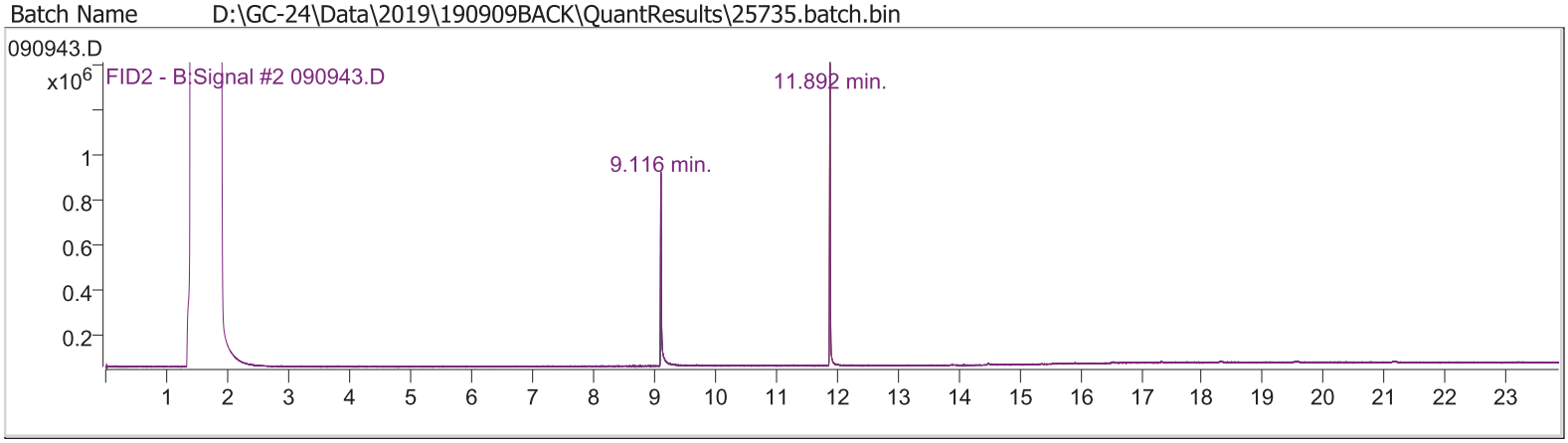
Heavy Oil



Quantitation Results Report

Agilent Technologies

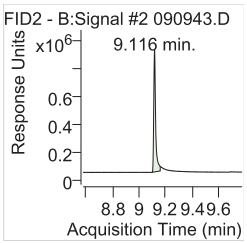
Data File	090943.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	9/9/2019 7:59:58 PM
Sample Name:	MB-25735		dualfid
Vial	91	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m	Last Calib Update	6/17/2019 9:49:03 AM
	O-DXEX-S		
Batch Name	D:\GC-24\Data\2019\190909BACK\QuantResults\25735.batch.bin		



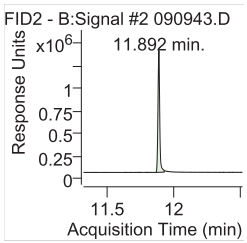
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.116	873585	15.197	ug/mL		-0.061
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.892	1247440	17.163	ug/mL		-0.031
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.892	601306	10.294	ug/mL	m	
Heavy Oil	19.556	2001144	7.565	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

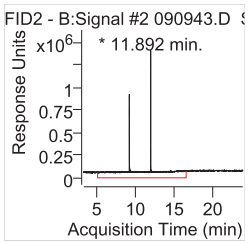
2-Fluorobiphenyl



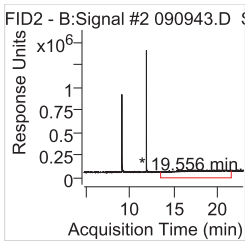
O-Terphenyl



Diesel



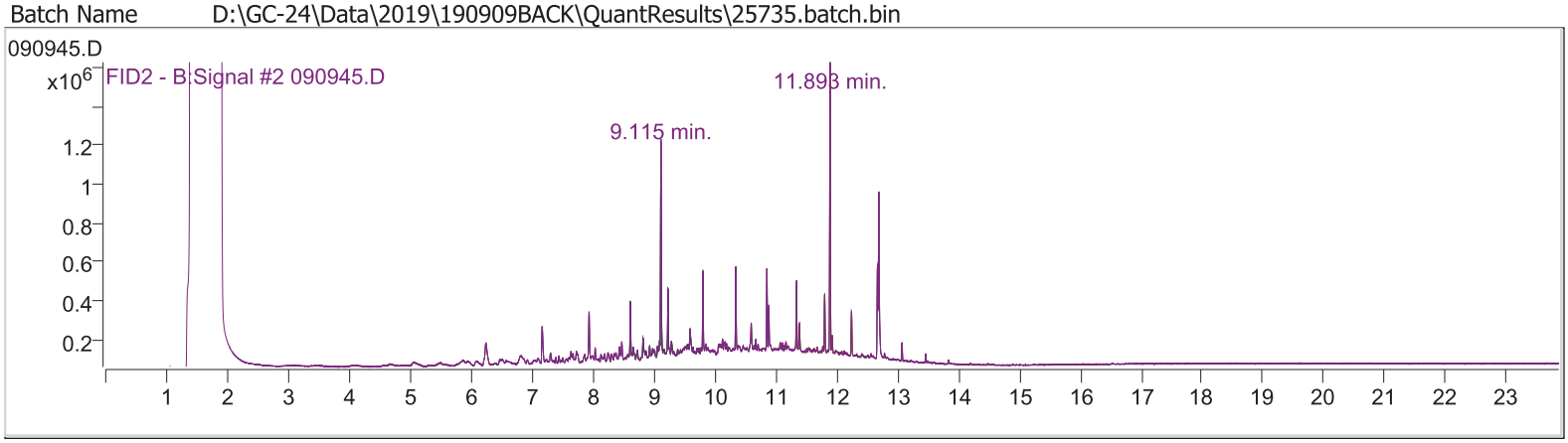
Heavy Oil



Quantitation Results Report

Agilent Technologies

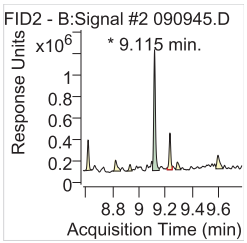
Data File	090945.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	9/9/2019 8:29:46 PM
Sample Name:	LCS-25735		dualfid
Vial	92	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	6/17/2019 9:49:03 AM
Batch Name	D:\GC-24\Data\2019\190909BACK\QuantResults\25735.batch.bin		



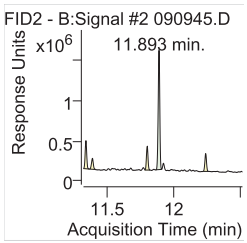
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.115	1019982	17.648	ug/mL	m	-0.061
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.893	1245617	17.137	ug/mL		-0.030
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.893	31531610	527.795	ug/mL	m	
Heavy Oil	17.500	0	0.000	ug/mL	md	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

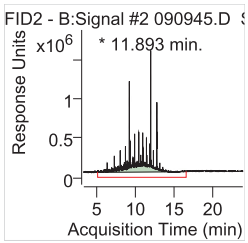
2-Fluorobiphenyl



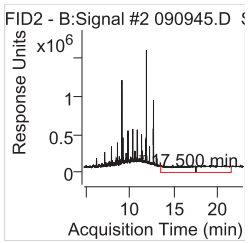
O-Terphenyl



Diesel



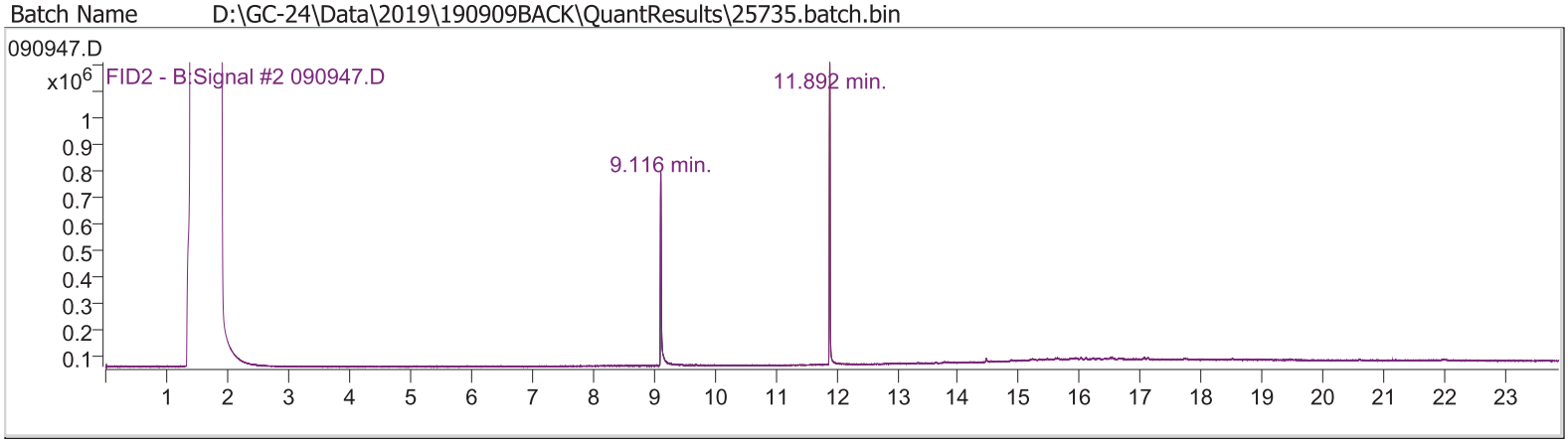
Heavy Oil



Quantitation Results Report

Agilent Technologies

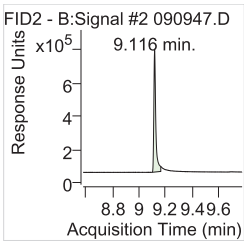
Data File	090947.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	9/9/2019 8:59:39 PM
Sample Name:	1909065-001A		dualfid
Vial	93	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	6/17/2019 9:49:03 AM
Batch Name	D:\GC-24\Data\2019\190909BACK\QuantResults\25735.batch.bin		



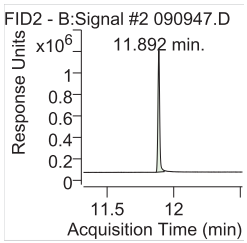
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.116	757243	13.250	ug/mL		-0.060
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.892	1049668	14.385	ug/mL		-0.031
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.892	409172	7.079	ug/mL	m	
Heavy Oil	16.535	4466362	57.157	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

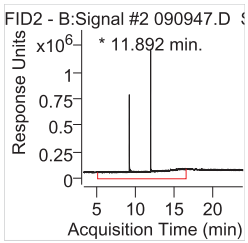
2-Fluorobiphenyl



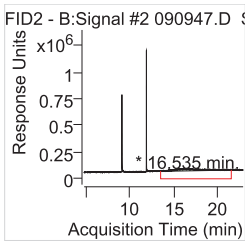
O-Terphenyl



Diesel



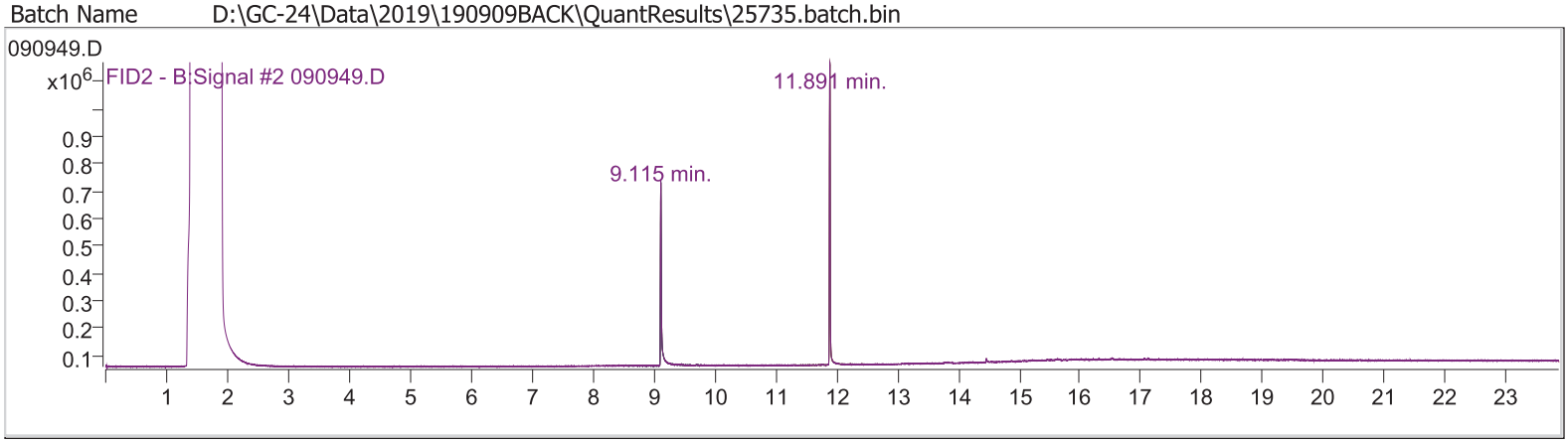
Heavy Oil



Quantitation Results Report

Agilent Technologies

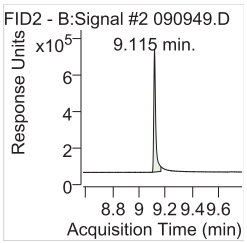
Data File	090949.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	9/9/2019 9:29:26 PM
Sample Name:	1909065-001ADUP		dualfid
Vial	94	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	6/17/2019 9:49:03 AM
Batch Name	D:\GC-24\Data\2019\190909BACK\QuantResults\25735.batch.bin		



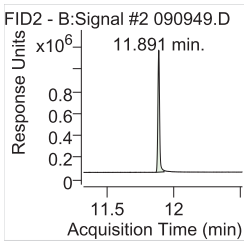
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.115	705052	12.376	ug/mL		-0.061
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.891	997701	13.655	ug/mL		-0.032
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.891	397545	6.884	ug/mL	m	
Heavy Oil	17.110	4241910	52.642	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

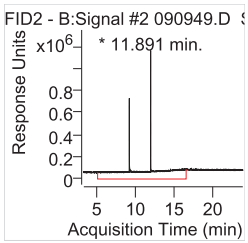
2-Fluorobiphenyl



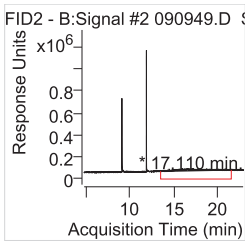
O-Terphenyl



Diesel



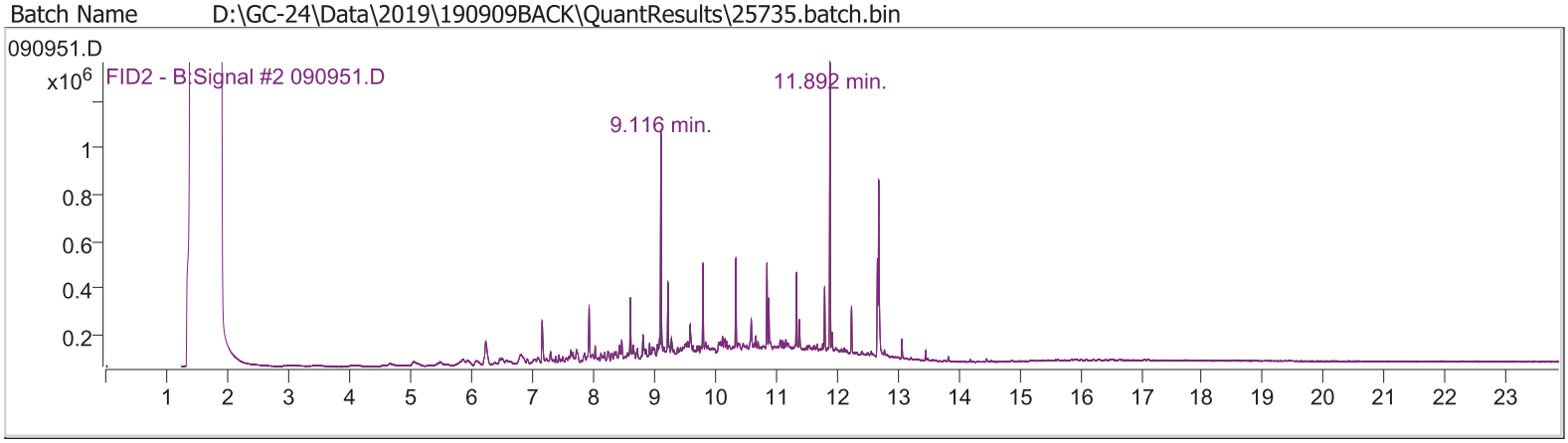
Heavy Oil



Quantitation Results Report

Agilent Technologies

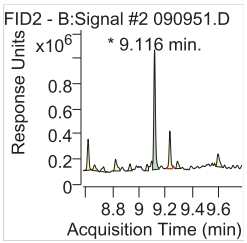
Data File	090951.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	9/9/2019 9:59:16 PM
Sample Name:	1909065-001AMS		dualfid
Vial	95	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m	Last Calib Update	6/17/2019 9:49:03 AM
	O-DXEX-S		
Batch Name	D:\GC-24\Data\2019\190909BACK\QuantResults\25735.batch.bin		



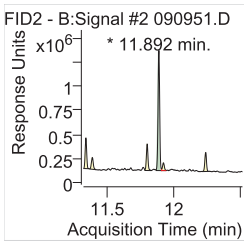
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.116	838570	14.611	ug/mL	m	-0.060
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.892	1071832	14.696	ug/mL	m	-0.031
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.892	27428939	459.152	ug/mL	m	
Heavy Oil	16.530	1767918	2.873	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

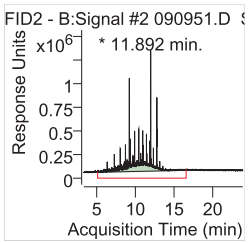
2-Fluorobiphenyl



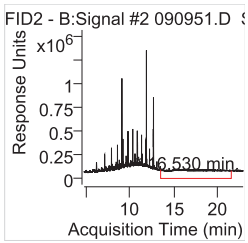
O-Terphenyl



Diesel



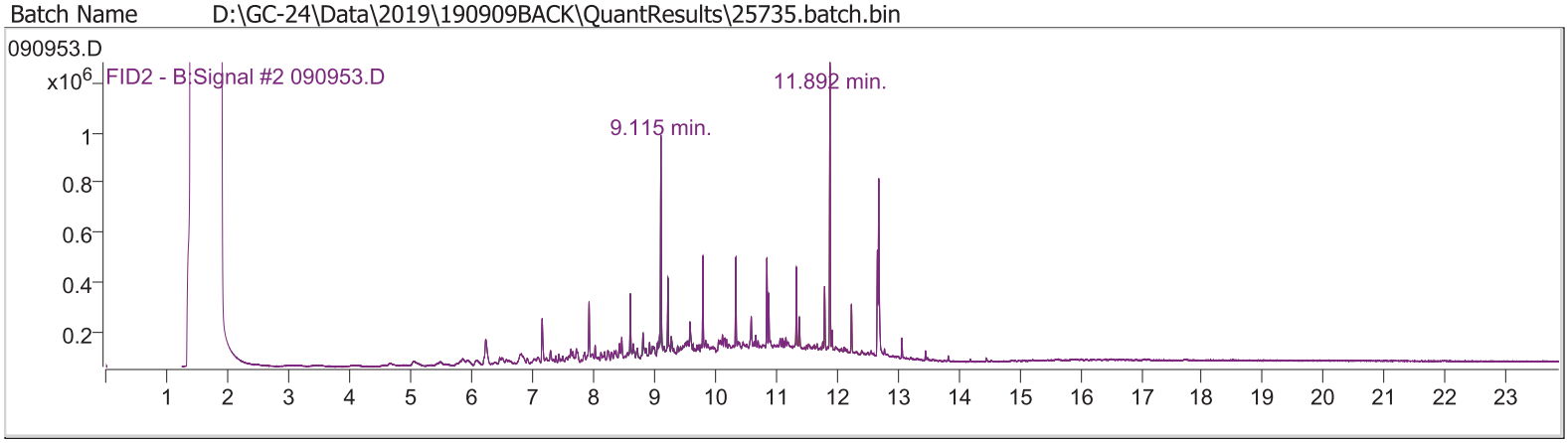
Heavy Oil



Quantitation Results Report

Agilent Technologies

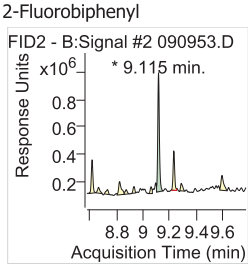
Data File	090953.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	9/9/2019 10:29:03 PM
Sample Name:	1909065-001AMSD		dualfid
Vial	96	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m	Last Calib Update	6/17/2019 9:49:03 AM
	O-DXEX-S		
Batch Name	D:\GC-24\Data\2019\190909BACK\QuantResults\25735.batch.bin		



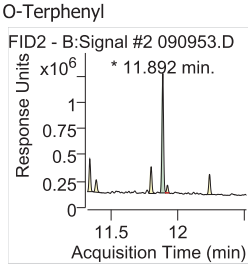
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.115	749184	13.115	ug/mL	m	-0.061
Spiked Amount:	Range: - %			Recovery =	NA%	
O-Terphenyl	11.892	969325	13.256	ug/mL	m	-0.031
Spiked Amount:	Range: - %			Recovery =	NA%	
Target Compounds						
Diesel	11.891	29314510	490.700	ug/mL	m	
Heavy Oil	17.058	1669008	0.884	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

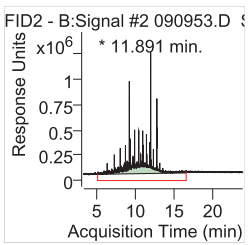
2-Fluorobiphenyl



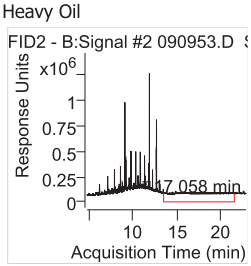
O-Terphenyl



Diesel



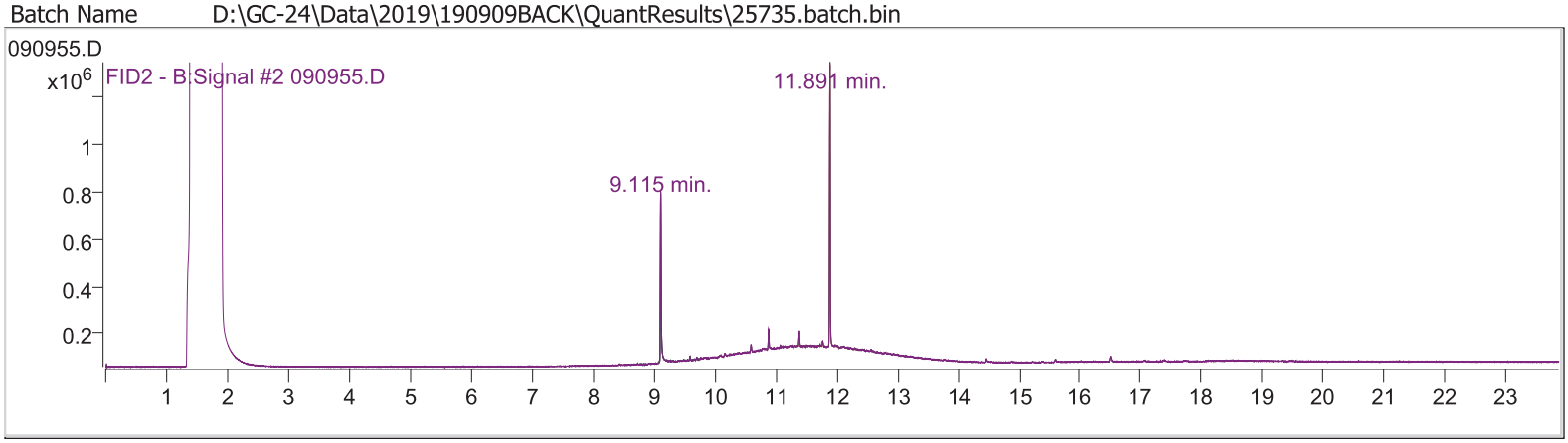
Heavy Oil



Quantitation Results Report

Agilent Technologies

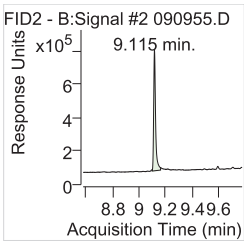
Data File	090955.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	9/9/2019 10:58:59 PM
Sample Name:	1909032-005A		dualfid
Vial	97	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m	Last Calib Update	6/17/2019 9:49:03 AM
	O-DXEX-S		
Batch Name	D:\GC-24\Data\2019\190909BACK\QuantResults\25735.batch.bin		



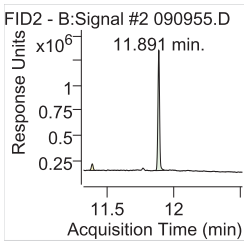
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.115	724036	12.694	ug/mL		-0.062
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.891	1055965	14.473	ug/mL		-0.031
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.891	15748652	263.727	ug/mL	m	
Heavy Oil	16.497	2290644	13.389	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

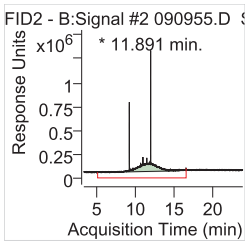
2-Fluorobiphenyl



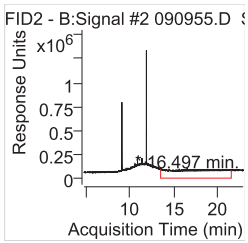
O-Terphenyl



Diesel



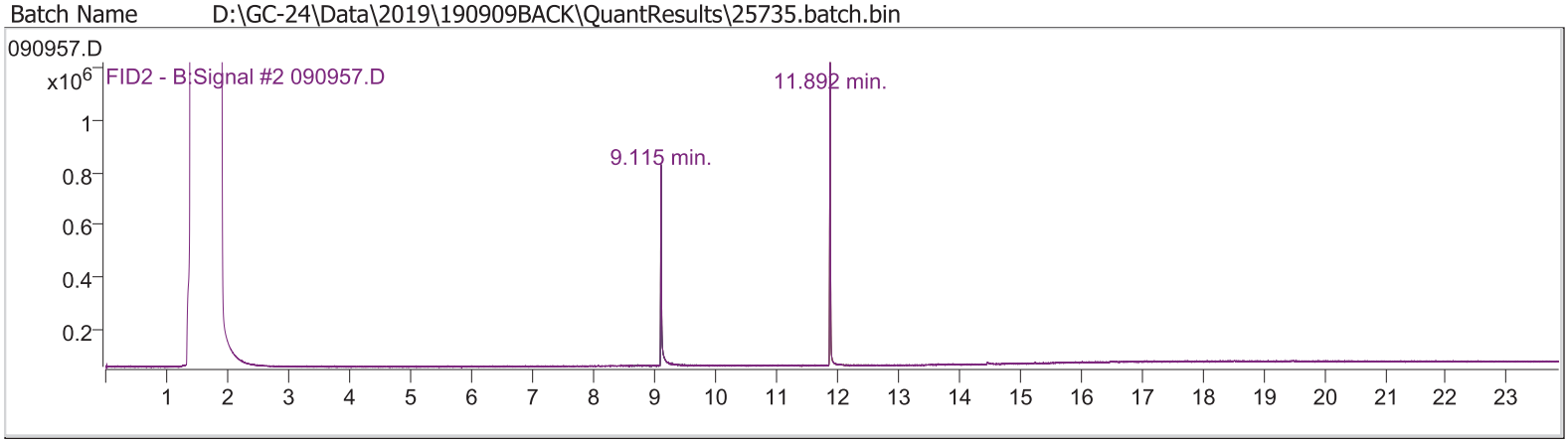
Heavy Oil



Quantitation Results Report

Agilent Technologies

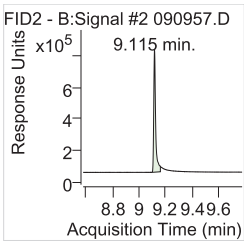
Data File	090957.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	9/9/2019 11:28:45 PM
Sample Name:	1909062-012A		dualfid
Vial	101	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	6/17/2019 9:49:03 AM
Batch Name	D:\GC-24\Data\2019\190909BACK\QuantResults\25735.batch.bin		



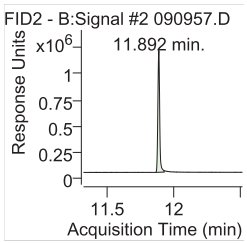
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.115	773768	13.526	ug/mL		-0.061
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.892	1109863	15.230	ug/mL		-0.031
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.891	438261	7.566	ug/mL	m	
Heavy Oil	19.467	2149304	10.546	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

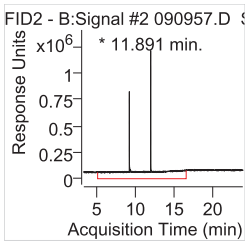
2-Fluorobiphenyl



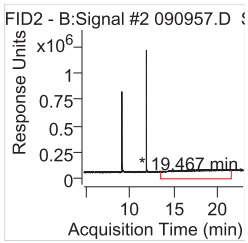
O-Terphenyl



Diesel



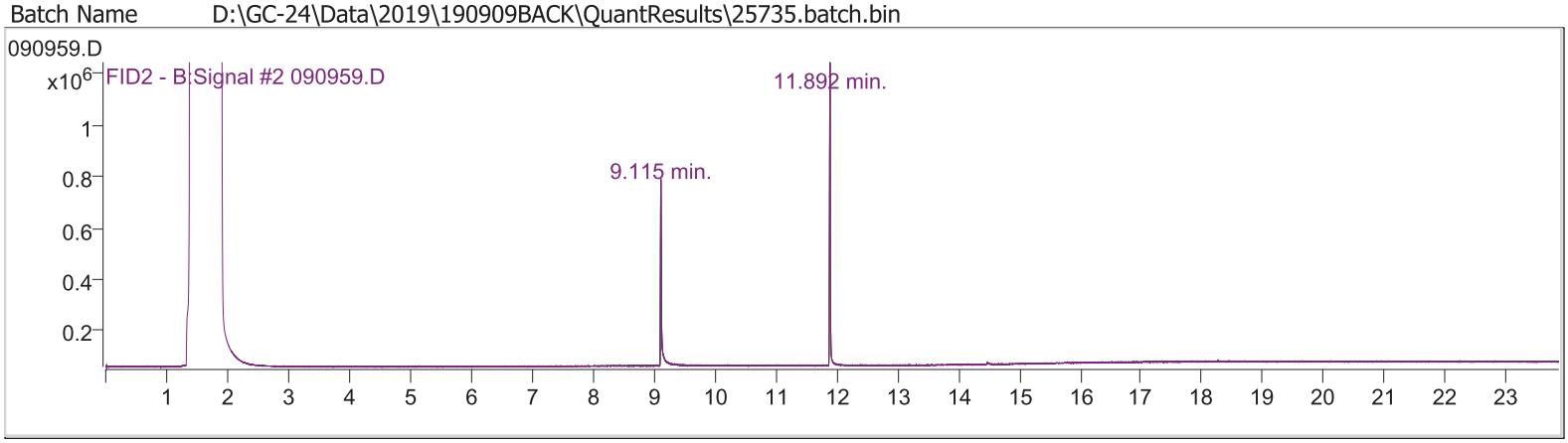
Heavy Oil



Quantitation Results Report

Agilent Technologies

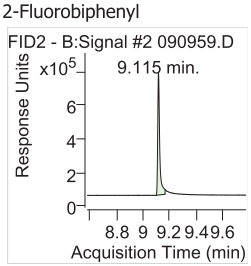
Data File	090959.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	9/9/2019 11:58:42 PM
Sample Name:	1909062-031A		dualfid
Vial	112	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m	Last Calib Update	6/17/2019 9:49:03 AM
	O-DXEX-S		
Batch Name	D:\GC-24\Data\2019\190909BACK\QuantResults\25735.batch.bin		



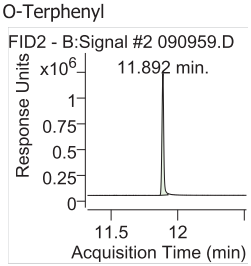
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.115	763972	13.362	ug/mL		-0.062
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.892	1112343	15.265	ug/mL		-0.030
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.892	531207	9.121	ug/mL	m	
Heavy Oil	18.265	1855472	4.635	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

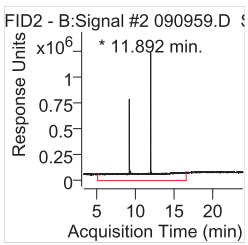
2-Fluorobiphenyl



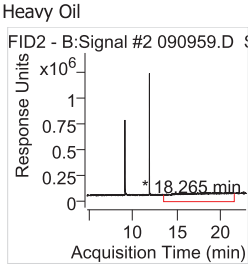
O-Terphenyl



Diesel



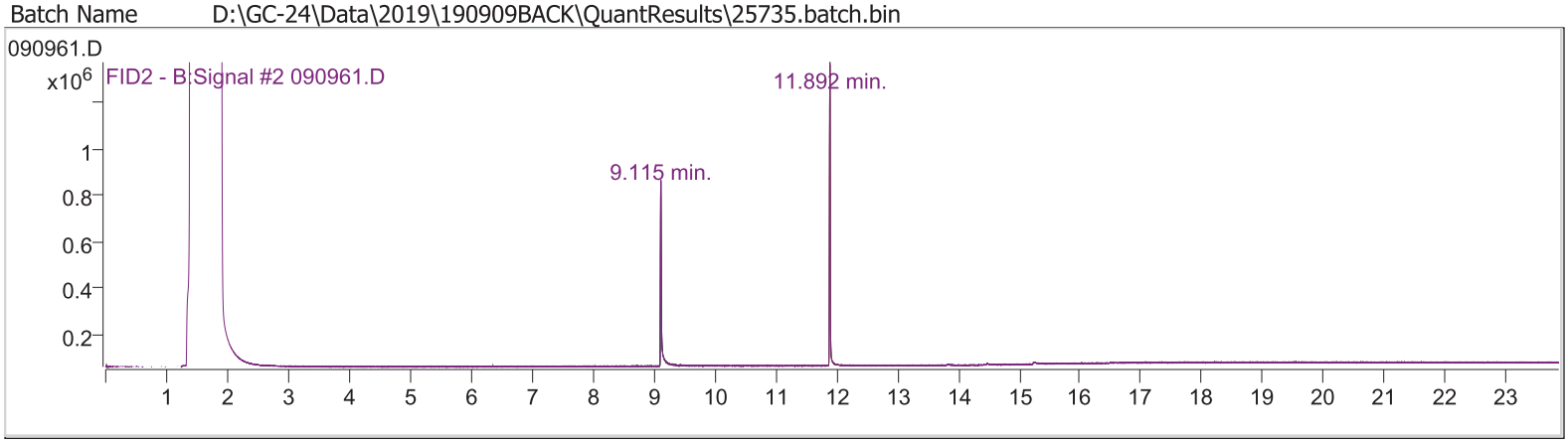
Heavy Oil



Quantitation Results Report

Agilent Technologies

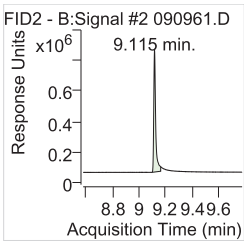
Data File	090961.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	9/10/2019 12:28:27 AM
Sample Name:	1909070-002A		dualfid
Vial	115	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	6/17/2019 9:49:03 AM
Batch Name	D:\GC-24\Data\2019\190909BACK\QuantResults\25735.batch.bin		



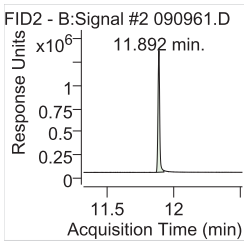
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.115	813332	14.189	ug/mL		-0.061
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.892	1179515	16.209	ug/mL		-0.031
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.892	488142	8.400	ug/mL	m	
Heavy Oil	18.526	1956539	6.668	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

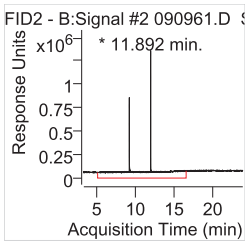
2-Fluorobiphenyl



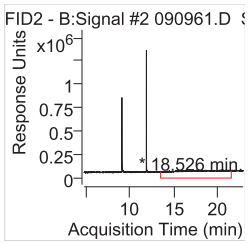
O-Terphenyl



Diesel



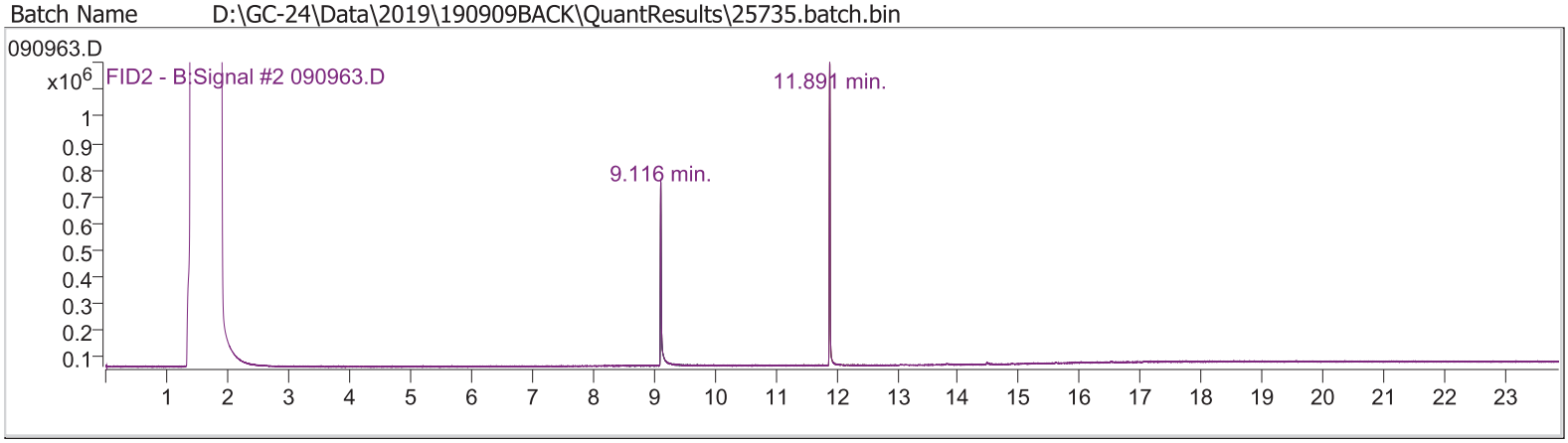
Heavy Oil



Quantitation Results Report

Agilent Technologies

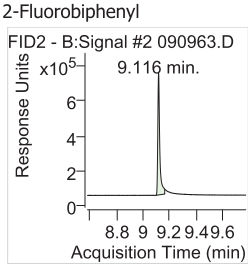
Data File	090963.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	9/10/2019 12:58:16 AM
Sample Name:	1909070-003A		dualfid
Vial	116	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	6/17/2019 9:49:03 AM
Batch Name	D:\GC-24\Data\2019\190909BACK\QuantResults\25735.batch.bin		



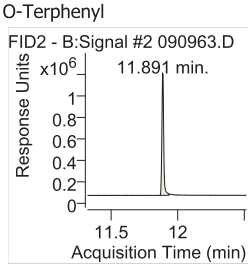
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.116	717611	12.586	ug/mL		-0.061
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.891	1090872	14.964	ug/mL		-0.032
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.891	620074	10.608	ug/mL	m	
Heavy Oil	18.524	1982911	7.198	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

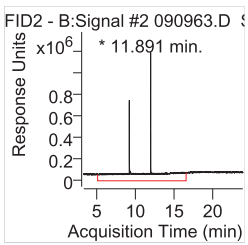
2-Fluorobiphenyl



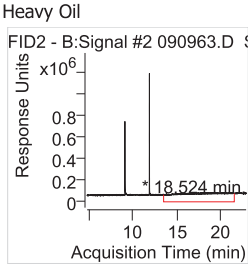
O-Terphenyl



Diesel



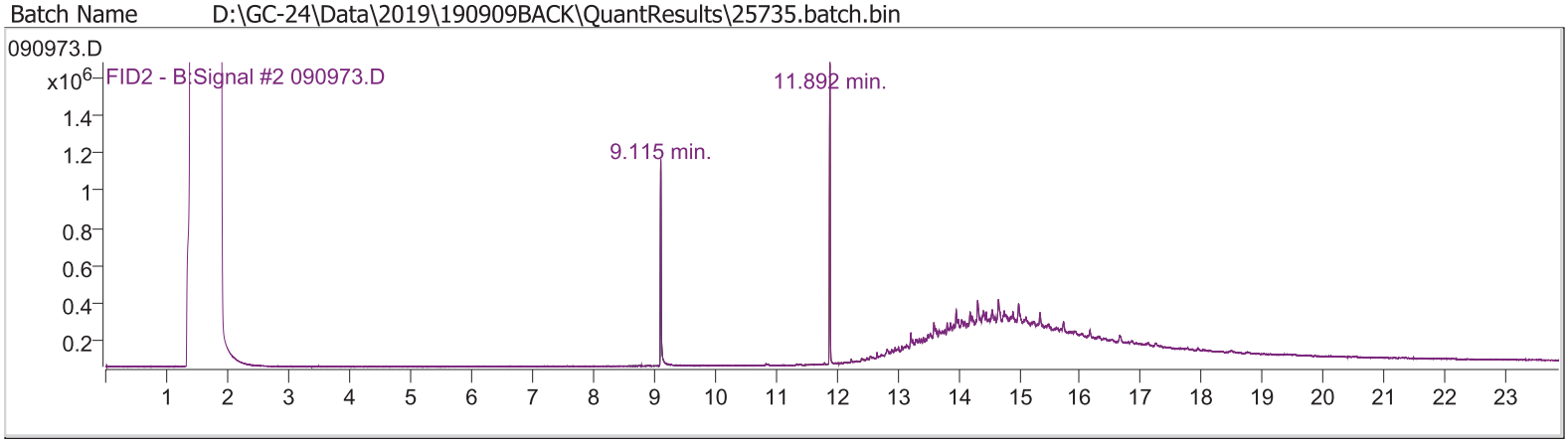
Heavy Oil



Quantitation Results Report

Agilent Technologies

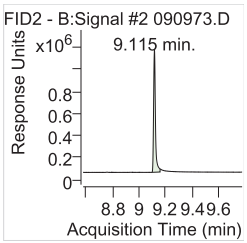
Data File	090973.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	9/10/2019 9:36:04 AM
Sample Name:	OIL-CCV-25735B		dualfid
Vial	1	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	6/17/2019 9:49:03 AM
Batch Name	D:\GC-24\Data\2019\190909BACK\QuantResults\25735.batch.bin		



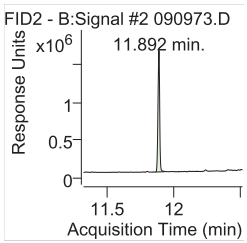
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.115	1066650	18.429	ug/mL		-0.062
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.892	1435363	19.803	ug/mL		-0.030
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	10.750	0	0.000	ug/mL	md	
Heavy Oil	14.661	56413301	1102.156	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

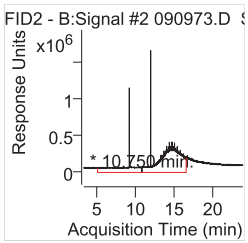
2-Fluorobiphenyl



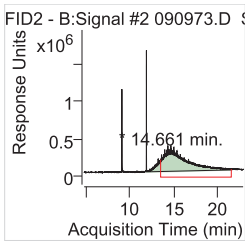
O-Terphenyl



Diesel



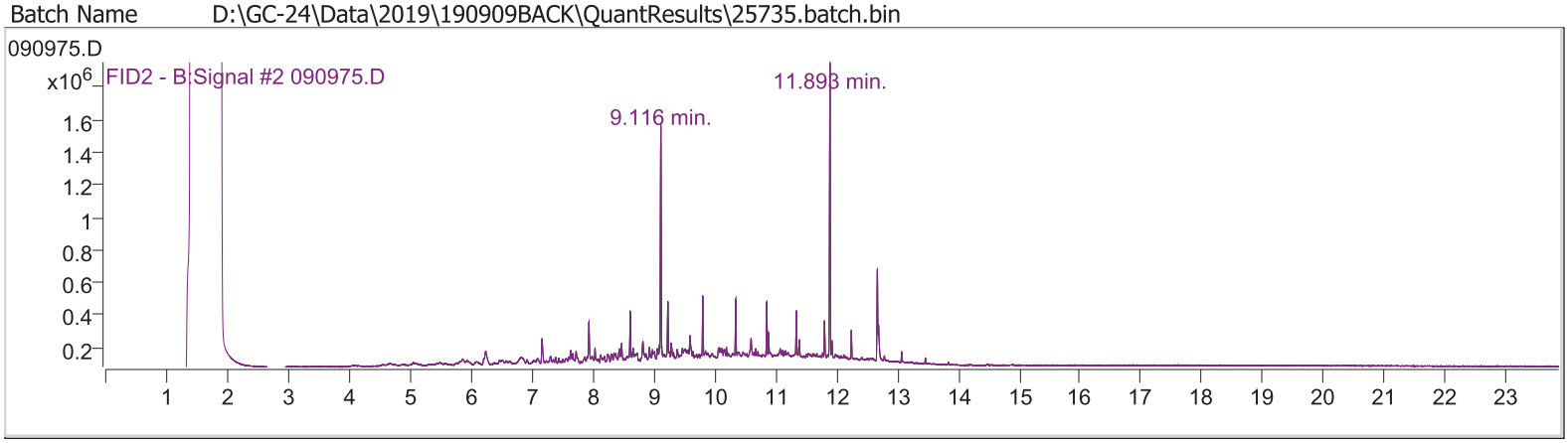
Heavy Oil



Quantitation Results Report

Agilent Technologies

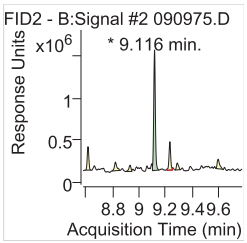
Data File	090975.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	9/10/2019 10:06:00 AM
Sample Name:	DX-CCV-25735B		dualfid
Vial	2	Multiplier	1.00
DA Method File	DX-190617-NWTPH_FINAL.m	Last Calib Update	6/17/2019 9:49:03 AM
	O-DXEX-S		
Batch Name	D:\GC-24\Data\2019\190909BACK\QuantResults\25735.batch.bin		



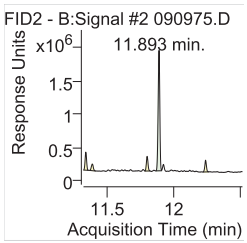
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	9.116	1216747	20.942	ug/mL	m	-0.061
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.893	1571322	21.713	ug/mL		-0.029
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.893	29104644	487.189	ug/mL	m	
Heavy Oil	17.500	0	0.000	ug/mL	md	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

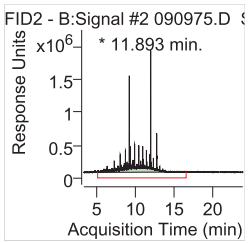
2-Fluorobiphenyl



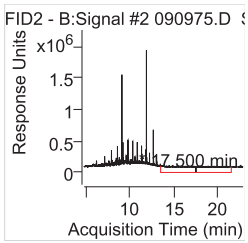
O-Terphenyl



Diesel



Heavy Oil



Chain of Custody Record & Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 9/4/19 Page: 1 of: 1

Laboratory Project No (internal): 1909032

Project Name: CL-Ellensburg

Special Remarks: Total Nitrogen = Nitrite + Nitrate + Ammonia
NPK = Nitrogen phosphorus + Potassium

Project No:

Client: Floyd|Snider

Collected by: Gabe Cisneros

Address: 601 Union Street Ste. 600

Location: 1611 Canyon Rd, Ellensburg WA

City, State, Zip: Seattle 98101

Report To (PM):

Telephone: 206-292-2078

PM Email: gabe.cisneros@floydsnider.com

Fax:

Sample Disposal: ☐ Return to client ☐ Disposal by lab (after 30 days)

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX + Naphth. 8260	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8) Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	NPK ← See Anions	Ammonia	pH	Comments
1	DU-01-090419 ~~090319~~ gc	9/4/19		S	X			X						X			X	X	X	8260 Method
2	DU-02-090419				X			X						X			X	X	X	
3	DU-03-090419				X			X						X			X	X	X	
4	DU-04-090419				X			X						X			X	X	X	
5	DU-05-090419				X			X						X			X	X	X	
6																				
7																				
8																				
9																				
10																				

Changes made by Gabe Cisneros 9/5/19

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite + Ammonia

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x [signature]	9/4/19 1630	x Kayla Peter	9/4/19 1630
Relinquished x	Date/Time	Received x	Date/Time

Turn-around Time:

- ☒ Standard
- ☐ 3 Day
- ☐ 2 Day
- ☐ Next Day
- Same Day _____ (specify)

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Floyd | Snider
Tom Colligan
601 Union St., Suite 600
Seattle, WA 98101

RE: CL-Ellensburg
Work Order Number: 1910080

October 15, 2019

Attention Tom Colligan:

Fremont Analytical, Inc. received 6 sample(s) on 10/4/2019 for the analyses presented in the following report.

Ammonia by SM 4500 NH3 E
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.
Ion Chromatography by EPA Method 300.0
pH by EPA Method 9045
Sample Moisture (Percent Moisture)

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

CC:
Gabe Cisneros

Date: *10/15/2019*

CLIENT: Floyd | Snider
Project: CL-Ellensburg
Work Order: 1910080

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1910080-001	DU-01-10042019	10/04/2019 11:00 AM	10/04/2019 4:14 PM
1910080-002	DU-02-10042019	10/04/2019 11:10 AM	10/04/2019 4:14 PM
1910080-003	DU-03-10042019	10/04/2019 11:30 AM	10/04/2019 4:14 PM
1910080-004	DU-04-10042019	10/04/2019 11:40 AM	10/04/2019 4:14 PM
1910080-005	DU-05-10042019	10/04/2019 12:00 PM	10/04/2019 4:14 PM
1910080-006	TB-10042019	10/04/2019 11:05 AM	10/04/2019 4:14 PM

Case Narrative

WO#: **1910080**
Date: **10/15/2019**

CLIENT: Floyd | Snider
Project: CL-Ellensburg

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **1910080**
Date Reported: **10/15/2019**

Client: Floyd | Snider
Project: CL-Ellensburg
Lab ID: 1910080-001
Client Sample ID: **DU-01-10042019**

Collection Date: 10/4/2019 11:00:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 26105		Analyst: DW
Diesel (Fuel Oil)	2,170	100	D	mg/Kg-dry	5	10/11/2019 10:54:19 AM
Heavy Oil	ND	50.0		mg/Kg-dry	1	10/10/2019 11:49:55 PM
Surr: 2-Fluorobiphenyl	103	50 - 150		%Rec	1	10/10/2019 11:49:55 PM
Surr: o-Terphenyl	107	50 - 150		%Rec	1	10/10/2019 11:49:55 PM
Ion Chromatography by EPA Method 300.0				Batch ID: 26116		Analyst: SS
Nitrite (as N)	ND	1.11		mg/Kg-dry	1	10/14/2019 12:40:00 PM
Nitrate (as N)	ND	1.11		mg/Kg-dry	1	10/14/2019 12:40:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R54424		Analyst: SBM
Percent Moisture	12.0	0.500		wt%	1	10/8/2019 8:26:52 AM
Ammonia by SM 4500 NH3 E				Batch ID: 26085		Analyst: SS
Nitrogen, Ammonia	ND	1.13		mg/Kg-dry	1	10/10/2019 11:00:00 AM
pH by EPA Method 9045				Batch ID: R54533		Analyst: WF
Hydrogen Ion (pH)	7.90			pH	1	10/11/2019 4:03:38 PM

Analytical Report

Work Order: **1910080**
Date Reported: **10/15/2019**

Client: Floyd | Snider
Project: CL-Ellensburg
Lab ID: 1910080-002
Client Sample ID: **DU-02-10042019**

Collection Date: 10/4/2019 11:10:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 26105		Analyst: DW
Diesel (Fuel Oil)	1,200	21.5		mg/Kg-dry	1	10/11/2019 12:19:43 AM
Heavy Oil	ND	53.7		mg/Kg-dry	1	10/11/2019 12:19:43 AM
Surr: 2-Fluorobiphenyl	83.4	50 - 150		%Rec	1	10/11/2019 12:19:43 AM
Surr: o-Terphenyl	85.2	50 - 150		%Rec	1	10/11/2019 12:19:43 AM
Ion Chromatography by EPA Method 300.0				Batch ID: 26116		Analyst: SS
Nitrite (as N)	1.22	1.15		mg/Kg-dry	1	10/14/2019 1:03:00 PM
Nitrate (as N)	9.39	1.15		mg/Kg-dry	1	10/14/2019 1:03:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R54424		Analyst: SBM
Percent Moisture	14.2	0.500		wt%	1	10/8/2019 8:26:52 AM
Ammonia by SM 4500 NH3 E				Batch ID: 26085		Analyst: SS
Nitrogen, Ammonia	ND	1.16		mg/Kg-dry	1	10/10/2019 11:00:00 AM
pH by EPA Method 9045				Batch ID: R54533		Analyst: WF
Hydrogen Ion (pH)	8.04			pH	1	10/11/2019 4:03:38 PM

Analytical Report

Work Order: **1910080**
Date Reported: **10/15/2019**

Client: Floyd | Snider
Project: CL-Ellensburg
Lab ID: 1910080-003
Client Sample ID: **DU-03-10042019**

Collection Date: 10/4/2019 11:30:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 26105		Analyst: DW
Diesel (Fuel Oil)	2,380	110	D	mg/Kg-dry	5	10/11/2019 11:24:21 AM
Heavy Oil	ND	54.8		mg/Kg-dry	1	10/11/2019 12:50:04 AM
Surr: 2-Fluorobiphenyl	87.7	50 - 150		%Rec	1	10/11/2019 12:50:04 AM
Surr: o-Terphenyl	85.1	50 - 150		%Rec	1	10/11/2019 12:50:04 AM
Ion Chromatography by EPA Method 300.0				Batch ID: 26116		Analyst: SS
Nitrite (as N)	ND	1.14		mg/Kg-dry	1	10/14/2019 2:35:00 PM
Nitrate (as N)	ND	1.14		mg/Kg-dry	1	10/14/2019 2:35:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R54424		Analyst: SBM
Percent Moisture	14.5	0.500		wt%	1	10/8/2019 8:26:52 AM
Ammonia by SM 4500 NH3 E				Batch ID: 26085		Analyst: SS
Nitrogen, Ammonia	ND	1.16		mg/Kg-dry	1	10/10/2019 11:00:00 AM
pH by EPA Method 9045				Batch ID: R54533		Analyst: WF
Hydrogen Ion (pH)	7.89			pH	1	10/11/2019 4:03:38 PM

Analytical Report

Work Order: **1910080**
Date Reported: **10/15/2019**

Client: Floyd | Snider
Project: CL-Ellensburg
Lab ID: 1910080-004
Client Sample ID: **DU-04-10042019**

Collection Date: 10/4/2019 11:40:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 26105		Analyst: DW
Diesel (Fuel Oil)	761	22.3		mg/Kg-dry	1	10/11/2019 1:20:15 AM
Heavy Oil	ND	55.8		mg/Kg-dry	1	10/11/2019 1:20:15 AM
Surr: 2-Fluorobiphenyl	85.1	50 - 150		%Rec	1	10/11/2019 1:20:15 AM
Surr: o-Terphenyl	87.3	50 - 150		%Rec	1	10/11/2019 1:20:15 AM
Ion Chromatography by EPA Method 300.0				Batch ID: 26116		Analyst: SS
Nitrite (as N)	2.03	1.20		mg/Kg-dry	1	10/14/2019 2:59:00 PM
Nitrate (as N)	61.9	4.79	D	mg/Kg-dry	4	10/15/2019 11:21:00 AM
Sample Moisture (Percent Moisture)				Batch ID: R54424		Analyst: SBM
Percent Moisture	17.6	0.500		wt%	1	10/8/2019 8:26:52 AM
Ammonia by SM 4500 NH3 E				Batch ID: 26085		Analyst: SS
Nitrogen, Ammonia	ND	1.21		mg/Kg-dry	1	10/10/2019 11:00:00 AM
pH by EPA Method 9045				Batch ID: R54533		Analyst: WF
Hydrogen Ion (pH)	7.93			pH	1	10/11/2019 4:03:38 PM

Analytical Report

Work Order: **1910080**
Date Reported: **10/15/2019**

Client: Floyd | Snider
Collection Date: 10/4/2019 12:00:00 PM
Project: CL-Ellensburg
Lab ID: 1910080-005
Matrix: Soil
Client Sample ID: **DU-05-10042019**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 26105		Analyst: DW
Diesel (Fuel Oil)	295	21.9		mg/Kg-dry	1	10/11/2019 2:20:49 AM
Heavy Oil	ND	54.7		mg/Kg-dry	1	10/11/2019 2:20:49 AM
Surr: 2-Fluorobiphenyl	83.0	50 - 150		%Rec	1	10/11/2019 2:20:49 AM
Surr: o-Terphenyl	84.1	50 - 150		%Rec	1	10/11/2019 2:20:49 AM
Ion Chromatography by EPA Method 300.0				Batch ID: 26116		Analyst: SS
Nitrite (as N)	2.03	1.16		mg/Kg-dry	1	10/14/2019 3:22:00 PM
Nitrate (as N)	59.4	4.64	D	mg/Kg-dry	4	10/15/2019 11:44:00 AM
Sample Moisture (Percent Moisture)				Batch ID: R54424		Analyst: SBM
Percent Moisture	15.2	0.500		wt%	1	10/8/2019 8:26:52 AM
Ammonia by SM 4500 NH3 E				Batch ID: 26085		Analyst: SS
Nitrogen, Ammonia	ND	1.18		mg/Kg-dry	1	10/10/2019 11:00:00 AM
pH by EPA Method 9045				Batch ID: R54533		Analyst: WF
Hydrogen Ion (pH)	7.73			pH	1	10/11/2019 4:03:38 PM

Work Order: 1910080
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Ammonia by SM 4500 NH3 E

Sample ID	MB-26085	SampType:	MBLK			Units:	mg/Kg			Prep Date:	10/8/2019			RunNo:	54501	
Client ID:	MBLKS	Batch ID:	26085							Analysis Date:	10/10/2019			SeqNo:	1080421	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual				
Nitrogen, Ammonia		ND	1.00													

Sample ID	LCS-26085	SampType:	LCS			Units:	mg/Kg			Prep Date:	10/8/2019			RunNo:	54501	
Client ID:	LCSS	Batch ID:	26085							Analysis Date:	10/10/2019			SeqNo:	1080422	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual				
Nitrogen, Ammonia		20.0	1.00	20.00	0	100	72.7	119								

Sample ID	1910080-001ADUP	SampType:	DUP			Units:	mg/Kg-dry			Prep Date:	10/8/2019			RunNo:	54501	
Client ID:	DU-01-10042019	Batch ID:	26085							Analysis Date:	10/10/2019			SeqNo:	1080424	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual				
Nitrogen, Ammonia		ND	1.13						0		30					

Sample ID	1910080-001AMS	SampType:	MS			Units:	mg/Kg-dry			Prep Date:	10/8/2019			RunNo:	54501	
Client ID:	DU-01-10042019	Batch ID:	26085							Analysis Date:	10/10/2019			SeqNo:	1080425	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual				
Nitrogen, Ammonia		17.3	1.14	22.70	0.5597	73.6	28.3	149								

Sample ID	1910080-001AMSD	SampType:	MSD			Units:	mg/Kg-dry			Prep Date:	10/8/2019			RunNo:	54501	
Client ID:	DU-01-10042019	Batch ID:	26085							Analysis Date:	10/10/2019			SeqNo:	1080426	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual				
Nitrogen, Ammonia		17.5	1.13	22.60	0.5597	75.1	28.3	149	17.26	1.59	20					

Work Order: 1910080
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID **MB-26116** SampType: **MBLK** Units: **mg/Kg** Prep Date: **10/11/2019** RunNo: **54559**
Client ID: **MBLKS** Batch ID: **26116** Analysis Date: **10/14/2019** SeqNo: **1081699**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	ND	1.00									
Nitrate (as N)	ND	1.00									

Sample ID **LCS-26116** SampType: **LCS** Units: **mg/Kg** Prep Date: **10/11/2019** RunNo: **54559**
Client ID: **LCSS** Batch ID: **26116** Analysis Date: **10/14/2019** SeqNo: **1081700**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	7.21	1.00	7.500	0	96.1	90	110				
Nitrate (as N)	7.13	1.00	7.500	0	95.1	90	110				

Sample ID **1910080-002ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **10/11/2019** RunNo: **54559**
Client ID: **DU-02-10042019** Batch ID: **26116** Analysis Date: **10/14/2019** SeqNo: **1081703**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	1.27	1.16						1.219	3.83	30	
Nitrate (as N)	10.2	1.16						9.393	8.69	30	

Sample ID **1910080-002AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **10/11/2019** RunNo: **54559**
Client ID: **DU-02-10042019** Batch ID: **26116** Analysis Date: **10/14/2019** SeqNo: **1081704**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	7.32	1.15	8.614	1.219	70.8	80	120				S
Nitrate (as N)	16.7	1.15	8.614	9.393	84.3	80	120				

NOTES:
S - Outlying spike recovery(ies) observed.

Work Order: 1910080
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID **1910080-002AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **10/11/2019** RunNo: **54559**
Client ID: **DU-02-10042019** Batch ID: **26116** Analysis Date: **10/14/2019** SeqNo: **1081705**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	7.27	1.17	8.775	1.219	68.9	80	120	7.316	0.692	30	S
Nitrate (as N)	16.4	1.17	8.775	9.393	79.8	80	120	16.65	1.59	30	S

NOTES:
S - Outlying spike recovery(ies) observed.

Work Order: 1910080
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

pH by EPA Method 9045

Sample ID	**MB-R54533**	SampType:	**MBLK**	Units:	**pH**	Prep Date:	**10/11/2019**	RunNo:	**54533**
Client ID:	**MBLKS**	Batch ID:	**R54533**			Analysis Date:	**10/11/2019**	SeqNo:	**1081012**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hydrogen Ion (pH)	7.34										

Sample ID	**LCS-R54533**	SampType:	**LCS**	Units:	**pH**	Prep Date:	**10/11/2019**	RunNo:	**54533**
Client ID:	**LCSS**	Batch ID:	**R54533**			Analysis Date:	**10/11/2019**	SeqNo:	**1081013**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hydrogen Ion (pH)	7.08		7.000	0	101	95	105				

Sample ID	**1910080-001ADUP**	SampType:	**DUP**	Units:	**pH**	Prep Date:	**10/11/2019**	RunNo:	**54533**
Client ID:	**DU-01-10042019**	Batch ID:	**R54533**			Analysis Date:	**10/11/2019**	SeqNo:	**1081015**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hydrogen Ion (pH)	7.92							7.900	0.253	10	

Work Order: 1910080
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID **MB-26105**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **10/10/2019**	RunNo: **54525**
Client ID: **MBLKS**	Batch ID: **26105**		Analysis Date: **10/10/2019**	SeqNo: **1080880**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	20.0									
Heavy Oil	ND	50.0									
Surr: 2-Fluorobiphenyl	20.6		20.00		103	50	150				
Surr: o-Terphenyl	20.9		20.00		105	50	150				

Sample ID **LCS-26105**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **10/10/2019**	RunNo: **54525**
Client ID: **LCSS**	Batch ID: **26105**		Analysis Date: **10/10/2019**	SeqNo: **1080881**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	569	20.0	500.0	0	114	65	135				
Surr: 2-Fluorobiphenyl	21.4		20.00		107	50	150				
Surr: o-Terphenyl	19.9		20.00		99.6	50	150				

Sample ID **1910120-001ADUP**	SampType: **DUP**	Units: **mg/Kg-dry**	Prep Date: **10/10/2019**	RunNo: **54525**
Client ID: **BATCH**	Batch ID: **26105**		Analysis Date: **10/10/2019**	SeqNo: **1080884**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	24.8						0		30	
Heavy Oil	ND	62.1						0		30	
Surr: 2-Fluorobiphenyl	21.5		24.83		86.6	50	150		0		
Surr: o-Terphenyl	21.8		24.83		87.9	50	150		0		

Sample ID **1910120-001AMS**	SampType: **MS**	Units: **mg/Kg-dry**	Prep Date: **10/10/2019**	RunNo: **54525**
Client ID: **BATCH**	Batch ID: **26105**		Analysis Date: **10/10/2019**	SeqNo: **1080885**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	711	24.0	600.5	14.39	116	65	135				
Surr: 2-Fluorobiphenyl	25.7		24.02		107	50	150				
Surr: o-Terphenyl	24.3		24.02		101	50	150				

Work Order: 1910080
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID **1910120-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **10/10/2019** RunNo: **54525**
Client ID: **BATCH** Batch ID: **26105** Analysis Date: **10/10/2019** SeqNo: **1080885**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID **1910120-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **10/10/2019** RunNo: **54525**
Client ID: **BATCH** Batch ID: **26105** Analysis Date: **10/10/2019** SeqNo: **1080886**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	733	25.5	638.5	14.39	113	65	135	711.0	3.09	30	
Surr: 2-Fluorobiphenyl	28.4		25.54		111	50	150		0		
Surr: o-Terphenyl	27.2		25.54		106	50	150		0		

Sample ID **1910080-004ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **10/10/2019** RunNo: **54525**
Client ID: **DU-04-10042019** Batch ID: **26105** Analysis Date: **10/11/2019** SeqNo: **1080897**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	538	23.7						761.3	34.3	30	R
Heavy Oil	ND	59.3						0		30	
Surr: 2-Fluorobiphenyl	21.3		23.71		89.7	50	150		0		
Surr: o-Terphenyl	21.1		23.71		88.9	50	150		0		

NOTES:
R - High RPD observed. The method is in control as indicated by the LCS.

Work Order: 1910080
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID **1910080-001ADUP** SampType: **DUP** Units: **wt%** Prep Date: **10/8/2019** RunNo: **54424**
Client ID: **DU-01-10042019** Batch ID: **R54424** Analysis Date: **10/8/2019** SeqNo: **1079189**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	11.8	0.500						12.02	2.02	20	

Sample ID **1910109-001ADUP** SampType: **DUP** Units: **wt%** Prep Date: **10/8/2019** RunNo: **54424**
Client ID: **BATCH** Batch ID: **R54424** Analysis Date: **10/8/2019** SeqNo: **1079202**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	9.64	0.500						9.932	3.02	20	

Sample Log-In Check List

Client Name:	**FS**	Work Order Number:	**1910080**
Logged by:	**Carissa True**	Date Received:	**10/4/2019 4:14:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Required ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >0°C to 10.0°C*	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Anions logged in for Nitrite and Nitrate (not N+N) per project.

Item Information

Item #	Temp °C
Cooler 1	2.3
Sample 1	8.9
Temp Blank 1	9.7

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Chain of Custody Record & Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 10/4/2019 Page: 1 of: 1

Laboratory Project No (internal): 1910080

Project Name: CL - Ellensburg

Special Remarks: cc results to gabe cisneros

Project No:

Client: Floyd | Snider

Address: 601 Union St, Ste 600

City, State, Zip: Seattle, WA 98101

Telephone: 206-292-2078

Fax:

Collected by: K Anderson

Location: Bg B Ellensburg WA

Report To (PM): Tom Colligan

PM Email: tom.colligan@floydsnider.com

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX + naphthalene	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8) Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	NPE - see anions	Ammonia	pH	Comments
1	DU-01-10042019	10/4/19	1100	soil						X				X		X	X	X		add VOCs for BTEX/naph by 8260
2	DU-02-10042019		1110							X				X		X	X	X		" "
3	DU-03-10042019		1130							X				X		X	X	X		" "
4	DU-04-10042019		1140							X				X		X	X	X		" "
5	DU-05-10042019		1200							X				X		X	X	X		" "
6	TB-10042019		1205	—																" "
7																				
8																				
9																				
10																				

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride (Nitrate+Nitrite + Ammonia)

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

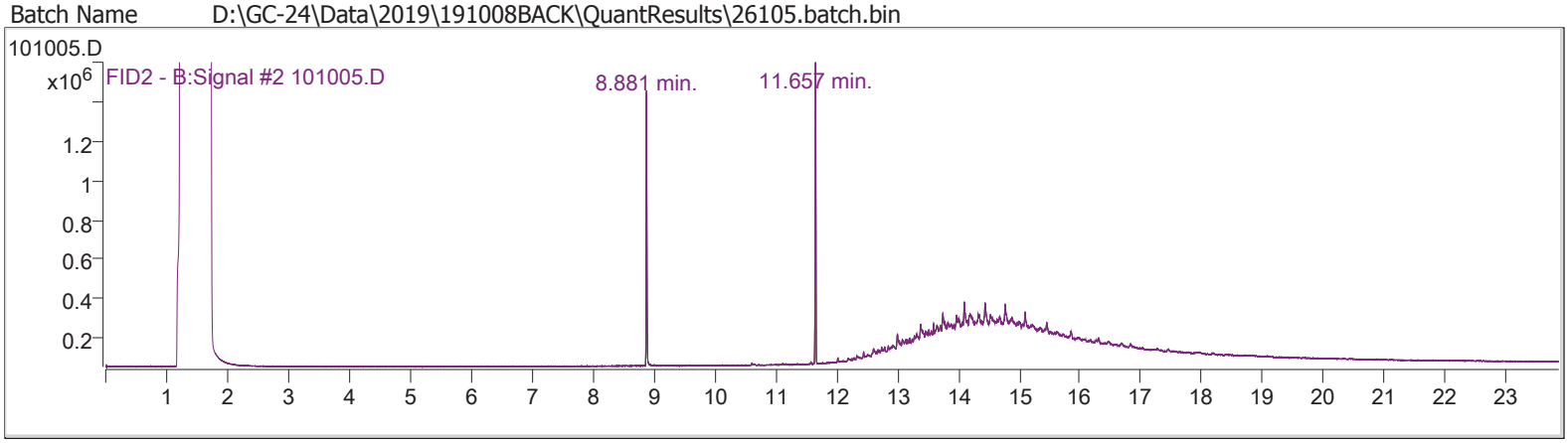
Relinquished	Date/Time	Received	Date/Time
x [signature]	10/4/2019 1613	x [signature]	10/4/19 16:14
x		x	

Turn-around Time:
- ☒ Standard
- ☐ 3 Day
- ☐ 2 Day
- ☐ Next Day
- Same Day ____ (specify)

Quantitation Results Report

Agilent Technologies

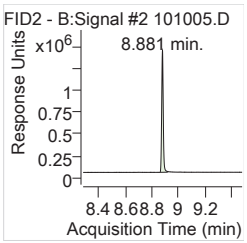
Data File	101005.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	10/10/2019 2:51:42 PM
Sample Name:	OIL-CCV-26080C		dualfid
Vial	1	Multiplier	1.00
DA Method File	DX-191008-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	10/9/2019 2:51:58 PM
Batch Name	D:\GC-24\Data\2019\191008BACK\QuantResults\26105.batch.bin		



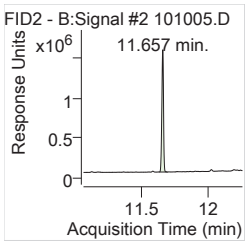
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	8.881	1149298	19.344	ug/mL		-0.001
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.657	1362148	19.658	ug/mL		-0.001
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	10.750	0	0.000	ug/mL	md	
Heavy Oil	14.099	49772744	984.946	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

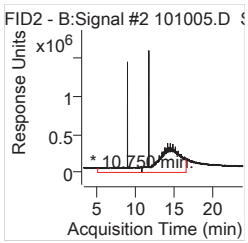
2-Fluorobiphenyl



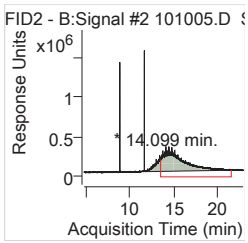
O-Terphenyl



Diesel



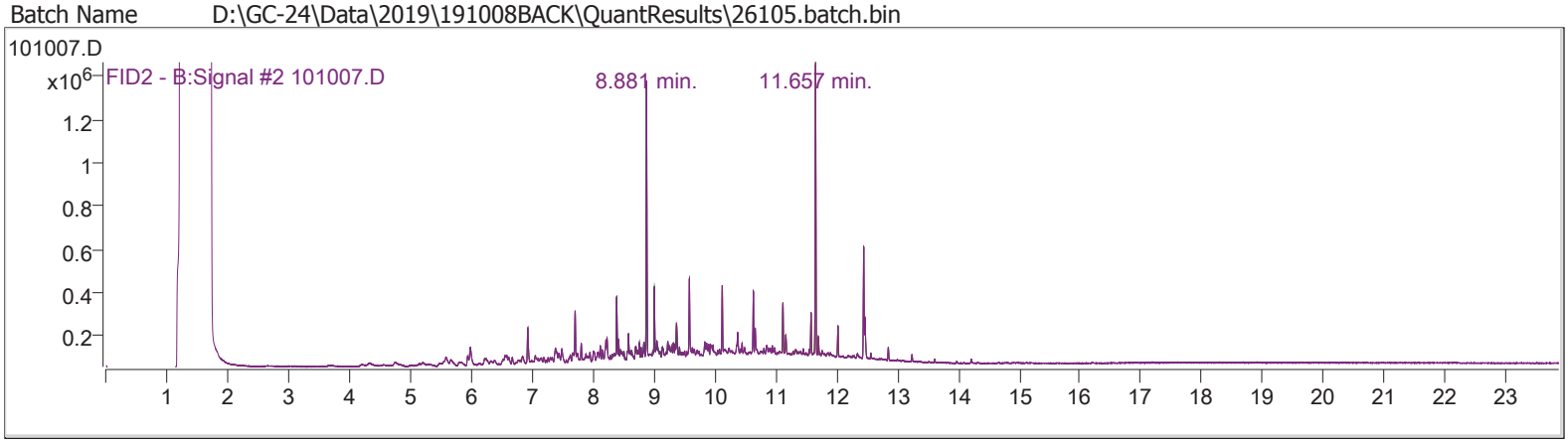
Heavy Oil



Quantitation Results Report

Agilent Technologies

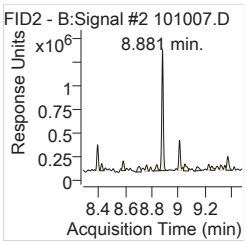
Data File	101007.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	10/10/2019 3:21:38 PM
Sample Name:	DX-CCV-26080C		dualfid
Vial	2	Multiplier	1.00
DA Method File	DX-191008-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	10/9/2019 2:51:58 PM
Batch Name	D:\GC-24\Data\2019\191008BACK\QuantResults\26105.batch.bin		



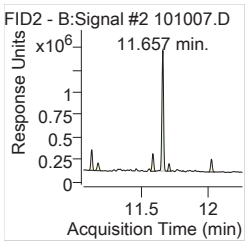
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	8.881	1043513	17.423	ug/mL		-0.001
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.657	1179789	16.762	ug/mL		-0.001
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.657	25344597	478.110	ug/mL	m	
Heavy Oil	17.500	0	0.000	ug/mL	md	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

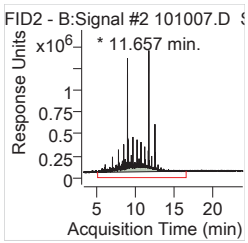
2-Fluorobiphenyl



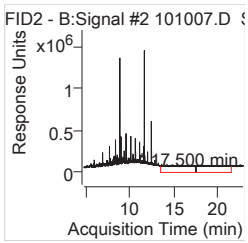
O-Terphenyl



Diesel

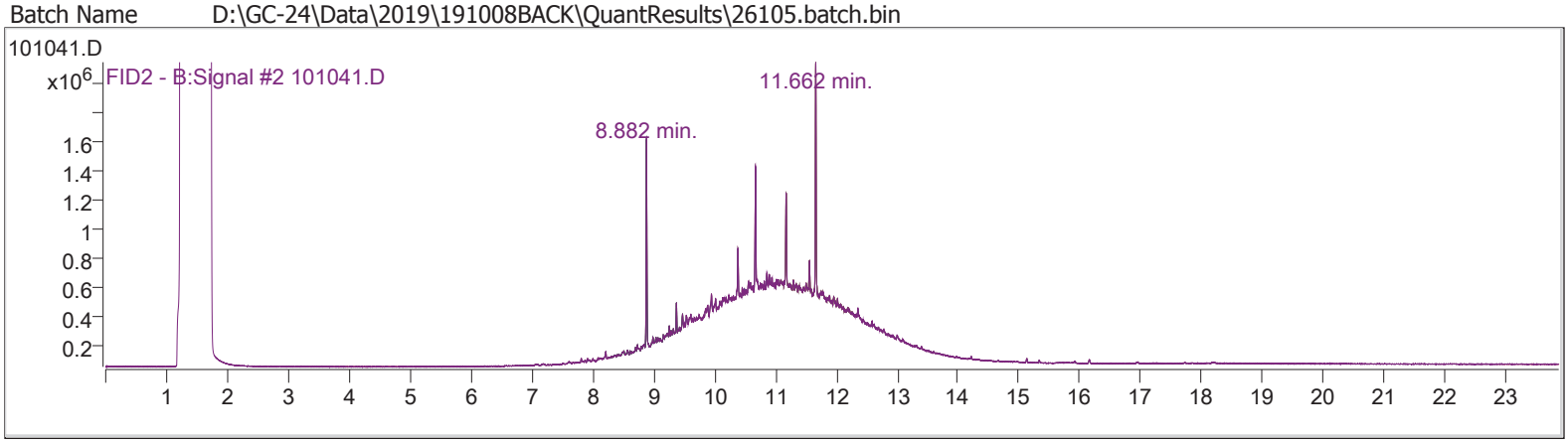


Heavy Oil



Agilent Technologies

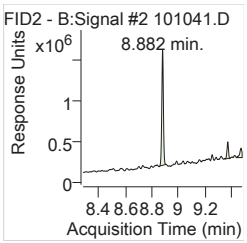
Data File	101041.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	10/10/2019 11:49:55 PM
Sample Name:	1910080-001A		dualfid
Vial	101	Multiplier	1.00
DA Method File	DX-191008-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	10/9/2019 2:51:58 PM
Batch Name	D:\GC-24\Data\2019\191008BACK\QuantResults\26105.batch.bin		



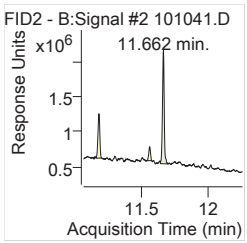
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	8.882	1213389	20.508	ug/mL		0.000
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.662	1476685	21.477	ug/mL		0.004
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.661	112672845	2167.196	ug/mL	m	
Heavy Oil	16.947	1931911	7.027	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

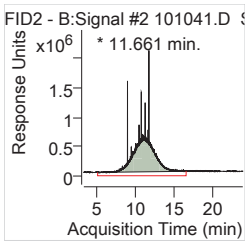
2-Fluorobiphenyl



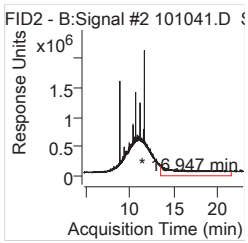
O-Terphenyl



Diesel



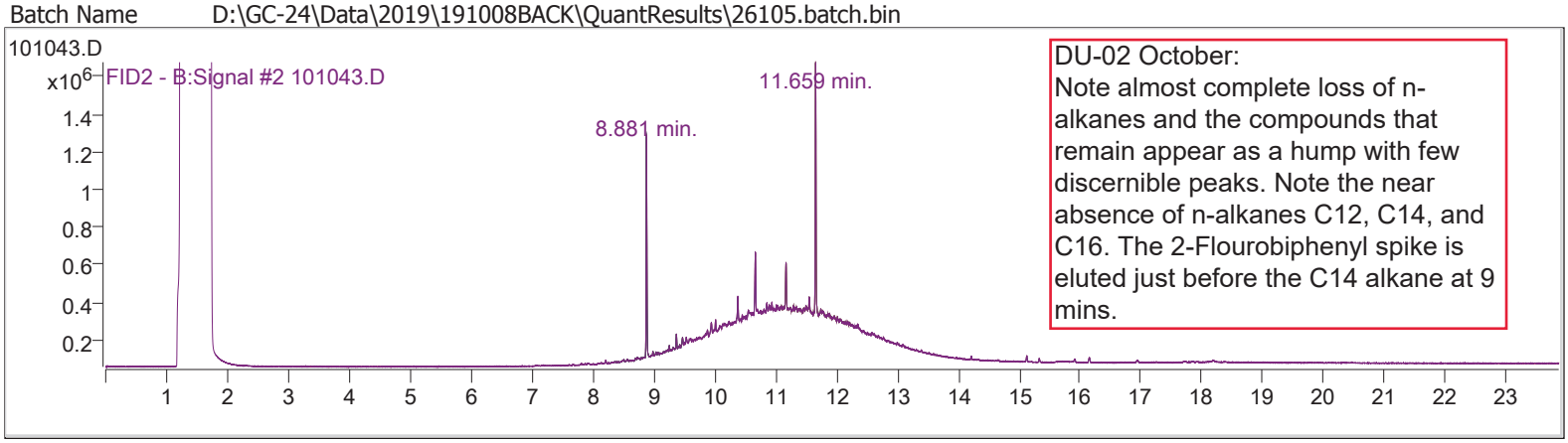
Heavy Oil



Quantitation Results Report

Agilent Technologies

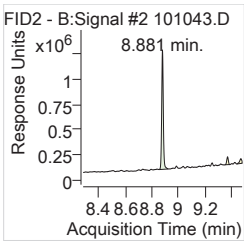
Data File	101043.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	10/11/2019 12:19:43 AM
Sample Name:	1910080-002A		dualfid
Vial	102	Multiplier	1.00
DA Method File	DX-191008-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	10/9/2019 2:51:58 PM
Batch Name	D:\GC-24\Data\2019\191008BACK\QuantResults\26105.batch.bin		



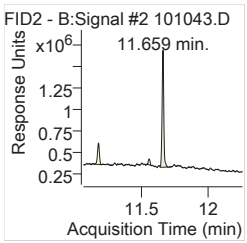
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	8.881	1002428	16.677	ug/mL		-0.001
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.659	1197688	17.046	ug/mL		0.001
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.658	58501065	1119.416	ug/mL	m	
Heavy Oil	16.939	1835946	5.065	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

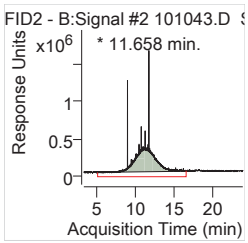
2-Fluorobiphenyl



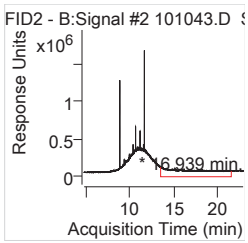
O-Terphenyl



Diesel



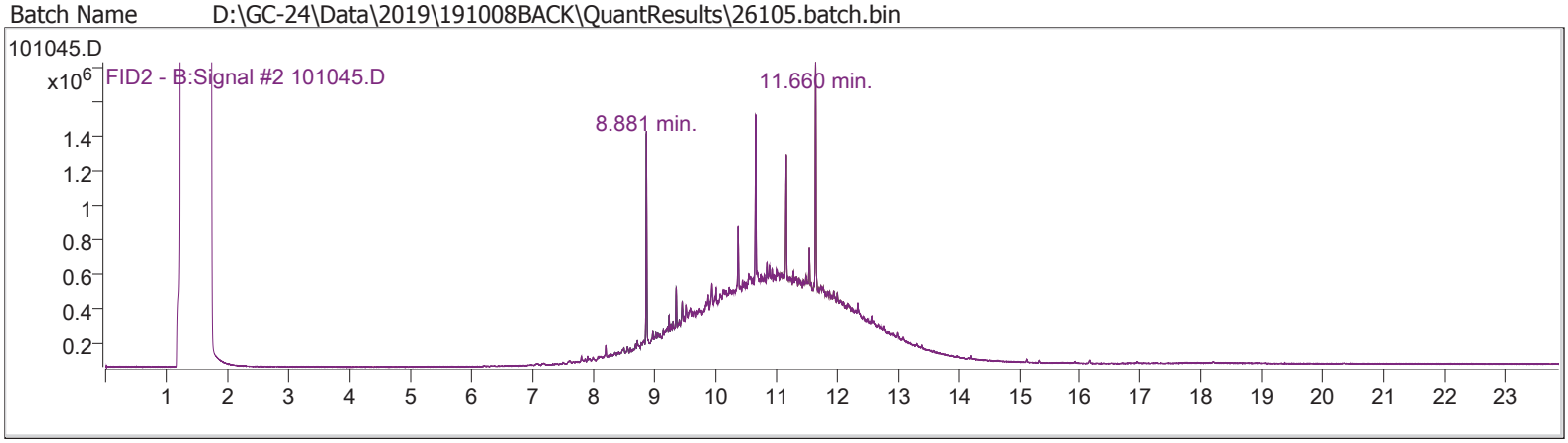
Heavy Oil



Quantitation Results Report

Agilent Technologies

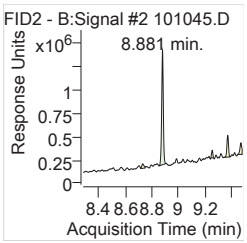
Data File	101045.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	10/11/2019 12:50:04 AM
Sample Name:	1910080-003A		dualfid
Vial	103	Multiplier	1.00
DA Method File	DX-191008-NWTPH_FINAL.m	Last Calib Update	10/9/2019 2:51:58 PM
	O-DXEX-S		
Batch Name	D:\GC-24\Data\2019\191008BACK\QuantResults\26105.batch.bin		



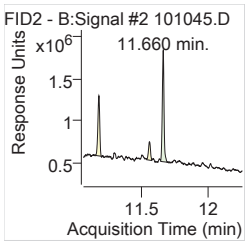
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	8.881	1050031	17.542	ug/mL		-0.001
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.660	1195905	17.018	ug/mL		0.002
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.660	106198061	2041.962	ug/mL	m	
Heavy Oil	16.945	1716638	2.626	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

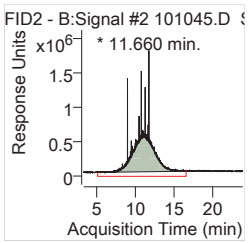
2-Fluorobiphenyl



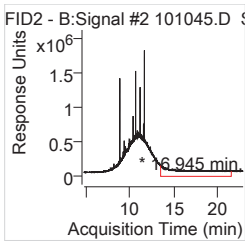
O-Terphenyl



Diesel



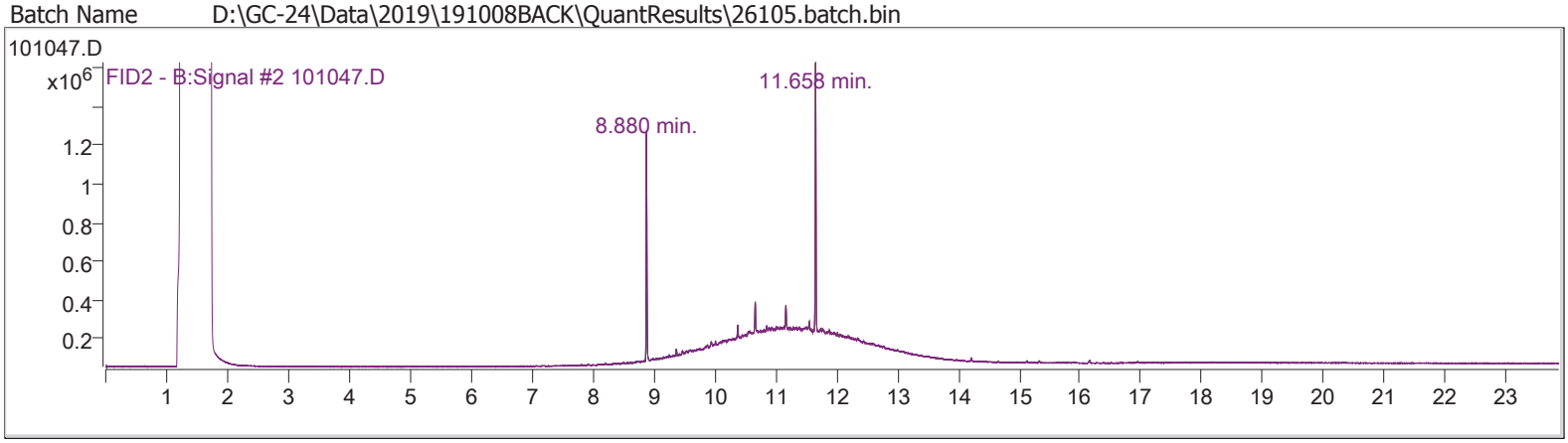
Heavy Oil



Quantitation Results Report

Agilent Technologies

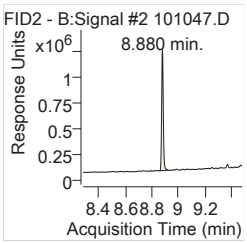
Data File	101047.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	10/11/2019 1:20:15 AM
Sample Name:	1910080-004A		dualfid
Vial	104	Multiplier	1.00
DA Method File	DX-191008-NWTPH_FINAL.m	Last Calib Update	10/9/2019 2:51:58 PM
	O-DXEX-S		
Batch Name	D:\GC-24\Data\2019\191008BACK\QuantResults\26105.batch.bin		



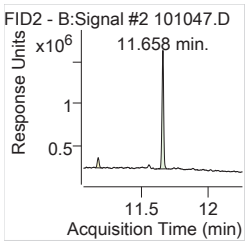
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	8.880	1021142	17.017	ug/mL		-0.002
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.658	1223726	17.460	ug/mL		0.000
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.658	35902323	682.316	ug/mL	m	
Heavy Oil	16.946	1273710	0.000	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

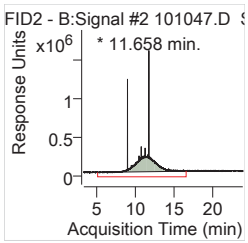
2-Fluorobiphenyl



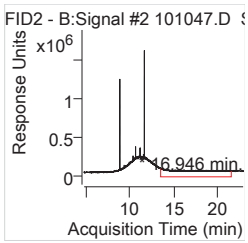
O-Terphenyl



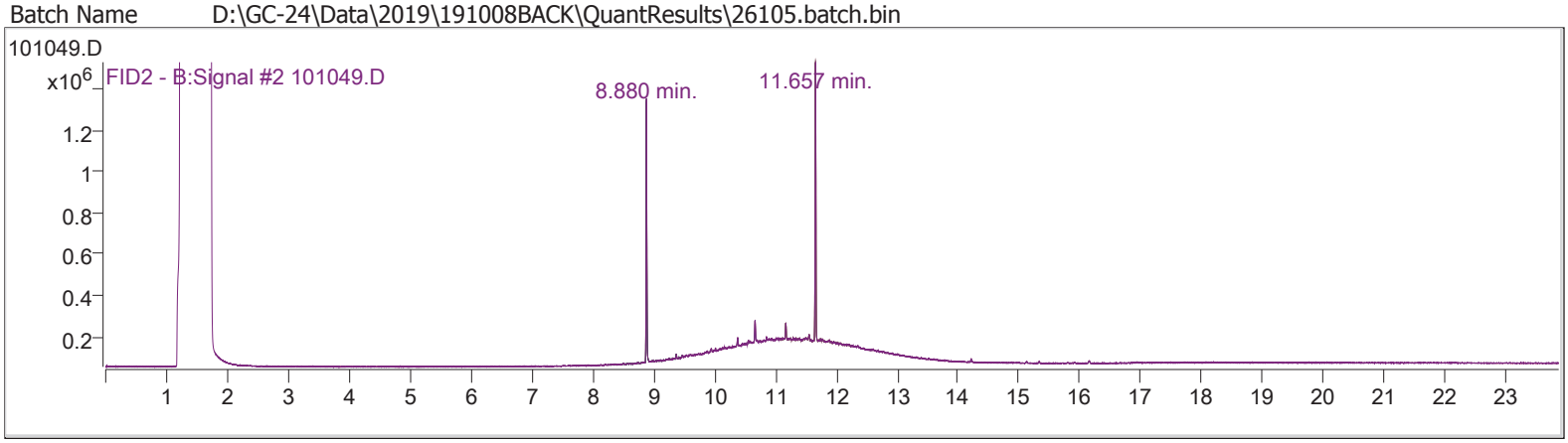
Diesel



Heavy Oil



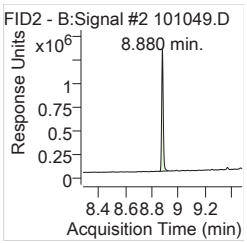
Data File	101049.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	10/11/2019 1:50:36 AM
Sample Name:	1910080-004ADUP		dualfid
Vial	105	Multiplier	1.00
DA Method File	DX-191008-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	10/9/2019 2:51:58 PM
Batch Name	D:\GC-24\Data\2019\191008BACK\QuantResults\26105.batch.bin		



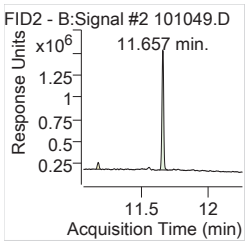
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	8.880	1071926	17.939	ug/mL		-0.002
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.657	1243892	17.780	ug/mL		-0.001
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.657	24103667	454.108	ug/mL	m	
Heavy Oil	16.944	1291006	0.000	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

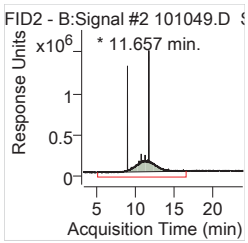
2-Fluorobiphenyl



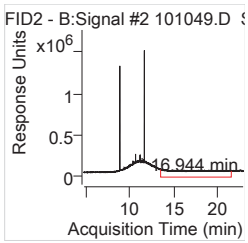
O-Terphenyl



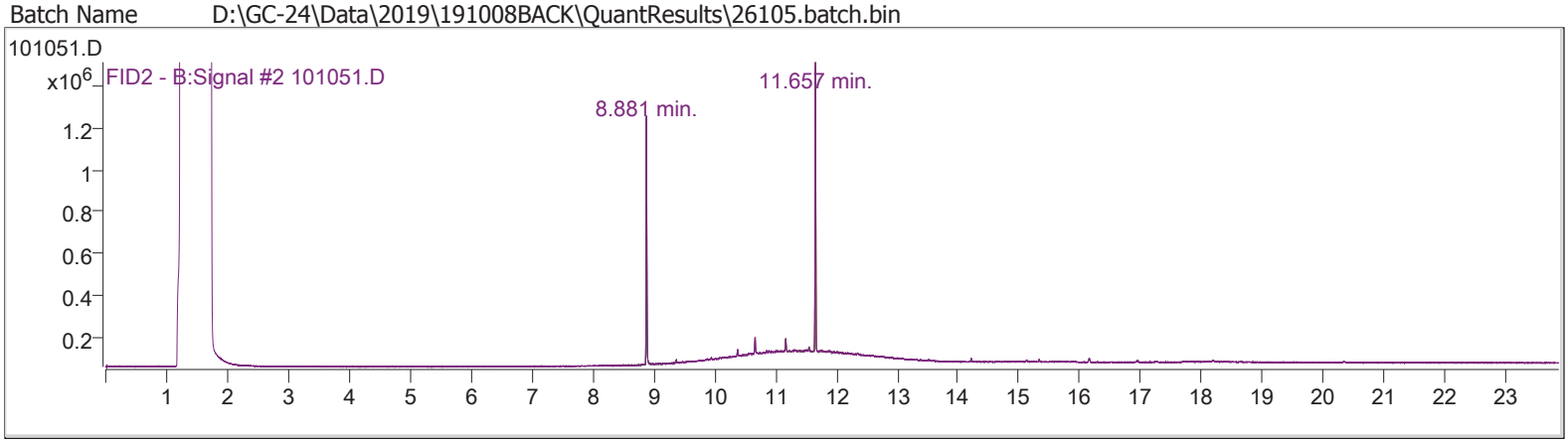
Diesel



Heavy Oil



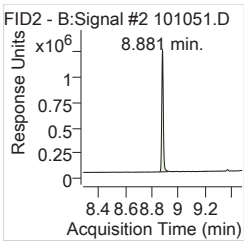
Data File	101051.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	10/11/2019 2:20:49 AM
Sample Name:	1910080-005A		dualfid
Vial	106	Multiplier	1.00
DA Method File	DX-191008-NWTPH_FINAL.m	Last Calib Update	10/9/2019 2:51:58 PM
	O-DXEX-S		
Batch Name	D:\GC-24\Data\2019\191008BACK\QuantResults\26105.batch.bin		



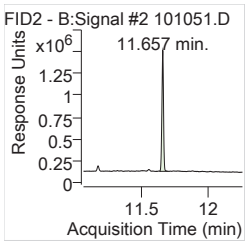
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	8.881	998202	16.601	ug/mL		-0.001
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.657	1183475	16.821	ug/mL		-0.001
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.657	14584610	269.993	ug/mL	m	
Heavy Oil	18.189	1581350	0.000	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

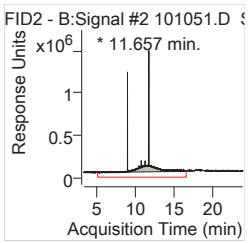
2-Fluorobiphenyl



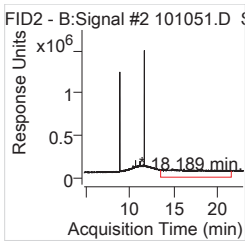
O-Terphenyl



Diesel



Heavy Oil



3600 Fremont Ave. N.
Seattle, WA 98103
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F: (206) 352-7178
info@fremontanalytical.com

Floyd | Snider
Gabe Cisneros
601 Union St., Suite 600
Seattle, WA 98101

RE: CL-Ellensburg
Work Order Number: 1911096

November 15, 2019

Attention Gabe Cisneros:

Fremont Analytical, Inc. received 3 sample(s) on 11/8/2019 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.
Ion Chromatography by EPA Method 300.0
pH by EPA Method 9045
Sample Moisture (Percent Moisture)
Total Metals by EPA Method 6020B
Total Phosphorus by EPA Method 6020

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

CC:
Tom Colligan

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)

Date: *11/15/2019*

CLIENT: Floyd | Snider
Project: CL-Ellensburg
Work Order: 1911096

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1911096-001	DU-01-110719	11/07/2019 9:00 AM	11/08/2019 9:00 AM
1911096-002	DU-03-110719	11/07/2019 9:10 AM	11/08/2019 9:00 AM
1911096-003	Trip Blank	10/29/2019 10:41 AM	11/08/2019 9:00 AM

Case Narrative

WO#: **1911096**
Date: **11/15/2019**

CLIENT: Floyd | Snider
Project: CL-Ellensburg

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **1911096**
Date Reported: **11/15/2019**

Client: Floyd | Snider
Project: CL-Ellensburg
Lab ID: 1911096-001
Client Sample ID: **DU-01-110719**

Collection Date: 11/7/2019 9:00:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 26464		Analyst: DW
Diesel (Fuel Oil)	864	20.6		mg/Kg-dry	1	11/12/2019 7:52:19 PM
Heavy Oil	ND	51.6		mg/Kg-dry	1	11/12/2019 7:52:19 PM
Surr: 2-Fluorobiphenyl	101	50 - 150		%Rec	1	11/12/2019 7:52:19 PM
Surr: o-Terphenyl	108	50 - 150		%Rec	1	11/12/2019 7:52:19 PM
Ion Chromatography by EPA Method 300.0				Batch ID: 26460		Analyst: TN
Nitrite (as N)	ND	1.17		mg/Kg-dry	1	11/12/2019 1:02:00 AM
Nitrate (as N)	37.4	5.86	D	mg/Kg-dry	5	11/12/2019 8:54:00 PM
Total Phosphorus by EPA Method 6020				Batch ID: 26475		Analyst: WC
Phosphorus	711	18.7		mg/Kg-dry	1	11/14/2019 7:00:59 PM
Total Metals by EPA Method 6020B				Batch ID: 26475		Analyst: WC
Potassium	1,590	46.8		mg/Kg-dry	1	11/14/2019 7:00:59 PM
Sample Moisture (Percent Moisture)				Batch ID: R55276		Analyst: SBM
Percent Moisture	15.2	0.500		wt%	1	11/13/2019 1:18:41 PM
pH by EPA Method 9045				Batch ID: R55355		Analyst: WF
Hydrogen Ion (pH)	7.81			pH	1	11/15/2019 4:27:59 PM

Analytical Report

Work Order: **1911096**
Date Reported: **11/15/2019**

Client: Floyd | Snider
Project: CL-Ellensburg
Lab ID: 1911096-002
Client Sample ID: **DU-03-110719**

Collection Date: 11/7/2019 9:10:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 26464		Analyst: DW
Diesel (Fuel Oil)	645	21.9		mg/Kg-dry	1	11/12/2019 8:22:41 PM
Heavy Oil	ND	54.7		mg/Kg-dry	1	11/12/2019 8:22:41 PM
Surr: 2-Fluorobiphenyl	95.3	50 - 150		%Rec	1	11/12/2019 8:22:41 PM
Surr: o-Terphenyl	96.9	50 - 150		%Rec	1	11/12/2019 8:22:41 PM
Ion Chromatography by EPA Method 300.0				Batch ID: 26460		Analyst: TN
Nitrite (as N)	1.67	1.22		mg/Kg-dry	1	11/12/2019 1:25:00 AM
Nitrate (as N)	34.0	6.10	D	mg/Kg-dry	5	11/12/2019 9:17:00 PM
Total Phosphorus by EPA Method 6020				Batch ID: 26475		Analyst: WC
Phosphorus	694	19.4		mg/Kg-dry	1	11/14/2019 7:06:36 PM
Total Metals by EPA Method 6020B				Batch ID: 26475		Analyst: WC
Potassium	2,300	48.6		mg/Kg-dry	1	11/14/2019 7:06:36 PM
Sample Moisture (Percent Moisture)				Batch ID: R55276		Analyst: SBM
Percent Moisture	19.6	0.500		wt%	1	11/13/2019 1:18:41 PM
pH by EPA Method 9045				Batch ID: R55355		Analyst: WF
Hydrogen Ion (pH)	7.94			pH	1	11/15/2019 4:27:59 PM

Work Order: 1911096
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID: **MB-26460** SampType: **MBLK** Units: **mg/Kg** Prep Date: **11/11/2019** RunNo: **55234**
Client ID: **MBLKS** Batch ID: **26460** Analysis Date: **11/11/2019** SeqNo: **1098596**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	ND	1.00									
Nitrate (as N)	ND	1.00									

Sample ID: **LCS-26460** SampType: **LCS** Units: **mg/Kg** Prep Date: **11/11/2019** RunNo: **55234**
Client ID: **LCSS** Batch ID: **26460** Analysis Date: **11/11/2019** SeqNo: **1098597**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	7.28	1.00	7.500	0	97.1	90	110				
Nitrate (as N)	7.28	1.00	7.500	0	97.1	90	110				

Sample ID: **1911096-002ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **11/11/2019** RunNo: **55234**
Client ID: **DU-03-110719** Batch ID: **26460** Analysis Date: **11/12/2019** SeqNo: **1098602**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	1.39	1.24						1.672	18.4	30	
Nitrate (as N)	38.6	1.24						43.35	11.6	30	E

NOTES:
E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID: **1911096-002AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **11/11/2019** RunNo: **55234**
Client ID: **DU-03-110719** Batch ID: **26460** Analysis Date: **11/12/2019** SeqNo: **1098603**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	9.95	1.23	9.223	1.672	89.7	80	120				
Nitrate (as N)	50.7	1.23	9.223	43.35	79.3	80	120				ES

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range (Nitrate).
E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1911096
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID: **1911096-002AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **11/11/2019** RunNo: **55234**
Client ID: **DU-03-110719** Batch ID: **26460** Analysis Date: **11/12/2019** SeqNo: **1098604**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	9.62	1.23	9.202	1.672	86.4	80	120	9.948	3.36	30	
Nitrate (as N)	51.4	1.23	9.202	43.35	87.0	80	120	50.66	1.37	30	E

NOTES:
E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1911096
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Total Phosphorus by EPA Method 6020

Sample ID: **MB-26475**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **11/12/2019**		RunNo: **55348**		
Client ID: **MBLKS**	Batch ID: **26475**					Analysis Date: **11/14/2019**		SeqNo: **1100489**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	ND	15.9									

Sample ID: **LCS-26475**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **11/12/2019**		RunNo: **55348**		
Client ID: **LCSS**	Batch ID: **26475**					Analysis Date: **11/14/2019**		SeqNo: **1100490**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	404	15.6	390.6	0	103	80	120				

Sample ID: **1911095-001ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **11/12/2019**		RunNo: **55348**		
Client ID: **BATCH**	Batch ID: **26475**					Analysis Date: **11/14/2019**		SeqNo: **1100492**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	347	18.9						239.3	36.7	20	R

NOTES:
R - High RPD observed. The method is in control as indicated by the LCS.

Sample ID: **1911095-001AMS**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **11/12/2019**		RunNo: **55348**		
Client ID: **BATCH**	Batch ID: **26475**					Analysis Date: **11/14/2019**		SeqNo: **1100494**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	839	18.8	469.1	239.3	128	75	125				S

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results.

Sample ID: **1911095-001AMSD**	SampType: **MSD**			Units: **mg/Kg-dry**		Prep Date: **11/12/2019**		RunNo: **55348**		
Client ID: **BATCH**	Batch ID: **26475**					Analysis Date: **11/14/2019**		SeqNo: **1100495**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	865	18.9	472.9	239.3	132	75	125	839.3	2.98	20	S

Work Order: 1911096
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Total Phosphorus by EPA Method 6020

Sample ID: **1911095-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **11/12/2019** RunNo: **55348**
Client ID: **BATCH** Batch ID: **26475** Analysis Date: **11/14/2019** SeqNo: **1100495**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results.

Sample ID: **1911095-001APDS** SampType: **PDS** Units: **mg/Kg-dry** Prep Date: **11/12/2019** RunNo: **55348**
Client ID: **BATCH** Batch ID: **26475** Analysis Date: **11/14/2019** SeqNo: **1100496**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	652	18.8	469	239	88.0	75	125				

Work Order: 1911096
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

pH by EPA Method 9045

Sample ID: **MB-R55355**	SampType: **MBLK**	Units: **pH**	Prep Date: **11/15/2019**	RunNo: **55355**
Client ID: **MBLKS**	Batch ID: **R55355**		Analysis Date: **11/15/2019**	SeqNo: **1100708**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hydrogen Ion (pH)	7.77										

Sample ID: **LCS-R55355**	SampType: **LCS**	Units: **pH**	Prep Date: **11/15/2019**	RunNo: **55355**
Client ID: **LCSS**	Batch ID: **R55355**		Analysis Date: **11/15/2019**	SeqNo: **1100709**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hydrogen Ion (pH)	7.06		7.000	0	101	95	105				

Sample ID: **1911096-001ADUP**	SampType: **DUP**	Units: **pH**	Prep Date: **11/15/2019**	RunNo: **55355**
Client ID: **DU-01-110719**	Batch ID: **R55355**		Analysis Date: **11/15/2019**	SeqNo: **1100711**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hydrogen Ion (pH)	7.78							7.810	0.385	10	

Work Order: 1911096
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: **MB-26475**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **11/12/2019**		RunNo: **55329**		
Client ID: **MBLKS**	Batch ID: **26475**					Analysis Date: **11/14/2019**		SeqNo: **1100073**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	ND	39.7									

Sample ID: **LCS-26475**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **11/12/2019**		RunNo: **55329**		
Client ID: **LCSS**	Batch ID: **26475**					Analysis Date: **11/14/2019**		SeqNo: **1100074**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	392	39.1	390.6	0	100	80	120				

Sample ID: **1911095-001ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **11/12/2019**		RunNo: **55329**		
Client ID: **BATCH**	Batch ID: **26475**					Analysis Date: **11/14/2019**		SeqNo: **1100076**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	781	47.3						795.9	1.90	20	

Sample ID: **1911095-001AMS**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **11/12/2019**		RunNo: **55329**		
Client ID: **BATCH**	Batch ID: **26475**					Analysis Date: **11/14/2019**		SeqNo: **1100078**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	1,280	46.9	469.1	795.9	103	75	125				

Sample ID: **1911095-001AMSD**	SampType: **MSD**			Units: **mg/Kg-dry**		Prep Date: **11/12/2019**		RunNo: **55329**		
Client ID: **BATCH**	Batch ID: **26475**					Analysis Date: **11/14/2019**		SeqNo: **1100079**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	1,250	47.3	472.9	795.9	96.1	75	125	1,277	2.14	20	

Work Order: 1911096
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID: **LCS-26464** SampType: **LCS** Units: **mg/Kg** Prep Date: **11/12/2019** RunNo: **55250**
Client ID: **LCSS** Batch ID: **26464** Analysis Date: **11/12/2019** SeqNo: **1098257**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	544	20.0	500.0	0	109	65	135				
Surr: 2-Fluorobiphenyl	21.3		20.00		106	50	150				
Surr: o-Terphenyl	20.5		20.00		103	50	150				

Sample ID: **MB-26464** SampType: **MBLK** Units: **mg/Kg** Prep Date: **11/12/2019** RunNo: **55250**
Client ID: **MBLKS** Batch ID: **26464** Analysis Date: **11/12/2019** SeqNo: **1098258**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	20.0									
Heavy Oil	ND	50.0									
Surr: 2-Fluorobiphenyl	19.6		20.00		98.2	50	150				
Surr: o-Terphenyl	20.7		20.00		104	50	150				

Sample ID: **1911124-001ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **11/12/2019** RunNo: **55250**
Client ID: **BATCH** Batch ID: **26464** Analysis Date: **11/12/2019** SeqNo: **1098779**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	19.5						60.47	9.69	30	
Diesel Range Organics (C12-C24)	54.9	19.5						60.47	9.69	30	
Heavy Oil	ND	48.8						0		30	
Surr: 2-Fluorobiphenyl	20.7		19.51		106	50	150		0		
Surr: o-Terphenyl	20.1		19.51		103	50	150		0		

NOTES:
DRO - Indicates detections eluting from dodecane through tetracosane (~C12-C24). Chromatographic pattern does not resemble a known petroleum distillate.

Sample ID: **1911124-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **11/12/2019** RunNo: **55250**
Client ID: **BATCH** Batch ID: **26464** Analysis Date: **11/12/2019** SeqNo: **1098539**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	632	19.7	491.4	60.47	116	65	135				

Work Order: 1911096
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID: **1911124-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **11/12/2019** RunNo: **55250**
Client ID: **BATCH** Batch ID: **26464** Analysis Date: **11/12/2019** SeqNo: **1098539**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2-Fluorobiphenyl	22.0		19.65		112	50	150				
Surr: o-Terphenyl	20.6		19.65		105	50	150				

Sample ID: **1911124-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **11/12/2019** RunNo: **55250**
Client ID: **BATCH** Batch ID: **26464** Analysis Date: **11/12/2019** SeqNo: **1098540**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	685	20.1	502.7	60.47	124	65	135	631.7	8.10	30	
Surr: 2-Fluorobiphenyl	25.2		20.11		125	50	150		0		
Surr: o-Terphenyl	23.7		20.11		118	50	150		0		

Sample ID: **1911121-001ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **11/12/2019** RunNo: **55250**
Client ID: **BATCH** Batch ID: **26464** Analysis Date: **11/12/2019** SeqNo: **1098717**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	21.5						0		30	
Heavy Oil	ND	53.7						0		30	
Surr: 2-Fluorobiphenyl	22.1		21.46		103	50	150		0		
Surr: o-Terphenyl	23.0		21.46		107	50	150		0		

Work Order: 1911096
CLIENT: Floyd | Snider
Project: CL-Ellensburg

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID: **1911101-004ADUP** SampType: **DUP** Units: **wt%** Prep Date: **11/13/2019** RunNo: **55276**
Client ID: **BATCH** Batch ID: **R55276** Analysis Date: **11/13/2019** SeqNo: **1098885**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	10.9	0.500						10.88	0.113	20	

Sample ID: **1911096-002ADUP** SampType: **DUP** Units: **wt%** Prep Date: **11/13/2019** RunNo: **55276**
Client ID: **DU-03-110719** Batch ID: **R55276** Analysis Date: **11/13/2019** SeqNo: **1098900**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	20.8	0.500						19.62	5.91	20	

Sample Log-In Check List

Client Name:	**FS**	Work Order Number:	**1911096**
Logged by:	**Carissa True**	Date Received:	**11/8/2019 9:00:00 AM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Required ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler 1	5.3
Sample 1	0.1
Temp Blank 1	3.5

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Chain of Custody Record & Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 11/7/19 Page: of:

Project Name: CL-Ellensburg

Project No:

Collected by: Gabe Cisneros

Location: 1611 Canyon Rd, Ellensburg, WA

Report To (PM): Gabe Cisneros

PM Email: gabe.cisneros@FloydSnider.com

Laboratory Project No (internal): 1911096

Special Remarks: CC results to Tom Colligan

NPK = Nitrogen + Phosphorus + Potassium

Sample Disposal: ☐ Return to client ☐ Disposal by lab (after 30 days)

Client: Floyd|Snider

Address: 601 Union Street, Ste 600

City, State, Zip: Seattle, WA 98101

Telephone: 206-292-2078

Fax:

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	NPK - Selenium	pH	Comments
1	DU-01-110719	11/7	0900	S					X								X	X		Hold VOAs for BTEX/NAPH/Gas by 8260
2	DU-03-110719	11/7	0910	S					X								X	X		
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished x	Date/Time 11/8/19 0550	Received x	Date/Time 11/8/19 0900
Relinquished x	Date/Time	Received x	Date/Time

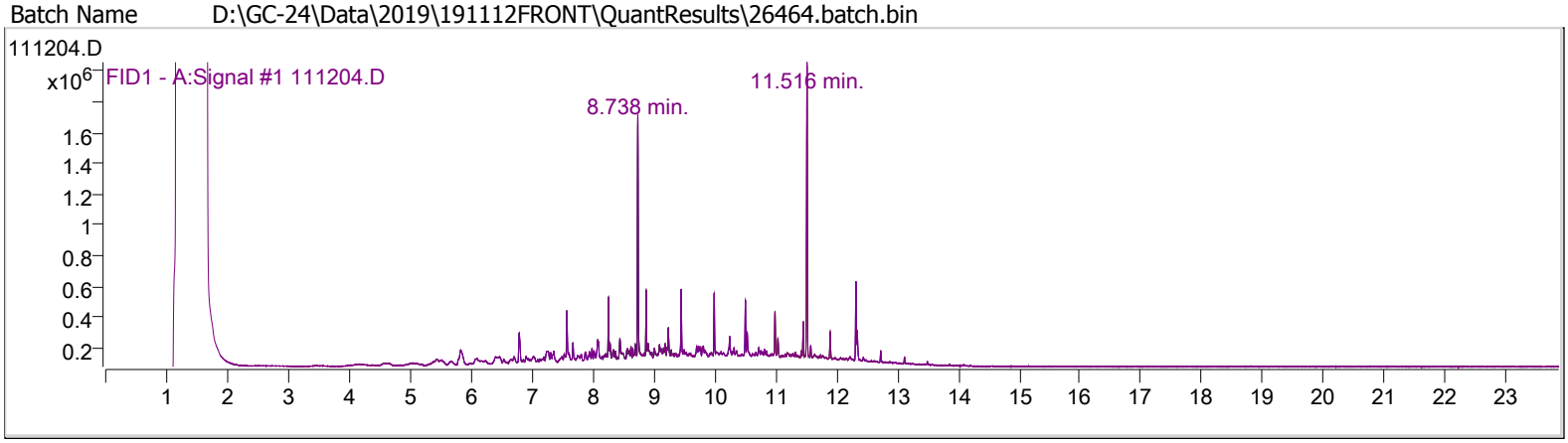
Turn-around Time:

- [x] Standard
- [ ] 3 Day
- [ ] 2 Day
- [ ] Next Day
- Same Day _____ (specify)

Quantitation Results Report

Agilent Technologies

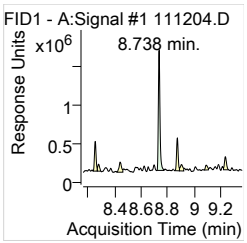
Data File	111204.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	11/12/2019 8:36:23 AM
Sample Name:	DX-CCV-		dualfid
Vial	2	Multiplier	1.00
DA Method File	DX-191111-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	11/11/2019 10:48:24 AM
Batch Name	D:\GC-24\Data\2019\191112FRONT\QuantResults\26464.batch.bin		



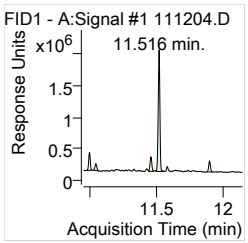
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	8.738	1328652	20.056	ug/mL		-0.026
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.516	1677644	19.453	ug/mL		-0.029
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.516	34062478	506.189	ug/mL	m	
Heavy Oil	17.500	0	0.000	ug/mL	md	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

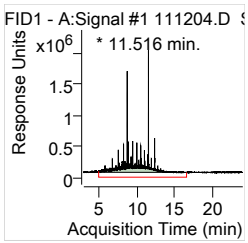
2-Fluorobiphenyl



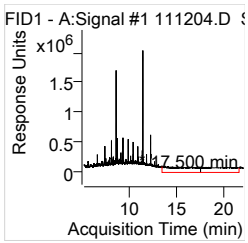
O-Terphenyl



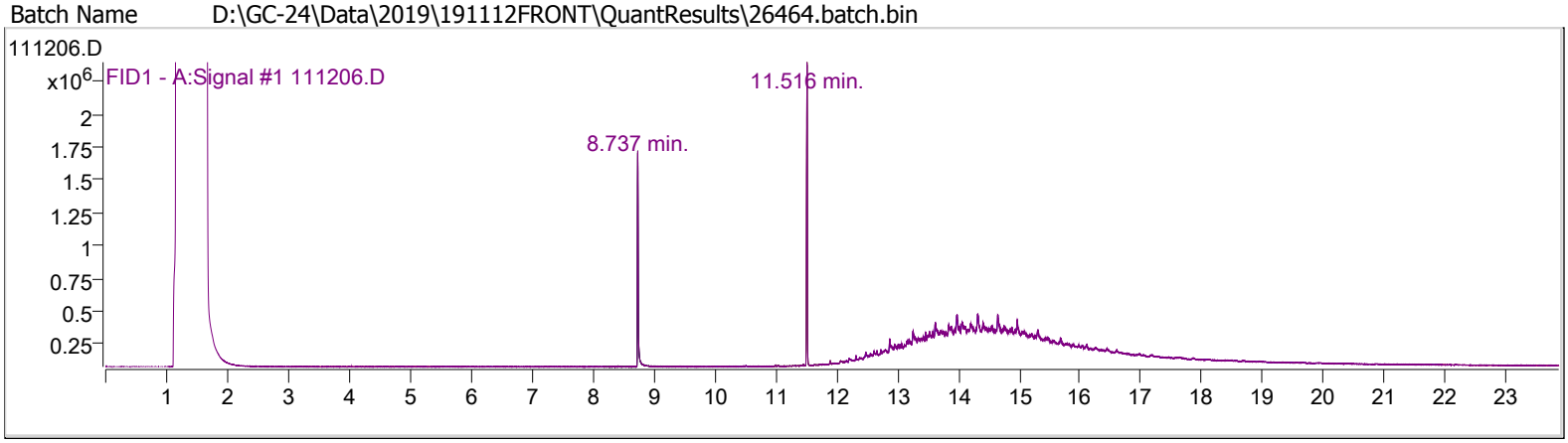
Diesel



Heavy Oil



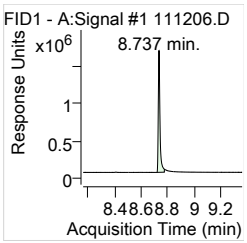
Data File	111206.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	11/12/2019 9:06:38 AM
Sample Name:	OIL-CCV-		dualfid
Vial	1	Multiplier	1.00
DA Method File	DX-191111-NWTPH_FINAL.m O-DXEX-S	Last Calib Update	11/11/2019 10:48:24 AM
Batch Name	D:\GC-24\Data\2019\191112FRONT\QuantResults\26464.batch.bin		



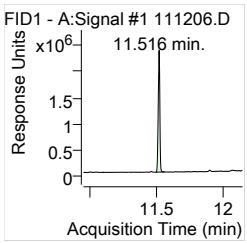
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	8.737	1457800	21.940	ug/mL		-0.027
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.516	1972356	22.905	ug/mL		-0.029
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	10.750	0	0.000	ug/mL	md	
Heavy Oil	14.319	61452338	976.581	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

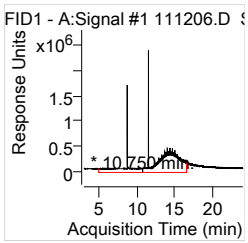
2-Fluorobiphenyl



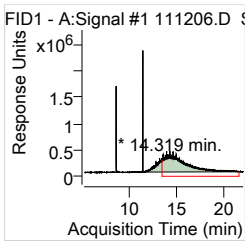
O-Terphenyl



Diesel



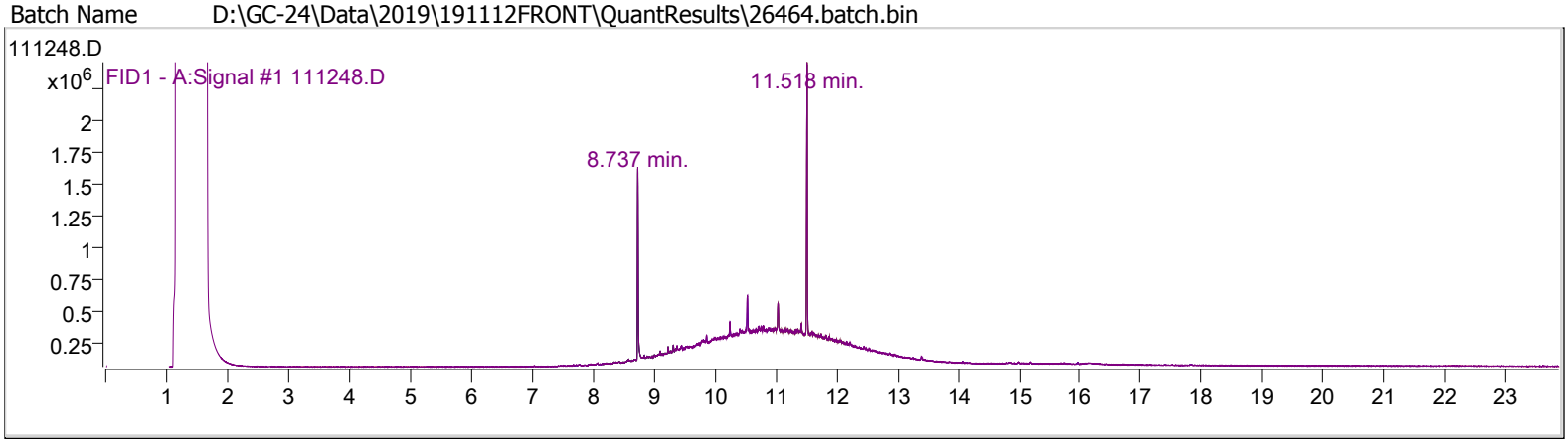
Heavy Oil



Quantitation Results Report

Agilent Technologies

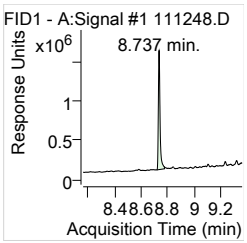
Data File	111248.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	11/12/2019 7:52:19 PM
Sample Name:	1911096-001A		dualfid
Vial	54	Multiplier	1.00
DA Method File	DX-191111-NWTPH_FINAL.m	Last Calib Update	11/11/2019 10:48:24 AM
	O-DXEX-S		
Batch Name	D:\GC-24\Data\2019\191112FRONT\QuantResults\26464.batch.bin		



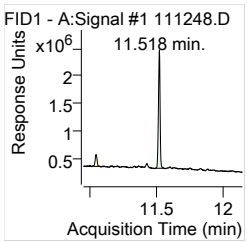
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	8.737	1342555	20.259	ug/mL		-0.027
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.518	1858477	21.571	ug/mL		-0.027
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.518	56013212	836.956	ug/mL	m	
Heavy Oil	16.699	840159	4.363	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

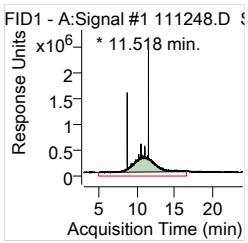
2-Fluorobiphenyl



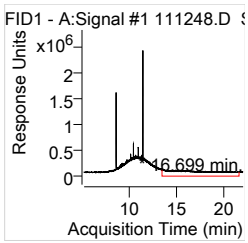
O-Terphenyl



Diesel



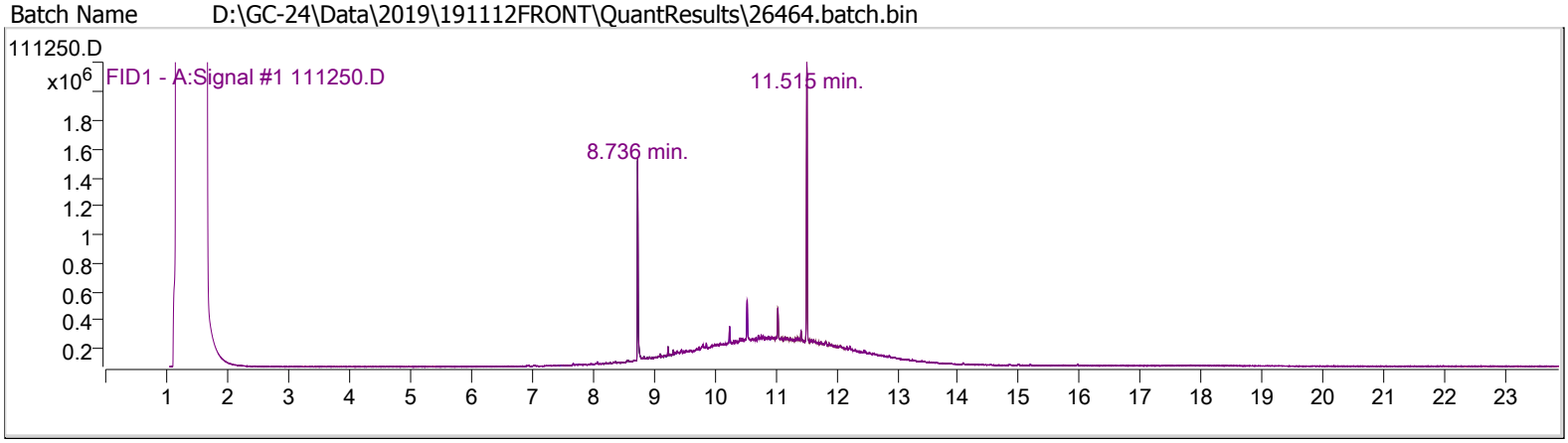
Heavy Oil



Quantitation Results Report

Agilent Technologies

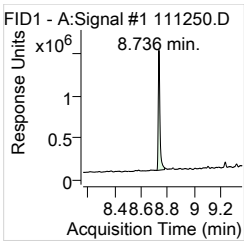
Data File	111250.D	Operator	DMW
Acq. Method	DXACQ050317sgtest2-190617	Acq. Date-Time	11/12/2019 8:22:41 PM
Sample Name:	1911096-002A		dualfid
Vial	55	Multiplier	1.00
DA Method File	DX-191111-NWTPH_FINAL.m	Last Calib Update	11/11/2019 10:48:24 AM
	O-DXEX-S		
Batch Name	D:\GC-24\Data\2019\191112FRONT\QuantResults\26464.batch.bin		



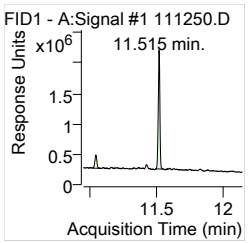
Compound	RT	Resp.	Conc.	Units		Dev(Min)
Internal Standards						
System Monitoring Compounds						
2-Fluorobiphenyl	8.736	1260370	19.060	ug/mL		-0.028
Spiked Amount:	Range: - %			Recovery = NA%		
O-Terphenyl	11.515	1670788	19.372	ug/mL		-0.030
Spiked Amount:	Range: - %			Recovery = NA%		
Target Compounds						
Diesel	11.515	39612403	589.819	ug/mL	m	
Heavy Oil	17.821	363175	0.000	ug/mL	m	

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

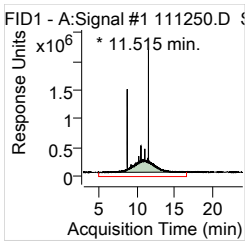
2-Fluorobiphenyl



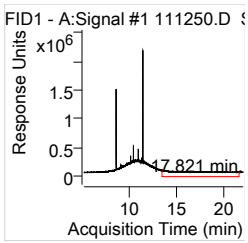
O-Terphenyl



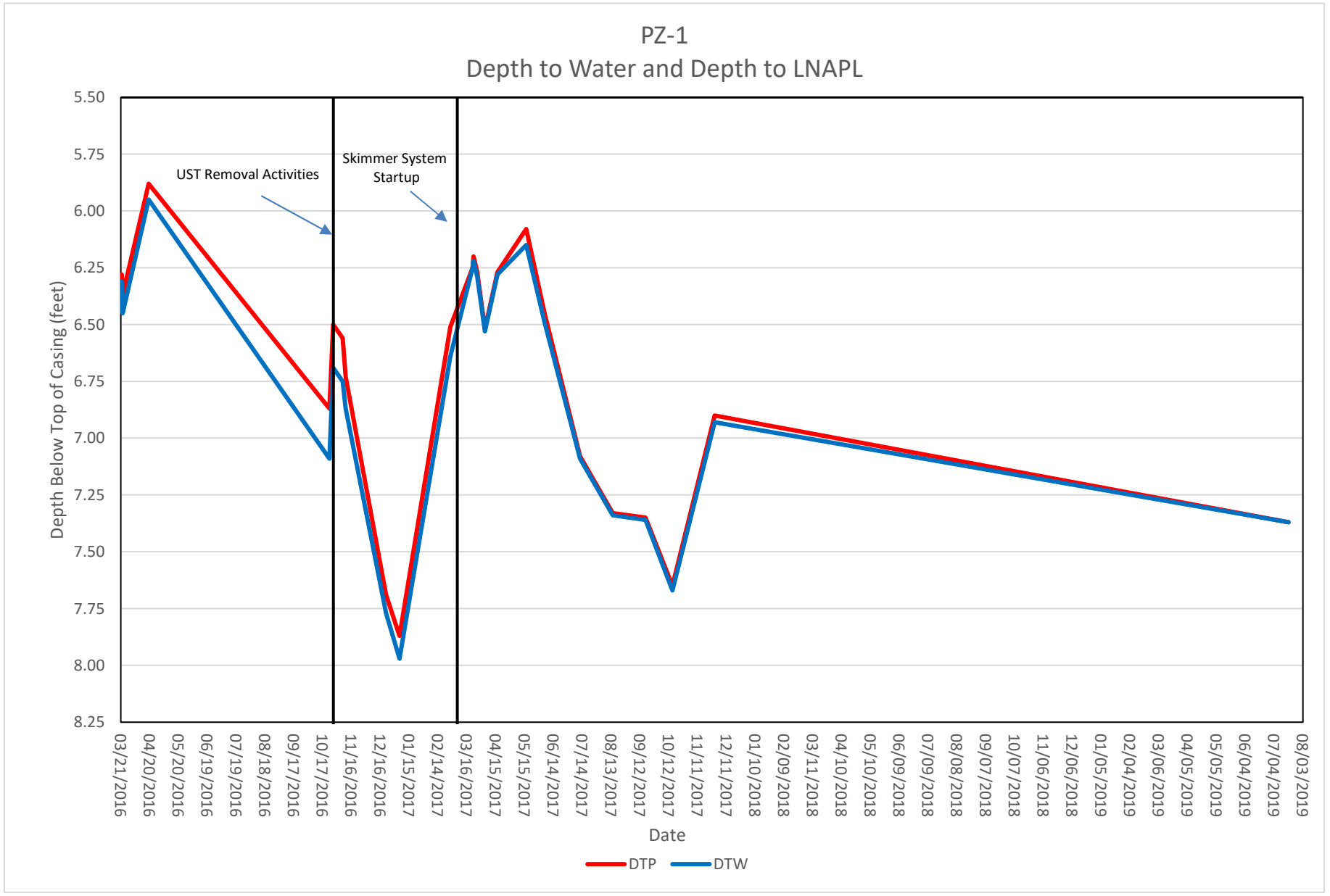
Diesel

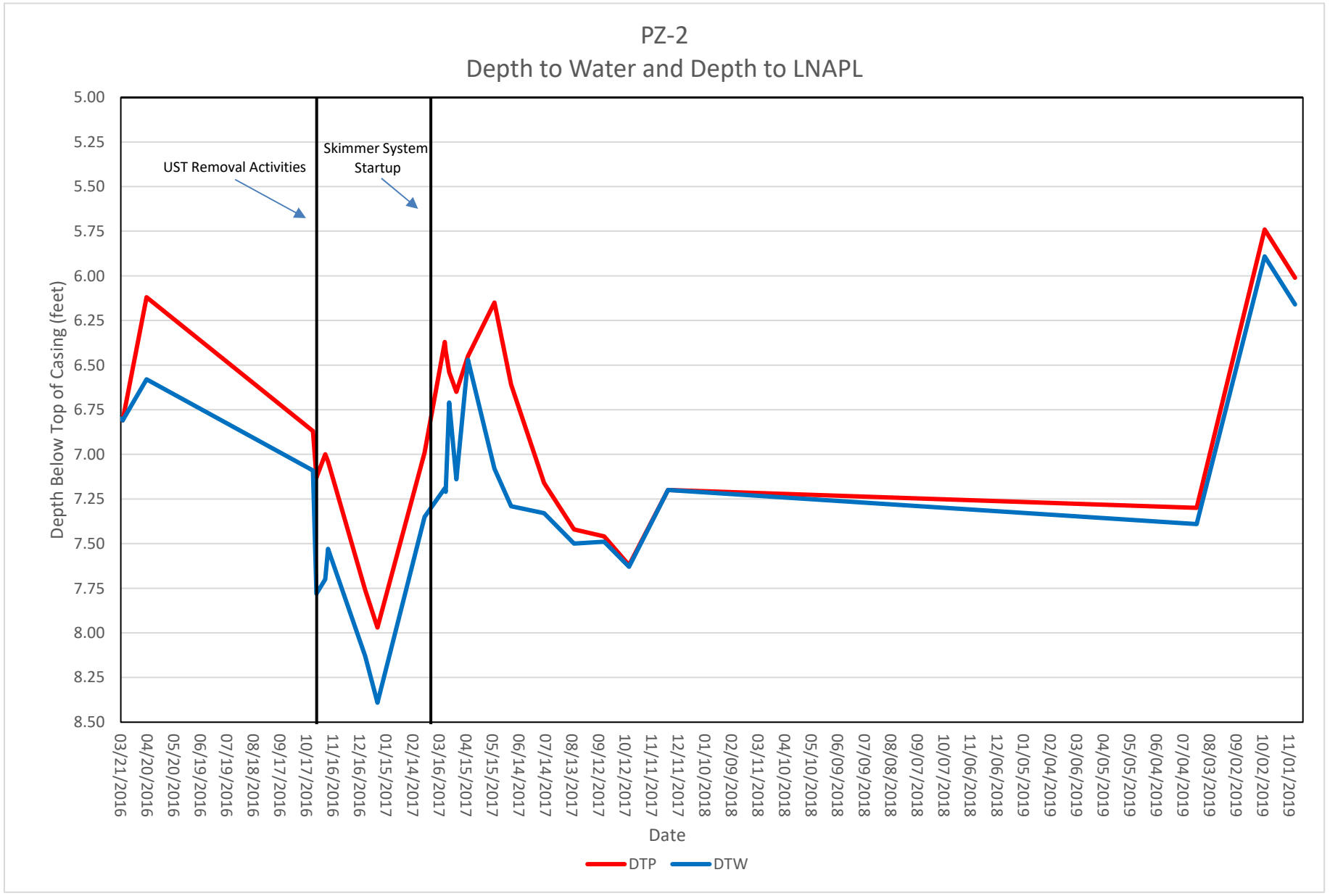


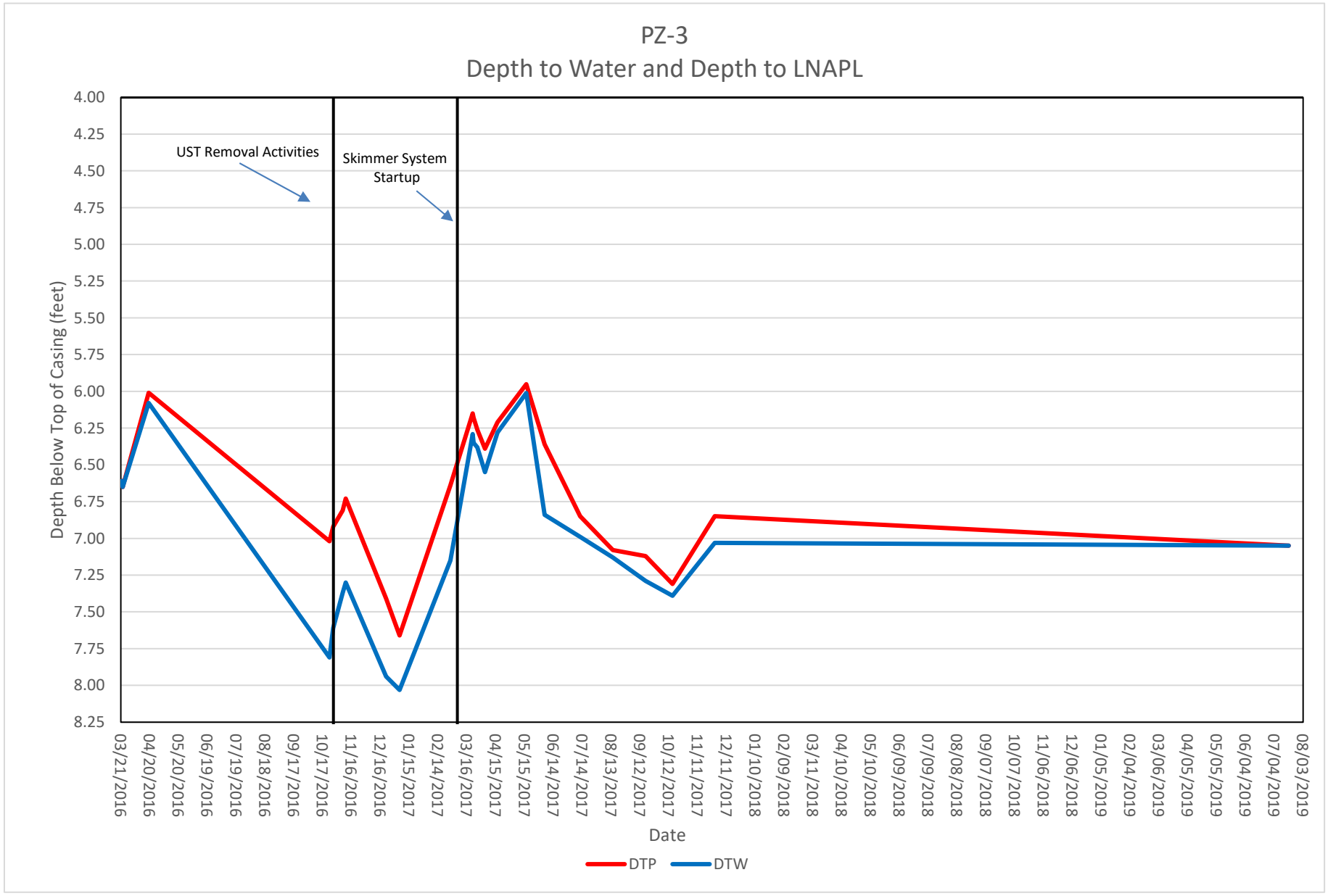
Heavy Oil

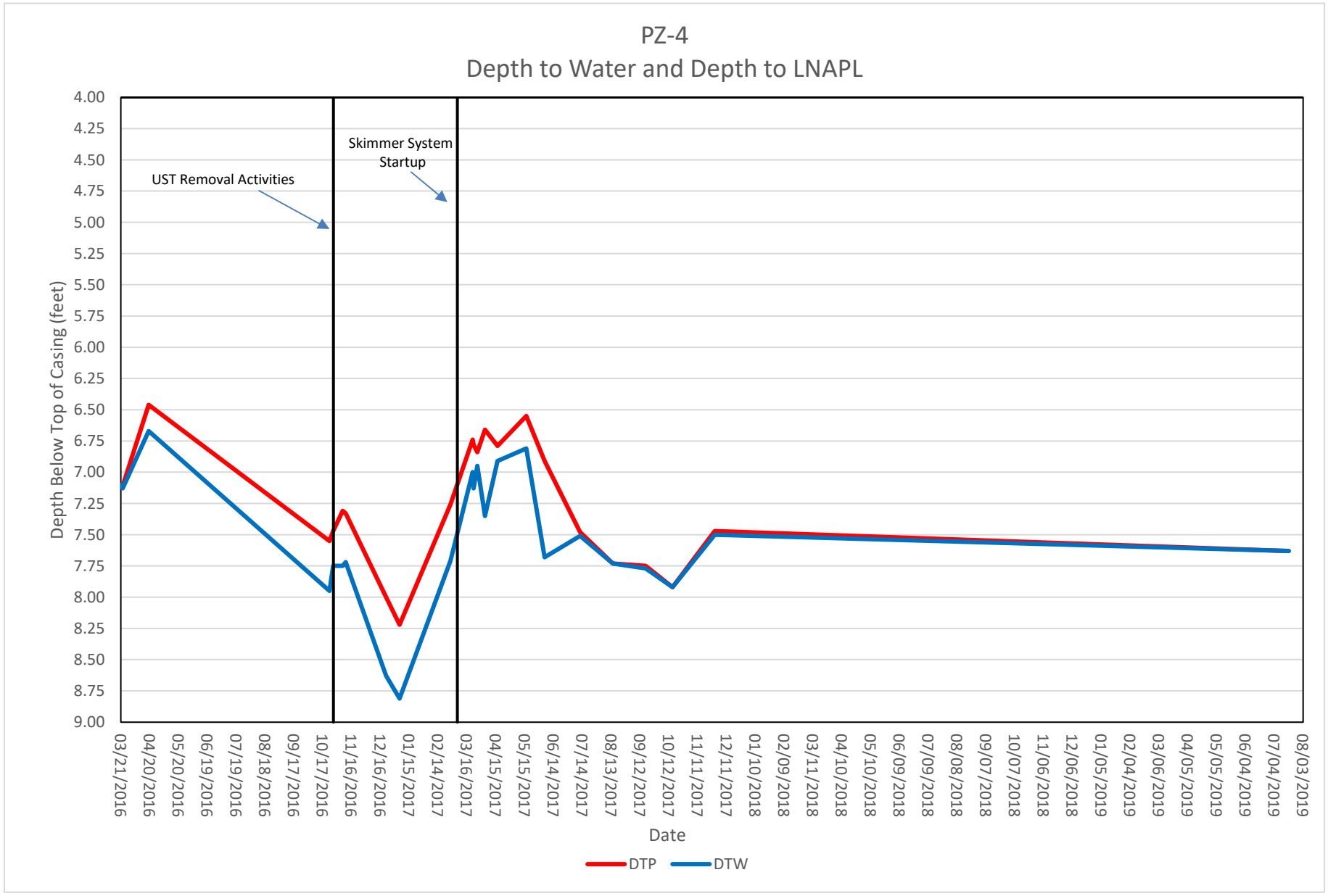


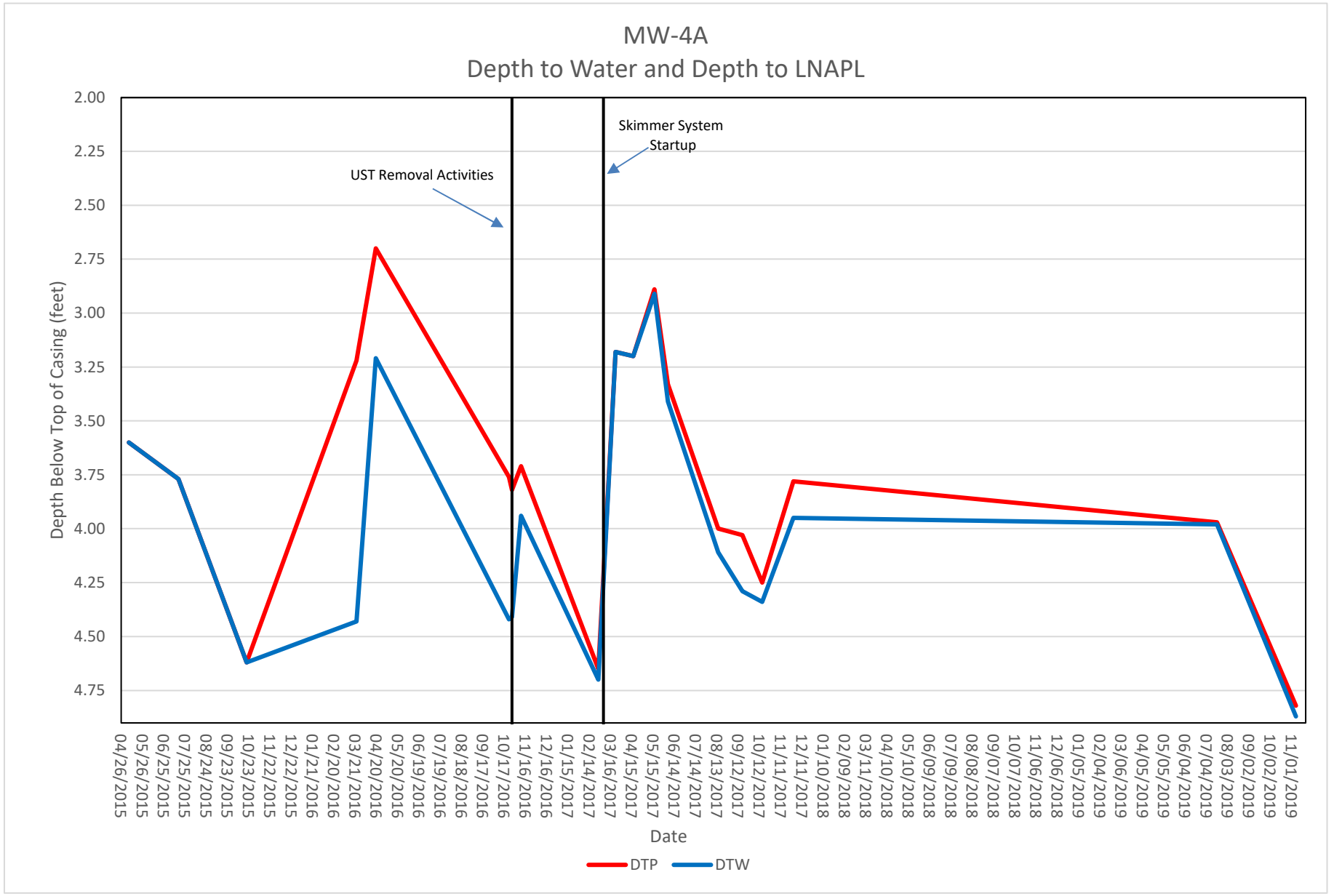
Attachment 3
LNAPL Depth Plots


PZ-1
Depth to Water and Depth to LNAPL
Depth Below Top of Casing (feet)
5.50
5.75
6.00
6.25
6.50
6.75
7.00
7.25
7.50
7.75
8.00
8.25
UST Removal Activities
Skimmer System Startup
03/21/2016
04/20/2016
05/20/2016
06/19/2016
07/19/2016
08/18/2016
09/17/2016
10/17/2016
11/16/2016
12/16/2016
01/15/2017
02/14/2017
03/16/2017
04/15/2017
05/15/2017
06/14/2017
07/14/2017
08/13/2017
09/12/2017
10/12/2017
11/11/2017
12/11/2017
01/10/2018
02/09/2018
03/11/2018
04/10/2018
05/10/2018
06/09/2018
07/09/2018
08/08/2018
09/07/2018
10/07/2018
11/06/2018
12/06/2018
01/05/2019
02/04/2019
03/06/2019
04/05/2019
05/05/2019
06/04/2019
07/04/2019
08/03/2019
Date
DTP
DTW


PZ-2
Depth to Water and Depth to LNAPL
Depth Below Top of Casing (feet)
5.00
5.25
5.50
5.75
6.00
6.25
6.50
6.75
7.00
7.25
7.50
7.75
8.00
8.25
8.50
UST Removal Activities
Skimmer System Startup
03/21/2016
04/20/2016
05/20/2016
06/19/2016
07/19/2016
08/18/2016
09/17/2016
10/17/2016
11/16/2016
12/16/2016
01/15/2017
02/14/2017
03/16/2017
04/15/2017
05/15/2017
06/14/2017
07/14/2017
08/13/2017
09/12/2017
10/12/2017
11/11/2017
12/11/2017
01/10/2018
02/09/2018
03/11/2018
04/10/2018
05/10/2018
06/09/2018
07/09/2018
08/08/2018
09/07/2018
10/07/2018
11/06/2018
12/06/2018
01/05/2019
02/04/2019
03/06/2019
04/05/2019
05/05/2019
06/04/2019
07/04/2019
08/03/2019
09/02/2019
10/02/2019
11/01/2019
Date
DTP
DTW


PZ-3
Depth to Water and Depth to LNAPL
Depth Below Top of Casing (feet)
4.00
4.25
4.50
4.75
5.00
5.25
5.50
5.75
6.00
6.25
6.50
6.75
7.00
7.25
7.50
7.75
8.00
8.25
UST Removal Activities
Skimmer System Startup
03/21/2016
04/20/2016
05/20/2016
06/19/2016
07/19/2016
08/18/2016
09/17/2016
10/17/2016
11/16/2016
12/16/2016
01/15/2017
02/14/2017
03/16/2017
04/15/2017
05/15/2017
06/14/2017
07/14/2017
08/13/2017
09/12/2017
10/12/2017
11/11/2017
12/11/2017
01/10/2018
02/09/2018
03/11/2018
04/10/2018
05/10/2018
06/09/2018
07/09/2018
08/08/2018
09/07/2018
10/07/2018
11/06/2018
12/06/2018
01/05/2019
02/04/2019
03/06/2019
04/05/2019
05/05/2019
06/04/2019
07/04/2019
08/03/2019
Date
DTP
DTW


PZ-4
Depth to Water and Depth to LNAPL
Depth Below Top of Casing (feet)
4.00
4.25
4.50
4.75
5.00
5.25
5.50
5.75
6.00
6.25
6.50
6.75
7.00
7.25
7.50
7.75
8.00
8.25
8.50
8.75
9.00
UST Removal Activities
Skimmer System Startup
03/21/2016
04/20/2016
05/20/2016
06/19/2016
07/19/2016
08/18/2016
09/17/2016
10/17/2016
11/16/2016
12/16/2016
01/15/2017
02/14/2017
03/16/2017
04/15/2017
05/15/2017
06/14/2017
07/14/2017
08/13/2017
09/12/2017
10/12/2017
11/11/2017
12/11/2017
01/10/2018
02/09/2018
03/11/2018
04/10/2018
05/10/2018
06/09/2018
07/09/2018
08/08/2018
09/07/2018
10/07/2018
11/06/2018
12/06/2018
01/05/2019
02/04/2019
03/06/2019
04/05/2019
05/05/2019
06/04/2019
07/04/2019
08/03/2019
Date
DTP
DTW


MW-4A
Depth to Water and Depth to LNAPL
Depth Below Top of Casing (feet)
2.00
2.25
2.50
2.75
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
UST Removal Activities
Skimmer System Startup
04/26/2015
05/26/2015
06/25/2015
07/25/2015
08/24/2015
09/23/2015
10/23/2015
11/22/2015
12/22/2015
01/21/2016
02/20/2016
03/21/2016
04/20/2016
05/20/2016
06/19/2016
07/19/2016
08/18/2016
09/17/2016
10/17/2016
11/16/2016
12/16/2016
01/15/2017
02/14/2017
03/16/2017
04/15/2017
05/15/2017
06/14/2017
07/14/2017
08/13/2017
09/12/2017
10/12/2017
11/11/2017
12/11/2017
01/10/2018
02/09/2018
03/11/2018
04/10/2018
05/10/2018
06/09/2018
07/09/2018
08/08/2018
09/07/2018
10/07/2018
11/06/2018
12/06/2018
01/05/2019
02/04/2019
03/06/2019
04/05/2019
05/05/2019
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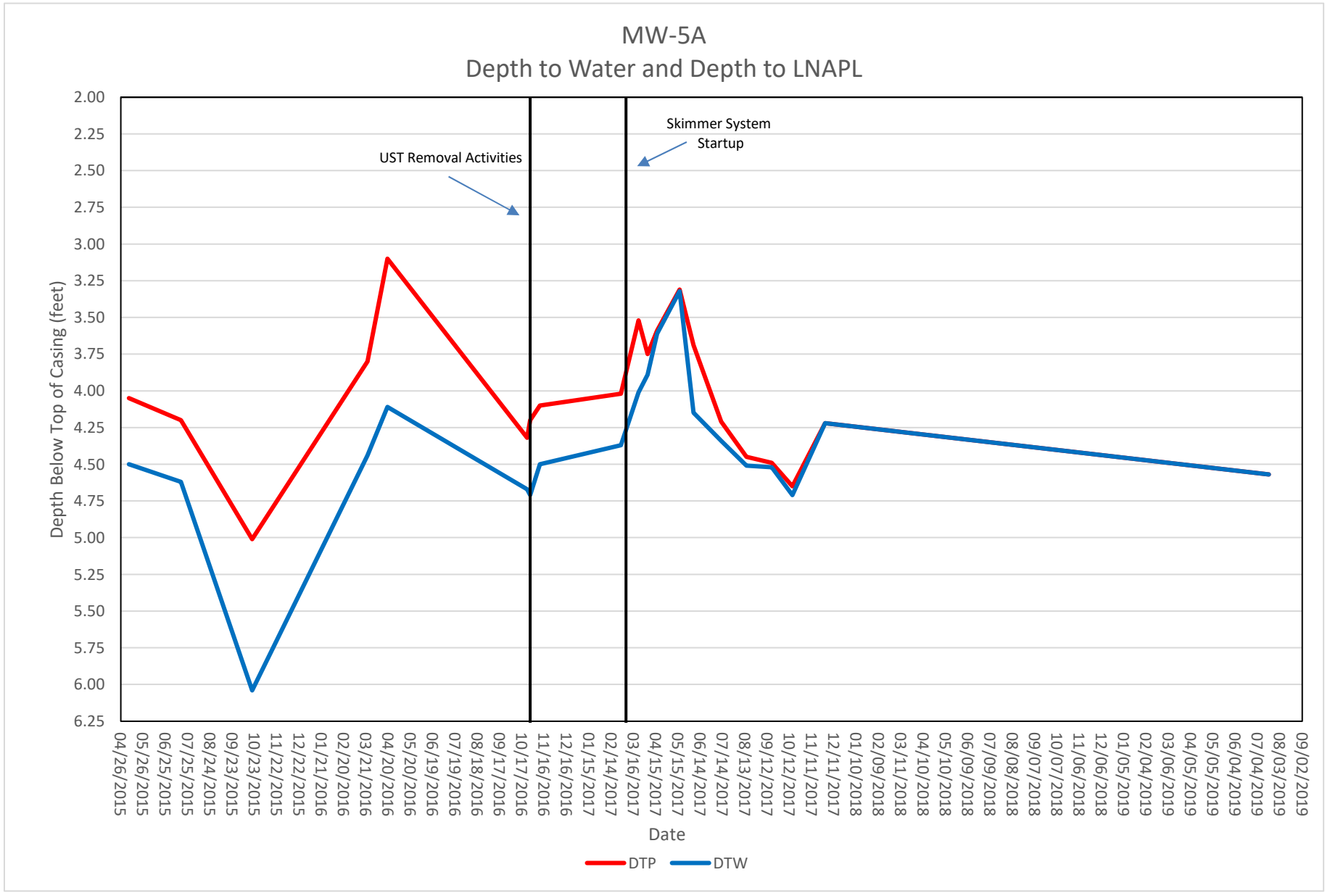
07/04/2019
08/03/2019
09/02/2019
10/02/2019
11/01/2019
Date
DTP
DTW


MW-5A
Depth to Water and Depth to LNAPL
Depth Below Top of Casing (feet)
2.00
2.25
2.50
2.75
3.00
3.25
3.50
3.75
4.00
4.25
4.50
4.75
5.00
5.25
5.50
5.75
6.00
6.25
UST Removal Activities
Skimmer System Startup
04/26/2015
05/26/2015
06/25/2015
07/25/2015
08/24/2015
09/23/2015
10/23/2015
11/22/2015
12/22/2015
01/21/2016
02/20/2016
03/21/2016
04/20/2016
05/20/2016
06/19/2016
07/19/2016
08/18/2016
09/17/2016
10/17/2016
11/16/2016
12/16/2016
01/15/2017
02/14/2017
03/16/2017
04/15/2017
05/15/2017
06/14/2017
07/14/2017
08/13/2017
09/12/2017
10/12/2017
11/11/2017
12/11/2017
01/10/2018
02/09/2018
03/11/2018
04/10/2018
05/10/2018
06/09/2018
07/09/2018
08/08/2018
09/07/2018
10/07/2018
11/06/2018
12/06/2018
01/05/2019
02/04/2019
03/06/2019
04/05/2019
05/05/2019
06/04/2019
07/04/2019
08/03/2019
09/02/2019
Date
DTP
DTW