Site Information

Closure Report
Glacier Federal Com 001H (08.08.21)
Eddy County, New Mexico
Unit A Sec 24 T26S R25E
Incident #: NAPP2122431964
32.034745°, -104.341834°

Crude Oil Release
Source: Equipment malfunction at the flare
Release Date: 8/8/2021
Volume Released: 0.5 bbls/Crude Oil
Volume Recovered: 0 bbls/Crude Oil

Prepared for:
Concho Operating, LLC
15 West London Rd
Loving, NM 88256

Prepared by:
NTG Environmental
701 Tradewinds Blvd
Suite C
Midland, TX 79706

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APPENDICES

701 Tradewinds Boulevard, Suite C
Midland, Texas 79706
Tel. 432.685.3898
www.ntglobal.com

November 5, 2021

Mike Bratcher
District Supervisor
Oil Conservation Division, District 2
811 S. First Street
Artesia, New Mexico 88210

Re: Closure Report
Glacier Federal Com 001H (08.08.21)
Concho Operating, LLC
Site Location: Unit A, S24, T26S, R25E
(Lat 32.034745º, Long -104.341834º)
Eddy County, New Mexico

Mr. Bratcher:

On behalf of Concho Operating, LLC (COG), New Tech Global Environmental, LLC (NTGE) has prepared this letter to document site assessment and remediation activities for the Glacier Federal Com 001H (08.08.2021). The site is located at 32.034745º, -104.341834º within Unit A, S24, T26S, R25E, and approximately 9.87 miles Southeast of Whites City, New Mexico, in Eddy County (Figures 1 and 2).

Background

Based on the initial C-141 obtained from the New Mexico Oil Conservation Division (NMOCD), the release was discovered on August 8, 2021. It resulted in the release of approximately half of a barrel (0.5) of crude oil from a flare fire. Approximately zero (0) barrels of produced water were recovered. The initial C-141 form is attached in Appendix A.

Site Characterization

The site is located within a critical karst area. Based on a review of the New Mexico Office of State Engineers and USGS databases, there is no known water well source within a ½ mile radius of the location. The nearest identified well is located approximately 0.98 miles Southwest of the site in S24, T26S, R25E. The well has a reported depth to groundwater of 12 feet below ground surface (ft bgs). A copy of the associated *Point of Diversion Summary* report is attached in Appendix B.

Regulatory Criteria

In accordance with the NMOCD regulatory criteria established in 19.15.29.12 NMAC, the following criteria were utilized in assessing the site.

- Benzene: 10 milligrams per kilogram (mg/kg).
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg.
- TPH: 100 mg/kg (GRO + DRO + MRO).
- Chloride 600 mg/kg.

Site Assessment

On September 9, 2021, NTG Environmental conducted site assessment activities to assess soil impacts resulting from the release. A total of one (1) confirmation sample was collected (CS-1), and four (4) sidewall samples (SW-1 through SW-4) were collected every 200 square feet to ensure proper removal of the contaminated soils. The soil sample locations are shown on Figure 3.

For chemical analysis, the soil samples were collected and placed directly into laboratory-provided sample containers, stored on ice, and transported under the proper chain-of-custody protocol to Xenco Laboratories in Midland, Texas. The samples were analyzed for total petroleum hydrocarbons (TPH) by EPA method 8015 modified benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021B, and chloride by EPA method 300.0. The laboratory reports containing analytical methods, results, and chain-of-custody documents are attached in Appendix C. The analytical results are provided in Table 1.

Referring to Table 1, the area of SW-1 and SW-4 showed concentrations of TPH exceeding the regulatory limit of 100 mg/kg with concentrations of 966 mg/kg and 581 mg/kg at depths ranging from the surface to 0.5 ft bgs. All other samples collected are below the NMOCD regulatory criteria for TPH, BTEX, and chloride.

Remediation Activities and Confirmation Sampling

New Tech Global Environmental personnel returned on site on October 26, 2021, after 0.5' of contaminated material had been removed from the release area. NTGE collected confirmation samples. All areas were excavated to a depth of 0.5' below the surface and sidewalls extended.

A total of one (1) confirmation sample was collected (CS-1), and four (4) sidewall samples (SW-1 through SW-4) were collected every 200 square feet to ensure proper removal of the contaminated soils. The soil sample locations are shown on Figure 3. All collected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B, and chloride by EPA method 4500. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1. The excavation depths and confirmation sample locations are shown in Figure 4.

All the final confirmation samples were below the 19.15.29.12 NMAC criteria. Refer to Table 1.

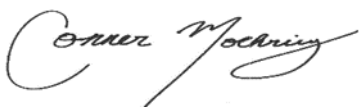
Once the remediation activities were completed, the excavated areas were backfilled with clean material to surface grade. Approximately five (5) cubic yards of material were excavated and transported offsite for proper disposal.

Conclusions

Based on the finding of the assessment and the analytical results, no further actions are required at the site. The final C-141 is attached, and Concho Resources formally requests closure of the spill. If you have any questions regarding this report or need additional information, please contact us at 432-813-0263.

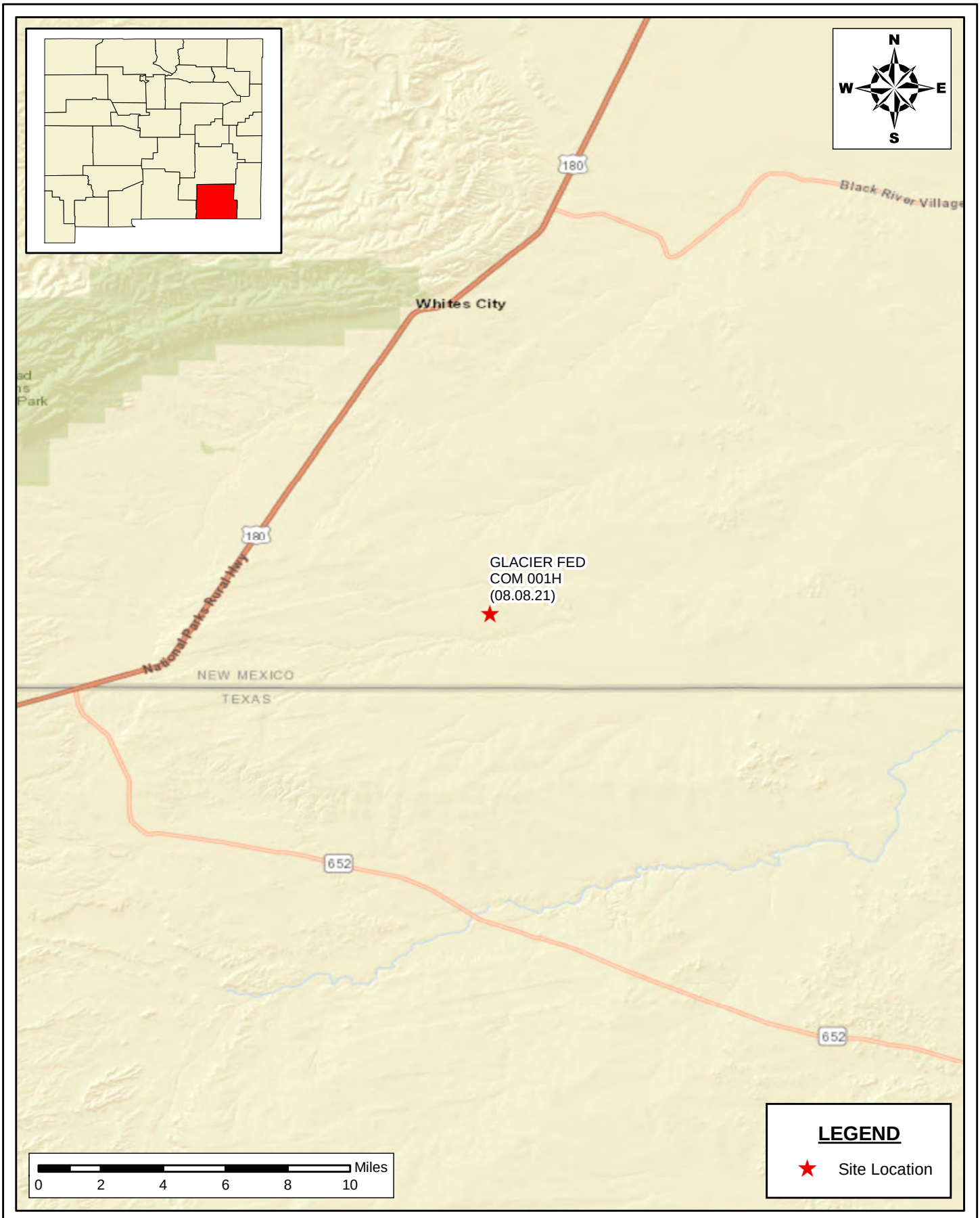
Sincerely,
NTG Environmental

Mike Carmona
Senior Project Manager



Conner Moehring
Project Manager

Figures



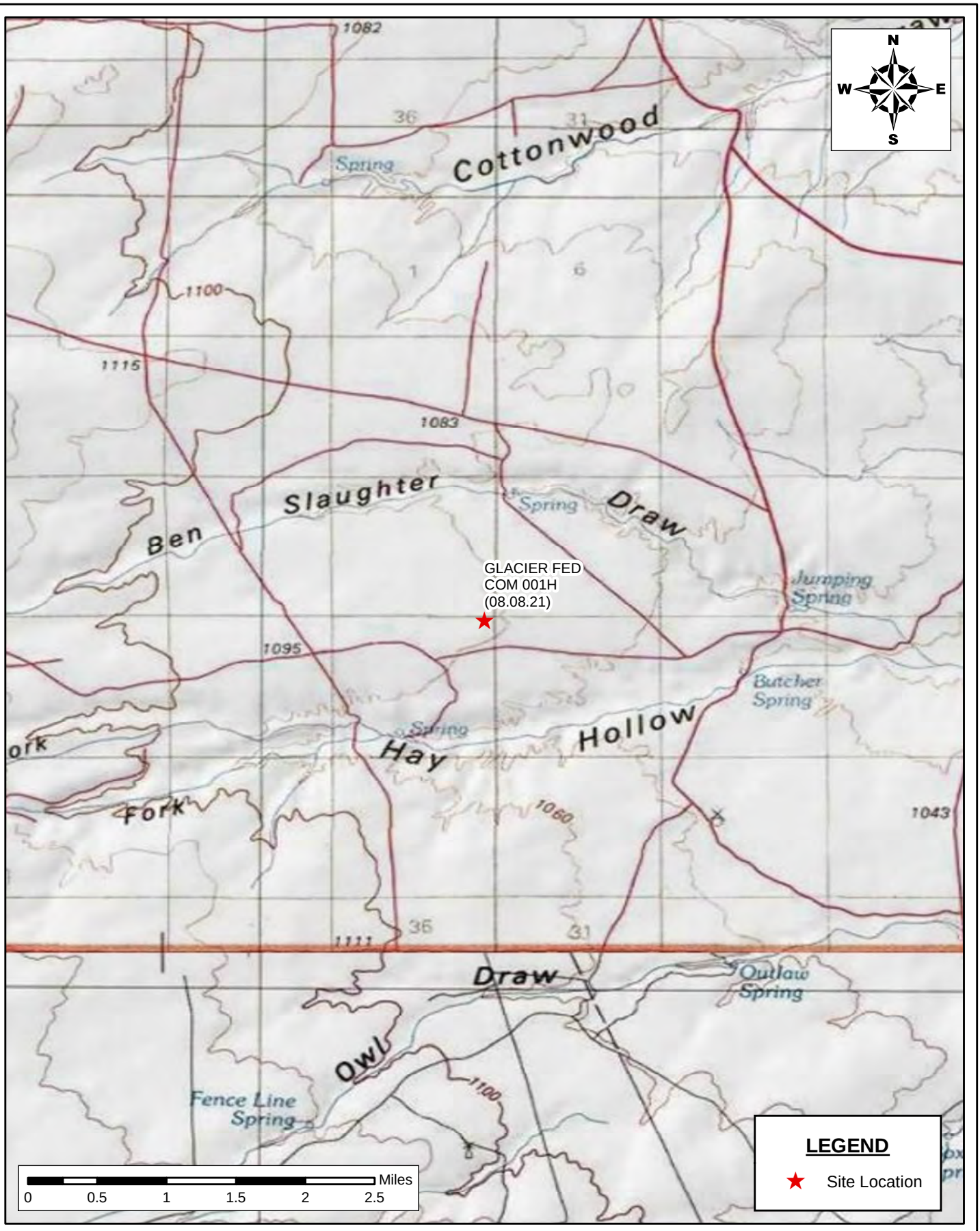
SITE LOCATION MAP
COG OPERATING, LLC
GLACIER FED COM 001H (08.08.21)
EDDY COUNTY, NEW MEXICO
32.034745°, -104.341834°

SCALE: As Shown | Date: 11/4/2021 | Project #:214635

New Tech Global Environmental, LLC
911 Regional Park Drive
Houston, Texas 77060
T - 281.872.9300
F - 281.872.4521
Web: www.ntglobal.com

NOTES:
1. Base Image: ESRI Maps & Data 2013
2. Map Projection: NAD 1983

DRAWING NUMBER:
FIGURE 1
SHEET NUMBER:
1 of 1



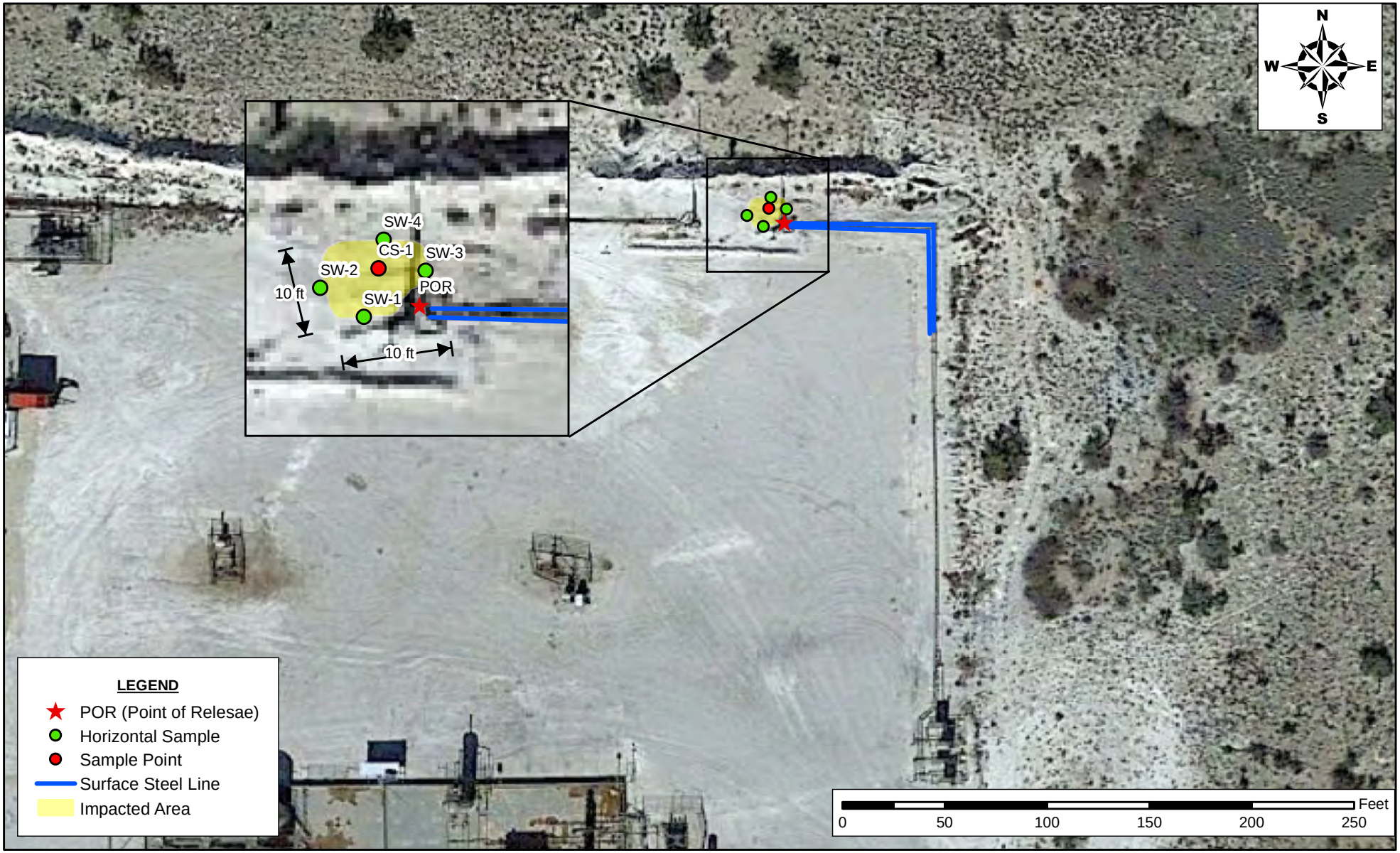
AREA MAP
COG OPERATING, LLC
GLACIER FED COM 001H (08.08.21)
EDDY COUNTY, NEW MEXICO
32.034745°, -104.341834°

SCALE: As Shown	08/23/2021	PROJECT #: 214635

New Tech Global Environmental, LLC
911 Regional Park Drive
Houston, Texas 77060
T - 281.872.9300
F - 281.872.4521
Web: www.ntglobal.com

NOTES:
1. Base Image: ESRI Maps & Data 2013
2. Map Projection: NAD 1983 UTM Zone 13N

DRAWING NUMBER:
FIGURE 2
SHEET NUMBER:
1 of 1



1 of 1

SHEET NUMBER

FIGURE 3

DRAWING NUMBER

SAMPLE LOCATION MAP
COG OPERATING, LLC
GLACIER FED COM 001H (08.08.21)
EDDY COUNTY, NEW MEXICO
32.034745°, -104.341834°

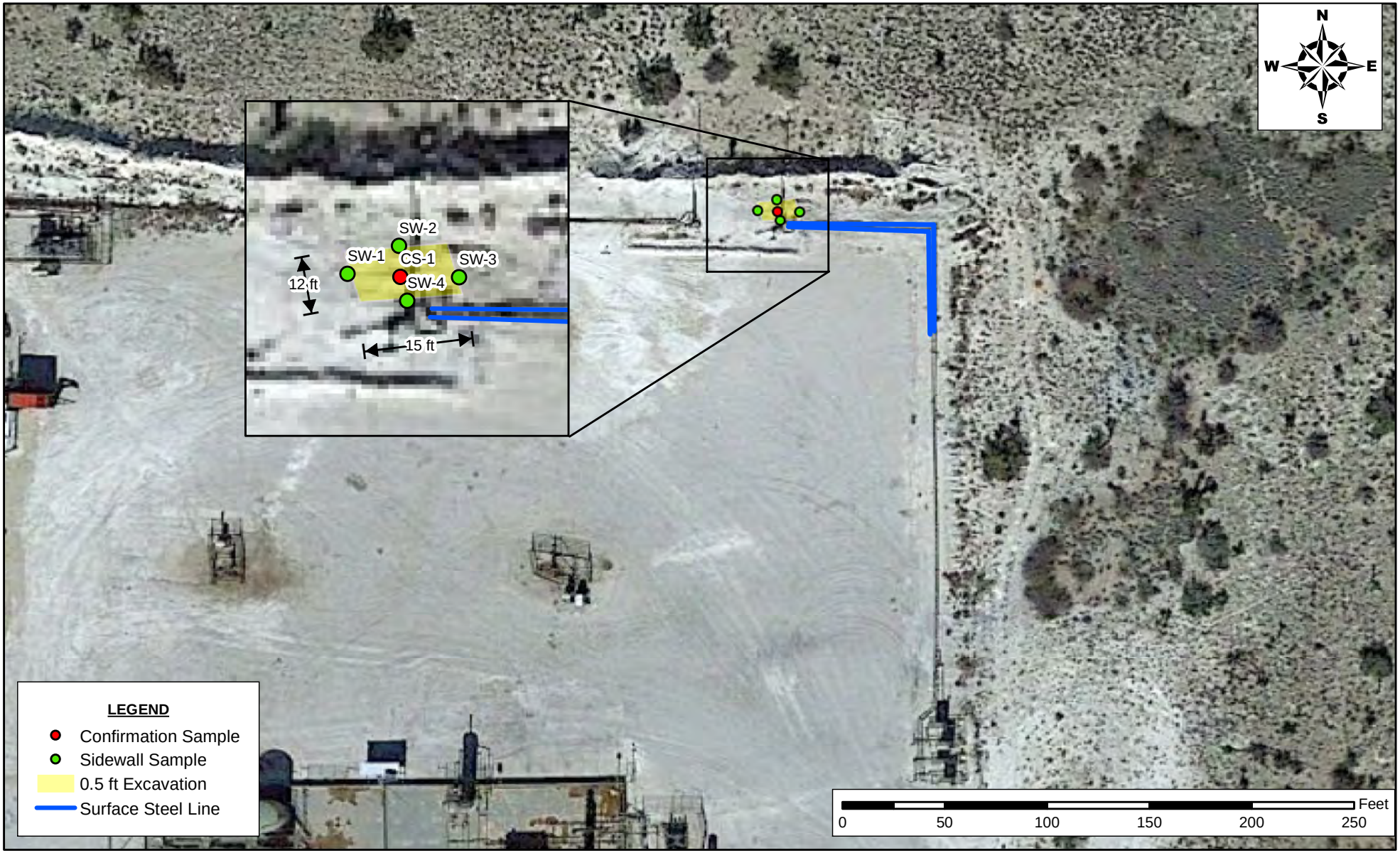
SCALE: AS SHOWN | DATE: 11/05/2021 | PROJECT #:214635

New Tech Global Environmental, LLC
911 Regional Park Drive
Houston, Texas 77060
T - 281.872.9300
F - 281.872.4521
Web: www.ntglobal.com

NOTES:

1. Base Image: Google Earth 2017
2. Map Projection: NAD 1983

Document Path: P:\2021 PROJECTS\COG\RSC\214635 Glacier Federal Com 001H (08.08.21)\7 - Figures\MXD\Figure_3_Sample LocationMap_11421.mxd



1 of 1

SHEET NUMBER

FIGURE 4

DRAWING NUMBER

EXCAVATION DEPTH MAP
COG OPERATING, LLC
GLACIER FED COM 001H (08.08.21)
EDDY COUNTY, NEW MEXICO
32.034745°, -104.341834°

SCALE: AS SHOWN | DATE: 11/05/2021 | PROJECT #:214635

New Tech Global Environmental, LLC
911 Regional Park Drive
Houston, Texas 77060
T - 281.872.9300
F - 281.872.4521
Web: www.ntglobal.com

NOTES:

1. Base Image: Google Earth 2017
2. Map Projection: NAD 1983

Document Path: P:\2021 PROJECTS\COG\RSC\214635 Glacier Federal Com 001H (08.08.21)\7 - Figures\MXD\Figure_4_Excavation Depth Map_11421.mxd

Tables

Table 1
Concho Operating, LLC
Glacier Federal Com 001H (08.08.21)
Eddy County, New Mexico

Sample ID	Date	Sample Depth (ft)	TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			GRO	DRO	MRO	Total						
CS-1	9/9/2021	0-0.5	<50.0	<50.0	<50.0	<50.0	0.00437	0.00536	0.00690	0.0355	0.0521	<4.97
	10/26/2021	-	<49.9	<49.9	<49.8	<49.9	<0.00202	<0.00202	<0.00202	<0.00403	<0.00403	57.4
SW-1	9/9/2021	0-0.5	<50.0	**966**	<50.0	**966**	0.00281	<0.00202	<0.00202	0.0192	0.0220	9.58
	10/26/2021	-	<49.9	<49.9	<49.9	<49.9	<0.00202	<0.00202	<0.00202	<0.00404	<0.00404	<50.4
SW-2	9/9/2021	0-0.5	<49.8	68.0	<49.8	68.0	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	<5.04
	10/26/2021	-	<50.0	<50.0	<50.0	<50.0	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	<50.3
SW-3	9/9/2021	0-0.5	<49.7	**581**	<49.7	**581**	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	<5.00
	10/26/2021	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	<49.7
SW-4	9/9/2021	0-0.5	<49.8	<49.8	<49.8	<49.8	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<4.98
	10/26/2021	-	<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	<0.00200	<0.00400	<0.00400	<49.9
Regulatory Limits						**100 mg/kg**	**10 mg/kg**	-	-	-	**50 mg/kg**	**600 mg/kg**

(-) Not Analyzed

A – Table 1 - 19.15.29 NMAC

mg/kg - milligram per kilogram

TPH- Total Petroleum Hydrocarbons

ft-feet

Removed

Photo Log

PHOTOGRAPHIC LOG

COG Operating, LLC

Photograph No. 1

Facility: Glacier Federal Com 001H (08.08.2021)

County: Eddy County, New Mexico

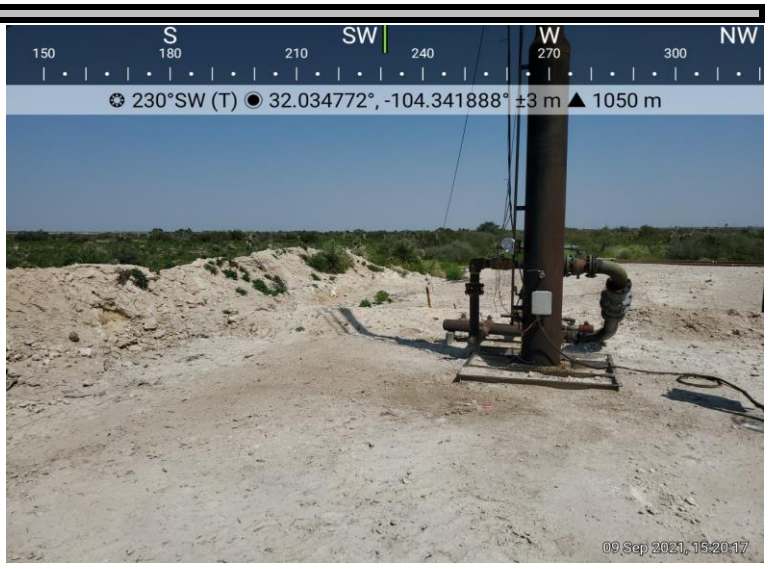
Description:
Veiw South, Area of Confirmation Sample 1

Photograph No. 2

Facility: Glacier Federal Com 001H (08.08.2021)

County: Eddy County, New Mexico

Description:
Veiw Southwest, Area of Confirmation Sample 1



Photograph No. 3

Facility: Glacier Federal Com 001H (08.08.2021)

County: Eddy County, New Mexico

Description:
Veiw East, Area of Confirmation Sample 1

Appendix A

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NAPP2122431964
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	COG Operating, LLC	OGRID	229137
Contact Name	Jacqui Harris	Contact Telephone	(575) 496-0780
Contact email	Jacqui.Harris@ConocoPhillips.com	Incident # *(assigned by OCD)*	NAPP2122431964
Contact mailing address	600 West Illinois Avenue, Midland, Texas 79701		

Location of Release Source

Latitude 32.034607 Longitude -104.341882

(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Glacier Federal Com 001H	Site Type	Tank Battery
Date Release Discovered	August 8, 2021	API# *(if applicable)*	30-015-43131

Unit Letter	Section	Township	Range	County
A	24	26S	25E	Eddy

Surface Owner: ☐ State ■ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

■ Crude Oil	Volume Released (bbls) 0.5	Volume Recovered (bbls) 0
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The release was caused by a FWKO lossing pressure, swamping out leading to the flare fire. No fluids were recovered due to the fire burning off any standing fluids.

The release resulted in a flare fire on the pad.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2122431964
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? The release involved a fire.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Immediate notice was given by Jacqui Harris via e-mail August 9, 2021 at 11:20 am to ocd.enviro@state.nm.us and blm_nm_cfo_spill@blm.gov .

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Brittany N. Esparza Title: Environmental Technician

Signature: Brittany Esparza Date: 8/12/2021

email: Brittany.Esparza@ConocoPhillips.com Telephone: (432) 221-0398

OCD Only

Received by: Ramona Marcus Date: 8/13/2021

L48 Spill Volume Estimate Form

Facility Name & Number:	Glacier Fed Com 1H
Asset Area:	
Release Discovery Date & Time:	6/8/2021
Release Type:	Oil
Provide any known details about the event:	Flare Fire

Spill Calculation - On Pad Surface Pool Spill

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Deepest point in each of the areas (in.)	No. of boundaries of "shore" in each area	Estimated *Pool* Area (sq. ft.)	Estimated Average Depth (ft.)	Estimated volume of each pool area (bbl.)	Penetration allowance (ft.)	Total Estimated Volume of Spill (bbl.)	Percentage of Oil if Spilled Fluid is a Mixture	Total Estimated Volume of Spilled Oil (bbl.)	Total Estimated Volume of Spilled Liquid other than Oil (bbl.)
Rectangle A	20.0	30.0	0.25	4	600.000	0.005	0.556	0.000	0.556			
Rectangle B					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Rectangle C					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Rectangle D					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Rectangle E					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Rectangle F					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Rectangle G					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Rectangle H					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Rectangle I					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Rectangle J					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
								Total Volume Release:	0.556			

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 41579
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rmarcus	None	8/13/2021

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2122431964
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	12 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☑ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☑ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☑ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☑ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☑ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☑ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☑ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☑ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☑ Yes ☐ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

- ☑ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☑ Data table of soil contaminant concentration data
- ☑ Depth to water determination
- ☑ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☑ Photographs including date and GIS information
- ☑ Topographic/Aerial maps
- ☑ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2122431964
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Jacqui Harris Title: Sr. Environmental Engineer

Signature: Jacqui Harris Date: 11/8/21

email: Jacqui.Harris@ConocoPhillips.com Telephone: (575) 496-0780

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2122431964
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☑ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☑ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☑ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☑ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Jacqui Harris Title: Sr. Environmental Engineer

Signature: Jacqui Harris Date: 11/8/21

email: Jacqui.Harris@ConocoPhillips.com Telephone: (575) 496-0780

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

Appendix B

Nearest Water Well

COG Operating, LLC

Legend

- 0.50 Mile Radius
- 0.98 Miles
- 1.01 Miles
- 1.19 Miles
- NMSEO Water Well
- Glacier Fed Com 001H (08.08.21)

Glacier Fed Com 001H (08.08.21)

10' - Drilled 2015

12' - Drilled 2017

23' - Drilled 2020

N

3000 ft

Critical Karst

COG Operating, LLC

Legend

- CRIT
- Glacier Fed Com 001H (08.08.21)

724

724

425

424

Glacier Fed Com 001H (08.08.21)

Google Earth

N

2 mi

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 01924	C	ED	3	2	4	26	26S	25E	560338	3541769*			
C 02366	CUB	ED		4	4	12	26S	25E	562027	3546345*	80	150	-70
C 02367	CUB	ED		2	2	17	26S	25E	555560	3545912*	30	40	-10
C 02368	CUB	ED		1	1	18	26S	25E	552738	3545893*	60	10	50
C 02369	CUB	ED		3	1	27	26S	25E	557611	3542260*	30	6	24
C 02370	CUB	ED		1	1	36	26S	25E	560846	3541060*	60	7	53
C 02790	CUB	ED	3	2	1	25	26S	25E	561146	3542586*	100		
C 03321	C	ED	4	1	1	11	26S	25E	559375	3547431	150	23	127
C 03816 POD1	C	ED	1	4	3	24	26S	25E	561116	3543177	80	10	70
C 04047 POD1	CUB	ED	1	4	3	24	26S	25E	561202	3543172	100	12	88

Average Depth to Water: **32 feet**
Minimum Depth: **6 feet**
Maximum Depth: **150 feet**

Record Count: 10

PLSS Search:

Township: 26S **Range:** 25E

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer
Point of Diversion Summary

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
	C 04047 POD1	1	4	3	24	26S	25E	561202	3543172

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)
(NAD83 UTM in meters)

Driller License: 1690 **Driller Company:** VISION RESOURCES, INC

Driller Name: JASON MALEY

Drill Start Date: 06/14/2017 **Drill Finish Date:** 06/15/2017 **Plug Date:**

Log File Date: 06/26/2017 **PCW Rcv Date:** **Source:** Shallow

Pump Type: **Pipe Discharge Size:** **Estimated Yield:** 200 GPM

Casing Size: 6.00 **Depth Well:** 100 feet **Depth Water:** 12 feet

Water Bearing Stratifications:	Top	Bottom	Description
	10	65	Other/Unknown

Casing Perforations:	Top	Bottom
	20	100

New Mexico Office of the State Engineer
Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
	C 03816 POD1	1	4	3	24	26S	25E	561116	3543177

Driller License: 1690 **Driller Company:** VISION RESOURCES, INC

Driller Name: MALEY, JASON

Drill Start Date: 06/19/2015 **Drill Finish Date:** 06/19/2015 **Plug Date:**

Log File Date: 06/29/2015 **PCW Rcv Date:** **Source:** Shallow

Pump Type: **Pipe Discharge Size:** **Estimated Yield:**

Casing Size: 6.00 **Depth Well:** 80 feet **Depth Water:** 10 feet

Water Bearing Stratifications:	Top	Bottom	Description
	10	70	Other/Unknown

Casing Perforations:	Top	Bottom
	20	80

New Mexico Office of the State Engineer
Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
22386	C 03811 POD1	4	1	4	19	26S	26E	563746	3543436

Driller License: 1690 **Driller Company:** VISION RESOURCES, INC

Driller Name: JASON MALEY

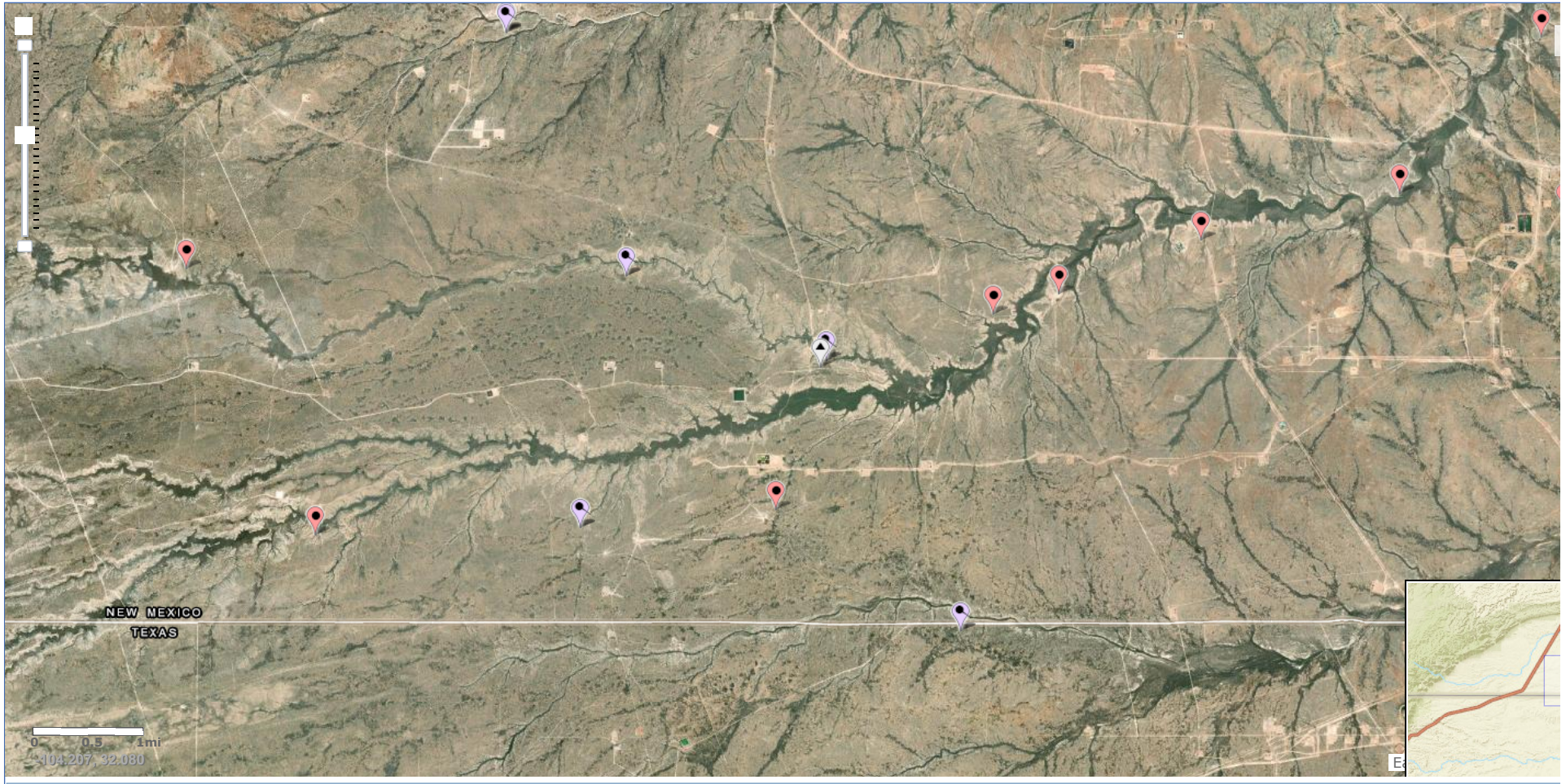
Drill Start Date:	05/18/2020	**Drill Finish Date:**	05/19/2020	**Plug Date:**	
Log File Date:	06/08/2020	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	100 GPM
Casing Size:	6.00	**Depth Well:**	75 feet	**Depth Water:**	23 feet

Water Bearing Stratifications:	Top	Bottom	Description
	15	75	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	20	75

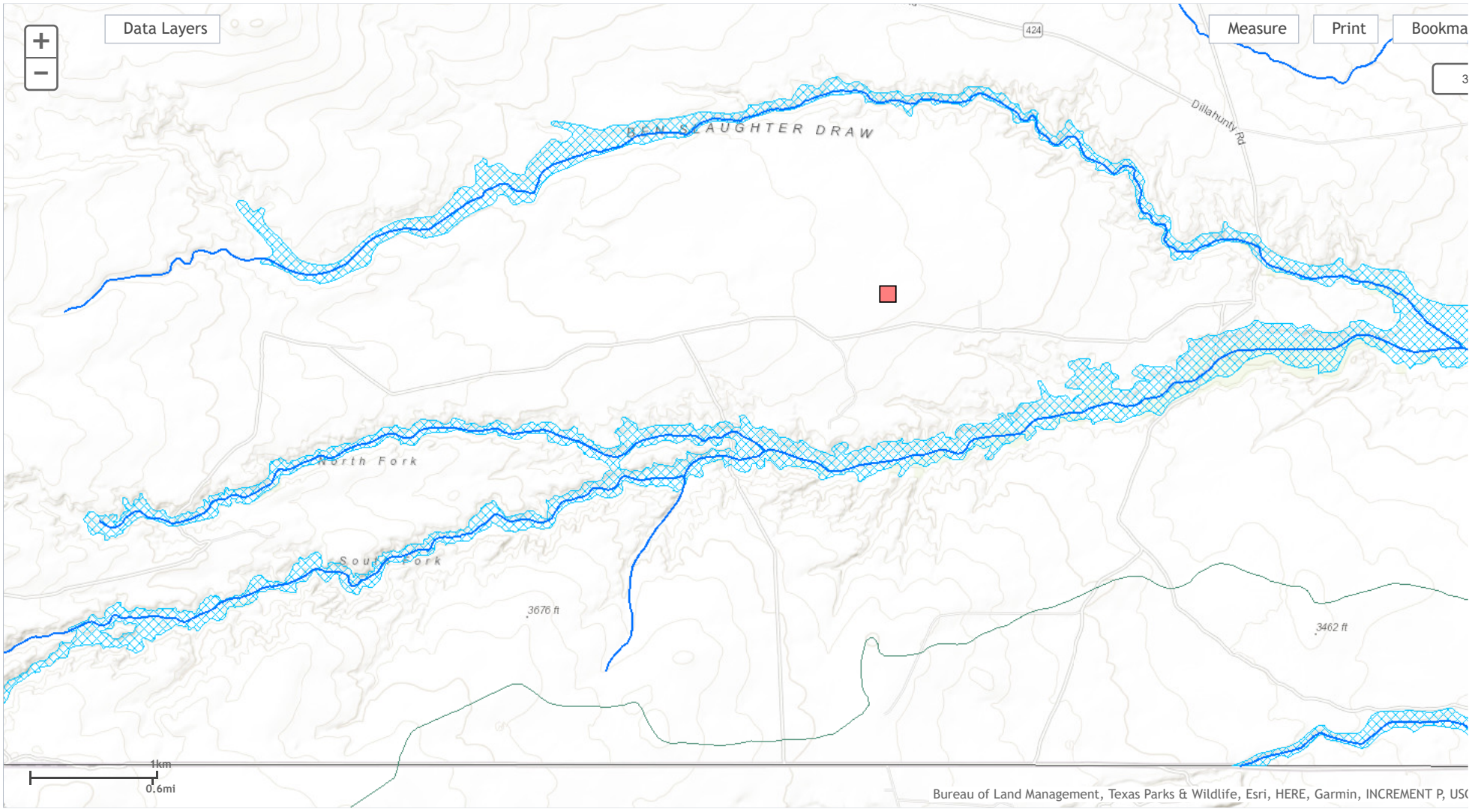
USGS science for a changing world

National Water Information System: Mapper



Site Information

NFHL Web Mapping Application



Appendix C

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Xenco, Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-5965-1
Laboratory Sample Delivery Group: 214635
Client Project/Site: Glacier Federal Com 001H (8.8.21)

For:
NT Global
701 Tradewinds Blvd
Midland, Texas 79706

Attn: Mike Carmona

JKRAMER

Authorized for release by:
9/14/2021 11:52:56 AM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

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

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

Client: NT Global
Project/Site: Glacier Federal Com 001H (8.8.21)

Laboratory Job ID: 880-5965-1
SDG: 214635

Table of Contents

Definitions/Glossary

Client: NT Global
Project/Site: Glacier Federal Com 001H (8.8.21)

Job ID: 880-5965-1
SDG: 214635

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: NT Global
Project/Site: Glacier Federal Com 001H (8.8.21)

Job ID: 880-5965-1
SDG: 214635

Job ID: 880-5965-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative
880-5965-1

Receipt
The samples were received on 9/10/2021 11:31 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.1°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-7647 and analytical batch 880-7728 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-7752 and analytical batch 880-7777 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: CS-1 (0.5') (880-5965-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

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

Client Sample Results

Client: NT Global
Project/Site: Glacier Federal Com 001H (8.8.21)

Job ID: 880-5965-1
SDG: 214635

Client Sample ID: CS-1 (0.5')

Lab Sample ID: 880-5965-1
Matrix: Solid
Date Collected: 09/09/21 00:00
Date Received: 09/10/21 11:31

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00437**		0.00201		mg/Kg		09/10/21 13:05	09/11/21 09:19	1
Toluene	**0.00536**		0.00201		mg/Kg		09/10/21 13:05	09/11/21 09:19	1
Ethylbenzene	**0.00690**		0.00201		mg/Kg		09/10/21 13:05	09/11/21 09:19	1
m-Xylene & p-Xylene	**0.0272**		0.00402		mg/Kg		09/10/21 13:05	09/11/21 09:19	1
o-Xylene	**0.00831**		0.00201		mg/Kg		09/10/21 13:05	09/11/21 09:19	1
Xylenes, Total	**0.0355**		0.00402		mg/Kg		09/10/21 13:05	09/11/21 09:19	1
Total BTEX	**0.0521**		0.00402		mg/Kg		09/10/21 13:05	09/11/21 09:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*145*	*S1+*	*70 - 130*	*09/10/21 13:05*	*09/11/21 09:19*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*09/10/21 13:05*	*09/11/21 09:19*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/10/21 14:25	09/13/21 19:58	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/10/21 14:25	09/13/21 19:58	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/10/21 14:25	09/13/21 19:58	1
Total TPH	<50.0	U	50.0		mg/Kg		09/10/21 14:25	09/13/21 19:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*09/10/21 14:25*	*09/13/21 19:58*	*1*
o-Terphenyl	*119*		*70 - 130*	*09/10/21 14:25*	*09/13/21 19:58*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.97	U	4.97		mg/Kg			09/14/21 09:01	1

Client Sample ID: SW-1

Lab Sample ID: 880-5965-2
Matrix: Solid
Date Collected: 09/09/21 00:00
Date Received: 09/10/21 11:31

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00281**		0.00202		mg/Kg		09/10/21 13:05	09/11/21 09:40	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/10/21 13:05	09/11/21 09:40	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/10/21 13:05	09/11/21 09:40	1
m-Xylene & p-Xylene	**0.0136**		0.00403		mg/Kg		09/10/21 13:05	09/11/21 09:40	1
o-Xylene	**0.00560**		0.00202		mg/Kg		09/10/21 13:05	09/11/21 09:40	1
Xylenes, Total	**0.0192**		0.00403		mg/Kg		09/10/21 13:05	09/11/21 09:40	1
Total BTEX	**0.0220**		0.00403		mg/Kg		09/10/21 13:05	09/11/21 09:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*09/10/21 13:05*	*09/11/21 09:40*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*09/10/21 13:05*	*09/11/21 09:40*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/10/21 14:25	09/13/21 20:19	1

Eurofins Xenco, Midland

Client Sample Results

Client: NT Global
Project/Site: Glacier Federal Com 001H (8.8.21)

Job ID: 880-5965-1
SDG: 214635

Client Sample ID: SW-1

Lab Sample ID: 880-5965-2
Matrix: Solid
Date Collected: 09/09/21 00:00
Date Received: 09/10/21 11:31

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	**966**		50.0		mg/Kg		09/10/21 14:25	09/13/21 20:19	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/10/21 14:25	09/13/21 20:19	1
Total TPH	**966**		50.0		mg/Kg		09/10/21 14:25	09/13/21 20:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*09/10/21 14:25*	*09/13/21 20:19*	*1*
o-Terphenyl	*126*		*70 - 130*	*09/10/21 14:25*	*09/13/21 20:19*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.58**		4.95		mg/Kg			09/14/21 09:06	1

Client Sample ID: SW-2

Lab Sample ID: 880-5965-3
Matrix: Solid
Date Collected: 09/09/21 00:00
Date Received: 09/10/21 11:31

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/10/21 12:07	09/12/21 02:16	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/10/21 12:07	09/12/21 02:16	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/10/21 12:07	09/12/21 02:16	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/10/21 12:07	09/12/21 02:16	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/10/21 12:07	09/12/21 02:16	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/10/21 12:07	09/12/21 02:16	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		09/10/21 12:07	09/12/21 02:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*09/10/21 13:05*	*09/11/21 10:00*	*1*
1,4-Difluorobenzene (Surr)	*224*	*S1+*	*70 - 130*	*09/10/21 13:05*	*09/11/21 10:00*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/10/21 14:25	09/13/21 20:40	1
Diesel Range Organics (Over C10-C28)	**68.0**		49.8		mg/Kg		09/10/21 14:25	09/13/21 20:40	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/10/21 14:25	09/13/21 20:40	1
Total TPH	**68.0**		49.8		mg/Kg		09/10/21 14:25	09/13/21 20:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*09/10/21 14:25*	*09/13/21 20:40*	*1*
o-Terphenyl	*123*		*70 - 130*	*09/10/21 14:25*	*09/13/21 20:40*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.04	U	5.04		mg/Kg			09/14/21 09:12	1

Client Sample Results

Client: NT Global
Project/Site: Glacier Federal Com 001H (8.8.21)

Job ID: 880-5965-1
SDG: 214635

Client Sample ID: SW-3

Lab Sample ID: 880-5965-4
Matrix: Solid
Date Collected: 09/09/21 00:00
Date Received: 09/10/21 11:31

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/10/21 13:05	09/11/21 10:21	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/10/21 13:05	09/11/21 10:21	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/10/21 13:05	09/11/21 10:21	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/10/21 13:05	09/11/21 10:21	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/10/21 13:05	09/11/21 10:21	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/10/21 13:05	09/11/21 10:21	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		09/10/21 13:05	09/11/21 10:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*155*	*S1+*	*70 - 130*	*09/10/21 13:05*	*09/11/21 10:21*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*09/10/21 13:05*	*09/11/21 10:21*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		09/10/21 14:25	09/13/21 21:01	1
Diesel Range Organics (Over C10-C28)	**581**		49.7		mg/Kg		09/10/21 14:25	09/13/21 21:01	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		09/10/21 14:25	09/13/21 21:01	1
Total TPH	**581**		49.7		mg/Kg		09/10/21 14:25	09/13/21 21:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*09/10/21 14:25*	*09/13/21 21:01*	*1*
o-Terphenyl	*121*		*70 - 130*	*09/10/21 14:25*	*09/13/21 21:01*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/14/21 09:18	1

Client Sample ID: SW-4

Lab Sample ID: 880-5965-5
Matrix: Solid
Date Collected: 09/09/21 00:00
Date Received: 09/10/21 11:31

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/10/21 13:05	09/11/21 10:41	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/10/21 13:05	09/11/21 10:41	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/10/21 13:05	09/11/21 10:41	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/10/21 13:05	09/11/21 10:41	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/10/21 13:05	09/11/21 10:41	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/10/21 13:05	09/11/21 10:41	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		09/10/21 13:05	09/11/21 10:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*09/10/21 13:05*	*09/11/21 10:41*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*09/10/21 13:05*	*09/11/21 10:41*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/10/21 14:25	09/13/21 21:22	1

Client Sample Results

Client: NT Global
Project/Site: Glacier Federal Com 001H (8.8.21)

Job ID: 880-5965-1
SDG: 214635

Client Sample ID: SW-4

Date Collected: 09/09/21 00:00
Date Received: 09/10/21 11:31

Lab Sample ID: 880-5965-5

Matrix: Solid

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/10/21 14:25	09/13/21 21:22	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/10/21 14:25	09/13/21 21:22	1
Total TPH	<49.8	U	49.8		mg/Kg		09/10/21 14:25	09/13/21 21:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*09/10/21 14:25*	*09/13/21 21:22*	*1*
o-Terphenyl	*122*		*70 - 130*	*09/10/21 14:25*	*09/13/21 21:22*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.98	U	4.98		mg/Kg			09/14/21 09:23	1

Surrogate Summary

Client: NT Global
Project/Site: Glacier Federal Com 001H (8.8.21)

Job ID: 880-5965-1
SDG: 214635

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-5806-A-38-E MS	Matrix Spike	113	104
880-5806-A-38-F MSD	Matrix Spike Duplicate	111	110
880-5961-A-1-B MS	Matrix Spike	101	82
880-5961-A-1-C MSD	Matrix Spike Duplicate	107	93
880-5965-1	CS-1 (0.5')	145 S1+	98
880-5965-2	SW-1	118	78
880-5965-3	SW-2	107	224 S1+
880-5965-4	SW-3	155 S1+	106
880-5965-5	SW-4	105	109
LCS 880-7647/1-A	Lab Control Sample	107	105
LCS 880-7752/1-A	Lab Control Sample	106	92
LCSD 880-7647/2-A	Lab Control Sample Dup	109	102
LCSD 880-7752/2-A	Lab Control Sample Dup	106	84
MB 880-7646/5-A	Method Blank	105	100
MB 880-7647/5-A	Method Blank	104	97
MB 880-7751/5-A	Method Blank	124	102
MB 880-7752/5-A	Method Blank	133 S1+	97

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-5964-A-1-D MS	Matrix Spike	101	109
880-5964-A-1-E MSD	Matrix Spike Duplicate	98	103
880-5965-1	CS-1 (0.5')	108	119
880-5965-2	SW-1	113	126
880-5965-3	SW-2	109	123
880-5965-4	SW-3	107	121
880-5965-5	SW-4	108	122
LCS 880-7768/2-A	Lab Control Sample	110	120
LCSD 880-7768/3-A	Lab Control Sample Dup	109	117
MB 880-7768/1-A	Method Blank	102	116

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: NT Global
Project/Site: Glacier Federal Com 001H (8.8.21)

Job ID: 880-5965-1
SDG: 214635

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-7646/5-A
Matrix: Solid
Analysis Batch: 7728

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7646

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/08/21 12:03	09/11/21 04:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/08/21 12:03	09/11/21 04:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/08/21 12:03	09/11/21 04:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/08/21 12:03	09/11/21 04:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/08/21 12:03	09/11/21 04:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/08/21 12:03	09/11/21 04:14	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		09/08/21 12:03	09/11/21 04:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*09/08/21 12:03*	*09/11/21 04:14*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*09/08/21 12:03*	*09/11/21 04:14*	*1*

Lab Sample ID: MB 880-7647/5-A
Matrix: Solid
Analysis Batch: 7728

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7647

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/08/21 12:07	09/11/21 18:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/08/21 12:07	09/11/21 18:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/08/21 12:07	09/11/21 18:45	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/08/21 12:07	09/11/21 18:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/08/21 12:07	09/11/21 18:45	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/08/21 12:07	09/11/21 18:45	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		09/08/21 12:07	09/11/21 18:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*09/08/21 12:07*	*09/11/21 18:45*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*09/08/21 12:07*	*09/11/21 18:45*	*1*

Lab Sample ID: LCS 880-7647/1-A
Matrix: Solid
Analysis Batch: 7728

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7647

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.08541		mg/Kg		85	70 - 130
Toluene	0.100	0.08223		mg/Kg		82	70 - 130
Ethylbenzene	0.100	0.08418		mg/Kg		84	70 - 130
m-Xylene & p-Xylene	0.200	0.1704		mg/Kg		85	70 - 130
o-Xylene	0.100	0.08413		mg/Kg		84	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

QC Sample Results

Client: NT Global
Project/Site: Glacier Federal Com 001H (8.8.21)

Job ID: 880-5965-1
SDG: 214635

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-7647/2-A
Matrix: Solid
Analysis Batch: 7728

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 7647

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.08641		mg/Kg		86	70 - 130	1	35
Toluene			0.100	0.08150		mg/Kg		82	70 - 130	1	35
Ethylbenzene			0.100	0.08079		mg/Kg		81	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.1672		mg/Kg		84	70 - 130	2	35
o-Xylene			0.100	0.08378		mg/Kg		84	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 880-5806-A-38-E MS
Matrix: Solid
Analysis Batch: 7728

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 7647

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00199	U	0.0998	0.07434		mg/Kg		74	70 - 130		
Toluene	<0.00199	U	0.0998	0.07195		mg/Kg		72	70 - 130		
Ethylbenzene	<0.00199	U F1	0.0998	0.07062		mg/Kg		71	70 - 130		
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.1439		mg/Kg		72	70 - 130		
o-Xylene	<0.00199	U F1	0.0998	0.07279		mg/Kg		73	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 880-5806-A-38-F MSD
Matrix: Solid
Analysis Batch: 7728

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 7647

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.101	0.08456		mg/Kg		84	70 - 130	13	35
Toluene	<0.00199	U	0.101	0.07017		mg/Kg		70	70 - 130	3	35
Ethylbenzene	<0.00199	U F1	0.101	0.06010	F1	mg/Kg		60	70 - 130	16	35
m-Xylene & p-Xylene	<0.00398	U F1	0.202	0.1224	F1	mg/Kg		61	70 - 130	16	35
o-Xylene	<0.00199	U F1	0.101	0.06282	F1	mg/Kg		62	70 - 130	15	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: MB 880-7751/5-A
Matrix: Solid
Analysis Batch: 7777

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7751

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/10/21 13:01	09/10/21 20:16	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/10/21 13:01	09/10/21 20:16	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/10/21 13:01	09/10/21 20:16	1

QC Sample Results

Client: NT Global
Project/Site: Glacier Federal Com 001H (8.8.21)

Job ID: 880-5965-1
SDG: 214635

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 880-7751/5-A
Matrix: Solid
Analysis Batch: 7777

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7751

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/10/21 13:01	09/10/21 20:16	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/10/21 13:01	09/10/21 20:16	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/10/21 13:01	09/10/21 20:16	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		09/10/21 13:01	09/10/21 20:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*	*09/10/21 13:01*	*09/10/21 20:16*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*09/10/21 13:01*	*09/10/21 20:16*	*1*

Lab Sample ID: MB 880-7752/5-A
Matrix: Solid
Analysis Batch: 7777

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7752

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/10/21 13:05	09/11/21 07:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/10/21 13:05	09/11/21 07:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/10/21 13:05	09/11/21 07:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/10/21 13:05	09/11/21 07:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/10/21 13:05	09/11/21 07:50	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/10/21 13:05	09/11/21 07:50	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		09/10/21 13:05	09/11/21 07:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*133*	*S1+*	*70 - 130*	*09/10/21 13:05*	*09/11/21 07:50*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*09/10/21 13:05*	*09/11/21 07:50*	*1*

Lab Sample ID: LCS 880-7752/1-A
Matrix: Solid
Analysis Batch: 7777

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7752

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.08673		mg/Kg		87	70 - 130
Toluene	0.100	0.1011		mg/Kg		101	70 - 130
Ethylbenzene	0.100	0.1055		mg/Kg		106	70 - 130
m-Xylene & p-Xylene	0.200	0.1947		mg/Kg		97	70 - 130
o-Xylene	0.100	0.09827		mg/Kg		98	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: LCSD 880-7752/2-A
Matrix: Solid
Analysis Batch: 7777

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 7752

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.07396		mg/Kg		74	70 - 130	16	35
Toluene	0.100	0.09523		mg/Kg		95	70 - 130	6	35

QC Sample Results

Client: NT Global
Project/Site: Glacier Federal Com 001H (8.8.21)

Job ID: 880-5965-1
SDG: 214635

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-7752/2-A
Matrix: Solid
Analysis Batch: 7777

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 7752

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylbenzene			0.100	0.09929		mg/Kg		99	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.1879		mg/Kg		94	70 - 130	4	35
o-Xylene			0.100	0.09651		mg/Kg		97	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*

Lab Sample ID: 880-5961-A-1-B MS
Matrix: Solid
Analysis Batch: 7777

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 7752

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U F1 F2	0.100	0.04441	F1	mg/Kg		44	70 - 130
Toluene	0.0197	F1	0.100	0.1738	F1	mg/Kg		154	70 - 130
Ethylbenzene	0.0108		0.100	0.08367		mg/Kg		73	70 - 130
m-Xylene & p-Xylene	0.0465		0.201	0.2824		mg/Kg		117	70 - 130
o-Xylene	0.0195		0.100	0.1069		mg/Kg		87	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*

Lab Sample ID: 880-5961-A-1-C MSD
Matrix: Solid
Analysis Batch: 7777

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 7752

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U F1 F2	0.0994	0.07520	F2	mg/Kg		75	70 - 130	51	35
Toluene	0.0197	F1	0.0994	0.1947	F1	mg/Kg		176	70 - 130	11	35
Ethylbenzene	0.0108		0.0994	0.1076		mg/Kg		97	70 - 130	25	35
m-Xylene & p-Xylene	0.0465		0.199	0.2969		mg/Kg		126	70 - 130	5	35
o-Xylene	0.0195		0.0994	0.1155		mg/Kg		97	70 - 130	8	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-7768/1-A
Matrix: Solid
Analysis Batch: 7792

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7768

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/10/21 14:25	09/13/21 12:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/10/21 14:25	09/13/21 12:28	1

QC Sample Results

Client: NT Global
Project/Site: Glacier Federal Com 001H (8.8.21)

Job ID: 880-5965-1
SDG: 214635

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-7768/1-A
Matrix: Solid
Analysis Batch: 7792

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7768

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/10/21 14:25	09/13/21 12:28	1
Total TPH	<50.0	U	50.0		mg/Kg		09/10/21 14:25	09/13/21 12:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*09/10/21 14:25*	*09/13/21 12:28*	*1*
o-Terphenyl	*116*		*70 - 130*	*09/10/21 14:25*	*09/13/21 12:28*	*1*

Lab Sample ID: LCS 880-7768/2-A
Matrix: Solid
Analysis Batch: 7792

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7768

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	784.1		mg/Kg		78	70 - 130
Diesel Range Organics (Over C10-C28)	1000	820.7		mg/Kg		82	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*110*		*70 - 130*
o-Terphenyl	*120*		*70 - 130*

Lab Sample ID: LCSD 880-7768/3-A
Matrix: Solid
Analysis Batch: 7792

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 7768

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	745.4		mg/Kg		75	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	1000	809.0		mg/Kg		81	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*109*		*70 - 130*
o-Terphenyl	*117*		*70 - 130*

Lab Sample ID: 880-5964-A-1-D MS
Matrix: Solid
Analysis Batch: 7792

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 7768

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	997	828.8		mg/Kg		83	70 - 130
Diesel Range Organics (Over C10-C28)	<49.8	U	997	833.3		mg/Kg		84	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*101*		*70 - 130*
o-Terphenyl	*109*		*70 - 130*

QC Sample Results

Client: NT Global
Project/Site: Glacier Federal Com 001H (8.8.21)

Job ID: 880-5965-1
SDG: 214635

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 880-5964-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 7792 — **Prep Batch: 7768**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	999	779.4		mg/Kg		78	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	<49.8	U	999	798.9		mg/Kg		80	70 - 130	4	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*98*		*70 - 130*
o-Terphenyl	*103*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-7766/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 7828

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/13/21 18:32	1

Lab Sample ID: LCS 880-7766/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 7828

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	239.8		mg/Kg		96	90 - 110

Lab Sample ID: LCSD 880-7766/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 7828

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	242.1		mg/Kg		97	90 - 110	1	20

Lab Sample ID: 880-5964-A-13-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 7828

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	<5.03	U	252	267.7		mg/Kg		106	90 - 110

Lab Sample ID: 880-5964-A-13-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 7828

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<5.03	U	252	259.1		mg/Kg		102	90 - 110	3	20

QC Association Summary

Client: NT Global
Project/Site: Glacier Federal Com 001H (8.8.21)

Job ID: 880-5965-1
SDG: 214635

GC VOA

Prep Batch: 7646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-7646/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 7647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5965-3	SW-2	Total/NA	Solid	5035	
MB 880-7647/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-7647/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-7647/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-5806-A-38-E MS	Matrix Spike	Total/NA	Solid	5035	
880-5806-A-38-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 7728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5965-3	SW-2	Total/NA	Solid	8021B	7647
MB 880-7646/5-A	Method Blank	Total/NA	Solid	8021B	7646
MB 880-7647/5-A	Method Blank	Total/NA	Solid	8021B	7647
LCS 880-7647/1-A	Lab Control Sample	Total/NA	Solid	8021B	7647
LCSD 880-7647/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	7647
880-5806-A-38-E MS	Matrix Spike	Total/NA	Solid	8021B	7647
880-5806-A-38-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	7647

Prep Batch: 7751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-7751/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 7752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5965-1	CS-1 (0.5')	Total/NA	Solid	5035	
880-5965-2	SW-1	Total/NA	Solid	5035	
880-5965-3	SW-2	Total/NA	Solid	5035	
880-5965-4	SW-3	Total/NA	Solid	5035	
880-5965-5	SW-4	Total/NA	Solid	5035	
MB 880-7752/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-7752/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-7752/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-5961-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-5961-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 7777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5965-1	CS-1 (0.5')	Total/NA	Solid	8021B	7752
880-5965-2	SW-1	Total/NA	Solid	8021B	7752
880-5965-3	SW-2	Total/NA	Solid	8021B	7752
880-5965-4	SW-3	Total/NA	Solid	8021B	7752
880-5965-5	SW-4	Total/NA	Solid	8021B	7752
MB 880-7751/5-A	Method Blank	Total/NA	Solid	8021B	7751
MB 880-7752/5-A	Method Blank	Total/NA	Solid	8021B	7752
LCS 880-7752/1-A	Lab Control Sample	Total/NA	Solid	8021B	7752
LCSD 880-7752/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	7752
880-5961-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	7752
880-5961-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	7752

QC Association Summary

Client: NT Global
Project/Site: Glacier Federal Com 001H (8.8.21)

Job ID: 880-5965-1
SDG: 214635

GC Semi VOA

Prep Batch: 7768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5965-1	CS-1 (0.5')	Total/NA	Solid	8015NM Prep	
880-5965-2	SW-1	Total/NA	Solid	8015NM Prep	
880-5965-3	SW-2	Total/NA	Solid	8015NM Prep	
880-5965-4	SW-3	Total/NA	Solid	8015NM Prep	
880-5965-5	SW-4	Total/NA	Solid	8015NM Prep	
MB 880-7768/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-7768/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-7768/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-5964-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-5964-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 7792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5965-1	CS-1 (0.5')	Total/NA	Solid	8015B NM	7768
880-5965-2	SW-1	Total/NA	Solid	8015B NM	7768
880-5965-3	SW-2	Total/NA	Solid	8015B NM	7768
880-5965-4	SW-3	Total/NA	Solid	8015B NM	7768
880-5965-5	SW-4	Total/NA	Solid	8015B NM	7768
MB 880-7768/1-A	Method Blank	Total/NA	Solid	8015B NM	7768
LCS 880-7768/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	7768
LCSD 880-7768/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	7768
880-5964-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	7768
880-5964-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	7768

HPLC/IC

Leach Batch: 7766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5965-1	CS-1 (0.5')	Soluble	Solid	DI Leach	
880-5965-2	SW-1	Soluble	Solid	DI Leach	
880-5965-3	SW-2	Soluble	Solid	DI Leach	
880-5965-4	SW-3	Soluble	Solid	DI Leach	
880-5965-5	SW-4	Soluble	Solid	DI Leach	
MB 880-7766/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-7766/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-7766/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-5964-A-13-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-5964-A-13-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 7828

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5965-1	CS-1 (0.5')	Soluble	Solid	300.0	7766
880-5965-2	SW-1	Soluble	Solid	300.0	7766
880-5965-3	SW-2	Soluble	Solid	300.0	7766
880-5965-4	SW-3	Soluble	Solid	300.0	7766
880-5965-5	SW-4	Soluble	Solid	300.0	7766
MB 880-7766/1-A	Method Blank	Soluble	Solid	300.0	7766
LCS 880-7766/2-A	Lab Control Sample	Soluble	Solid	300.0	7766
LCSD 880-7766/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	7766
880-5964-A-13-C MS	Matrix Spike	Soluble	Solid	300.0	7766
880-5964-A-13-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	7766

Lab Chronicle

Client: NT Global
Project/Site: Glacier Federal Com 001H (8.8.21)

Job ID: 880-5965-1
SDG: 214635

Client Sample ID: CS-1 (0.5')

Lab Sample ID: 880-5965-1
Matrix: Solid
Date Collected: 09/09/21 00:00
Date Received: 09/10/21 11:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	7752	09/10/21 13:05	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7777	09/11/21 09:19	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	7768	09/10/21 14:25	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7792	09/13/21 19:58	AM	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	7766	09/10/21 14:22	CH	XEN MID
Soluble	Analysis	300.0		1			7828	09/14/21 09:01	CH	XEN MID

Client Sample ID: SW-1

Lab Sample ID: 880-5965-2
Matrix: Solid
Date Collected: 09/09/21 00:00
Date Received: 09/10/21 11:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	7752	09/10/21 13:05	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7777	09/11/21 09:40	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	7768	09/10/21 14:25	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7792	09/13/21 20:19	AM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	7766	09/10/21 14:22	CH	XEN MID
Soluble	Analysis	300.0		1			7828	09/14/21 09:06	CH	XEN MID

Client Sample ID: SW-2

Lab Sample ID: 880-5965-3
Matrix: Solid
Date Collected: 09/09/21 00:00
Date Received: 09/10/21 11:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	7752	09/10/21 13:05	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7777	09/11/21 10:00	MR	XEN MID
Total/NA	Prep	5035			5.01 g	5 mL	7647	09/10/21 12:07	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7728	09/12/21 02:16	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	7768	09/10/21 14:25	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7792	09/13/21 20:40	AM	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	7766	09/10/21 14:22	CH	XEN MID
Soluble	Analysis	300.0		1			7828	09/14/21 09:12	CH	XEN MID

Client Sample ID: SW-3

Lab Sample ID: 880-5965-4
Matrix: Solid
Date Collected: 09/09/21 00:00
Date Received: 09/10/21 11:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	7752	09/10/21 13:05	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7777	09/11/21 10:21	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	7768	09/10/21 14:25	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7792	09/13/21 21:01	AM	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	7766	09/10/21 14:22	CH	XEN MID
Soluble	Analysis	300.0		1			7828	09/14/21 09:18	CH	XEN MID

Lab Chronicle

Client: NT Global
Project/Site: Glacier Federal Com 001H (8.8.21)

Job ID: 880-5965-1
SDG: 214635

Client Sample ID: SW-4

Date Collected: 09/09/21 00:00
Date Received: 09/10/21 11:31

Lab Sample ID: 880-5965-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	7752	09/10/21 13:05	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7777	09/11/21 10:41	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	7768	09/10/21 14:25	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7792	09/13/21 21:22	AM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	7766	09/10/21 14:22	CH	XEN MID
Soluble	Analysis	300.0		1			7828	09/14/21 09:23	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: NT Global
Project/Site: Glacier Federal Com 001H (8.8.21)

Job ID: 880-5965-1
SDG: 214635

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

Method Summary

Client: NT Global
Project/Site: Glacier Federal Com 001H (8.8.21)

Job ID: 880-5965-1
SDG: 214635

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: NT Global
Project/Site: Glacier Federal Com 001H (8.8.21)

Job ID: 880-5965-1
SDG: 214635

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-5965-1	CS-1 (0.5')	Solid	09/09/21 00:00	09/10/21 11:31
880-5965-2	SW-1	Solid	09/09/21 00:00	09/10/21 11:31
880-5965-3	SW-2	Solid	09/09/21 00:00	09/10/21 11:31
880-5965-4	SW-3	Solid	09/09/21 00:00	09/10/21 11:31
880-5965-5	SW-4	Solid	09/09/21 00:00	09/10/21 11:31

NTG ENVIRONMENTAL

Chain of Cu

880-5965 Chain of Custody

Work Order No: 5965

9/14/2021

Page 1 of 1

Project Manager	Mike Carmona	Bill to (if different)	Jacqui Harris
Company Name	NTG Environmental	Company Name	COG Operating, LLC
Address	701 Tradewinds BLVD	Address.	15 W Loving Rd
City, State ZIP	Midland, TX 79706	City, State ZIP	Loving NM 88256
Phone	432-813-0263	Email	jacqui harris@conocophillips com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project:

Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐

Deliverables EDD ☐ ADaPT ☐ Other

Project Name	Glacier Federal Com 001H (8 8 21)	Turn Around	
Project Number	214635	☐ Routine ☑ Rush	
Project Location	Eddy Co, NM	Due Date	72 hrs
Sampler's Name	NH / CRM	TAT starts the day received by the lab if received by 4 30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank.	Yes (No)	Wet Ice	(Yes) No
Received Intact.	(Yes) No	Thermometer ID	IR8
Cooler Custody Seals	Yes No (N/A)	Correction Factor	+0.5
Sample Custody Seals.	Yes No (N/A)	Temperature Reading	3.6
Total Containers.		Corrected Temperature.	4.1

ANALYSIS REQUEST

Preservative Codes

None NO DI Water H_2O

Cool Cool MeOH Me

HCL. HC HNO_3 HN

H_2S0_4 H_2 NaOH Na

H_3PO_4 HP

$NaHSO_4$ NABIS

$Na_2S_2O_3$ $NaSO_3$

Zn Acetate+NaOH Zn

NaOH+Ascorbic Acid SAPC

Sample Identification	Date	Time	Soil	Water	Grab/ Comp	# of Cont	Pres. Code	BTEX 8021B	TPH 8015M (GRO + DRO + MRO)	Chloride 300 0	HOLD	Sample Comments
CS-1 (0 5')	9/9/2021	-	X		Comp	1		X	X	X		
SW-1	9/9/2021	-	X		Comp	1		X	X	X		
SW-2	9/9/2021	-	X		Comp	1		X	X	X		
SW-3	9/9/2021	-	X		Comp	1		X	X	X		
SW-4	9/9/2021	-	X		Comp	1		X	X	X		

Parameters

Additional Comments:

Relinquished by (Signature)	Received by (Signature)	Date/Time	Relinquished by (Signature)	Received by (Signature)	Date/Time
1			2		
3		9/10/21 1131	4		
5			6		

Revised Date 05012020 Rev 2020 1

Login Sample Receipt Checklist

Client: NT Global

Job Number: 880-5965-1
SDG Number: 214635

Login Number: 5965
List Number: 1
Creator: Phillips, Kerianna

List Source: Eurofins Xenco, Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	False	No time on COC or sample containers
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Xenco, Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-1485-1
Laboratory Sample Delivery Group: Eddy Co NM
Client Project/Site: Glacier Federal Com 001H

For:
NT Global
701 Tradewinds Blvd
Midland, Texas 79706

Attn: Mike Carmona

JKRAMER

Authorized for release by:
10/28/2021 4:42:28 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

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

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

Client: NT Global
Project/Site: Glacier Federal Com 001H

Laboratory Job ID: 890-1485-1
SDG: Eddy Co NM

Table of Contents

Definitions/Glossary

Client: NT Global
Project/Site: Glacier Federal Com 001H

Job ID: 890-1485-1
SDG: Eddy Co NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: NT Global
Project/Site: Glacier Federal Com 001H

Job ID: 890-1485-1
SDG: Eddy Co NM

Job ID: 890-1485-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1485-1

Receipt
The samples were received on 10/26/2021 1:46 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-10436 and analytical batch 880-10677 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-10730 and analytical batch 880-10786 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: NT Global
Project/Site: Glacier Federal Com 001H

Job ID: 890-1485-1
SDG: Eddy Co NM

Client Sample ID: CS-1 (0.5)

Lab Sample ID: 890-1485-1
Matrix: Solid
Date Collected: 10/26/21 00:00
Date Received: 10/26/21 13:46

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		10/27/21 09:00	10/27/21 14:43	1
Toluene	<0.00202	U	0.00202		mg/Kg		10/27/21 09:00	10/27/21 14:43	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		10/27/21 09:00	10/27/21 14:43	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		10/27/21 09:00	10/27/21 14:43	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		10/27/21 09:00	10/27/21 14:43	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		10/27/21 09:00	10/27/21 14:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*10/27/21 09:00*	*10/27/21 14:43*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*10/27/21 09:00*	*10/27/21 14:43*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			10/28/21 17:22	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/28/21 16:34	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/27/21 16:03	10/28/21 11:04	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/27/21 16:03	10/28/21 11:04	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/27/21 16:03	10/28/21 11:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*10/27/21 16:03*	*10/28/21 11:04*	*1*
o-Terphenyl	*118*		*70 - 130*	*10/27/21 16:03*	*10/28/21 11:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**57.4**		50.5		mg/Kg			10/27/21 22:56	10

Client Sample ID: SW-1

Lab Sample ID: 890-1485-2
Matrix: Solid
Date Collected: 10/26/21 00:00
Date Received: 10/26/21 13:46

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		10/27/21 09:00	10/27/21 15:03	1
Toluene	<0.00202	U	0.00202		mg/Kg		10/27/21 09:00	10/27/21 15:03	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		10/27/21 09:00	10/27/21 15:03	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		10/27/21 09:00	10/27/21 15:03	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		10/27/21 09:00	10/27/21 15:03	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		10/27/21 09:00	10/27/21 15:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*10/27/21 09:00*	*10/27/21 15:03*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*10/27/21 09:00*	*10/27/21 15:03*	*1*

Client Sample Results

Client: NT Global
Project/Site: Glacier Federal Com 001H

Job ID: 890-1485-1
SDG: Eddy Co NM

Client Sample ID: SW-1

Date Collected: 10/26/21 00:00
Date Received: 10/26/21 13:46

Lab Sample ID: 890-1485-2
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			10/28/21 17:22	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/28/21 16:34	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/27/21 16:03	10/28/21 12:07	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/27/21 16:03	10/28/21 12:07	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/27/21 16:03	10/28/21 12:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*10/27/21 16:03*	*10/28/21 12:07*	*1*
o-Terphenyl	*109*		*70 - 130*	*10/27/21 16:03*	*10/28/21 12:07*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<50.4	U	50.4		mg/Kg			10/28/21 09:00	10

Client Sample ID: SW-2

Date Collected: 10/26/21 00:00
Date Received: 10/26/21 13:46

Lab Sample ID: 890-1485-3
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		10/27/21 09:00	10/27/21 15:23	1
Toluene	<0.00201	U	0.00201		mg/Kg		10/27/21 09:00	10/27/21 15:23	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		10/27/21 09:00	10/27/21 15:23	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		10/27/21 09:00	10/27/21 15:23	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		10/27/21 09:00	10/27/21 15:23	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		10/27/21 09:00	10/27/21 15:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*10/27/21 09:00*	*10/27/21 15:23*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*10/27/21 09:00*	*10/27/21 15:23*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			10/28/21 17:22	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/28/21 16:34	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/27/21 16:03	10/28/21 12:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/27/21 16:03	10/28/21 12:29	1

Client Sample Results

Client: NT Global
Project/Site: Glacier Federal Com 001H

Job ID: 890-1485-1
SDG: Eddy Co NM

Client Sample ID: SW-2

Lab Sample ID: 890-1485-3
Matrix: Solid
Date Collected: 10/26/21 00:00
Date Received: 10/26/21 13:46

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/27/21 16:03	10/28/21 12:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*10/27/21 16:03*	*10/28/21 12:29*	*1*
o-Terphenyl	*103*		*70 - 130*	*10/27/21 16:03*	*10/28/21 12:29*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<50.3	U	50.3		mg/Kg			10/28/21 09:06	10

Client Sample ID: SW-3

Lab Sample ID: 890-1485-4
Matrix: Solid
Date Collected: 10/26/21 00:00
Date Received: 10/26/21 13:46

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/27/21 09:00	10/27/21 15:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/27/21 09:00	10/27/21 15:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/27/21 09:00	10/27/21 15:44	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/27/21 09:00	10/27/21 15:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/27/21 09:00	10/27/21 15:44	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/27/21 09:00	10/27/21 15:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*10/27/21 09:00*	*10/27/21 15:44*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*10/27/21 09:00*	*10/27/21 15:44*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			10/28/21 17:22	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/28/21 16:34	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/27/21 16:03	10/28/21 12:50	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/27/21 16:03	10/28/21 12:50	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/27/21 16:03	10/28/21 12:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*10/27/21 16:03*	*10/28/21 12:50*	*1*
o-Terphenyl	*101*		*70 - 130*	*10/27/21 16:03*	*10/28/21 12:50*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<49.7	U	49.7		mg/Kg			10/28/21 09:12	10

Client Sample Results

Client: NT Global
Project/Site: Glacier Federal Com 001H

Job ID: 890-1485-1
SDG: Eddy Co NM

Client Sample ID: SW-4

Date Collected: 10/26/21 00:00
Date Received: 10/26/21 13:46

Lab Sample ID: 890-1485-5

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/27/21 09:00	10/27/21 16:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/27/21 09:00	10/27/21 16:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/27/21 09:00	10/27/21 16:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/27/21 09:00	10/27/21 16:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/27/21 09:00	10/27/21 16:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/27/21 09:00	10/27/21 16:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*10/27/21 09:00*	*10/27/21 16:04*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*10/27/21 09:00*	*10/27/21 16:04*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			10/28/21 17:22	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			10/28/21 16:34	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		10/27/21 16:03	10/28/21 13:11	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		10/27/21 16:03	10/28/21 13:11	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		10/27/21 16:03	10/28/21 13:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*10/27/21 16:03*	*10/28/21 13:11*	*1*
o-Terphenyl	*104*		*70 - 130*	*10/27/21 16:03*	*10/28/21 13:11*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<49.9	U	49.9		mg/Kg			10/28/21 09:18	10

Surrogate Summary

Client: NT Global
Project/Site: Glacier Federal Com 001H

Job ID: 890-1485-1
SDG: Eddy Co NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-7519-A-1-B MS	Matrix Spike	102	104
880-7519-A-1-C MSD	Matrix Spike Duplicate	122	101
890-1485-1	CS-1 (0.5)	107	104
890-1485-2	SW-1	99	104
890-1485-3	SW-2	108	106
890-1485-4	SW-3	103	100
890-1485-5	SW-4	99	94
LCS 880-10436/1-A	Lab Control Sample	93	100
LCSD 880-10436/2-A	Lab Control Sample Dup	95	99
MB 880-10436/5-A	Method Blank	100	110

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1485-1	CS-1 (0.5)	116	118
890-1485-1 MS	CS-1 (0.5)	104	97
890-1485-1 MSD	CS-1 (0.5)	107	92
890-1485-2	SW-1	112	109
890-1485-3	SW-2	106	103
890-1485-4	SW-3	103	101
890-1485-5	SW-4	106	104
LCS 880-10766/2-A	Lab Control Sample	94	90
LCSD 880-10766/3-A	Lab Control Sample Dup	83	77
MB 880-10766/1-A	Method Blank	115	115

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: NT Global
Project/Site: Glacier Federal Com 001H

Job ID: 890-1485-1
SDG: Eddy Co NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-10436/5-A
Matrix: Solid
Analysis Batch: 10677

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 10436

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/27/21 09:00	10/27/21 12:32	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/27/21 09:00	10/27/21 12:32	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/27/21 09:00	10/27/21 12:32	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/27/21 09:00	10/27/21 12:32	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/27/21 09:00	10/27/21 12:32	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/27/21 09:00	10/27/21 12:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*10/27/21 09:00*	*10/27/21 12:32*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*10/27/21 09:00*	*10/27/21 12:32*	*1*

Lab Sample ID: LCS 880-10436/1-A
Matrix: Solid
Analysis Batch: 10677

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 10436

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1073		mg/Kg		107	70 - 130		
Toluene			0.100	0.1166		mg/Kg		117	70 - 130		
Ethylbenzene			0.100	0.1176		mg/Kg		118	70 - 130		
m-Xylene & p-Xylene			0.200	0.2333		mg/Kg		117	70 - 130		
o-Xylene			0.100	0.1270		mg/Kg		127	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-10436/2-A
Matrix: Solid
Analysis Batch: 10677

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 10436

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1055		mg/Kg		105	70 - 130	2	35
Toluene			0.100	0.1152		mg/Kg		115	70 - 130	1	35
Ethylbenzene			0.100	0.1203		mg/Kg		120	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2353		mg/Kg		118	70 - 130	1	35
o-Xylene			0.100	0.1239		mg/Kg		124	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 880-7519-A-1-B MS
Matrix: Solid
Analysis Batch: 10677

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 10436

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	0.0003483		0.101	0.003788	F1	mg/Kg		4	70 - 130		
Toluene	0.0005096		0.101	0.01188	F1	mg/Kg		11	70 - 130		

QC Sample Results

Client: NT Global
Project/Site: Glacier Federal Com 001H

Job ID: 890-1485-1
SDG: Eddy Co NM

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-7519-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 10677 — **Prep Batch: 10436**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	0.00006446		0.101	0.01362	F1	mg/Kg		14	70 - 130
m-Xylene & p-Xylene	0.0002469		0.201	0.004926	F1	mg/Kg		2	70 - 130
o-Xylene	0.0001651		0.101	<0.00201	U F1	mg/Kg		2	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 880-7519-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 10677 — **Prep Batch: 10436**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0003483		0.100	0.007038	F1 F2	mg/Kg		7	70 - 130	60	35
Toluene	0.0005096		0.100	0.01136	F1	mg/Kg		11	70 - 130	4	35
Ethylbenzene	0.00006446		0.100	0.01667	F1	mg/Kg		17	70 - 130	20	35
m-Xylene & p-Xylene	0.0002469		0.200	0.02817	F1 F2	mg/Kg		14	70 - 130	140	35
o-Xylene	0.0001651		0.100	0.02794	F1 F2	mg/Kg		28	70 - 130	178	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-10766/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 10808 — **Prep Batch: 10766**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/27/21 16:03	10/28/21 10:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/27/21 16:03	10/28/21 10:00	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/27/21 16:03	10/28/21 10:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*115*		*70 - 130*	*10/27/21 16:03*	*10/28/21 10:00*	*1*
o-Terphenyl	*115*		*70 - 130*	*10/27/21 16:03*	*10/28/21 10:00*	*1*

Lab Sample ID: LCS 880-10766/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 10808 — **Prep Batch: 10766**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	774.2		mg/Kg		77	70 - 130
Diesel Range Organics (Over C10-C28)	1000	997.5		mg/Kg		100	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: NT Global
Project/Site: Glacier Federal Com 001H

Job ID: 890-1485-1
SDG: Eddy Co NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-10766/2-A
Matrix: Solid
Analysis Batch: 10808

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 10766

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	94		70 - 130
o-Terphenyl	90		70 - 130

Lab Sample ID: LCSD 880-10766/3-A
Matrix: Solid
Analysis Batch: 10808

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 10766

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	802.4		mg/Kg		80	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	954.5		mg/Kg		95	70 - 130	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	83		70 - 130
o-Terphenyl	77		70 - 130

Lab Sample ID: 890-1485-1 MS
Matrix: Solid
Analysis Batch: 10808

Client Sample ID: CS-1 (0.5)
Prep Type: Total/NA
Prep Batch: 10766

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	961.6		mg/Kg		96	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	997	997.5		mg/Kg		96	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	104		70 - 130
o-Terphenyl	97		70 - 130

Lab Sample ID: 890-1485-1 MSD
Matrix: Solid
Analysis Batch: 10808

Client Sample ID: CS-1 (0.5)
Prep Type: Total/NA
Prep Batch: 10766

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	1000	991.3		mg/Kg		99	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U	1000	966.9		mg/Kg		93	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	92		70 - 130

QC Sample Results

Client: NT Global
Project/Site: Glacier Federal Com 001H

Job ID: 890-1485-1
SDG: Eddy Co NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-10730/1-A
Matrix: Solid
Analysis Batch: 10786

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			10/27/21 20:23	1

Lab Sample ID: LCS 880-10730/2-A
Matrix: Solid
Analysis Batch: 10786

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	250.5		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-10730/3-A
Matrix: Solid
Analysis Batch: 10786

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	240.9		mg/Kg		96	90 - 110	4	20

Lab Sample ID: 880-7601-A-11-E MS
Matrix: Solid
Analysis Batch: 10786

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	6030	F1	2510	8227	F1	mg/Kg		88	90 - 110		

Lab Sample ID: 880-7601-A-11-F MSD
Matrix: Solid
Analysis Batch: 10786

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	6030	F1	2510	8223	F1	mg/Kg		87	90 - 110	0	20

QC Association Summary

Client: NT Global
Project/Site: Glacier Federal Com 001H

Job ID: 890-1485-1
SDG: Eddy Co NM

GC VOA

Prep Batch: 10436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1485-1	CS-1 (0.5)	Total/NA	Solid	5035	
890-1485-2	SW-1	Total/NA	Solid	5035	
890-1485-3	SW-2	Total/NA	Solid	5035	
890-1485-4	SW-3	Total/NA	Solid	5035	
890-1485-5	SW-4	Total/NA	Solid	5035	
MB 880-10436/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-10436/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-10436/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-7519-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-7519-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 10677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1485-1	CS-1 (0.5)	Total/NA	Solid	8021B	10436
890-1485-2	SW-1	Total/NA	Solid	8021B	10436
890-1485-3	SW-2	Total/NA	Solid	8021B	10436
890-1485-4	SW-3	Total/NA	Solid	8021B	10436
890-1485-5	SW-4	Total/NA	Solid	8021B	10436
MB 880-10436/5-A	Method Blank	Total/NA	Solid	8021B	10436
LCS 880-10436/1-A	Lab Control Sample	Total/NA	Solid	8021B	10436
LCSD 880-10436/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	10436
880-7519-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	10436
880-7519-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	10436

Analysis Batch: 10878

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1485-1	CS-1 (0.5)	Total/NA	Solid	Total BTEX	
890-1485-2	SW-1	Total/NA	Solid	Total BTEX	
890-1485-3	SW-2	Total/NA	Solid	Total BTEX	
890-1485-4	SW-3	Total/NA	Solid	Total BTEX	
890-1485-5	SW-4	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 10766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1485-1	CS-1 (0.5)	Total/NA	Solid	8015NM Prep	
890-1485-2	SW-1	Total/NA	Solid	8015NM Prep	
890-1485-3	SW-2	Total/NA	Solid	8015NM Prep	
890-1485-4	SW-3	Total/NA	Solid	8015NM Prep	
890-1485-5	SW-4	Total/NA	Solid	8015NM Prep	
MB 880-10766/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-10766/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-10766/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1485-1 MS	CS-1 (0.5)	Total/NA	Solid	8015NM Prep	
890-1485-1 MSD	CS-1 (0.5)	Total/NA	Solid	8015NM Prep	

Analysis Batch: 10808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1485-1	CS-1 (0.5)	Total/NA	Solid	8015B NM	10766
890-1485-2	SW-1	Total/NA	Solid	8015B NM	10766

QC Association Summary

Client: NT Global
Project/Site: Glacier Federal Com 001H

Job ID: 890-1485-1
SDG: Eddy Co NM

GC Semi VOA (Continued)

Analysis Batch: 10808 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1485-3	SW-2	Total/NA	Solid	8015B NM	10766
890-1485-4	SW-3	Total/NA	Solid	8015B NM	10766
890-1485-5	SW-4	Total/NA	Solid	8015B NM	10766
MB 880-10766/1-A	Method Blank	Total/NA	Solid	8015B NM	10766
LCS 880-10766/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	10766
LCSD 880-10766/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	10766
890-1485-1 MS	CS-1 (0.5)	Total/NA	Solid	8015B NM	10766
890-1485-1 MSD	CS-1 (0.5)	Total/NA	Solid	8015B NM	10766

Analysis Batch: 10872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1485-1	CS-1 (0.5)	Total/NA	Solid	8015 NM	
890-1485-2	SW-1	Total/NA	Solid	8015 NM	
890-1485-3	SW-2	Total/NA	Solid	8015 NM	
890-1485-4	SW-3	Total/NA	Solid	8015 NM	
890-1485-5	SW-4	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 10730

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1485-1	CS-1 (0.5)	Soluble	Solid	DI Leach	
890-1485-2	SW-1	Soluble	Solid	DI Leach	
890-1485-3	SW-2	Soluble	Solid	DI Leach	
890-1485-4	SW-3	Soluble	Solid	DI Leach	
890-1485-5	SW-4	Soluble	Solid	DI Leach	
MB 880-10730/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-10730/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-10730/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-7601-A-11-E MS	Matrix Spike	Soluble	Solid	DI Leach	
880-7601-A-11-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 10786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1485-1	CS-1 (0.5)	Soluble	Solid	300.0	10730
890-1485-2	SW-1	Soluble	Solid	300.0	10730
890-1485-3	SW-2	Soluble	Solid	300.0	10730
890-1485-4	SW-3	Soluble	Solid	300.0	10730
890-1485-5	SW-4	Soluble	Solid	300.0	10730
MB 880-10730/1-A	Method Blank	Soluble	Solid	300.0	10730
LCS 880-10730/2-A	Lab Control Sample	Soluble	Solid	300.0	10730
LCSD 880-10730/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	10730
880-7601-A-11-E MS	Matrix Spike	Soluble	Solid	300.0	10730
880-7601-A-11-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	10730

Lab Chronicle

Client: NT Global
Project/Site: Glacier Federal Com 001H

Job ID: 890-1485-1
SDG: Eddy Co NM

Client Sample ID: CS-1 (0.5)

Lab Sample ID: 890-1485-1
Matrix: Solid
Date Collected: 10/26/21 00:00
Date Received: 10/26/21 13:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	10436	10/27/21 09:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	10677	10/27/21 14:43	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			10878	10/28/21 17:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			10872	10/28/21 16:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	10766	10/27/21 16:03	DM	XEN MID
Total/NA	Analysis	8015B NM		1			10808	10/28/21 11:04	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	10730	10/27/21 11:54	SC	XEN MID
Soluble	Analysis	300.0		10			10786	10/27/21 22:56	CH	XEN MID

Client Sample ID: SW-1

Lab Sample ID: 890-1485-2
Matrix: Solid
Date Collected: 10/26/21 00:00
Date Received: 10/26/21 13:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	10436	10/27/21 09:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	10677	10/27/21 15:03	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			10878	10/28/21 17:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			10872	10/28/21 16:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	10766	10/27/21 16:03	DM	XEN MID
Total/NA	Analysis	8015B NM		1			10808	10/28/21 12:07	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	10730	10/27/21 11:54	SC	XEN MID
Soluble	Analysis	300.0		10			10786	10/28/21 09:00	CH	XEN MID

Client Sample ID: SW-2

Lab Sample ID: 890-1485-3
Matrix: Solid
Date Collected: 10/26/21 00:00
Date Received: 10/26/21 13:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	10436	10/27/21 09:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	10677	10/27/21 15:23	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			10878	10/28/21 17:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			10872	10/28/21 16:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	10766	10/27/21 16:03	DM	XEN MID
Total/NA	Analysis	8015B NM		1			10808	10/28/21 12:29	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	10730	10/27/21 11:54	SC	XEN MID
Soluble	Analysis	300.0		10			10786	10/28/21 09:06	CH	XEN MID

Client Sample ID: SW-3

Lab Sample ID: 890-1485-4
Matrix: Solid
Date Collected: 10/26/21 00:00
Date Received: 10/26/21 13:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	10436	10/27/21 09:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	10677	10/27/21 15:44	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			10878	10/28/21 17:22	AJ	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: NT Global
Project/Site: Glacier Federal Com 001H

Job ID: 890-1485-1
SDG: Eddy Co NM

Client Sample ID: SW-3

Date Collected: 10/26/21 00:00
Date Received: 10/26/21 13:46

Lab Sample ID: 890-1485-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			10872	10/28/21 16:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	10766	10/27/21 16:03	DM	XEN MID
Total/NA	Analysis	8015B NM		1			10808	10/28/21 12:50	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	10730	10/27/21 11:54	SC	XEN MID
Soluble	Analysis	300.0		10			10786	10/28/21 09:12	CH	XEN MID

Client Sample ID: SW-4

Date Collected: 10/26/21 00:00
Date Received: 10/26/21 13:46

Lab Sample ID: 890-1485-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	10436	10/27/21 09:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	10677	10/27/21 16:04	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			10878	10/28/21 17:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			10872	10/28/21 16:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	10766	10/27/21 16:03	DM	XEN MID
Total/NA	Analysis	8015B NM		1			10808	10/28/21 13:11	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	10730	10/27/21 11:54	SC	XEN MID
Soluble	Analysis	300.0		10			10786	10/28/21 09:18	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: NT Global
Project/Site: Glacier Federal Com 001H

Job ID: 890-1485-1
SDG: Eddy Co NM

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: NT Global
Project/Site: Glacier Federal Com 001H

Job ID: 890-1485-1
SDG: Eddy Co NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: NT Global
Project/Site: Glacier Federal Com 001H

Job ID: 890-1485-1
SDG: Eddy Co NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-1485-1	CS-1 (0.5)	Solid	10/26/21 00:00	10/26/21 13:46
890-1485-2	SW-1	Solid	10/26/21 00:00	10/26/21 13:46
890-1485-3	SW-2	Solid	10/26/21 00:00	10/26/21 13:46
890-1485-4	SW-3	Solid	10/26/21 00:00	10/26/21 13:46
890-1485-5	SW-4	Solid	10/26/21 00:00	10/26/21 13:46

Chain of Custody

NTG ENVIRONMENTAL

Work Order No: _____

Page 1 of 1

Project Manager:	Mike Carmona	Bill to: (if different)	Jacqui Harris
Company Name:	NTG Environmental	Company Name:	COG
Address:	701 Tradewinds BLVD	Address:	15 W Loving Rd
City, State ZIP:	Midland, TX 79706	City, State ZIP:	Loving,NM 88256
Phone:	432-813-0263	Email:	jacqui.harris@conocophillips.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project:

Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐

Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Glacier Federal Com 001H	Turn Around	
Project Number:	214635	☐ Routine ☑ Rush	
Project Location	Eddy Co, NM	Due Date:	48 Hrs
Sampler's Name:	ES	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Received Intact:	Yes No	Thermometer ID:	TNM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	3.2
Total Containers:		Corrected Temperature:	3.0

Preservative Codes

None: NO — DI Water: H_2O

Cool: Cool — MeOH: Me

HCL: HC — HNO_3: HN

H_2S0_4: H_2 — NaOH: Na

H_3PO_4: HP

$NaHSO_4$: NABIS

$Na_2S_2O_3$: $NaSO_3$

Zn Acetate+NaOH: Zn

NaOH+Ascorbic Acid: SAPC

Sample Identification	Date	Time	Soil	Water	Grab/ Comp	# of Cont	Pres. Code	BTEX 8021B	TPH 8015M (GRO + DRO + MRO)	Chloride 300.0	HOLD	Sample Comments
CS-1 (0.5')	10/26/2021		X		Grab]	1		X	X	X		
SW-1	10/26/2021		X		Comp	1		X	X	X		
SW-2	10/26/2021		X		Comp	1		X	X	X		
SW-3	10/26/2021		X		Comp	1		X	X	X		
SW-4	10/26/2021		X		Comp	1		X	X	X		
											X	

890-1485 Chain of Custody

Additoinal Comments:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	10.26.21 1347	10/26/1:46	2		
3			4		
5			6		

Revised Date 05012020 Rev. 2020.1

1 2 3 4 5 6 7 8 9 10 11 12 13 14

Eurofins Xenco, Carlsbad
1089 N Canal St
Carlsbad NM 88220
Phone 575-988-3199 Fax 575-988-3199

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-482 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica kramer@eurofinset com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-1485-1
Address: 1211 W Florida Ave	Due Date Requested: 10/28/2021			
City: Midland	TAT Requested (days):			
State Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: Glacier Federal Com 001H	Project #: 88000786			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA
M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Z other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D/DI_LEACH Chloride	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH GRO-DRO-MRO	8015MOD_Calc	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
CS-1 (0 5) (890-1485-1)	10/26/21	Mountain		Solid			X	X	X	X	X	1	
SW-1 (890-1485-2)	10/26/21	Mountain		Solid			X	X	X	X	X	1	
SW-2 (890-1485-3)	10/26/21	Mountain		Solid			X	X	X	X	X	1	
SW-3 (890-1485-4)	10/26/21	Mountain		Solid			X	X	X	X	X	1	
SW-4 (890-1485-5)	10/26/21	Mountain		Solid			X	X	X	X	X	1	

Note. Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.

Possible Hazard Identification
Unconfirmed

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

Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:
Relinquished by: Cloe Cuf 10-26-21	Date/Time:	Company	Received by: J Kramer · Date/Time: 10-27-21 · Company
Relinquished by:	Date/Time:	Company	Received by: · Date/Time: 1112 · Company
Relinquished by:	Date/Time:	Company	Received by: · Date/Time: · Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No		Cooler Temperature(s) °C and Other Remarks: 2.4/2.7

Ver 06/08/2021

Login Sample Receipt Checklist

Client: NT Global

Job Number: 890-1485-1
SDG Number: Eddy Co NM

Login Number: 1485
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: NT Global

Job Number: 890-1485-1
SDG Number: Eddy Co NM

Login Number: 1485
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Xenco, Midland
List Creation: 10/27/21 11:09 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.6/2.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2122431964
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☑ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☑ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☑ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☑ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Jacqui Harris Title: Sr. Environmental Engineer

Signature: Jacqui Harris Date: 11/8/21

email: Jacqui.Harris@ConocoPhillips.com Telephone: (575) 496-0780

OCD Only

Received by: Robert Hamlet Date: 3/21/2022

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Robert Hamlet Date: 3/21/2022

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 61103

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 61103
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NAPP2122431964 GLACIER FEDERAL COM 001H, thank you. This closure is approved.	3/21/2022