

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	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Wapiti Operating, LLC	OGRID: 328741
Contact Name: Randy L. Madison	Contact Telephone: 575-445-6706
Contact email: rmadison@wapitienergy.com	Incident # (assigned by OCD) NRM2006661276
Contact mailing address: P.O. Box 190, 309 Silver St., Raton, NM 87740	

Location of Release Source

Latitude: N 36.81890 _____ Longitude: W 104.96274 _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: 2" Vent on Mainline	Site Type: Produced Water Line
Date Release Discovered: 3/1/20	API# (if applicable):

Unit Letter	Section	Township	Range	County
K	19	30N	19E	Colfax

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name: Vermejo Park Ranch _____)

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls): 192	Volume Recovered (bbls): 80
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: 2" vent failed on the main water line in Gachupin Canyon due to it freezing. The threads on a 2" fiberglass transition from fiberglass to steel line failed. This allowed the steel pipe to open to atmosphere spilling the produced water.

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State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? We calculated the amount of produced water to be about 192 Barrels.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? A phone call was made to Cory Smith. A follow-up email was also sent to Cory. Randy Madison made the notification	

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:

There was nothing to be contained. The produced water went to the bottom of the arroyo and pooled in two low spots. That water was removed.

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: Randy L. Madison Title: HSE Specialist

Signature:  Date: 3/13/20

email: rmadison@wapitienergy.com Telephone: 575-445-6706

OCD Only

Received by: _____ Date: _____

Incident ID	
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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?	<u>25</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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.

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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: Randy L. Madison Title: HSE Specialist

Signature:  Date: 7/17/20

email: _rmadison@wapitienergy.com Telephone: _575-445-6706

OCD Only

Received by: Date:

Incident ID	
District RP	
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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.

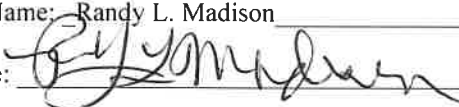
Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☒ 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: Randy L. Madison

Title: HSE Specialist

Signature: 

Date: 7/17/20

email: rmadison@wapitienergy.com

Telephone: 575-445-6706

OCD Only

Received by: OCD

Date: 7/23/2020

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: 8/4/2020

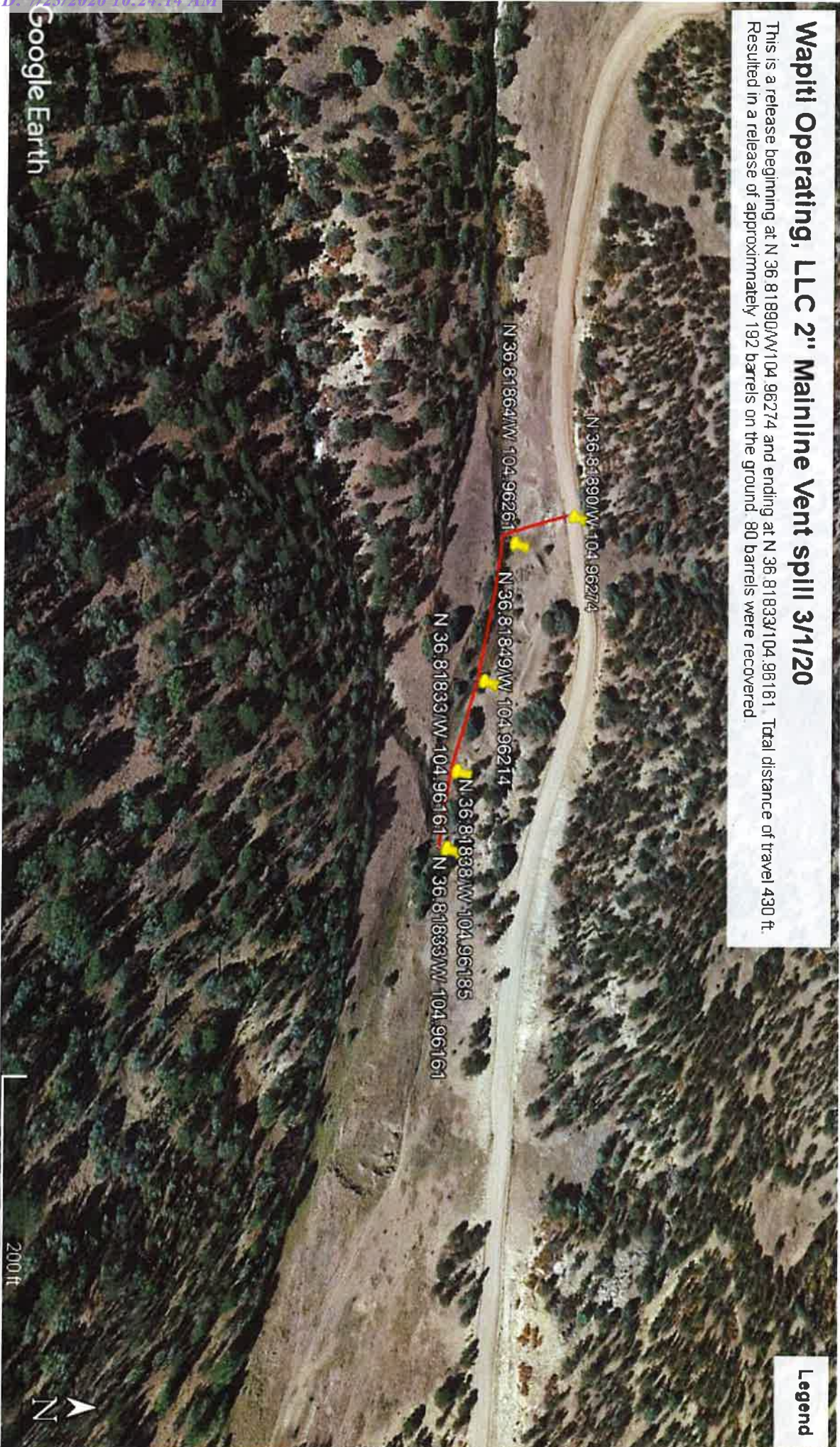
Printed Name: Cory Smith

Title: Environmental Specialist

Wapiti Operating, LLC 2" Mainline Vent spill 3/1/20

This is a release beginning at N 36 81890/W 104 96274 and ending at N 36 81833/W 104 96161. Total distance of travel 430 ft. Resulted in a release of approximately 192 barrels on the ground. 80 barrels were recovered.

Legend



Google Earth

200 ft



Executive Summary

On March 1, 2020 Wapiti Operating had a 2" vent on a mainline freeze and bust. This released 192 barrels of produced water. We recovered 80 barrels of the water. The water traveled down a dry arroyo. The ground was froze and the water travelled about 430 ft.

A grab sample was collected and analyzed at the time (3/2/20). The sample was analyzed for the constituents listed in Table I of 19.15.29.12 NMAC. The results came back with in Table I criteria. No remediation is needed.

NMOCD required additional composite sampling of the area every 200 square feet or 200 linear feet. A sampling plan was created and submitted. It was approved with some additions. NMOCD was notified two business days prior to sampling. Six composite samples were collected on 6/15/20 and analyzed per the constituents listed in Table I of 19.15.29.12 NMAC. The results came back below the requirements in Table I.

2" Vent Main Line
3/1/20 (D-137/D-138)

• Vent
#1 N 36.81890
W 104.96274

• #2 N 36.81864
W 104.96261

#3
N 36.81849
W 104.96214

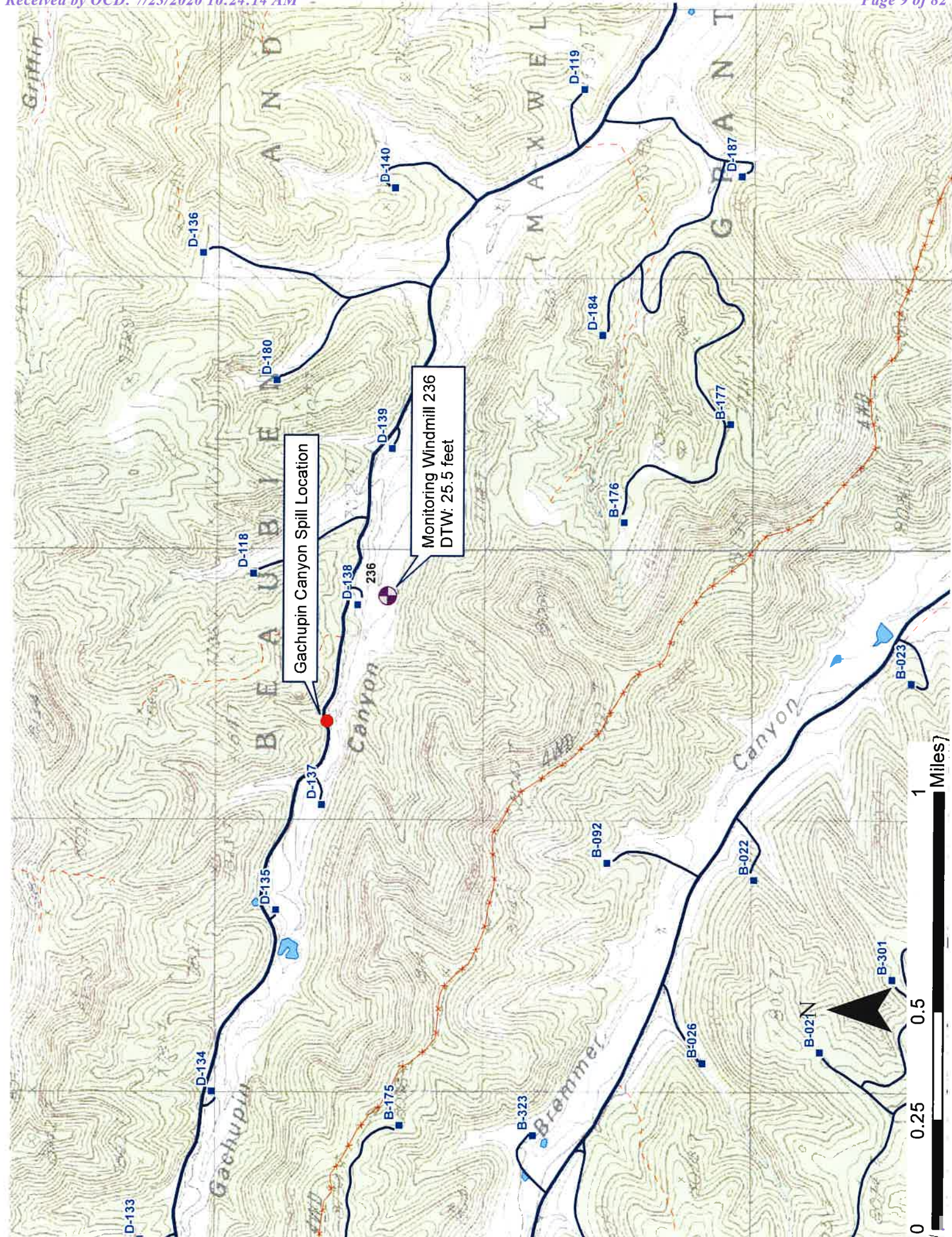
#4 N 36.81836
W 104.96185

#5 N 36.81833
W 104.96161

Sample

N 36.81889
W 104.96268

By M. M. M.
3/2/20





Environment Testing
TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-134318-1

Client Project/Site: Produced Water Spill

For:

Wapiti Operating, LLC
PO BOX 190
309 Silver Street
Raton, New Mexico 87740

Attn: Mr. Randy Madison

A handwritten signature in black ink that reads "Shelby Turner".

Authorized for release by:
3/17/2020 10:55:47 AM

Shelby Turner, Project Manager I
(303)736-0100
shelby.turner@testamericainc.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

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

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Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Laboratory Job ID: 280-134318-1

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Definitions/Glossary

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-134318-1

Glossary

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

Case Narrative

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-134318-1

Job ID: 280-134318-1**Laboratory: Eurofins TestAmerica, Denver****Narrative****CASE NARRATIVE****Client: Wapiti Operating, LLC****Project: Produced Water Spill****Report Number: 280-134318-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 3/5/2020 12:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.1° C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples Gachupin (D-137/D-138) (280-134318-1) and VPR A-47 (280-134318-2) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 03/10/2020.

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

GASOLINE RANGE ORGANICS (GRO)

Samples Gachupin (D-137/D-138) (280-134318-1) and VPR A-47 (280-134318-2) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were prepared and analyzed on 03/13/2020.

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

DIESEL RANGE ORGANICS

Samples Gachupin (D-137/D-138) (280-134318-1) and VPR A-47 (280-134318-2) were analyzed for diesel range organics in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 03/06/2020 and analyzed on 03/10/2020.

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

ANIONS (28 DAYS)

Samples Gachupin (D-137/D-138) (280-134318-1) and VPR A-47 (280-134318-2) were analyzed for anions (28 days) in accordance with EPA SW-846 Method 9056A. The samples were leached on 03/06/2020 and analyzed on 03/06/2020.

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

PERCENT SOLIDS

Samples Gachupin (D-137/D-138) (280-134318-1) and VPR A-47 (280-134318-2) were analyzed for percent solids in accordance with ASTM D2216-90. The samples were analyzed on 03/11/2020.

Case Narrative

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-134318-1

Job ID: 280-134318-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

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



Detection Summary

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-134318-1



Client Sample ID: Gachupin (D-137/D-138)

Lab Sample ID: 280-134318-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	23		8.0		mg/Kg	1		8015B	Total/NA
Motor Oil (C20-C38)	38		24		mg/Kg	1		8015B	Total/NA
Chloride	110		29		mg/Kg	1		9056A	Soluble

Client Sample ID: VPR A-47

Lab Sample ID: 280-134318-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) -C6-C10	1.8		1.5		mg/Kg	1		8015B	Total/NA
Diesel Range Organics [C10-C28]	66		7.7		mg/Kg	1		8015B	Total/NA
Motor Oil (C20-C38)	130		23		mg/Kg	1		8015B	Total/NA
Chloride	340		28		mg/Kg	1		9056A	Soluble

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-134318-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8015B	Gasoline Range Organics - (GC)	SW846	TAL DEN
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
3546	Microwave Extraction	SW846	TAL DEN
5030B	Purge and Trap	SW846	TAL DEN
5035	Closed System Purge and Trap	SW846	TAL DEN
DI Leach	Deionized Water Leaching Procedure	ASTM	TAL DEN

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-134318-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-134318-1	Gachupin (D-137/D-138)	Solid	03/02/20 11:22	03/05/20 12:45	
280-134318-2	VPR A-47	Solid	03/02/20 13:40	03/05/20 12:45	

Client Sample Results

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-134318-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: Gachupin (D-137/D-138)

Date Collected: 03/02/20 11:22

Date Received: 03/05/20 12:45

Lab Sample ID: 280-134318-1

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0044		mg/Kg		03/10/20 11:00	03/10/20 14:52	1
Ethylbenzene	ND		0.0044		mg/Kg		03/10/20 11:00	03/10/20 14:52	1
Toluene	ND		0.0044		mg/Kg		03/10/20 11:00	03/10/20 14:52	1
m-Xylene & p-Xylene	ND		0.0022		mg/Kg		03/10/20 11:00	03/10/20 14:52	1
o-Xylene	ND		0.0022		mg/Kg		03/10/20 11:00	03/10/20 14:52	1
Xylenes, Total	ND		0.0044		mg/Kg		03/10/20 11:00	03/10/20 14:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		58 - 140				03/10/20 11:00	03/10/20 14:52	1
Toluene-d8 (Surr)	102		80 - 126				03/10/20 11:00	03/10/20 14:52	1
4-Bromofluorobenzene (Surr)	112		76 - 127				03/10/20 11:00	03/10/20 14:52	1
Dibromofluoromethane (Surr)	100		75 - 121				03/10/20 11:00	03/10/20 14:52	1

Client Sample ID: VPR A-47

Date Collected: 03/02/20 13:40

Date Received: 03/05/20 12:45

Lab Sample ID: 280-134318-2

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0049		mg/Kg		03/10/20 11:00	03/10/20 15:15	1
Ethylbenzene	ND		0.0049		mg/Kg		03/10/20 11:00	03/10/20 15:15	1
Toluene	ND		0.0049		mg/Kg		03/10/20 11:00	03/10/20 15:15	1
m-Xylene & p-Xylene	ND		0.0025		mg/Kg		03/10/20 11:00	03/10/20 15:15	1
o-Xylene	ND		0.0025		mg/Kg		03/10/20 11:00	03/10/20 15:15	1
Xylenes, Total	ND		0.0049		mg/Kg		03/10/20 11:00	03/10/20 15:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		58 - 140				03/10/20 11:00	03/10/20 15:15	1
Toluene-d8 (Surr)	101		80 - 126				03/10/20 11:00	03/10/20 15:15	1
4-Bromofluorobenzene (Surr)	107		76 - 127				03/10/20 11:00	03/10/20 15:15	1
Dibromofluoromethane (Surr)	101		75 - 121				03/10/20 11:00	03/10/20 15:15	1

Method: 8015B - Gasoline Range Organics - (GC)

Client Sample ID: Gachupin (D-137/D-138)

Date Collected: 03/02/20 11:22

Date Received: 03/05/20 12:45

Lab Sample ID: 280-134318-1

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		1.8		mg/Kg		03/13/20 10:23	03/13/20 14:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	91		77 - 123				03/13/20 10:23	03/13/20 14:53	1

Client Sample ID: VPR A-47

Date Collected: 03/02/20 13:40

Date Received: 03/05/20 12:45

Lab Sample ID: 280-134318-2

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	1.8		1.5		mg/Kg		03/13/20 10:23	03/13/20 15:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	91		77 - 123				03/13/20 10:23	03/13/20 15:18	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-134318-1

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

Client Sample ID: Gachupin (D-137/D-138)

Date Collected: 03/02/20 11:22

Date Received: 03/05/20 12:45

Lab Sample ID: 280-134318-1

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	23		8.0		mg/Kg		03/06/20 14:11	03/10/20 17:13	1
Motor Oil (C20-C38)	38		24		mg/Kg		03/06/20 14:11	03/10/20 17:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	71		49 - 115				03/06/20 14:11	03/10/20 17:13	1

Client Sample ID: VPR A-47

Date Collected: 03/02/20 13:40

Date Received: 03/05/20 12:45

Lab Sample ID: 280-134318-2

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	66		7.7		mg/Kg		03/06/20 14:11	03/10/20 17:36	1
Motor Oil (C20-C38)	130		23		mg/Kg		03/06/20 14:11	03/10/20 17:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	75		49 - 115				03/06/20 14:11	03/10/20 17:36	1

General Chemistry

Client Sample ID: Gachupin (D-137/D-138)

Date Collected: 03/02/20 11:22

Date Received: 03/05/20 12:45

Lab Sample ID: 280-134318-1

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	12.4		0.1		%			03/11/20 16:05	1
Percent Solids	87.6		0.1		%			03/11/20 16:05	1

Client Sample ID: VPR A-47

Date Collected: 03/02/20 13:40

Date Received: 03/05/20 12:45

Lab Sample ID: 280-134318-2

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.6		0.1		%			03/11/20 16:05	1
Percent Solids	90.4		0.1		%			03/11/20 16:05	1

General Chemistry - Soluble

Client Sample ID: Gachupin (D-137/D-138)

Date Collected: 03/02/20 11:22

Date Received: 03/05/20 12:45

Lab Sample ID: 280-134318-1

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	110		29		mg/Kg			03/06/20 19:09	1

Client Sample ID: VPR A-47

Date Collected: 03/02/20 13:40

Date Received: 03/05/20 12:45

Lab Sample ID: 280-134318-2

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	340		28		mg/Kg			03/06/20 19:26	1

Eurofins TestAmerica, Denver

Surrogate Summary

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-134318-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (58-140)	TOL (80-126)	BFB (76-127)	DBFM (75-121)
280-134318-1	Gachupin (D-137/D-138)	101	102	112	100
280-134318-2	VPR A-47	99	101	107	101
LCS 280-488264/1-A	Lab Control Sample	96	99	101	100
LCSD 280-488264/2-A	Lab Control Sample Dup	95	100	102	101
MB 280-488264/3-A	Method Blank	95	101	102	101

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8015B - Gasoline Range Organics - (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TFT1 (77-123)			
280-134318-1	Gachupin (D-137/D-138)	91			
280-134318-2	VPR A-47	91			
LCS 280-488619/2-A	Lab Control Sample	92			
LCSD 280-488619/3-A	Lab Control Sample Dup	90			
MB 280-488619/1-A	Method Blank	91			

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		OTPH1 (49-115)			
280-134318-1	Gachupin (D-137/D-138)	71			
280-134318-2	VPR A-47	75			
280-134318-2 MS	VPR A-47	81			
280-134318-2 MS	VPR A-47	79			
280-134318-2 MSD	VPR A-47	83			
280-134318-2 MSD	VPR A-47	79			
LCS 280-487907/2-A	Lab Control Sample	86			
LCS 280-487907/3-A	Lab Control Sample	95			
MB 280-487907/1-A	Method Blank	76			

Surrogate Legend

OTPH = o-Terphenyl

QC Sample Results

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-134318-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-488264/3-A

Matrix: Solid

Analysis Batch: 488243

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 488264

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0050		mg/Kg		03/10/20 11:00	03/10/20 12:10	1
Ethylbenzene	ND		0.0050		mg/Kg		03/10/20 11:00	03/10/20 12:10	1
Toluene	ND		0.0050		mg/Kg		03/10/20 11:00	03/10/20 12:10	1
m-Xylene & p-Xylene	ND		0.0025		mg/Kg		03/10/20 11:00	03/10/20 12:10	1
o-Xylene	ND		0.0025		mg/Kg		03/10/20 11:00	03/10/20 12:10	1
Xylenes, Total	ND		0.0050		mg/Kg		03/10/20 11:00	03/10/20 12:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		58 - 140	03/10/20 11:00	03/10/20 12:10	1
Toluene-d8 (Surr)	101		80 - 126	03/10/20 11:00	03/10/20 12:10	1
4-Bromofluorobenzene (Surr)	102		76 - 127	03/10/20 11:00	03/10/20 12:10	1
Dibromofluoromethane (Surr)	101		75 - 121	03/10/20 11:00	03/10/20 12:10	1

Lab Sample ID: LCS 280-488264/1-A

Matrix: Solid

Analysis Batch: 488243

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 488264

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.0436		mg/Kg		87	75 - 135
Ethylbenzene	0.0500	0.0448		mg/Kg		90	73 - 125
Toluene	0.0500	0.0415		mg/Kg		83	77 - 122
m-Xylene & p-Xylene	0.0500	0.0431		mg/Kg		86	77 - 135
o-Xylene	0.0500	0.0438		mg/Kg		88	75 - 135
Xylenes, Total	0.100	0.0869		mg/Kg		87	76 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		58 - 140
Toluene-d8 (Surr)	99		80 - 126
4-Bromofluorobenzene (Surr)	101		76 - 127
Dibromofluoromethane (Surr)	100		75 - 121

Lab Sample ID: LCSD 280-488264/2-A

Matrix: Solid

Analysis Batch: 488243

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 488264

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	0.0500	0.0481		mg/Kg		96	75 - 135	10	20
Ethylbenzene	0.0500	0.0499		mg/Kg		100	73 - 125	11	20
Toluene	0.0500	0.0453		mg/Kg		91	77 - 122	9	20
m-Xylene & p-Xylene	0.0500	0.0483		mg/Kg		97	77 - 135	11	20
o-Xylene	0.0500	0.0480		mg/Kg		96	75 - 135	9	20
Xylenes, Total	0.100	0.0963		mg/Kg		96	76 - 135	10	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		58 - 140
Toluene-d8 (Surr)	100		80 - 126
4-Bromofluorobenzene (Surr)	102		76 - 127

Eurofins TestAmerica, Denver

QC Sample Results

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-134318-1

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

Lab Sample ID: LCSD 280-488264/2-A

Matrix: Solid

Analysis Batch: 488243

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 488264

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
Dibromofluoromethane (Surr)	101		75 - 121

Method: 8015B - Gasoline Range Organics - (GC)

Lab Sample ID: MB 280-488619/1-A

Matrix: Solid

Analysis Batch: 488643

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 488619

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	ND		2.0		mg/Kg		03/13/20 09:31	03/13/20 11:16	1
-C6-C10									

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	91				77 - 123	03/13/20 09:31	03/13/20 11:16	1

Lab Sample ID: LCS 280-488619/2-A

Matrix: Solid

Analysis Batch: 488643

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 488619

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
Gasoline Range Organics (GRO)	4.48	Result	Qualifier	mg/Kg		109		75 - 135
-C6-C10								

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
a,a,a-Trifluorotoluene	92				77 - 123

Lab Sample ID: LCSD 280-488619/3-A

Matrix: Solid

Analysis Batch: 488643

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 488619

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
Gasoline Range Organics (GRO)	4.48	Result	Qualifier	mg/Kg		109		75 - 135	0	30
-C6-C10										

Surrogate	LCSD	LCSD	%Recovery	Qualifier	Limits
a,a,a-Trifluorotoluene	90				77 - 123

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

Lab Sample ID: MB 280-487907/1-A

Matrix: Solid

Analysis Batch: 488279

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 487907

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.0		mg/Kg		03/06/20 14:11	03/10/20 16:07	1
Motor Oil (C20-C38)	ND		24		mg/Kg		03/06/20 14:11	03/10/20 16:07	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-134318-1

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

Lab Sample ID: MB 280-487907/1-A

Matrix: Solid

Analysis Batch: 488279

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 487907

Surrogate	MB MB %Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	76		49 - 115	03/06/20 14:11	03/10/20 16:07	1

Lab Sample ID: LCS 280-487907/2-A

Matrix: Solid

Analysis Batch: 488279

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 487907

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Diesel Range Organics [C10-C28]	132	110		mg/Kg		83	53 - 115
Surrogate	LCS LCS %Recovery	Qualifier	Limits				
o-Terphenyl	86		49 - 115				

Lab Sample ID: LCS 280-487907/3-A

Matrix: Solid

Analysis Batch: 488279

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 487907

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Motor Oil (C20-C38)	334	311		mg/Kg		93	57 - 115
Surrogate	LCS LCS %Recovery	Qualifier	Limits				
o-Terphenyl	95		49 - 115				

Lab Sample ID: 280-134318-2 MS

Matrix: Solid

Analysis Batch: 488279

Client Sample ID: VPR A-47

Prep Type: Total/NA

Prep Batch: 487907

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Diesel Range Organics [C10-C28]	66		117	150		mg/Kg		72	56 - 115
Surrogate	MS MS %Recovery	Qualifier	Limits						
o-Terphenyl	81		49 - 115						

Lab Sample ID: 280-134318-2 MS

Matrix: Solid

Analysis Batch: 488279

Client Sample ID: VPR A-47

Prep Type: Total/NA

Prep Batch: 487907

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Motor Oil (C20-C38)	130		315	422		mg/Kg		92	57 - 115
Surrogate	MS MS %Recovery	Qualifier	Limits						
o-Terphenyl	79		49 - 115						

Eurofins TestAmerica, Denver

QC Sample Results

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-134318-1

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

Lab Sample ID: 280-134318-2 MSD

Matrix: Solid

Analysis Batch: 488279

Client Sample ID: VPR A-47

Prep Type: Total/NA

Prep Batch: 487907

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	66		128	155		mg/Kg		70	56 - 115	3	23

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	83		49 - 115

Lab Sample ID: 280-134318-2 MSD

Matrix: Solid

Analysis Batch: 488279

Client Sample ID: VPR A-47

Prep Type: Total/NA

Prep Batch: 487907

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Motor Oil (C20-C38)	130		299	399		mg/Kg		90	57 - 115	6	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	79		49 - 115

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MRL 280-487947/3

Matrix: Solid

Analysis Batch: 487947

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.56		mg/L		91	50 - 150

Lab Sample ID: MB 280-487972/3-A

Matrix: Solid

Analysis Batch: 487947

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		30		mg/Kg			03/06/20 17:41	1

Lab Sample ID: LCS 280-487972/1-A

Matrix: Solid

Analysis Batch: 487947

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1000	987		mg/Kg		99	90 - 110

Lab Sample ID: LCSD 280-487972/2-A

Matrix: Solid

Analysis Batch: 487947

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	1000	988		mg/Kg		99	90 - 110	0	10

Eurofins TestAmerica, Denver

QC Association Summary

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-134318-1

GC/MS VOA

Analysis Batch: 488243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134318-1	Gachupin (D-137/D-138)	Total/NA	Solid	8260B	488264
280-134318-2	VPR A-47	Total/NA	Solid	8260B	488264
MB 280-488264/3-A	Method Blank	Total/NA	Solid	8260B	488264
LCS 280-488264/1-A	Lab Control Sample	Total/NA	Solid	8260B	488264
LCSD 280-488264/2-A	Lab Control Sample Dup	Total/NA	Solid	8260B	488264

Prep Batch: 488264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134318-1	Gachupin (D-137/D-138)	Total/NA	Solid	5030B	
280-134318-2	VPR A-47	Total/NA	Solid	5030B	
MB 280-488264/3-A	Method Blank	Total/NA	Solid	5030B	
LCS 280-488264/1-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 280-488264/2-A	Lab Control Sample Dup	Total/NA	Solid	5030B	

GC VOA

Prep Batch: 488619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-488619/1-A	Method Blank	Total/NA	Solid	5030B	
LCS 280-488619/2-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 280-488619/3-A	Lab Control Sample Dup	Total/NA	Solid	5030B	

Prep Batch: 488632

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134318-1	Gachupin (D-137/D-138)	Total/NA	Solid	5035	
280-134318-2	VPR A-47	Total/NA	Solid	5035	

Analysis Batch: 488643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134318-1	Gachupin (D-137/D-138)	Total/NA	Solid	8015B	488632
280-134318-2	VPR A-47	Total/NA	Solid	8015B	488632
MB 280-488619/1-A	Method Blank	Total/NA	Solid	8015B	488619
LCS 280-488619/2-A	Lab Control Sample	Total/NA	Solid	8015B	488619
LCSD 280-488619/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B	488619

GC Semi VOA

Prep Batch: 487907

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134318-1	Gachupin (D-137/D-138)	Total/NA	Solid	3546	
280-134318-2	VPR A-47	Total/NA	Solid	3546	
MB 280-487907/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-487907/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 280-487907/3-A	Lab Control Sample	Total/NA	Solid	3546	
280-134318-2 MS	VPR A-47	Total/NA	Solid	3546	
280-134318-2 MS	VPR A-47	Total/NA	Solid	3546	
280-134318-2 MSD	VPR A-47	Total/NA	Solid	3546	
280-134318-2 MSD	VPR A-47	Total/NA	Solid	3546	

Analysis Batch: 488279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134318-1	Gachupin (D-137/D-138)	Total/NA	Solid	8015B	487907

Eurofins TestAmerica, Denver

QC Association Summary

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-134318-1

GC Semi VOA (Continued)

Analysis Batch: 488279 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134318-2	VPR A-47	Total/NA	Solid	8015B	487907
MB 280-487907/1-A	Method Blank	Total/NA	Solid	8015B	487907
LCS 280-487907/2-A	Lab Control Sample	Total/NA	Solid	8015B	487907
LCS 280-487907/3-A	Lab Control Sample	Total/NA	Solid	8015B	487907
280-134318-2 MS	VPR A-47	Total/NA	Solid	8015B	487907
280-134318-2 MS	VPR A-47	Total/NA	Solid	8015B	487907
280-134318-2 MSD	VPR A-47	Total/NA	Solid	8015B	487907
280-134318-2 MSD	VPR A-47	Total/NA	Solid	8015B	487907

General Chemistry

Analysis Batch: 487947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134318-1	Gachupin (D-137/D-138)	Soluble	Solid	9056A	487972
280-134318-2	VPR A-47	Soluble	Solid	9056A	487972
MB 280-487972/3-A	Method Blank	Soluble	Solid	9056A	487972
LCS 280-487972/1-A	Lab Control Sample	Soluble	Solid	9056A	487972
LCSD 280-487972/2-A	Lab Control Sample Dup	Soluble	Solid	9056A	487972
MRL 280-487947/3	Lab Control Sample	Total/NA	Solid	9056A	487972

Leach Batch: 487972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134318-1	Gachupin (D-137/D-138)	Soluble	Solid	DI Leach	
280-134318-2	VPR A-47	Soluble	Solid	DI Leach	
MB 280-487972/3-A	Method Blank	Soluble	Solid	DI Leach	
LCS 280-487972/1-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 280-487972/2-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 488435

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134318-1	Gachupin (D-137/D-138)	Total/NA	Solid	Moisture	
280-134318-2	VPR A-47	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-134318-1

Client Sample ID: Gachupin (D-137/D-138)

Lab Sample ID: 280-134318-1

Date Collected: 03/02/20 11:22

Matrix: Solid

Date Received: 03/05/20 12:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.673 g	5 mL	488264	03/10/20 11:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	488243	03/10/20 14:52	GPM	TAL DEN
Total/NA	Prep	5035			5.465 g	5 mL	488632	03/13/20 10:23	CAS	TAL DEN
Total/NA	Analysis	8015B		1	1 mL	50 mL	488643	03/13/20 14:53	CAS	TAL DEN
Total/NA	Prep	3546			15.0 g	1 mL	487907	03/06/20 14:11	MB	TAL DEN
Total/NA	Analysis	8015B		1			488279	03/10/20 17:13	MAM	TAL DEN
Soluble	Leach	DI Leach			10.19 g	100 mL	487972	03/06/20 13:02	JAP	TAL DEN
Soluble	Analysis	9056A		1	5 mL	5 mL	487947	03/06/20 19:09	BWH	TAL DEN
Total/NA	Analysis	Moisture		1			488435	03/11/20 16:05	BWH	TAL DEN

Client Sample ID: VPR A-47

Lab Sample ID: 280-134318-2

Date Collected: 03/02/20 13:40

Matrix: Solid

Date Received: 03/05/20 12:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.076 g	5 mL	488264	03/10/20 11:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	488243	03/10/20 15:15	GPM	TAL DEN
Total/NA	Prep	5035			6.745 g	5 mL	488632	03/13/20 10:23	CAS	TAL DEN
Total/NA	Analysis	8015B		1	1 mL	50 mL	488643	03/13/20 15:18	CAS	TAL DEN
Total/NA	Prep	3546			15.5 g	1 mL	487907	03/06/20 14:11	MB	TAL DEN
Total/NA	Analysis	8015B		1			488279	03/10/20 17:36	MAM	TAL DEN
Soluble	Leach	DI Leach			10.59 g	100 mL	487972	03/06/20 13:02	JAP	TAL DEN
Soluble	Analysis	9056A		1	5 mL	5 mL	487947	03/06/20 19:26	BWH	TAL DEN
Total/NA	Analysis	Moisture		1			488435	03/11/20 16:05	BWH	TAL DEN

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-134318-1

Laboratory: Eurofins TestAmerica, Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21
A2LA	ISO/IEC 17025	2907.01	10-31-21
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	01-08-20 *
Arizona	State	AZ0713	12-20-20
Arkansas DEQ	State	19-047-0	06-01-20
California	State	2513	01-08-21
Connecticut	State	PH-0686	09-30-20
Florida	NELAP	E87667-57	06-30-20
Illinois	NELAP	2000172019-1	04-30-20
Iowa	State	IA#370	12-01-20
Kansas	NELAP	E-10166	04-30-20
Louisiana	NELAP	30785	06-30-20
Maine	State	2019011 (231)	03-03-21
Minnesota	NELAP	1788752	12-31-20
Nevada	State	CO000262020-1	07-31-20
New Hampshire	NELAP	205319	04-28-20
New Jersey	NELAP	190002	06-30-20
New York	NELAP	59923	04-01-20
North Carolina (WW/SW)	State	358	12-31-20
North Dakota	State	R-034	01-08-21
Oklahoma	State	2018-006	08-31-20
Oregon	NELAP	4025-011	01-08-21
Pennsylvania	NELAP	013	08-01-20
South Carolina	State	72002001	01-08-20 *
Texas	NELAP	T104704183-19-17	09-30-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	CO000262019-11	07-31-20
Virginia	NELAP	10490	06-14-20
Washington	State	C583-19	08-05-20
West Virginia DEP	State	354	11-30-20
Wisconsin	State	999615430	08-31-20
Wyoming (UST)	A2LA	2907.01	10-31-21

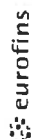
* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Denver

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver
#280



Environment Testing,
TestAmerica

Client Information Client Contact: Mr. Randy Madison Company: Wapiti Operating, LLC		Lab P#: Supplier: Randy J. Madison Turner, Shelby R E-Mail: shelby.turner@testamercinc.com Phone: 574-420-1120		Carrier Tracking No(s): CQC No: Page: Job #:	
Address: P.O. Box 190 309 Silver Street City: Raton State, Zip: NM, 87740 Phone: 575-445-6706(Tel) Email: rmadison@wapitienergy.com Project Name: Produced Water Spill Site:		Analysis Requested Due Date Requested: TAT Requested (days): PO #: Pay by Credit Card WO #: Project #: 28020400 SSOW#:			
Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		Preservation Codes: M - Hexane N - None O - AcNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (Specify)			
Sample Identification Sample Date: 3/2/20 Sample Time: 1122 Sample Type (C=Comp, G=grab): G Matrix (Weaker, Stronger, One-sided, BT-Traus, Anti): Solid Preservation Code: G		Total Number of containers: 1 Special Instructions/Note:			
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Method of Shipment:			
Relinquished by: [Signature] Date/Time: 3/3/20 at 1100		Received by: [Signature] Date/Time: 3/5/20 0910 Company: Wapiti			
Relinquished by: [Signature] Date/Time:		Received by: [Signature] Date/Time: 12:45 Company:			
Relinquished by:		Received by: [Signature] Date/Time: 3/5/20 Company:			
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: 4.5 to 4.9 Vg. 3/5/20			

Page 1 of 1

FROM (575) 420-1120
Randy Madison
309 Silver St
RATON NM 87740
US

SHIP DATE 02MAR20
ACTWST 20 DO LG
CART 7507474027MET4
BILL SENDER

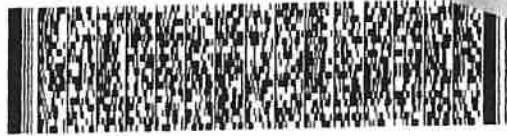
TO Shelby Turner
TestAmerica Denver Lab.
4955 Yarrow St.

ARVADA CO 80002
(303) 736-0100

REF

TO
FO

DEPT



TRK# 7779 1069 3845

80002

9632 0019 6 (000 000 0000) 0 00 7779 1069 3845



280-134318 Waybill

Login Sample Receipt Checklist

Client: Wapiti Operating, LLC

Job Number: 280-134318-1

Login Number: 134318

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: Lubin, Julius C

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	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 $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



April 23, 2020

TO: Cory Smith, Environmental Specialist
NMOCD District 3 & 4
1000 Rio Brazos Rd.
Aztec, NM 87410

FR: Randy Madison, HSE Specialist

REF: Major Spill VPR A-47 API # 30-00720197, Incident # NRM2005230899
Major Spill 2" Vent on Mainline, Incident #NRM2006661276

Mr. Smith,

Per our recent conversations and the associated timeline, I am requesting a time extension until 8/1/20 to close out the referenced spill incidents per 19.15.29.8, E(1). With the additional discussed soil sampling on both of the referenced incidents, as well as the limitations in resource caused by the pandemic, it is unlikely Wapiti will meet 90 day deadlines; (A-47 due 5/10/20 and Mainline due 6/1/20).

We are continuing to make every effort to gather the additional information and provide closure. Thank you for your consideration in this matter.

Kinds Regards,

Randy L. Madison, HSE Specialist

Randy Madison

From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Thursday, April 30, 2020 9:29 AM
To: Randy Madison
Cc: Ian Johnston
Subject: RE: Emailing: Request for Extension Signed

Mr. Madison,

Please in the future break each extension request down for each individual incident#.

OCD has reviewed the extension request for incidents# nRM2005230899 and nRM2006661276 received on April 23, 2020 and have approved both extensions. Please submit the closure report no later than August 1, 2020.

Please include this approval in your final C-141 in addition keep a copy of this approval as no hard copy will be sent to you.

If you have any additional questions please give me a call.

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

-----Original Message-----

From: Randy Madison <RMadison@WapitiEnergy.com>
Sent: Thursday, April 23, 2020 8:03 AM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Cc: Ian Johnston <IJohnston@WapitiEnergy.com>
Subject: [EXT] Emailing: Request for Extension Signed

Cory,
Please find my request for an extension attached.
Randy

Randy L. Madison, HSE Specialist
Wapiti Operating, LLC
P.O. Box 190
309 Silver St.
Raton, NM 87740
Office 575-445-6706
Cell 575-420-1120
rmadison@wapitienergy.com

Your message is ready to be sent with the following file or link attachments:

Request for Extension Signed

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.



May 4, 2020

TO: Cory Smith, Environmental Specialist
NMOCD District 3 & 4
1000 Rio Brazos Rd.
Aztec, NM 87410

FR: Randy Madison, HSE Specialist

REF: Major Spill 2" Vent on Mainline, Incident #NRM2006661276

Wapiti Operating Sampling Plan in reference to above stated incidents.

This spill contains a V-pattern from the source of the release to the bottom of the arroyo, than traveled about 430 linear feet. The following is planned to be conducted:

- A composite sample consisting of 5 points is planned in this area of the V-pattern.
- A second composite sample consisting of 5 points at equal distances will be collected where the spilled fluids traveled down the dry arroyo, about 430 linear varying from 6 inches to 2 feet in width. The sampling will be collected by hand as Wapiti Operating has no ROW to this area. A grab sample was collected on 3/2/20 and was submitted at the time of the release to provide documentation that the contamination was within the limits of Table 1 on all tests and no remediation is believed to be needed.

Kinds Regards,



Randy L. Madison, HSE Specialist

Randy Madison

From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Monday, May 4, 2020 1:43 PM
To: Randy Madison
Cc: Ian Johnston
Subject: RE: Emailing: RE Emailing Request for Extension Signed

Randy,

I need more information to approved an alternative sampling plan. Specifically I need the size of the impacts, the area of the impacts, specifically on a map where Wapiti plans to collect samples from etc.

Also please use the incident# in all request so that I can quickly find all related information to this release.

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

-----Original Message-----

From: Randy Madison <RMadison@WapitiEnergy.com>
Sent: Monday, May 4, 2020 12:46 PM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Cc: Ian Johnston <IJohnston@WapitiEnergy.com>
Subject: [EXT] Emailing: RE Emailing Request for Extension Signed

Cory,
Please find attached my sample plan on the 2" vent on the mainline.
Thanks
Randy

Randy L. Madison, HSE Specialist
Wapiti Operating, LLC
P.O. Box 190
309 Silver St.
Raton, NM 87740
Office 575-445-6706
Cell 575-420-1120
rmadison@wapitienergy.com



May 13, 2020

TO: Cory Smith, Environmental Specialist
NMOCD District 3 & 4
1000 Rio Brazos Rd.
Aztec, NM 87410

FR: Randy Madison, HSE Specialist

REF: Major Spill 2" Vent on Mainline, Incident # NRM200661276

Wapiti Operating Sampling Plan in reference to above stated incident.

The following details will be conducted reference the attached the drawings:

- A-Drawing approximately 234 sq.ft. A grab sample was collected in this area on 3/2/20. The results of the analysis came back within the limits of Table 1. No additional Sampling needed
- B-Drawing is down the embankment over rock. There is no staining. No soil to sample
- C-Drawing approximately 500 sq.ft. Wapiti will collect two composition samples of this area with a total of ten collection point equally distributed throughout the area
- D-Drawing is down the center of the arroyo. It varies from inches in width to about two feet in some areas. It is 316 feet in linear ft. I will collect one composition sample consisting of 5 points of equal length along the 316 feet.

The sampling will be performed by hand, as Wapiti Operating has no ROW to the area.

Kinds Regards,

Randy L. Madison, HSE Specialist



Sampling Plan Map

Mapiti Operating Mainline Spill- NFRM2000661278 Area not Drawn to Scale.
A Drawing- 8'by18'by18'=234 sq.ft.
B Drawing Rock drop off nothing to sample rock is clean
C Drawing 10'by50'=500 sq.ft.
D Drawing inches to 2' by 316 linear ft.

Randy Madison

From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Wednesday, May 13, 2020 9:46 AM
To: Randy Madison
Cc: Ian Johnston
Subject: RE: Incident # NRM200661276 Sampling Plan/Map

Mr. Madison

OCD approves the sample plan with the following conditions of approval:

Area A: Must be sampled collect 1 5pt composite sample (The previous sample was a grab sample and does not meet the requirements of 19.15.29.12 NMAC for closure.)

Area B: Please provide me pictures of the area showing no signs of staining and no loose soils that can be collected. If there are loose soils 1x 5pt composite sample needs to be collected from this area

Area C - 2 5pt composite samples for this area.

Area D- collect a 5pt composite sample for every 200 linear Ft with aliquots every 40' ie 2 samples for area D

All samples will be analyzed for TPH,BTEX, and Chlorides. Prior to the collection of final confirmation samples please ensure that you provide notice to the OCD per 19.15.29.12 NMAC

Please include this approval in your Final C-141 as no paper copy will be sent to you.

IF you have any additional questions please give me a call.

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

-----Original Message-----

From: Randy Madison <RMadison@WapitiEnergy.com>
Sent: Wednesday, May 13, 2020 7:44 AM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Cc: Ian Johnston <IJohnston@WapitiEnergy.com>
Subject: [EXT] Incident # NRM200661276 Sampling Plan/Map

Mr. Smith,
Please find attached an explanation of sampling and a Map/Drawing.
Thanks
Randy

Randy L. Madison, HSE Specialist

Wapiti Operating, LLC
P.O. Box 190
309 Silver St.
Raton, NM 87740
Office 575-445-6706
Cell 575-420-1120
rmadison@wapitienergy.com

Your message is ready to be sent with the following file or link attachments:

Sampling Plan 5-13-20
Sampling Plan 5-7-20

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May 26, 2020

TO: Cory Smith, Environmental Specialist
NMOCD District 3 & 4
1000 Rio Brazos Rd.
Aztec, NM 87410

FR: Randy Madison, HSE Specialist

REF: Major Spill VPR A-47 API # 30-00720197, Incident # NRM2005230899
Major Spill 2" Vent on Mainline, Incident #NRM 2006661276

Mr. Smith,

This is written notification of the final sampling at the above 2 locations. I will sample the NRM 2005230899 at 1000 hrs. on 6/1/20. Upon completion of this sampling I will travel to the NRM 2006661276, this will be about 1200 hrs. I will then sample this spill. This is a follow up to our phone conversation this morning.

Kinds Regards,
Randy L. Madison, HSE Specialist

Randy Madison

From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Monday, June 8, 2020 7:22 AM
To: Randy Madison
Subject: RE: Sampling on Incident #NRM2005230899 & NRM2006661276

Randy,

No problem unfortunately I cannot make the sampling event as they still don't want us traveling if possible. Please make sure to keep the samples on ice.. and retake photos etc.

If you want to sample before the 15th please let me know.

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

From: Randy Madison <RMadison@WapitiEnergy.com>
Sent: Friday, June 5, 2020 9:43 AM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Subject: [EXT] Sampling on Incident #NRM2005230899 & NRM2006661276

Cory,
This is to notify you that I will not be sampling NRM 2006661276 on June 8, 2020. I will be sampling NRM 2005230899 and NRM 2006661276 on 6/15/20 starting at 0900. There were temperature issues with the last sample so they were no good.
Randy

Randy L. Madison, HSE Specialist
Wapiti Operating, LLC
P.O. Box 190
309 Silver St.
Raton, NM 87740
Office 575-445-6706
Cell 575-420-1120
rmadison@wapitienergy.com



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RE Emailing Request for Extension Signed

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Environment Testing
America

ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-137697-1

Client Project/Site: Produced Water Spill

For:

Wapiti Operating, LLC
PO BOX 190
309 Silver Street
Raton, New Mexico 87740

Attn: Mr. Randy Madison

A handwritten signature in black ink that reads "Shelby Turner".

Authorized for release by:
7/9/2020 12:52:49 PM

Shelby Turner, Project Manager I
(303)736-0100
Shelby.Turner@Eurofinset.com

LINKS

Review your project
results through

Total Access

Have a Question?



Visit us at:

www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

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

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Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Laboratory Job ID: 280-137697-1

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Definitions/Glossary

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

Qualifiers

GC Semi VOA

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

Job ID: 280-137697-1**Laboratory: Eurofins TestAmerica, Denver****Narrative****CASE NARRATIVE****Client: Wapiti Operating, LLC****Project: Produced Water Spill****Report Number: 280-137697-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 6/16/2020 9:58 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.6° C

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples A-DRAWING (ADC-1) (280-137697-1), B-DRAWING (BDC-1) (280-137697-2), C-DRAWING (CDC-1) (280-137697-3), C-DRAWING (CDC-2) (280-137697-4), D-DRAWING (DDC-1) (280-137697-5) and D-DRAWING (DDC-2) (280-137697-6) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 06/21/2020.

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

GASOLINE RANGE ORGANICS (GRO)

Samples A-DRAWING (ADC-1) (280-137697-1), B-DRAWING (BDC-1) (280-137697-2), C-DRAWING (CDC-1) (280-137697-3), C-DRAWING (CDC-2) (280-137697-4), D-DRAWING (DDC-1) (280-137697-5) and D-DRAWING (DDC-2) (280-137697-6) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were prepared on 06/15/2020 and analyzed on 06/26/2020 and 06/27/2020.

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

DIESEL RANGE ORGANICS

Samples A-DRAWING (ADC-1) (280-137697-1), B-DRAWING (BDC-1) (280-137697-2), C-DRAWING (CDC-1) (280-137697-3), C-DRAWING (CDC-2) (280-137697-4), D-DRAWING (DDC-1) (280-137697-5) and D-DRAWING (DDC-2) (280-137697-6) were analyzed for diesel range organics in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 06/23/2020 and analyzed on 07/02/2020 and 07/07/2020.

o-Terphenyl failed the surrogate recovery criteria low for LCS 280-499774/2-A. Diesel Range Organics [C10-C28] failed the recovery criteria low for LCS 280-499774/2-A. The associated samples are out of hold; therefore, re-extraction was not performed and the data has been reported. Refer to the QC report for details.

Associated samples: A-DRAWING (ADC-1) (280-137697-1), B-DRAWING (BDC-1) (280-137697-2), C-DRAWING (CDC-1) (280-137697-3), C-DRAWING (CDC-2) (280-137697-4), D-DRAWING (DDC-1) (280-137697-5) and D-DRAWING (DDC-2) (280-137697-6).

The peak profile present in the following samples is atypical of a hydrocarbon pattern and consists of several discrete peaks: B-DRAWING

Case Narrative

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

Job ID: 280-137697-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

(BDC-1) (280-137697-2) and C-DRAWING (CDC-1) (280-137697-3).

The continuing calibration verification (CCV) associated with batch 280-500853 recovered above the upper control limit (+/-15%D) for o-Terphenyl (Surr). The affected CCV and associated samples have surrogate recoveries well within acceptance criteria (45-130%). The n-Octacosane met acceptance criteria for %D and surrogate recovery in the affected CCVs. The associated samples are impacted: (CCV 280-500853/34), (LCS 280-499774/2-A), (LCS 280-499774/3-A) and (MB 280-499774/1-A).

Sequence goes:

CCVRT DRO o-Terphenyl (Surr) +22.3 (surrogate recovery 122%)

CCV DRO in control

MB,LCS,LCD

CCV DRO o-Terphenyl (Surr) +23.2%D (surrogate recovery 123%)

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

ANIONS (28 DAYS)

Samples A-DRAWING (ADC-1) (280-137697-1), B-DRAWING (BDC-1) (280-137697-2), C-DRAWING (CDC-1) (280-137697-3), C-DRAWING (CDC-2) (280-137697-4), D-DRAWING (DDC-1) (280-137697-5) and D-DRAWING (DDC-2) (280-137697-6) were analyzed for anions (28 days) in accordance with EPA SW-846 Method 9056A. The samples were leached on 06/25/2020 and analyzed on 06/26/2020.

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

PERCENT SOLIDS

Samples A-DRAWING (ADC-1) (280-137697-1), B-DRAWING (BDC-1) (280-137697-2), C-DRAWING (CDC-1) (280-137697-3), C-DRAWING (CDC-2) (280-137697-4), D-DRAWING (DDC-1) (280-137697-5) and D-DRAWING (DDC-2) (280-137697-6) were analyzed for percent solids in accordance with ASTM D2216-90. The samples were analyzed on 06/17/2020.

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

Detection Summary

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

Client Sample ID: A-DRAWING (ADC-1)

Lab Sample ID: 280-137697-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	14	*	7.1		mg/Kg	1		8015B	Total/NA
Motor Oil (C20-C38)	62		21		mg/Kg	1		8015B	Total/NA

Client Sample ID: B-DRAWING (BDC-1)

Lab Sample ID: 280-137697-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	22	*	7.1		mg/Kg	1		8015B	Total/NA
Motor Oil (C20-C38)	67		21		mg/Kg	1		8015B	Total/NA
Chloride	35		29		mg/Kg	1		9056A	Soluble

Client Sample ID: C-DRAWING (CDC-1)

Lab Sample ID: 280-137697-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	24	*	7.6		mg/Kg	1		8015B	Total/NA
Motor Oil (C20-C38)	50		23		mg/Kg	1		8015B	Total/NA

Client Sample ID: C-DRAWING (CDC-2)

Lab Sample ID: 280-137697-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	16	*	7.7		mg/Kg	1		8015B	Total/NA
Motor Oil (C20-C38)	44		23		mg/Kg	1		8015B	Total/NA

Client Sample ID: D-DRAWING (DDC-1)

Lab Sample ID: 280-137697-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	12	*	7.9		mg/Kg	1		8015B	Total/NA
Motor Oil (C20-C38)	26		24		mg/Kg	1		8015B	Total/NA

Client Sample ID: D-DRAWING (DDC-2)

Lab Sample ID: 280-137697-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	45	*	7.6		mg/Kg	1		8015B	Total/NA
Motor Oil (C20-C38)	56		23		mg/Kg	1		8015B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8015B	Gasoline Range Organics - (GC)	SW846	TAL DEN
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
3546	Microwave Extraction	SW846	TAL DEN
5030B	Purge and Trap	SW846	TAL DEN
5035	Closed System Purge and Trap	SW846	TAL DEN
DI Leach	Deionized Water Leaching Procedure	ASTM	TAL DEN

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-137697-1	A-DRAWING (ADC-1)	Solid	06/15/20 13:00	06/16/20 09:58	
280-137697-2	B-DRAWING (BDC-1)	Solid	06/15/20 13:20	06/16/20 09:58	
280-137697-3	C-DRAWING (CDC-1)	Solid	06/15/20 13:45	06/16/20 09:58	
280-137697-4	C-DRAWING (CDC-2)	Solid	06/15/20 13:57	06/16/20 09:58	
280-137697-5	D-DRAWING (DDC-1)	Solid	06/15/20 14:11	06/16/20 09:58	
280-137697-6	D-DRAWING (DDC-2)	Solid	06/15/20 14:30	06/16/20 09:58	

Client Sample Results

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: A-DRAWING (ADC-1)

Date Collected: 06/15/20 13:00

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-1

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0047		mg/Kg		06/20/20 17:57	06/21/20 03:06	1
Ethylbenzene	ND		0.0047		mg/Kg		06/20/20 17:57	06/21/20 03:06	1
Toluene	ND		0.0047		mg/Kg		06/20/20 17:57	06/21/20 03:06	1
m-Xylene & p-Xylene	ND		0.0023		mg/Kg		06/20/20 17:57	06/21/20 03:06	1
o-Xylene	ND		0.0023		mg/Kg		06/20/20 17:57	06/21/20 03:06	1
Xylenes, Total	ND		0.0047		mg/Kg		06/20/20 17:57	06/21/20 03:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		58 - 140	06/20/20 17:57	06/21/20 03:06	1
Toluene-d8 (Surr)	100		80 - 126	06/20/20 17:57	06/21/20 03:06	1
4-Bromofluorobenzene (Surr)	97		76 - 127	06/20/20 17:57	06/21/20 03:06	1
Dibromofluoromethane (Surr)	100		75 - 121	06/20/20 17:57	06/21/20 03:06	1

Client Sample ID: B-DRAWING (BDC-1)

Date Collected: 06/15/20 13:20

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-2

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0050		mg/Kg		06/20/20 17:57	06/21/20 03:28	1
Ethylbenzene	ND		0.0050		mg/Kg		06/20/20 17:57	06/21/20 03:28	1
Toluene	ND		0.0050		mg/Kg		06/20/20 17:57	06/21/20 03:28	1
m-Xylene & p-Xylene	ND		0.0025		mg/Kg		06/20/20 17:57	06/21/20 03:28	1
o-Xylene	ND		0.0025		mg/Kg		06/20/20 17:57	06/21/20 03:28	1
Xylenes, Total	ND		0.0050		mg/Kg		06/20/20 17:57	06/21/20 03:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		58 - 140	06/20/20 17:57	06/21/20 03:28	1
Toluene-d8 (Surr)	100		80 - 126	06/20/20 17:57	06/21/20 03:28	1
4-Bromofluorobenzene (Surr)	100		76 - 127	06/20/20 17:57	06/21/20 03:28	1
Dibromofluoromethane (Surr)	100		75 - 121	06/20/20 17:57	06/21/20 03:28	1

Client Sample ID: C-DRAWING (CDC-1)

Date Collected: 06/15/20 13:45

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-3

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0047		mg/Kg		06/20/20 17:57	06/21/20 03:51	1
Ethylbenzene	ND		0.0047		mg/Kg		06/20/20 17:57	06/21/20 03:51	1
Toluene	ND		0.0047		mg/Kg		06/20/20 17:57	06/21/20 03:51	1
m-Xylene & p-Xylene	ND		0.0024		mg/Kg		06/20/20 17:57	06/21/20 03:51	1
o-Xylene	ND		0.0024		mg/Kg		06/20/20 17:57	06/21/20 03:51	1
Xylenes, Total	ND		0.0047		mg/Kg		06/20/20 17:57	06/21/20 03:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		58 - 140	06/20/20 17:57	06/21/20 03:51	1
Toluene-d8 (Surr)	100		80 - 126	06/20/20 17:57	06/21/20 03:51	1
4-Bromofluorobenzene (Surr)	99		76 - 127	06/20/20 17:57	06/21/20 03:51	1
Dibromofluoromethane (Surr)	100		75 - 121	06/20/20 17:57	06/21/20 03:51	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: C-DRAWING (CDC-2)

Date Collected: 06/15/20 13:57

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-4

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0049		mg/Kg		06/20/20 17:58	06/21/20 04:14	1
Ethylbenzene	ND		0.0049		mg/Kg		06/20/20 17:58	06/21/20 04:14	1
Toluene	ND		0.0049		mg/Kg		06/20/20 17:58	06/21/20 04:14	1
m-Xylene & p-Xylene	ND		0.0024		mg/Kg		06/20/20 17:58	06/21/20 04:14	1
o-Xylene	ND		0.0024		mg/Kg		06/20/20 17:58	06/21/20 04:14	1
Xylenes, Total	ND		0.0049		mg/Kg		06/20/20 17:58	06/21/20 04:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		58 - 140	06/20/20 17:58	06/21/20 04:14	1
Toluene-d8 (Surr)	99		80 - 126	06/20/20 17:58	06/21/20 04:14	1
4-Bromofluorobenzene (Surr)	100		76 - 127	06/20/20 17:58	06/21/20 04:14	1
Dibromofluoromethane (Surr)	104		75 - 121	06/20/20 17:58	06/21/20 04:14	1

Client Sample ID: D-DRAWING (DDC-1)

Date Collected: 06/15/20 14:11

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-5

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0045		mg/Kg		06/20/20 17:58	06/21/20 04:36	1
Ethylbenzene	ND		0.0045		mg/Kg		06/20/20 17:58	06/21/20 04:36	1
Toluene	ND		0.0045		mg/Kg		06/20/20 17:58	06/21/20 04:36	1
m-Xylene & p-Xylene	ND		0.0022		mg/Kg		06/20/20 17:58	06/21/20 04:36	1
o-Xylene	ND		0.0022		mg/Kg		06/20/20 17:58	06/21/20 04:36	1
Xylenes, Total	ND		0.0045		mg/Kg		06/20/20 17:58	06/21/20 04:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		58 - 140	06/20/20 17:58	06/21/20 04:36	1
Toluene-d8 (Surr)	98		80 - 126	06/20/20 17:58	06/21/20 04:36	1
4-Bromofluorobenzene (Surr)	96		76 - 127	06/20/20 17:58	06/21/20 04:36	1
Dibromofluoromethane (Surr)	102		75 - 121	06/20/20 17:58	06/21/20 04:36	1

Client Sample ID: D-DRAWING (DDC-2)

Date Collected: 06/15/20 14:30

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-6

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0045		mg/Kg		06/20/20 17:58	06/21/20 04:59	1
Ethylbenzene	ND		0.0045		mg/Kg		06/20/20 17:58	06/21/20 04:59	1
Toluene	ND		0.0045		mg/Kg		06/20/20 17:58	06/21/20 04:59	1
m-Xylene & p-Xylene	ND		0.0023		mg/Kg		06/20/20 17:58	06/21/20 04:59	1
o-Xylene	ND		0.0023		mg/Kg		06/20/20 17:58	06/21/20 04:59	1
Xylenes, Total	ND		0.0045		mg/Kg		06/20/20 17:58	06/21/20 04:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		58 - 140	06/20/20 17:58	06/21/20 04:59	1
Toluene-d8 (Surr)	100		80 - 126	06/20/20 17:58	06/21/20 04:59	1
4-Bromofluorobenzene (Surr)	99		76 - 127	06/20/20 17:58	06/21/20 04:59	1
Dibromofluoromethane (Surr)	100		75 - 121	06/20/20 17:58	06/21/20 04:59	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

Method: 8015B - Gasoline Range Organics - (GC)

Client Sample ID: A-DRAWING (ADC-1)

Date Collected: 06/15/20 13:00

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-1

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		0.050		mg/Kg		06/15/20 13:00	06/26/20 03:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	100		77 - 123				06/15/20 13:00	06/26/20 03:01	1

Client Sample ID: B-DRAWING (BDC-1)

Date Collected: 06/15/20 13:20

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-2

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		0.057		mg/Kg		06/15/20 13:20	06/26/20 03:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	99		77 - 123				06/15/20 13:20	06/26/20 03:21	1

Client Sample ID: C-DRAWING (CDC-1)

Date Collected: 06/15/20 13:45

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-3

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		0.067		mg/Kg		06/15/20 13:45	06/26/20 03:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	102		77 - 123				06/15/20 13:45	06/26/20 03:40	1

Client Sample ID: C-DRAWING (CDC-2)

Date Collected: 06/15/20 13:57

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-4

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		0.071		mg/Kg		06/15/20 13:57	06/26/20 04:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	101		77 - 123				06/15/20 13:57	06/26/20 04:00	1

Client Sample ID: D-DRAWING (DDC-1)

Date Collected: 06/15/20 14:11

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-5

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		0.057		mg/Kg		06/15/20 14:11	06/26/20 04:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	101		77 - 123				06/15/20 14:11	06/26/20 04:20	1

Client Sample ID: D-DRAWING (DDC-2)

Date Collected: 06/15/20 14:30

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-6

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		4.1		mg/Kg		06/15/20 14:30	06/27/20 09:50	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

Method: 8015B - Gasoline Range Organics - (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	105		77 - 123	06/15/20 14:30	06/27/20 09:50	1

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

Client Sample ID: A-DRAWING (ADC-1)

Date Collected: 06/15/20 13:00

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-1

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	14	*	7.1		mg/Kg		06/23/20 15:02	07/07/20 07:31	1
Motor Oil (C20-C38)	62		21		mg/Kg		06/23/20 15:02	07/07/20 07:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	74		49 - 115				06/23/20 15:02	07/07/20 07:31	1

Client Sample ID: B-DRAWING (BDC-1)

Date Collected: 06/15/20 13:20

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-2

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	22	*	7.1		mg/Kg		06/23/20 15:02	07/07/20 07:53	1
Motor Oil (C20-C38)	67		21		mg/Kg		06/23/20 15:02	07/07/20 07:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	71		49 - 115				06/23/20 15:02	07/07/20 07:53	1

Client Sample ID: C-DRAWING (CDC-1)

Date Collected: 06/15/20 13:45

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-3

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	24	*	7.6		mg/Kg		06/23/20 15:02	07/07/20 08:15	1
Motor Oil (C20-C38)	50		23		mg/Kg		06/23/20 15:02	07/07/20 08:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	78		49 - 115				06/23/20 15:02	07/07/20 08:15	1

Client Sample ID: C-DRAWING (CDC-2)

Date Collected: 06/15/20 13:57

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-4

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	16	*	7.7		mg/Kg		06/23/20 15:02	07/07/20 08:37	1
Motor Oil (C20-C38)	44		23		mg/Kg		06/23/20 15:02	07/07/20 08:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	73		49 - 115				06/23/20 15:02	07/07/20 08:37	

Client Sample ID: D-DRAWING (DDC-1)

Date Collected: 06/15/20 14:11

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-5

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	12	*	7.9		mg/Kg		06/23/20 15:02	07/07/20 10:28	1
Motor Oil (C20-C38)	26		24		mg/Kg		06/23/20 15:02	07/07/20 10:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	64		49 - 115				06/23/20 15:02	07/07/20 10:28	

Eurofins TestAmerica, Denver

Client Sample Results

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

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

Client Sample ID: D-DRAWING (DDC-2)

Date Collected: 06/15/20 14:30

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-6

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	45	*	7.6		mg/Kg		06/23/20 15:02	07/07/20 10:50	1
Motor Oil (C20-C38)	56		23		mg/Kg		06/23/20 15:02	07/07/20 10:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	82		49 - 115				06/23/20 15:02	07/02/20 09:53	1
o-Terphenyl	86		49 - 115				06/23/20 15:02	07/07/20 10:50	1

General Chemistry

Client Sample ID: A-DRAWING (ADC-1)

Date Collected: 06/15/20 13:00

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-1

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.3		0.1		%			06/17/20 15:20	1
Percent Solids	92.7		0.1		%			06/17/20 15:20	1

Client Sample ID: B-DRAWING (BDC-1)

Date Collected: 06/15/20 13:20

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-2

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.2		0.1		%			06/17/20 15:20	1
Percent Solids	97.8		0.1		%			06/17/20 15:20	1

Client Sample ID: C-DRAWING (CDC-1)

Date Collected: 06/15/20 13:45

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-3

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.9		0.1		%			06/17/20 15:20	1
Percent Solids	90.1		0.1		%			06/17/20 15:20	1

Client Sample ID: C-DRAWING (CDC-2)

Date Collected: 06/15/20 13:57

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-4

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.1		0.1		%			06/17/20 15:20	1
Percent Solids	95.9		0.1		%			06/17/20 15:20	1

Client Sample ID: D-DRAWING (DDC-1)

Date Collected: 06/15/20 14:11

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-5

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	14.0		0.1		%			06/17/20 15:20	1
Percent Solids	86.0		0.1		%			06/17/20 15:20	1

Client Sample ID: D-DRAWING (DDC-2)

Date Collected: 06/15/20 14:30

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-6

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13.5		0.1		%			06/17/20 15:20	1
Percent Solids	86.5		0.1		%			06/17/20 15:20	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

General Chemistry - Soluble

Client Sample ID: A-DRAWING (ADC-1)

Date Collected: 06/15/20 13:00

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-1

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		29		mg/Kg	-		06/26/20 16:16	1

Client Sample ID: B-DRAWING (BDC-1)

Date Collected: 06/15/20 13:20

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-2

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	35		29		mg/Kg	-		06/26/20 16:32	1

Client Sample ID: C-DRAWING (CDC-1)

Date Collected: 06/15/20 13:45

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-3

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		29		mg/Kg	-		06/26/20 16:48	1

Client Sample ID: C-DRAWING (CDC-2)

Date Collected: 06/15/20 13:57

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-4

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		30		mg/Kg	-		06/26/20 17:05	1

Client Sample ID: D-DRAWING (DDC-1)

Date Collected: 06/15/20 14:11

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-5

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		27		mg/Kg	-		06/26/20 17:21	1

Client Sample ID: D-DRAWING (DDC-2)

Date Collected: 06/15/20 14:30

Date Received: 06/16/20 09:58

Lab Sample ID: 280-137697-6

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		30		mg/Kg	-		06/26/20 17:38	1

Surrogate Summary

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (58-140)	TOL (80-126)	BFB (76-127)	DBFM (75-121)
280-137697-1	A-DRAWING (ADC-1)	104	100	97	100
280-137697-2	B-DRAWING (BDC-1)	110	100	100	100
280-137697-3	C-DRAWING (CDC-1)	106	100	99	100
280-137697-4	C-DRAWING (CDC-2)	114	99	100	104
280-137697-5	D-DRAWING (DDC-1)	104	98	96	102
280-137697-6	D-DRAWING (DDC-2)	105	100	99	100
LCS 280-499543/1-A	Lab Control Sample	103	98	96	101
LCSD 280-499543/24-A	Lab Control Sample Dup	100	99	97	102
MB 280-499543/2-A	Method Blank	104	99	96	99

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8015B - Gasoline Range Organics - (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TFT1 (77-123)			
280-137697-1	A-DRAWING (ADC-1)	100			
280-137697-2	B-DRAWING (BDC-1)	99			
280-137697-3	C-DRAWING (CDC-1)	102			
280-137697-4	C-DRAWING (CDC-2)	101			
280-137697-5	D-DRAWING (DDC-1)	101			
280-137697-6	D-DRAWING (DDC-2)	105			
LCS 280-500121/1-A	Lab Control Sample	100			
LCS 280-500144/1-A	Lab Control Sample	106			
LCSD 280-500121/2-A	Lab Control Sample Dup	99			
LCSD 280-500144/2-A	Lab Control Sample Dup	106			
MB 280-500121/3-A	Method Blank	98			
MB 280-500144/3-A	Method Blank	104			

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		OTPH1 (49-115)			
280-137697-1	A-DRAWING (ADC-1)	74			
280-137697-2	B-DRAWING (BDC-1)	71			
280-137697-3	C-DRAWING (CDC-1)	78			
280-137697-4	C-DRAWING (CDC-2)	73			
280-137697-5	D-DRAWING (DDC-1)	64			
280-137697-6	D-DRAWING (DDC-2)	82			
280-137697-6	D-DRAWING (DDC-2)	86			

Eurofins TestAmerica, Denver

Surrogate Summary

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH1 (49-115)
LCS 280-499774/2-A	Lab Control Sample	32 X
LCS 280-499774/3-A	Lab Control Sample	78
MB 280-499774/1-A	Method Blank	73

Surrogate Legend

OTPH = o-Terphenyl

QC Sample Results

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-499543/2-A

Matrix: Solid

Analysis Batch: 499544

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 499543

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0050		mg/Kg		06/20/20 17:57	06/20/20 20:40	1
Ethylbenzene	ND		0.0050		mg/Kg		06/20/20 17:57	06/20/20 20:40	1
Toluene	ND		0.0050		mg/Kg		06/20/20 17:57	06/20/20 20:40	1
m-Xylene & p-Xylene	ND		0.0025		mg/Kg		06/20/20 17:57	06/20/20 20:40	1
o-Xylene	ND		0.0025		mg/Kg		06/20/20 17:57	06/20/20 20:40	1
Xylenes, Total	ND		0.0050		mg/Kg		06/20/20 17:57	06/20/20 20:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		58 - 140	06/20/20 17:57	06/20/20 20:40	1
Toluene-d8 (Surr)	99		80 - 126	06/20/20 17:57	06/20/20 20:40	1
4-Bromofluorobenzene (Surr)	96		76 - 127	06/20/20 17:57	06/20/20 20:40	1
Dibromofluoromethane (Surr)	99		75 - 121	06/20/20 17:57	06/20/20 20:40	1

Lab Sample ID: LCS 280-499543/1-A

Matrix: Solid

Analysis Batch: 499544

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 499543

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.0447		mg/Kg		89	75 - 135
Ethylbenzene	0.0500	0.0458		mg/Kg		92	73 - 125
Toluene	0.0500	0.0440		mg/Kg		88	77 - 122
m-Xylene & p-Xylene	0.0500	0.0460		mg/Kg		92	77 - 135
o-Xylene	0.0500	0.0455		mg/Kg		91	75 - 135
Xylenes, Total	0.100	0.0915		mg/Kg		92	76 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		58 - 140
Toluene-d8 (Surr)	98		80 - 126
4-Bromofluorobenzene (Surr)	96		76 - 127
Dibromofluoromethane (Surr)	101		75 - 121

Lab Sample ID: LCSD 280-499543/24-A

Matrix: Solid

Analysis Batch: 499544

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 499543

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	0.0500	0.0474		mg/Kg		95	75 - 135	6	20
Ethylbenzene	0.0500	0.0485		mg/Kg		97	73 - 125	6	20
Toluene	0.0500	0.0476		mg/Kg		95	77 - 122	8	20
m-Xylene & p-Xylene	0.0500	0.0497		mg/Kg		99	77 - 135	8	20
o-Xylene	0.0500	0.0492		mg/Kg		98	75 - 135	8	20
Xylenes, Total	0.100	0.0989		mg/Kg		99	76 - 135	8	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		58 - 140
Toluene-d8 (Surr)	99		80 - 126
4-Bromofluorobenzene (Surr)	97		76 - 127

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QC Sample Results

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

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

Lab Sample ID: LCSD 280-499543/24-A

Matrix: Solid

Analysis Batch: 499544

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 499543

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	102		75 - 121

Method: 8015B - Gasoline Range Organics - (GC)

Lab Sample ID: MB 280-500121/3-A

Matrix: Solid

Analysis Batch: 500332

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 500121

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.0		mg/Kg		06/25/20 12:21	06/26/20 23:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	98		77 - 123	06/25/20 12:21	06/26/20 23:54	1

Lab Sample ID: LCS 280-500121/1-A

Matrix: Solid

Analysis Batch: 500332

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 500121

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C10	8.54	8.32		mg/Kg		97	75 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene	100		77 - 123

Lab Sample ID: LCSD 280-500121/2-A

Matrix: Solid

Analysis Batch: 500332

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 500121

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Gasoline Range Organics (GRO) -C6-C10	8.54	8.19		mg/Kg		96	75 - 135	2	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
a,a,a-Trifluorotoluene	99		77 - 123

Lab Sample ID: MB 280-500144/3-A

Matrix: Solid

Analysis Batch: 500158

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 500144

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.0		mg/Kg		06/25/20 15:21	06/25/20 21:03	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	104		77 - 123	06/25/20 15:21	06/25/20 21:03	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

Method: 8015B - Gasoline Range Organics - (GC) (Continued)

Lab Sample ID: LCS 280-500144/1-A

Matrix: Solid

Analysis Batch: 500158

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 500144

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C10	8.54	8.90		mg/Kg		104	75 - 135
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
a,a,a-Trifluorotoluene	106		77 - 123				

Lab Sample ID: LCSD 280-500144/2-A

Matrix: Solid

Analysis Batch: 500158

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 500144

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C10	8.54	8.63		mg/Kg		101	75 - 135	3	30
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
a,a,a-Trifluorotoluene	106		77 - 123						

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

Lab Sample ID: MB 280-499774/1-A

Matrix: Solid

Analysis Batch: 500853

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 499774

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.0		mg/Kg		06/23/20 15:02	07/02/20 04:48	1
Motor Oil (C20-C38)	ND		24		mg/Kg		06/23/20 15:02	07/02/20 04:48	1
Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac			
o-Terphenyl	73		49 - 115	06/23/20 15:02	07/02/20 04:48	1			

Lab Sample ID: LCS 280-499774/2-A

Matrix: Solid

Analysis Batch: 500853

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 499774

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	132	41.6	*	mg/Kg		31	53 - 115
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
o-Terphenyl	32	X	49 - 115				

Lab Sample ID: LCS 280-499774/3-A

Matrix: Solid

Analysis Batch: 500853

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 499774

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Motor Oil (C20-C38)	334	282		mg/Kg		84	57 - 115

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QC Sample Results

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

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

Lab Sample ID: LCS 280-499774/3-A

Matrix: Solid

Analysis Batch: 500853

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 499774

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	78		49 - 115

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MRL 280-500254/3

Matrix: Solid

Analysis Batch: 500254

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	5.01		mg/L		100	50 - 150

Lab Sample ID: MRL 280-500256/3

Matrix: Solid

Analysis Batch: 500256

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.18		mg/L		84	50 - 150

Lab Sample ID: MB 280-500118/2-A

Matrix: Solid

Analysis Batch: 500254

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		30		mg/Kg			06/26/20 12:59	1

Lab Sample ID: LCS 280-500118/1-A

Matrix: Solid

Analysis Batch: 500254

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1000	983		mg/Kg		98	90 - 110

Lab Sample ID: MB 280-500118/2-A

Matrix: Solid

Analysis Batch: 500256

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		30		mg/Kg			06/26/20 13:02	1

Lab Sample ID: LCS 280-500118/1-A

Matrix: Solid

Analysis Batch: 500256

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1000	985		mg/Kg		98	90 - 110

QC Association Summary

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

GC/MS VOA

Prep Batch: 499543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137697-1	A-DRAWING (ADC-1)	Total/NA	Solid	5030B	
280-137697-2	B-DRAWING (BDC-1)	Total/NA	Solid	5030B	
280-137697-3	C-DRAWING (CDC-1)	Total/NA	Solid	5030B	
280-137697-4	C-DRAWING (CDC-2)	Total/NA	Solid	5030B	
280-137697-5	D-DRAWING (DDC-1)	Total/NA	Solid	5030B	
280-137697-6	D-DRAWING (DDC-2)	Total/NA	Solid	5030B	
MB 280-499543/2-A	Method Blank	Total/NA	Solid	5030B	
LCS 280-499543/1-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 280-499543/24-A	Lab Control Sample Dup	Total/NA	Solid	5030B	

Analysis Batch: 499544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137697-1	A-DRAWING (ADC-1)	Total/NA	Solid	8260B	499543
280-137697-2	B-DRAWING (BDC-1)	Total/NA	Solid	8260B	499543
280-137697-3	C-DRAWING (CDC-1)	Total/NA	Solid	8260B	499543
280-137697-4	C-DRAWING (CDC-2)	Total/NA	Solid	8260B	499543
280-137697-5	D-DRAWING (DDC-1)	Total/NA	Solid	8260B	499543
280-137697-6	D-DRAWING (DDC-2)	Total/NA	Solid	8260B	499543
MB 280-499543/2-A	Method Blank	Total/NA	Solid	8260B	499543
LCS 280-499543/1-A	Lab Control Sample	Total/NA	Solid	8260B	499543
LCSD 280-499543/24-A	Lab Control Sample Dup	Total/NA	Solid	8260B	499543

GC VOA

Prep Batch: 500121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137697-6	D-DRAWING (DDC-2)	Total/NA	Solid	5035	
MB 280-500121/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-500121/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-500121/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 500144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137697-1	A-DRAWING (ADC-1)	Total/NA	Solid	5035	
280-137697-2	B-DRAWING (BDC-1)	Total/NA	Solid	5035	
280-137697-3	C-DRAWING (CDC-1)	Total/NA	Solid	5035	
280-137697-4	C-DRAWING (CDC-2)	Total/NA	Solid	5035	
280-137697-5	D-DRAWING (DDC-1)	Total/NA	Solid	5035	
MB 280-500144/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-500144/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-500144/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 500158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137697-1	A-DRAWING (ADC-1)	Total/NA	Solid	8015B	500144
280-137697-2	B-DRAWING (BDC-1)	Total/NA	Solid	8015B	500144
280-137697-3	C-DRAWING (CDC-1)	Total/NA	Solid	8015B	500144
280-137697-4	C-DRAWING (CDC-2)	Total/NA	Solid	8015B	500144
280-137697-5	D-DRAWING (DDC-1)	Total/NA	Solid	8015B	500144
MB 280-500144/3-A	Method Blank	Total/NA	Solid	8015B	500144
LCS 280-500144/1-A	Lab Control Sample	Total/NA	Solid	8015B	500144

Eurofins TestAmerica, Denver

QC Association Summary

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

GC VOA (Continued)

Analysis Batch: 500158 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 280-500144/2-A	Lab Control Sample Dup	Total/NA	Solid	8015B	500144

Analysis Batch: 500332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137697-6	D-DRAWING (DDC-2)	Total/NA	Solid	8015B	500121
MB 280-500121/3-A	Method Blank	Total/NA	Solid	8015B	500121
LCS 280-500121/1-A	Lab Control Sample	Total/NA	Solid	8015B	500121
LCSD 280-500121/2-A	Lab Control Sample Dup	Total/NA	Solid	8015B	500121

GC Semi VOA

Prep Batch: 499774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137697-1	A-DRAWING (ADC-1)	Total/NA	Solid	3546	
280-137697-2	B-DRAWING (BDC-1)	Total/NA	Solid	3546	
280-137697-3	C-DRAWING (CDC-1)	Total/NA	Solid	3546	
280-137697-4	C-DRAWING (CDC-2)	Total/NA	Solid	3546	
280-137697-5	D-DRAWING (DDC-1)	Total/NA	Solid	3546	
280-137697-6	D-DRAWING (DDC-2)	Total/NA	Solid	3546	
MB 280-499774/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-499774/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 280-499774/3-A	Lab Control Sample	Total/NA	Solid	3546	

Analysis Batch: 500853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137697-6	D-DRAWING (DDC-2)	Total/NA	Solid	8015B	499774
MB 280-499774/1-A	Method Blank	Total/NA	Solid	8015B	499774
LCS 280-499774/2-A	Lab Control Sample	Total/NA	Solid	8015B	499774
LCS 280-499774/3-A	Lab Control Sample	Total/NA	Solid	8015B	499774

Analysis Batch: 501099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137697-1	A-DRAWING (ADC-1)	Total/NA	Solid	8015B	499774
280-137697-2	B-DRAWING (BDC-1)	Total/NA	Solid	8015B	499774
280-137697-3	C-DRAWING (CDC-1)	Total/NA	Solid	8015B	499774
280-137697-4	C-DRAWING (CDC-2)	Total/NA	Solid	8015B	499774
280-137697-5	D-DRAWING (DDC-1)	Total/NA	Solid	8015B	499774
280-137697-6	D-DRAWING (DDC-2)	Total/NA	Solid	8015B	499774

General Chemistry

Analysis Batch: 499151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137697-1	A-DRAWING (ADC-1)	Total/NA	Solid	Moisture	
280-137697-2	B-DRAWING (BDC-1)	Total/NA	Solid	Moisture	
280-137697-3	C-DRAWING (CDC-1)	Total/NA	Solid	Moisture	
280-137697-4	C-DRAWING (CDC-2)	Total/NA	Solid	Moisture	
280-137697-5	D-DRAWING (DDC-1)	Total/NA	Solid	Moisture	
280-137697-6	D-DRAWING (DDC-2)	Total/NA	Solid	Moisture	

Eurofins TestAmerica, Denver

QC Association Summary

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

General Chemistry

Leach Batch: 500118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137697-1	A-DRAWING (ADC-1)	Soluble	Solid	DI Leach	
280-137697-2	B-DRAWING (BDC-1)	Soluble	Solid	DI Leach	
280-137697-3	C-DRAWING (CDC-1)	Soluble	Solid	DI Leach	
280-137697-4	C-DRAWING (CDC-2)	Soluble	Solid	DI Leach	
280-137697-5	D-DRAWING (DDC-1)	Soluble	Solid	DI Leach	
280-137697-6	D-DRAWING (DDC-2)	Soluble	Solid	DI Leach	
MB 280-500118/2-A	Method Blank	Soluble	Solid	DI Leach	
LCS 280-500118/1-A	Lab Control Sample	Soluble	Solid	DI Leach	

Analysis Batch: 500254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137697-1	A-DRAWING (ADC-1)	Soluble	Solid	9056A	500118
280-137697-2	B-DRAWING (BDC-1)	Soluble	Solid	9056A	500118
280-137697-3	C-DRAWING (CDC-1)	Soluble	Solid	9056A	500118
280-137697-4	C-DRAWING (CDC-2)	Soluble	Solid	9056A	500118
280-137697-5	D-DRAWING (DDC-1)	Soluble	Solid	9056A	500118
280-137697-6	D-DRAWING (DDC-2)	Soluble	Solid	9056A	500118
MB 280-500118/2-A	Method Blank	Soluble	Solid	9056A	500118
LCS 280-500118/1-A	Lab Control Sample	Soluble	Solid	9056A	500118
MRL 280-500254/3	Lab Control Sample	Total/NA	Solid	9056A	

Analysis Batch: 500256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-500118/2-A	Method Blank	Soluble	Solid	9056A	500118
LCS 280-500118/1-A	Lab Control Sample	Soluble	Solid	9056A	500118
MRL 280-500256/3	Lab Control Sample	Total/NA	Solid	9056A	

Lab Chronicle

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

Client Sample ID: A-DRAWING (ADC-1)

Lab Sample ID: 280-137697-1

Date Collected: 06/15/20 13:00

Matrix: Solid

Date Received: 06/16/20 09:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.336 g	5 mL	499543	06/20/20 17:57	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	499544	06/21/20 03:06	GPM	TAL DEN
Total/NA	Prep	5035			4.001 g	5 mL	500144	06/15/20 13:00	AAR	TAL DEN
Total/NA	Analysis	8015B		1	5 mL	5 mL	500158	06/26/20 03:01	CAS	TAL DEN
Total/NA	Prep	3546			16.8 g	1 mL	499774	06/23/20 15:02	MB	TAL DEN
Total/NA	Analysis	8015B		1			501099	07/07/20 07:31	MAM	TAL DEN
Soluble	Leach	DI Leach			10.49 g	100 mL	500118	06/25/20 12:13	JAP	TAL DEN
Soluble	Analysis	9056A		1	5 mL	5 mL	500254	06/26/20 16:16	JAP	TAL DEN
Total/NA	Analysis	Moisture		1			499151	06/17/20 15:20	FRG	TAL DEN

Client Sample ID: B-DRAWING (BDC-1)

Lab Sample ID: 280-137697-2

Date Collected: 06/15/20 13:20

Matrix: Solid

Date Received: 06/16/20 09:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.019 g	5 mL	499543	06/20/20 17:57	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	499544	06/21/20 03:28	GPM	TAL DEN
Total/NA	Prep	5035			3.512 g	5 mL	500144	06/15/20 13:20	AAR	TAL DEN
Total/NA	Analysis	8015B		1	5 mL	5 mL	500158	06/26/20 03:21	CAS	TAL DEN
Total/NA	Prep	3546			16.8 g	1 mL	499774	06/23/20 15:02	MB	TAL DEN
Total/NA	Analysis	8015B		1			501099	07/07/20 07:53	MAM	TAL DEN
Soluble	Leach	DI Leach			10.37 g	100 mL	500118	06/25/20 12:13	JAP	TAL DEN
Soluble	Analysis	9056A		1	5 mL	5 mL	500254	06/26/20 16:32	JAP	TAL DEN
Total/NA	Analysis	Moisture		1			499151	06/17/20 15:20	FRG	TAL DEN

Client Sample ID: C-DRAWING (CDC-1)

Lab Sample ID: 280-137697-3

Date Collected: 06/15/20 13:45

Matrix: Solid

Date Received: 06/16/20 09:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.272 g	5 mL	499543	06/20/20 17:57	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	499544	06/21/20 03:51	GPM	TAL DEN
Total/NA	Prep	5035			2.963 g	5 mL	500144	06/15/20 13:45	AAR	TAL DEN
Total/NA	Analysis	8015B		1	5 mL	5 mL	500158	06/26/20 03:40	CAS	TAL DEN
Total/NA	Prep	3546			15.8 g	1 mL	499774	06/23/20 15:02	MB	TAL DEN
Total/NA	Analysis	8015B		1			501099	07/07/20 08:15	MAM	TAL DEN
Soluble	Leach	DI Leach			10.52 g	100 mL	500118	06/25/20 12:13	JAP	TAL DEN
Soluble	Analysis	9056A		1	5 mL	5 mL	500254	06/26/20 16:48	JAP	TAL DEN
Total/NA	Analysis	Moisture		1			499151	06/17/20 15:20	FRG	TAL DEN

Lab Chronicle

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

Client Sample ID: C-DRAWING (CDC-2)

Lab Sample ID: 280-137697-4

Date Collected: 06/15/20 13:57

Matrix: Solid

Date Received: 06/16/20 09:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.143 g	5 mL	499543	06/20/20 17:58	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	499544	06/21/20 04:14	GPM	TAL DEN
Total/NA	Prep	5035			2.801 g	5 mL	500144	06/15/20 13:57	AAR	TAL DEN
Total/NA	Analysis	8015B		1	5 mL	5 mL	500158	06/26/20 04:00	CAS	TAL DEN
Total/NA	Prep	3546			15.6 g	1 mL	499774	06/23/20 15:02	MB	TAL DEN
Total/NA	Analysis	8015B		1			501099	07/07/20 08:37	MAM	TAL DEN
Soluble	Leach	DI Leach			10.15 g	100 mL	500118	06/25/20 12:13	JAP	TAL DEN
Soluble	Analysis	9056A		1	5 mL	5 mL	500254	06/26/20 17:05	JAP	TAL DEN
Total/NA	Analysis	Moisture		1			499151	06/17/20 15:20	FRG	TAL DEN

Client Sample ID: D-DRAWING (DDC-1)

Lab Sample ID: 280-137697-5

Date Collected: 06/15/20 14:11

Matrix: Solid

Date Received: 06/16/20 09:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.577 g	5 mL	499543	06/20/20 17:58	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	499544	06/21/20 04:36	GPM	TAL DEN
Total/NA	Prep	5035			3.504 g	5 mL	500144	06/15/20 14:11	AAR	TAL DEN
Total/NA	Analysis	8015B		1	5 mL	5 mL	500158	06/26/20 04:20	CAS	TAL DEN
Total/NA	Prep	3546			15.2 g	1 mL	499774	06/23/20 15:02	MB	TAL DEN
Total/NA	Analysis	8015B		1			501099	07/07/20 10:28	MAM	TAL DEN
Soluble	Leach	DI Leach			10.93 g	100 mL	500118	06/25/20 12:13	JAP	TAL DEN
Soluble	Analysis	9056A		1	5 mL	5 mL	500254	06/26/20 17:21	JAP	TAL DEN
Total/NA	Analysis	Moisture		1			499151	06/17/20 15:20	FRG	TAL DEN

Client Sample ID: D-DRAWING (DDC-2)

Lab Sample ID: 280-137697-6

Date Collected: 06/15/20 14:30

Matrix: Solid

Date Received: 06/16/20 09:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.540 g	5 mL	499543	06/20/20 17:58	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	499544	06/21/20 04:59	GPM	TAL DEN
Total/NA	Prep	5035			2.447 g	5 mL	500121	06/15/20 14:30	AAR	TAL DEN
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	500332	06/27/20 09:50	CAS	TAL DEN
Total/NA	Prep	3546			15.7 g	1 mL	499774	06/23/20 15:02	MB	TAL DEN
Total/NA	Analysis	8015B		1			500853	07/02/20 09:53	MAM	TAL DEN
Total/NA	Prep	3546			15.7 g	1 mL	499774	06/23/20 15:02	MB	TAL DEN
Total/NA	Analysis	8015B		1			501099	07/07/20 10:50	MAM	TAL DEN
Soluble	Leach	DI Leach			10.13 g	100 mL	500118	06/25/20 12:13	JAP	TAL DEN
Soluble	Analysis	9056A		1	5 mL	5 mL	500254	06/26/20 17:38	JAP	TAL DEN
Total/NA	Analysis	Moisture		1			499151	06/17/20 15:20	FRG	TAL DEN

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Eurofins TestAmerica, Denver

Accreditation/Certification Summary

Client: Wapiti Operating, LLC
Project/Site: Produced Water Spill

Job ID: 280-137697-1

Laboratory: Eurofins TestAmerica, Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21
A2LA	ISO/IEC 17025	2907.01	10-31-21
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-21
Arizona	State	AZ0713	12-20-20
Arkansas DEQ	State	19-047-0	06-01-21
California	State	2513	01-08-21
Connecticut	State	PH-0686	09-30-20
Florida	NELAP	E87667-57	07-01-21
Georgia	State	4025-011	01-09-21
Illinois	NELAP	2000172019-1	04-30-21
Iowa	State	IA#370	12-01-20
Kansas	NELAP	E-10166	04-30-21
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-21
Maine	State	2019011 (231)	03-03-21
Minnesota	NELAP	1788752	12-31-20
Nevada	State	CO000262020-1	07-31-20
New Hampshire	NELAP	205319	04-29-21
New Jersey	NELAP	190002	06-30-21
New York	NELAP	59923	04-01-21
North Carolina (WW/SW)	State	358	12-31-20
North Dakota	State	R-034	01-08-21
Oklahoma	State	2018-006	08-31-20
Oregon	NELAP	4025-011	01-08-21
Pennsylvania	NELAP	013	08-01-20
South Carolina	State	72002001	01-08-21
Texas	NELAP	T104704183-19-17	09-30-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	CO000262019-11	07-31-20
Virginia	NELAP	10490	06-14-21
Washington	State	C583-19	08-05-20
West Virginia DEP	State	354	11-30-20
Wisconsin	State	999615430	08-31-20
Wyoming (UST)	A2LA	2907.01	10-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Denver

Eurofins TestAmerica, Denver

4955 Yarrow Street
 Arvada, CO 80002
 Phone: 303-736-0100 Fax: 303-431-7171

Denver #280

Chain of Custody Record



Environment Testing
 America

Client Information		Lab PM		Carrier Tracking Notes		COC No	
Company: Wapiti Operating, LLC Address: PO BOX 190 309 Silver Street City: Raton State, Zip: NM, 87740 Phone: 575-445-6706(Tel) Email: rmadison@wapitienery.com Project Name: Produced Water Spill Site: 2 nd Mainline		Lab PM: Turner, Shelby R E-Mail: shelby.turner@testamericainc.com		280-99168-29852.1 Page 1 of 1 Job #		Environment Testing America	
Due Date Requested:		TAT Requested (days):		Analysis Requested		Preservation Codes:	
PO #		Pay by Credit Card		Perform MSMSD (Yes or No)		A - HCl B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO ₄ F - MeOH G - Acetic Acid H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Project #		WO #		Field Filtered Sample (Yes or No)		Total Number of Containers	
28020400		SSOW#		X		Special Instructions/Note:	
Sample Identification	Sample Data	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Weigh, Spread, Creasment, Bl-Tissue, AW)	Preservation Code:	Special Instructions/Note:	
A-Drawing (ADC-1)	6/15/20	1300	C	Solid	N	280-137697 Chain of Custody	
B-Drawing (BDC-1)	6/15/20	1320	C	Solid	N		
C-Drawing (CDC-1)	6/15/20	1345	C	Solid	N		
C-Drawing (CDC-2)	6/15/20	1357	C	Solid	N		
D-Drawing (DDC-1)	6/15/20	1411	C	Solid	N		
D-Drawing (DDC-2)	6/15/20	1430	C	Solid	N		
				Solid	N		
				Solid	N		
				Solid	N		
				Solid	N		
				Solid	N		
Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological				<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months			
Deliverable Requested: I, II, III, IV, Other (specify)				Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: Randy Madison		6/16/20		5:00 PM		Received by: mgphane	
Relinquished by:		Date/Time:		Date/Time:		Company: ESTADEN	
Relinquished by:		Date/Time:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Date/Time:		Company:	
Custody Seals Intact:		Custody Seal No.:		Cooling Temperature, C and Other Remarks:		30.1°C, to 6 mg, 6-16, 20	
Yes <input type="checkbox"/> No <input type="checkbox"/>							

Ver: 01/16/2019

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Login Sample Receipt Checklist

Client: Wapiti Operating, LLC

Job Number: 280-137697-1

Login Number: 137697

List Source: Eurofins TestAmerica, Denver

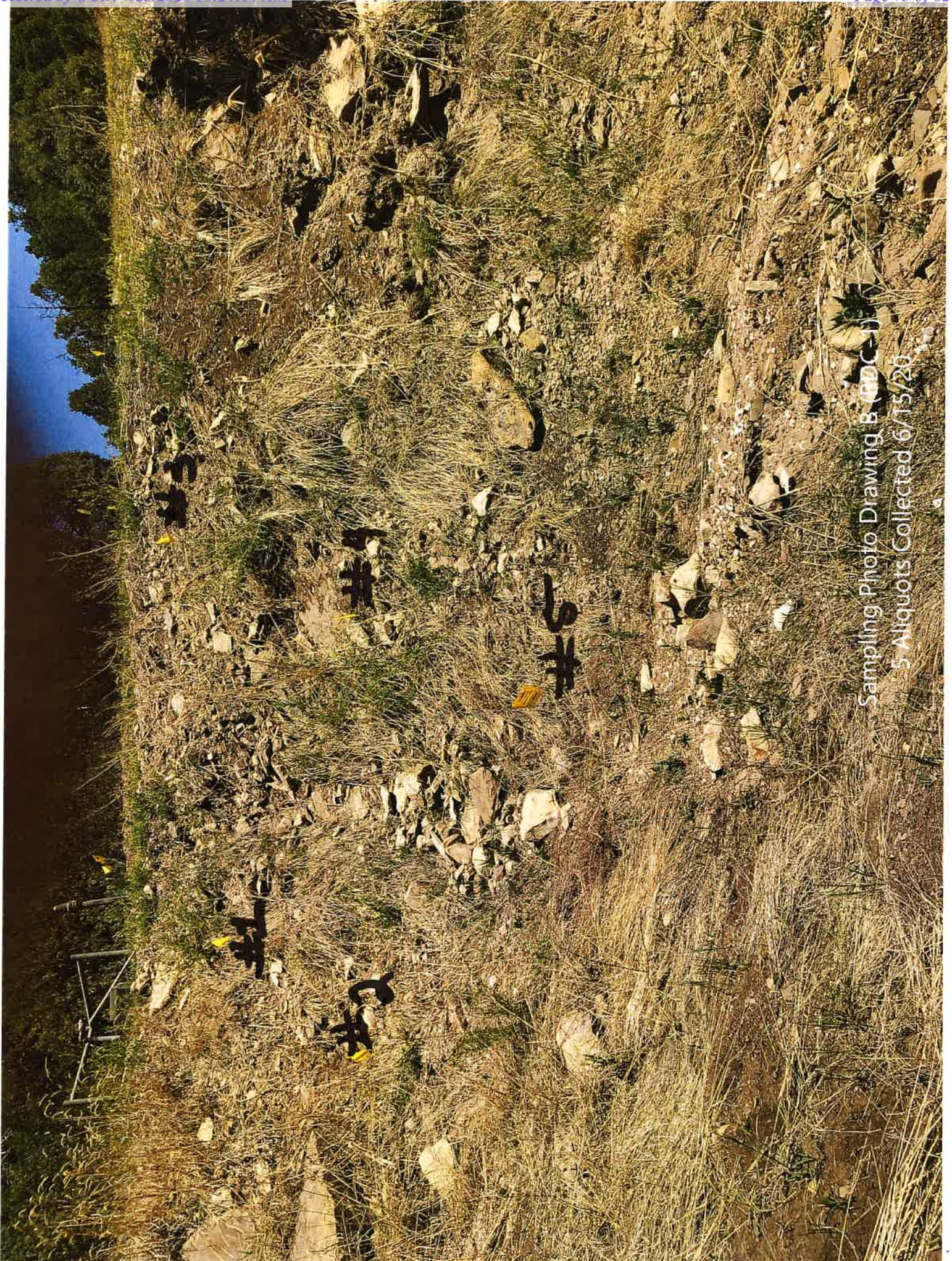
List Number: 1

Creator: Lubin, Julius C

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
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 $<6\text{mm}$ ($1/4''$).	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Sampling Photo Drawing A (APC-1)
5 aliquots collected 6/15/20



Sampling Photo Drawing B (BDC-1)
5 Aliquots Collected 6/15/20



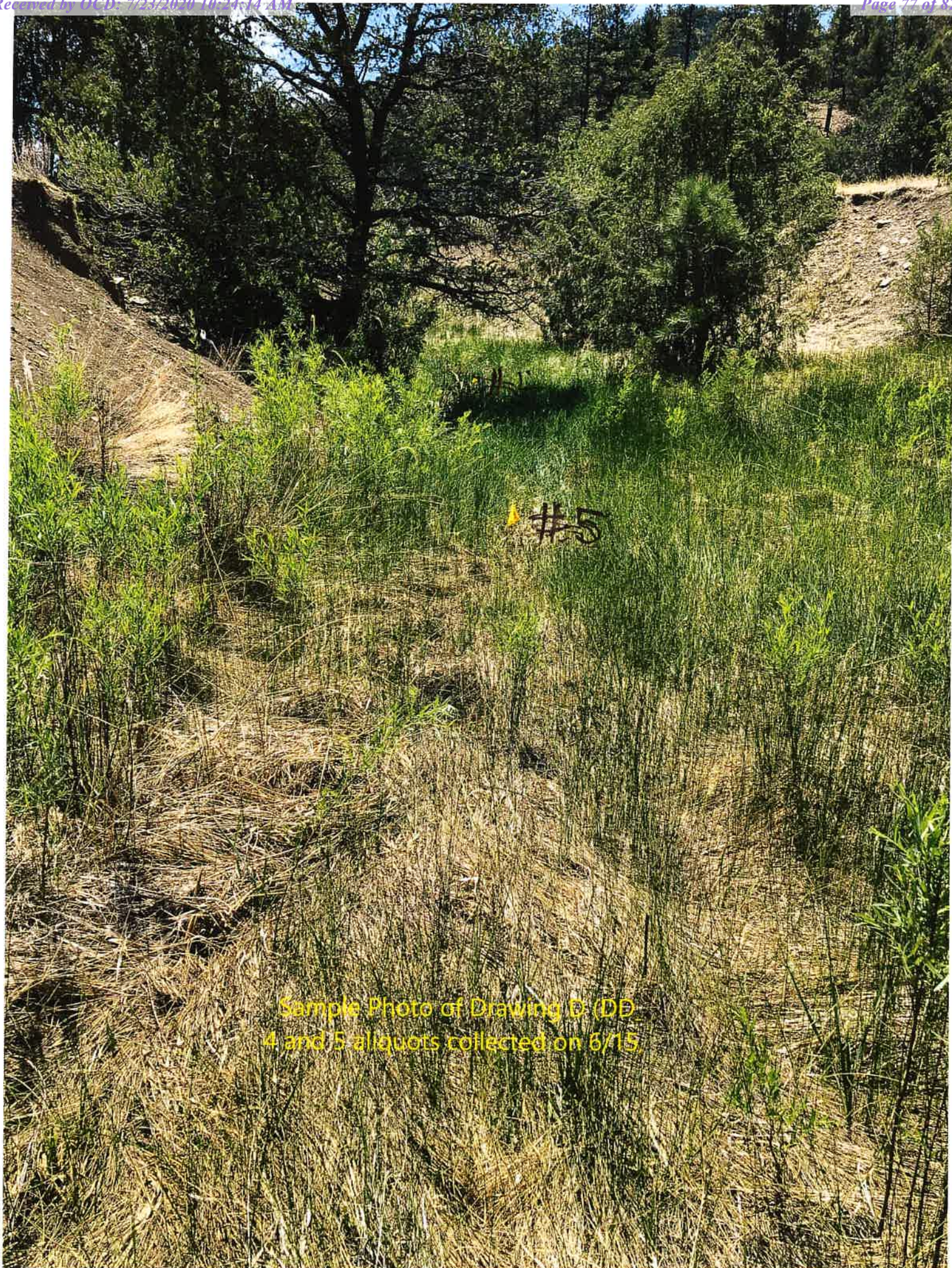
Sample Photo Draining C (CDC-1)
3 Aliquots collected 6/15/20



Sample Photo Drawing C (CDC-2)
5 All plots showing 1 behind the
bush collected 6/15/20



Sample Photo of Drawing D (DDC-1)
3 Of 5 Aliquots collected 6/15/20



Sample Photo of Drawing D (DD
4 and 5 aliquots collected on 6/15)

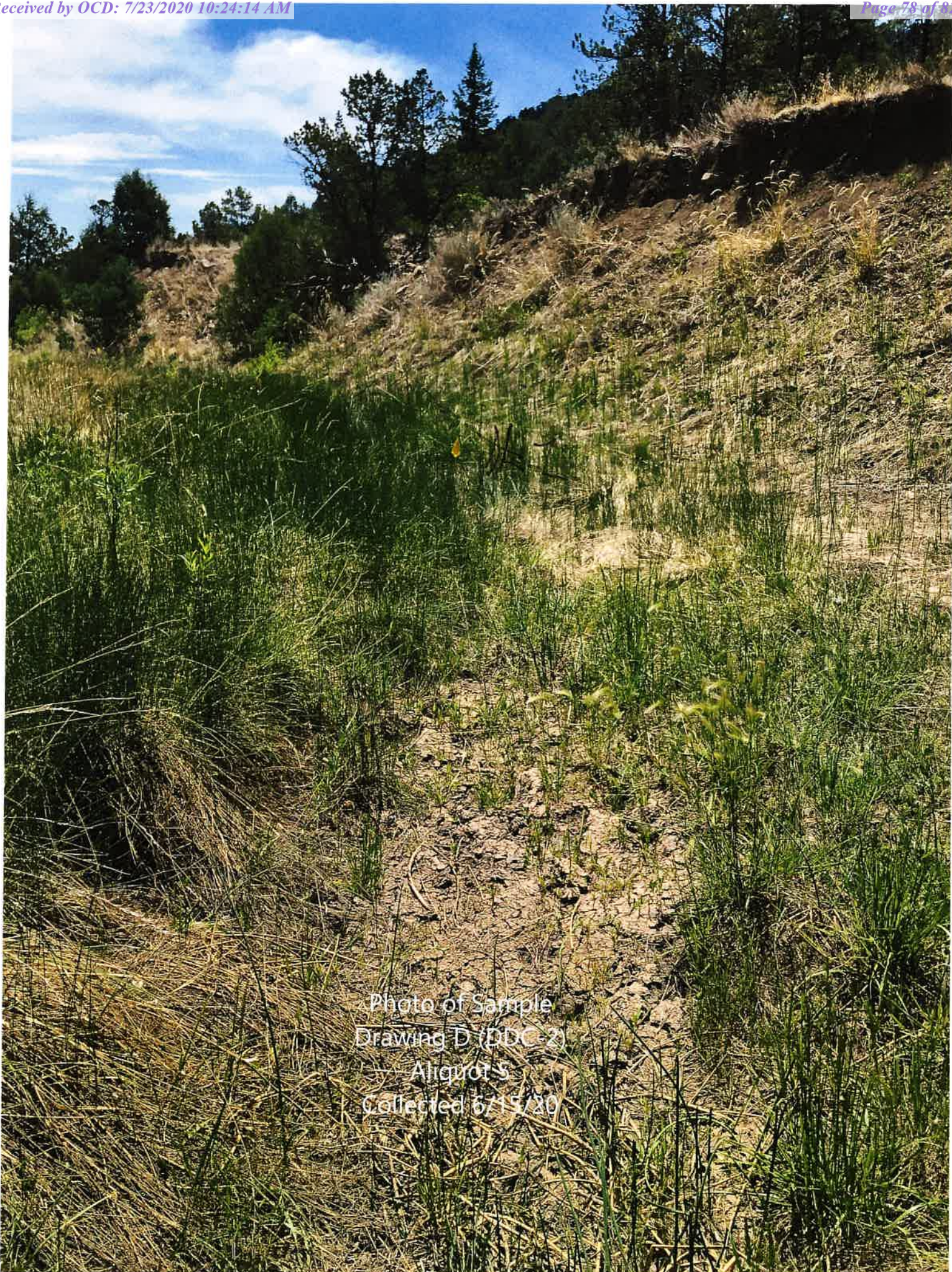
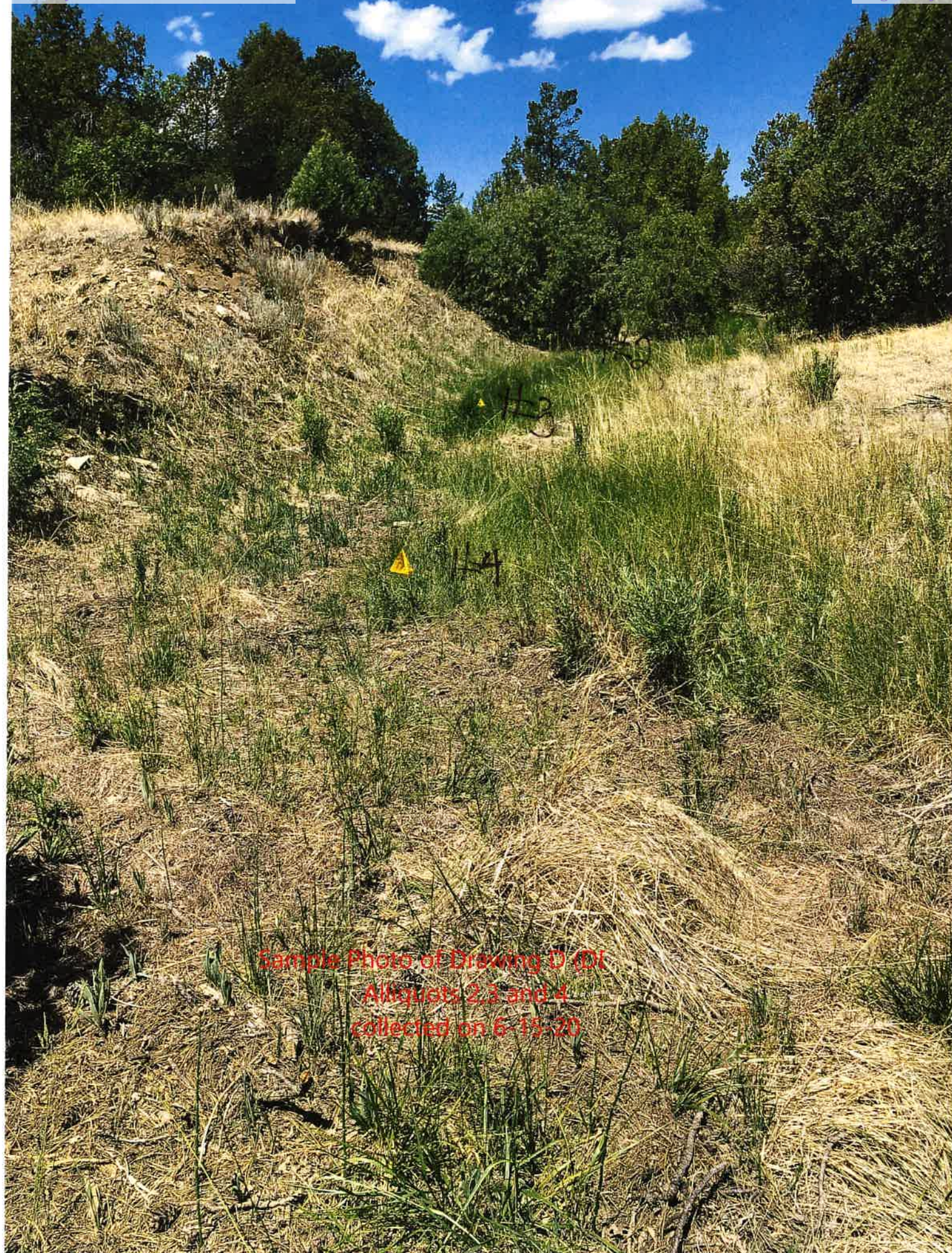


Photo of Sample
Drawing D (DDC-2)
— Aliquot 5
Collected 6/15/20

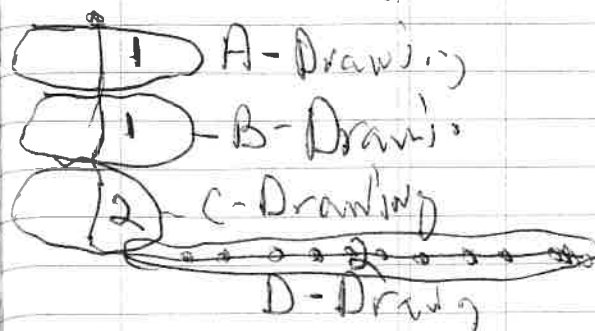


Sample Photo of Drawing D (DI
Alliquots 2,3 and 4
collected on 6-15-20

A photograph of a grassy field with a yellow flag and a wooden stake in the background. The field is covered in dry, yellowish-brown grass and some green weeds. A yellow flag is visible in the upper left quadrant, and a wooden stake is visible in the upper right quadrant. The text "Photo of Drawing D (DOC-2) Aliquot 5 end of the spill collected 6/15/20" is overlaid in the bottom right corner.

Photo of Drawing D (DOC-2)
Aliquot 5 end of the spill
collected 6/15/20

Mainline Samples



A-Drawing
N. 36.81889 Center
W 104.96266

B-Drawing
N 36.81886 Center
W 104.96266

C-Drawing Center
N 36.818872
W 104.96259

D-Drawing C-1 Aliquots
N 36.81865
W 104.96242
Elevation 7526
2 N 36.81862
W 104.96228
Elevation 7522

Main Line Sables
3 N 36.81855
W 104.96216
Elevation 7526
4 N 36.81849
W 104.96207
Elevation 7523
5 N 36.81849
W 104.96208
Elevation 7527
Collection C-2 Allipwote
2 N 36.81840
W 104.96198
Elevation 7527
2 N 36.81836
W 104.96188
Elevation 7526
3 N 36.81836
W 104.96172
Elevation 7525
4 N 36.81829
W 104.96168
Elevation 7523
5 N 36.81833
W 104.96161
Elevation 7527

By J. M. J.
6/15/21