District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	COG OPERATING LLC	Contact	Robert McNeill
Address	600 West Illinois Avenue, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Burch Keely Unit #142	Facility Type	Injection Well

Surface Owner Federal	Mineral Owner	Lease No. (API#) 30-015-04388

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	30	17S	30E					Eddy

Latitude 32.81100 **Longitude** 104.01749

NATURE OF RELEASE

Type of Release Produced water	Volume of Release 20bbls	Volume Recovered 15bbls
Source of Release Steel flowline	Date and Hour of Occurrence 05-07-2014	Date and Hour of Discovery 05-07-2014 10:00am
Was Immediate Notice Given? ☐ Yes ☒ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A steel flowline failed due to corrosion, we replaced the bad section of steel pipe with a new joint.

Describe Area Affected and Cleanup Action Taken.*

Initially 20bbls of produced water were released. We were able to recover 15bbls with a vacuum truck. All free fluids have been recovered. Concho will have the spill site sampled to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD/BLM for approval prior to any significant remediation work.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: Robert Grubbs	OIL CONSERVATION DIVISION
Printed Name: Robert Grubbs Jr.	Approved by District Supervisor:
Title: Senior Environmental Coordinator	Approval Date: / Expiration Date:
E-mail Address: rgrubbs@concho.com	Conditions of Approval: / Attached ☐
Date: 06-03-2014 Phone: 432-661-6601	

* Attach Additional Sheets If Necessary

ARCADIS

COG (ConocoPhillips)

2024 Work Plan

Burch Keely Unit #142

Eddy County, New Mexico

Incident # NHMP1415747700

April 2024

2024 Work Plan

Burch Keely Unit #142
Incident # NHMP1415747700

Eddy County, New Mexico

April 2024

Prepared By:
Arcadis U.S., Inc.
10205 Westheimer Road, Suite 800
Houston
Texas 77042
Phone: 713 953 4800
Fax: 713 977 4620

Prepared For:
Ike Tavarez
Project Manager
ConocoPhillips RM&R
600 W. Illinois Ave.
Midland, TX 79701

Our Ref:
30197423

Justin Nixon
Task Manager

Scott Foord, PG
Certified Project Manager

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2024 Work Plan
Burch Keely Unit #142

1 Introduction

Arcadis U.S., Inc. (Arcadis) has prepared this Work Plan, on behalf of Concho Operating, LLC (COG – now ConocoPhillips), for the release site known as the Burch Keely Unit #142 (Site) located at 32.81100, -104.01749. Details of the release are summarized in the New Mexico Oil Conservation Division (NMOCD) Initial C-141 Form included as **Appendix A**.

2 Project Summary

The Site is located on federal land approximately 2.5-miles southwest of the City of Maljimar in Unit D, Section 30, Township 17 South, Range 30 East, Eddy County, New Mexico. The site is located within a low karst area. A Site Location Map is included as **Figure 1** and a Topographic Map as **Figure 2**.

2.1 Incident # NHMP1415747700

According to the Initial C-141 Form, on May 7, 2014 a steel flowline failed due to corrosion, which was replaced with a new steel joint, resulting in the release of approximately 20 barrels (bbls) of produced water to ground surface at the Site with 15 bbls recovered. The Initial C-141 Form was submitted to the NMOCD on June 3, 2014 and assigned Incident ID number NHMP1415747700. The Initial C-141 Form is included as **Appendix A.**

3 Site Characterization

After a review of the New Mexico Office of State Engineers (NMOSE) and USGS databases, there are no known water sources within a 0.5-mile radius of the Site. A water well was located approximately 1.87 miles northeast of the site with a depth to water of 80 feet bgs. As such, assessment activities completed to date and proposed remediation/reclamation activities at the Site have been evaluated assuming a Site with a depth to groundwater as less than 50 feet below ground surface (bgs). The following site characteristics were determined in accordance with 19.15.29 New Mexico Administrative Code (NMAC):

What is the minimum distance, between the closest lateral extents of the release and the following surface areas:

- A continuously flowing watercourse or any other significant watercourse: >5 miles
- Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark): >5 miles
- An occupied permanent residence, school, hospital, institution, or church: Between 1 and 5 miles
- A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes: >5 miles
- Any other fresh water well or spring: >5 miles
- Incorporated municipal boundaries or a defined municipal fresh water well field: >5 miles
- A wetland: >5 miles
- A subsurface mine: >5 miles
- A (non-karst) unstable area: >5 miles
- Categorize the risk of this well/site being in Karst Geology: Low

- A 100-year floodplain: Between 1 and 5 miles
- Did the release impact areas not on an exploration, development, production, or storage site? No

The site characterization data is presented in **Appendix B**.

4 NMAC Regulatory Criteria

The NMOCD classifies the Site to use the most stringent regulatory limits due to depth to groundwater being assumed less than 50 feet bgs and no documented water wells within ½ mile of the site. Per Table I of NMAC part 19.15.29.12, the following closure criteria apply to the Site for both reclamation and remediation activities:

Constituent	Limit (mg/kg)
Chloride	600 mg/kg
Total Petroleum Hydrocarbons (TPH) – Gasoline Range Organics (GRO), Diesel Range Organics (DRO), and Oil Range Organics (ORO)	100 mg/kg
Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX)	50 mg/kg
Benzene	10 mg/kg

5 Site Assessment Activities

In October and December 2023, Arcadis performed site assessment activities to evaluate soil impacts stemming from the release. A total of nine (9) sample points (S-1 through S-9) were advanced to depths ranging from the surface to 4 feet bgs inside and surrounding the release area to evaluate the vertical and horizontal extents of the release. Soil sample locations are shown on **Figure 3**. Soil samples were collected for chemical analyses, placed directly into laboratory-provided sample containers, stored on ice, and transported under the proper chain-of-custody protocol to Eurofins Laboratories in Midland, Texas.

The samples were analyzed for TPH by United States Environmental Protection Agency (EPA) Method 8015, modified BTEX by EPA Method 8021B, and chloride by EPA method 300.0. Soil samples analyzed for TPH were reported with concentrations ranging from 15.4 mg/kg (S-3) to 84.4 mg/kg (S-9). Soil samples analyzed for BTEX were reported with concentrations ranging from 0.000100 mg/kg (S-8) to 0.000102 mg/kg (S-9). Soil samples analyzed for chloride were reported with concentrations ranging from 11.5 mg/kg (S-9) to 2,200 mg/kg (S-2).

Horizontal and vertical delineation was assessed in each cardinal direction to determine the potential area of concern. Arcadis will use this data and field screening to guide proposed remediation activities prior to collecting any confirmation laboratory analytical samples. Soil sample analytical results from assessment activities are summarized in **Table 1**. Laboratory reports for soil samples collected during the initial site assessment, including analytical methods, results, and chain-of-custody documents, are attached in **Appendix C.** NMOCD correspondence is shown in **Appendix D.**

6 Proposed Work Plan

Based on the analytical data and the detected TPH and chloride concentrations in soil samples collected during site assessment activities, COG proposes to remediate the areas of concern via excavation illustrated in orange as shown in **Figure 3** and bolded in **Table 1**.

The proposed excavation area encompasses a surface area of approximately 1,400 square feet. An estimated 220 cubic yards of soil will be removed and transported to the R360 Halfway CRI Facility, which is listed as an NMOCD approved disposal facility.

In accordance with NMAC 19.15.29.12(D)(1)(b) COG proposes the following confirmation sampling plan to adhere with NMOCD requirements. Five-point composite confirmation soil samples will be collected from the excavation floor and sidewalls at 200 square foot intervals for analysis of chloride by EPA Method 300.0, BTEX by EPA Method 8260, and TPH for GRO, DRO, and ORO by EPA Method 8015. Lateral and vertical limits of the excavation will halt once confirmation sample analytical results are in accordance with NMAC 19.15.29.12(D)(1)(c).

Backfill material will be verified to be non-waste containing prior to backfilling the remediated area by obtaining analytical data from the backfill material supplier (R360) if available, or by collecting a five-point composite sample and analyzing for chloride by EPA Method 300.0, BTEX by EPA Method 8260, and TPH for GRO, DRO, and ORO by EPA Method 8015. Following completion of excavation activities and confirmation that the backfill material is non-waste containing, the areas will be backfilled with the clean material and graded to match the original surface conditions and drainage. Approximately 700 square feet of the area of concern located within the pasture area will be reclaimed to original condition and re-seeded following remediation activities. The remaining 700 square feet of the area of concern will be reclaimed but not reseeded. This area will be restored as a lease road.

The proposed remediation activities will be implemented within 90 days following approval of this work plan by the NMOCD. The anticipated schedule includes 30 days to setup field work and confirm sub-contractors, 30 days to complete on-site remediation activities, and 30 days to prepare a soil remediation summary and closure request report.

7 Work Plan Approval Request

Upon completion of the above proposed soil remediation activities, a final closure request report describing the remediation activities and a separate reclamation report will be submitted to the NMOCD for review. If you have any questions regarding this work plan or need additional information, please do not hesitate to contact Scott Foord at 281-725-7447 or Justin Nixon at 432-296-9547.

Tables

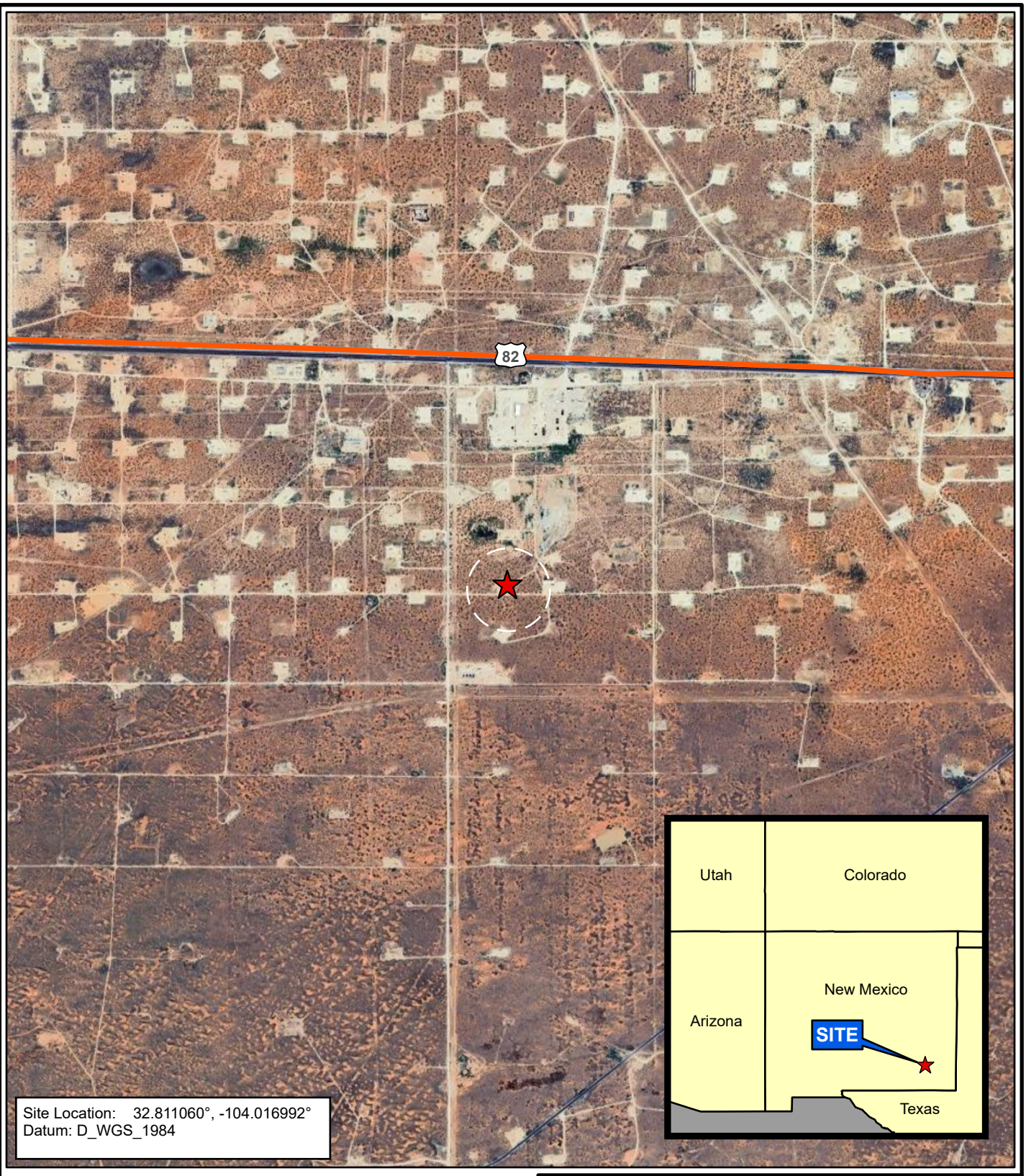
Table 1
2024 Soil Sample Analytical Results
Burch Keely Unit #142
COG (ConocoPhillips)

ARCADIS

			BTEX Methods					TPH Methods				Cl Method
Sample ID	Date	Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	m-Xylene & p-Xylene (mg/kg)	Total BTEX (mg/kg)	GRO C6-C10 (mg/kg)	DRO C10-C28 (mg/kg)	ORO C28-C36 (mg/kg)	Total TPH (mg/kg)	Chloride, Dissolved (mg/kg)
S1-1-101123	10/11/2023	1	<0.000383	<0.000454	<0.000563	<0.00101	<0.00101	18.7J	15.3J	<15.1	34.0J	76.1
S1-2-101123	10/11/2023	2	<0.000381	<0.000451	<0.000559	<0.00100	<0.00100	16.7J	<14.9	<14.9	16.7J	105
S1-3-101123	10/11/2023	3	<0.000388	<0.000460	<0.000570	<0.00102	<0.00102	29.4J	18.5J	<15.0	47.9J	108
S2-1-101123	10/11/2023	1	<0.000387	<0.000459	<0.000568	<0.00102	<0.00102	26.2J	18.5J	<15.2	44.7J	**769**
S2-2-101023	10/10/2023	2	<0.000386	<0.000457	<0.000566	<0.00101	<0.00101	18.5J	<14.9	<14.9	18.5J	**2200**
S3-1-101023	10/10/2023	1	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	21.5J	29.7J	<15.0	51.2	109
S3-2-101123	10/11/2023	2	<0.000383	<0.000453	<0.000562	<0.00100	<0.00100	15.4J	<15.1	<15.1	15.4J	202
S4-1-101123	10/11/2023	1	<0.000381	<0.000451	<0.000559	<0.00100	<0.00100	<14.9	17.6J F1	<14.9	17.6J	104
S4-2-101123	10/11/2023	2	<0.000389	<0.000461	<0.000571	<0.00102	<0.00102	16.7J	26.2J	<15.0	42.9J	114
S5-1-101123	10/11/2023	1	<0.000383	<0.000454	<0.000563	<0.00101	<0.00101	46.5J	22.4J	<14.9	68.9	385
S5-2-101123	10/11/2023	2	<0.000388	<0.000460	<0.000570	<0.00102	<0.00102	25.0J	22.8J	<15.0	47.8J	305
S6-1-101023	10/10/2023	1	<0.000383	<0.000453	<0.000562	<0.00100	<0.00100	21.0J	16.3J	<15.1	37.3J	203
S6-2-101023	10/10/2023	2	<0.000381	0.000479J	<0.000559	<0.00100	<0.00100	24.8J	20.0J	<15.2	44.8J	466F1
S7-1-101123	10/11/2023	1	<0.000389	<0.000461	<0.000571	<0.00102	<0.00102	25.4J	<15.0	<15.0	25.4J	88.1
S7-2-101123	10/11/2023	2	<0.000387	<0.000459	<0.000568	<0.00102	<0.00102	18.5J	17.8J	<15.0	36.3J	92.7
S8-1-101123	10/11/2023	1	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	23.3J	23.3J	<15.0	46.6J	110
S8-2-101123	10/11/2023	2	<0.000382	<0.000452	<0.000561	<0.00100	<0.00100	22.8J	16.9J	<14.9	39.7J	116
S8-3-101123	10/11/2023	3	<0.000383	<0.000453	<0.000562	<0.00100	<0.00100	18.7J	<15.0	<15.0	18.7J	87.7
S8-4-101123	10/11/2023	4	<0.000381	<0.000451	<0.000559	<0.00100	<0.00100	36.8J	19.8J	<15.1	56.6	102
S-9-1-120623	12/6/2023	1	<0.000388	<0.000460	<0.000570	<0.00102	<0.00102	22.8	61.6	<15.2	84.4	11.5
S-9-2-120623	12/6/2023	2	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	25.7 J	34.7 J	<15.0	60.4	135
NMOCD Reclamation Standard			**10**	- -	- -	- -	**50**	- -	- -	- -	**100**	**600**
NMOCD Closure Criteria			**10**	- -	- -	- -	**50**	- -	- -	- -	**100**	**600**

Legend:
J: Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
F1: MS and/or MSD recovery exceeds control limits
Analytes exceeding NMAC Standards are indicated in bold
'<' indicates the analyte was not detected at or above the Method Detection Limit (MDL)
mg/kg: Milligram per Kilogram
BTEX : Benzene, Toluene, Ethylbenzene, and Total Xylenes
NMAC : New Mexico Administration Code
TPH GRO: Total Petroleum Hydrocarbons Gasoline Range Organics
TPH DRO: Total Petroleum Hydrocarbon Diesel Range Organics
TPH ORO: Total Petroluem Hydrocarbons Oil Range Organics
S : Soil sample
Notes:
1. Chloride analyzed by EPA Method 300
2. TPH analyzed by EPA Method 8015 M
3. BTEX analyzed by EPA Method 8260B
4. Closure Criteria New Mexico Administrative Code 19.15.29.12.E(2)

Figures



Legend

Site Location

Credits: ESRI Online, Google Earth 12/21/2019

0 2,000 4,000 Feet

GRAPHIC SCALE

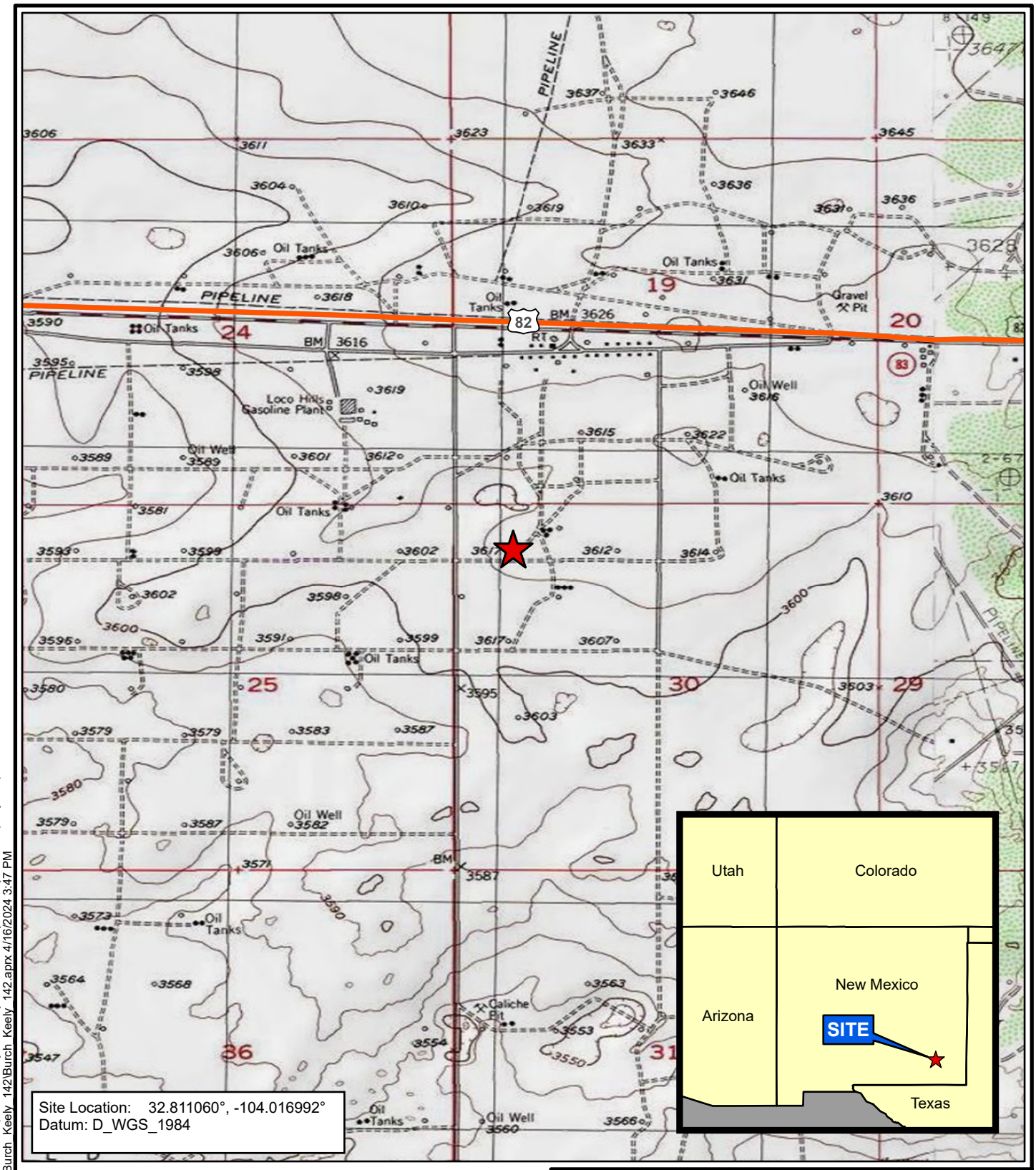
COG (CONOCOPHILLIPS)
BURCH KEELY #142
EDDY COUNTY, NEW MEXICO

SITE LOCATION MAP

ARCADIS

FIGURE 1

City: Houston Div/Group: Remediation West -Air Group Created By: W Berry Last Saved By: wberry ; Client (Project #)
T:_EHSS\ArcGIS_Pro\Land\COG_COP\NM\Burch_Keely_142\Burch_Keely_142.aprx 4/16/2024 3:47 PM



Legend

Site Location

Credits: ESRI Online, USGS 24,000 K Topo (Map Service)
Red Lake, New Mexico Quadrangle

0 2,000 4,000 Feet

GRAPHIC SCALE

COG (CONOCOPHILLIPS)
BURCH KEELY #142
EDDY COUNTY, NEW MEXICO

TOPOGRAPHIC MAP

ARCADIS

FIGURE 2

City: Houston Div/Group: Remediation West -Air Group Created By: W Berry Last Saved By: wberry ; Client (Project #) T:_EHSS\ArcGIS_Pro\Land\COG_COP\NM\Burch_Keely_142\Burch_Keely_142.aprx 4/16/2024 3:47 PM

LEGEND:

- Release
- Assessment Sample Locations
- Plugged & Abandoned
- Pipeline
- Proposed excavation area
- Reseeded pasture area
- Lease road

0 40 80 Feet

GRAPHIC SCALE

Site Location: 32.811060°, -104.016992°
Datum: D_WGS_1984

Credits: ESRI Online, Google Earth 12/21/2019

COG (CONOCOPHILLIPS)
BURCH KEELY #142
EDDY COUNTY, NEW MEXICO

Proposed Excavation and Sample Location Map

ARCADIS

FIGURE
3

City: Houston Div/Group: Remediation West - Air Group Created By: W Berry Last Saved By: wberry Client (Project #)
T:_EHSS\ArcGIS_Pro\Land\COG_COPNM\Burch_Keely_142\Burch_Keely_142.aprx 4/17/2024 4:56 PM

Photographic Logs

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
Burch Keely Unit #142	Eddy County, NM	NHMP1415747700

Photo No.	Date:
1	10/11/2023

Direction Photo Taken:

W

Description:

Former pad location

32.811093, -104.017062

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
Burch Keely Unit #142	Eddy County, NM	NHMP1415747700

Photo No.	Date:
2	10/11/2023

Direction Photo Taken:

E

Description:

Sample location S-4

32.811011, -104.017333

ARCADIS

PHOTOGRAPHIC LOG

Property Name:	Location:	Case No.
Burch Keely Unit #142	Eddy County, NM	NHMP1415747700

Photo No.	Date:
3	10/11/2023

Direction Photo Taken:

N

Description:

Sample location S-2

32.811060, -104.016992

Appendix A

Initial C-141 Form Incident # NHMP1415747700

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

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

RECEIVED
JUN 04 2014
NMOCD ARTESIA

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

nHMP1415-747700

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	COG OPERATING LLC 229137	Contact	Robert McNeill
Address	600 West Illinois Avenue, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Burch Keely Unit #142	Facility Type	Injection Well

Surface Owner Federal	Mineral Owner	Lease No. (API#) 30-015-04388

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	30	17S	30E					Eddy

Latitude 32.81100 Longitude 104.01749

NATURE OF RELEASE

Type of Release Produced water	Volume of Release 20bbls	Volume Recovered 15bbls
Source of Release Steel flowline	Date and Hour of Occurrence 05-07-2014	Date and Hour of Discovery 05-07-2014 10:00am
Was Immediate Notice Given? ☐ Yes ☒ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A steel flowline failed due to corrosion, we replaced the bad section of steel pipe with a new joint.

Describe Area Affected and Cleanup Action Taken.*

Initially 20bbls of produced water were released. We were able to recover 15bbls with a vacuum truck. All free fluids have been recovered. Concho will have the spill site sampled to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD/BLM for approval prior to any significant remediation work.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: Robert Grubbs Jr

Printed Name: Robert Grubbs Jr.

Title: Senior Environmental Coordinator

E-mail Address: rgrubbs@concho.com

Date: 06-03-2014 Phone: 432-661-6601

* Attach Additional Sheets If Necessary

OIL CONSERVATION DIVISION

Approved by District Supervisor:

Approval Date: 6/6/14 Expiration Date: N/A

Conditions of Approval: Attached ☐

Remediation per OCD Rule & Guidelines, & like approval by BLM. SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 7/6/14

2RP-2332

Bratcher, Mike, EMNRD

From: Robert Grubbs <RGrubbs@concho.com>
Sent: Wednesday, June 04, 2014 8:53 AM
To: Bratcher, Mike, EMNRD; Jeff Robertson (jlrobertson@blm.gov) (jlrobertson@blm.gov)
Cc: Robert McNeill; Amanda Trujillo; Guadalupe Carrasco; Production Mail
Subject: C-141 Initial Report - Burch Keely Unit #142 (IW)
Attachments: 05-07-2014 Burch Keely Unit #142 (IW) Initial.pdf

Mr. Bratcher,

Please see attached the C-141 Initial Report for a release that occurred at our Burch Keely Unit #142 (IW) on 05-07-2014 in Eddy County New Mexico. We plan to assess the spill area timely.

Thank you,

Robert Grubbs Jr.
Sr. Environmental Coordinator
432.683.7443 (main)
432.818.2369 (direct)
432.661.6601 (cell)
rgrubbs@concho.com
Mailing Address:
One Concho Center
600 W. Illinois Avenue
Midland, Texas 79701

CONCHO

Appendix B

Site Characterization Data

New Mexico Office of the State Engineer

Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	RA 11914 POD1	2	4	2	20	17S	30E	594801	3632002

Driller License: 1682 **Driller Company:** HUNGRY HORSE, LLC.

Driller Name: JOHN NORRIS

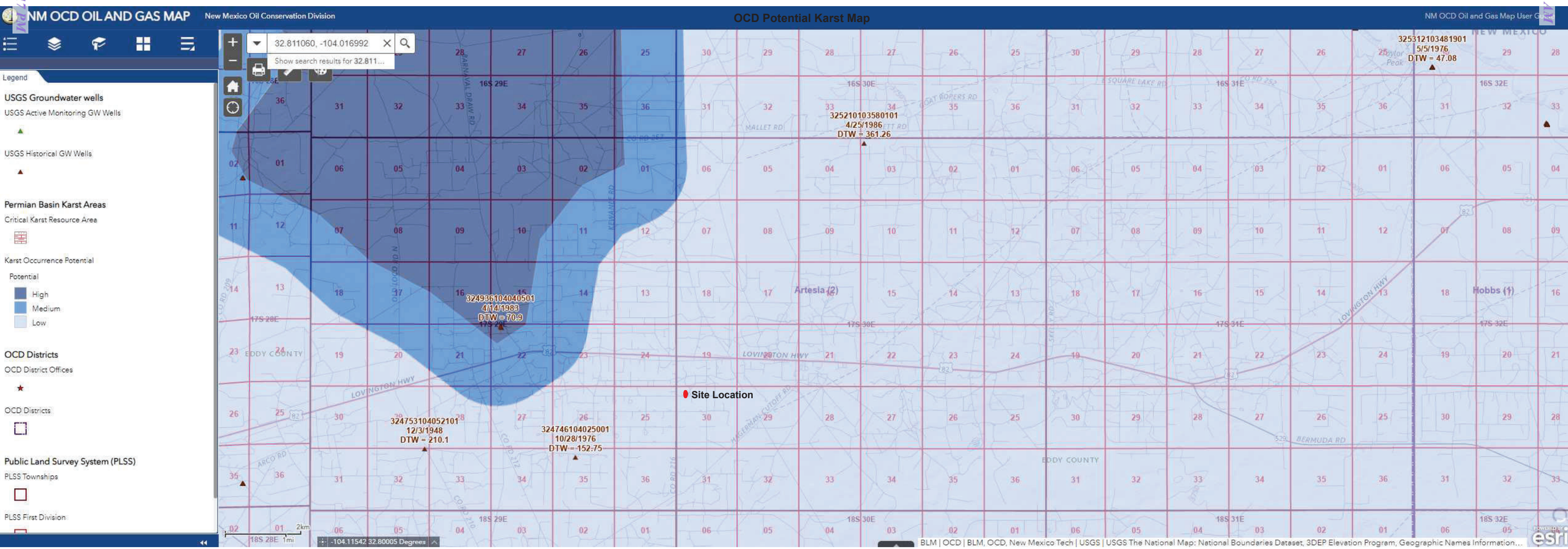
Drill Start Date: 03/19/2013 **Drill Finish Date:** 03/19/2013 **Plug Date:**

Log File Date: 04/09/2013 **PCW Rcv Date:** **Source:** Shallow

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

Casing Size: **Depth Well:** 85 feet **Depth Water:** 80 feet

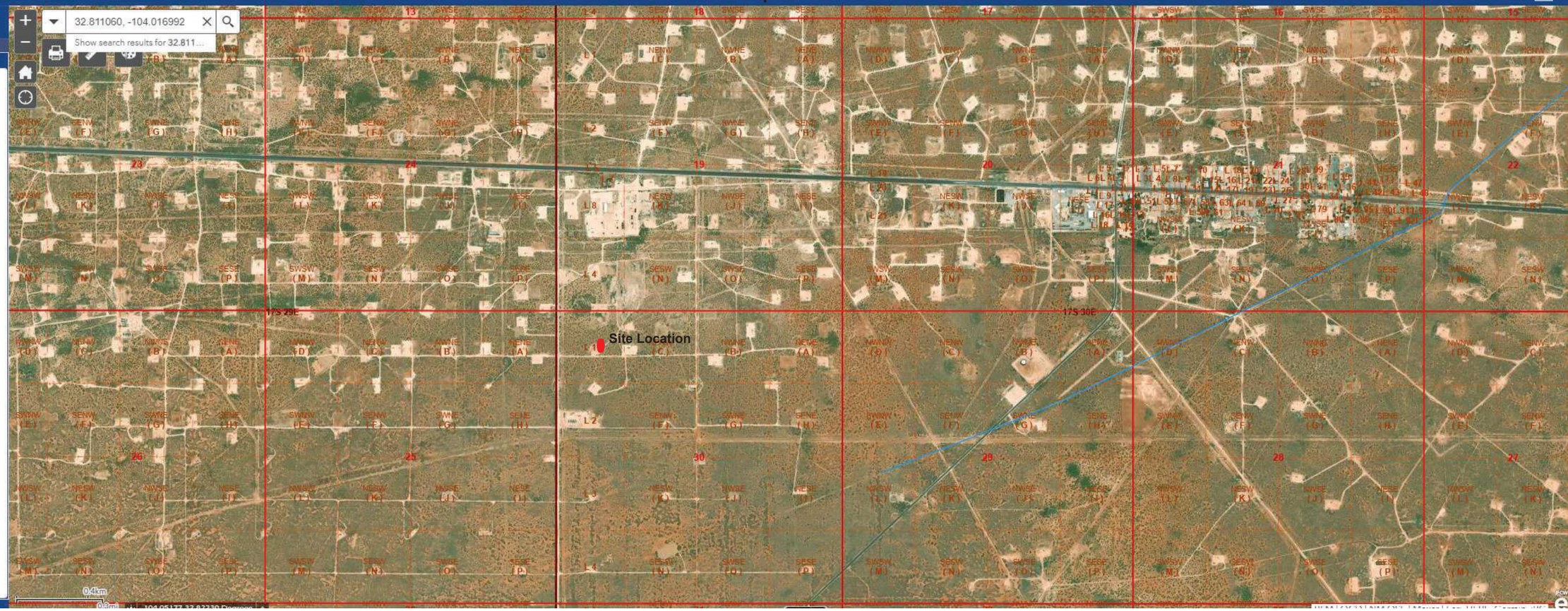
Water Bearing Stratifications:	Top	Bottom	Description
	11	85	Sandstone/Gravel/Conglomerate

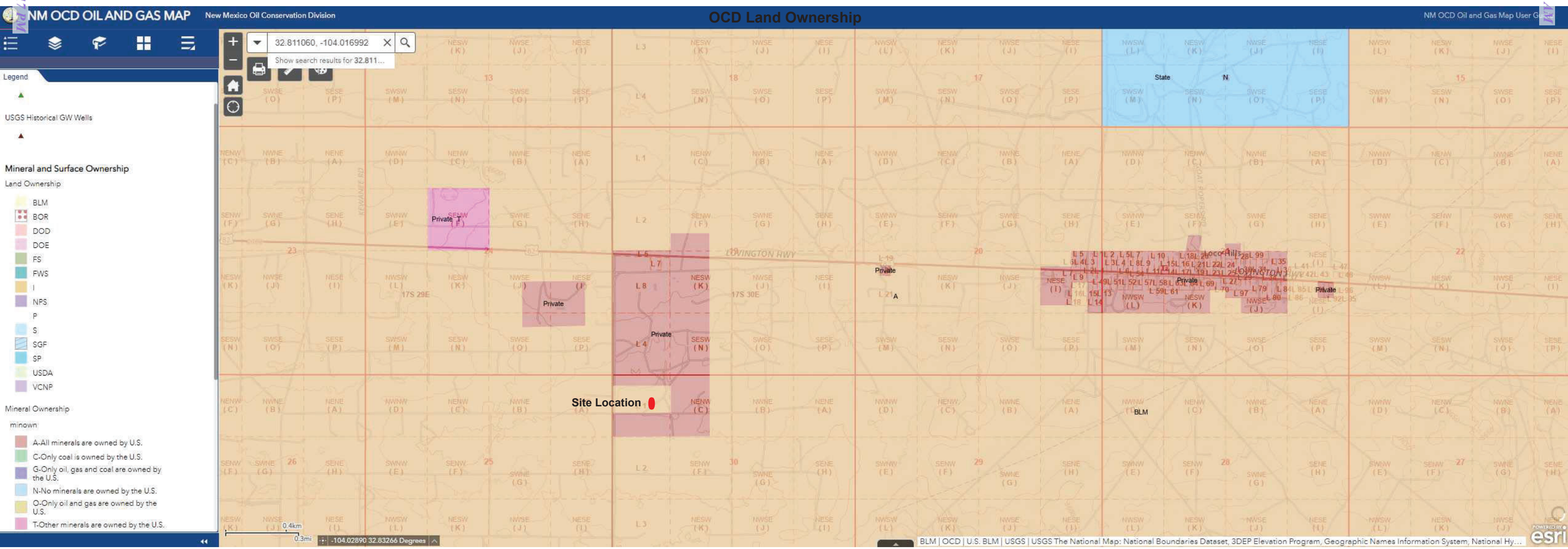


NM OCD OIL AND GAS MAP New Mexico Oil Conservation Division

OCD Water Bodies Map

NM OCD Oil and Gas Map User Gu





Appendix C

Laboratory Analytical Reports

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Justin Nixon
ARCADIS US Inc
1004 North Big Spring
Suite 300
Midland, Texas 79701

Generated 10/18/2023 1:04:31 PM

JOB DESCRIPTION

Burch Keeley #142
SDG NUMBER Lea County, NM

JOB NUMBER

880-34338-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

my EOL

Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Generated
10/18/2023 1:04:31 PM

Authorized for release by
John Builes, Project Manager
John.Builes@et.eurofinsus.com
(561)558-4549

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Laboratory Job ID: 880-34338-1
SDG: Lea County, NM

Table of Contents

Definitions/Glossary

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Definitions/Glossary

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TNTC	Too Numerous To Count

Case Narrative

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Job ID: 880-34338-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-34338-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 10/12/2023 8:58 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.5°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: S1-1-101123 (880-34338-1), S1-2-101123 (880-34338-2), S1-3-101123 (880-34338-3), S2-1-101123 (880-34338-4), S2-2-101023 (880-34338-5), S3-1-101023 (880-34338-6), S3-2-101123 (880-34338-7), S4-1-101123 (880-34338-8), S4-2-101123 (880-34338-9), S5-1-101123 (880-34338-10), S5-2-101123 (880-34338-11), S6-1-101023 (880-34338-12), S6-2-101023 (880-34338-13), S7-1-101123 (880-34338-14), S7-2-101123 (880-34338-15), S8-1-101123 (880-34338-16), S8-2-101123 (880-34338-17), S8-3-101123 (880-34338-18) and S8-4-101123 (880-34338-19).

GC VOA
Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-64563 and analytical batch 880-64524 was outside the upper control limits.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-64532 and 880-64562 and analytical batch 880-64515 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-64515/5), (LCS 880-64532/2-A), (LCS 880-64562/2-A) and (LCSD 880-64562/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: S1-1-101123 (880-34338-1), S1-2-101123 (880-34338-2), S1-3-101123 (880-34338-3), S2-1-101123 (880-34338-4), S2-2-101023 (880-34338-5), S3-1-101023 (880-34338-6), S3-2-101123 (880-34338-7), (890-5445-A-8-C), (890-5445-A-8-D MS) and (890-5445-A-8-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The continuing calibration verification (CCV) associated with batch 880-64515 recovered above the upper control limit for Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28) due to being inadvertently double spiked. Percent recoveries are based on the amount spiked. The associated samples are impacted: (CCV 880-64515/20), (CCV 880-64515/31), (CCV 880-64515/47) and (CCV 880-64515/58).

Method 8015MOD_NM: An incorrect volume of spiking solution was inadvertently added to the laboratory control sample duplicate (LCSD) associated with preparation batch 880-64562 and analytical batch 880-64515. Since only an acceptable LCS is required per the method, the data has been qualified and reported.

Case Narrative

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Job ID: 880-34338-1 (Continued)

Laboratory: Eurofins Midland (Continued)

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-64629 and analytical batch 880-64616 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: S4-1-101123 (880-34338-8), S4-2-101123 (880-34338-9), S5-1-101123 (880-34338-10), S5-2-101123 (880-34338-11), S6-1-101023 (880-34338-12), S6-2-101023 (880-34338-13), S7-1-101123 (880-34338-14), S7-2-101123 (880-34338-15), S8-1-101123 (880-34338-16), S8-2-101123 (880-34338-17), (880-34338-A-8-D MS) and (880-34338-A-8-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: S8-3-101123 (880-34338-18) and S8-4-101123 (880-34338-19). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-64616/21), (CCV 880-64616/32) and (CCV 880-64616/8). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The method blank for preparation batch 880-64629 and analytical batch 880-64616 contained Diesel Range Organics (Over C10-C28) above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-64629 and analytical batch 880-64616 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-64629 and analytical batch 880-64616 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28).

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-64571 and analytical batch 880-64698 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Client Sample ID: S1-1-101123

Lab Sample ID: 880-34338-1
Matrix: Solid
Date Collected: 10/11/23 09:10
Date Received: 10/12/23 08:58

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		10/12/23 13:30	10/13/23 00:08	1
Toluene	<0.000454	U	0.00199	0.000454	mg/Kg		10/12/23 13:30	10/13/23 00:08	1
Ethylbenzene	<0.000563	U	0.00199	0.000563	mg/Kg		10/12/23 13:30	10/13/23 00:08	1
m-Xylene & p-Xylene	<0.00101	U	0.00398	0.00101	mg/Kg		10/12/23 13:30	10/13/23 00:08	1
o-Xylene	<0.000343	U	0.00199	0.000343	mg/Kg		10/12/23 13:30	10/13/23 00:08	1
Xylenes, Total	<0.00101	U	0.00398	0.00101	mg/Kg		10/12/23 13:30	10/13/23 00:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*10/12/23 13:30*	*10/13/23 00:08*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*10/12/23 13:30*	*10/13/23 00:08*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00398	0.00101	mg/Kg			10/13/23 00:08	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**34.0**	**J**	50.3	15.1	mg/Kg			10/12/23 19:01	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**18.7**	**J**	50.3	15.1	mg/Kg		10/12/23 10:42	10/12/23 19:01	1
Diesel Range Organics (Over C10-C28)	**15.3**	**J**	50.3	15.1	mg/Kg		10/12/23 10:42	10/12/23 19:01	1
OII Range Organics (Over C28-C36)	<15.1	U	50.3	15.1	mg/Kg		10/12/23 10:42	10/12/23 19:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*143*	*S1+*	*70 - 130*	*10/12/23 10:42*	*10/12/23 19:01*	*1*
o-Terphenyl	*138*	*S1+*	*70 - 130*	*10/12/23 10:42*	*10/12/23 19:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**76.1**		5.04	0.398	mg/Kg			10/17/23 15:30	1

Client Sample ID: S1-2-101123

Lab Sample ID: 880-34338-2
Matrix: Solid
Date Collected: 10/11/23 09:20
Date Received: 10/12/23 08:58

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000381	U	0.00198	0.000381	mg/Kg		10/12/23 13:30	10/13/23 00:28	1
Toluene	<0.000451	U	0.00198	0.000451	mg/Kg		10/12/23 13:30	10/13/23 00:28	1
Ethylbenzene	<0.000559	U	0.00198	0.000559	mg/Kg		10/12/23 13:30	10/13/23 00:28	1
m-Xylene & p-Xylene	<0.00100	U	0.00396	0.00100	mg/Kg		10/12/23 13:30	10/13/23 00:28	1
o-Xylene	<0.000341	U	0.00198	0.000341	mg/Kg		10/12/23 13:30	10/13/23 00:28	1
Xylenes, Total	<0.00100	U	0.00396	0.00100	mg/Kg		10/12/23 13:30	10/13/23 00:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*10/12/23 13:30*	*10/13/23 00:28*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*10/12/23 13:30*	*10/13/23 00:28*	*1*

Client Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Client Sample ID: S1-2-101123

Date Collected: 10/11/23 09:20
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-2

Matrix: Solid

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00396	0.00100	mg/Kg			10/13/23 00:28	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**16.7**	**J**	49.5	14.9	mg/Kg			10/13/23 00:09	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**16.7**	**J *1**	49.5	14.9	mg/Kg		10/12/23 13:28	10/13/23 00:09	1
Diesel Range Organics (Over C10-C28)	<14.9	U *- *1	49.5	14.9	mg/Kg		10/12/23 13:28	10/13/23 00:09	1
OII Range Organics (Over C28-C36)	<14.9	U	49.5	14.9	mg/Kg		10/12/23 13:28	10/13/23 00:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*157*	*S1+*	*70 - 130*	*10/12/23 13:28*	*10/13/23 00:09*	*1*
o-Terphenyl	*151*	*S1+*	*70 - 130*	*10/12/23 13:28*	*10/13/23 00:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**105**		5.03	0.397	mg/Kg			10/17/23 15:36	1

Client Sample ID: S1-3-101123

Date Collected: 10/11/23 09:30
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-3

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000388	U	0.00202	0.000388	mg/Kg		10/12/23 13:30	10/13/23 00:49	1
Toluene	<0.000460	U	0.00202	0.000460	mg/Kg		10/12/23 13:30	10/13/23 00:49	1
Ethylbenzene	<0.000570	U	0.00202	0.000570	mg/Kg		10/12/23 13:30	10/13/23 00:49	1
m-Xylene & p-Xylene	<0.00102	U	0.00403	0.00102	mg/Kg		10/12/23 13:30	10/13/23 00:49	1
o-Xylene	<0.000347	U	0.00202	0.000347	mg/Kg		10/12/23 13:30	10/13/23 00:49	1
Xylenes, Total	<0.00102	U	0.00403	0.00102	mg/Kg		10/12/23 13:30	10/13/23 00:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*10/12/23 13:30*	*10/13/23 00:49*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*10/12/23 13:30*	*10/13/23 00:49*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00102	U	0.00403	0.00102	mg/Kg			10/13/23 00:49	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**47.9**	**J**	50.1	15.0	mg/Kg			10/13/23 00:31	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**29.4**	**J *1**	50.1	15.0	mg/Kg		10/12/23 13:28	10/13/23 00:31	1
Diesel Range Organics (Over C10-C28)	**18.5**	**J *- *1**	50.1	15.0	mg/Kg		10/12/23 13:28	10/13/23 00:31	1

Eurofins Midland

Client Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Client Sample ID: S1-3-101123

Lab Sample ID: 880-34338-3

Date Collected: 10/11/23 09:30
Matrix: Solid
Date Received: 10/12/23 08:58

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<15.0	U	50.1	15.0	mg/Kg		10/12/23 13:28	10/13/23 00:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*165*	*S1+*	*70 - 130*	*10/12/23 13:28*	*10/13/23 00:31*	*1*
o-Terphenyl	*153*	*S1+*	*70 - 130*	*10/12/23 13:28*	*10/13/23 00:31*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**108**		4.98	0.393	mg/Kg			10/17/23 15:41	1

Client Sample ID: S2-1-101123

Lab Sample ID: 880-34338-4

Date Collected: 10/11/23 10:00
Matrix: Solid
Date Received: 10/12/23 08:58

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000387	U	0.00201	0.000387	mg/Kg		10/12/23 13:30	10/13/23 01:09	1
Toluene	<0.000459	U	0.00201	0.000459	mg/Kg		10/12/23 13:30	10/13/23 01:09	1
Ethylbenzene	<0.000568	U	0.00201	0.000568	mg/Kg		10/12/23 13:30	10/13/23 01:09	1
m-Xylene & p-Xylene	<0.00102	U	0.00402	0.00102	mg/Kg		10/12/23 13:30	10/13/23 01:09	1
o-Xylene	<0.000346	U	0.00201	0.000346	mg/Kg		10/12/23 13:30	10/13/23 01:09	1
Xylenes, Total	<0.00102	U	0.00402	0.00102	mg/Kg		10/12/23 13:30	10/13/23 01:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*10/12/23 13:30*	*10/13/23 01:09*	*1*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*10/12/23 13:30*	*10/13/23 01:09*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00102	U	0.00402	0.00102	mg/Kg			10/13/23 01:09	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**44.7**	**J**	50.5	15.2	mg/Kg			10/13/23 00:53	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**26.2**	**J *1**	50.5	15.2	mg/Kg		10/12/23 13:28	10/13/23 00:53	1
Diesel Range Organics (Over C10-C28)	**18.5**	**J *- *1**	50.5	15.2	mg/Kg		10/12/23 13:28	10/13/23 00:53	1
OII Range Organics (Over C28-C36)	<15.2	U	50.5	15.2	mg/Kg		10/12/23 13:28	10/13/23 00:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*150*	*S1+*	*70 - 130*	*10/12/23 13:28*	*10/13/23 00:53*	*1*
o-Terphenyl	*145*	*S1+*	*70 - 130*	*10/12/23 13:28*	*10/13/23 00:53*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**769**		4.98	0.393	mg/Kg			10/17/23 15:58	1

Client Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Client Sample ID: S2-2-101023

Date Collected: 10/10/23 10:10
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-5
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000386	U	0.00200	0.000386	mg/Kg		10/12/23 13:30	10/13/23 01:30	1
Toluene	<0.000457	U	0.00200	0.000457	mg/Kg		10/12/23 13:30	10/13/23 01:30	1
Ethylbenzene	<0.000566	U	0.00200	0.000566	mg/Kg		10/12/23 13:30	10/13/23 01:30	1
m-Xylene & p-Xylene	<0.00101	U	0.00401	0.00101	mg/Kg		10/12/23 13:30	10/13/23 01:30	1
o-Xylene	**0.000847**	**J**	0.00200	0.000345	mg/Kg		10/12/23 13:30	10/13/23 01:30	1
Xylenes, Total	<0.00101	U	0.00401	0.00101	mg/Kg		10/12/23 13:30	10/13/23 01:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*10/12/23 13:30*	*10/13/23 01:30*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*10/12/23 13:30*	*10/13/23 01:30*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00401	0.00101	mg/Kg			10/13/23 01:30	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**18.5**	**J**	49.6	14.9	mg/Kg			10/13/23 01:37	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**18.5**	**J *1**	49.6	14.9	mg/Kg		10/12/23 13:28	10/13/23 01:37	1
Diesel Range Organics (Over C10-C28)	<14.9	U *- *1	49.6	14.9	mg/Kg		10/12/23 13:28	10/13/23 01:37	1
OII Range Organics (Over C28-C36)	<14.9	U	49.6	14.9	mg/Kg		10/12/23 13:28	10/13/23 01:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*166*	*S1+*	*70 - 130*	*10/12/23 13:28*	*10/13/23 01:37*	*1*
o-Terphenyl	*156*	*S1+*	*70 - 130*	*10/12/23 13:28*	*10/13/23 01:37*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2200**		25.0	1.98	mg/Kg			10/17/23 16:04	5

Client Sample ID: S3-1-101023

Date Collected: 10/10/23 15:10
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-6
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000384	U	0.00200	0.000384	mg/Kg		10/12/23 13:30	10/13/23 01:50	1
Toluene	<0.000455	U	0.00200	0.000455	mg/Kg		10/12/23 13:30	10/13/23 01:50	1
Ethylbenzene	<0.000564	U	0.00200	0.000564	mg/Kg		10/12/23 13:30	10/13/23 01:50	1
m-Xylene & p-Xylene	<0.00101	U	0.00399	0.00101	mg/Kg		10/12/23 13:30	10/13/23 01:50	1
o-Xylene	<0.000343	U	0.00200	0.000343	mg/Kg		10/12/23 13:30	10/13/23 01:50	1
Xylenes, Total	<0.00101	U	0.00399	0.00101	mg/Kg		10/12/23 13:30	10/13/23 01:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*10/12/23 13:30*	*10/13/23 01:50*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*10/12/23 13:30*	*10/13/23 01:50*	*1*

Client Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Client Sample ID: S3-1-101023

Lab Sample ID: 880-34338-6
Matrix: Solid
Date Collected: 10/10/23 15:10
Date Received: 10/12/23 08:58

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00399	0.00101	mg/Kg			10/13/23 01:50	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**51.2**		49.9	15.0	mg/Kg			10/13/23 01:59	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**21.5**	**J *1**	49.9	15.0	mg/Kg		10/12/23 13:28	10/13/23 01:59	1
Diesel Range Organics (Over C10-C28)	**29.7**	**J *- *1**	49.9	15.0	mg/Kg		10/12/23 13:28	10/13/23 01:59	1
OII Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		10/12/23 13:28	10/13/23 01:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*145*	*S1+*	*70 - 130*	*10/12/23 13:28*	*10/13/23 01:59*	*1*
o-Terphenyl	*138*	*S1+*	*70 - 130*	*10/12/23 13:28*	*10/13/23 01:59*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**109**		4.96	0.392	mg/Kg			10/17/23 16:21	1

Client Sample ID: S3-2-101123

Lab Sample ID: 880-34338-7
Matrix: Solid
Date Collected: 10/11/23 15:20
Date Received: 10/12/23 08:58

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		10/12/23 13:30	10/13/23 02:10	1
Toluene	<0.000453	U	0.00199	0.000453	mg/Kg		10/12/23 13:30	10/13/23 02:10	1
Ethylbenzene	<0.000562	U	0.00199	0.000562	mg/Kg		10/12/23 13:30	10/13/23 02:10	1
m-Xylene & p-Xylene	<0.00100	U	0.00398	0.00100	mg/Kg		10/12/23 13:30	10/13/23 02:10	1
o-Xylene	<0.000342	U	0.00199	0.000342	mg/Kg		10/12/23 13:30	10/13/23 02:10	1
Xylenes, Total	<0.00100	U	0.00398	0.00100	mg/Kg		10/12/23 13:30	10/13/23 02:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*10/12/23 13:30*	*10/13/23 02:10*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*10/12/23 13:30*	*10/13/23 02:10*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00398	0.00100	mg/Kg			10/13/23 02:10	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**15.4**	**J**	50.3	15.1	mg/Kg			10/13/23 02:21	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**15.4**	**J *1**	50.3	15.1	mg/Kg		10/12/23 13:28	10/13/23 02:21	1
Diesel Range Organics (Over C10-C28)	<15.1	U *- *1	50.3	15.1	mg/Kg		10/12/23 13:28	10/13/23 02:21	1

Client Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Client Sample ID: S3-2-101123

Lab Sample ID: 880-34338-7

Date Collected: 10/11/23 15:20
Matrix: Solid
Date Received: 10/12/23 08:58

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<15.1	U	50.3	15.1	mg/Kg		10/12/23 13:28	10/13/23 02:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*160*	*S1+*	*70 - 130*	*10/12/23 13:28*	*10/13/23 02:21*	*1*
o-Terphenyl	*156*	*S1+*	*70 - 130*	*10/12/23 13:28*	*10/13/23 02:21*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**202**		4.99	0.394	mg/Kg			10/17/23 16:27	1

Client Sample ID: S4-1-101123

Lab Sample ID: 880-34338-8

Date Collected: 10/11/23 10:50
Matrix: Solid
Date Received: 10/12/23 08:58

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000381	U	0.00198	0.000381	mg/Kg		10/12/23 13:30	10/13/23 02:31	1
Toluene	<0.000451	U	0.00198	0.000451	mg/Kg		10/12/23 13:30	10/13/23 02:31	1
Ethylbenzene	<0.000559	U	0.00198	0.000559	mg/Kg		10/12/23 13:30	10/13/23 02:31	1
m-Xylene & p-Xylene	<0.00100	U	0.00396	0.00100	mg/Kg		10/12/23 13:30	10/13/23 02:31	1
o-Xylene	<0.000341	U	0.00198	0.000341	mg/Kg		10/12/23 13:30	10/13/23 02:31	1
Xylenes, Total	<0.00100	U	0.00396	0.00100	mg/Kg		10/12/23 13:30	10/13/23 02:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*10/12/23 13:30*	*10/13/23 02:31*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*10/12/23 13:30*	*10/13/23 02:31*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00396	0.00100	mg/Kg			10/13/23 02:31	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**17.6**	**J**	49.8	14.9	mg/Kg			10/13/23 17:57	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<14.9	U *1	49.8	14.9	mg/Kg		10/13/23 08:50	10/13/23 17:57	1
Diesel Range Organics (Over C10-C28)	**17.6**	**J F1 B *1**	49.8	14.9	mg/Kg		10/13/23 08:50	10/13/23 17:57	1
OII Range Organics (Over C28-C36)	<14.9	U	49.8	14.9	mg/Kg		10/13/23 08:50	10/13/23 17:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*143*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 17:57*	*1*
o-Terphenyl	*134*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 17:57*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**104**		5.04	0.398	mg/Kg			10/17/23 16:32	1

Client Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Client Sample ID: S4-2-101123

Lab Sample ID: 880-34338-9
Matrix: Solid
Date Collected: 10/11/23 11:00
Date Received: 10/12/23 08:58

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000389	U	0.00202	0.000389	mg/Kg		10/12/23 13:30	10/13/23 02:51	1
Toluene	<0.000461	U	0.00202	0.000461	mg/Kg		10/12/23 13:30	10/13/23 02:51	1
Ethylbenzene	<0.000571	U	0.00202	0.000571	mg/Kg		10/12/23 13:30	10/13/23 02:51	1
m-Xylene & p-Xylene	<0.00102	U	0.00404	0.00102	mg/Kg		10/12/23 13:30	10/13/23 02:51	1
o-Xylene	<0.000347	U	0.00202	0.000347	mg/Kg		10/12/23 13:30	10/13/23 02:51	1
Xylenes, Total	<0.00102	U	0.00404	0.00102	mg/Kg		10/12/23 13:30	10/13/23 02:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*10/12/23 13:30*	*10/13/23 02:51*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*10/12/23 13:30*	*10/13/23 02:51*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00102	U	0.00404	0.00102	mg/Kg			10/13/23 02:51	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**42.9**	**J**	49.9	15.0	mg/Kg			10/13/23 19:00	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**16.7**	**J *1**	49.9	15.0	mg/Kg		10/13/23 08:50	10/13/23 19:00	1
Diesel Range Organics (Over C10-C28)	**26.2**	**J B *1**	49.9	15.0	mg/Kg		10/13/23 08:50	10/13/23 19:00	1
OII Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		10/13/23 08:50	10/13/23 19:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*146*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 19:00*	*1*
o-Terphenyl	*130*		*70 - 130*	*10/13/23 08:50*	*10/13/23 19:00*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**114**		5.02	0.397	mg/Kg			10/17/23 16:38	1

Client Sample ID: S5-1-101123

Lab Sample ID: 880-34338-10
Matrix: Solid
Date Collected: 10/11/23 11:50
Date Received: 10/12/23 08:58

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		10/12/23 13:30	10/13/23 03:12	1
Toluene	<0.000454	U	0.00199	0.000454	mg/Kg		10/12/23 13:30	10/13/23 03:12	1
Ethylbenzene	<0.000563	U	0.00199	0.000563	mg/Kg		10/12/23 13:30	10/13/23 03:12	1
m-Xylene & p-Xylene	<0.00101	U	0.00398	0.00101	mg/Kg		10/12/23 13:30	10/13/23 03:12	1
o-Xylene	<0.000343	U	0.00199	0.000343	mg/Kg		10/12/23 13:30	10/13/23 03:12	1
Xylenes, Total	<0.00101	U	0.00398	0.00101	mg/Kg		10/12/23 13:30	10/13/23 03:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*10/12/23 13:30*	*10/13/23 03:12*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*10/12/23 13:30*	*10/13/23 03:12*	*1*

Client Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Client Sample ID: S5-1-101123

Lab Sample ID: 880-34338-10
Matrix: Solid
Date Collected: 10/11/23 11:50
Date Received: 10/12/23 08:58

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00398	0.00101	mg/Kg			10/13/23 03:12	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**68.9**		49.6	14.9	mg/Kg			10/13/23 19:21	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**46.5**	**J *1**	49.6	14.9	mg/Kg		10/13/23 08:50	10/13/23 19:21	1
Diesel Range Organics (Over C10-C28)	**22.4**	**J B *1**	49.6	14.9	mg/Kg		10/13/23 08:50	10/13/23 19:21	1
OII Range Organics (Over C28-C36)	<14.9	U	49.6	14.9	mg/Kg		10/13/23 08:50	10/13/23 19:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*167*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 19:21*	*1*
o-Terphenyl	*156*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 19:21*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**385**		5.00	0.395	mg/Kg			10/13/23 19:02	1

Client Sample ID: S5-2-101123

Lab Sample ID: 880-34338-11
Matrix: Solid
Date Collected: 10/11/23 12:00
Date Received: 10/12/23 08:58

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000388	U	0.00202	0.000388	mg/Kg		10/12/23 13:30	10/13/23 05:02	1
Toluene	<0.000460	U	0.00202	0.000460	mg/Kg		10/12/23 13:30	10/13/23 05:02	1
Ethylbenzene	<0.000570	U	0.00202	0.000570	mg/Kg		10/12/23 13:30	10/13/23 05:02	1
m-Xylene & p-Xylene	<0.00102	U	0.00403	0.00102	mg/Kg		10/12/23 13:30	10/13/23 05:02	1
o-Xylene	<0.000347	U	0.00202	0.000347	mg/Kg		10/12/23 13:30	10/13/23 05:02	1
Xylenes, Total	<0.00102	U	0.00403	0.00102	mg/Kg		10/12/23 13:30	10/13/23 05:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*10/12/23 13:30*	*10/13/23 05:02*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*10/12/23 13:30*	*10/13/23 05:02*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00102	U	0.00403	0.00102	mg/Kg			10/13/23 05:02	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**47.8**	**J**	50.2	15.0	mg/Kg			10/13/23 19:43	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**25.0**	**J *1**	50.2	15.0	mg/Kg		10/13/23 08:50	10/13/23 19:43	1
Diesel Range Organics (Over C10-C28)	**22.8**	**J B *1**	50.2	15.0	mg/Kg		10/13/23 08:50	10/13/23 19:43	1

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Client Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Client Sample ID: S5-2-101123
Date Collected: 10/11/23 12:00
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-11
Matrix: Solid

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<15.0	U	50.2	15.0	mg/Kg		10/13/23 08:50	10/13/23 19:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*146*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 19:43*	*1*
o-Terphenyl	*132*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 19:43*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**305**		4.95	0.391	mg/Kg			10/13/23 19:07	1

Client Sample ID: S6-1-101023
Date Collected: 10/10/23 15:50
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-12
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		10/12/23 13:30	10/13/23 05:22	1
Toluene	<0.000453	U	0.00199	0.000453	mg/Kg		10/12/23 13:30	10/13/23 05:22	1
Ethylbenzene	<0.000562	U	0.00199	0.000562	mg/Kg		10/12/23 13:30	10/13/23 05:22	1
m-Xylene & p-Xylene	<0.00100	U	0.00398	0.00100	mg/Kg		10/12/23 13:30	10/13/23 05:22	1
o-Xylene	<0.000342	U	0.00199	0.000342	mg/Kg		10/12/23 13:30	10/13/23 05:22	1
Xylenes, Total	<0.00100	U	0.00398	0.00100	mg/Kg		10/12/23 13:30	10/13/23 05:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*10/12/23 13:30*	*10/13/23 05:22*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*10/12/23 13:30*	*10/13/23 05:22*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00398	0.00100	mg/Kg			10/13/23 05:22	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**37.3**	**J**	50.5	15.1	mg/Kg			10/13/23 20:03	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**21.0**	**J *1**	50.5	15.1	mg/Kg		10/13/23 08:50	10/13/23 20:03	1
Diesel Range Organics (Over C10-C28)	**16.3**	**J B *1**	50.5	15.1	mg/Kg		10/13/23 08:50	10/13/23 20:03	1
OII Range Organics (Over C28-C36)	<15.1	U	50.5	15.1	mg/Kg		10/13/23 08:50	10/13/23 20:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*156*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 20:03*	*1*
o-Terphenyl	*139*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 20:03*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**203**		5.00	0.395	mg/Kg			10/13/23 19:12	1

Client Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Client Sample ID: S6-2-101023

Lab Sample ID: 880-34338-13
Matrix: Solid
Date Collected: 10/10/23 16:00
Date Received: 10/12/23 08:58

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000381	U	0.00198	0.000381	mg/Kg		10/12/23 13:30	10/13/23 05:43	1
Toluene	**0.000479**	**J**	0.00198	0.000451	mg/Kg		10/12/23 13:30	10/13/23 05:43	1
Ethylbenzene	<0.000559	U	0.00198	0.000559	mg/Kg		10/12/23 13:30	10/13/23 05:43	1
m-Xylene & p-Xylene	<0.00100	U	0.00396	0.00100	mg/Kg		10/12/23 13:30	10/13/23 05:43	1
o-Xylene	<0.000341	U	0.00198	0.000341	mg/Kg		10/12/23 13:30	10/13/23 05:43	1
Xylenes, Total	<0.00100	U	0.00396	0.00100	mg/Kg		10/12/23 13:30	10/13/23 05:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*10/12/23 13:30*	*10/13/23 05:43*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*10/12/23 13:30*	*10/13/23 05:43*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00396	0.00100	mg/Kg			10/13/23 05:43	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**44.8**	**J**	50.5	15.2	mg/Kg			10/13/23 20:24	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**24.8**	**J *1**	50.5	15.2	mg/Kg		10/13/23 08:50	10/13/23 20:24	1
Diesel Range Organics (Over C10-C28)	**20.0**	**J B *1**	50.5	15.2	mg/Kg		10/13/23 08:50	10/13/23 20:24	1
OII Range Organics (Over C28-C36)	<15.2	U	50.5	15.2	mg/Kg		10/13/23 08:50	10/13/23 20:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*157*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 20:24*	*1*
o-Terphenyl	*146*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 20:24*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**466**	**F1**	5.00	0.395	mg/Kg			10/13/23 19:17	1

Client Sample ID: S7-1-101123

Lab Sample ID: 880-34338-14
Matrix: Solid
Date Collected: 10/11/23 12:40
Date Received: 10/12/23 08:58

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000389	U	0.00202	0.000389	mg/Kg		10/12/23 13:30	10/13/23 06:03	1
Toluene	<0.000461	U	0.00202	0.000461	mg/Kg		10/12/23 13:30	10/13/23 06:03	1
Ethylbenzene	<0.000571	U	0.00202	0.000571	mg/Kg		10/12/23 13:30	10/13/23 06:03	1
m-Xylene & p-Xylene	<0.00102	U	0.00404	0.00102	mg/Kg		10/12/23 13:30	10/13/23 06:03	1
o-Xylene	**0.000394**	**J**	0.00202	0.000347	mg/Kg		10/12/23 13:30	10/13/23 06:03	1
Xylenes, Total	<0.00102	U	0.00404	0.00102	mg/Kg		10/12/23 13:30	10/13/23 06:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*10/12/23 13:30*	*10/13/23 06:03*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*10/12/23 13:30*	*10/13/23 06:03*	*1*

Client Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Client Sample ID: S7-1-101123

Lab Sample ID: 880-34338-14
Matrix: Solid
Date Collected: 10/11/23 12:40
Date Received: 10/12/23 08:58

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00102	U	0.00404	0.00102	mg/Kg			10/13/23 06:03	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**25.4**	**J**	49.9	15.0	mg/Kg			10/13/23 20:45	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**25.4**	**J *1**	49.9	15.0	mg/Kg		10/13/23 08:50	10/13/23 20:45	1
Diesel Range Organics (Over C10-C28)	<15.0	U *1	49.9	15.0	mg/Kg		10/13/23 08:50	10/13/23 20:45	1
OII Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		10/13/23 08:50	10/13/23 20:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*159*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 20:45*	*1*
o-Terphenyl	*150*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 20:45*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**88.1**		4.99	0.394	mg/Kg			10/13/23 19:33	1

Client Sample ID: S7-2-101123

Lab Sample ID: 880-34338-15
Matrix: Solid
Date Collected: 10/11/23 12:50
Date Received: 10/12/23 08:58

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000387	U	0.00201	0.000387	mg/Kg		10/12/23 13:30	10/13/23 06:24	1
Toluene	<0.000459	U	0.00201	0.000459	mg/Kg		10/12/23 13:30	10/13/23 06:24	1
Ethylbenzene	<0.000568	U	0.00201	0.000568	mg/Kg		10/12/23 13:30	10/13/23 06:24	1
m-Xylene & p-Xylene	<0.00102	U	0.00402	0.00102	mg/Kg		10/12/23 13:30	10/13/23 06:24	1
o-Xylene	<0.000346	U	0.00201	0.000346	mg/Kg		10/12/23 13:30	10/13/23 06:24	1
Xylenes, Total	<0.00102	U	0.00402	0.00102	mg/Kg		10/12/23 13:30	10/13/23 06:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*10/12/23 13:30*	*10/13/23 06:24*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*10/12/23 13:30*	*10/13/23 06:24*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00102	U	0.00402	0.00102	mg/Kg			10/13/23 06:24	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**36.3**	**J**	50.1	15.0	mg/Kg			10/13/23 21:07	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**18.5**	**J *1**	50.1	15.0	mg/Kg		10/13/23 08:50	10/13/23 21:07	1
Diesel Range Organics (Over C10-C28)	**17.8**	**J B *1**	50.1	15.0	mg/Kg		10/13/23 08:50	10/13/23 21:07	1

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Client Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Client Sample ID: S7-2-101123

Lab Sample ID: 880-34338-15

Date Collected: 10/11/23 12:50
Matrix: Solid
Date Received: 10/12/23 08:58

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<15.0	U	50.1	15.0	mg/Kg		10/13/23 08:50	10/13/23 21:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*154*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 21:07*	*1*
o-Terphenyl	*144*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 21:07*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**92.7**		5.01	0.396	mg/Kg			10/13/23 19:38	1

Client Sample ID: S8-1-101123

Lab Sample ID: 880-34338-16

Date Collected: 10/11/23 14:00
Matrix: Solid
Date Received: 10/12/23 08:58

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000384	U	0.00200	0.000384	mg/Kg		10/12/23 13:30	10/13/23 06:44	1
Toluene	<0.000455	U	0.00200	0.000455	mg/Kg		10/12/23 13:30	10/13/23 06:44	1
Ethylbenzene	<0.000564	U	0.00200	0.000564	mg/Kg		10/12/23 13:30	10/13/23 06:44	1
m-Xylene & p-Xylene	<0.00101	U	0.00399	0.00101	mg/Kg		10/12/23 13:30	10/13/23 06:44	1
o-Xylene	<0.000343	U	0.00200	0.000343	mg/Kg		10/12/23 13:30	10/13/23 06:44	1
Xylenes, Total	<0.00101	U	0.00399	0.00101	mg/Kg		10/12/23 13:30	10/13/23 06:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*10/12/23 13:30*	*10/13/23 06:44*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*10/12/23 13:30*	*10/13/23 06:44*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00399	0.00101	mg/Kg			10/13/23 06:44	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**46.6**	**J**	50.0	15.0	mg/Kg			10/13/23 21:28	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**23.3**	**J *1**	50.0	15.0	mg/Kg		10/13/23 08:50	10/13/23 21:28	1
Diesel Range Organics (Over C10-C28)	**23.3**	**J B *1**	50.0	15.0	mg/Kg		10/13/23 08:50	10/13/23 21:28	1
OII Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		10/13/23 08:50	10/13/23 21:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*148*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 21:28*	*1*
o-Terphenyl	*137*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 21:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**110**		4.95	0.391	mg/Kg			10/13/23 19:53	1

Client Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Client Sample ID: S8-2-101123

Lab Sample ID: 880-34338-17
Matrix: Solid
Date Collected: 10/11/23 14:10
Date Received: 10/12/23 08:58

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000382	U	0.00198	0.000382	mg/Kg		10/12/23 13:30	10/13/23 07:05	1
Toluene	<0.000452	U	0.00198	0.000452	mg/Kg		10/12/23 13:30	10/13/23 07:05	1
Ethylbenzene	<0.000561	U	0.00198	0.000561	mg/Kg		10/12/23 13:30	10/13/23 07:05	1
m-Xylene & p-Xylene	<0.00100	U	0.00397	0.00100	mg/Kg		10/12/23 13:30	10/13/23 07:05	1
o-Xylene	**0.000402**	**J**	0.00198	0.000341	mg/Kg		10/12/23 13:30	10/13/23 07:05	1
Xylenes, Total	<0.00100	U	0.00397	0.00100	mg/Kg		10/12/23 13:30	10/13/23 07:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*10/12/23 13:30*	*10/13/23 07:05*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*10/12/23 13:30*	*10/13/23 07:05*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00397	0.00100	mg/Kg			10/13/23 07:05	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**39.7**	**J**	49.6	14.9	mg/Kg			10/13/23 21:49	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**22.8**	**J *1**	49.6	14.9	mg/Kg		10/13/23 08:50	10/13/23 21:49	1
Diesel Range Organics (Over C10-C28)	**16.9**	**J B *1**	49.6	14.9	mg/Kg		10/13/23 08:50	10/13/23 21:49	1
OII Range Organics (Over C28-C36)	<14.9	U	49.6	14.9	mg/Kg		10/13/23 08:50	10/13/23 21:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*166*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 21:49*	*1*
o-Terphenyl	*155*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 21:49*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**116**		5.00	0.395	mg/Kg			10/17/23 16:43	1

Client Sample ID: S8-3-101123

Lab Sample ID: 880-34338-18
Matrix: Solid
Date Collected: 10/11/23 14:20
Date Received: 10/12/23 08:58

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		10/12/23 13:30	10/13/23 07:25	1
Toluene	<0.000453	U	0.00199	0.000453	mg/Kg		10/12/23 13:30	10/13/23 07:25	1
Ethylbenzene	<0.000562	U	0.00199	0.000562	mg/Kg		10/12/23 13:30	10/13/23 07:25	1
m-Xylene & p-Xylene	<0.00100	U	0.00398	0.00100	mg/Kg		10/12/23 13:30	10/13/23 07:25	1
o-Xylene	<0.000342	U	0.00199	0.000342	mg/Kg		10/12/23 13:30	10/13/23 07:25	1
Xylenes, Total	<0.00100	U	0.00398	0.00100	mg/Kg		10/12/23 13:30	10/13/23 07:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*10/12/23 13:30*	*10/13/23 07:25*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*10/12/23 13:30*	*10/13/23 07:25*	*1*

Client Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Client Sample ID: S8-3-101123
Date Collected: 10/11/23 14:20
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-18
Matrix: Solid

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00398	0.00100	mg/Kg			10/13/23 07:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**18.7**	**J**	50.1	15.0	mg/Kg			10/13/23 22:31	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**18.7**	**J *1**	50.1	15.0	mg/Kg		10/13/23 08:50	10/13/23 22:31	1
Diesel Range Organics (Over C10-C28)	<15.0	U *1	50.1	15.0	mg/Kg		10/13/23 08:50	10/13/23 22:31	1
OII Range Organics (Over C28-C36)	<15.0	U	50.1	15.0	mg/Kg		10/13/23 08:50	10/13/23 22:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*162*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 22:31*	*1*
o-Terphenyl	*151*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 22:31*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**87.7**		4.96	0.392	mg/Kg			10/17/23 16:49	1

Client Sample ID: S8-4-101123
Date Collected: 10/11/23 14:30
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-19
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000381	U	0.00198	0.000381	mg/Kg		10/12/23 13:30	10/13/23 07:46	1
Toluene	<0.000451	U	0.00198	0.000451	mg/Kg		10/12/23 13:30	10/13/23 07:46	1
Ethylbenzene	<0.000559	U	0.00198	0.000559	mg/Kg		10/12/23 13:30	10/13/23 07:46	1
m-Xylene & p-Xylene	<0.00100	U	0.00396	0.00100	mg/Kg		10/12/23 13:30	10/13/23 07:46	1
o-Xylene	<0.000341	U	0.00198	0.000341	mg/Kg		10/12/23 13:30	10/13/23 07:46	1
Xylenes, Total	<0.00100	U	0.00396	0.00100	mg/Kg		10/12/23 13:30	10/13/23 07:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*10/12/23 13:30*	*10/13/23 07:46*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*10/12/23 13:30*	*10/13/23 07:46*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00396	0.00100	mg/Kg			10/13/23 07:46	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**56.6**		50.5	15.1	mg/Kg			10/13/23 22:51	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**36.8**	**J *1**	50.5	15.1	mg/Kg		10/13/23 08:50	10/13/23 22:51	1
Diesel Range Organics (Over C10-C28)	**19.8**	**J B *1**	50.5	15.1	mg/Kg		10/13/23 08:50	10/13/23 22:51	1

Eurofins Midland

Client Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Client Sample ID: S8-4-101123

Date Collected: 10/11/23 14:30
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-19

Matrix: Solid

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<15.1	U	50.5	15.1	mg/Kg		10/13/23 08:50	10/13/23 22:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*155*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 22:51*	*1*
o-Terphenyl	*144*	*S1+*	*70 - 130*	*10/13/23 08:50*	*10/13/23 22:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**102**		4.99	0.394	mg/Kg			10/17/23 16:55	1

Surrogate Summary

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-34338-1	S1-1-101123	90	102
880-34338-1 MS	S1-1-101123	98	96
880-34338-1 MSD	S1-1-101123	105	101
880-34338-2	S1-2-101123	115	106
880-34338-3	S1-3-101123	105	105
880-34338-4	S2-1-101123	103	114
880-34338-5	S2-2-101023	109	107
880-34338-6	S3-1-101023	114	107
880-34338-7	S3-2-101123	100	105
880-34338-8	S4-1-101123	111	113
880-34338-9	S4-2-101123	117	106
880-34338-10	S5-1-101123	108	105
880-34338-11	S5-2-101123	91	98
880-34338-12	S6-1-101023	99	98
880-34338-13	S6-2-101023	116	104
880-34338-14	S7-1-101123	112	103
880-34338-15	S7-2-101123	112	112
880-34338-16	S8-1-101123	106	101
880-34338-17	S8-2-101123	106	104
880-34338-18	S8-3-101123	100	105
880-34338-19	S8-4-101123	110	106
LCS 880-64563/1-A	Lab Control Sample	100	109
LCSD 880-64563/2-A	Lab Control Sample Dup	111	104
MB 880-64507/5-A	Method Blank	111	123
MB 880-64563/5-A	Method Blank	118	138 S1+

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-34338-1	S1-1-101123	143 S1+	138 S1+
880-34338-2	S1-2-101123	157 S1+	151 S1+
880-34338-3	S1-3-101123	165 S1+	153 S1+
880-34338-4	S2-1-101123	150 S1+	145 S1+
880-34338-5	S2-2-101023	166 S1+	156 S1+
880-34338-6	S3-1-101023	145 S1+	138 S1+
880-34338-7	S3-2-101123	160 S1+	156 S1+
880-34338-8	S4-1-101123	143 S1+	134 S1+
880-34338-8 MS	S4-1-101123	156 S1+	130
880-34338-8 MSD	S4-1-101123	150 S1+	124
880-34338-9	S4-2-101123	146 S1+	130
880-34338-10	S5-1-101123	167 S1+	156 S1+
880-34338-11	S5-2-101123	146 S1+	132 S1+
880-34338-12	S6-1-101023	156 S1+	139 S1+

Surrogate Summary

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits) 1CO1 (70-130)	OTPH1 (70-130)
880-34338-13	S6-2-101023	157 S1+	146 S1+
880-34338-14	S7-1-101123	159 S1+	150 S1+
880-34338-15	S7-2-101123	154 S1+	144 S1+
880-34338-16	S8-1-101123	148 S1+	137 S1+
880-34338-17	S8-2-101123	166 S1+	155 S1+
880-34338-18	S8-3-101123	162 S1+	151 S1+
880-34338-19	S8-4-101123	155 S1+	144 S1+
LCS 880-64532/2-A	Lab Control Sample	117	136 S1+
LCS 880-64562/2-A	Lab Control Sample	142 S1+	163 S1+
LCS 880-64629/2-A	Lab Control Sample	103	115
LCSD 880-64532/3-A	Lab Control Sample Dup	82	88
LCSD 880-64562/3-A	Lab Control Sample Dup	161 S1+	173 S1+
LCSD 880-64629/3-A	Lab Control Sample Dup	105	107
MB 880-64532/1-A	Method Blank	196 S1+	182 S1+
MB 880-64562/1-A	Method Blank	210 S1+	209 S1+
MB 880-64629/1-A	Method Blank	147 S1+	134 S1+

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-64507/5-A
Matrix: Solid
Analysis Batch: 64524

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64507

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		10/11/23 16:59	10/12/23 12:01	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		10/11/23 16:59	10/12/23 12:01	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		10/11/23 16:59	10/12/23 12:01	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		10/11/23 16:59	10/12/23 12:01	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		10/11/23 16:59	10/12/23 12:01	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		10/11/23 16:59	10/12/23 12:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*10/11/23 16:59*	*10/12/23 12:01*	*1*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*	*10/11/23 16:59*	*10/12/23 12:01*	*1*

Lab Sample ID: MB 880-64563/5-A
Matrix: Solid
Analysis Batch: 64524

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64563

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		10/12/23 13:30	10/12/23 23:39	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		10/12/23 13:30	10/12/23 23:39	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		10/12/23 13:30	10/12/23 23:39	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		10/12/23 13:30	10/12/23 23:39	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		10/12/23 13:30	10/12/23 23:39	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		10/12/23 13:30	10/12/23 23:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*10/12/23 13:30*	*10/12/23 23:39*	*1*
1,4-Difluorobenzene (Surr)	*138*	*S1+*	*70 - 130*	*10/12/23 13:30*	*10/12/23 23:39*	*1*

Lab Sample ID: LCS 880-64563/1-A
Matrix: Solid
Analysis Batch: 64524

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 64563

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1066		mg/Kg		107	70 - 130
Toluene	0.100	0.09335		mg/Kg		93	70 - 130
Ethylbenzene	0.100	0.08896		mg/Kg		89	70 - 130
m-Xylene & p-Xylene	0.200	0.1947		mg/Kg		97	70 - 130
o-Xylene	0.100	0.09431		mg/Kg		94	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: LCSD 880-64563/2-A
Matrix: Solid
Analysis Batch: 64524

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 64563

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1091		mg/Kg		109	70 - 130	2	35

QC Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

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

Lab Sample ID: LCSD 880-64563/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 64524 — **Prep Batch: 64563**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09063		mg/Kg		91	70 - 130	3	35
Ethylbenzene			0.100	0.09204		mg/Kg		92	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.2139		mg/Kg		107	70 - 130	9	35
o-Xylene			0.100	0.1049		mg/Kg		105	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 880-34338-1 MS — **Client Sample ID: S1-1-101123**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 64524 — **Prep Batch: 64563**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.000383	U	0.0996	0.09090		mg/Kg		91	70 - 130
Toluene	<0.000454	U	0.0996	0.08339		mg/Kg		84	70 - 130
Ethylbenzene	<0.000563	U	0.0996	0.07473		mg/Kg		75	70 - 130
m-Xylene & p-Xylene	<0.00101	U	0.199	0.1756		mg/Kg		88	70 - 130
o-Xylene	<0.000343	U	0.0996	0.08800		mg/Kg		88	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: 880-34338-1 MSD — **Client Sample ID: S1-1-101123**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 64524 — **Prep Batch: 64563**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.000383	U	0.100	0.1059		mg/Kg		106	70 - 130	15	35
Toluene	<0.000454	U	0.100	0.08479		mg/Kg		85	70 - 130	2	35
Ethylbenzene	<0.000563	U	0.100	0.08333		mg/Kg		83	70 - 130	11	35
m-Xylene & p-Xylene	<0.00101	U	0.200	0.1922		mg/Kg		96	70 - 130	9	35
o-Xylene	<0.000343	U	0.100	0.09429		mg/Kg		94	70 - 130	7	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

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

Lab Sample ID: MB 880-64532/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 64515 — **Prep Batch: 64532**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		10/12/23 08:00	10/12/23 08:09	1

QC Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

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

Lab Sample ID: MB 880-64532/1-A
Matrix: Solid
Analysis Batch: 64515

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64532

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<15.0	U	50.0	15.0	mg/Kg		10/12/23 08:00	10/12/23 08:09	1
OII Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		10/12/23 08:00	10/12/23 08:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*196*	*S1+*	*70 - 130*	*10/12/23 08:00*	*10/12/23 08:09*	*1*
o-Terphenyl	*182*	*S1+*	*70 - 130*	*10/12/23 08:00*	*10/12/23 08:09*	*1*

Lab Sample ID: LCS 880-64532/2-A
Matrix: Solid
Analysis Batch: 64515

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 64532

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	843.0		mg/Kg		84	70 - 130
Diesel Range Organics (Over C10-C28)	1000	878.5		mg/Kg		88	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*117*		*70 - 130*
o-Terphenyl	*136*	*S1+*	*70 - 130*

Lab Sample ID: LCSD 880-64532/3-A
Matrix: Solid
Analysis Batch: 64515

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 64532

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	798.2		mg/Kg		80	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	1000	772.7		mg/Kg		77	70 - 130	13	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*82*		*70 - 130*
o-Terphenyl	*88*		*70 - 130*

Lab Sample ID: MB 880-64562/1-A
Matrix: Solid
Analysis Batch: 64515

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64562

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		10/12/23 13:28	10/12/23 19:45	1
Diesel Range Organics (Over C10-C28)	<15.0	U	50.0	15.0	mg/Kg		10/12/23 13:28	10/12/23 19:45	1
OII Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		10/12/23 13:28	10/12/23 19:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*210*	*S1+*	*70 - 130*	*10/12/23 13:28*	*10/12/23 19:45*	*1*

QC Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

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

Lab Sample ID: MB 880-64562/1-A
Matrix: Solid
Analysis Batch: 64515

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64562

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	209	S1+	70 - 130	10/12/23 13:28	10/12/23 19:45	1

Lab Sample ID: LCS 880-64562/2-A
Matrix: Solid
Analysis Batch: 64515

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 64562

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1015		mg/Kg		102	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1103		mg/Kg		110	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	142	S1+	70 - 130
o-Terphenyl	163	S1+	70 - 130

Lab Sample ID: LCSD 880-64562/3-A
Matrix: Solid
Analysis Batch: 64515

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 64562

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	750.3	*1	mg/Kg		75	70 - 130	30	20
Diesel Range Organics (Over C10-C28)	1000	567.5	*- *1	mg/Kg		57	70 - 130	64	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	161	S1+	70 - 130
o-Terphenyl	173	S1+	70 - 130

Lab Sample ID: MB 880-64629/1-A
Matrix: Solid
Analysis Batch: 64616

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64629

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		10/13/23 07:30	10/13/23 09:29	1
Diesel Range Organics (Over C10-C28)	24.42	J	50.0	15.0	mg/Kg		10/13/23 07:30	10/13/23 09:29	1
OII Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		10/13/23 07:30	10/13/23 09:29	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	147	S1+	70 - 130	10/13/23 07:30	10/13/23 09:29	1
o-Terphenyl	134	S1+	70 - 130	10/13/23 07:30	10/13/23 09:29	1

QC Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

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

Lab Sample ID: LCS 880-64629/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 64616 — **Prep Batch: 64629**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	789.5		mg/Kg		79	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	743.9		mg/Kg		74	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*103*		*70 - 130*
o-Terphenyl	*115*		*70 - 130*

Lab Sample ID: LCSD 880-64629/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 64616 — **Prep Batch: 64629**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1145	*1	mg/Kg		114	70 - 130	37	20
Diesel Range Organics (Over C10-C28)			1000	1132	*1	mg/Kg		113	70 - 130	41	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*107*		*70 - 130*

Lab Sample ID: 880-34338-8 MS — **Client Sample ID: S4-1-101123**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 64616 — **Prep Batch: 64629**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<14.9	U *1	1010	1084		mg/Kg		108	70 - 130		
Diesel Range Organics (Over C10-C28)	17.6	J F1 B *1	1010	1568	F1	mg/Kg		154	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*156*	*S1+*	*70 - 130*
o-Terphenyl	*130*		*70 - 130*

Lab Sample ID: 880-34338-8 MSD — **Client Sample ID: S4-1-101123**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 64616 — **Prep Batch: 64629**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<14.9	U *1	1010	1069		mg/Kg		106	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	17.6	J F1 B *1	1010	1493	F1	mg/Kg		147	70 - 130	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*150*	*S1+*	*70 - 130*

QC Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

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

Lab Sample ID: 880-34338-8 MSD
Matrix: Solid
Analysis Batch: 64616

Client Sample ID: S4-1-101123
Prep Type: Total/NA
Prep Batch: 64629

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	124		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-64571/1-A
Matrix: Solid
Analysis Batch: 64698

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.395	U	5.00	0.395	mg/Kg			10/13/23 17:23	1

Lab Sample ID: LCS 880-64571/2-A
Matrix: Solid
Analysis Batch: 64698

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	233.3		mg/Kg		93	90 - 110		

Lab Sample ID: LCSD 880-64571/3-A
Matrix: Solid
Analysis Batch: 64698

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	233.6		mg/Kg		93	90 - 110	0	20

Lab Sample ID: 880-34338-13 MS
Matrix: Solid
Analysis Batch: 64698

Client Sample ID: S6-2-101023
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	466	F1	250	685.6	F1	mg/Kg		88	90 - 110		

Lab Sample ID: 880-34338-13 MSD
Matrix: Solid
Analysis Batch: 64698

Client Sample ID: S6-2-101023
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	466	F1	250	682.7	F1	mg/Kg		87	90 - 110	0	20

Lab Sample ID: MB 880-64572/1-A
Matrix: Solid
Analysis Batch: 64702

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.395	U	5.00	0.395	mg/Kg			10/17/23 14:05	1

QC Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-64572/2-A
Matrix: Solid
Analysis Batch: 64702

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	247.1		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-64572/3-A
Matrix: Solid
Analysis Batch: 64702

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	247.7		mg/Kg		99	90 - 110	0	20

Lab Sample ID: 880-34338-3 MS
Matrix: Solid
Analysis Batch: 64702

Client Sample ID: S1-3-101123
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	108		249	351.7		mg/Kg		98	90 - 110		

Lab Sample ID: 880-34338-3 MSD
Matrix: Solid
Analysis Batch: 64702

Client Sample ID: S1-3-101123
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	108		249	351.8		mg/Kg		98	90 - 110	0	20

QC Association Summary

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

GC VOA

Prep Batch: 64507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-64507/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 64524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34338-1	S1-1-101123	Total/NA	Solid	8021B	64563
880-34338-2	S1-2-101123	Total/NA	Solid	8021B	64563
880-34338-3	S1-3-101123	Total/NA	Solid	8021B	64563
880-34338-4	S2-1-101123	Total/NA	Solid	8021B	64563
880-34338-5	S2-2-101023	Total/NA	Solid	8021B	64563
880-34338-6	S3-1-101023	Total/NA	Solid	8021B	64563
880-34338-7	S3-2-101123	Total/NA	Solid	8021B	64563
880-34338-8	S4-1-101123	Total/NA	Solid	8021B	64563
880-34338-9	S4-2-101123	Total/NA	Solid	8021B	64563
880-34338-10	S5-1-101123	Total/NA	Solid	8021B	64563
880-34338-11	S5-2-101123	Total/NA	Solid	8021B	64563
880-34338-12	S6-1-101023	Total/NA	Solid	8021B	64563
880-34338-13	S6-2-101023	Total/NA	Solid	8021B	64563
880-34338-14	S7-1-101123	Total/NA	Solid	8021B	64563
880-34338-15	S7-2-101123	Total/NA	Solid	8021B	64563
880-34338-16	S8-1-101123	Total/NA	Solid	8021B	64563
880-34338-17	S8-2-101123	Total/NA	Solid	8021B	64563
880-34338-18	S8-3-101123	Total/NA	Solid	8021B	64563
880-34338-19	S8-4-101123	Total/NA	Solid	8021B	64563
MB 880-64507/5-A	Method Blank	Total/NA	Solid	8021B	64507
MB 880-64563/5-A	Method Blank	Total/NA	Solid	8021B	64563
LCS 880-64563/1-A	Lab Control Sample	Total/NA	Solid	8021B	64563
LCSD 880-64563/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	64563
880-34338-1 MS	S1-1-101123	Total/NA	Solid	8021B	64563
880-34338-1 MSD	S1-1-101123	Total/NA	Solid	8021B	64563

Prep Batch: 64563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34338-1	S1-1-101123	Total/NA	Solid	5030B	
880-34338-2	S1-2-101123	Total/NA	Solid	5030B	
880-34338-3	S1-3-101123	Total/NA	Solid	5030B	
880-34338-4	S2-1-101123	Total/NA	Solid	5030B	
880-34338-5	S2-2-101023	Total/NA	Solid	5030B	
880-34338-6	S3-1-101023	Total/NA	Solid	5030B	
880-34338-7	S3-2-101123	Total/NA	Solid	5030B	
880-34338-8	S4-1-101123	Total/NA	Solid	5030B	
880-34338-9	S4-2-101123	Total/NA	Solid	5030B	
880-34338-10	S5-1-101123	Total/NA	Solid	5030B	
880-34338-11	S5-2-101123	Total/NA	Solid	5030B	
880-34338-12	S6-1-101023	Total/NA	Solid	5030B	
880-34338-13	S6-2-101023	Total/NA	Solid	5030B	
880-34338-14	S7-1-101123	Total/NA	Solid	5030B	
880-34338-15	S7-2-101123	Total/NA	Solid	5030B	
880-34338-16	S8-1-101123	Total/NA	Solid	5030B	
880-34338-17	S8-2-101123	Total/NA	Solid	5030B	
880-34338-18	S8-3-101123	Total/NA	Solid	5030B	
880-34338-19	S8-4-101123	Total/NA	Solid	5030B	

QC Association Summary

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

GC VOA (Continued)

Prep Batch: 64563 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-64563/5-A	Method Blank	Total/NA	Solid	5030B	
LCS 880-64563/1-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 880-64563/2-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
880-34338-1 MS	S1-1-101123	Total/NA	Solid	5030B	
880-34338-1 MSD	S1-1-101123	Total/NA	Solid	5030B	

Analysis Batch: 64673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34338-1	S1-1-101123	Total/NA	Solid	Total BTEX	
880-34338-2	S1-2-101123	Total/NA	Solid	Total BTEX	
880-34338-3	S1-3-101123	Total/NA	Solid	Total BTEX	
880-34338-4	S2-1-101123	Total/NA	Solid	Total BTEX	
880-34338-5	S2-2-101023	Total/NA	Solid	Total BTEX	
880-34338-6	S3-1-101023	Total/NA	Solid	Total BTEX	
880-34338-7	S3-2-101123	Total/NA	Solid	Total BTEX	
880-34338-8	S4-1-101123	Total/NA	Solid	Total BTEX	
880-34338-9	S4-2-101123	Total/NA	Solid	Total BTEX	
880-34338-10	S5-1-101123	Total/NA	Solid	Total BTEX	
880-34338-11	S5-2-101123	Total/NA	Solid	Total BTEX	
880-34338-12	S6-1-101023	Total/NA	Solid	Total BTEX	
880-34338-13	S6-2-101023	Total/NA	Solid	Total BTEX	
880-34338-14	S7-1-101123	Total/NA	Solid	Total BTEX	
880-34338-15	S7-2-101123	Total/NA	Solid	Total BTEX	
880-34338-16	S8-1-101123	Total/NA	Solid	Total BTEX	
880-34338-17	S8-2-101123	Total/NA	Solid	Total BTEX	
880-34338-18	S8-3-101123	Total/NA	Solid	Total BTEX	
880-34338-19	S8-4-101123	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 64515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34338-1	S1-1-101123	Total/NA	Solid	8015B NM	64532
880-34338-2	S1-2-101123	Total/NA	Solid	8015B NM	64562
880-34338-3	S1-3-101123	Total/NA	Solid	8015B NM	64562
880-34338-4	S2-1-101123	Total/NA	Solid	8015B NM	64562
880-34338-5	S2-2-101023	Total/NA	Solid	8015B NM	64562
880-34338-6	S3-1-101023	Total/NA	Solid	8015B NM	64562
880-34338-7	S3-2-101123	Total/NA	Solid	8015B NM	64562
MB 880-64532/1-A	Method Blank	Total/NA	Solid	8015B NM	64532
MB 880-64562/1-A	Method Blank	Total/NA	Solid	8015B NM	64562
LCS 880-64532/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	64532
LCS 880-64562/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	64562
LCSD 880-64532/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	64532
LCSD 880-64562/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	64562

Prep Batch: 64532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34338-1	S1-1-101123	Total/NA	Solid	8015NM Prep	
MB 880-64532/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-64532/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

GC Semi VOA (Continued)

Prep Batch: 64532 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-64532/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Prep Batch: 64562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34338-2	S1-2-101123	Total/NA	Solid	8015NM Prep	
880-34338-3	S1-3-101123	Total/NA	Solid	8015NM Prep	
880-34338-4	S2-1-101123	Total/NA	Solid	8015NM Prep	
880-34338-5	S2-2-101023	Total/NA	Solid	8015NM Prep	
880-34338-6	S3-1-101023	Total/NA	Solid	8015NM Prep	
880-34338-7	S3-2-101123	Total/NA	Solid	8015NM Prep	
MB 880-64562/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-64562/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-64562/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 64616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34338-8	S4-1-101123	Total/NA	Solid	8015B NM	64629
880-34338-9	S4-2-101123	Total/NA	Solid	8015B NM	64629
880-34338-10	S5-1-101123	Total/NA	Solid	8015B NM	64629
880-34338-11	S5-2-101123	Total/NA	Solid	8015B NM	64629
880-34338-12	S6-1-101023	Total/NA	Solid	8015B NM	64629
880-34338-13	S6-2-101023	Total/NA	Solid	8015B NM	64629
880-34338-14	S7-1-101123	Total/NA	Solid	8015B NM	64629
880-34338-15	S7-2-101123	Total/NA	Solid	8015B NM	64629
880-34338-16	S8-1-101123	Total/NA	Solid	8015B NM	64629
880-34338-17	S8-2-101123	Total/NA	Solid	8015B NM	64629
880-34338-18	S8-3-101123	Total/NA	Solid	8015B NM	64629
880-34338-19	S8-4-101123	Total/NA	Solid	8015B NM	64629
MB 880-64629/1-A	Method Blank	Total/NA	Solid	8015B NM	64629
LCS 880-64629/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	64629
LCSD 880-64629/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	64629
880-34338-8 MS	S4-1-101123	Total/NA	Solid	8015B NM	64629
880-34338-8 MSD	S4-1-101123	Total/NA	Solid	8015B NM	64629

Prep Batch: 64629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34338-8	S4-1-101123	Total/NA	Solid	8015NM Prep	
880-34338-9	S4-2-101123	Total/NA	Solid	8015NM Prep	
880-34338-10	S5-1-101123	Total/NA	Solid	8015NM Prep	
880-34338-11	S5-2-101123	Total/NA	Solid	8015NM Prep	
880-34338-12	S6-1-101023	Total/NA	Solid	8015NM Prep	
880-34338-13	S6-2-101023	Total/NA	Solid	8015NM Prep	
880-34338-14	S7-1-101123	Total/NA	Solid	8015NM Prep	
880-34338-15	S7-2-101123	Total/NA	Solid	8015NM Prep	
880-34338-16	S8-1-101123	Total/NA	Solid	8015NM Prep	
880-34338-17	S8-2-101123	Total/NA	Solid	8015NM Prep	
880-34338-18	S8-3-101123	Total/NA	Solid	8015NM Prep	
880-34338-19	S8-4-101123	Total/NA	Solid	8015NM Prep	
MB 880-64629/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-64629/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-64629/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

GC Semi VOA (Continued)

Prep Batch: 64629 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34338-8 MS	S4-1-101123	Total/NA	Solid	8015NM Prep	
880-34338-8 MSD	S4-1-101123	Total/NA	Solid	8015NM Prep	

Analysis Batch: 64660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34338-1	S1-1-101123	Total/NA	Solid	8015 NM	
880-34338-2	S1-2-101123	Total/NA	Solid	8015 NM	
880-34338-3	S1-3-101123	Total/NA	Solid	8015 NM	
880-34338-4	S2-1-101123	Total/NA	Solid	8015 NM	
880-34338-5	S2-2-101023	Total/NA	Solid	8015 NM	
880-34338-6	S3-1-101023	Total/NA	Solid	8015 NM	
880-34338-7	S3-2-101123	Total/NA	Solid	8015 NM	
880-34338-8	S4-1-101123	Total/NA	Solid	8015 NM	
880-34338-9	S4-2-101123	Total/NA	Solid	8015 NM	
880-34338-10	S5-1-101123	Total/NA	Solid	8015 NM	
880-34338-11	S5-2-101123	Total/NA	Solid	8015 NM	
880-34338-12	S6-1-101023	Total/NA	Solid	8015 NM	
880-34338-13	S6-2-101023	Total/NA	Solid	8015 NM	
880-34338-14	S7-1-101123	Total/NA	Solid	8015 NM	
880-34338-15	S7-2-101123	Total/NA	Solid	8015 NM	
880-34338-16	S8-1-101123	Total/NA	Solid	8015 NM	
880-34338-17	S8-2-101123	Total/NA	Solid	8015 NM	
880-34338-18	S8-3-101123	Total/NA	Solid	8015 NM	
880-34338-19	S8-4-101123	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 64571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34338-10	S5-1-101123	Soluble	Solid	DI Leach	
880-34338-11	S5-2-101123	Soluble	Solid	DI Leach	
880-34338-12	S6-1-101023	Soluble	Solid	DI Leach	
880-34338-13	S6-2-101023	Soluble	Solid	DI Leach	
880-34338-14	S7-1-101123	Soluble	Solid	DI Leach	
880-34338-15	S7-2-101123	Soluble	Solid	DI Leach	
880-34338-16	S8-1-101123	Soluble	Solid	DI Leach	
MB 880-64571/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64571/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-64571/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-34338-13 MS	S6-2-101023	Soluble	Solid	DI Leach	
880-34338-13 MSD	S6-2-101023	Soluble	Solid	DI Leach	

Leach Batch: 64572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34338-1	S1-1-101123	Soluble	Solid	DI Leach	
880-34338-2	S1-2-101123	Soluble	Solid	DI Leach	
880-34338-3	S1-3-101123	Soluble	Solid	DI Leach	
880-34338-4	S2-1-101123	Soluble	Solid	DI Leach	
880-34338-5	S2-2-101023	Soluble	Solid	DI Leach	
880-34338-6	S3-1-101023	Soluble	Solid	DI Leach	
880-34338-7	S3-2-101123	Soluble	Solid	DI Leach	

QC Association Summary

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

HPLC/IC (Continued)

Leach Batch: 64572 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34338-8	S4-1-101123	Soluble	Solid	DI Leach	
880-34338-9	S4-2-101123	Soluble	Solid	DI Leach	
880-34338-17	S8-2-101123	Soluble	Solid	DI Leach	
880-34338-18	S8-3-101123	Soluble	Solid	DI Leach	
880-34338-19	S8-4-101123	Soluble	Solid	DI Leach	
MB 880-64572/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64572/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-64572/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-34338-3 MS	S1-3-101123	Soluble	Solid	DI Leach	
880-34338-3 MSD	S1-3-101123	Soluble	Solid	DI Leach	

Analysis Batch: 64698

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34338-10	S5-1-101123	Soluble	Solid	300.0	64571
880-34338-11	S5-2-101123	Soluble	Solid	300.0	64571
880-34338-12	S6-1-101023	Soluble	Solid	300.0	64571
880-34338-13	S6-2-101023	Soluble	Solid	300.0	64571
880-34338-14	S7-1-101123	Soluble	Solid	300.0	64571
880-34338-15	S7-2-101123	Soluble	Solid	300.0	64571
880-34338-16	S8-1-101123	Soluble	Solid	300.0	64571
MB 880-64571/1-A	Method Blank	Soluble	Solid	300.0	64571
LCS 880-64571/2-A	Lab Control Sample	Soluble	Solid	300.0	64571
LCSD 880-64571/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	64571
880-34338-13 MS	S6-2-101023	Soluble	Solid	300.0	64571
880-34338-13 MSD	S6-2-101023	Soluble	Solid	300.0	64571

Analysis Batch: 64702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34338-1	S1-1-101123	Soluble	Solid	300.0	64572
880-34338-2	S1-2-101123	Soluble	Solid	300.0	64572
880-34338-3	S1-3-101123	Soluble	Solid	300.0	64572
880-34338-4	S2-1-101123	Soluble	Solid	300.0	64572
880-34338-5	S2-2-101023	Soluble	Solid	300.0	64572
880-34338-6	S3-1-101023	Soluble	Solid	300.0	64572
880-34338-7	S3-2-101123	Soluble	Solid	300.0	64572
880-34338-8	S4-1-101123	Soluble	Solid	300.0	64572
880-34338-9	S4-2-101123	Soluble	Solid	300.0	64572
880-34338-17	S8-2-101123	Soluble	Solid	300.0	64572
880-34338-18	S8-3-101123	Soluble	Solid	300.0	64572
880-34338-19	S8-4-101123	Soluble	Solid	300.0	64572
MB 880-64572/1-A	Method Blank	Soluble	Solid	300.0	64572
LCS 880-64572/2-A	Lab Control Sample	Soluble	Solid	300.0	64572
LCSD 880-64572/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	64572
880-34338-3 MS	S1-3-101123	Soluble	Solid	300.0	64572
880-34338-3 MSD	S1-3-101123	Soluble	Solid	300.0	64572

Lab Chronicle

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Client Sample ID: S1-1-101123
Date Collected: 10/11/23 09:10
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.02 g	5 mL	64563	10/12/23 13:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64524	10/13/23 00:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64673	10/13/23 00:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			64660	10/12/23 19:01	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	64532	10/12/23 10:42	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64515	10/12/23 19:01	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	64572	10/12/23 14:20	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64702	10/17/23 15:30	CH	EET MID

Client Sample ID: S1-2-101123
Date Collected: 10/11/23 09:20
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.05 g	5 mL	64563	10/12/23 13:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64524	10/13/23 00:28	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64673	10/13/23 00:28	SM	EET MID
Total/NA	Analysis	8015 NM		1			64660	10/13/23 00:09	SM	EET MID
Total/NA	Prep	8015NM Prep			10.10 g	10 mL	64562	10/12/23 13:28	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64515	10/13/23 00:09	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	64572	10/12/23 14:20	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64702	10/17/23 15:36	CH	EET MID

Client Sample ID: S1-3-101123
Date Collected: 10/11/23 09:30
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.96 g	5 mL	64563	10/12/23 13:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64524	10/13/23 00:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64673	10/13/23 00:49	SM	EET MID
Total/NA	Analysis	8015 NM		1			64660	10/13/23 00:31	SM	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	64562	10/12/23 13:28	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64515	10/13/23 00:31	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	64572	10/12/23 14:20	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64702	10/17/23 15:41	CH	EET MID

Client Sample ID: S2-1-101123
Date Collected: 10/11/23 10:00
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.97 g	5 mL	64563	10/12/23 13:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64524	10/13/23 01:09	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64673	10/13/23 01:09	SM	EET MID

Eurofins Midland

Lab Chronicle

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Client Sample ID: S2-1-101123

Lab Sample ID: 880-34338-4
Matrix: Solid
Date Collected: 10/11/23 10:00
Date Received: 10/12/23 08:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			64660	10/13/23 00:53	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	64562	10/12/23 13:28	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64515	10/13/23 00:53	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	64572	10/12/23 14:20	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64702	10/17/23 15:58	CH	EET MID

Client Sample ID: S2-2-101023

Lab Sample ID: 880-34338-5
Matrix: Solid
Date Collected: 10/10/23 10:10
Date Received: 10/12/23 08:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.99 g	5 mL	64563	10/12/23 13:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64524	10/13/23 01:30	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64673	10/13/23 01:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			64660	10/13/23 01:37	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	64562	10/12/23 13:28	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64515	10/13/23 01:37	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	64572	10/12/23 14:20	AG	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	64702	10/17/23 16:04	CH	EET MID

Client Sample ID: S3-1-101023

Lab Sample ID: 880-34338-6
Matrix: Solid
Date Collected: 10/10/23 15:10
Date Received: 10/12/23 08:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.01 g	5 mL	64563	10/12/23 13:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64524	10/13/23 01:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64673	10/13/23 01:50	SM	EET MID
Total/NA	Analysis	8015 NM		1			64660	10/13/23 01:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	64562	10/12/23 13:28	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64515	10/13/23 01:59	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	64572	10/12/23 14:20	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64702	10/17/23 16:21	CH	EET MID

Client Sample ID: S3-2-101123

Lab Sample ID: 880-34338-7
Matrix: Solid
Date Collected: 10/11/23 15:20
Date Received: 10/12/23 08:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.03 g	5 mL	64563	10/12/23 13:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64524	10/13/23 02:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64673	10/13/23 02:10	SM	EET MID
Total/NA	Analysis	8015 NM		1			64660	10/13/23 02:21	SM	EET MID
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	64562	10/12/23 13:28	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64515	10/13/23 02:21	SM	EET MID

Lab Chronicle

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Client Sample ID: S3-2-101123
Date Collected: 10/11/23 15:20
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	64572	10/12/23 14:20	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64702	10/17/23 16:27	CH	EET MID

Client Sample ID: S4-1-101123
Date Collected: 10/11/23 10:50
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.05 g	5 mL	64563	10/12/23 13:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64524	10/13/23 02:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64673	10/13/23 02:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			64660	10/13/23 17:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	64629	10/13/23 08:50	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64616	10/13/23 17:57	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	64572	10/12/23 14:20	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64702	10/17/23 16:32	CH	EET MID

Client Sample ID: S4-2-101123
Date Collected: 10/11/23 11:00
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.95 g	5 mL	64563	10/12/23 13:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64524	10/13/23 02:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64673	10/13/23 02:51	SM	EET MID
Total/NA	Analysis	8015 NM		1			64660	10/13/23 19:00	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	64629	10/13/23 08:50	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64616	10/13/23 19:00	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	64572	10/12/23 14:20	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64702	10/17/23 16:38	CH	EET MID

Client Sample ID: S5-1-101123
Date Collected: 10/11/23 11:50
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.02 g	5 mL	64563	10/12/23 13:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64524	10/13/23 03:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64673	10/13/23 03:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			64660	10/13/23 19:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	64629	10/13/23 08:50	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64616	10/13/23 19:21	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	64571	10/12/23 14:18	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64698	10/13/23 19:02	CH	EET MID

Lab Chronicle

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Client Sample ID: S5-2-101123
Date Collected: 10/11/23 12:00
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.96 g	5 mL	64563	10/12/23 13:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64524	10/13/23 05:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64673	10/13/23 05:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			64660	10/13/23 19:43	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	64629	10/13/23 08:50	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64616	10/13/23 19:43	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	64571	10/12/23 14:18	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64698	10/13/23 19:07	CH	EET MID

Client Sample ID: S6-1-101023
Date Collected: 10/10/23 15:50
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.03 g	5 mL	64563	10/12/23 13:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64524	10/13/23 05:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64673	10/13/23 05:22	SM	EET MID
Total/NA	Analysis	8015 NM		1			64660	10/13/23 20:03	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	64629	10/13/23 08:50	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64616	10/13/23 20:03	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	64571	10/12/23 14:18	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64698	10/13/23 19:12	CH	EET MID

Client Sample ID: S6-2-101023
Date Collected: 10/10/23 16:00
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.05 g	5 mL	64563	10/12/23 13:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64524	10/13/23 05:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64673	10/13/23 05:43	SM	EET MID
Total/NA	Analysis	8015 NM		1			64660	10/13/23 20:24	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	64629	10/13/23 08:50	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64616	10/13/23 20:24	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	64571	10/12/23 14:18	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64698	10/13/23 19:17	CH	EET MID

Client Sample ID: S7-1-101123
Date Collected: 10/11/23 12:40
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.95 g	5 mL	64563	10/12/23 13:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64524	10/13/23 06:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64673	10/13/23 06:03	SM	EET MID

Eurofins Midland

Lab Chronicle

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Client Sample ID: S7-1-101123
Date Collected: 10/11/23 12:40
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			64660	10/13/23 20:45	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	64629	10/13/23 08:50	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64616	10/13/23 20:45	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	64571	10/12/23 14:18	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64698	10/13/23 19:33	CH	EET MID

Client Sample ID: S7-2-101123
Date Collected: 10/11/23 12:50
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.97 g	5 mL	64563	10/12/23 13:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64524	10/13/23 06:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64673	10/13/23 06:24	SM	EET MID
Total/NA	Analysis	8015 NM		1			64660	10/13/23 21:07	SM	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	64629	10/13/23 08:50	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64616	10/13/23 21:07	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	64571	10/12/23 14:18	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64698	10/13/23 19:38	CH	EET MID

Client Sample ID: S8-1-101123
Date Collected: 10/11/23 14:00
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-16
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.01 g	5 mL	64563	10/12/23 13:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64524	10/13/23 06:44	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64673	10/13/23 06:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			64660	10/13/23 21:28	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	64629	10/13/23 08:50	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64616	10/13/23 21:28	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	64571	10/12/23 14:18	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64698	10/13/23 19:53	CH	EET MID

Client Sample ID: S8-2-101123
Date Collected: 10/11/23 14:10
Date Received: 10/12/23 08:58

Lab Sample ID: 880-34338-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.04 g	5 mL	64563	10/12/23 13:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64524	10/13/23 07:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64673	10/13/23 07:05	SM	EET MID
Total/NA	Analysis	8015 NM		1			64660	10/13/23 21:49	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	64629	10/13/23 08:50	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64616	10/13/23 21:49	SM	EET MID

Lab Chronicle

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Client Sample ID: S8-2-101123

Lab Sample ID: 880-34338-17

Date Collected: 10/11/23 14:10
Matrix: Solid
Date Received: 10/12/23 08:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	64572	10/12/23 14:20	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64702	10/17/23 16:43	CH	EET MID

Client Sample ID: S8-3-101123

Lab Sample ID: 880-34338-18

Date Collected: 10/11/23 14:20
Matrix: Solid
Date Received: 10/12/23 08:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.03 g	5 mL	64563	10/12/23 13:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64524	10/13/23 07:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64673	10/13/23 07:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			64660	10/13/23 22:31	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	64629	10/13/23 08:50	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64616	10/13/23 22:31	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	64572	10/12/23 14:20	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64702	10/17/23 16:49	CH	EET MID

Client Sample ID: S8-4-101123

Lab Sample ID: 880-34338-19

Date Collected: 10/11/23 14:30
Matrix: Solid
Date Received: 10/12/23 08:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.05 g	5 mL	64563	10/12/23 13:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64524	10/13/23 07:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64673	10/13/23 07:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			64660	10/13/23 22:51	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	64629	10/13/23 08:50	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64616	10/13/23 22:51	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	64572	10/12/23 14:20	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64702	10/17/23 16:55	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5030B	Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

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.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-34338-1
SDG: Lea County, NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-34338-1	S1-1-101123	Solid	10/11/23 09:10	10/12/23 08:58
880-34338-2	S1-2-101123	Solid	10/11/23 09:20	10/12/23 08:58
880-34338-3	S1-3-101123	Solid	10/11/23 09:30	10/12/23 08:58
880-34338-4	S2-1-101123	Solid	10/11/23 10:00	10/12/23 08:58
880-34338-5	S2-2-101023	Solid	10/10/23 10:10	10/12/23 08:58
880-34338-6	S3-1-101023	Solid	10/10/23 15:10	10/12/23 08:58
880-34338-7	S3-2-101123	Solid	10/11/23 15:20	10/12/23 08:58
880-34338-8	S4-1-101123	Solid	10/11/23 10:50	10/12/23 08:58
880-34338-9	S4-2-101123	Solid	10/11/23 11:00	10/12/23 08:58
880-34338-10	S5-1-101123	Solid	10/11/23 11:50	10/12/23 08:58
880-34338-11	S5-2-101123	Solid	10/11/23 12:00	10/12/23 08:58
880-34338-12	S6-1-101023	Solid	10/10/23 15:50	10/12/23 08:58
880-34338-13	S6-2-101023	Solid	10/10/23 16:00	10/12/23 08:58
880-34338-14	S7-1-101123	Solid	10/11/23 12:40	10/12/23 08:58
880-34338-15	S7-2-101123	Solid	10/11/23 12:50	10/12/23 08:58
880-34338-16	S8-1-101123	Solid	10/11/23 14:00	10/12/23 08:58
880-34338-17	S8-2-101123	Solid	10/11/23 14:10	10/12/23 08:58
880-34338-18	S8-3-101123	Solid	10/11/23 14:20	10/12/23 08:58
880-34338-19	S8-4-101123	Solid	10/11/23 14:30	10/12/23 08:58

Eurofins Midland
1211 W Florida Ave
Midland TX 79701
Phone (432) 704-5440

Chain of Custody Record

880-34338 Chain of Custody

Page 1 of 2

Client Information	Sampler: Heath Boyd	Lab PM: Builes John	Carrier Tracking No(s):
Client Contact: Justin Nixon	Phone: 575-942-0292	E-Mail: John.Builes@et.eurofinsus.com	State of Origin: NM

Company: ARCADIS US Inc	PWSID:	Job #:
Address: 1004 North Big Spring Suite 300	Due Date Requested:	
City: Midland	TAT Requested (days): Standard	
State, Zip: TX, 79701	Compliance Project: Δ Yes Δ No	
Phone: 432-296-9547(Tel)	PO #: 30197423-03	
Email: Justin.Nixon@arcadis.com	WO #:	
Project Name: Burch Keeley #142	Project #: 88001920	
Site: Lea County, NM	SSOW#:	

Analysis Requested

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

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D, 8015MOD_NM, 8021B	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N		
S1-1-101123	10/11/23	910	G	Solid			X		
S1-2-101123	"	920	"	Solid			X		
S1-3-101123	"	930	"	Solid			X		
S2-1-101123	"	1000	"	Solid			X		
S2-2-101123	10/10/23	1010	"	Solid			X		
S3-1-101023	10/10/23	1510	"	Solid			X		
S3-2-101023	10/11/23	1520	"	Solid			X		
S4-1-101123	"	1050	"	Solid			X		
S4-2-101123	"	1100	"	Solid			X		
S5-1-101123	"	1150	"	Solid			X		
S5-2-101123	10/10/23	1200	G	Solid			X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested I II III IV Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Michael Rodriguez	10-12-23 / 0855	Arcadis		10/12/23 0858	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks:
		1.3 | 1.5

Ver: 01/16/2019

Eurofins Midland
1211 W Florida Ave
Midland TX 79701
Phone (432) 704-5440

Chain of Custody Record

Loc: 880
34338

nvironment Testing

Client Information	Sampler: Heath Boyd	Lab PM: Builes, John	Carrier Tracking No(s):	
Client Contact: Justin Nixon	Phone: 575-942-0292	E-Mail: John.Builes@et.eurofinsus.com	State of Origin: NM	Page 2 of 2
Company: ARCADIS US Inc	PWSID:			Job #:
Address: 1004 North Big Spring Suite 300	Due Date Requested			
City: Midland	TAT Requested (days): Standard			
State, Zip: TX 79701	Compliance Project: Δ Yes Δ No			
Phone: 432-296-9547(Tel)	PO #: 30197423-03			
Email: Justin.Nixon@arcadis.com	WO #:			
Project Name: Burch Keeley #142	Project #: 88001920			
Site: Lea County, NM	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D, 8015MOD_NM, 8021B	Total Number of containers	Special Instructions/Note
			Preservation Code:				N		
S6-1-101023	10/10/23	1550	G	Solid			X		
S6-2-101023	10/10/23	1600		Solid			X		
S7-1-101123	10/11/23	1240		Solid			X		
S7-2-101123		1250		Solid			X		
S8-1-101123		1400		Solid			X		
S8-2-101123		1410		Solid			X		
S8-3-101123		1420		Solid			X		
S8-4-101123	X	143	X	Solid			X		
				Solid					
				Solid					
				Solid					

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested I II III IV Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Michael Rodriguez	10-12-23/0855	Arcadis		10/12/23	
Relinquished by:	Date/Time	Company	Received by	Date/Time: 850	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks.

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: ARCADIS US Inc

Job Number: 880-34338-1
SDG Number: Lea County, NM

Login Number: 34338
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

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

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Justin Nixon
ARCADIS US Inc
1004 North Big Spring
Suite 300
Midland, Texas 79701

Generated 12/11/2023 9:50:38 PM

JOB DESCRIPTION

Burch Keeley #142

JOB NUMBER

880-36644-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Generated
12/11/2023 9:50:38 PM

Authorized for release by
John Builes, Project Manager
John.Builes@et.eurofinsus.com
(561)558-4549

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Laboratory Job ID: 880-36644-1

Table of Contents

Definitions/Glossary

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-36644-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-36644-1

Job ID: 880-36644-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-36644-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 12/7/2023 11:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.8°C

GC VOA
Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-68490 and 880-68743 and analytical batch 880-68654 was outside the upper control limits.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-68631 and analytical batch 880-68635 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-68635/20), (CCV 880-68635/31), (CCV 880-68635/5) and (LCSD 880-68631/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SP9-1'-120623 (880-36644-1) and SP9-2'-120623 (880-36644-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

Client Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-36644-1

Client Sample ID: SP9-1'-120623
Date Collected: 12/06/23 10:00
Date Received: 12/07/23 11:30

Lab Sample ID: 880-36644-1
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000388	U	0.00202	0.000388	mg/Kg		12/09/23 16:01	12/10/23 07:13	1
Toluene	<0.000460	U	0.00202	0.000460	mg/Kg		12/09/23 16:01	12/10/23 07:13	1
Ethylbenzene	<0.000570	U	0.00202	0.000570	mg/Kg		12/09/23 16:01	12/10/23 07:13	1
m-Xylene & p-Xylene	<0.00102	U	0.00403	0.00102	mg/Kg		12/09/23 16:01	12/10/23 07:13	1
o-Xylene	<0.000347	U	0.00202	0.000347	mg/Kg		12/09/23 16:01	12/10/23 07:13	1
Xylenes, Total	<0.00102	U	0.00403	0.00102	mg/Kg		12/09/23 16:01	12/10/23 07:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*12/09/23 16:01*	*12/10/23 07:13*	*1*
1,4-Difluorobenzene (Surr)	*122*		*70 - 130*	*12/09/23 16:01*	*12/10/23 07:13*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00102	U	0.00403	0.00102	mg/Kg			12/10/23 07:13	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**84.4**		50.5	15.2	mg/Kg			12/08/23 18:21	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**22.8**	**J**	50.5	15.2	mg/Kg		12/07/23 16:49	12/08/23 18:21	1
Diesel Range Organics (Over C10-C28)	**61.6**		50.5	15.2	mg/Kg		12/07/23 16:49	12/08/23 18:21	1
Oil Range Organics (Over C28-C36)	<15.2	U	50.5	15.2	mg/Kg		12/07/23 16:49	12/08/23 18:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*131*	*S1+*	*70 - 130*	*12/07/23 16:49*	*12/08/23 18:21*	*1*
o-Terphenyl	*143*	*S1+*	*70 - 130*	*12/07/23 16:49*	*12/08/23 18:21*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11.5**		4.95	0.391	mg/Kg			12/07/23 23:50	1

Client Sample ID: SP9-2'-120623
Date Collected: 12/06/23 10:10
Date Received: 12/07/23 11:30

Lab Sample ID: 880-36644-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000384	U	0.00200	0.000384	mg/Kg		12/09/23 16:01	12/10/23 07:33	1
Toluene	<0.000455	U	0.00200	0.000455	mg/Kg		12/09/23 16:01	12/10/23 07:33	1
Ethylbenzene	<0.000564	U	0.00200	0.000564	mg/Kg		12/09/23 16:01	12/10/23 07:33	1
m-Xylene & p-Xylene	<0.00101	U	0.00399	0.00101	mg/Kg		12/09/23 16:01	12/10/23 07:33	1
o-Xylene	**0.000359**	**J**	0.00200	0.000343	mg/Kg		12/09/23 16:01	12/10/23 07:33	1
Xylenes, Total	<0.00101	U	0.00399	0.00101	mg/Kg		12/09/23 16:01	12/10/23 07:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*12/09/23 16:01*	*12/10/23 07:33*	*1*
1,4-Difluorobenzene (Surr)	*127*		*70 - 130*	*12/09/23 16:01*	*12/10/23 07:33*	*1*

Client Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-36644-1

Client Sample ID: SP9-2'-120623

Date Collected: 12/06/23 10:10
Date Received: 12/07/23 11:30

Lab Sample ID: 880-36644-2

Matrix: Solid

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00399	0.00101	mg/Kg			12/10/23 07:33	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**60.4**		50.0	15.0	mg/Kg			12/08/23 18:43	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**25.7**	**J**	50.0	15.0	mg/Kg		12/07/23 16:49	12/08/23 18:43	1
Diesel Range Organics (Over C10-C28)	**34.7**	**J**	50.0	15.0	mg/Kg		12/07/23 16:49	12/08/23 18:43	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		12/07/23 16:49	12/08/23 18:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*12/07/23 16:49*	*12/08/23 18:43*	*1*
o-Terphenyl	*133*	*S1+*	*70 - 130*	*12/07/23 16:49*	*12/08/23 18:43*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**135**		4.98	0.393	mg/Kg			12/08/23 00:10	1

Surrogate Summary

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-36644-1

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-36644-1	SP9-1'-120623	96	122
880-36644-2	SP9-2'-120623	110	127
LCS 880-68743/1-A	Lab Control Sample	104	112
LCSD 880-68743/2-A	Lab Control Sample Dup	87	107
MB 880-68490/5-A	Method Blank	111	141 S1+
MB 880-68743/5-A	Method Blank	106	132 S1+

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-36644-1	SP9-1'-120623	131 S1+	143 S1+
880-36644-2	SP9-2'-120623	124	133 S1+
LCS 880-68631/2-A	Lab Control Sample	114	129
LCSD 880-68631/3-A	Lab Control Sample Dup	127	147 S1+
MB 880-68631/1-A	Method Blank	178 S1+	213 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-36644-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-68490/5-A
Matrix: Solid
Analysis Batch: 68654

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 68490

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		12/06/23 12:07	12/09/23 12:02	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		12/06/23 12:07	12/09/23 12:02	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		12/06/23 12:07	12/09/23 12:02	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		12/06/23 12:07	12/09/23 12:02	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		12/06/23 12:07	12/09/23 12:02	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		12/06/23 12:07	12/09/23 12:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*12/06/23 12:07*	*12/09/23 12:02*	*1*
1,4-Difluorobenzene (Surr)	*141*	*S1+*	*70 - 130*	*12/06/23 12:07*	*12/09/23 12:02*	*1*

Lab Sample ID: MB 880-68743/5-A
Matrix: Solid
Analysis Batch: 68654

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 68743

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		12/09/23 16:01	12/10/23 00:05	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		12/09/23 16:01	12/10/23 00:05	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		12/09/23 16:01	12/10/23 00:05	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		12/09/23 16:01	12/10/23 00:05	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		12/09/23 16:01	12/10/23 00:05	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		12/09/23 16:01	12/10/23 00:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*12/09/23 16:01*	*12/10/23 00:05*	*1*
1,4-Difluorobenzene (Surr)	*132*	*S1+*	*70 - 130*	*12/09/23 16:01*	*12/10/23 00:05*	*1*

Lab Sample ID: LCS 880-68743/1-A
Matrix: Solid
Analysis Batch: 68654

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 68743

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1096		mg/Kg		110	70 - 130
Toluene	0.100	0.09294		mg/Kg		93	70 - 130
Ethylbenzene	0.100	0.08787		mg/Kg		88	70 - 130
m-Xylene & p-Xylene	0.200	0.2149		mg/Kg		107	70 - 130
o-Xylene	0.100	0.1043		mg/Kg		104	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: LCSD 880-68743/2-A
Matrix: Solid
Analysis Batch: 68654

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 68743

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1026		mg/Kg		103	70 - 130	7	35

QC Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-36644-1

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

Lab Sample ID: LCSD 880-68743/2-A
Matrix: Solid
Analysis Batch: 68654

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 68743

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09148		mg/Kg		91	70 - 130	2	35
Ethylbenzene			0.100	0.07112		mg/Kg		71	70 - 130	21	35
m-Xylene & p-Xylene			0.200	0.1766		mg/Kg		88	70 - 130	20	35
o-Xylene			0.100	0.08618		mg/Kg		86	70 - 130	19	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

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

Lab Sample ID: MB 880-68631/1-A
Matrix: Solid
Analysis Batch: 68635

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 68631

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		12/07/23 16:49	12/08/23 08:19	1
Diesel Range Organics (Over C10-C28)	<15.0	U	50.0	15.0	mg/Kg		12/07/23 16:49	12/08/23 08:19	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		12/07/23 16:49	12/08/23 08:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*178*	*S1+*	*70 - 130*	*12/07/23 16:49*	*12/08/23 08:19*	*1*
o-Terphenyl	*213*	*S1+*	*70 - 130*	*12/07/23 16:49*	*12/08/23 08:19*	*1*

Lab Sample ID: LCS 880-68631/2-A
Matrix: Solid
Analysis Batch: 68635

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 68631

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1111		mg/Kg		111	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1070		mg/Kg		107	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*114*		*70 - 130*
o-Terphenyl	*129*		*70 - 130*

Lab Sample ID: LCSD 880-68631/3-A
Matrix: Solid
Analysis Batch: 68635

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 68631

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1134		mg/Kg		113	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	1106		mg/Kg		111	70 - 130	3	20

Eurofins Midland

QC Sample Results

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-36644-1

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

Lab Sample ID: LCSD 880-68631/3-A
Matrix: Solid
Analysis Batch: 68635

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 68631

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*127*		*70 - 130*
o-Terphenyl	*147*	*S1+*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-68614/1-A
Matrix: Solid
Analysis Batch: 68623

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.395	U	5.00	0.395	mg/Kg			12/07/23 23:30	1

Lab Sample ID: LCS 880-68614/2-A
Matrix: Solid
Analysis Batch: 68623

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	255.7		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-68614/3-A
Matrix: Solid
Analysis Batch: 68623

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	254.3		mg/Kg		102	90 - 110	1	20

Lab Sample ID: 880-36644-1 MS
Matrix: Solid
Analysis Batch: 68623

Client Sample ID: SP9-1'-120623
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	11.5		248	273.2		mg/Kg		106	90 - 110		

Lab Sample ID: 880-36644-1 MSD
Matrix: Solid
Analysis Batch: 68623

Client Sample ID: SP9-1'-120623
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	11.5		248	274.4		mg/Kg		106	90 - 110	0	20

QC Association Summary

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-36644-1

GC VOA

Prep Batch: 68490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-68490/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 68654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36644-1	SP9-1'-120623	Total/NA	Solid	8021B	68743
880-36644-2	SP9-2'-120623	Total/NA	Solid	8021B	68743
MB 880-68490/5-A	Method Blank	Total/NA	Solid	8021B	68490
MB 880-68743/5-A	Method Blank	Total/NA	Solid	8021B	68743
LCS 880-68743/1-A	Lab Control Sample	Total/NA	Solid	8021B	68743
LCSD 880-68743/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	68743

Prep Batch: 68743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36644-1	SP9-1'-120623	Total/NA	Solid	5030B	
880-36644-2	SP9-2'-120623	Total/NA	Solid	5030B	
MB 880-68743/5-A	Method Blank	Total/NA	Solid	5030B	
LCS 880-68743/1-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 880-68743/2-A	Lab Control Sample Dup	Total/NA	Solid	5030B	

Analysis Batch: 68848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36644-1	SP9-1'-120623	Total/NA	Solid	Total BTEX	
880-36644-2	SP9-2'-120623	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 68631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36644-1	SP9-1'-120623	Total/NA	Solid	8015NM Prep	
880-36644-2	SP9-2'-120623	Total/NA	Solid	8015NM Prep	
MB 880-68631/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-68631/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-68631/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 68635

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36644-1	SP9-1'-120623	Total/NA	Solid	8015B NM	68631
880-36644-2	SP9-2'-120623	Total/NA	Solid	8015B NM	68631
MB 880-68631/1-A	Method Blank	Total/NA	Solid	8015B NM	68631
LCS 880-68631/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	68631
LCSD 880-68631/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	68631

Analysis Batch: 68820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36644-1	SP9-1'-120623	Total/NA	Solid	8015 NM	
880-36644-2	SP9-2'-120623	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 68614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36644-1	SP9-1'-120623	Soluble	Solid	DI Leach	

QC Association Summary

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-36644-1

HPLC/IC (Continued)

Leach Batch: 68614 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36644-2	SP9-2'-120623	Soluble	Solid	DI Leach	
MB 880-68614/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-68614/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-68614/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-36644-1 MS	SP9-1'-120623	Soluble	Solid	DI Leach	
880-36644-1 MSD	SP9-1'-120623	Soluble	Solid	DI Leach	

Analysis Batch: 68623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-36644-1	SP9-1'-120623	Soluble	Solid	300.0	68614
880-36644-2	SP9-2'-120623	Soluble	Solid	300.0	68614
MB 880-68614/1-A	Method Blank	Soluble	Solid	300.0	68614
LCS 880-68614/2-A	Lab Control Sample	Soluble	Solid	300.0	68614
LCSD 880-68614/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	68614
880-36644-1 MS	SP9-1'-120623	Soluble	Solid	300.0	68614
880-36644-1 MSD	SP9-1'-120623	Soluble	Solid	300.0	68614

Lab Chronicle

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-36644-1

Client Sample ID: SP9-1'-120623
Date Collected: 12/06/23 10:00
Date Received: 12/07/23 11:30

Lab Sample ID: 880-36644-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.96 g	5 mL	68743	12/09/23 16:01	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68654	12/10/23 07:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68848	12/10/23 07:13	SM	EET MID
Total/NA	Analysis	8015 NM		1			68820	12/08/23 18:21	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	68631	12/07/23 16:49	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68635	12/08/23 18:21	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	68614	12/07/23 14:59	SMC	EET MID
Soluble	Analysis	300.0		1			68623	12/07/23 23:50	CH	EET MID

Client Sample ID: SP9-2'-120623
Date Collected: 12/06/23 10:10
Date Received: 12/07/23 11:30

Lab Sample ID: 880-36644-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.01 g	5 mL	68743	12/09/23 16:01	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	68654	12/10/23 07:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			68848	12/10/23 07:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			68820	12/08/23 18:43	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	68631	12/07/23 16:49	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	68635	12/08/23 18:43	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	68614	12/07/23 14:59	SMC	EET MID
Soluble	Analysis	300.0		1			68623	12/08/23 00:10	CH	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-36644-1

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-36644-1

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5030B	Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

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.
TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: ARCADIS US Inc
Project/Site: Burch Keeley #142

Job ID: 880-36644-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-36644-1	SP9-1'-120623	Solid	12/06/23 10:00	12/07/23 11:30
880-36644-2	SP9-2'-120623	Solid	12/06/23 10:10	12/07/23 11:30

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Phone (717) 656-2300

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: Heath Boyd	Lab PM:	Carrier Tracking No(s):	COC No:
Client Contact: Justin Nixon	Phone: 575-390-4618	E-Mail: Heath.Boyd@arcadis	State of Origin: NM	Page: 1 of 1
Company: Arcadis	PWSID:			Job #: 30197423
Address: 1004 N Big Spring St. Suite 121	Due Date Requested:			
City: Midland	TAT Requested (days): Standard			
State, Zip: Tx, 797903	Compliance Project: Δ Yes Δ No			
Phone: 432-296-9547	PO #:			
Email: Justin.nixon@arcadis.com	WO #:			
Project Name: Burch Keeley	Project #: 30197423			
Site: New mexico	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D	8015 MOD_NM	8021B	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
S9-1'-120623	12/6/23	1000	G	S			1	X	X		Hold S-10-1'3Z'
S9-2'-120623	"	1010	"	"			1	X	X		until needed
S10-1'-120623	"	1030	"	"			1	X	X		Per Justin Nixon
S10-2'-120623	X	1040	X	X			1	X	X		

880-36644 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: 0.0 | 0.5

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by:		Date/Time: ~~12/6/23 1645~~ 12/6/23 1500	Company: Arcadis	Received by:		Date/Time: 12/6/23 2:20	Company
Relinquished by:		Date/Time: 12/6/23 2:50	Company	Received by:		Date/Time: 12/7/23 11:30	Company
Relinquished by:		Date/Time:	Company	Received by:		Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: ARCADIS US Inc

Job Number: 880-36644-1

Login Number: 36644
List Number: 1
Creator: Teel, Brianna

List Source: Eurofins Midland

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

Appendix D

NMOCD Correspondence

From: Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>
Sent: Wednesday, April 10, 2024 8:55 AM
To: Nixon, Justin
Cc: Braidy Moulder; Katherine Purvis
Subject: RE: [EXTERNAL] Burch Keely Unit #142 Incident # NHMP1415747700 Extension request

Good morning Justin,

Per 19.15.29 NMAC, an extension of time can be requested upon a showing of good cause. If a remediation plan is ready to be submitted this week, is an extension necessary?

A complete remediation plan or closure report was due August 8, 2023, approximately 8 months ago. The extension request is not approved.

This incident is out of compliance as the report was due 252 days ago. Please submit the report by 4/12/2024. Failure to submit a complete remediation plan and/or remediation closure report by 4/12/2024 is subject to compliance and enforcement penalties pursuant to 19.15.5 NMAC.

Please include a copy of this email in the report so it is documented in the project file.

Thank you,
Brittany Hall ● Environmental Specialist
Environmental Bureau Projects Group
EMNRD - Oil Conservation Division
1000 Rio Brazos Road | Aztec, NM 87110
505.517.5333 | Brittany.Hall@emnrd.nm.gov
http://www.emnrd.nm.gov/ocd/

Please be advised that the new Digital C-141 is live as of December 1, 2023. Please review the new Digital C-141 submission Dec 1, 2023 Guidance document posted on the EMRND Website prior to submitting any C-141s. The guidance documents can be found at https://www.emnrd.nm.gov/ocd/ocd-announcements-and-notifications/ or https://www.emnrd.nm.gov/ocd/ocd-forms/.

From: Nixon, Justin <Justin.Nixon@arcadis.com>
Sent: Tuesday, April 9, 2024 2:59 PM
To: Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>
Subject: [EXTERNAL] Burch Keely Unit #142 Incident # NHMP1415747700 Extension request

Ms. Hall,

We would like to please request a 30 day extension on the 8/2/23 submittal deadline below. We have completed the assessment and have the draft work plan for remediation ready to be submitted this week. Please let me know if you need any additional information. Incident # NHMP1415747700

Closure request denied. Incomplete report. No workplan has been approved for this site. Site needs to be remediated per 19.15.29 NMAC or complete documentation needs to be provided that remediation was completed.

Thanks,

Justin Nixon | Certified Project Manager 1 | justin.nixon@arcadis.com
Arcadis | Arcadis U.S., Inc.
1004 N Big Spring Street, Suite 121 Midland TX | 79701 | USA
T. +1 432 214 2972| M. +1 432 296 9547

Arcadis U.S., Inc.
10205 Westheimer Road, Suite 800
Houston
Texas 77042
Phone: 713 953 4800
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Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS

Action 338467

QUESTIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 338467
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nHMP1415747700**
Incident Name	**NHMP1415747700 BURCH KEELY UNIT #142 @ 30-015-04388**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Plan Received**
Incident Well	**[30-015-04388] BURCH KEELY UNIT #142**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	BURCH KEELY UNIT #142
Date Release Discovered	05/07/2014
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	Cause: Corrosion | Flow Line - Injection | Produced Water | Released: 20 BBL | Recovered: 15 BBL | Lost: 5 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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QUESTIONS (continued)

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 338467
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**No**
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

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	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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.

I hereby agree and sign off to the above statement	Name: Brittany Esparza Title: Environmental Technician Email: brittany.Esparza@ConocoPhillips.com Date: 04/29/2024

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QUESTIONS (continued)

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 338467
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 75 and 100 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Greater than 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 500 and 1000 (ft.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Greater than 5 (mi.)
Any other fresh water well or spring	Greater than 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Greater than 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	2200
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	84.4
GRO+DRO (EPA SW-846 Method 8015M)	84.4
BTEX (EPA SW-846 Method 8021B or 8260B)	0.1
Benzene (EPA SW-846 Method 8021B or 8260B)	0.1
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	07/15/2024
On what date will (or did) the final sampling or liner inspection occur	07/16/2024
On what date will (or was) the remediation complete(d)	07/20/2024
What is the estimated surface area (in square feet) that will be reclaimed	1400
What is the estimated volume (in cubic yards) that will be reclaimed	220
What is the estimated surface area (in square feet) that will be remediated	1400
What is the estimated volume (in cubic yards) that will be remediated	220
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 338467
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	HALFWAY DISPOSAL AND LANDFILL [fEEM0112334510]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
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.	
I hereby agree and sign off to the above statement	Name: Brittany Esparza Title: Environmental Technician Email: brittany.Esparza@ConocoPhillips.com Date: 04/29/2024
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 338467
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

District I
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QUESTIONS (continued)

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 338467
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	***{Unavailable.}***

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

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

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

CONDITIONS

Action 338467

CONDITIONS

Operator:	OGRID:
COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	229137
	Action Number: 338467
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

CONDITIONS

Created By	Condition	Condition Date
bhall	Remediation plan conditionally approved as the area of S-2 is not vertically delineated or completely horizontally delineated. Horizontal and vertical delineation will need to be achieved during remediation excavation activities.	4/30/2024
bhall	At this time, NMOCD will not approve the reclamation only of the 700 square feet of the area of concern that includes the lease road due to the incomplete horizontal delineation. A variance request for the reseeding of the area of the lease road will need to be submitted in the closure report if the lease road is impacted by the contamination.	4/30/2024
bhall	As the site is no longer reasonably needed for production or subsequent drilling activities, the site will need to be reclaimed at the time of remediation and reseeded during the next favorable growing season. A reclamation can be submitted with the closure report or after the closure report has been approved.	4/30/2024
bhall	A reclamation report will not be accepted until reclamation of the release areais complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will need to be reclaimed and revegetated as early as practicable	4/30/2024
bhall	The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	4/30/2024
bhall	Subsequent to the approval of a reclamation report, a revegetation report will need to be submitted. All revegetation activities will need to be documented and included in the revegetation report. The revegetation report will need to include: An executive summary of the revegetation activities including: Seed mix, Method of seeding, dates of when the release area was reseeded, information pertinent to inspections, information about any amendments added to the soil, information on how the vegetative cover established meets the life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds per 19.15.29.13 D.(3) NMAC, and any additional information; a scaled Site Map including area that was revegetated in square feet; and pictures of the revegetated areas during reseeding activities, inspections, and final pictures when revegetation is achieved.	4/30/2024
bhall	Per 19.15.29.13 E. NMAC, if a reclamation and revegetation report has been submitted to the surface owner, it may be used if the requirements of the surface owner provide equal or better protection of freshwater, human health, and the environment. A copy of the approval of the reclamation and revegetation report from the surface owner and a copy of the approved reclamation and revegetation report will need to be submitted to the OCD via the Permitting website.	4/30/2024