

COG (ConocoPhillips)

2023 Soil Assessment Summary and Closure Request Report

Big Papi Federal Com #002H Incident # NAB1707232069

October 2023

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Big Papi Federal Com #002H Incident # NAB1707232069

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1 Introduction

Arcadis U.S., Inc. (Arcadis) has prepared this Soil Assessment Summary and Closure Request Report (Report), on behalf of Concho Operating, LLC (COG – now ConocoPhillips), for the release site known as the Big Papi Federal Com #002H (Site). 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 approximately 18-miles southwest of the City of Malaga in Unit C, Section 04, Township 26 South, Range 29 East, Eddy County, New Mexico. A Site Location Map is included as **Figure 1**.

2.1 Incident # NAB1707232069

According to the Initial C-141 Form, on February 28, 2017, a check valve failure at the Site resulted in the release of approximately 30 barrels (bbls) of produced water to ground surface. A vacuum truck recovered approximately 0 bbls of produced water. The Initial C-141 Form was submitted to the NMOCD on March 7, 2017 and assigned Incident ID number NAB1707232069. The Initial C-141 Form is included as **Appendix A** and the Final C-141 Form is included in **Appendix B**.

3 Initial Site Characterization and Remediation Activities Summary (2017/2018)

Soil assessment activities were performed at the Site on July 16, 2017 by American Safety Services Inc. (ASSI) to determine the horizontal and vertical extent of the release area. Assessment activities included advancement of two soil borings (Soil Bore – 1 and Soil Bore - 2) with an air rotary drill rig. Soil Bore – 1 was completed to approximately 20 feet below ground surface (bgs) and Soil Bore -2 was completed to approximately 15 feet bgs. Six soil samples were collected from Soil Bore - 1 and five soil samples were collected from Soil Bore - 2. All soil samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX), total petroleum hydrocarbons (TPH), and chloride.

Soil sample analytical results for the two borings confirmed no BTEX or TPH constituent concentrations were present in soil above current (2023) applicable NMOCD screening levels for the Site. Chloride concentrations in soil were not reported above current NMOCD screening levels at depths greater than 4-feet bgs for a site with depth to groundwater greater than 50-feet bgs. Chloride was detected in soil at concentrations above the reclamation standard of 600 milligrams per kilogram (mg/kg) at depths ranging from the ground surface to 4-feet bgs.

The assessment activities associated analytical soil sample results and the initial proposed remediation/reclamation activities for the impacted area are detailed in the 2017 Work Plan submitted previously by ASSI and approved by the NMOCD and Bureau of Land Management (BLM) (see **Appendix C**).

Initial soil remediation activities were initiated by ASSI in December 2017. Bedrock refusal was encountered across the excavation area at depths ranging from 3-feet to 4-feet bgs. ASSI requested approval from NMOCD

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and BLM to cease excavation activities and to line and backfill the excavation area. NMOCD approved the request on April 11, 2018, with the stipulation that five-point composite samples would be collected from the base of the excavation.

A second site assessment was conducted by TRC on August 8, 2018. Assessment activities included the collection of six soil samples from the sidewalls of the excavation area for laboratory analysis to confirm in-situ chloride concentrations. Horizontal delineation of chloride impacted soil to concentrations less than 600 mg/kg was confirmed within the excavated area.

TRC conducted a subsequent soil sampling event at the Site on August 28, 2018. Two composite soil samples (NFL Comp and SFL Comp) were collected from the base of the excavated area and analyzed for chloride. Chloride concentrations were reported at 36,300 mg/kg (NFL Comp) and 52.8 mg/kg (SFL Comp). Details from these assessment activities are provided within the Site Assessment Summary and Proposed Remediation Plan dated November 9, 2018, submitted by TRC (see **Appendix D**). No information associated with additional historical assessment or remediation activities is available.

On April 13, 2023, the NMOCD rejected the Site Assessment Summary and Proposed Remediation Plan submitted by TRC.

4 Current Closure Criteria for Soils Impacted by a Release

Per Table I of NMAC part 19.15.29.12, the following closure criteria apply to a Site with depth to ground water greater than 51 feet bgs, but less than 100 feet bgs:

Constituent	Limit (mg/kg)
Chloride	10,000 mg/kg
TPH – Gasoline Range Organics (GRO) Diesel Range Organics (DRO) and Oil Range Organics (ORO)	2,500 mg/kg
TPH – GRO and DRO	1,000 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg

5 2023 Soil Assessment Summary

5.1 Historical Excavation Area Assessment Activities (2023)

Arcadis began subsequent soil assessment activities at the Site on September 30, 2023, to determine current chloride concentrations remaining in soil within the excavation area. A backhoe was utilized to install four test trenches (NFL-1, NFL-2, NFL-3, and SFL-1) from the current ground surface of the excavation base to

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approximately 2 feet below the current ground surface material. Base rock refusal was encountered at all test trench locations at a depth of approximately 2 feet below the surface within the excavation area. It is unknown if the excavation area was partially backfilled prior to the recent soil assessment activities conducted by Arcadis.

Soil grab samples were collected at 0-1 feet bgs and at 1-2 feet bgs (top of the base rock) from each excavation base test trench location. Four excavation area sidewall locations (N-1, W-1, E-1, and S-1) were also sampled (grab samples) at a depth of approximately 1-foot bgs. Sidewall soil sample locations are depicted in **Figure 2** and excavation base soil sample locations are depicted in **Figure 3**.

The soil samples were collected in 4-oz jars provided by Eurofins Xenco Analytical Laboratory (Xenco) located in Midland, Texas, then placed on ice and shipped to Xenco for analysis of chloride by United States Environmental Protection Agency (USEPA) Method 300; TPH by Method 8015 M for GRO, DRO, and ORO; and BTEX by USEPA Methods 8015/8021. Analytical results are shown in **Table 1**. Laboratory analytical reports are included in **Appendix E**.

5.2 Chloride

All soil samples collected were below the NMOCD reclamation limit of 600 mg/kg.

5.3 TPH

TPH concentrations were reported below the NMOCD reclamation limit of 100 mg/kg at all sample locations for GRO, DRO, and ORO in all soil samples collected.

5.4 BTEX

Benzene concentrations were reported below the NMAC standard of 10 mg/kg at all sample locations. BTEX concentrations were reported below the NMAC standard of 50 mg/kg at all sample locations.

6 Restoration, Reclamation, and Re-Vegetation Plan

Upon receiving laboratory analytical results from recent soil samples confirming impacted soil over the applicable NMOCD restoration limits are no longer present or have been removed, the excavated area was backfilled with locally sourced, non-impacted "like" material placed at or near the original relative positions. The affected area was contoured and/or compacted to achieve erosion control, stability, and preservation of surface water flow to the extent practicable. Excavated areas were topped with a topsoil similar to native the surrounding pasture material. The backfilled area will be reseeded with a BLM approved seed mixture following abandonment of associated production facilities adjacent to the Site.

7 Summary

Analytical results associated with recent assessment activities conducted in 2023 indicate that concentrations of chloride, TPH, and BTEX in soil above NMAC screening standards are not currently present within the historical excavation area.

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8 Soil Closure Request

Based on laboratory analytical results and field activities conducted to date, no additional soil assessment or remediation activities are recommended at this time for TPH, BTEX, or chloride impacts in soil at the Site.

Arcadis requests closure be granted to the Big Papi Federal Com #002H site for Incident ID number NAB1707232069. The Final C-141 Form is included as **Appendix B**.

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Tables

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					B	TEX		Cl Method			
Location ID	Depth (Feet)	Date Collected	Sample Name	Soil Status	Benzene mg/kg	Total BTEX mg/kg	Gasoline Range Organics (GRO)- C6-C10 mg/kg	Diesel Range Organics (Over C10-C28) mg/kg	Oll Range Organics (Over C28-C36) mg/kg	Total TPH mg/kg	Chloride, Dissolvec
NMOCD					10	50				100	600
N-1	1	6/30/2023	N-1-S-1'	In-Situ	< 0.000388	< 0.00102	20.5	<15.0	<15.0	20.5	120
E-1	1	6/30/2023	E-1-S-1'	In-Situ	< 0.000383	<0.00100	19.7	<15.0	<15.0	19.7	402
S-1	1	6/30/2023	S-1-S-1'	In-Situ	< 0.000383	<0.00101	18.0	<15.0	<15.0	18.0	126
W-1	1	6/30/2023	W-1-S-1'	In-Situ	< 0.000381	<0.00100	19.4	<15.0	<15.0	19.4	163
NFL-1	0-1	6/30/2023	NFL-1-S-1'	In-Situ	< 0.000389	< 0.00102	21.5	<15.0	<15.0	21.5	165
	1-2	6/30/2023	NFL-1-S-2'	In-Situ	< 0.000388	<0.00102	17.0	<15.0	<15.0	17.0	99.4
NFL-2	0-1	6/30/2023	NFL-2-S-1'	In-Situ	< 0.000383	<0.00101	47.8	<15.0	<15.0	47.8	107
	1-2	6/30/2023	NFL-2-S-2'	In-Situ	< 0.000381	<0.00100	<14.9	<14.9	<14.9	<14.9	107
NFL-3	0-1	6/30/2023	NFL-3-S-1'	In-Situ	< 0.000389	< 0.00102	<14.9	<14.9	<14.9	<14.9	148
	1-2	6/30/2023	NFL-3-S-2'	In-Situ	< 0.000387	<0.00101	23.9	<15.0	<15.0	23.9	280
SFL-1	0-1	6/30/2023	SFL-1-S-1'	In-Situ	< 0.000383	<0.00100	17.5	<15.0	<15.0	17.5	65.8
	1-2	6/30/2023	SFL-1-S-2'	In-Situ	< 0.000381	<0.00100	<15.0	<15.0	<15.0	<15.0	62.4

Legend:

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

NMAC : New Mexico Administration Code

bgs: Below ground surface

SFL-South base sample

NFL-North base sample

N, S, E, W : North, south, east, or west sidewall 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)

NMOCD: New Mexico Oild Conservation Division

--: No individual standard

Table 1 2023 Soil Sample Analytical Results Big Papi COG (ConocoPhillips)



Qualifier Type	Lab Qualifiers	Definition
Inorganic	J	Indicates an estimated value.
Inorganic	JB	
Inorganic	JBF	
Inorganic	U	The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

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Figures

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Photographic Logs











Initial C-141 Form Incident #NAB1707232069

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				ARTESTA DISTRIC	T
<u>istrict 1</u> i <u>strict 1</u> i <u>strict 11</u> 1 S. First St., Artesia, NM 88210 i <u>strict 111</u> XO Rio Brazos Road, Aztec, NM 87410 i <u>strict IV</u> 120 S. St. Francis Dr., Santa Fe, NM 87505	State of Energy Minerals Oil Conser 1220 South Santa Fo	New Mexa and Natura vation Div 1 St. Franc e, NM 875	ico l Resources vision is Dr. 05	MAR 0 7 2017	Form C-141 Revised August 8, 2011 to appropriate District Office in cordance with 19.15.29 NMAC.
R	lease Notification	n and Co	rrective A	ction	
NAB 1707 2320/09		OPERA	TOR	Initia	l Report 🔲 Final Repo
Name of Company: COG Oper	ating LLC 229/37	Contact:		Robert McNe	ill
Address: 600 West Illinois Avenue, N	Aidland TX 79701	Telephone N	lo.	432-683-7443	B
acility Name: Big Papi Federal Com #0		Facinty Typ	e: Flowline		······································
surface Owner: Federal	Mineral Owner:			API No.	30-015-37833
	LOCATIO	N OF REI	LEASE		
Unit Letter Section Township Rang	e Feet from the North	South Line	Fect from the	East/West Line West	County Eddy
	T - Man Ja 22 07756	T an alter	1, 102 08(220	j trust j	Ludy
	Latitude 32.07/50	b Longitud	le 103.986229		
	NATURE	OF REL	EASE		
Produced Water		volume or	30 bbls	volume R	0 bbls
iource of Release:		Date and H	Iour of Occurrent	ice: Date and Hour of Discovery:	
Vas Immediate Notice Given?	If YES, To	Whom?		nuary 26, 2017 10:00 am	
X Yes	No Not Required		Ms. Weave	er – NMOCD / Ms.	Tucker - BLM
By Whom? Robert Gr Was a Watercourse Reached?	Date and Hour: February 28, 2017 12:19 and VII				
f a Watercourse was Impacted, Describe Ful	ly.*				
Describe Cause of Problem and Remedial Ac	tion Taken.*				
The release was caused by a check valve fail	ire. The check valve was re	paired.			
Describe Area Affected and Cleanup Action	Taken.*				
The release was within a pasture. A vacuum (any possible impact from the release and we	ruck was dispatched to rem will present a remediation w	ove all freesta ork plan to th	nding fluids. Con e NMOCD for ap	cho will have the sp proval prior to any	area sampled to delineate significant remediation
activities					
activities. I hereby certify that the information given ab regulations all operators are required to repor public health or the environment. The accept should their operations have failed to adequa or the environment. In addition, NMOCD ac federal, state, or local laws and/or regulations	ove is true and complete to t and/or file certain release i ance of a C-141 report by the tely investigate and remedia ceptance of a C-141 report of a.	the best of my notifications a ne NMOCD m te contaminat does not reliev	knowledge and u nd perform correct arked as "Final R ion that pose a thu we the operator of	inderstand that purs ctive actions for rele eport" does not reli eat to ground water responsibility for co	uant to NMOCD rules and eases which may endanger eve the operator of liability , surface water, human health ompliance with any other
activities. I hereby certify that the information given ab regulations all operators are required to repor public health or the environment. The accept should their operations have failed to adequa or the environment. In addition, NMOCD ac federal, state, or local laws and/or regulations Signature: Reflect Hardward	ove is true and complete to t and/or file certain release i ance of a C-141 report by the tely investigate and remedia ceptance of a C-141 report of the content of the con	the best of my notifications a ne NMOCD m te contaminat does not reliev	knowledge and u nd perform corre- narked as "Final R ion that pose a thu- re the operator of <u>OIL CON</u> Signed F	Inderstand that purs ctive actions for rele leport" does not reli reat to ground water responsibility for co SERVATION	uant to NMOCD rules and cases which may endanger eve the operator of liability c, surface water, human health ompliance with any other DIVISION
Activities. I hereby certify that the information given ab regulations all operators are required to repor- public health or the environment. The accept should their operations have failed to adequa or the environment. In addition, NMOCD acc federal, state, or local laws and/or regulations Signature: Rebuce Haskel Printed Name: Rebecca Haskel	ove is true and complete to t and/or file certain release i ance of a C-141 report by the tely investigate and remedia ceptance of a C-141 report of s.	the best of my notifications a ne NMOCD m te contaminat does not reliev Approved by	knowledge and u nd perform corre- narked as "Final R ion that pose a the re the operator of <u>OIL CON</u> Signed F Environmental S	Inderstand that purs ctive actions for rele- ceport" does not reli- responsibility for co- SERVATION Sy Market S Specialist:	uant to NMOCD rules and cases which may endanger eve the operator of liability , surface water, human health ompliance with any other DIVISION
activities. I hereby certify that the information given ab regulations all operators are required to repor- public health or the environment. The accept should their operations have failed to adequa or the environment. In addition, NMOCD ac federal, state, or local laws and/or regulations Signature: Rebuce Haskel Printed Name: Rebecca Haskel Title: Senior HSE Cou	ove is true and complete to t and/or file certain release i ance of a C-141 report by the tely investigate and remedia ceptance of a C-141 report of the second sec	the best of my notifications a ne NMOCD m te contaminat does not reliev Approved by Approval Da	knowledge and u nd perform corre- narked as "Final R ion that pose a thu- re the operator of <u>OIL CON</u> <u>Signed Environmental S</u> te: <u>31017</u>	Inderstand that purs ctive actions for rele leport" does not reli reat to ground water responsibility for co SERVATION By Multy S Specialist: Expiration	uant to NMOCD rules and cases which may endanger eve the operator of liability , surface water, human health ompliance with any other DIVISION
activities. I hereby certify that the information given ab regulations all operators are required to repor public health or the environment. The accept should their operations have failed to adequa or the environment. In addition, NMOCD ac federal, state, or local laws and/or regulations: Signature: Kellen Haussen Signature: Rebecca Haskel Printed Name: Rebecca Haskel Title: Senior HSE Cou E-mail Address: haskell@conch	ove is true and complete to t and/or file certain release is ance of a C-141 report by the tely investigate and remedia ceptance of a C-141 report of s. ordinator o.com	the best of my notifications a ne NMOCD m te contaminat does not reliev Approved by Approval Da Conditions o	knowledge and u nd perform corre- narked as "Final R ion that pose a the re the operator of <u>OIL CON</u> Signed R Environmental S te: <u>2101</u> f Approval:	Inderstand that purs ctive actions for rele- leport" does not reli- responsibility for co- SERVATION Sy Market S specialist: Expiration	uant to NMOCD rules and cases which may endanger eve the operator of liability , surface water, human health ompliance with any other DIVISION

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 3/7/17 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RP-4/41 has been assigned. Please refer to this case number in all future correspondence.

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete <u>division-approved corrective action</u> for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 2 office in 422514 on or before 422/72. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

• Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

• Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

• Nominal detection limits for field and laboratory analyses must be provided.

• Composite sampling is not generally allowed.

• Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

•Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

• If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

• Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold OCD Environmental Bureau Chief 1220 South St. Francis Drive Santa Fe, New Mexico 87505 505-476-3465 jim.griswold@state.nm.us

Bratcher, Mike, EMNRD

From:	Rebecca Haskell <rhaskell@concho.com></rhaskell@concho.com>
Sent:	Tuesday, March 7, 2017 9:27 AM
То:	Weaver, Crystal, EMNRD; stucker@blm.gov
Cc:	Bratcher, Mike, EMNRD; Jim Amos (jamos@blm.gov)
Subject:	(C-141 Initial) BIG PAPI FEDERAL COM #002H 2/28/17 (30-015-37833)
Attachments:	Big Papi Federal Com #002H Initial C-141 2-28-17 (30-015-37833).pdf

Ms. Weaver / Ms. Tucker,

Attached is a C-141 for your consideration. If you have any additional questions please feel free to contact me.

Thank You,

Becky Haskell Senior HSE Coordinator COG Operating LLC 600 W Illinois Avenue | Midland, TX 79701 Direct: 432-818-2372 | Main: 432.683.7443 Cell: 432-556-5130 rhaskell@concho.com



From: Robert Grubbs
Sent: Tuesday, February 28, 2017 1:19 PM
To: 'stucker@blm.gov'; Amos, James <jamos@blm.gov> (jamos@blm.gov); Weaver, Crystal, EMNRD
<Crystal.Weaver@state.nm.us> (Crystal.Weaver@state.nm.us); Mike Bratcher (mike.bratcher@state.nm.us)
(mike.bratcher@state.nm.us)
Subject: (Notification) BIG PAPI FEDERAL COM #002H (30-015-37833)

MS. TUCKER AND MS. WEAVER,

COG OPERATING LLC IS REPORTING A RELEASE ON THE BIG PAPI FEDERAL COM #002H (30-015-37832) UNIT C SECTION 04 TOWNSHIP 26S RANGE 29E THE RELEASE OCCURRED AT APPROXIMATELY 10:00 AM ON 2-28-2017 ESTIMATED RELEASED: APPROX. 50 BBLS PRODUCED WATER ESTIMATED RECOVERED: APPROX. ? BBLS PRODUCED WATER (IN THE PROCESS OF RECOVERING THE FREE FLUID)

THE RELEASE WAS DUE TO A CHECK VALVE THAT FAILED. THE RELEASE OCCURRED IN THE PASTURE. A SUNDRY WILL FOLLOW. IF YOU HAVE ANY ADDITIONAL QUESTIONS PLEASE FEEL FREE TO CONTACT ME.

Thank you,

ROBERT GRUBBS JR. SR. HSE COORDINATOR 432.683.7443 (MAIN) 432.818.2369 (DIRECT) 432.661.6601 (CELL) 432.221.0892 (FAX) RGRUBBS@CONCHO.COM MAILING ADDRESS: ONE CONCHO CENTER 600 W. ILLINOIS AVENUE MIDLAND, TEXAS 79701

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Bratcher, Mike, EMNRD

From:	Robert Grubbs <rgrubbs@concho.com></rgrubbs@concho.com>
Sent:	Tuesday, February 28, 2017 12:19 PM
То:	'stucker@blm.gov'; Amos, James <jamos@blm.gov> (jamos@blm.gov); Weaver, Crystal,</jamos@blm.gov>
	EMNRD; Bratcher, Mike, EMNRD
Subject:	(Notification) BIG PAPI FEDERAL COM #002H (30-015-37833)

MS. TUCKER AND MS. WEAVER,

COG OPERATING LLC IS REPORTING A RELEASE ON THE BIG PAPI FEDERAL COM #002H (30-015-37832)

UNIT C SECTION 04 TOWNSHIP 26S RANGE 29E THE RELEASE OCCURRED AT APPROXIMATELY 10:00 AM ON 2-28-2017 ESTIMATED RELEASED: APPROX. 50 BBLS PRODUCED WATER ESTIMATED RECOVERED: APPROX. ? BBLS PRODUCED WATER (IN THE PROCESS OF RECOVERING THE FREE FLUID)

THE RELEASE WAS DUE TO A CHECK VALVE THAT FAILED. THE RELEASE OCCURRED IN THE PASTURE. A SUNDRY WILL FOLLOW. IF YOU HAVE ANY ADDITIONAL QUESTIONS PLEASE FEEL FREE TO CONTACT ME.

THANK YOU,

ROBERT GRUBBS JR. SR. HSE COORDINATOR 432.683.7443 (MAIN) 432.818.2369 (DIRECT) 432.661.6601 (CELL) 432.221.0892 (FAX) RGRUBBS@CONCHO.COM MAILING ADDRESS: ONE CONCHO CENTER 600 W. ILLINOIS AVENUE MIDLAND, TEXAS 79701

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Appendix B

Final C-141 Form Incident #NAB1707232069

District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

Page 27 of 97

Incident ID	NAB1707232069
District RP	N/A
Facility ID	N/A
Application ID	N/A

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>120</u> (ft bgs)
Did this release impact groundwater or surface water?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🔀 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🔀 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🔀 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🔀 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🔀 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🛛 Yes 🗌 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No
Did the release impact areas not on an exploration, development, production, or storage site?	🛛 Yes 🗌 No

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

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

Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
 Field data

Data table of soil contaminant concentration data

- Depth to water determination
 - Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
 - Laboratory data including chain of custody

Received by OCD: 10/23/2	2023 2:34:39 PM	_			Page 28 of 9
Form C-141	State of New Mexico		Incident	D	NAB1707232069
Page 2	Oil Conservation Divis	ion	District R	P	N/A
			Facility I	D	N/A
			Applicati	on ID	N/A
If the site characterization r plan. That plan must inclu and methods, anticipated ti 19.15.29.12 NMAC, howev I hereby certify that the info regulations all operators are public health or the environ failed to adequately investig addition, OCD acceptance of and/or regulations. Printed Name:Ike To Signature:ike.tavarez@c	eport does not include completed effort de the estimated volume of material to melines for beginning and completing to ver, use of the table is modified by site- ormation given above is true and complete to required to report and/or file certain releas ment. The acceptance of a C-141 report by gate and remediate contamination that pose of a C-141 report does not relieve the opera Tavarez Titl	s at remediation be remediated, the remediation - and release-sp to the best of my se notifications ar / the OCD does n a threat to groun tor of responsibil le: Proje Date:	of the release, the report the proposed remediati The closure criteria for ecific parameters. chowledge and understand d perform corrective action of relieve the operator of I dwater, surface water, hun ity for compliance with an ct Manager RM&R	t must inc on technic or a releas that pursu ns for rele- iability sho nan health y other fec	elude a proposed remediation que, proposed sampling plan e are contained in Table 1 of ant to OCD rules and ases which may endanger build their operations have or the environment. In leral, state, or local laws
8630					
8630 OCD Only					

Oil Conservation Division

Incident ID	NAB1707232069
District RP	N/A
Facility ID	N/A
Application ID	N/A

Page 29 of 97

Closure

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

Closure Report Attachment Checklist: Each of the following items must be included in the closure report.						
A scaled site and sampling diagram as described in 19.15.29.11 NMAC						
Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)						
Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)						
Description of remediation activities						
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete. Printed Name: Ke Tavarez Title:Project Manager Date:09/18/2023 email: ike.tavarez@conocophillips.com Date:09/18/2023						
OCD Only						
Received by: <u>Shelly Wells</u> Date: <u>10/23/2023</u>						
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.						
Closure Approved by: Ashley Maxwell Date: 11/03/2023						
Printed Name: Ashley Maxwell Environmental Specialist						



Work Plan



REMEDIATION WORK PLAN

Property:

Concho Operating, LLC. Big Papi Federal Com #002H Eddy County, New Mexico Unit Letter "C", Section 04, Township 26 South, Range 29 East Latitude 32.077566, Longitude -103.986229 2RP-4141

September 2017

Prepared for:

Concho Operating, LLC. 600 West Illinois Avenue Midland, TX 79701 Attn: Mrs. Rebecca Haskell

Prepared by:

Ryan Reich Environmental Project Manager

Jack Zimmerman, P.G., C.P.G Senior Geologist

American Safety Services, Inc. (Geoscience License #50528) 8715 Andrews Hwy. • Odessa, TX 79765. • T 432.552.7625 • www.americansafety.net

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5.0 WORK PLAN	4

APPENDICES

Appendix A

Figure 1 – Site Vicinity Map

Figure 2 – Topography Map

Figure 3 – Release Footprint Map

Figure 4 – Proposed Excavated Depths Map

Appendix B

Table 1 - Soil Analytical Summary Table

Appendix C

Laboratory Analysis and Chain-of-Custody

Appendix D

Initial C-141

Appendix E

Groundwater Data

WORK PLAN

Concho Operating, LLC. Big Papi Federal Com #002H Eddy County, New Mexico Unit Letter "C", Section 04, Township 26 South, Range 29 East Latitude 32.077566, Longitude -103.986229 2RP-4141

September 2017

1.0 INTRODUCTION

1.1 Site Description & Background

American Safety Services Inc. (ASSI) has prepared this Work Plan for the Concho Operating, LLC. (COG) Big Papi Federal Com #002H (referred to hereinafter as the "Site" or "subject Site"). This Work Plan is based upon the interpretation of the data collected by ASSI.

The Big Papi Federal #002H is located in Unit Letter "C", Section 04, Township 26 South, Range 29 East, Eddy County, New Mexico (GPS 32.077566N, -103.986229W).

Remedial actions were conducted by ASSI in accordance with New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Oil Conservation Division (NMOCD) rules (*NMAC 19.15.29 Release Notification*) and the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.

1.2 **Project Objective**

The objective of the Work Plan is to present documentation of the activities that were performed to date and to request an effective means to remediate the Site.

1.3 Standard of Care

ASSI's services are performed in accordance with standards provided by a firm rendering the same or similar services in the area during the same time period. ASSI makes no warranties, express or implied, as to the services performed hereunder. Additionally, ASSI does not warranty the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services will be performed in accordance with the scope of work agreed with the client.

COG – Big Papi Federal Com #002H Work Plan September 2017 Page 2

1.4 Reliance

This report has been prepared for the exclusive use of COG, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization of COG and ASSI. Any unauthorized distribution or reuse is at the sole risk of COG. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, the report, and ASSI's Agreement. The limitation of liability defined in the agreement is the aggregate limit of ASSI's liability to the client.

2.0 SITE RANKING & PROPOSED REMEDIAL ACTION GOALS

The Site is subject to regulatory oversight by the NMOCD. To address activities related to releases, the NMOCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the NMOCD rules, specifically NMAC 19.15.29 *Release Notification.* These documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

In accordance with the NMOCD's *Guidelines for Remediation of Leaks, Spills and Releases*, ASSI utilized the general site characteristics to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the table below:

Ranking Criteria		Ranking Score	
	<50 feet	20	0
Depth to Groundwater	50 to 99 feet	10	
	>100 feet	0	
Wellhead Protection Area, <a>	Yes	20	0
source, or; <200 feet from private domestic water source.	No	0	
Distance to Surface Water Body	<200 feet	20	
	200 to 1,000 feet	10	0
	>1,000 feet	0	
Total Ranking Score		0	

Based on ASSI's evaluation of the scoring criteria, the Site would have a Total Ranking Score of 0. This ranking is based on the following:

- The depth to the initial groundwater-bearing zone is 100 to 150 feet at the Site.
- The impacted area is greater than 200 feet from a private domestic water source.
- Distance to the nearest surface water body is greater than 1,000 ft.

Based on a Total Ranking Score of 0, cleanup goals for soils remaining in place include: 10 milligrams per kilogram (mg/Kg) for Benzene, 50 mg/Kg for Total Benzene, Toluene,

COG – Big Papi Federal Com #002H Work Plan Page 35 of 97

Ethylbenzene, and Xylene (BTEX), 5,000 mg/Kg for Total Petroleum Hydrocarbons (TPH), and 600 mg/Kg for Chloride.

Figures 1 and 2 show the location of COG's Big Papi Federal Com #002H facility in Eddy County, New Mexico and surrounding topography.

3.0 INITIAL RESPONSE & ACTIVITIES

3.1 Initial Response

On July 26, 2017, ASSI personnel completed drilling and sampling activities utilizing air rotary drilling techniques at the Big Papi Federal Com #002H facility. This action was in response to a reportable release that occurred on February 28, 2017. Thirty (30) barrels (bbls) of produced water was released directly to the ground. None of the fluids were recovered. The release impacted approximately eight thousand (8,000) square feet of pasture area (Figure 3).

3.2 Drilling Activities

On July 26th ASSI and COG personnel along with Scarborough Drilling were present to collect delineation samples utilizing air rotary drilling techniques. Mr. Ryan Reich, an ASSI environmental professional, was present to document onsite activities (written and photographic).

A total of seventeen (17) samples were collected, however, only eleven (11) samples were analyzed. Six (6) samples were analyzed from Soil Bore-1 and five (5) samples were analyzed from Soil Bore-2 for BTEX, TPH, and Chloride (Table 1).

Two (2) soil borings (i.e., Soil Bore-1 and Soil Bore-2), were advanced to delineate Chloride at depth. Soil boring locations are shown on Figure 4. Discrete samples were collected from Soil Bore-1 at the following depths: 1', 3', 5', 7', 10', and 20', below ground surface (bgs). At Soil Bore-2 discrete samples were collected at the following depths: 1', 3', 5' 7' and 15' bgs. Soil was field screened for Chloride utilizing electro conductivity during drilling operations.

3.3 Soil Sampling Analytical Results

Analytical results were compared to the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases* (Section VI A. Contaminated Soils) and show Chloride exceedances exist in soil above the NMOCD clean-up goals as discussed in Section 2.0 at both sample locations. However, at location Soil Bore-1 vertical delineation was achieved at a depth of nine (9) feet bgs with a Chloride concentration of 190 mg/Kg. At location Soil Bore-2 vertical delineation was achieved at a depth of seven (7) feet bgs with a Chloride concentration of 120 mg/Kg. Each location meets the NMOCD's threshold of 600 mg/Kg satisfying clean-up goal criteria.

COG – Big Papi Federal Com #002H Work Plan

4.0 LABORATORY ANALYTICAL METHODS

The samples were analyzed for TPH GRO/DRO utilizing EPA method SW-846 8015, BTEX using EPA method SW-846 8021B, and Chloride utilizing EPA method SW-846 300.1. Copies of the laboratory analysis are provided in Appendix D.

Soil was collected in laboratory prepared glassware, placed on ice, and packed in a cooler. The sample coolers and completed chain-of-custody forms were relinquished to Xenco Laboratories in Midland, Texas for normal turn-around time.

Figure 4 shows the approximate location of the sampling (i.e., Soil Bore) locations and dimensions of the proposed excavation area in relation to pertinent land features and general Site boundaries, which is included in Appendix A.

5.0 WORK PLAN

Based upon the data collected and the work completed by ASSI, the constituent of concern (COC) has been vertically delineated at both sample locations. Furthermore, laboratory analysis shows that TPH and BTEX concentrations are below the NMOCD clean-up goals.

Based on the analytical data presented in Table 1, COG and ASSI propose to complete a removal action of the impacted material. The area adjacent to and around Soil Bore-1 will be excavated to a depth of approximately four (4) feet bgs. The area adjacent to and around Soil Bore-2 will be excavated to a depth of approximately three (3) feet bgs (Figure 4). All material will be removed by mechanical means, be temporarily stockpiled onsite and subsequently removed (hauled away) offsite to a proper disposal facility under appropriate manifest. Prior to beginning backfilling operations, sidewall samples will be collected from each excavation in their prospective cardinal direction for Chloride only and submitted for laboratory analysis. The excavated areas will be backfilled to grade with clean imported material and the surface grade contoured to the surrounding landscape.
.



APPENDIX A

Figures

American Safety Services, Inc. (Geoscience License #50528) 8715 Andrews Hwy. • Odessa, TX 79765. • T 432.552.7625 • www.americansafety.net **Received by OCD: 10/23/2023 2:34:39 PM COG - Big Papi Fed Com #2H** Figure 1

285

947

Peece line



Acres 1

Tel To a

Big Papi Fed Com #2H

Alçatraz



Released to Imaging: 11/3/2023 1:36:41 PM

NA

Goodle Ea









— 4' Excavation

— 3' Excavation

— Sample Point

Concho-

Big Papi Federal Com #002H Eddy Co, New Mexico 32.0775N, -103.9862W



FIGURE 4

Proposed Excavation

Depths

.



APPENDIX B

Table 1

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TARIE 1	_	 	_	
			_	1
		ᄂ	_	_

	Summary of Delineation Sampling Analytical Results Concentrations of Benzene, BTEX, TPH & Chloride in Soil Concho Operating, LLC Big Papi Federal Com #002H Eddy County, New Mexico NMOCD REF: 2RP-4141 8021B 8015M 30														
						8021B				803	15M		300.0		
SAMPLE LOCATION	SAMPLE DEPTH (bgs)	SAMPLE DATE	SOIL STATUS	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	ORO (mg/Kg)	Total TPH (mg/Kg)	CHLORIDE (mg/Kg)		
NMOCD - Guid	lelines for Remediat	tion of Leaks, Spills a	nd Releases	10	NE	NE	NE	50	NE	NE	NE	5,000	600		
						Vertical Delination Sa	mpling								
Soil Bore-1	0'-1'	7/26/2017	In-Situ	<0.00200	<0.00200	<0.00200	<0.002	<0.002	<15.0	21.5	<15.0	21.5	44,500		
Soil Bore-1	2'-3'	7/26/2017	In-Situ	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	27.2	<15.0	27.2	3,840		
Soil Bore-1	4'-5'	7/26/2017	In-Situ	-	-	-	-	-	-	-	-	-	1,610		
Soil Bore-1	6'-7'	7/26/2017	In-Situ	-	-	-	-	-	-	-	-	-	1,080		
Soil Bore-1	9'-10'	7/26/2017	In-Situ	-	-	-	-	-	-	-	-	-	190		
Soil Bore-1	19'-20'	7/26/2017	In-Situ	-	-	-	-	-	-	-	-	-	187		
Soil Bore-2	0'-1'	7/26/2017	In-Situ	<0.00200	<0.00200	<0.00200	<0.002	<0.002	<15.0	<15.0	<15.0	<15	12,200		
Soil Bore-2	2'-3'	7/26/2017	In-Situ	-	-	-	-	-	-	-	-	-	3,160		
Soil Bore-2	4'-5'	7/26/2017	In-Situ	-	-	-	-	-	-	-	-	-	785		
Soil Bore-2	6'-7'	7/26/2017	In-Situ	-	-	-	-	-	-	-	-	-	120		
Soil Bore-2	14'-15'	7/26/2017	In-Situ	-	-	-	-	-	-	-	-	-	231		

mg/Kg - milligrams per Kilogram

— = Not Established

Concentrations in BOLD exceed the NMOCD Guidelines

Proposed excavted area

\$'



APPENDIX C

Laboratory Analysis

American Safety Services, Inc. (Geoscience License #50528) 8715 Andrews Hwy. • Odessa, TX 79765. • T 432.552.7625 • www.americansafety.net





Project Id: Contact:

Thomas Franklin **Project Location:** Eddy Co.NM



American Safety Services, Odessa, TX Project Name: Big Papi Fed #2



Date Received in Lab: Thu Jul-27-17 08:50 am Report Date: 31-AUG-17 Project Manager: Brandi Ritcherson

	Lab Id:	558748-0	001	558748-0	002	558748-0	03	558748-0	004	558748-0	05	558748-	007
Analysis Paguastad	Field Id:	Soil Bore	e-1	Soil Bore	e-1	Soil Bore	e-1	Soil Bor	e-1	Soil Bore	e-1	Soil Bor	e-1
Analysis Kequesiea	Depth:	0-1		2-3		4-5		6-7		9-10		19-20	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	_
	Sampled:	Jul-26-17 1	1:25	Jul-26-17 1	1:30	Jul-26-17 1	1:35	Jul-26-17	1:40	Jul-26-17 1	1:45	Jul-26-17	11:55
BTEX by EPA 8021B	Extracted:	Jul-31-17 1	4:00	Jul-31-17 1	4:00								
	Analyzed:	Jul-31-17 2	23:10	Jul-31-17 2	.3:29								
	Units/RL:	mg/kg	RL	mg/kg	RL								
Benzene		< 0.00200	0.00200	< 0.00201	0.00201								
Toluene		< 0.00200	0.00200	< 0.00201	0.00201								
Ethylbenzene		< 0.00200	0.00200	< 0.00201	0.00201								
m,p-Xylenes		< 0.00399	0.00399	< 0.00402	0.00402								
o-Xylene		< 0.00200	0.00200	< 0.00201	0.00201								
Total Xylenes		< 0.002	0.002	< 0.00201	0.00201								
Total BTEX		< 0.002	0.002	< 0.00201	0.00201								
Inorganic Anions by EPA 300/300.1	Extracted:	Jul-31-17 1	5:22	Jul-31-17 1	5:22	Jul-31-17 1	5:22	Jul-31-17 1	5:22	Jul-31-17 1	5:22	Jul-31-17	15:22
	Analyzed:	Jul-31-17 1	5:52	Jul-31-17 1	6:00	Jul-31-17 1	6:08	Jul-31-17 1	6:15	Jul-31-17 1	5:29	Jul-31-17	16:38
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		44500	248	3840	49.6	1610	24.7	1080	24.9	190	4.98	187	4.91
TPH By SW8015 Mod	Extracted:	Jul-28-17 1	7:00	Jul-28-17 1	7:00								
	Analyzed:	Jul-29-17 (06:42	Jul-29-17 0	07:03								
	Units/RL:	mg/kg	RL	mg/kg	RL								
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0								
Diesel Range Organics (DRO)		21.5	15.0	27.2	15.0								
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0								
Total TPH		21.5	15	27.2	15								

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing,

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Brand Retinson

Brandi Ritcherson Project Manager

Page 1 of 8





Project Id: Contact:

Thomas Franklin **Project Location:** Eddy Co.NM



American Safety Services, Odessa, TX Project Name: Big Papi Fed #2



Date Received in Lab: Thu Jul-27-17 08:50 am Report Date: 31-AUG-17 Project Manager: Brandi Ritcherson

	Lab Id:	558748-0	010	558748-0	011	558748-0	012	558748-0	013	558748-0	15	
Analysis Paguested	Field Id:	Soil Bor	e-2	Soil Bore	e-2	Soil Bor	e-2	Soil Bor	e-2	Soil Bore	-2	
Analysis Kequestea	Depth:	0-1		2-3		4-5		6-7		14-15		
	Matrix:	SOIL		SOIL		SOIL	,	SOIL		SOIL		
	Sampled:	Jul-26-17	12:15	Jul-26-17 1	12:20	Jul-26-17 1	12:25	Jul-26-17	12:27	Jul-26-17 1	2:32	
BTEX by EPA 8021B	Extracted:	Jul-31-17	14:00	1								
	Analyzed:	Jul-31-17	23:47									
	Units/RL:	mg/kg	RL									
Benzene		< 0.00200	0.00200									
Toluene		< 0.00200	0.00200									
Ethylbenzene		< 0.00200	0.00200									
m,p-Xylenes		< 0.00401	0.00401									
o-Xylene		< 0.00200	0.00200									
Total Xylenes		< 0.002	0.002									
Total BTEX		< 0.002	0.002									
Inorganic Anions by EPA 300/300.1	Extracted:	Jul-31-17	15:22	Jul-31-17 1	5:22	Jul-31-17 1	15:22	Jul-31-17	5:22	Jul-31-17 1	5:22	
	Analyzed:	Jul-31-17	16:46	Jul-31-17 1	6:54	Jul-31-17 1	17:01	Jul-31-17	7:09	Jul-31-17 1	7:17	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Chloride		12200	98.2	3160	24.9	785	4.92	120	4.92	231	4.95	
TPH By SW8015 Mod	Extracted:	Jul-31-17	11:00									
	Analyzed:	Jul-31-17	13:58									
	Units/RL:	mg/kg	RL									
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0									
Diesel Range Organics (DRO)		<15.0	15.0									
Oil Range Hydrocarbons (ORO)		<15.0	15.0									
Total TPH		<15	15									

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing,

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Brand Retinson

Brandi Ritcherson Project Manager

for American Safety Services

Project Manager: Thomas Franklin

Big Papi Fed #2

31-AUG-17

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054) Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400) Xenco-San Antonio: Texas (T104704534) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)





31-AUG-17

Project Manager: **Thomas Franklin American Safety Services** 8715 Andrews Hwy Odessa, TX 79765

Reference: XENCO Report No(s): **558748 Big Papi Fed #2** Project Address: Eddy Co.NM

Thomas Franklin:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 558748. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 558748 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

mand

Brandi Ritcherson Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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Page 48 of 97



LABORATORIES

Flagging Criteria



Page 49 of 97

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- **BRL** Below Reporting Limit.
- RL Reporting Limit
- MDL Method Detection LimitSDL Sample Detection LimitLOD Limit of DetectionPQL Practical Quantitation LimitMQL Method Quantitation LimitLOQ Limit of Quantitation
- **DL** Method Detection Limit
- NC Non-Calculable
- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
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Pag	e 50 of 97
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Receive

Received by OCD: 10/23/2023 2:34:39 PM



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: American Safety Services Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 07/27/2017 08:50:00 AM Temperature Measuring device used : R8 Work Order #: 558748 Comments Sample Receipt Checklist 5.7 #1 *Temperature of cooler(s)? #2 *Shipping container in good condition? Yes #3 *Samples received on ice? Yes #4 *Custody Seal present on shipping container/ cooler? N/A #5 *Custody Seals intact on shipping container/ cooler? N/A #6 Custody Seals intact on sample bottles? N/A #7 *Custody Seals Signed and dated? N/A #8 *Chain of Custody present? Yes #9 Sample instructions complete on Chain of Custody? Yes #10 Any missing/extra samples? No #11 Chain of Custody signed when relinguished/ received? Yes #12 Chain of Custody agrees with sample label(s)? Yes #13 Container label(s) legible and intact? Yes #14 Sample matrix/ properties agree with Chain of Custody? Yes #15 Samples in proper container/ bottle? Yes #16 Samples properly preserved? Yes #17 Sample container(s) intact? Yes #18 Sufficient sample amount for indicated test(s)? Yes #19 All samples received within hold time? Yes #20 Subcontract of sample(s)? No #21 VOC samples have zero headspace? N/A

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

Checklist completed by: Shawnee Smith

Date: 07/28/2017

Checklist reviewed by:

Brandi Ritcherson

Date: 07/28/2017

.



APPENDIX D

Initial C-141

American Safety Services, Inc. (Geoscience License #50528) 8715 Andrews Hwy. • Odessa, TX 79765. • T 432.552.7625 • www.americansafety.net

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				ARTESIA DISTRIC	
<u>strict 1</u> 25 N. French Dr., Hobbs, NM 88240 <u>istrict II</u> 1 S. First St., Artesia, NM 88210 <u>istrict III</u> 800 Rio Brazos Road, Aztec, NM 87410 <u>istrict IV</u> 220 S. St. Francis Dr., Santa Fe, NM 87505	State of Energy Minerals Oil Conser 1220 South Santa Fe	New Mexi and Natural vation Div 1 St. Franci 2, NM 8750	co Resources ision s Dr.)5	MAR 0 7 2017	Form C-141 Revised August 8, 2011 to appropriate District Office in cordance with 19.15.29 NMAC.
R	elease Notification	and Co	rrective A	ction	
1AB 1707 2320/09		OPERAT	OR	Initia	Report 🗍 Final Repo
Name of Company: COG Open	rating LLC 224/37	Contact:		Robert McNe	ill
Address: 600 West Illinois Avenue, I	Midland TX 79701	Telephone N	0.	432-683-7443	
acinty Name: Big Papi Federal Com #0		racinty Type	: Plowline		
urface Owner: Federal	Mineral Owner:			API No.	30-015-37833
	LOCATIO	N OF REL	EASE		
Unit Letter Section Township Rang	e Feet from the North	South Line	Fect from the	East/West Line West	County Eddy
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	Lathude 32.077300		e 103.980229		
imo of Polococi	NATURE	OF RELE		Valuma B	
Produced Water		volume of	30 bbls	volume R	0 bbls
ource of Release:		Date and H	our of Occurrence	e: Date and I	four of Discovery:
Vas Immediate Notice Given?	······································	If YES, To	Whom?		ruary 28, 2017 10.00 am
X Yes	No Not Required		Ms. Weave	er – NMOCD / Ms.	Tucker - BLM
By Whom? Robert Gr Was a Watercourse Reached?	ubbs	Date and H If YES, Vo	our: February 28 Jume Impacting (, 2017 12:19 arth V he Watercourse.	m
f a Watercourse was Impacted, Describe Ful	ly.*				
Describe Cause of Problem and Remedial Ac	tion Taken.*				· · · · · · · · · · · · · · · · · · ·
The release was caused by a check valve fail	ure. The check valve was rer	aired.			
Describe Area Affected and Cleanup Action	Taken.*				
The release was within a pasture. A vacuum any possible impact from the release and we potivities	truck was dispatched to remo will present a remediation w	ove all freestan ork plan to the	ding fluids. Con NMOCD for ap	cho will have the sp proval prior to any	ill area sampled to delineate significant remediation
hereby certify that the information given ab regulations all operators are required to repor- public health or the environment. The accep- should their operations have failed to adequa or the environment. In addition, NMOCD ac federal, state, or local laws and/or regulation	ove is true and complete to t rt and/or file certain release r tance of a C-141 report by th tely investigate and remedia ceptance of a C-141 report o s.	he best of my notifications an e NMOCD ma te contamination loes not relieve	knowledge and u d perform corre- irked as "Final R on that pose a the the operator of	enderstand that purs ctive actions for rele eport" does not reli eat to ground water responsibility for co	uant to NMOCD rules and cases which may endanger eve the operator of liability , surface water, human health ompliance with any other
Signature: Refleca Hashell			OIL CON Sizned F	SERVATION	DIVISION
		A	Fnvironmental S	pecialist:	Martin Carl Carl
Printed Name: Rebecca Haskel	1	Approved by			
Printed Name: Rebecca Haskel	l ordinator	Approval Dat	= 3/10/17	Expiration	Date: N/A
Printed Name: Rebecca Haskel Title: Senior HSE Co E-mail Address: <u>rhaskell@conch</u>	l ordinator 10.com	Approved by Approval Dat Conditions of	e: 3/10/17 Approval:	Expiration	Date: N/A



APPENDIX E

Groundwater Data

American Safety Services, Inc. (Geoscience License #50528) 8715 Andrews Hwy. • Odessa, TX 79765. • T 432.552.7625 • www.americansafety.net



Period of approved data



Period of approved data

by OCD: 10/23/2423 234:3922423ET NGVD above level Groundwater Page 57 of 97



20



Period of approved data

Page 58 of 97



Laboratory Analytical Reports

Received by OCD: 10/23/2023 2:34:39 PM



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Justin Nixon ARCADIS US Inc 1004 North Big Spring Suite 300 Midland, Texas 79701 Generated 7/3/2023 4:20:11 PM

JOB DESCRIPTION

Big Papi Fed Com 002H SDG NUMBER Eddy County, NM

JOB NUMBER

880-30229-1

Eurofins Midland 1211 W. Florida Ave Midland TX 79701





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

Eurofins Midland is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

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Sample Summary	33
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Job ID: 880-302	29-1
SDG: Eddy County	, NN

Qualifiers

GC VOA		
Qualifier	Qualifier Description	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	5
GC Semi VOA	N Contraction of the second	
Qualifier	Qualifier Description	
*1	LCS/LCSD RPD exceeds control limits.	
В	Compound was found in the blank and sample.	
F1	MS and/or MSD recovery exceeds control limits.	
F2	MS/MSD RPD exceeds control limits	9
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	U
S1-	Surrogate recovery exceeds control limits, low biased.	6
U	Indicates the analyte was analyzed for but not detected.	ž
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 FacDilution FactorDLDetection Limit (DoD/DOE)DL, RA, RE, INIndicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sampleDLCDecision Level Concentration (Radiochemistry)EDLEstimated 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

Job ID: 880-30229-1

Laboratory: Eurofins Midland

Narrative

Job Narrative 880-30229-1

Receipt

The samples were received on 6/30/2023 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 5.0°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: N-1-S-1' (880-30229-1), E-1-S-1' (880-30229-2), S-1-S-1' (880-30229-3), W-1-S-1' (880-30229-4), NFL-1-S-1' (880-30229-5), NFL-1-S-2' (880-30229-6), NFL-2-S-1' (880-30229-7), NFL-2-S-2' (880-30229-8), NFL-3-S-1' (880-30229-9), NFL-3-S-2' (880-30229-10), SFL-1-S-1' (880-30229-11) and SFL-1-S-2' (880-30229-12).

GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: S-1-S-1' (880-30229-3), W-1-S-1' (880-30229-4) and (880-30229-A-1-A MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: NFL-1-S-2' (880-30229-6), NFL-2-S-1' (880-30229-7), NFL-2-S-2' (880-30229-8), NFL-3-S-1' (880-30229-9) and NFL-3-S-2' (880-30229-10). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: SFL-1-S-1' (880-30229-11) and SFL-1-S-2' (880-30229-12). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

Method 8015MOD_NM: The method blank for preparation batch 880-56757 and analytical batch 880-56779 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-56757 and analytical batch 880-56779 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.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-56816/20), (CCV 880-56816/5) and (LCS 880-56820/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The method blank for preparation batch 880-56820 and analytical batch 880-56816 contained Gasoline Range Organics (GRO)-C6-C10 and OII Range Organics (Over C28-C36) above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples 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.

4

Client Sample Results

Client: ARCADIS US Inc Project/Site: Big Papi Fed Com 002H

Client Sample ID: N-1-S-1' Date Collected: 06/28/23 09:00

Date Received: 06/30/23 11:30

Method: SW846 8021B - Volatile	Organic Comp	ounds (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000388	U	0.00202	0.000388	mg/Kg		06/30/23 12:25	07/01/23 03:20	1
Toluene	<0.000460	U	0.00202	0.000460	mg/Kg		06/30/23 12:25	07/01/23 03:20	1
Ethylbenzene	<0.000570	U	0.00202	0.000570	mg/Kg		06/30/23 12:25	07/01/23 03:20	1
m-Xylene & p-Xylene	<0.00102	U	0.00403	0.00102	mg/Kg		06/30/23 12:25	07/01/23 03:20	1
o-Xylene	<0.000347	U	0.00202	0.000347	mg/Kg		06/30/23 12:25	07/01/23 03:20	1
Xylenes, Total	<0.00102	U	0.00403	0.00102	mg/Kg		06/30/23 12:25	07/01/23 03:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				06/30/23 12:25	07/01/23 03:20	1
1,4-Difluorobenzene (Surr)	80		70 - 130				06/30/23 12:25	07/01/23 03:20	1
Method: TAL SOP Total BTEX - 1	otal BTEX Cal	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00102	U	0.00403	0.00102	mg/Kg			07/03/23 01:44	1
- Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (G	C)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	20.5	J	49.9	15.0	mg/Kg			07/03/23 16:54	1
_ Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO) (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	20.5	JB	49.9	15.0	mg/Kg		07/03/23 08:26	07/03/23 14:43	1
(GRO)-C6-C10	-15.0		40.0	45.0	···· ·· // ··		07/02/02 00:00	07/02/02 44:42	4
C10 C28)	<15.0	U	49.9	15.0	mg/Kg		07/03/23 08:26	07/03/23 14:43	1
Oll Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		07/03/23 08:26	07/03/23 14:43	1
Surrogate	%Recoverv	Qualifier	Limits				Prepared	Analvzed	Dil Fac
1-Chlorooctane	85		70 - 130				07/03/23 08:26	07/03/23 14:43	1
o-Terphenyl	91		70 - 130				07/03/23 08:26	07/03/23 14:43	1
- Method: EPA 300.0 - Anions. Ion	Chromatogram	ohv - Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	120		5.02	0.397	mg/Kg			06/30/23 18:02	1
Client Sample ID: E-1-S-1'							Lab Sam	ple ID: 880-3	0229-2
Date Collected: 06/28/23 09:30								Matri	x: Solid
Date Received: 06/30/23 11:30									
_ Method: SW846 8021B - Volatile	Organic Comp	ounds (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		06/30/23 12:25	07/01/23 03:46	1
Toluene	<0.000453	U	0.00199	0.000453	mg/Kg		06/30/23 12:25	07/01/23 03:46	1

1,4-Difluorobenzene (Surr)	79		70 - 130			06/30/23 12:25	07/01/23 03:46	1
4-Bromofluorobenzene (Surr)	128		70 - 130			06/30/23 12:25	07/01/23 03:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Xylenes, Total	<0.00100	U	0.00398	0.00100	mg/Kg	06/30/23 12:25	07/01/23 03:46	1
o-Xylene	<0.000342	U	0.00199	0.000342	mg/Kg	06/30/23 12:25	07/01/23 03:46	1
m-Xylene & p-Xylene	<0.00100	U	0.00398	0.00100	mg/Kg	06/30/23 12:25	07/01/23 03:46	1

0.00199

0.000562 mg/Kg

<0.000562 U

06/30/23 12:25 07/01/23 03:46

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5

Job ID: 880-30229-1 SDG: Eddy County, NM

Lab Sample ID: 880-30229-1

Matrix: Solid

1 1

1

Ethylbenzene

5

Job ID: 880-30229-1 SDG: Eddy County, NM

Client Sample ID: E-1-S-1'

Project/Site: Big Papi Fed Com 002H

Date Received: 06/30/23 11:30

Client: ARCADIS US Inc

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00398	0.00100	mg/Kg			07/03/23 01:44	1
_ Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (GC)						
Analyte	Result	Qualifier	, RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	19.7	J	50.0	15.0	mg/Kg			07/03/23 16:54	1
- Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	19.7	JB	50.0	15.0	mg/Kg		07/03/23 08:26	07/03/23 15:06	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<15.0	U	50.0	15.0	mg/Kg		07/03/23 08:26	07/03/23 15:06	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		07/03/23 08:26	07/03/23 15:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130				07/03/23 08:26	07/03/23 15:06	1
o-Terphenyl	83		70 - 130				07/03/23 08:26	07/03/23 15:06	1
– Method: EPA 300.0 - Anions. Ion	Chromatograp	hv - Solubl	e						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlanida	402		<u> </u>	0 307	ma/Ka			06/30/23 18:20	

Client Sample ID: S-1-S-1'

Date Collected: 06/28/23 10:00 Date Received: 06/30/23 11:30

Lab Sample ID: 880-30229-3 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		06/30/23 12:25	07/01/23 04:13	1
Toluene	<0.000454	U	0.00199	0.000454	mg/Kg		06/30/23 12:25	07/01/23 04:13	1
Ethylbenzene	<0.000563	U	0.00199	0.000563	mg/Kg		06/30/23 12:25	07/01/23 04:13	1
m-Xylene & p-Xylene	<0.00101	U	0.00398	0.00101	mg/Kg		06/30/23 12:25	07/01/23 04:13	1
o-Xylene	<0.000343	U	0.00199	0.000343	mg/Kg		06/30/23 12:25	07/01/23 04:13	1
Xylenes, Total	<0.00101	U	0.00398	0.00101	mg/Kg		06/30/23 12:25	07/01/23 04:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	138	S1+	70 - 130				06/30/23 12:25	07/01/23 04:13	1
1,4-Difluorobenzene (Surr)	86		70 - 130				06/30/23 12:25	07/01/23 04:13	1

Method: TAL SOP Total BTEX - Total BTEX Calculation Analyte Result Qualifier RL MDL Unit D Prepared Analyzed

Total BTEX	<0.00101	U	0.00398	0.00101	mg/Kg			07/03/23 01:44	1
- Method: SW846 8015 NM - Die	sel Range Organ	ics (DRO) (G	iC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	18.0	J	50.0	15.0	mg/Kg			07/03/23 11:34	1
	iesel Range Orga	anics (DRO) ((GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	18.0	J F1 F2 *1	50.0	15.0	mg/Kg		07/01/23 10:26	07/02/23 14:01	1
(GRO)-C6-C10		В							
Diesel Range Organics (Over	<15.0	U F1	50.0	15.0	mg/Kg		07/01/23 10:26	07/02/23 14:01	1

Eurofins Midland

Lab Sample ID: 880-30229-2 Date Collected: 06/28/23 09:30 Matrix: Solid

C10-C28)

Dil Fac

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Job ID: 880-30229-1 SDG: Eddy County, NM

Client Sample ID: S-1-S-1'

Project/Site: Big Papi Fed Com 002H

Date Collected: 06/28/23 10:00 Date Received: 06/30/23 11:30

Client: ARCADIS US Inc

		=		Unit		Fiepaieu	Analyzeu	DIFAC
<15.0	U	50.0	15.0	mg/Kg		07/01/23 10:26	07/02/23 14:01	1
%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
121		70 - 130				07/01/23 10:26	07/02/23 14:01	1
107		70 - 130				07/01/23 10:26	07/02/23 14:01	1
hromatograp	ohy - Solubl	e						
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
126		4.98	0.393	mg/Kg			06/30/23 18:26	1
	<15.0 <u>%Recovery</u> 121 107 hromatograp Result 126	<15.0 0 <u>%Recovery</u> 121 107 hromatography - Solubl <u>Result</u> 126 Qualifier	<15.0 0 50.0 %Recovery Qualifier Limits 121 70 - 130 107 70 - 130 Chromatography - Soluble Result Qualifier RL 126 4.98 4.98	<15.0 0 50.0 15.0 %Recovery Qualifier Limits 121 70 - 130 107 70 - 130 Chromatography - Soluble Result Qualifier RL MDL 126 4.98 0.393	<15.0 0 50.0 15.0 mg/Kg %Recovery Qualifier Limits 121 70 - 130 107 70 - 130 Chromatography - Soluble Result Qualifier RL MDL Unit 126 4.98 0.393 mg/Kg	$\frac{\ensuremath{^{\prime}\text{Recovery}}}{121} \frac{\ensuremath{\text{Qualifier}}}{121} \\ \frac{70 - 130}{70 - 130} \\ \frac{107}{70 - 130} \\ \frac{\text{Chromatography - Soluble}}{126} \\ \frac{\text{Result}}{126} \\ \frac{\ensuremath{\text{Qualifier}}}{4.98} \\ \frac{\text{MDL}}{0.393} \\ \frac{\text{Unit}}{\text{mg/Kg}} \\ \frac{\text{D}}{126} \\ \frac{126}{126} $	<15.0	$\frac{(15.0 \text{ U})}{15.0 \text{ mg/kg}} = \frac{(17.0 \text{ J})}{17.0 \text{ J})} = \frac{(17.0 \text{ J})}{17.0 \text{ J})} = \frac{(17.0 \text{ J})}{107} = \frac{(17.0 \text{ J})}{$

Date Received: 06/30/23 11:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000381	U	0.00198	0.000381	mg/Kg		06/30/23 12:25	07/01/23 04:39	1
Toluene	<0.000451	U	0.00198	0.000451	mg/Kg		06/30/23 12:25	07/01/23 04:39	1
Ethylbenzene	<0.000559	U	0.00198	0.000559	mg/Kg		06/30/23 12:25	07/01/23 04:39	1
m-Xylene & p-Xylene	<0.00100	U	0.00396	0.00100	mg/Kg		06/30/23 12:25	07/01/23 04:39	1
o-Xylene	<0.000341	U	0.00198	0.000341	mg/Kg		06/30/23 12:25	07/01/23 04:39	1
Xylenes, Total	<0.00100	U	0.00396	0.00100	mg/Kg		06/30/23 12:25	07/01/23 04:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	150	S1+	70 - 130				06/30/23 12:25	07/01/23 04:39	1
1,4-Difluorobenzene (Surr)	90		70 - 130				06/30/23 12:25	07/01/23 04:39	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			07/03/23 01:44	1

Method: SW846 8015 NM - Diesel R	ange Organ	ics (DRO) (GO	C)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	19.4	J	49.9	15.0	mg/Kg			07/03/23 11:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	19.4	J *1 B	49.9	15.0	mg/Kg		07/01/23 10:26	07/02/23 15:07	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<15.0	U	49.9	15.0	mg/Kg		07/01/23 10:26	07/02/23 15:07	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		07/01/23 10:26	07/02/23 15:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	129		70 - 130				07/01/23 10:26	07/02/23 15:07	1
o-Terphenyl	115		70 - 130				07/01/23 10:26	07/02/23 15:07	1
- Method: EPA 300.0 - Anions, Ion	Chromatograp	ohy - Solubl	e						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	163		4.95	0.391	mg/Kg			06/30/23 18:31	1

5

Client Sample Results

5

Job ID: 880-30229-1 SDG: Eddy County, NM

Lab Sample ID: 880-30229-5

Client Sample ID: NFL-1-S-1' Date Collected: 06/28/23 11:00

Project/Site: Big Papi Fed Com 002H

Date Received: 06/30/23 11:30

Client: ARCADIS US Inc

Method: SW846 8021B - Volatile Or	ganic Comp	ounds (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000389	U	0.00202	0.000389	mg/Kg		06/30/23 12:25	07/01/23 05:05	1
Toluene	<0.000461	U	0.00202	0.000461	mg/Kg		06/30/23 12:25	07/01/23 05:05	1
Ethylbenzene	<0.000571	U	0.00202	0.000571	mg/Kg		06/30/23 12:25	07/01/23 05:05	1
m-Xylene & p-Xylene	<0.00102	U	0.00404	0.00102	mg/Kg		06/30/23 12:25	07/01/23 05:05	1
o-Xylene	<0.000347	U	0.00202	0.000347	mg/Kg		06/30/23 12:25	07/01/23 05:05	1
Xylenes, Total	<0.00102	U	0.00404	0.00102	mg/Kg		06/30/23 12:25	07/01/23 05:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	126		70 - 130				06/30/23 12:25	07/01/23 05:05	1
1,4-Difluorobenzene (Surr)	79		70 - 130				06/30/23 12:25	07/01/23 05:05	1
Method: TAL SOP Total BTEX - Tota	al BTEX Cal	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00102	U	0.00404	0.00102	mg/Kg			07/03/23 01:44	1
- Method: SW846 8015 NM - Diesel R	ange Organ	ics (DRO) (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	21.5	J	49.9	15.0	mg/Kg			07/03/23 11:34	1
- Method: SW846 8015B NM - Diesel	Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	21.5	J *1 B	49.9	15.0	mg/Kg		07/01/23 10:26	07/02/23 15:30	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<15.0	U	49.9	15.0	mg/Kg		07/01/23 10:26	07/02/23 15:30	1
Oll Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		07/01/23 10:26	07/02/23 15:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	126		70 - 130				07/01/23 10:26	07/02/23 15:30	1
o-Terphenyl	111		70 - 130				07/01/23 10:26	07/02/23 15:30	1
- Method: EPA 300.0 - Anions, Ion Cł	nromatograp	ohy - Solubl	e						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	165		25.0	1.98	mg/Kg			06/30/23 18:37	5
Client Sample ID: NFL-1-S-2'							Lab Sam	ple ID: 880-3	0229-6
Date Collected: 06/28/23 11:30								Matri	x: Solid
Date Received: 06/30/23 11:30									
Method: SW846 8021B - Volatile Or	ganic Comp	ounds (GC))						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000388	U	0.00202	0.000388	mg/Kg		06/30/23 12:25	07/01/23 05:31	1
Toluene	<0.000460	U	0.00202	0.000460	mg/Kg		06/30/23 12:25	07/01/23 05:31	1
Ethylbenzene	<0.000570	U	0.00202	0.000570	mg/Kg		06/30/23 12:25	07/01/23 05:31	1
m-Xylene & p-Xylene	<0.00102	U	0.00403	0.00102	mg/Kg		06/30/23 12:25	07/01/23 05:31	1
o-Xylene	<0.000347	U	0.00202	0.000347	mg/Kg		06/30/23 12:25	07/01/23 05:31	1
Xylenes, Total	<0.00102	U	0.00403	0.00102	mg/Kg		06/30/23 12:25	07/01/23 05:31	1

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 131 S1+ 70 - 130 4-Bromofluorobenzene (Surr) 06/30/23 12:25 07/01/23 05:31 1 1,4-Difluorobenzene (Surr) 89 70 - 130 06/30/23 12:25 07/01/23 05:31 1

Matrix: Solid

Released to Imaging: 11/3/2023 1:36:41 PM

Job ID: 880-30229-1 SDG: Eddy County, NM

Lab Sample ID: 880-30229-6

Client Sample ID: NFL-1-S-2' Date Collected: 06/28/23 11:30

Project/Site: Big Papi Fed Com 002H

Date Received: 06/30/23 11:30

Client: ARCADIS US Inc

Method: TAL SOP Total BTEX - Tota	al BTEX Calo	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00102	U	0.00403	0.00102	mg/Kg			07/03/23 01:44	1
 Method: SW846 8015 NM - Diesel R	ange Organ	ics (DRO) (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Total TPH	17.0	J	50.0	15.0	mg/Kg			07/03/23 11:34	1
 Method: SW846 8015B NM - Diesel	Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	17.0	J *1 B	50.0	15.0	mg/Kg		07/01/23 10:26	07/02/23 15:54	1
Diesel Range Organics (Over	<15.0	U	50.0	15.0	mg/Kg		07/01/23 10:26	07/02/23 15:54	1
Oll Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		07/01/23 10:26	07/02/23 15:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	126		70 - 130				07/01/23 10:26	07/02/23 15:54	1
o-Terphenyl	112		70 - 130				07/01/23 10:26	07/02/23 15:54	1
_ Method: EPA 300.0 - Anions, Ion Ch	romatograp	ohy - Solubl	e						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	99.4		4.97	0.393	mg/Kg			06/30/23 18:55	1

Client Sample ID: NFL-2-S-1'

Date Collected: 06/28/23 12:00

Lab Sample ID: 880-30229-7 Matrix: Solid

Date Received: 06/30/23 11:30

Method: SW846 8021B - Volat	ile Organic Comp	ounds (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		06/30/23 12:25	07/01/23 05:57	1
Toluene	<0.000454	U	0.00199	0.000454	mg/Kg		06/30/23 12:25	07/01/23 05:57	1
Ethylbenzene	<0.000563	U	0.00199	0.000563	mg/Kg		06/30/23 12:25	07/01/23 05:57	1
m-Xylene & p-Xylene	<0.00101	U	0.00398	0.00101	mg/Kg		06/30/23 12:25	07/01/23 05:57	1
o-Xylene	<0.000343	U	0.00199	0.000343	mg/Kg		06/30/23 12:25	07/01/23 05:57	1
Xylenes, Total	<0.00101	U	0.00398	0.00101	mg/Kg		06/30/23 12:25	07/01/23 05:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	133	S1+	70 - 130				06/30/23 12:25	07/01/23 05:57	1
1,4-Difluorobenzene (Surr)	88		70 - 130				06/30/23 12:25	07/01/23 05:57	1

Method: TAL SOP Total BTEX -	Total BTEX Cal	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00398	0.00101	mg/Kg			07/03/23 01:44	1
- Method: SW846 8015 NM - Dies	el Range Organ	ics (DRO) (0	GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	47.8	J	49.9	15.0	mg/Kg			07/03/23 11:34	1
- Method: SW846 8015B NM - Die	esel Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	47.8	J *1 B	49.9	15.0	mg/Kg		07/01/23 10:26	07/02/23 16:18	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<15.0	U	49.9	15.0	ma/Ka		07/01/23 10:26	07/02/23 16:18	1

Eurofins Midland

Released to Imaging: 11/3/2023 1:36:41 PM

C10-C28)

Matrix: Solid 5

Matrix: Solid

5

Job ID: 880-30229-1 SDG: Eddy County, NM

Lab Sample ID: 880-30229-7

Project/Site: Big Papi Fed Com 002H Client Sample ID: NFL-2-S-1'

Date Collected: 06/28/23 12:00 Date Received: 06/30/23 11:30

Client: ARCADIS US Inc

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		07/01/23 10:26	07/02/23 16:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	126		70 - 130				07/01/23 10:26	07/02/23 16:18	1
o-Terphenyl	109		70 - 130				07/01/23 10:26	07/02/23 16:18	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	ohy - Solubl	e						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	107		4.98	0.393	mg/Kg			06/30/23 19:01	1
Client Sample ID: NFL-2-S-2	•						Lab Sam	ple ID: 880-3	0229-8
Date Collected: 06/28/23 12:30								Matri	x: Solid

Date Collected: 06/28/23 12:30

Date Received: 06/30/23 11:30

Method: SW846 8021B - Volati	le Organic Comp	ounds (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000381	U	0.00198	0.000381	mg/Kg		06/30/23 12:25	07/01/23 06:23	1
Toluene	<0.000451	U	0.00198	0.000451	mg/Kg		06/30/23 12:25	07/01/23 06:23	1
Ethylbenzene	<0.000559	U	0.00198	0.000559	mg/Kg		06/30/23 12:25	07/01/23 06:23	1
m-Xylene & p-Xylene	<0.00100	U	0.00396	0.00100	mg/Kg		06/30/23 12:25	07/01/23 06:23	1
o-Xylene	<0.000341	U	0.00198	0.000341	mg/Kg		06/30/23 12:25	07/01/23 06:23	1
Xylenes, Total	<0.00100	U	0.00396	0.00100	mg/Kg		06/30/23 12:25	07/01/23 06:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	144	S1+	70 - 130				06/30/23 12:25	07/01/23 06:23	1
1,4-Difluorobenzene (Surr)	86		70 - 130				06/30/23 12:25	07/01/23 06:23	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			07/03/23 01:44	1

Method: SW846 8015 NM - Diesel R	lange Organ	ics (DRO) (G	C)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<14.9	U	49.8	14.9	mg/Kg			07/03/23 11:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<14.9	U *1	49.8	14.9	mg/Kg		07/01/23 10:26	07/02/23 16:41	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<14.9	U	49.8	14.9	mg/Kg		07/01/23 10:26	07/02/23 16:41	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<14.9	U	49.8	14.9	mg/Kg		07/01/23 10:26	07/02/23 16:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	127		70 - 130				07/01/23 10:26	07/02/23 16:41	1
o-Terphenyl	111		70 - 130				07/01/23 10:26	07/02/23 16:41	1
- Method: EPA 300.0 - Anions, Ion	Chromatograp	ohy - Solubl	e						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	107		4.99	0.394	mg/Kg			06/30/23 19:06	1

Client Sample Results

Client: ARCADIS US Inc Project/Site: Big Papi Fed Com 002H

Client Sample ID: NFL-3-S-1' Date Collected: 06/28/23 13:00

Date Received: 06/30/23 11:30

Method: SW846 8021B - Volatile	Organic Comp	ounds (GC))	MDI	Unit	-	Branarad	Analyzad	
Banzana			KL			<u> </u>			
Benzene	<0.000389	U	0.00202	0.000389	mg/Kg		06/30/23 12:25	07/01/23 06:50	1
	<0.000461	U	0.00202	0.000461	mg/Kg		06/30/23 12:25	07/01/23 06:50	1
Etnyibenzene	<0.000571	U	0.00202	0.000571	mg/ĸg		06/30/23 12:25	07/01/23 06:50	· · · · · · · · .
m-Xylene & p-Xylene	< 0.00102	0	0.00404	0.00102	mg/Kg		06/30/23 12:25	07/01/23 06:50	1
o-Xylene	<0.000347	U	0.00202	0.000347	mg/Kg		06/30/23 12:25	07/01/23 06:50	1
Xylenes, Total	<0.00102	U	0.00404	0.00102	mg/Kg		06/30/23 12:25	07/01/23 06:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	140	S1+	70 - 130				06/30/23 12:25	07/01/23 06:50	1
1,4-Difluorobenzene (Surr) _	77		70 - 130				06/30/23 12:25	07/01/23 06:50	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cal	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00102	U	0.00404	0.00102	mg/Kg			07/03/23 01:44	1
- Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<14.9	U	49.8	14.9	mg/Kg			07/03/23 11:34	1
- Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<14.9	U *1	49.8	14.9	mg/Kg		07/01/23 10:26	07/02/23 17:05	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<14.9	U	49.8	14.9	mg/Kg		07/01/23 10:26	07/02/23 17:05	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<14.9	U	49.8	14.9	mg/Kg		07/01/23 10:26	07/02/23 17:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	119		70 - 130				07/01/23 10:26	07/02/23 17:05	1
o-Terphenyl	105		70 - 130				07/01/23 10:26	07/02/23 17:05	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	ohy - Solubl	e						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	148		5.04	0.398	mg/Kg			06/30/23 19:12	1
Client Sample ID: NFL-3-S-2	1						Lab Samp	le ID: 880-30	229-10
Date Collected: 06/28/23 13:30								Matri	x: Solid
Date Received: 06/30/23 11:30									
_ Method: SW846 8021B - Volatile	Organic Comp	ounds (GC))						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000387	U	0.00201	0.000387	mg/Kg		06/30/23 12:25	07/01/23 07:16	1
Toluene	<0.000458	U	0.00201	0.000458	mg/Kg		06/30/23 12:25	07/01/23 07:16	1
Ethylbenzene	<0.000567	U	0.00201	0.000567	mg/Kg		06/30/23 12:25	07/01/23 07:16	1

o-Xylene	<0.000345	U	0.00201	0.000345	mg/Kg	06/30/23 12:25	07/01/23 07:16	1
Xylenes, Total	<0.00101	U	0.00402	0.00101	mg/Kg	06/30/23 12:25	07/01/23 07:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	135	S1+	70 _ 130			06/30/23 12:25	07/01/23 07:16	1
1,4-Difluorobenzene (Surr)	87		70 - 130			06/30/23 12:25	07/01/23 07:16	1

0.00402

0.00101 mg/Kg

06/30/23 12:25

<0.00101 U

07/01/23 07:16

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Job ID: 880-30229-1 SDG: Eddy County, NM

Lab Sample ID: 880-30229-9

Matrix: Solid

5

m-Xylene & p-Xylene

1

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Matrix: Solid

5

Job ID: 880-30229-1 SDG: Eddy County, NM

Client Sample ID: NFL-3-S-2' Date Collected: 06/28/23 13:30

Project/Site: Big Papi Fed Com 002H

Date Received: 06/30/23 11:30

Client: ARCADIS US Inc

al BTEX Calo	ulation							
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<0.00101	U	0.00402	0.00101	mg/Kg			07/03/23 01:44	1
ange Organ	ics (DRO) (GC)						
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
23.9	J	50.0	15.0	mg/Kg			07/03/23 11:34	1
Range Orga	nics (DRO)	(GC)						
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
23.9	J *1 B	50.0	15.0	mg/Kg		07/01/23 10:26	07/02/23 17:29	1
<15.0	U	50.0	15.0	mg/Kg		07/01/23 10:26	07/02/23 17:29	1
<15.0	U	50.0	15.0	mg/Kg		07/01/23 10:26	07/02/23 17:29	1
%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
127		70 - 130				07/01/23 10:26	07/02/23 17:29	1
111		70 - 130				07/01/23 10:26	07/02/23 17:29	1
hromatograp	hy - Solub	le						
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
280		5.04	0.398	mg/Kg			06/30/23 19:18	1
	al BTEX Calo Result <0.00101 control control contro	Result Qualifier <0.00101 Qualifier <0.00101	al BTEX CalculationResultQualifierRL<0.00101	al BTEX CalculationResultQualifierRLMDL<0.00101	al BTEX CalculationResultQualifierRLMDLUnit<0.00101	al BTEX CalculationResultQualifierRLMDLUnitD<0.00101	BTEX Calculation ResultQualifierRLMDLUnitDPrepared<0.00101	all BTEX Calculation Result Qualifier RL MDL Unit D Prepared Analyzed <0.00101

Client Sample ID: SFL-1-S-1'

Date Collected: 06/28/23 14:00

Lab Sample ID: 880-30229-11 Matrix: Solid

Date Received: 06/30/23 11:30

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		06/30/23 12:25	07/01/23 09:03	1	
Toluene	<0.000453	U	0.00199	0.000453	mg/Kg		06/30/23 12:25	07/01/23 09:03	1	
Ethylbenzene	<0.000562	U	0.00199	0.000562	mg/Kg		06/30/23 12:25	07/01/23 09:03	1	
m-Xylene & p-Xylene	<0.00100	U	0.00398	0.00100	mg/Kg		06/30/23 12:25	07/01/23 09:03	1	
o-Xylene	< 0.000342	U	0.00199	0.000342	mg/Kg		06/30/23 12:25	07/01/23 09:03	1	
Xylenes, Total	<0.00100	U	0.00398	0.00100	mg/Kg		06/30/23 12:25	07/01/23 09:03	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa	
4-Bromofluorobenzene (Surr)	141	S1+	70 - 130				06/30/23 12:25	07/01/23 09:03	1	
1,4-Difluorobenzene (Surr)	86		70 - 130				06/30/23 12:25	07/01/23 09:03	1	

Method: TAL SOP Total BTEX -	Total BTEX Cal	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00398	0.00100	mg/Kg			07/03/23 01:44	1
Method: SW846 8015 NM - Dies	el Range Organ	ics (DRO) (G	SC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	17.5	J	49.9	15.0	mg/Kg			07/03/23 11:34	1
	esel Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	17.5	J *1 B	49.9	15.0	mg/Kg		07/01/23 10:26	07/02/23 17:51	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<15.0	U	49.9	15.0	mg/Kg		07/01/23 10:26	07/02/23 17:51	1
C10-C28)									

Eurofins Midland

Lab Sample ID: 880-30229-10
Matrix: Solid

Matrix: Solid

Job ID: 880-30229-1 SDG: Eddy County, NM

Lab Sample ID: 880-30229-11

Client Sample ID: SFL-1-S-1'

Project/Site: Big Papi Fed Com 002H

Date Collected: 06/28/23 14:00 Date Received: 06/30/23 11:30

Client: ARCADIS US Inc

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		07/01/23 10:26	07/02/23 17:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	123		70 - 130				07/01/23 10:26	07/02/23 17:51	1
o-Terphenyl	108		70 - 130				07/01/23 10:26	07/02/23 17:51	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	65.8		5.00	0.395	mg/Kg			06/30/23 19:24	1

Client Sample ID: SFL-1-S-2'

Date Collected: 06/28/23 14:30

Date Received: 06/30/23 11:30

Method: SW846 8021B - Volati	le Organic Comp	ounds (GC))						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000381	U	0.00198	0.000381	mg/Kg		06/30/23 12:25	07/01/23 09:29	1
Toluene	<0.000451	U	0.00198	0.000451	mg/Kg		06/30/23 12:25	07/01/23 09:29	1
Ethylbenzene	<0.000559	U	0.00198	0.000559	mg/Kg		06/30/23 12:25	07/01/23 09:29	1
m-Xylene & p-Xylene	<0.00100	U	0.00396	0.00100	mg/Kg		06/30/23 12:25	07/01/23 09:29	1
o-Xylene	<0.000341	U	0.00198	0.000341	mg/Kg		06/30/23 12:25	07/01/23 09:29	1
Xylenes, Total	<0.00100	U	0.00396	0.00100	mg/Kg		06/30/23 12:25	07/01/23 09:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	145	S1+	70 - 130				06/30/23 12:25	07/01/23 09:29	1
1,4-Difluorobenzene (Surr)	89		70 - 130				06/30/23 12:25	07/01/23 09:29	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			07/03/23 01:44	1

Method: SW846 8015 NM - Diesel R	ange Organ	ics (DRO) (G	C)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<15.0	U	49.9	15.0	mg/Kg			07/03/23 11:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<15.0	U *1	49.9	15.0	mg/Kg		07/01/23 10:26	07/02/23 18:16	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<15.0	U	49.9	15.0	mg/Kg		07/01/23 10:26	07/02/23 18:16	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		07/01/23 10:26	07/02/23 18:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	129		70 - 130				07/01/23 10:26	07/02/23 18:16	1
o-Terphenyl	114		70 - 130				07/01/23 10:26	07/02/23 18:16	1
- Method: EPA 300.0 - Anions, Ion	Chromatograp	ohy - Solubl	e						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	62.4		4.95	0.391	mg/Kg			06/30/23 19:41	1

5

Client: ARCADIS US Inc Project/Site: Big Papi Fed Com 002H

Method: 8021B - Volatile Organic Compounds (GC) Matrix: Solid

•				Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		5
880-30229-1	N-1-S-1'	115	80		
880-30229-1 MS	N-1-S-1'	137 S1+	108		6
880-30229-1 MSD	N-1-S-1'	122	83		
880-30229-2	E-1-S-1'	128	79		
880-30229-3	S-1-S-1'	138 S1+	86		
880-30229-4	W-1-S-1'	150 S1+	90		8
880-30229-5	NFL-1-S-1'	126	79		
880-30229-6	NFL-1-S-2'	131 S1+	89		0
880-30229-7	NFL-2-S-1'	133 S1+	88		3
880-30229-8	NFL-2-S-2'	144 S1+	86		
880-30229-9	NFL-3-S-1'	140 S1+	77		
880-30229-10	NFL-3-S-2'	135 S1+	87		
880-30229-11	SFL-1-S-1'	141 S1+	86		
880-30229-12	SFL-1-S-2'	145 S1+	89		
LCS 880-56697/1-A	Lab Control Sample	109	84		
LCSD 880-56697/2-A	Lab Control Sample Dup	116	80		
MB 880-56654/5-A	Method Blank	71	87		13
MB 880-56697/5-A	Method Blank	75	80		
0					

Surrogate Legend

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

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

Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-30229-1	N-1-S-1'	85	91	
880-30229-2	E-1-S-1'	78	83	
880-30229-3	S-1-S-1'	121	107	
880-30229-3 MS	S-1-S-1'	129	101	
880-30229-3 MSD	S-1-S-1'	122	98	
880-30229-4	W-1-S-1'	129	115	
880-30229-5	NFL-1-S-1'	126	111	
880-30229-6	NFL-1-S-2'	126	112	
880-30229-7	NFL-2-S-1'	126	109	
880-30229-8	NFL-2-S-2'	127	111	
880-30229-9	NFL-3-S-1'	119	105	
880-30229-10	NFL-3-S-2'	127	111	
880-30229-11	SFL-1-S-1'	123	108	
880-30229-12	SFL-1-S-2'	129	114	
LCS 880-56757/2-A	Lab Control Sample	98	87	
LCS 880-56820/2-A	Lab Control Sample	66 S1-	74	
LCSD 880-56757/3-A	Lab Control Sample Dup	121	108	
LCSD 880-56820/3-A	Lab Control Sample Dup	79	90	
MB 880-56757/1-A	Method Blank	119	109	
MB 880-56820/1-A	Method Blank	110	120	
Surrogate Legend				

Eurofins Midland

Job ID: 880-30229-1

Prep Type: Total/NA

SDG: Eddy County, NM

Surrogate Summary

Client: ARCADIS US Inc Project/Site: Big Papi Fed Com 002H 1C0 = 1-Chlorooctane OTPH = o-Terphenyl Job ID: 880-30229-1 SDG: Eddy County, NM

Client: ARCADIS US Inc Project/Site: Big Papi Fed Com 002H

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-56654/5-	A						Client Sa	ample ID: Metho	od Blank
Matrix: Solid								Prep Type:	Total/NA
Analysis Batch: 56649								Prep Batc	h: 56654
	N	B MB							
Analyte	Resi	It Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00038	35 U	0.00200	0.000385	mg/Kg		06/30/23 08:34	06/30/23 12:27	1
Toluene	<0.0004	56 U	0.00200	0.000456	mg/Kg		06/30/23 08:34	06/30/23 12:27	1
Ethylbenzene	<0.00056	65 U	0.00200	0.000565	mg/Kg		06/30/23 08:34	06/30/23 12:27	1
m-Xylene & p-Xylene	<0.0010)1 U	0.00400	0.00101	mg/Kg		06/30/23 08:34	06/30/23 12:27	1
o-Xylene	< 0.00034	14 U	0.00200	0.000344	mg/Kg		06/30/23 08:34	06/30/23 12:27	1
Xylenes, Total	<0.0010)1 U	0.00400	0.00101	mg/Kg		06/30/23 08:34	06/30/23 12:27	1
					0 0				
	N	IB MB							
Surrogate	%Recove	ry Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)		71	70 - 130				06/30/23 08:34	06/30/23 12:27	1
1,4-Difluorobenzene (Surr)	à	37	70 - 130				06/30/23 08:34	06/30/23 12:27	1
Lab Sample ID: MB 880-56697/5-	A						Client Sa	ample ID: Metho	od Blank
Matrix: Solid								Prep Type:	Total/NA
Analysis Batch: 56649								Prep Batc	h: 56697
	N	B MB							
Analyte	Resu	It Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00038	35 U	0.00200	0.000385	mg/Kg		06/30/23 12:25	07/01/23 02:53	1
Toluene	<0.0004	56 U	0.00200	0.000456	mg/Kg		06/30/23 12:25	07/01/23 02:53	1
Ethylbenzene	<0.00056	65 U	0.00200	0.000565	mg/Kg		06/30/23 12:25	07/01/23 02:53	1
m-Xylene & p-Xylene	<0.0010)1 U	0.00400	0.00101	mg/Kg		06/30/23 12:25	07/01/23 02:53	1
o-Xylene	< 0.00034	14 U	0.00200	0.000344	mg/Kg		06/30/23 12:25	07/01/23 02:53	1
Xylenes, Total	<0.0010)1 U	0.00400	0.00101	mg/Kg		06/30/23 12:25	07/01/23 02:53	1
•									
	N	IB MB							
Surrogate	%Recove	ry Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	:	75	70 - 130				06/30/23 12:25	07/01/23 02:53	1
1,4-Difluorobenzene (Surr)	ė	30	70 - 130				06/30/23 12:25	07/01/23 02:53	1
_ Lab Sample ID: LCS 880-56697/1	I-A						Client Sample	ID: Lab Control	Sample
Matrix: Solid								Prep Type:	Total/NA
Analysis Batch: 56649								Prep Batc	h: 56697
-			Spike	LCS LCS	5			%Rec	
Analyte			Added	Result Qua	lifier Un	it	D %Rec	Limits	
Benzene			0.100	0.1055	mg	/Kg	105	70 - 130	
Toluene			0.100	0.1035	mg	/Kg	104	70 - 130	
Ethylbenzene			0.100	0.1006	mg	/Kg	101	70 - 130	
m-Xylene & p-Xylene			0.200	0.1958	mg	/Kg	98	70 - 130	
o-Xvlene			0.100	0.1026	ma	/Ka	103	70 - 130	
,					5	5			
	LCS L	CS							
Surrogate	%Recovery Q	ualifier	Limits						
4-Bromofluorobenzene (Surr)	109		70 - 130						
1,4-Difluorobenzene (Surr)	84		70 - 130						
- Lab Sample ID: LCSD 880-56697	″ /2-∆					Clien	t Sample ID: I	ab Control Sam	nle Dun
Matrix: Solid						Glieff			Total/NA
Analysis Batch: 56649								Bron Bate	h. 56607
Analysis Dalun. 30043			Spiko		n.			«Rec	11. 3003/ חפס
Analyte				Result Our	lifior Un	it		limite DD	n Limit
-mary to			Auucu	nesult Qua			D /onec		

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Job ID: 880-30229-1 SDG: Eddy County, NM

Benzene

0.1244

mg/Kg

124

70 - 130

0.100

35

16

Client: ARCADIS US Inc Project/Site: Big Papi Fed Com 002H

Job ID: 880-30229-1 SDG: Eddy County, NM

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

Lab Sample ID: LCSD 880-56 Matrix: Solid	6697/2-A					Clie	nt San	nple ID:	Lab Contro Prep 1	I Sampl	e Dup tal/NA
Analysis Batch: 56649									Prep	Batch:	56697
			Spike	LCSD	LCSD		_	~ -	%Rec		RPD
Analyte		<u> </u>	Added	Result	Qualifier		D	%Rec	Limits	RPD	Limi
			0.100	0.1184		mg/Kg		118	70 - 130	13	35
			0.100	0.1189		mg/Kg		119	70 - 130	17	
			0.200	0.2332		mg/Kg		117	70 - 130	17	30
0-Xylene			0.100	0.1165		mg/Kg		110	70 - 130	14	33
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	116		70 - 130								
1,4-Difluorobenzene (Surr)	80		70 - 130								
- 	MO							~	lient Comm		
Lab Sample ID: 880-30229-1 Matrix: Solid								U U	nent Samp	ie iD: N-	1-3-1 tal/N/
Analysis Batch: 56649									Prep	Batch:	56607
Analysis Batch. 50049	Sample	Sample	Sniko	МЗ	MS				%Pec	Datch.	50057
Analyte	Result	Qualifier		Rosult	Qualifier	Unit	п	%Rec	/intec		
Renzene	<0.000388		0.0996	0 1250	quamer	ma/Ka		125	70 130		
Toluene	<0.000460	U U	0.0996	0.1200		ma/Ka		120	70 130		
Ethylbenzene	<0.000570	U	0.0996	0 1138		ma/Ka		114	70 - 130		
m-Xylene & n-Xylene	<0.000070	U	0.000	0.2210		mg/Kg		111	70 130		
o-Xvlene	< 0.000347	U	0.0996	0.1148		ma/Ka		115	70 - 130		
			0.0000	0					10-100		
Surrogato	MS % Pocovoru	MS Qualifier	Limite								
4-Bromofluorobenzene (Surr)		S1+	70 130								
1 4-Difluorobenzene (Surr)	108	07.	70 - 130								
Lab Sample ID: 880-30229-1	MSD							С	lient Samp	le ID: N-	1-S-1
Matrix: Solid									Prep 1	Type: To	tal/NA
Analysis Batch: 56649									Prep	Batch:	56697
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Benzene	<0.000388	U	0.0990	0.1225		mg/Kg		124	70 - 130	2	35
Toluene	<0.000460	U	0.0990	0.1183		mg/Kg		119	70 - 130	2	35
Ethylbenzene	<0.000570	U	0.0990	0.1165		mg/Kg		118	70 - 130	2	35
m-Xylene & p-Xylene	< 0.00102	U	0.198	0.2273		mg/Kg		115	70 - 130	3	35
o-Xylene	<0.000347	U	0.0990	0.1150		mg/Kg		116	70 - 130	0	35
	MSD	MSD									
Surrogate	%Recoverv	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	122		70 - 130								
1,4-Difluorobenzene (Surr)	83		70 - 130								
-											
Aethod: 8015B NM - Dies	sel Range O	ganics (DRO) (GC)								
Lab Sample ID: MB 880-5675	57/1-A							Client S	Sample ID:	Method	Blank
Matrix: Solid									Prep 1	Type: To	tal/NA

Prep Type: Total/NA Prep Batch: 56757

Analysis Batch: 56779								Prep Batch	n: 56757
	MB	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	16.02	J	50.0	15.0	mg/Kg		07/01/23 10:26	07/02/23 11:26	1
(GRO)-C6-C10									

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Released to Imaging: 11/3/2023 1:36:41 PM

Client: ARCADIS US Inc Project/Site: Big Papi Fed Com 002H Job ID: 880-30229-1

SDG: Eddy County, NM

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

Lab Sample ID: MB 880-56757/	1-A							Client S	Sample ID: I	Methoc	d Blank
Matrix: Solid									Prep T	ype: To	otal/NA
Analysis Batch: 56779									Prep	Batch	: 56757
-		MB MB									
Analyte	Re	sult Qualifier	RL		MDL Un	it	DF	repared	Analyz	ed	Dil Fac
Diesel Range Organics (Over	<1	15.0 U	50.0		15.0 mg	J/Kg	07/0	01/23 10:2	6 07/02/23	11:26	1
OII Range Organics (Over C28-C36)	<1	15.0 U	50.0		15.0 mg	g/Kg	07/	01/23 10:2	.6 07/02/23 ²	11:26	1
		MR MR									
Surrogate	%Recov	verv Qualifier	l imits				,	Pronarod	Δnalvz	har	Dil Fac
1-Chlorooctane		110 Qualifier	70 130				07/	01/23 10·2	26 07/02/23	11.26	1
o-Ternhenyl		109	70 130				07/	01/23 10:2	6 07/02/23	11.26	1
		100	70 - 700				0///	71720 10.2	0 07/02/20	11.20	1
Lab Sample ID: LCS 880-56757	7/ <mark>2-A</mark>						Clien	t Sampl	e ID: Lab Co	ontrol §	Sample
Matrix: Solid									Pren T	vpe: To	otal/NA
Analysis Batch: 56779									Pren	Batch	. 56757
Analysis Baton. corre			Spike	LCS	LCS				%Rec	Batom	
Analyte			bebbA	Result	Oualifie	r Unit	п	%Rec	Limits		
Gasoline Range Organics	,		1000	1015	Quanne			102	70 130		
(GRO)-C6-C10			1000	1015		ilig/itg		102	70 - 150		
Diesel Range Organics (Over			1000	995.4		ma/Ka		100	70 - 130		
C10-C28)						5. 5					
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	98		70 - 130								
o-Terphenyl	87		70 - 130								
Lab Completing 10, LCCD 000 EC7	7/0 A					01			Lab Cantra		
Lab Sample ID: LCSD 880-567	57/3-A					Clie	ent Sar	nple ID:	Lab Contro	I Samp	ole Dup
Lab Sample ID: LCSD 880-5675 Matrix: Solid	57/3- A					Cli	ent Sar	nple ID:	Lab Contro Prep T	I Samp ype: To	ole Dup otal/NA
Lab Sample ID: LCSD 880-567 Matrix: Solid Analysis Batch: 56779	57/3-A					Cli	ent Sar	nple ID:	Lab Contro Prep T Prep	I Samp ype: To Batch:	ole Dup otal/NA : 56757
Lab Sample ID: LCSD 880-567 Matrix: Solid Analysis Batch: 56779	57/3-A		Spike	LCSD	LCSD	Cliv	ent Sar	nple ID:	Lab Contro Prep T Prep %Rec	I Samp ype: To Batch	ole Dup otal/NA : 56757 RPD
Lab Sample ID: LCSD 880-5675 Matrix: Solid Analysis Batch: 56779 Analyte	57/3-A		Spike Added	LCSD Result	LCSD Qualifie	Cli	ent Sar	%Rec	Lab Contro Prep T Prep %Rec Limits	I Samp Type: To Batch	otal/NA : 56757 RPD Limit
Lab Sample ID: LCSD 880-5675 Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics	57/3-A		Spike Added 1000	LCSD Result 728.5	LCSD Qualifie	Cliv rUnit mg/Kg	ent Sar D	%Rec 73	Lab Contro Prep T %Rec Limits 70 - 130	I Samp Type: To Batch RPD 33	ble Dup otal/NA : 56757 RPD Limit 20
Lab Sample ID: LCSD 880-5674 Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diagol Bargo Organics (Over	57/3-A		Spike Added 1000	LCSD Result 728.5	LCSD Qualifie *1	rUnitmg/Kg	ent Sar	%Rec 73	Lab Contro Prep T Prep %Rec Limits 70 - 130	i Samp ype: To Batch RPD 33	ble Dup otal/NA : 56757 RPD Limit 20
Lab Sample ID: LCSD 880-5674 Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	57/3-A		Spike Added 1000	LCSD Result 728.5 1138	LCSD Qualifie *1	r Unit mg/Kg mg/Kg	ent Sar	%Rec 73	Lab Contro Prep T Prep %Rec Limits 70 - 130 70 - 130	I Samp Type: To Batch MPD 33	ble Dup otal/NA : 56757 RPD Limit 20 20
Lab Sample ID: LCSD 880-5674 Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	57/3-A		Spike Added 1000 1000	LCSD Result 728.5 1138	LCSD Qualifie *1	r <u>Unit</u> mg/Kg mg/Kg	ent Sar	%Rec 73 114	Lab Contro Prep T %Rec Limits 70 - 130 70 - 130	I Samp Type: To Batch RPD 33 13	ble Dup otal/NA : 56757 RPD Limit 20 20
Lab Sample ID: LCSD 880-5679 Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	57/3-A	LCSD	Spike Added 1000 1000	LCSD Result 728.5 1138	LCSD Qualifier *1	r <u>Unit</u> mg/Kg mg/Kg	ent Sar	%Rec 73 114	Lab Contro Prep T %Rec Limits 70 - 130 70 - 130	I Samp Type: To Batch RPD 33 13	ble Dup otal/NA : 56757 RPD Limit 20 20
Lab Sample ID: LCSD 880-5679 Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	57/3-A LCSD %Recovery	LCSD Qualifier	Spike Added 1000 1000 Limits	LCSD Result 728.5 1138	LCSD Qualifier *1	Cli <u>r</u> Unit mg/Kg mg/Kg	ent Sar	%Rec 73 114	Lab Contro Prep T %Rec Limits 70 - 130 70 - 130	I Samp Type: Tr Batch <u>RPD</u> 33 13	ble Dup otal/NA : 56757 RPD Limit 20 20
Lab Sample ID: LCSD 880-5679 Matrix: Solid Analysis Batch: 56779 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	57/3-A LCSD %Recovery 121	LCSD Qualifier	Spike Added 1000 1000 Limits 70 - 130	LCSD Result 728.5 1138	LCSD Qualifier *1	Cli r <u>Unit</u> mg/Kg mg/Kg	ent Sar	%Rec 73 114	Lab Contro Prep T %Rec Limits 70 - 130 70 - 130	I Samp ype: To Batch RPD 33 13	ble Dup otal/NA : 56757 RPD Limit 20 20
Lab Sample ID: LCSD 880-5673 Matrix: Solid Analysis Batch: 56779 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl	LCSD %Recovery 121 108	LCSD Qualifier	Spike Added 1000 1000 1000 1000 1000 1000 1000 1000	LCSD Result 728.5 1138	LCSD Qualifie *1	Cli <u>r</u> <u>Unit</u> mg/Kg mg/Kg	ent Sar	%Rec 73 114	Lab Contro Prep T %Rec Limits 70 - 130 70 - 130	I Samp ype: To Batch 33 13	ble Dup otal/NA : 56757 RPD Limit 20 20
Lab Sample ID: LCSD 880-5679 Matrix: Solid Analysis Batch: 56779 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl	LCSD %Recovery 121 108	LCSD Qualifier	Spike Added 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000	LCSD Result 728.5 1138	LCSD Qualifie *1	Cli <u>r</u> <u>Unit</u> mg/Kg mg/Kg	ent Sar	%Rec 73 114	Lab Contro Prep T %Rec Limits 70 - 130 70 - 130	I Samp ype: To Batch 33 13	ble Dup otal/NA : 56757 RPD Limit 20 20
Lab Sample ID: LCSD 880-5673 Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-30229-3 Mate	57/3-A LCSD %Recovery 121 108 S	LCSD Qualifier	Spike Added 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000	LCSD Result 728.5 1138	LCSD Qualifier *1	Cli r <u>Unit</u> mg/Kg mg/Kg	ent Sar	%Rec 73 114	Lab Contro Prep T Prep %Rec Limits 70 - 130 70 - 130	I Samp ype: To Batch 33 13	Die Dup otal/NA : 56757 RPD Limit 20 20
Lab Sample ID: LCSD 880-5673 Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-30229-3 Matrix: Solid	57/3-A LCSD %Recovery 121 108 S	LCSD Qualifier	Spike Added 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000	LCSD Result 728.5 1138	LCSD Qualifie *1	r Unit mg/Kg mg/Kg	ent Sar	%Rec 73 114	Lab Contro Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130	I Samp ype: To Batch 33 13 Ie ID: S ype: To	ble Dup otal/NA : 56757 RPD <u>Limit</u> 20 20 S-1-S-1' otal/NA
Lab Sample ID: LCSD 880-5673 Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-30229-3 Matrix: Solid Analysis Batch: 56779	LCSD %Recovery 121 108 S	LCSD Qualifier	Spike Added 1000 1000 1000 1000 0.1000 Dimits 70 - 130 70 - 130	LCSD Result 728.5 1138	LCSD Qualifier *1	Cli	ent Sar	%Rec 73 114	Lab Contro Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130	I Samp ype: Tr Batch 33 13 Ie ID: S ype: To Batch:	Die Dup otal/NA : 56757 RPD
Lab Sample ID: LCSD 880-5673 Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-30229-3 Matrix: Solid Analysis Batch: 56779	57/3-A <i>LCSD</i> %Recovery 121 108 S Sample	LCSD Qualifier	Spike Added 1000	LCSD Result 728.5 1138 MS	LCSD Qualifier *1	Cli	ent Sar	%Rec 73 114	Lab Contro Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Xiient Sampl Prep T Prep T Prep %Rec	I Samp ype: To Batch 33 13 Ie ID: S ype: To Batch:	Die Dup otal/NA : 56757 RPD
Lab Sample ID: LCSD 880-5673 Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-30229-3 Matrix: Solid Analysis Batch: 56779 Analyte	57/3-A <i>LCSD</i> %Recovery 121 108 S Sample Result	LCSD Qualifier	Spike Added 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 50 - 130 70 - 130 Spike Added	LCSD Result 728.5 1138 MS Result	LCSD Qualifier *1 MS Qualifier	r Unit mg/Kg mg/Kg	ent Sar D_	%Rec 73 114 %Rec 0	Lab Contro Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130	I Samp ype: To Batch RPD 33 13 13 Ie ID: S ype: To Batch:	Die Dup otal/NA : 56757 RPD Limit 20 20 20 S-1-S-1' otal/NA : 56757
Lab Sample ID: LCSD 880-5673 Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-30229-3 Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics	57/3-A <i>LCSD</i> %Recovery 121 108 S Sample Result 18.0	LCSD Qualifier Sample Qualifier J F1 F2 *1	Spike Added 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 Limits 70 - 130 70 - 130 Spike Added 999	LCSD Result 728.5 1138 MS Result 1332	LCSD Qualifier *1 MS Qualifier F1	r Unit mg/Kg mg/Kg	ent Sar D_	%Rec 73 114	Lab Contro Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Xilient Samp Prep T Prep %Rec Limits 70 - 130	I Samp ype: To Batch RPD 33 13 14 15 15 15 15 15 15 15 15 15 15	Die Dup otal/NA : 56757 RPD Limit 20 20 20 S-1-S-1' otal/NA : 56757
Lab Sample ID: LCSD 880-5673 Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-30229-3 Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10	57/3-A <i>LCSD</i> %Recovery 121 108 S Sample Result 18.0	LCSD Qualifier Qualifier J F1 F2 *1 B	Spike Added 1000 1000 1000 Limits 70 - 130 70 - 130 Spike Added 999	LCSD Result 728.5 1138 MS Result 1332	LCSD Qualified *1 MS Qualified F1	r Unit mg/Kg mg/Kg	ent Sar D_	%Rec 73 114 %Rec 131	Lab Contro Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 20 - 130 20 - 130 20 - 130	I Samp ype: To Batch RPD 33 13 13 Ie ID: S ype: To Batch: 	S-1-S-1' otal/NA : 56757 RPD Limit 20 20 20 S-1-S-1' otal/NA : 56757
Lab Sample ID: LCSD 880-5675 Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-30229-3 MS Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	57/3-A <i>LCSD</i> %Recovery 121 108 S S Sample Result 18.0 <15.0	LCSD Qualifier Qualifier J F1 F2 *1 B U F1	Spike Added 1000 1000 1000 Limits 70 - 130 70 - 130 Spike Added 999 999	LCSD Result 728.5 1138 MS Result 1332	LCSD Qualifier *1 MS Qualifier F1	r Unit mg/Kg mg/Kg	ent Sar D_	%Rec 73 114 %Rec 131 133	Lab Contro Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Client Sampl Prep T Prep %Rec Limits 70 - 130 70 - 130	I Samp ype: To Batch 33 13 Ie ID: S ype: To Batch:	Die Dup otal/NA : 56757 RPD Limit 20 20 20 S-1-S-1' otal/NA : 56757
Lab Sample ID: LCSD 880-5675 Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-30229-3 Mit Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	57/3-A <i>LCSD</i> %Recovery 121 108 S S Sample Result 18.0 <15.0	LCSD Qualifier Qualifier J F1 F2 *1 B U F1	Spike Added 1000 1000 1000 Limits 70 - 130 70 - 130 Spike Added 999 999	LCSD Result 728.5 1138 MS Result 1332	LCSD Qualifie *1 MS Qualifie F1 F1	r Unit mg/Kg mg/Kg	ent Sar D_	%Rec 73 114 %Rec 131 133	Lab Contro Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Client Sampl Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130	I Samp ype: To Batch 33 13 Ie ID: S ype: To Batch	Die Dup otal/NA : 56757 RPD Limit 20 20 20 S-1-S-1' otal/NA : 56757
Lab Sample ID: LCSD 880-5675 Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-30229-3 Mit Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	57/3-A <i>LCSD</i> %Recovery 121 108 S S Sample Result 18.0 <15.0 MS	LCSD Qualifier Qualifier J F1 F2 *1 B U F1 MS	Spike Added 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 Limits 70 - 130 Spike Added 999 999	LCSD Result 728.5 1138 MS Result 1332	LCSD Qualifie *1 MS Qualifie F1 F1	r Unit mg/Kg mg/Kg	ent Sar D_	%Rec 73 114 0	Lab Contro Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 2lient Sampl Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130	I Samp ype: To Batch 33 13 Ie ID: S ype: To Batch:	Die Dup otal/NA : 56757 RPD Limit 20 20 30 S-1-S-1' otal/NA : 56757
Lab Sample ID: LCSD 880-5675 Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-30229-3 Mit Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	57/3-A <i>LCSD</i> %Recovery 121 108 S S Sample Result 18.0 <15.0 MS %Recovery	LCSD Qualifier J F1 F2 *1 B U F1 MS Qualifier	Spike Added 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 Limits 70 - 130 Spike Added 999 999 999 999 999 999	LCSD Result 728.5 1138 MS Result 1332 1325	LCSD Qualifie *1 MS Qualifie F1 F1	r Unit mg/Kg mg/Kg	ent Sar D_	%Rec 73 114 114 %Rec 131 131 133	Lab Contro Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 2lient Samp Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130	I Samp ype: To Batch 33 13 Ie ID: S ype: To Batch	Die Dup otal/NA : 56757 RPD Limit 20 20 S-1-S-1' otal/NA : 56757
Lab Sample ID: LCSD 880-5673 Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 880-30229-3 Matrix: Solid Analysis Batch: 56779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	57/3-A <i>LCSD</i> %Recovery 121 108 S S Sample Result 18.0 <15.0 MS %Recovery 129	LCSD Qualifier J F1 F2 *1 B U F1 MS Qualifier	Spike Added 1000 1000 1000 1000 Limits 70 - 130 Spike Added 999 999 999 999 999 970 - 130	LCSD Result 728.5 1138 MS Result 1332 1325	LCSD Qualifiei *1 MS Qualifiei F1 F1	r Unit mg/Kg mg/Kg	ent Sar D_	%Rec 73 114 %Rec 131 133	Lab Contro Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Prep T Prep %Rec Limits 70 - 130 70 - 130	I Samp ype: To Batch 33 13 Ie ID: S ype: To Batch	Die Dup otal/NA : 56757 RPD Limit 20 20 S-1-S-1' otal/NA : 56757

Client: ARCADIS US Inc Project/Site: Big Papi Fed Com 002H

Job ID: 880-30229-1 SDG: Eddy County, NM

Matrix: Solid													Pron T	vne: To	tal/N4
Analysis Patch: 56779													Prep 1	Patch:	56757
Analysis Batch. 56779	Sample	Sam	nla	Snike		Men	Men						% Rec	Datch.	30/3
Analyta	Sample	Sam	pie	Spike		Booult	NISD Out	lifior	Unit		D	% Bee	%Rec	DDD	KPL Limi
	Result	Qua		Added		Result		imer	Unit		_	%Rec			
	16.0	JFI	FZ I	999		997.2	FΖ		mg/Kg			90	70 - 130	29	2
Diesel Bange Organics (Over	<15.0	U F1		999		1241			ma/Ka			124	70 - 130	7	2
C10-C28)	10.0	011		000		1211			ingrig			121	10-100		-
	MSD	MSD)												
Surrogate	%Recovery	Qua	lifier	Limits											
1-Chlorooctane	122			70 - 130											
o-Terphenyl	98			70 - 130											
Lab Sample ID: MB 880-56820	/1-A											Client Sa	ample ID: I	Method	Blan
Matrix: Solid													Pren T	vne: To	tal/N
Analysis Batch: 56816													Pren	Batch	5682
Analysis Buton. 00010		MR	MB										iieh	Suton.	5502
Analyte	D		Qualifier		PI		мпі	Unit		п	р.	onared	Analyz	ha	
Casolino Pango Organico	N	0 57			50.0		15.0	malka		<u> </u>	07/01	3/23 08.00	07/03/02		Dird
(GRO)-C6-C10	ï	9.37	J		50.0		10.0	mg/⊼g			01/0	5/23 00:00	01/03/23	01.00	
Diesel Range Organics (Over	<	<15.0	U		50.0		15.0	ma/Ka			07/03	3/23 08:00	07/03/23	08:16	
C10-C28)								5 5							
Oll Range Organics (Over C28-C36)	1	9.88	J		50.0		15.0	mg/Kg			07/03	3/23 08:00	07/03/23	08:16	
		мв	MB												
Surrogate	%Reco	verv	<u>–</u> Qualifier	Lim	its						PI	repared	Analvz	ed	Dil Fa
1-Chlorooctane		110			130					-	07/0	3/23 08·00	07/03/23	08.16	2
o-Terphenyl		120		70 -	130						07/0	3/23 08:00	07/03/23	08:16	
-															
Lab Sample ID: LCS 880-56820	0/2-A									Cli	ient	Sample	ID: Lab Co	ontrol S	ampl
Matrix: Solid													Prep T	ype: To	otal/N
Analysis Batch: 56816													Prep	Batch:	5682
-				Spike		LCS	LCS						%Rec		
Analyte				Added		Result	Qua	lifier	Unit		D	%Rec	Limits		
Gasoline Range Organics				1000		820.5			mg/Kg		_	82	70 - 130		
(GRO)-C6-C10															
Diesel Range Organics (Over C10-C28)				1000		895.9			mg/Kg			90	70 - 130		
	LCS	LCS													
Surrogate	%Recovery	Qua	lifier	Limits											
1-Chlorooctane	66	S1-		70 - 130											
o-Terphenyl	74			70 - 130											
Lab Sample ID: LCSD 880-568	20/3-A								Cli	ent S	Sam	ple ID: I	ab Contro	l Samn	le Du
Matrix: Solid													Prep T	vpe: To	tal/N
Analysis Batch: 56816													Pren	Batch	5682
Analysis Baton. 00010				Snike		LCSD	LCS	D					%Rec	Suton.	RP
Analyte				babba		Result	Qual	- lifier	Unit		р	%Rec	l imite	RPD	Lim
Gasoline Range Organics				1000		821.8	aud		ma/Ka		-	82	70 130	0	
(GRO)-C6-C10				1000		021.0			iiig/Ky			02	10 - 130	0	2
				1000		051 4			malka			05	70 130	6	2

C10-C28)

Client: ARCADIS US Inc

Job ID: 880-30229-1 SDG: Eddy County, NM

Project/Site: Big Papi Fed Com 002H

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

Analysis Batch: 56816 Prop Batch: 56820 LCSD LCSD Sarrogate Mecovery Qualifier To: 130 Sarrogate Mecovery Qualifier To: 130 Sarrogate Method: 300.0 - Anions, ion Chromatography Lab Sample ID: MB 880-367041-A MB MB Result Qualifier Ru Mol. Unit D Prepared Analyzed DI Fac Analysie Result Qualifier Ru Mol. Unit D Prepared Analyzed DI Fac Chindide 40.395 U 5.00 0.385 mg/kg D Prepared Analyzed DI Fac Chindide Result Qualifier Ru Mol. Unit D Prepared Analyzed DI Fac Chindide Result Qualifier Ru Chion Sample D: LoS 806-56704/3-A Client Sample D: LoS D 806-56704/3-A Sample Client Sample D: LoS D 806-56704/3-A Result Qualifier Unit D %Rec Result Prop Type: Soluble Analysis Batch: 56713 Sample Sable Added Result Qualifier Unit	Lab Sample ID: LCSD 880-56820 Matrix: Solid)/3-A						Cli	ent Sar	nple ID:	Lab Contro Prep 1	ol Samp Type: To	le Dup otal/NA
LCSD LCSD LCSD Limits -Torobanding 70 70 70 70 - Torobanding 90 70 70 70 Lab Sample ID: MB 890-66704/1-A Matrix: Solid Prepared Analysis Analysis Analysis D Prepared Analysis 10 70	Analysis Batch: 56816										Prep	Batch:	56820
Surrogate XRecovery 73 Qualifier 70:130 Limits 70:130 Orizontanie - Chronoctanie - Strephenyl 30 70:130 Wethod: 300.0 - Anions, Ion Chromatography Client Sample ID: Method Blank Matrix: Solid Analysis Batch: 56713 Client Sample ID: Method Blank Prop Type: Soluble - Matrix: Solid Analysis Batch: 56713 Analyse Choode Result Qualifier Rt MOL Unit D Prepared 06/30/23 17:45 Analysis 06/30/23 17:45 DI Fac 06/30/23 17:45 DI Fac 06/30/20 20:10 DI Fac 06/30/20 20:10		LCSD	LCSD										
International Characteriane Propheny Propheny Propheny Propheny Lab Sample ID: MB 800-56704/1-A Client Sample ID: MB 800-56704/1-A Client Sample ID: MB 800-56704/1-A Propheny Propheny Propheny Propheny D D D D <th>Surrogate</th> <th>%Recoverv</th> <th>Qualifier</th> <th>Limits</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	Surrogate	%Recoverv	Qualifier	Limits									
or Terphenyr 90 70.130 Method: 300.0 - Anions, ion Chromatography Lab Sample ID: MB 880-56704/1-A Matrix: Solid Client Sample ID: Method Blank Prop Type: Soluble Analysis Batch: 56713 MB MB Analysis Batch: 56713 Client Sample ID: LoS 680-56704/2-A Matrix: Solid MB MB Analysis Batch: 56713 Analysis Batch: 56713 MB MB Analysis Batch: 56713 ME MB Analysis Batch: 56713 Client Sample ID: LoS 680-56704/2-A Matrix: Solid Analysis Batch: 56713 ME MA Analysis Batch: 56713 Spike Analysis LCS LCS Result Qualifier Unit mg/Kg D 97 %Rec Prop Type: Soluble Prop Type: Soluble Prop Type: Soluble Analysis Batch: 56713 Spike Analysis Client Sample ID: Lab Control Sample Du Matrix: Solid Analysis Batch: 56713 %Rec Prop Type: Soluble Analysis Batch: 56713 ME MB Analysis Batch: 56713 Analyse Chienide Spike Result Qualifier Kis MS MS Result Qualifier Mit MS MS MS %Rec Prop Type: Soluble Analysis Batch: 56713 Spike Analyse MS M	1-Chlorooctane	79		70 - 130	-								
Method: 200.0 - Anions, Ion Chromatography Lab Sample ID: MB 880-56704/1-A Matrix: Solid Client Sample ID: Method Blank Prep Type: Soluble Analysis Batch: S6713 MB MB Analysis Batch: Result Qualifier RL MDL Unit D Prep Type: Soluble Choride <0.395 gr/dk	o-Terphenvl	90		70 - 130									
Lab Sample ID: MB 880-56704/1-A Matrix: Solid Analysis Batch: 56713 MB MB Client Sample ID: Method Biank Prep Type: Soluble Analysis Batch: 56713 MB MB Analysis Batch: 56713 Analysis Batch: 56713 D Prepared Analyzed Dil Fac Lab Sample ID: LCS 880-56704/2-A Matrix: Solid Result Qualifier Result Qualifier Client Sample ID: Lab Control Sample Prep Type: Soluble Analysis Batch: 56713 Spike LCS LCS LCS MB MB NRec Imits Prepared NRec NRec Prep Type: Soluble Lab Sample ID: LCS 880-56704/3-A Matrix: Solid Added Result Qualifier Unit D %Rec NRec RPD Imits Prep Type: Soluble Lab Sample ID: LCSD 880-56704/3-A Spike LCS LCS LCS LCS MRec NRPC NRPC Prep Type: Soluble Analysis Batch: 56713 Spike LCS LCS LCS LCS LCS LCS LCS LCS Smple D: M-1-S-TI Prep Type: Soluble Analysis Batch: 56713 Spike Added Result Qualifier Added Result Qualifier RPD	Method: 300.0 - Anions, Ion	Chromat	ography										
Matrix: Solid Analysis Batch: 56713 Prep Type: Soluble Analyte Result Qualifier RL 0:00000 MDL 0:000 Unit 0:000000 D Prepared 00000023 17:45 Analyze 0000023 17:45 DIF Rec 0000023 17:45 Lab Sample ID: LCS 880-56704/2-A Matrix: Solid Analysis Batch: 56713 Result Qualifier NDL 0:000 Unit 0:000 D %Rec WRec Limits Client Sample ID: Lab Control Sample Du Wrep Type: Soluble Analyte Added Result Qualifier Unit 0:000 D %Rec 90:010 Limits Analyte Added Result Qualifier Unit 0:000 D %Rec 90:010 RPD Prep Type: Soluble Analyte Added Result Qualifier Unit 0:000 D %Rec 90:010 RPD Vrep Type: Soluble Analyte Added Result Qualifier Unit 0:000 D %Rec 90:010 RPD Vrep Type: Soluble Analyte Sample Sample Sample Sample Sample Sample MS MS Sist KRec RPD Vrep Type: Soluble Analyte Result Qualifier Added Result Qualifier Unit Mrits: Solid D %Rec Analyte Sample Sample Sample Sample Sample Sample MSD MSD MSD Vrec Analyte Result Qualifier Added Result	 Lab Sample ID: MB 880-56704/1-	- A								Client S	Sample ID:	Method	l Blank
Analysis Batch: 56713 MB MB Analyte Result Qualifier RL MDL Unit D Prepared Analyzed DII Fac Chloride <0.395	Matrix: Solid										Prep	Type: S	Soluble
MB Result Qualifier RL MDL Unit D Prepared Analyze Dil Face Chlorido <0.365	Analysis Batch: 56713												
Analyte Result Qualifier RL MDL Unit D Prepared Analyzed DI Fac Chiorida <0.395	-		MB MB										
Chloride <0.395	Analyte	R	esult Qualifier		RL		MDL Unit		D F	Prepared	Analyz	zed	Dil Fac
Lab Sample ID: LCS 880-56704/2-A Client Sample ID: Lab Control Sample Matrix: Solid Analysis Batch: 56713 Spike LCS LCS V=Rec Analysis Batch: 56713 Spike Added Result Qualifier Unit D %Rec Limits Choorde 250 242.9 mg/Kg D %Rec Limits Prep Type: Soluble Lab Sample ID: LCSD 880-56704/3-A Client Sample ID: Lab Control Sample Dup Parep Type: Soluble Prep Type: Soluble Prep Type: Soluble Analyte Added Result Qualifier Unit D %Rec RPD Limits Analyte Added Result Qualifier Added Result Qualifier Unit D %Rec Limits PD Limits Limits PD Limits Limits PD Limits <	Chloride	<(0.395 U		5.00	(0.395 mg/k	ζg			06/30/23	17:45	1
Matrix: Solid Analysis Batch: 56713 Spike LCS LCS LCS Matrix Prep Type: Soluble Analyte Added Result Qualifier Unit D %Rec Limits	Lab Sample ID: LCS 880-56704/2	2-A							Clien	t Sample	e ID: Lab C	ontrol S	Sample
Analysis Batch: 56713 Spike LCS LCS LCS LCS LCS Lmit D %Rec Analyte 250 242.9 mg/Kg 97 90.110 97 90.110 Lab Sample ID: LCSD 880-56704/3-A Client Sample ID: Lab Control Sample Dup Prep Type: Soluble Analyte Added Result Qualifier Unit D %Rec RPD Limits Prep Type: Soluble Analyte Added Result Qualifier Unit D %Rec RPD Limits	Matrix: Solid										Prep	Type: S	Soluble
AnalyteAddedResultQualifierUnitD%RecLimitsChloride250242.9mg/Kg9790.110010Lab Sample ID: LCSD 880-56704/3-A Matrix: SolidAnalysis Batch: 56713Client Sample ID: Lab Control Sample Dup Prep Type: SolubleAnalyteAddedResultQualifierUnitD%RecRPD LimitsAnalyteAddedResultQualifierUnitD%RecRPD LimitsChloride250243.7mg/KgD90.110020Lab Sample ID: 880-30229-1 MS Matrix: SolidSampleSpikeMSMSKecIlmitsAnalyteResultQualifierAddedResultQualifierUnitD%RecLimitsAnalyteResultQualifierAddedResultQualifierUnitD%RecIlmitsChloride120251357.7mg/KgD%RecRPDLimitsAnalyteResultQualifierAddedResultQualifierUnitD%RecRPDAnalyteResultQualifierAddedResultQualifierUnitD%RecRPDAnalyteResultQualifierAddedResultQualifierUnitD%RecRPDLab Sample ID: 880-30229-11 MSSampleSampleSpikeMSDMSDMSD9490.110020Lab Sample ID: 880-30229-11 MS </td <td>Analysis Batch: 56713</td> <td></td> <td></td> <td>Spike</td> <td></td> <td>LCS</td> <td>LCS</td> <td></td> <td></td> <td></td> <td>%Rec</td> <td></td> <td></td>	Analysis Batch: 56713			Spike		LCS	LCS				%Rec		
Choide250242.9mg/Kg6790.110Lab Sample ID: LCSD 880-56704/3-A Matrix: Solid Analysis Batch: 56713SpikeLCSDClient Sample ID: Lab Control Sample Dup Prep Type: SolubleAnalyteAddedResultQualifierUnitD%RecRPDChoide250243.7mg/KgD%RecRPDLab Sample ID: 880-30229-1 MS Matrix: Solid AnalyteSample SampleSpikeMS%RecLimitsAnalyteResultQualifierAddedResultQualifierUnitD%RecAnalyteResultQualifierAddedResultQualifierUnitD%RecAnalyteResultQualifierAddedResultQualifierUnitD%RecRPDLab Sample ID: 880-30229-1 MSD Matrix: Solid Analysis Batch: 56713SampleSpikeMS MSD%RecLimits-Lab Sample ID: 880-30229-1 MSD Matrix: Solid Analysis Batch: 56713SampleSpikeMSDMSD%RecRPDLimitsLab Sample ID: 880-30229-11 MS Matrix: Solid Analysis Batch: 56713SampleSpikeMSDMSD%RecRPDLimitsAnalyteResultQualifierAddedResultQualifierUnitD%RecRPDLimitsChoide120251357.5mg/Kg90.110020Lab Sample ID: 880-30229-11 MS Matrix: Solid Analysis Batch: 56713SampleSpikeMS </td <td>Analyte</td> <td></td> <td></td> <td>Added</td> <td></td> <td>Result</td> <td>Qualifier</td> <td>Unit</td> <td>р</td> <td>%Rec</td> <td>Limits</td> <td></td> <td></td>	Analyte			Added		Result	Qualifier	Unit	р	%Rec	Limits		
Lab Sample ID: LCSD 880-56704/3-A Client Sample ID: Lab Control Sample Dup Matrix: Solid Analyte Ethoride Prep Type: Soluble Analyte Added Result Qualifier Unit D %Rec RPD Choride 250 243.7 mg/Kg 97 90.110 0 20 Lab Sample ID: 880-30229-1 MS Matrix: Solid Analyte Result Qualifier Unit D %Rec Limits RPD Limits Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits	Chloride			250		242.9		mg/Kg		97	90 - 110		
Matrix: Solid Analysis Batch: 56713 Prep Type: Soluble Analyte Added Result Qualifier Unit D %Rec RPD Limits Limits Subled Limits Subled Limits Subled Limits Limits RPD Limits Limits Limits Limits RPD Limits Limits Limits RPD Limits Limits Limits <t< td=""><td>Lab Sample ID: LCSD 880-56704</td><td>/3-A</td><td></td><td></td><td></td><td></td><td></td><td>Cli</td><td>ent Sar</td><td>nple ID:</td><td>Lab Contro</td><td>ol Samp</td><td>le Dup</td></t<>	Lab Sample ID: LCSD 880-56704	/3-A						Cli	ent Sar	nple ID:	Lab Contro	ol Samp	le Dup
Analysis Batch: 56713 Spike LCSD LCSD LCSD Mark RPD Limits RPD RPD Limits	Matrix: Solid										Prep	Type: S	Soluble
AnalyteSpikeLCSDLCSDWRecRPDAnalyte250243.7mg/Kg09790.110020Lab Sample ID: 880-30229-1 MSMatrix: SolidSampleSampleSpikeMSMSClient Sample ID: N-1-S-1'AnalyteResultQualifferAddedResultQualifferUnitD%RecLimitsPrep Type: SolubleChloride120251357.7mg/KgD%RecLimitsChloride120251357.7mg/KgD%RecLimitsChloride120251357.7mg/KgD%RecLimitsLab Sample ID: 880-30229-1 MSDSampleSampleSpikeMSDMSDClient Sample ID: N-1-S-1'Prep Type: SolubleAnalyteResultQualifferAddedResultQualifferUnitD%RecRPDLimitsChloride120251357.5mg/KgD%RecRPDLimits20AnalyteResultQualifferAddedResultQualifferUnitD%RecRPDLimitsChloride120251357.5mg/KgD%RecRPDLimits20AnalyteResultQualifferAddedResultQualifferUnitD%RecRPDLimitsChloride120251357.5mg/KgD%RecRPD </td <td>Analysis Batch: 56713</td> <td></td> <td>.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</td> <td></td>	Analysis Batch: 56713											.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
AnalyteAddedResultQualifierUnitD%RecLimitsRPDLimitChloride250243.7243.7mg/KgD%RecLimitsRPDLimitLab Sample ID: 880-30229-1 MSSampleSampleSpikeMSMSMSClient Sample ID: N-1-S-1*Matrix: SolidResultQualifierAddedResultQualifierUnitD%RecLimitsAnalyteResultQualifierAddedResultQualifierUnitD%RecLimitsChloride120251357.7mg/KgD%RecResultClient Sample ID: N-1-S-1*Lab Sample ID: 880-30229-1 MSDSampleSpikeMSDMSDClient Sample ID: N-1-S-1*Matrix: SolidAnalyteResultQualifierAddedResultQualifierUnitD%RecRPDAnalyteResultQualifierAddedResultQualifierUnitD%RecRPDLimitsChloride120251357.5mg/KgD%RecRPDLimits20Lab Sample ID: 880-30229-11 MSSampleSampleSpikeMSMSMSClient Sample ID: SFL-1-S-1*Matrix: SolidAnalysis Batch: 56713SampleSampleSpikeMSMSMS%RecLimitsAnalyteResultQualifierAddedResultQualifierUnitD%RecLimitsChlorid	· · · · · · · · · · · · · · · · · · ·			Spike		LCSD	LCSD				%Rec		RPD
Chloride250243.7mg/Kg9790 - 110020Lab Sample ID: 880-30229-1 MS Matrix: Solid Analysis Batch: 56713SampleSampleSpikeMSMSClient Sample ID: N-1-S-1' Prep Type: SolubleAnalyteResuitQualifierAddedResuitQualifierUnit mg/KgD%RecLimitsChoride120251357.7mg/KgD%RecLimits	Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Lab Sample ID: 880-30229-1 MS Matrix: Solid Analysis Batch: 56713Client Sample ID: N-1-S-1' Prep Type: SolubleAnalyteResult QualifierQualifierAdded 251MSMS%Rec utimitsAnalyteResult 120QualifierAdded 251Result 357.7Qualifier mg/KgD%Rec 95Limits 90.110Lab Sample ID: 880-30229-1 MSD Matrix: Solid AnalyteSample Result QualifierSample 251Spike 357.7MSDClient Sample ID: N-1-S-1' Prep Type: SolubleAnalyteResult QualifierQualifier 251Added 251MSD%Rec mg/KgRPD 90.110Limits 90.110Lab Sample ID: 880-30229-11 MS ChlorideSample 120Sample 251Spike 357.5MSD%Rec mg/KgRPD 90.90.110RPD 90.110Limits 70Lab Sample ID: 880-30229-11 MS Matrix: Solid Analysis Batch: 56713Sample Spike Sample Sample SpikeSpike MS MSMSDClient Sample ID: SFL-1-S-1' Prep Type: SolubleLab Sample ID: 880-30229-11 MS Matrix: Solid Analysis Batch: 56713Sample Spike Sample SpikeMS MSWRec Result QualifierClient Sample ID: SFL-1-S-1' Prep Type: SolubleLab Sample ID: 880-30229-11 MS Matrix: Solid Analysis Batch: 56713Sample Spike SpikeMS MS%Rec Result QualifierMatrix: Solid Analysis Batch: 56713Sample Spike SpikeMS MSMS%Rec Spike SpikeChoride65.8250309.6mm/Kg<	Chloride			250		243.7		mg/Kg		97	90 - 110	0	20
Matrix: Solid Analysis Batch: 56713 Prep Type: Soluble Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits	 Lab Sample ID: 880-30229-1 MS									c	lient Samp	le ID: N	I-1-S-1'
Analysis Batch: 56713 Sample Sample Spike MS MS MS MS MRc Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits	Matrix: Solid										Prep	Type: S	Soluble
SampleSampleSpikeMSMSMS%RecAnalyteResultQualifierAddedResultQualifierUnitD%RecLimitsChloride120251357.7mg/KgD%RecLimitsLab Sample ID: 880-30229-1 MSD Matrix: Solid Analysis Batch: 56713SampleSampleSpikeMSDMSDAnalyteResult QualifierQualifierAddedResult QualifierQualifierUnit mg/KgD%RecRPD LimitsRPD LimitsLab Sample ID: 880-30229-11 MS Matrix: Solid AnalyteSampleSampleSpikeMSDMSDD%RecRPD LimitLimitsLimitsLimitsLimitsLPD LimitRPD LimitLimitsLimitsLPD LimitRPD LimitLimitsLPD LimitLimitsLPD Lim	Analysis Batch: 56713												
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Lab Sample ID: 880-30229-1 MSD Matrix: Solid Analysis Batch: 56713Client Sample ID: N-1-S-1* Prep Type: SolubleAnalysis Batch: 56713Sample Result QualifierSpike Added 251MSD 357.5MSD%Rec mg/KgRPD 9Limits 90 - 110RPD 0Limits 20Lab Sample ID: 880-30229-11 MS Matrix: Solid Analysis Batch: 56713Sample Sample SampleSpike SpikeMS MSClient Sample ID: SFL-1-S-1* Prep Type: SolubleLab Sample ID: 880-30229-11 MS Matrix: Solid Analysis Batch: 56713Sample SampleSpike Added AddedMS Result Qualifier QualifierMS Qualifier Qualifier%Rec MS MSClient Sample ID: SFL-1-S-1* Prep Type: SolubleAnalyte ChlorideResult 65.8Qualifier AddedAdded Result QualifierQualifier Qualifier MS MSMS MS%Rec MS MS	Chloride	120		251		357.7		mg/Kg		95	90 - 110		
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Analysis Batch: 56713 Sample Sample Spike MSD MSD %Rec RPD Analyte Result Qualifier Added Result Qualifier Unit D %Rec RPD Limits RPD Limit Chloride 120 251 357.5 mg/Kg D %Rec RPD Limit Lab Sample ID: 880-30229-11 MS Katrix: Solid Katrix: Solid Katrix: Solid Prep Type: Soluble Analyte Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit D %Rec Analyte Result Qualifier Added Result Qualifier Unit D %Rec MRec Chloride 65.8 250 309.6 mg/Kg D 98 90.110 Matrix	Matrix: Solid										Prep	Type: S	Soluble
Sample Sample Spike MSD MSD %Rec RPD Limits RPD Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limits Result Result Result Result Result Result Result Result<	Analysis Batch: 56713												
Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit Chloride 120 251 357.5 mg/Kg 94 90 - 110 0 20 Lab Sample ID: 880-30229-11 MS Client Sample ID: SFL-1-S-1' Matrix: Solid Prep Type: Soluble Analyte Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit D %Rec Chloride 65.8 250 309.6 mg/Kg D %Rec 90.110 0		Sample	Sample	Spike		MSD	MSD				%Rec		RPD
Chloride 120 251 357.5 mg/Kg 94 90 - 110 0 20 Lab Sample ID: 880-30229-11 MS Client Sample ID: SFL-1-S-1" Matrix: Solid Analysis Batch: 56713 Sample Sample Spike MS MS Client Sample ID: SFL-1-S-1" Matrix: Solid Analyte Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit D %Rec Matrix Matrix Matrix Matrix Soluble	Analyte	Result	Qualifier	Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Lab Sample ID: 880-30229-11 MS Client Sample ID: SFL-1-S-1' Matrix: Solid Prep Type: Soluble Analysis Batch: 56713 Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit D %Rec Chloride 65.8 250 309.6 mg/Kg 98 90 110	Chloride	120		251		357.5		mg/Kg		94	90 - 110	0	20
Matrix: Solid Prep Type: Soluble Analysis Batch: 56713 Sample Spike MS_MS %Rec Analyte Result Qualifier Added Result Qualifier Unit D %Rec Chloride 65.8 250 309.6 mg/Kg 98 90 110	Lab Sample ID: 880-30229-11 MS	5								Clie	nt Sample	ID: SFL	1- <mark>S-1'</mark>
Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit D %Rec Chloride 65.8 250 309.6 mg/Kg 98 90 110	Matrix: Solid Analysis Batch: 56713										Prep	Type: S	Soluble
Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits Chloride 65.8 250 309.6 mg/Kg 98 90 110	Analysis Daton. 307 13	Sample	Sample	Spike		MS	MS				%Rec		
Chloride 65.8 250 309.6 ma/Ka 98 90 110	Analyte	Result	Qualifier	Added		Result	Qualifier	Unit	р	%Rec	Limits		
	Chloride	65.8		250		309.6				98	90 - 110		

Client: ARCADIS US Inc Project/Site: Big Papi Fed Com 002H

Job ID: 880-30229-1 SDG: Eddy County, NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Method: 300.0 - Anions, Id	on Chromat	ograpny ((Continued)									
Lab Sample ID: 880-30229-11 Matrix: Solid	MSD							Clie	nt Sample Prep	ID: SFL- Type: S	1-S-1' oluble	4
Analysis Batch: 56713	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	5
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	65.8		250	310.2		mg/Kg		98	90 - 110	0	20	
												7
												8
												9
												13

Client: ARCADIS US Inc Project/Site: Big Papi Fed Com 002H

Job ID: 880-30229-1 SDG: Eddy County, NM

GC VOA

Analysis Batch: 56649

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
880-30229-1	N-1-S-1'	Total/NA	Solid	8021B	56697	
880-30229-2	E-1-S-1'	Total/NA	Solid	8021B	56697	5
880-30229-3	S-1-S-1'	Total/NA	Solid	8021B	56697	
880-30229-4	W-1-S-1'	Total/NA	Solid	8021B	56697	
880-30229-5	NFL-1-S-1'	Total/NA	Solid	8021B	56697	
880-30229-6	NFL-1-S-2'	Total/NA	Solid	8021B	56697	
880-30229-7	NFL-2-S-1'	Total/NA	Solid	8021B	56697	
880-30229-8	NFL-2-S-2'	Total/NA	Solid	8021B	56697	8
880-30229-9	NFL-3-S-1'	Total/NA	Solid	8021B	56697	
880-30229-10	NFL-3-S-2'	Total/NA	Solid	8021B	56697	9
880-30229-11	SFL-1-S-1'	Total/NA	Solid	8021B	56697	
880-30229-12	SFL-1-S-2'	Total/NA	Solid	8021B	56697	
MB 880-56654/5-A	Method Blank	Total/NA	Solid	8021B	56654	
MB 880-56697/5-A	Method Blank	Total/NA	Solid	8021B	56697	
LCS 880-56697/1-A	Lab Control Sample	Total/NA	Solid	8021B	56697	
LCSD 880-56697/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	56697	
880-30229-1 MS	N-1-S-1'	Total/NA	Solid	8021B	56697	
880-30229-1 MSD	N-1-S-1'	Total/NA	Solid	8021B	56697	
Prep Batch: 56654						

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-56654/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 56697

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-30229-1	N-1-S-1'	Total/NA	Solid	5030B	
880-30229-2	E-1-S-1'	Total/NA	Solid	5030B	
880-30229-3	S-1-S-1'	Total/NA	Solid	5030B	
880-30229-4	W-1-S-1'	Total/NA	Solid	5030B	
880-30229-5	NFL-1-S-1'	Total/NA	Solid	5030B	
880-30229-6	NFL-1-S-2'	Total/NA	Solid	5030B	
880-30229-7	NFL-2-S-1'	Total/NA	Solid	5030B	
880-30229-8	NFL-2-S-2'	Total/NA	Solid	5030B	
880-30229-9	NFL-3-S-1'	Total/NA	Solid	5030B	
880-30229-10	NFL-3-S-2'	Total/NA	Solid	5030B	
880-30229-11	SFL-1-S-1'	Total/NA	Solid	5030B	
880-30229-12	SFL-1-S-2'	Total/NA	Solid	5030B	
MB 880-56697/5-A	Method Blank	Total/NA	Solid	5030B	
LCS 880-56697/1-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 880-56697/2-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
880-30229-1 MS	N-1-S-1'	Total/NA	Solid	5030B	
880-30229-1 MSD	N-1-S-1'	Total/NA	Solid	5030B	

Analysis Batch: 56811

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-30229-1	N-1-S-1'	Total/NA	Solid	Total BTEX	
880-30229-2	E-1-S-1'	Total/NA	Solid	Total BTEX	
880-30229-3	S-1-S-1'	Total/NA	Solid	Total BTEX	
880-30229-4	W-1-S-1'	Total/NA	Solid	Total BTEX	
880-30229-5	NFL-1-S-1'	Total/NA	Solid	Total BTEX	
880-30229-6	NFL-1-S-2'	Total/NA	Solid	Total BTEX	

Client: ARCADIS US Inc Project/Site: Big Papi Fed Com 002H

GC VOA (Continued)

Analysis Batch: 56811 (Continued)

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-30229-7	NFL-2-S-1'	Total/NA	Solid	Total BTEX	
880-30229-8	NFL-2-S-2'	Total/NA	Solid	Total BTEX	
880-30229-9	NFL-3-S-1'	Total/NA	Solid	Total BTEX	
880-30229-10	NFL-3-S-2'	Total/NA	Solid	Total BTEX	
880-30229-11	SFL-1-S-1'	Total/NA	Solid	Total BTEX	
880-30229-12	SFL-1-S-2'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 56757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-30229-3	S-1-S-1'	Total/NA	Solid	8015NM Prep	
880-30229-4	W-1-S-1'	Total/NA	Solid	8015NM Prep	
880-30229-5	NFL-1-S-1'	Total/NA	Solid	8015NM Prep	
880-30229-6	NFL-1-S-2'	Total/NA	Solid	8015NM Prep	
880-30229-7	NFL-2-S-1'	Total/NA	Solid	8015NM Prep	
880-30229-8	NFL-2-S-2'	Total/NA	Solid	8015NM Prep	
880-30229-9	NFL-3-S-1'	Total/NA	Solid	8015NM Prep	
880-30229-10	NFL-3-S-2'	Total/NA	Solid	8015NM Prep	
880-30229-11	SFL-1-S-1'	Total/NA	Solid	8015NM Prep	
880-30229-12	SFL-1-S-2'	Total/NA	Solid	8015NM Prep	
MB 880-56757/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-56757/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-56757/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-30229-3 MS	S-1-S-1'	Total/NA	Solid	8015NM Prep	
880-30229-3 MSD	S-1-S-1'	Total/NA	Solid	8015NM Prep	

Analysis Batch: 56779

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-30229-3	S-1-S-1'	Total/NA	Solid	8015B NM	56757
880-30229-4	W-1-S-1'	Total/NA	Solid	8015B NM	56757
880-30229-5	NFL-1-S-1'	Total/NA	Solid	8015B NM	56757
880-30229-6	NFL-1-S-2'	Total/NA	Solid	8015B NM	56757
880-30229-7	NFL-2-S-1'	Total/NA	Solid	8015B NM	56757
880-30229-8	NFL-2-S-2'	Total/NA	Solid	8015B NM	56757
880-30229-9	NFL-3-S-1'	Total/NA	Solid	8015B NM	56757
880-30229-10	NFL-3-S-2'	Total/NA	Solid	8015B NM	56757
880-30229-11	SFL-1-S-1'	Total/NA	Solid	8015B NM	56757
880-30229-12	SFL-1-S-2'	Total/NA	Solid	8015B NM	56757
MB 880-56757/1-A	Method Blank	Total/NA	Solid	8015B NM	56757
LCS 880-56757/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	56757
LCSD 880-56757/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	56757
880-30229-3 MS	S-1-S-1'	Total/NA	Solid	8015B NM	56757
880-30229-3 MSD	S-1-S-1'	Total/NA	Solid	8015B NM	56757

Analysis Batch: 56816

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-30229-1	N-1-S-1'	Total/NA	Solid	8015B NM	56820
880-30229-2	E-1-S-1'	Total/NA	Solid	8015B NM	56820
MB 880-56820/1-A	Method Blank	Total/NA	Solid	8015B NM	56820
LCS 880-56820/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	56820

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Job ID: 880-30229-1 SDG: Eddy County, NM

Client: ARCADIS US Inc Project/Site: Big Papi Fed Com 002H

GC Semi VOA (Continued)

Analysis Batch: 56816 (Continued)

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
LCSD 880-56820/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	56820
Prep Batch: 56820					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-30229-1	N-1-S-1'	Total/NA	Solid	8015NM Prep	
880-30229-2	E-1-S-1'	Total/NA	Solid	8015NM Prep	
MB 880-56820/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-56820/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-56820/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-30229-1		Total/NA	Solid	8015 NM	
880-30229-2	E-1-S-1'	Total/NA	Solid	8015 NM	
880-30229-3	S-1-S-1'	Total/NA	Solid	8015 NM	
880-30229-4	W-1-S-1'	Total/NA	Solid	8015 NM	
880-30229-5	NFL-1-S-1'	Total/NA	Solid	8015 NM	
880-30229-6	NFL-1-S-2'	Total/NA	Solid	8015 NM	
880-30229-7	NFL-2-S-1'	Total/NA	Solid	8015 NM	
880-30229-8	NFL-2-S-2'	Total/NA	Solid	8015 NM	
880-30229-9	NFL-3-S-1'	Total/NA	Solid	8015 NM	
880-30229-10	NFL-3-S-2'	Total/NA	Solid	8015 NM	
880-30229-11	SFL-1-S-1'	Total/NA	Solid	8015 NM	
880-30229-12	SFL-1-S-2'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 56704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-30229-1	N-1-S-1'	Soluble	Solid	DI Leach	
880-30229-2	E-1-S-1'	Soluble	Solid	DI Leach	
880-30229-3	S-1-S-1'	Soluble	Solid	DI Leach	
880-30229-4	W-1-S-1'	Soluble	Solid	DI Leach	
880-30229-5	NFL-1-S-1'	Soluble	Solid	DI Leach	
880-30229-6	NFL-1-S-2'	Soluble	Solid	DI Leach	
880-30229-7	NFL-2-S-1'	Soluble	Solid	DI Leach	
880-30229-8	NFL-2-S-2'	Soluble	Solid	DI Leach	
880-30229-9	NFL-3-S-1'	Soluble	Solid	DI Leach	
880-30229-10	NFL-3-S-2'	Soluble	Solid	DI Leach	
880-30229-11	SFL-1-S-1'	Soluble	Solid	DI Leach	
880-30229-12	SFL-1-S-2'	Soluble	Solid	DI Leach	
MB 880-56704/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-56704/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-56704/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-30229-1 MS	N-1-S-1'	Soluble	Solid	DI Leach	
880-30229-1 MSD	N-1-S-1'	Soluble	Solid	DI Leach	
880-30229-11 MS	SFL-1-S-1'	Soluble	Solid	DI Leach	
880-30229-11 MSD	SFL-1-S-1'	Soluble	Solid	DI Leach	

Job ID: 880-30229-1

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SDG: Eddy County, NM

Client: ARCADIS US Inc Project/Site: Big Papi Fed Com 002H

HPLC/IC

Analysis Batch: 56713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
880-30229-1	N-1-S-1'	Soluble	Solid	300.0	56704	
880-30229-2	E-1-S-1'	Soluble	Solid	300.0	56704	6
880-30229-3	S-1-S-1'	Soluble	Solid	300.0	56704	
880-30229-4	W-1-S-1'	Soluble	Solid	300.0	56704	
880-30229-5	NFL-1-S-1'	Soluble	Solid	300.0	56704	
880-30229-6	NFL-1-S-2'	Soluble	Solid	300.0	56704	
880-30229-7	NFL-2-S-1'	Soluble	Solid	300.0	56704	_
880-30229-8	NFL-2-S-2'	Soluble	Solid	300.0	56704	8
880-30229-9	NFL-3-S-1'	Soluble	Solid	300.0	56704	
880-30229-10	NFL-3-S-2'	Soluble	Solid	300.0	56704	9
880-30229-11	SFL-1-S-1'	Soluble	Solid	300.0	56704	
880-30229-12	SFL-1-S-2'	Soluble	Solid	300.0	56704	
MB 880-56704/1-A	Method Blank	Soluble	Solid	300.0	56704	
LCS 880-56704/2-A	Lab Control Sample	Soluble	Solid	300.0	56704	
LCSD 880-56704/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	56704	
880-30229-1 MS	N-1-S-1'	Soluble	Solid	300.0	56704	
880-30229-1 MSD	N-1-S-1'	Soluble	Solid	300.0	56704	
880-30229-11 MS	SFL-1-S-1'	Soluble	Solid	300.0	56704	
880-30229-11 MSD	SFL-1-S-1'	Soluble	Solid	300.0	56704	

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Job ID: 880-30229-1 SDG: Eddy County, NM

Job ID: 880-30229-1

Lab Sample ID: 880-30229-1

Matrix: Solid

Matrix: Solid

Lab Sample ID: 880-30229-2

Lab Sample ID: 880-30229-3

Lab Sample ID: 880-30229-4

Matrix: Solid

SDG: Eddy County, NM

Client Sample ID: N-1-S-1' Date Collected: 06/28/23 09:00

Date Received: 06/30/23 11:30

Client: ARCADIS US Inc

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.96 g	5 mL	56697	06/30/23 12:25	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	56649	07/01/23 03:20	SM	EET MID
Total/NA	Analysis	Total BTEX		1			56811	07/03/23 01:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			56892	07/03/23 16:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	56820	07/03/23 08:26	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	56816	07/03/23 14:43	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	56704	06/30/23 13:23	KS	EET MID
Soluble	Analysis	300.0		1			56713	06/30/23 18:02	СН	EET MID

Client Sample ID: E-1-S-1' Date Collected: 06/28/23 09:30

Date Received: 06/30/23 11:30

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.03 g	5 mL	56697	06/30/23 12:25	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	56649	07/01/23 03:46	SM	EET MID
Total/NA	Analysis	Total BTEX		1			56811	07/03/23 01:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			56892	07/03/23 16:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	56820	07/03/23 08:26	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	56816	07/03/23 15:06	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	56704	06/30/23 13:23	KS	EET MID
Soluble	Analysis	300.0		1			56713	06/30/23 18:20	СН	EET MID

Client Sample ID: S-1-S-1'

Date Collected: 06/28/23 10:00 Date Received: 06/30/23 11:30

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.02 g	5 mL	56697	06/30/23 12:25	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	56649	07/01/23 04:13	SM	EET MID
Total/NA	Analysis	Total BTEX		1			56811	07/03/23 01:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			56892	07/03/23 11:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	56757	07/01/23 10:26	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	56779	07/02/23 14:01	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	56704	06/30/23 13:23	KS	EET MID
Soluble	Analysis	300.0		1			56713	06/30/23 18:26	СН	EET MID

Client Sample ID: W-1-S-1' Date Collected: 06/28/23 10:30 Date Received: 06/30/23 11:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.05 g	5 mL	56697	06/30/23 12:25	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	56649	07/01/23 04:39	SM	EET MID
Total/NA	Analysis	Total BTEX		1			56811	07/03/23 01:44	SM	EET MID

Eurofins Midland

Matrix: Solid

Client Sample ID: W-1-S-1'

Job ID: 880-30229-1 SDG: Eddy County, NM

Lab Sample ID: 880-30229-4 Matrix: Solid

Lab Sample ID: 880-30229-5

Lab Sample ID: 880-30229-6

Lab Sample ID: 880-30229-7

Matrix: Solid

Matrix: Solid

Date Collected: 06/28/23 10:30 Date Received: 06/30/23 11:30

Client: ARCADIS US Inc

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			56892	07/03/23 11:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	56757	07/01/23 10:26	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	56779	07/02/23 15:07	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	56704	06/30/23 13:23	KS	EET MID
Soluble	Analysis	300.0		1			56713	06/30/23 18:31	СН	EET MID

Client Sample ID: NFL-1-S-1' Date Collected: 06/28/23 11:00 Date Received: 06/30/23 11:30

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.95 g	5 mL	56697	06/30/23 12:25	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	56649	07/01/23 05:05	SM	EET MID
Total/NA	Analysis	Total BTEX		1			56811	07/03/23 01:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			56892	07/03/23 11:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	56757	07/01/23 10:26	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	56779	07/02/23 15:30	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	56704	06/30/23 13:23	KS	EET MID
Soluble	Analysis	300.0		5			56713	06/30/23 18:37	CH	EET MID

Client Sample ID: NFL-1-S-2'

Date Collected: 06/28/23 11:30 Date Received: 06/30/23 11:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.96 g	5 mL	56697	06/30/23 12:25	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	56649	07/01/23 05:31	SM	EET MID
Total/NA	Analysis	Total BTEX		1			56811	07/03/23 01:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			56892	07/03/23 11:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	56757	07/01/23 10:26	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	56779	07/02/23 15:54	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	56704	06/30/23 13:23	KS	EET MID
Soluble	Analysis	300.0		1			56713	06/30/23 18:55	СН	EET MID

Client Sample ID: NFL-2-S-1' Date Collected: 06/28/23 12:00 Date Received: 06/30/23 11:30

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.02 g	5 mL	56697	06/30/23 12:25	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	56649	07/01/23 05:57	SM	EET MID
Total/NA	Analysis	Total BTEX		1			56811	07/03/23 01:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			56892	07/03/23 11:34	SM	EET MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	10.03 g 1 uL	10 mL 1 uL	56757 56779	07/01/23 10:26 07/02/23 16:18	AJ SM	EET MID EET MID

Eurofins Midland

Matrix: Solid

Client Sample ID: NFL-2-S-1'

Lab Chronicle

Job ID: 880-30229-1 SDG: Eddy County, NM

Lab Sample ID: 880-30229-7 Matrix: Solid

Lab Sample ID: 880-30229-8

Lab Sample ID: 880-30229-9

Lab Sample ID: 880-30229-10

Date Collected: 06/28/23 12:00 Date Received: 06/30/23 11:30

Client: ARCADIS US Inc

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.02 g	50 mL	56704	06/30/23 13:23	KS	EET MID
Soluble	Analysis	300.0		1			56713	06/30/23 19:01	СН	EET MID

Client Sample ID: NFL-2-S-2'

Date Collected: 06/28/23 12:30 Date Received: 06/30/23 11:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.05 g	5 mL	56697	06/30/23 12:25	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	56649	07/01/23 06:23	SM	EET MID
Total/NA	Analysis	Total BTEX		1			56811	07/03/23 01:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			56892	07/03/23 11:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	56757	07/01/23 10:26	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	56779	07/02/23 16:41	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	56704	06/30/23 13:23	KS	EET MID
Soluble	Analysis	300.0		1			56713	06/30/23 19:06	СН	EET MID

Client Sample ID: NFL-3-S-1' Date Collected: 06/28/23 13:00 Date Received: 06/30/23 11:30

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.95 g	5 mL	56697	06/30/23 12:25	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	56649	07/01/23 06:50	SM	EET MID
Total/NA	Analysis	Total BTEX		1			56811	07/03/23 01:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			56892	07/03/23 11:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	56757	07/01/23 10:26	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	56779	07/02/23 17:05	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	56704	06/30/23 13:23	KS	EET MID
Soluble	Analysis	300.0		1			56713	06/30/23 19:12	СН	EET MID

Client Sample ID: NFL-3-S-2' Date Collected: 06/28/23 13:30

Date Received: 06/30/23 11:30

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.98 g	5 mL	56697	06/30/23 12:25	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	56649	07/01/23 07:16	SM	EET MID
Total/NA	Analysis	Total BTEX		1			56811	07/03/23 01:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			56892	07/03/23 11:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	56757	07/01/23 10:26	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	56779	07/02/23 17:29	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	56704	06/30/23 13:23	KS	EET MID
Soluble	Analysis	300.0		1			56713	06/30/23 19:18	CH	EET MID

Eurofins Midland

Matrix: Solid

Matrix: Solid

Matrix: Solid

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Released to Imaging: 11/3/2023 1:36:41 PM

Client Sample ID: SFL-1-S-1'

Job ID: 880-30229-1 SDG: Eddy County, NM

Lab Sample ID: 880-30229-11

Matrix: Solid

Date Collected: 06/28/23 14:00 Date Received: 06/30/23 11:30

Client: ARCADIS US Inc

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.03 g	5 mL	56697	06/30/23 12:25	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	56649	07/01/23 09:03	SM	EET MID
Total/NA	Analysis	Total BTEX		1			56811	07/03/23 01:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			56892	07/03/23 11:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	56757	07/01/23 10:26	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	56779	07/02/23 17:51	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	56704	06/30/23 13:23	KS	EET MID
Soluble	Analysis	300.0		1			56713	06/30/23 19:24	СН	EET MID

Lab Sample ID: 880-30229-12

Matrix: Solid

Client Sample ID: SFL-1-S-2' Date Collected: 06/28/23 14:30 Date Received: 06/30/23 11:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.05 g	5 mL	56697	06/30/23 12:25	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	56649	07/01/23 09:29	SM	EET MID
Total/NA	Analysis	Total BTEX		1			56811	07/03/23 01:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			56892	07/03/23 11:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	56757	07/01/23 10:26	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	56779	07/02/23 18:16	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	56704	06/30/23 13:23	KS	EET MID
Soluble	Analysis	300.0		1			56713	06/30/23 19:41	СН	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: Big Papi Fed Com 002H Job ID: 880-30229-1 SDG: Eddy County, NM

Laboratory: Eurofins Midland

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

uthority	P	rogram	Identification Number	Expiration Date
exas	N	IELAP	T104704400-23-26	06-30-24
The following analytes	are included in this report, b	out the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for
the agency does not offer certification.				
the agency does not of Analysis Method	fer certification. Prep Method	Matrix	Analyte	
the agency does not of Analysis Method 8015 NM	fer certification. Prep Method	Matrix Solid	Analyte Total TPH	

Eurofins Midland

Job ID: 880-30229-1 SDG: Eddy 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

Solid

Solid

Solid

Solid

Solid

Solid

Solid

Solid

Solid

Client: ARCADIS US Inc Project/Site: Big Papi Fed Com 002H

Lab Sample ID 880-30229-1

880-30229-2

880-30229-3

880-30229-4

880-30229-5

880-30229-6

880-30229-7

880-30229-8

880-30229-9

880-30229-10

880-30229-11

880-30229-12

Client Sample ID

N-1-S-1'

E-1-S-1'

S-1-S-1'

W-1-S-1'

NFL-1-S-1'

NFL-1-S-2'

NFL-2-S-1'

NFL-2-S-2'

NFL-3-S-1'

NFL-3-S-2'

SFL-1-S-1'

SFL-1-S-2'

			SDG: Eddy County, NM	
Matrix Solid	Collected 06/28/23 09:00	Received 06/30/23 11:30		
Solid	06/28/23 09:30	06/30/23 11:30		
Solid	06/28/23 10:00	06/30/23 11:30		

06/30/23 11:30

06/30/23 11:30

06/30/23 11:30

06/30/23 11:30

06/30/23 11:30

06/30/23 11:30

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06/28/23 10:30

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06/28/23 11:30

06/28/23 12:00

06/28/23 12:30

06/28/23 13:00

06/28/23 13:30

06/28/23 14:00

06/28/23 14:30

Page 92 of 97

Job ID: 880-30229-1

5
8
9
13

Received by	OCD:	10/23/2023	2:34:39 PM
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0

53/5.0	Cooler Temperature(s) oC and Other Remarks.						dy Seals Intact: Yes ∆ No Custody Seal No	Custo ∆
Date/Time: NSO Company	Received by	Company			Date/Time:		ed by:	Kelinquish
Determine (30/23 Company	Received by	Company		19/25	Date/Time		in avillo	Ŕ
Company S24 Company	Received by: Canal Canulla	Arcad'S	1730	53/25	19 million			Balin
Vethod of Shipment:		Time		Date.			it Relinquished by	Empty K
	ecial Instructions/QC Requirements.	Sp				-	bie hequested. Fill IV Other (specify)	
if samples are retained longer than 1 month) y Lab Arcmive For Months	Return To Client	Sa [nogical	Rabo	Unrilown	tant Forson B	he Boourstot 1 II III N/ Other formation	
	$ \mathcal{F} $	Solid	N N	140	¥		L+1 J+1	Possili T
	. *	Solid		1330	+	10 F 7 4 4 4 4 4 4 4 5 F 7 1	1-5-5-6	2 / 7 T
880-30229 Chain of Custody		Solid		1700			2-3-5-1	
	ĸ	Solid		1230			1-2-5-2.	S IT
		Solid		1700			レーン・シード	NS I
	*	Solid	-	1130			2-1-5-2'	2
	*	Solid	_	1100			6-1-5-1	NT
	<u>ج</u>	Solid	-	1030			1-5-1'	E
	<u>ج</u>	Solid		1000			1-5-1.	5
	×	Solid		930			1-5-1	Pr
135	×	Solid	0	400	6/28/23		-1-5-1	2
		ation Code:	Preserv)				
rotal Number	300_ORGFM_	Matrix (Winwater, Sacolid, Oanwasteridi, BT=Tissue, A=Air) Field Perform MS/	Sample Type (C=comp, G=grab)	Sample Time	Sample Date		Identification	Sample
of con Other	2810, 801	Samp MSD (Y			OCTAN	2 ří	-ddy County,	m
tan L EDA Z other (specify)	5MOD_	e (Yes es or N			Project #: 88001808		Fed Com 002H	Big Pap
J Di Water V MCAA	NM, 80	or No			WO #		ixon@arcadis.com	Justin N
G Anchor S H2SO4 G Anchor T SP Dodecahydrate	218			ar Requested	Po #: Purchase Orde		-9547(Tel)	432-296
D Altrovenate P Na2O4S E NaHSO4 D Na2SO3				act: A Yes	Compliance Proj		01	State, <i>Lip</i> TX, 797
B NACH N None B NACH O ANAO2			Ī	tays):	TAT Requested (o			Midland
Preservation Codes.				ted.	Due Date Reques		rth Big Spring Suite 300	1004 No
300 #:	Analysis Request		PWSID				IS US Inc	ARCAD
rforigin パーパー Page: パーパー Page 1 of 2	@et.eurofinsus.com	らて E-Mail John Builes	20-5	46.5	Phone: 57		iaet: ixon	Justin N
Tracking No(s) CCC No: 880-6222-859.1	Carrier	Lab PM Builes Johr	Boyd	ath -	sampler He		Information	Client
2000 Environme T 5.	đ	stody Reco	n of Cu	Chair			Florida Ave TX 79701 432) 704-5440	1211 W Midland Phone (
							ine Midland	Film

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Custody Seals Intact: ∆ Yes ∆ No Custody Seal No		- Zarera Conille	Relinquist	Relinquished by	Empty Kit Relinoviished by	Deliverable Requested: I, II III IV Other (specify)	Non-Hazard Plammable Sign Initant Poison B	Prosible Havard Idantifination										5-6-1-2-21		Sample Identification	-	Lody (ounty, NM	Big Papi Fed Com 002H	Justin Nixon@arcadis.com	432-296-9547(Tel) 5mol	TX, 79701	Midland	1004 North Big Spring Suite 300	ARCADIS US Inc	Justin Nixon	Client Information	Phone (432) 704-5440	1211 W. Florida Ave	Eurotins Midland
	Date/Time Company	Later line company	Jane 1111 - (28/23 1730 ACCompany		7		Unrolown Rabiobgical	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	6/28/23 1430 C Solid	Preservation Code	Iype (Wewater, Sazold Sample Date Time G=grab) BT=Tissue, A=Air)	Sample Matrix	SSOW#:	Project # 88001808	WO #	Po #: Purchase Order Requested	Compliance Project: Δ Yes Δ No	TAT Requested (days): 2 Darc - R / R /	Due Date Requested	PwsiD:	100 202 - 212 - 222 Tem	Sampler Hoarth Boyd Buil		Chain of Custody R	
Cooler Temperature(s) oC and Other Remarks.	Received by:	Received by O A C	1.3 Received by &	Time: Method of Shi		Special Instructions/OC Requirements	Sample Disposal (A fee may be assessed if samples											X		Field Fi	Itered . MS/M 9FM_28	Samplo 3D (14	3 (Yes stor) HMOD_	or Na 9) NM, 80	218				Analysis Requested	n Builes@et.eurofinsus.com	PM Carrier Tracking Notes, John		lecord	
	aterTime /(20 Company	terring 20/22 company	Jate Time 23 5-24 Company	pment:		MOILIN	s are retained longer than 1 month)						30220							Potal Nu	mber c	if comt Other	EDA Z other (specify)	J I Ice U Acetone J DI Water V MCAA	G Anchor SH2SO4 H Ascorbic Acid T TSP Dodecahydrate	D Mitric Acid Q Na2Q4S	A HCL N None B NAOH O Ashao2	Preservation Codes.	Job #:	Page: Page3 of 2	(s) COC No: 880-6222-859 1	ADDA En i armen Te u	🔅 eurofins	

Job Number: 880-30229-1 SDG Number: Eddy County, NM

List Source: Eurofins Midland

Login Sample Receipt Checklist

Client: ARCADIS US Inc

Login Number: 30229 List Number: 1

<6mm (1/4").

Creator: Rodriguez, Leticia

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	N/A	

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

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District I 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3470 Fax: (505) 476-3462

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

CONDITIONS

Operator:	OGRID:		
COG OPERATING LLC	229137		
600 W Illinois Ave	Action Number:		
Midland, TX 79701	278484		
	Action Type:		
	[C-141] Release Corrective Action (C-141)		

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	11/3/2023

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