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Oil Conservation Division

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Incident ID	NOY1816556237
District RP	1RP-5094
Facility ID	
Application ID	

# Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>&gt; 55</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 <b>not</b> 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
- $\square$  Depth to water determination
- Determination of water sources and significant watercourses within <sup>1</sup>/<sub>2</sub>-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information.
- Topographic/Aerial maps
- Laboratory data including chain of custody

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

Received by OCD: 11/	2/2023 1:36:42 PM State of New Mexico			<b>Page 2 of 383</b>
			Incident ID	NOY1816556237
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regulations all operator public health or the env failed to adequately inv addition, OCD accepta and/or regulations. Printed Name:	lodie Sanjari	cations and perfo CD does not relie t to groundwater, esponsibility for o Title: Date: 11/2/2	orm corrective actions for rele ve the operator of liability sh surface water, human health compliance with any other fe <u>Environmental Professio</u>	eases which may endanger ould their operations have or the environment. In deral, state, or local laws
OCD Only Received by: <u>Shelly</u>	Wells	Date: <u>1</u>	1/2/2023	

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Oil Conservation Division

Incident ID	NOY1816556237
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# 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: <u>Melodie Sanjari</u> Title: Environmental Professional Signature: <u>Melodie Sanjari</u> Date 11/2/2023 email: msanjari@marathonoil.com Telephone: 575-988-8753 **OCD Only** Received by: Shelly Wells Date: <u>11/2/2023</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: Date: Title: Printed Name:



November 1, 2023

New Mexico Oil Conservation Division 1220 South St, Francis Drive Santa Fe, NM 87505

Re: Amendment to Closure Report Nighthawk State Com 3H Marathon Oil Corporation NOY1809252064 & NOY1816556237 1RP-5004 & 1RP-5094 Site Location: Unit O, S20, T18S, R35E (Lat 32.7266235°, Long -103.4785538°) Lea County, New Mexico

To Whom It May Concern:

On behalf of Marathon Oil Corporation (Marathon), Carmona Resource, LLC has prepared this letter to document additional site activities for the Nighthawk State Com 3H. The site is located at the GPS 32.7266235°, -103.4785538° within Unit O, S20, T18S, R35E in Lea County, New Mexico.

### **1.0 Site Information and Background**

### 1RP-5004 / NOY1809252064 & NOY1816556237/1RP-5094

On May 26, 2023, and June 8, 2023, the New Mexico OCD denied the closure report for the following reason: "When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided. If evidence of depth to groundwater within a ½ mile radius of the site cannot be provided, impacted soils will need to meet Table 1 Closure Criteria for groundwater at a depth of 50 feet or less. A deferral cannot be granted on a release if the depth to water is <50' depth to groundwater. The point in question for NOY1816556237 (1RP-5094) is BH18-01 on the map (Figure 2). This point returned results above the most stringent closure standards/reclamation standards that drive horizontal delineation. Please submit a revised closure report by 9/6/2023."

On September 26, 2023, for incident number NOY1809252064 (1RP-5004) the New Mexico OCD denied the closure report for the following reason: "The report does not address the reason for rejection sent to the operator on 3/15/2023. When using the closure standards according to 19.15.29 NMAC the release must be laterally delineated to the most stringent closure criteria as discussed in 19.15.29.13 D. (1) NMAC." Horizontal delineation submitted was incomplete for BH15-03 and did not meet the requirements of 19.15.29.11 NMAC. The values for determination of horizontal impact are derived by either approved "background" values or Table I Closure Criteria for releases where groundwater is at a depth of 50 feet or less. Laboratory data must be provided as evidence of delineation efforts. Any sample exceeding approved

310 West Wall Street, Suite 500 Midland, Texas 79701 432.813.1992



"background" values or Table I Closure Criteria for releases where groundwater is at a depth of 50 feet or less requires additional samples for horizontal delineation. Clarify whether BH18-02 was fully encompassed by the excavation. If it was not further horizontal delineation at BH18-02 will need to be completed. The February 2019 report written by Vertex states "The liner within the heater treater containment area was inspected for integrity and found to be ripped in two (2) places." Pictures included in the report also show liner integrity was not intact. Per 19.15.29.11 A.(5)(b) If the responsible party is unable to demonstrate liner integrity or the release occurred outside of a lined containment area, the responsible party must delineate the release horizontally and vertically using Table I of 19.15.29.12 NMAC constituents or as required by Subparagraph (e) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC based on the type of release. Submit a complete report through the OCD Permitting website by 12/27/2023."

On September 26, 2023, for incident number NOY1816556237 (1RP-5094), the New Mexico OCD denied the closure report for the following reason: "The rejection sent for this incident number on 6/8/2023 stated "The point in question for NOY1816556237 (1RP-5094) is BH18-01 on the map (Figure 2). This point returned results above the most stringent closure standards/reclamation standards that drive horizontal delineation." BH18-01 was not addressed under this submission. Clarify that the samples listed in Table 5 correspond to the samples in Table 1 of the workplan that is uploaded to the Incident file of NOY1816556237. Include the samples on Table 5 on the scaled site map. There is a discrepancy between sample location names. There are 2 samples identified as BH18-01. One of these samples is illustrated on the map in the workplan and was collected on 7/7/2018. The other is located on the tables of the workplan and the closure report and was collected on 5/30/2018. The sample collected on 5/30/2018 is not in the same location as BH18-01 collected on 7/7/2018. This discrepancy will need to be address in the next submittal. The OCD cannot determine if horizontal delineation submitted was completed based on the information provided. The values for determination of horizontal impact are derived by either approved "background" values or Table I Closure Criteria for releases where groundwater is at a depth of 50 feet or less. A visual footprint on the surface is not sufficient to assess the horizontal extent of the release. Laboratory data must be provided as evidence of delineation efforts. Any sample exceeding approved "background" values or Table I Closure Criteria for releases where groundwater is at a depth of 50 feet or less requires additional samples for horizontal delineation. Submit a complete report though the OCD Permitting website by 12/27/2023."

### 2.0 Site Characterization and Groundwater

The site is located within a low karst area. Based on a review of the New Mexico Office of State Engineers and USGS databases, two known water sources are within a 0.50-mile radius of the location. The nearest identified well is located approximately 0.45 miles North of the site in S20, T18S, R35E and was drilled in 1953. The well has a reported depth to groundwater of 78' below ground surface (ft bgs). A copy of the associated Summary report is attached in Appendix D of the amended report. The nearest identified well is located approximately 0.45 miles North of the site in S20, T18S, R35E and was drilled in 1996. The well has a reported depth to groundwater of 82.10' below ground surface (ft bgs). A copy of the associated Summary report is attached in Appendix D of the amended report. On August 15, 2023, Carmona Resources, LLC was onsite to drill a groundwater determination bore to 55' below ground surface within a 0.50-mile radius of



the location. The groundwater determination bore is located approximately 0.04 miles southeast of the site at 32.726286°, -103.479090° in S20, T18S, and R35E. The bore was left open for 72 hours and tagged with a water level meter. The bore has shown no signs of water at a depth of 55' below the ground surface (bgs). A copy of the groundwater determination bore log is attached in Appendix D of the amended report. The location of the groundwater determination bore can be seen in Figure 3C.

## 3.0 NMAC Regulatory Criteria

Per the NMOCD regulatory criteria established in 19.15.29.12 NMAC, the following criteria were utilized in assessing the site.

- Benzene: 10 milligrams per kilogram (mg/kg).
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg.
- TPH: 2,500 mg/kg (GRO + DRO + MRO).
- TPH: 1,000 mg/kg (GRO + DRO).
- Chloride: 10,000 mg/kg.

## **4.0 Site Assessment Activities**

On August 15, 2023, Carmona Resources, LLC performed site assessment activities to evaluate soil impacts stemming from the release. Two (2) sample points (BH-1 and BH-4) were advanced to a depth ranging from the surface to 4.0' bgs inside the release area at BH 18-01 (05/30/2018) and BH 18-05 (05/30/2018) to assess the vertical extent. See Figure 3A and Figure 3B for the sample locations. For chemical analysis, the soil samples were collected and placed directly into laboratory-provided sample containers, stored on ice, and transported under the proper chain-of-custody protocol to Eurofins Laboratories in Midland, Texas. The samples were analyzed for total petroleum hydrocarbons (TPH) by EPA method 8015, modified benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021B, and chloride by EPA method 300.0. The laboratory reports, including analytical methods, results, and chain-of-custody documents, are attached in Appendix E of the amended report.

On October 4, 2023, Carmona Resources, LLC returned to the site and performed site assessment activities to evaluate soil impacts stemming from the release. Two (2) sample points (BH-2 and BH-5) were advanced to a depth ranging from the surface to 4.0' bgs outside the release area at BH 18-01 (07/07/2018) and BH 18-03 (05/30/2018) to assess the vertical extent. Additionally, twelve (12) horizontal samples (H-1 through H-12) were collected surrounding both releases to laterally delineate the extent of both incidents. See Figure 3A and Figure 3B for the sample locations. For chemical analysis, the soil samples were collected and placed directly into laboratory-provided sample containers, stored on ice, and transported under the proper chain-of-custody protocol to Eurofins Laboratories in Midland, Texas. The samples were analyzed for total petroleum hydrocarbons (TPH) by EPA method 8015, modified benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021B, and chloride by EPA method 300.0. The laboratory reports, including analytical methods, results, and chain-of-custody documents, are attached in Appendix E of the amended report. The text of the original report can be found in Appendix F of this report. Labs and photologs can be found in the original report.



In order to address all concerns stemming from the rejection on September 26, 2023, Carmona Resources has found the following:

- All horizontal samples collected on October 4, 2023 were below the most stringent closure criteria for both incidents.
- Horizontal and vertical delineation was achieved for BH 18-03 (5/30/2018) with the installation of BH-5 on October 4, 2023. The sample point of BH 18-03 has undergone natural attenuation from precipitation and weather events from the initial sampling conducted on May 30, 2018, to the present.
- The sample point BH 18-02 (05/30/2018) was encompassed by the excavation conducted on November 14, 2018. See Figure 3A.
- Liner integrity was restored at the time of remediation conducted November 14,2018.
- The sample point BH 18-01 (07/07/2018) that was submitted under Vertex's work plan with incident number NOY1816556237 was encompassed by remediation activities conducted on November 14, 2018. See Figure 3B.
- The sample results in Table 5, on page 5 of the original report, are identical to the sample results that were submitted via work plan under incident number POY1816556459. See Figure 3B for sample locations that correspond to the samples in Table 1 of the work plan that was uploaded to Incident file NOY1816556237.
- All samples that were collected during the initial site assessment on May 30, 2018, with the exception of BH 18-01 (05/30/2018), were below the regulatory requirements for TPH, BTEX, and chloride. The sample point of BH 18-01 (05/30/2018) has undergone natural attenuation from precipitation and weather events from the initial sampling conducted on May 30, 2018, to the present day.
- All samples that were collected during remediation activities on November 14, 2018 (North Wall, South Wall, West Wall, and East Wall) in Figure 2 of the original closure report submitted by Vertex were below the regulatory requirements for TPH, BTEX, and chloride.
- All samples collected during the site reassessment on August 15, 2023, and October 4, 2023, were below the regulatory requirements for TPH, BTEX, and chloride. Refer to Table 1.



### 5.0 Conclusions

Based on the assessment results and the analytical data, no further actions are required at the site. The final C-141 is attached in Appendix A of the original request for closure. Marathon formally requests the closure of the spill. If you have any questions regarding this report or need additional information, please get in touch with us at 432-813-1992.

Sincerely,

Carmona Resources, LLC

Mike Carmona Environmental Manager

hat - / to or / t

Clinton Merritt Sr. Project Manager















# **APPENDIX B**



.

Table 1 Marathon Oil Corporation Night Hawk 3H Lea County, New Mexico

Commite ID	Dete	Danth (ft)		TPH	l (mg/kg)	-	Benzene	Toluene	Ethlybenzene	Xylene	Total BTEX	Chloride
Sample ID	Date	Depth (ft)	GRO	DRO	MRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
	8/15/2023	0-1	<50.1	51.1	<50.1	51.1	<0.00201	0.00708	<0.00201	<0.00402	0.00708	8,880
BH-1	"	2	<50.2	<50.2	<50.2	<50.2	<0.00202	<0.00202	<0.00202	<0.00404	<0.00404	455
	"	4	<49.8	<49.8	<49.8	<49.8	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	142
	5/30/2023	0	-	-	-	<15.0	<0.00199	-	-	-	<0.00199	23,900
*BH 18-01	"	2	-	-	-	<15.0	<0.00200	-	-	-	<0.00200	387
	"	4	-	-	-	-	-	-	-	-	-	2,480
	10/4/2023	0-1	<49.6	<49.6	<49.6	<49.6	<0.00200	<0.00200	<0.00200	<0.00400	<0.00400	206
BH-2	"	2	<50.3	<50.3	<50.3	<50.3	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	101
	"	4	<50.5	<50.5	<50.5	<50.5	<0.00202	<0.00202	<0.00202	<0.00404	<0.00404	106
	7/7/2018	0	<15.0	68.9	<15.0	68.9	< 0.00202	-	-	-	<0.00202	5,910
*BH 18-01	"	2	<14.9	<14.9	<14.9	<14.9	<0.00201	-	-	-	<0.00201	1,700
	"	4	<15.0	40.2	<15.0	40.2	<0.00199	-	-	-	<0.00199	1,630
	8/15/2023	0-1	-	-	-	-	-	-	-	-	-	130
BH-4	"	2	-	-	-	-	-	-	-	-	-	75.5
	"	4	-	-	-	-	-	-	-	-	-	285
*BH 18-05	5/30/2023	0	-	-	-	-	<0.00201	-	-	-	<0.00201	89.0
ВП 16-05	"	2	-	-	-	-	<0.00200	-	-	-	<0.00200	48.4
BH-5	10/4/2023	0-1	<49.6	<49.6	<49.6	<49.6	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	261
*BH 18-03	5/30/2023	0	-	-	-	-	<0.00199	-	-	-	<0.00199	4,360
BH 10-03	"	2	-	-	-	-	<0.00200	-	-	-	<0.00200	518
Regulato	ory Criteria <sup>A</sup>		1,000	mg/kg		2,500 mg/kg	10 mg/kg				50 mg/kg	10,000 mg/kg

(-) Not Analyzed

<sup>A</sup> – Table 1 - 19.15.29 NMAC

mg/kg - milligram per kilogram TPH- Total Petroleum Hydrocarbons ft-feet (BH) - Bore Hole

\*Sample Point Collected by Vertex

Removed

.

Table 1 Marathon Oil Corporation Night Hawk 3H Lea County, New Mexico

Comple ID	Data	Domth (ft)		TPF	l (mg/kg)		Benzene	Toluene	Ethlybenzene	Xylene	Total BTEX	Chloride
Sample ID	Date	Depth (ft)	GRO	DRO	MRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
H-1	10/4/2023	0 - 0.5	<49.9	<49.9	<49.9	<49.9	<0.00202	<0.00202	<0.00202	<0.00403	<0.00403	136
H-2	10/4/2023	0 - 0.5	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00401	<0.00401	334
H-3	10/4/2023	0 - 0.5	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	246
H-4	10/4/2023	0 - 0.5	<50.5	<50.5	<50.5	<50.5	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	290
H-5	10/4/2023	0 - 0.5	<50.5	<50.5	<50.5	<50.5	<0.00200	<0.00200	<0.00200	<0.00401	<0.00401	287
H-6	10/4/2023	0 - 0.5	<50.3	<50.3	<50.3	<50.3	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	186
H-7	10/4/2023	0 - 0.5	<49.6	<49.6	<49.6	<49.6	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	174
H-8	10/4/2023	0 - 0.5	<49.7	<49.7	<49.7	<49.7	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	192
H-9	10/4/2023	0 - 0.5	<49.7	<49.7	<49.7	<49.7	<0.00198	<0.00198	<0.00198	<0.00396	<0.00396	111
H-10	10/4/2023	0 - 0.5	<50.5	<50.5	<50.5	<50.5	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	90.4
H-11	10/4/2023	0 - 0.5	<50.3	<50.3	<50.3	<50.3	<0.00202	<0.00202	<0.00202	<0.00404	<0.00404	218
H-12	10/4/2023	0 - 0.5	<50.3	<50.3	<50.3	<50.3	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	256
	ory Criteria <sup>A</sup>		1,000	mg/kg		2,500 mg/kg	10 mg/kg				50 mg/kg	10,000 mg/kg

(-) Not Analyzed <sup>A</sup> – Table 1 - 19.15.29 NMAC mg/kg - milligram per kilogram TPH- Total Petroleum Hydrocarbons ft-feet

(H) Horizontals

# **APPENDIX C**



## PHOTOGRAPHIC LOG

## **Marathon Oil Corporation**



## PHOTOGRAPHIC LOG

### **Marathon Oil Corporation**



# **APPENDIX D**



## Received by OCD: 11/2/2023 1:36:42 PM Nearest vvater vveli

Marathon Oil Permian LLC

6150' - Drilled 1957

anti-steam

92.38' - Drilled 2016 77' Drilled 1953

78' - Drilled 1953 (82.10' - Drilled 1996

NIGHTHAWK STATE COM #003H

95' - Drilled 1961

Cheleased to amaging. 3/18/2024 8:58:24 AM

10 AL

## Legend

- 🍰 0.45 Miles
- 🕹 0.45 Miles
- location 50 Mile Radius
- 🕹 0.61 Miles
- ab 0.73 Miles
- 🍰 0.73 Miles
- 🍰 1.17 Miles
- NIGHTHAWK STATE COM #003H

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- NMSEO Water Well
- USGS Water Well

A DOLLAR STRATEGICS

1









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

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a	been i O=orp C=the		d,						3=SW 4=SE	-	40 m )			
water right file.)	closed	n) POD		(qua	ners	ares	smalle	st to la	rgest) (INA	AD83 UTM in me	eters)	(	In feet)	
		Sub-			QC								Depth	
POD Number L 02053	Code	basin L	Count LE	y 64	16 4		<b>Tws</b> 18S		<b>X</b> 642464	Y 3622723* 🥌	Distance 726	Well 175	Water 78	Column 97
L 04562		L	LE		3 -		) 18S		641874	3621315*	979	156	95	61
L 02357		L	LE				) 18S		642855	3623137*	1168	170	77	93
L 03171		L	LE		3 3		′ 18S		641835	3623734* 🥌	1879	170	150	20
L 02679		L	LE		4 4		18S		644680	3622151* 🥌	2115	200	68	132
L 02679	R	L	LE		4 4	1 21	18S	35E	644680	3622151* 🥌	2115	200	68	132
L 07928		L	LE	4	4 <sup>-</sup>	1 19	) 18S	35E	640639	3622915 🌍	2135	175		
L 02680		L	LE		1 2	2 21	18S	35E	644257	3623357* 🌍	2162	190	59	131
L 09742		L	LE		1 4	1 17	′ 18S	35E	642474	3624312 🌍	2310	200		
L 02052		L	LE			17	′ 18S	35E	642438	3624337* 🌍	2336	190	72	118
L 09588		L	LE	4	3 4	1 16	5 18S	35E	644349	3623659* 🌍	2429	155	84	71
L 03888		L	LE		3	1 19	18S	35E	640253	3622912* 🌍	2488	107	70	37
L 03772		L	LE		2 2	2 21	18S	35E	644659	3623361* 🌍	2491	130	60	70
L 03866		L	LE		3 3	3 22	2 18S	35E	645082	3622155* 🌍	2516	127	65	62
L 04399		L	LE		3 3	3 22	18S	35E	645082	3622155* 🌍	2516	90	75	15
L 05156		L	LE		4 <sup>-</sup>	I 17	′ 18S	35E	642224	3624545* 🌍	2564	150	90	60
L 12926 POD1		L	LE	2	2 3	3 25	5 18S	34E	639839	3621631 🌍	2755	182	117	65
L 03721		L	LE		3 3	3 18	18S	35E	640241	3623717* 🌍	2891	161	90	71
L 15235 POD1		L	LE	2	4 <sup>-</sup>	31	18S	35E	640696	3619795 🌍	2896	162	75	87
L 05810		L	LE		2 3	3 22	18S	35E	645479	3622564* 🌍	2962	145	95	50
L 05444		L	LE		4 3	3 32	18S	35E	642319	3618899* 🌍	3115	80	58	22
L 09762		L	LE		3 3	3 33	18S	35E	643526	3618913* 🌍	3235	160	80	80
<u>L 03783</u>		L	LE			27	′ 18S	35E	645710	3621138* 🌍	3257	115	65	50
<u>L 02678</u>		L	LE		3 4	1 22	2 18S	35E	645890	3622166* 🌍	3323	200	58	142
L 02678	R	L	LE		3 4	1 22	2 18S	35E	645890	3622166* 🤤	3323	200	58	142
L 02678 POD2	R	L	LE		3 4	1 22	2 18S	35E	645890	3622166* 🌍	3323	185	58	127
*UTM location was derived f	rom PLS	S - see	Help											

\*UTM location was derived from PLSS - see Help

7/18/23 11:32 AM

#### Received by OCD: 11/2/2023 1:36:42 PM

water right file.)

been replaced, O=orphaned, C=the file is

(R=POD has

closed)

(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

	POD Sub-		~	Q	<b>`</b>						Denth	Denth	<b>M</b> /=1
POD Number	Code basin	County				c Tws	Rng	х	Y	Distance		Depth Water (	vvater Column
L 03963	L	LE				7 18S		645896	3621762* 🌍	3334	127	70	57
L 02678 POD3	L	LE		3	4 22	2 18S	35E	645902	3622214 🌍	3338	190	154	36
L 14371 POD1	L	LE	1	1	2 0	5 19S	35E	642616	3618661 🌍	3342	172	60	112
L 06047	L	LE	2	2	1 16	6 18S	35E	643927	3625066* 🌍	3349	122	65	57
L 00493	L	LE	1	2	1 0	5 19S	35E	642290	3618663 🌍	3352	100		
L 14200 POD1	L	LE	2	2	2 0	5 19S	35E	642952	3618657 🌍	3368	180	60	120
L 02676	L	LE		1	2 16	6 18S	35E	644231	3624972* 🌍	3401	175	60	115
L 02679 POD2	L	LE		3	2 22	2 18S	35E	645876	3622973* 🌍	3445	187	65	122
L 14200 POD2	L	LE	2	2	2 0	5 19S	35E	643291	3618631 🌍	3448	180	60	120
L 02350	L	LE	4	1	3 08	3 18S	35E	641897	3625650* 🌍	3707	216	105	111
L 02677	L	LE		3	4 1	5 18S	35E	645863	3623780* 🌍	3741	194	54	140
L 04794	L	LE			4 07	7 18S	35E	641200	3625540* 🌍	3792	150	95	55
L 02349 POD3	L	LE	4	1	4 07	7 18S	35E	641225	3625573 🌍	3814	220	142	78
L 02349 POD2	L	LE	4	1	4 07	7 18S	35E	641091	3625641* 🌍	3926	214	85	129
L 02348	L	LE	3	1	4 09	9 18S	35E	644116	3625679* 🌍	3986	215	105	110
L 10304	L	LE	1	4	4 09	9 18S	35E	644526	3625479* 🌍	3987	170	72	98
L 05178	L	LE	4	4	2 0	5 19S	35E	643185	3618063 🌍	3988	142	85	57
									Avera	ge Depth to	Water:	80 1	feet
										Minimum	Depth:	54 f	feet
										Maximum	Depth:	154 1	feet
Record Count: 43													

#### Record Count: 43

#### UTMNAD83 Radius Search (in meters):

Easting (X): 642570

Northing (Y): 3622004

**Radius:** 4000

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

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# New Mexico Office of the State Engineer **Point of Diversion Summary**

			(quarters a							
			(quarters						JTM in meters)	
Well Tag	POD	Number	Q64 Q1	6 Q4	Sec	Tws	Rng	X	Y	
	L 02	2053			20	18S	35E	642464	3622723*	
<sup>x</sup> Driller Licen	ise:	17	Driller Co	ompai	ny:	A.N	A. BRIN	INSTOOL		
Driller Name	e:	M.I. SIGNER								
Drill Start D	ate:	01/27/1953	Drill Finis	sh Da	te:	0	2/13/195	53 P	ug Date:	
Log File Dat	e:	02/24/1953	PCW Rev	<b>Date</b>	:			S	ource:	Shallow
Pump Type:			Pipe Disc	harge	Size:			E	stimated Yield	l <b>:</b>
Casing Size:		12.00	Depth We	ell:		1	75 feet	D	epth Water:	78 feet
x	Wate	er Bearing Stratifi	cations:	Т	op l	Botton	n Descr	ription		
				12	20	130	) Sands	stone/Grave	el/Conglomerat	e
х		Casing Perfe	orations:	Т	op l	Botton	1			
				1	07	172	2			
X				-						

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

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7/18/23 11:32 AM

POINT OF DIVERSION SUMMARY

Date	Time	?	?	Water level,	Water level,	Referenced vertical	?
		Water-level date-time	Parameter code	feet below	feet above	datum	s
1		accuracy	1	land surface	specific vertical		
ι				Groundwate	datum r 👻 New Mexico	✓ GC	ר ב

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- Full News 🔊

Groundwater levels for New Mexico

Click to hide state-specific text

Important: <u>Next Generation Monitoring Location Page</u>

#### Search Results -- 1 sites found

Agency code = usgs

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

#### USGS 324420103281501 18S.35E.20.41111

Lea County, New Mexico Latitude 32°43'59", Longitude 103°28'46" NAD27 Land-surface elevation 3,937.00 feet above NGVD29 The depth of the well is 175 feet below land surface. This well is completed in the High Plains aquifer (N100HGHPLN) national aquifer. This well is completed in the Ogallala Formation (1210GLL) local aquifer.

Output formats

Table of data	
Tab-separated data	
Graph of data	
Reselect period	

Date	Time	? Water- level date- time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source ( measur(
1953-09-11		D	62610		3861.18	NGVD29	1	Z		
1953-09-11		D	62611		3862.74	NAVD88	1	Z		
1953-09-11		D	72019	75.82			1	Z		
1953-10-07		D	62610		3861.23	NGVD29	1	Z		
1953-10-07		D	62611		3862.79	NAVD88	1	Z		
1953-10-07		D	72019	75.77			1	Z		
1953-11-20		D	62610		3861.24	NGVD29	1	Z		
1953-11-20		D	62611		3862.80	NAVD88	1	Z		
1953-11-20		D	72019	75.76			1	Z		
1954-01-11		D	62610		3861.23	NGVD29	1	Z		
1954-01-11		D	62611		3862.79	NAVD88	1	Z		
1954-01-11		D	72019	75.77			1	Z		
1954-03-02		D	62610		3861.15	NGVD29	1	Z		
1954-03-02		D	62611		3862.71	NAVD88	1	Z		

# Respined by 060: 11/2/2023 1:36:42 PM

USGS Groundwater for New Mexico: Water Levels -- 1 sites

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Date	Time	? Water-level date-time accuracy	? Pa cod	rameter de	Water level, feet below land surface	Water level, feet above specific vertical datum	Reference vertical datum	d
1954-03-02	D	72019	75.85			1	Z	
1954-05-05	D	62610	, 0.00	3861.13	NGVD29	1	Z	
1954-05-05	D	62611		3862.69	NAVD88	1	Z	
1954-05-05	D	72019	75.87	5002.05	1010200	1	Z	
1954-07-13	D	62610	/ 5.0/	3861.23	NGVD29	1	Z	
1954-07-13	D	62611		3862.79	NAVD88	1	Z	
1954-07-13	D	72019	75.77	0002.77		1	Z	
1954-09-14	D	62610		3861.18	NGVD29	1	Z	
1954-09-14	D	62611		3862.74	NAVD88	1	Z	
1954-09-14	D	72019	75.82	0002.77		1	Z	
954-11-09	D	62610	70102	3861.15	NGVD29	1	Z	
.954-11-09	D	62611		3862.71	NAVD88	1	Z	
.954-11-09	D	72019	75.85	0002171		1	Z	
1955-01-06	D	62610	, 5.05	3861.19	NGVD29	1	Z	
1955-01-06	D	62611		3862.75	NAVD88	1	Z	
1955-01-06	D	72019	75.81	5002.75	NAV DOO	1	Z	
.955-03-19	D	62610	75.01	3861.24	NGVD29	1	Z	
.955-03-19	D	62611		3862.80	NAVD88	1	Z	
.955-03-19	D	72019	75.76	5002.00	NAV DOO	1	Z	
955-05-28	D	62610	75.70	3861.15	NGVD29	1	Z	
955-05-28	D	62611		3862.71	NAVD88	1	Z	
955-05-28	D	72019	75.85	5002.71	NAV DOO	1	Z	
955-07-15	D	62610	75.05	3861.17	NGVD29	1	Z	
.955-07-15	D	62611		3862.73	NAVD88	1	Z	
955-07-15	D	72019	75.83	5002.75	1010200	1	Z	
.955-09-22	D	62610	/ 5.05	3861.21	NGVD29	1	Z	
.955-09-22	D	62611		3862.77	NAVD88	1	Z	
.955-09-22	D	72019	75.79	5002.77	1010200	1	Z	
.955-11-28	D	62610	/5.//5	3861.21	NGVD29	1	Z	
.955-11-28	D	62611		3862.77	NAVD88	1	Z	
955-11-28	D	72019	75.79	5002.77		1	Z	
.956-01-05	D	62610	, , , , ,	3861.27	NGVD29	1	Z	
.956-01-05	D	62611		3862.83	NAVD88	1	Z	
956-01-05	D	72019	75.73			1	Z	
.956-03-14	D	62610		3861.30	NGVD29	1	Z	
956-03-14	D	62611		3862.86	NAVD88	1	Z	
956-03-14	D	72019	75.70			1	Z	
956-05-09	D	62610		3861.22	NGVD29	1	Z	
956-05-09	D	62611		3862.78	NAVD88	1	Z	
956-05-09	D	72019	75.78			1	Z	
956-07-26	D	62610		3861.21	NGVD29	1	Z	
956-07-26	D	62611		3862.77	NAVD88	1	Z	
956-07-26	D	72019	75.79			1	Z	
956-09-06	D	62610		3861.26	NGVD29	1	Z	
956-09-06	D	62611		3862.82	NAVD88	1	Z	
956-09-06	D	72019	75.74			1	Z	
956-11-30	D	62610		3861.22	NGVD29	1	Z	
956-11-30	D	62611		3862.78	NAVD88	1	Z	
956-11-30	D	72019	75.78			1	Z	
957-01-12	D	62610		3861.23	NGVD29	1	Z	

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USGS Groundwater for New Mexico: Water Levels -- 1 sites

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Date	Time	? Water-level date-time accuracy	? Par cod	ameter e	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum
1957-01-12	D	62611		3862.79	NAVD88	1	Z
1957-01-12	D	72019	75.77	2001 15		1	Z
1958-01-14	D	62610		3861.15	NGVD29	1	Z
1958-01-14	D	62611	75.05	3862.71	NAVD88	1	Z
1958-01-14	D	72019	75.85	20(1.20	NCVD20	1	Z
1960-01-15	D	62610		3861.20	NGVD29	1	Z
1960-01-15	D	62611	75.00	3862.76	NAVD88	1	Z
1960-01-15	D	72019	75.80	2061-20	NOVERS	1	Z
1961-01-17	D	62610		3861.30	NGVD29	1	Z
1961-01-17	D	62611	75 70	3862.86	NAVD88	1	Z
1961-01-17	D	72019	75.70	2064 44		1	Z
1962-01-16	D	62610		3861.14	NGVD29	1	Z
962-01-16	D	62611	75.00	3862.70	NAVD88	1	Z
1962-01-16	D	72019	75.86			1	Z
1967-09-20	D	62610		3860.81	NGVD29	1	Z
1967-09-20	D	62611		3862.37	NAVD88	1	Z
1967-09-20	D	72019	76.19	0040 54		1	Z
1971-01-20	D	62610		3860.51	NGVD29	1	Z
1971-01-20	D	62611		3862.07	NAVD88	1	Z
1971-01-20	D	72019	76.49			1	Z
1976-02-12	D	62610		3860.15	NGVD29	1	Z
1976-02-12	D	62611		3861.71	NAVD88	1	Z
1976-02-12	D	72019	76.85			1	Z
1981-03-13	D	62610		3859.10	NGVD29	1	Z
981-03-13	D	62611		3860.66	NAVD88	1	Z
981-03-13	D	72019	77.90			1	Z
986-04-02	D	62610		3857.65	NGVD29	1	Z
1986-04-02	D	62611		3859.21	NAVD88	1	Z
986-04-02	D	72019	79.35			1	Z
991-03-15	D	62610		3857.80	NGVD29	1	Z
.991-03-15	D	62611		3859.36	NAVD88	1	Z
1991-03-15	D	72019	79.20			1	Z
996-01-12	D	62610		3854.90	NGVD29	1	S
1996-01-12	D	62611		3856.46	NAVD88	1	S
1996-01-12	D	72019	82.10			1	S

#### Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined

Rottins: //www.waterdata.u399.60%/020/020/020/020/020/020/020103281501&agency\_cd=USGS&format=html

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USGS Groundwater for New Mexico: Water Levels -- 1 sites

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	2
Questions or (							
Automated rei	<u>trievals</u>						
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<u>Data Tips</u>							
Explanation of							

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# *New Mexico Office of the State Engineer* **Point of Diversion Summary**

		(quarters are 1=NW 2=NE 3=SW 4=SE)							
		(quarters	are sma	illest to	o largest)		(NAD83 U	TM in meters)	
POD	Number	Q64 Q1	6 Q4	Sec	Tws	Rng	Χ	Y	
L 04	562	3	1	29	18S	35E	641874	3621315* 🧲	
ense:	111	Driller Co	ompan	ıy:	BU	RKE, EC	WARD B.		
me:									
Date:	12/20/1960	Drill Finis	sh Dat	e:	12	2/21/196	0 Plu	ug Date:	01/17/1961
ate:	12/29/1960	PCW Rev	Dates	:			So	urce:	Shallow
Pump Type:		Pipe Disc	Size:			Es	timated Yield	:	
e:	7.00	Depth We	11:		1:	56 feet	De	pth Water:	95 feet
Wate	r Bearing Stratif	ications:	То	p I	Bottom	Descri	iption		
			9	98	156	Sandst	tone/Gravel	/Conglomerat	e
	Casing Per	forations:	To	p I	Bottom	l			
			11	0	154				
	L 04 ense: me: Date: ate: e: e:	me: Date: 12/20/1960 ate: 12/29/1960 e: e: 7.00 Water Bearing Stratif	POD NumberQ64 Q1L 045623ense:111Driller Come:Date:12/20/1960Drill Finisate:12/29/1960PCW Reverse:Pipe Disclar	POD Number Q64 Q16 Q4   L 04562 3 1   ense: 111 Driller Companies   Date: 12/20/1960 Drill Finish Date   ate: 12/29/1960 PCW Rcv Date   e: Pipe Discharge   e: 7.00   Depth Well: To   Water Bearing Stratifications: To	(quarters are smallest to   POD Number Q64 Q16 Q4 Sec   L 04562 3 1 29   ense: 111 Driller Company:   me: Date: 12/20/1960 Drill Finish Date:   ate: 12/29/1960 PCW Rcv Date:   e: Pipe Discharge Size:   e: 7.00 Depth Well:   Water Bearing Stratifications: Top 198	POD NumberQ64 Q16 Q4 SecTwsL 045623129188ense:111Driller Company:BUIme:BUIBUIBUIDate:12/20/1960Drill Finish Date:12ate:12/29/1960PCW Rcv Date:12e:Pipe Discharge Size:15e:7.00Depth Well:15Water Bearing Stratifications:TopBottom98156	POD Number L 04562Q64 Q16 Q4 3 1 29 188 35Eense:11Driller Company:BURKE, EEme:Drill Finish Date:12/20/1960Drill Finish Date:12/29/1960PCW Rcv Date:e:Pipe Discharge Size:e:Pipe Discharge Size:e:7.00Depth Well:156 feetWater Bearing Stratifications:Top98156 Sandst	POD Number Q64 Q16 Q4 Sec Tws Rng X   L 04562 3 1 29 18S 35E 641874   ense: 111 Driller Company: BURKE, EDWARD B.   me: Date: 12/20/1960 Drill Finish Date: 12/21/1960 Phe   ate: 12/29/1960 PCW Rev Date: So so   e: Pipe Discharge Size: Es es   e: 7.00 Depth Well: 156 feet De   Water Bearing Stratifications: Top Bottom Description   98 156 Sandstone/Gravel	POD Number Q64 Q16 Q4 Sec Tws Rng X Y   L 04562 3 1 29 18S 35E 641874 3621315*   ense: 111 Driller Company: BURKE, EDWARD B.   me: Date: 12/20/1960 Drill Finish Date: 12/21/1960 Plug Date:   ate: 12/29/1960 PCW Rev Date: Source: Source:   e: Pipe Discharge Size: Estimated Yield   e: 7.00 Depth Well: 156 feet Depth Water:   98 156 Sandstone/Gravel/Conglomerat

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

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7/18/23 11:36 AM

POINT OF DIVERSION SUMMARY



# New Mexico Office of the State Engineer **Point of Diversion Summary**

			(quarters are 1=NW 2=NE 3=SW 4=SE)							
			(quarters	are sma	allest to	o largest)	)	(NAD83 U	JTM in meters)	
Well Tag	POD	Number	Q64 Q1	6 Q4	Sec	Tws	Rng	X	Y	
	L 02	2357		2	20	18S	35E	642855	3623137* 🧲	
x Driller Lice	ense:	30	Driller Co	ompar	ny:	BA	RRON,	EMMETT		
Driller Nan	ne:	E. BARRON								
Drill Start	Date:	11/02/1953	Drill Fini	sh Dat	te:	12/02/1953		53 P	lug Date:	
Log File Da	ate:	12/17/1953	PCW Rev	/ Date	:			S	ource:	Shallow
Pump Type	Pump Type:		Pipe Discharge Size					Ε	<b>Estimated Yield</b>	:
Casing Size	e:	12.00	Depth We	ell:		1	70 feet	D	epth Water:	77 feet
X	Wate	er Bearing Stratifi	ications:	То	op 1	Bottom	Desci	ription		
				12	25	135	5 Sands	stone/Grave	el/Conglomerat	e
х		Casing Perf	orations:	То	op l	Bottom	ı			
					00	165	_			

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

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7/18/23 11:41 AM

POINT OF DIVERSION SUMMARY

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? S
۱				Groundwate	4 · · · · )	✓ GC	<b>)</b>

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Groundwater levels for New Mexico

Click to hide state-specific text

Important: <u>Next Generation Monitoring Location Page</u>

#### Search Results -- 1 sites found

Agency code = usgs site\_no list =

324415103281501

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

#### USGS 324415103281501 18S.35E.20.21434

Lea County, New Mexico Latitude 32°44'13.3", Longitude 103°28'36.4" NAD83 Land-surface elevation 3,933.00 feet above NGVD29 The depth of the well is 170 feet below land surface. This well is completed in the High Plains aquifer (N100HGHPLN) national aquifer. This well is completed in the Ogallala Formation (1210GLL) local aquifer.

Output formats
Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water- level date- time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1953-12-09		D	62610		3860.81	NGVD29	1	Z		
1953-12-09		D	62611		3862.36	NAVD88	1	Z		
1953-12-09		D	72019	72.19			1	Z		
1954-01-11		D	62610		3860.75	NGVD29	1	Z		
1954-01-11		D	62611		3862.30	NAVD88	1	Z		
1954-01-11		D	72019	72.25			1	Z		
1954-03-02		D	62610		3860.74	NGVD29	1	Z		
1954-03-02		D	62611		3862.29	NAVD88	1	Z		
1954-03-02		D	72019	72.26			1	Z		
1954-05-05		D	62610		3860.74	NGVD29	1	Z		
1954-05-05		D	62611		3862.29	NAVD88	1	Z		
1954-05-05		D	72019	72.26			1	Z		
1954-07-13		D	62610		3860.79	NGVD29	1	Z		
1954-07-13		D	62611		3862.34	NAVD88	1	Z		

# Respined by AGP: 11/2/2023 1:36:42 PM

USGS Groundwater for New Mexico: Water Levels -- 1 sites

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Date	Time	? Water-level date-time accuracy	? Pa co	rameter de	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	
1954-07-13	D	72010	72 21			1	7	
	D	72019	72.21	2000 70	NCVD20	1	Z	
1954-09-14	D	62610		3860.78	NGVD29	1	Z	
.954-09-14 .954-09-14	D	62611 72019	72.22	3862.33	NAVD88	1	Z Z	
.954-09-14	D	62610	12.22	3860.75	NGVD29	1	Z	
.954-11-09	D	62611		3862.30	NAVD88	1	Z	
1954-11-09	D	72019	72.25	5002.50	NAV DOO	1	Z	
1955-01-06	D	62610	12.25	3860.77	NGVD29	1	Z	
1955-01-06	D	62611		3862.32	NAVD88	1	Z	
1955-01-06	D	72019	72.23	5002.52	1010200	1	Z	
1955-03-19	D	62610	, 2120	3860.80	NGVD29	1	Z	
1955-03-19	D	62611		3862.35	NAVD88	1	Z	
1955-03-19	D	72019	72.20			1	Z	
1955-05-28	D	62610		3860.74	NGVD29	1	Z	
1955-05-28	D	62611		3862.29	NAVD88	1	Z	
1955-05-28	D	72019	72.26			1	Z	
1955-07-15	D	62610		3860.75	NGVD29	1	Z	
1955-07-15	D	62611		3862.30	NAVD88	1	Z	
1955-07-15	D	72019	72.25			1	Z	
1955-09-22	D	62610		3860.79	NGVD29	1	Z	
1955-09-22	D	62611		3862.34	NAVD88	1	Z	
1955-09-22	D	72019	72.21			1	Z	
1955-11-28	D	62610		3860.79	NGVD29	1	Z	
1955-11-28	D	62611		3862.34	NAVD88	1	Z	
1955-11-28	D	72019	72.21			1	Z	
1956-01-05	D	62610		3860.82	NGVD29	1	Z	
1956-01-05	D	62611		3862.37	NAVD88	1	Z	
1956-01-05	D	72019	72.18			1	Z	
1956-03-14	D	62610		3860.82	NGVD29	1	Z	
1956-03-14	D	62611		3862.37	NAVD88	1	Z	
1956-03-14	D	72019	72.18			1	Z	
1956-05-09	D	62610		3860.78	NGVD29	1	Z	
1956-05-09	D	62611		3862.33	NAVD88	1	Z	
1956-05-09	D	72019	72.22			1	Z	
1956-07-26	D	62610		3860.79	NGVD29	1	Z	
1956-07-26	D	62611		3862.34	NAVD88	1	Z	
1956-07-26	D	72019	72.21			1	Z	
1956-09-06	D	62610		3860.79	NGVD29	1	Z	
1956-09-06	D	62611		3862.34	NAVD88	1	Z	
1956-09-06	D	72019	72.21	_		1	Z	
1956-11-30	D	62610		3860.77	NGVD29	1	Z	
1956-11-30	D	62611		3862.32	NAVD88	1	Z	
1956-11-30	D	72019	72.23			1	Z	
1957-01-12	D	62610		3860.76	NGVD29	1	Z	
1957-01-12	D	62611		3862.31	NAVD88	1	Z	
1957-01-12	D	72019	72.24	2000 70		1	Z	
1958-01-14	D	62610		3860.73	NGVD29	1	Z	
1958-01-14	D	62611	70.07	3862.28	NAVD88	1	Z	
1958-01-14	D	72019	72.27			1	Z	

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USGS Groundwater for New Mexico: Water Levels -- 1 sites

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Date	Time	? Water-level date-time accuracy		rameter de	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	
1960-01-15	D	62611		3862.38	NAVD88	1	Z	
960-01-15	D	72019	72.17			1	Z	
1961-01-17	D	62610		3860.84	NGVD29	1	Z	
961-01-17	D	62611		3862.39	NAVD88	1	Z	
.961-01-17	D	72019	72.16			1	Z	
962-01-16	D	62610		3860.74	NGVD29	1	Z	
962-01-16	D	62611		3862.29	NAVD88	1	Z	
962-01-16	D	72019	72.26			1	Z	
963-02-18	D	62610		3860.84	NGVD29	1	Z	
963-02-18	D	62611		3862.39	NAVD88	1	Z	
.963-02-18	D	72019	72.16			1	Z	
964-02-10	D	62610		3860.71	NGVD29	1	Z	
964-02-10	D	62611		3862.26	NAVD88	1	Z	
964-02-10	D	72019	72.29			1	Z	
965-02-10	D	62610		3860.61	NGVD29	1	Z	
965-02-10	D	62611		3862.16	NAVD88	1	Z	
965-02-10	D	72019	72.39			1	Z	
966-02-07	D	62610		3860.51	NGVD29	1	Z	
966-02-07	D	62611		3862.06	NAVD88	1	Z	
966-02-07	D	72019	72.49			1	Z	
967-01-03	D	62610		3860.42	NGVD29	1	Z	
967-01-03	D	62611		3861.97	NAVD88	1	Z	
967-01-03	D	72019	72.58			1	Z	
968-01-02	D	62610		3860.24	NGVD29	1	Z	
968-01-02	D	62611		3861.79	NAVD88	1	Z	
968-01-02	D	72019	72.76			1	Z	
.969-01-14	D	62610		3860.00	NGVD29	1	Z	
969-01-14	D	62611		3861.55	NAVD88	1	Z	
969-01-14	D	72019	73.00			1	Z	
970-01-05	D	62610		3859.73	NGVD29	1	Z	
970-01-05	D	62611		3861.28	NAVD88	1	Z	
970-01-05	D	72019	73.27			1	Z	
971-01-12	D	62610		3859.69	NGVD29	1	Z	
971-01-12	D	62611		3861.24	NAVD88	1	Z	
971-01-12	D	72019	73.31			1	Z	
971-01-20	D	62610		3859.70	NGVD29	1	Z	
971-01-20	D	62611		3861.25	NAVD88	1	Z	
971-01-20	D	72019	73.30			1	Z	
972-01-12	D	62610		3859.55	NGVD29	1	Z	
972-01-12	D	62611		3861.10	NAVD88	1	Z	
972-01-12	D	72019	73.45			1	Z	
973-01-09	D	62610		3859.42	NGVD29	1	Z	
973-01-09	D	62611		3860.97	NAVD88	1	Z	
973-01-09	D	72019	73.58			1	Z	
974-01-08	D	62610		3859.27	NGVD29	1	Z	
974-01-08	D	62611		3860.82	NAVD88	1	Z	
974-01-08	D	72019	73.73			1	Z	
975-01-08	D	62610		3859.64	NGVD29	1	Z	
975-01-08	D	62611		3861.19	NAVD88	1	Z	
975-01-08	D	72019	73.36			1	Z	

## Receiped by QGD: 11/2/2023 1:36:42 PM

USGS Groundwater for New Mexico: Water Levels -- 1 sites

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Date	Time	? Water-level date-time accuracy		arameter ode	Water level, feet below land surface	Water level, feet above specific vertical datum	Refere vertic datum	
.976-01-13	D	62610		3859.32	NGVD29	1	Z	
.976-01-13	D	62611		3860.87	NAVD88	1	Z	
.976-01-13	D	72019	73.68			1	Z	
.976-02-12	D	62610		3859.27	NGVD29	1	Z	
976-02-12	D	62611		3860.82	NAVD88	1	Z	
.976-02-12	D	72019	73.73			1	Z	
.977-01-08	D	62610		3859.13	NGVD29	1	Z	
.977-01-08	D	62611		3860.68	NAVD88	1	Z	
.977-01-08	D	72019	73.87			1	Z	
.981-01-06	D	62610		3857.88	NGVD29	1	Z	
.981-01-06	D	62611		3859.43	NAVD88	1	Z	
.981-01-06	D	72019	75.12			1	Z	
.982-01-06	D	62610		3857.57	NGVD29	1	Z	
982-01-06	D	62611		3859.12	NAVD88	1	Z	
.982-01-06	D	72019	75.43			1	Z	
.983-01-04	D	62610		3857.09	NGVD29	1	Z	
.983-01-04	D	62611		3858.64	NAVD88	1	Z	
983-01-04	D	72019	75.91			1	Z	
984-01-05	D	62610		3856.62	NGVD29	1	Z	
984-01-05	D	62611		3858.17	NAVD88	1	Z	
984-01-05	D	72019	76.38			1	Z	
985-01-08	D	62610	/0.50	3856.22	NGVD29	1	Z	
985-01-08	D	62611		3857.77	NAVD88	1	Z	
.985-01-08	D	72019	76.78		1010200	1	Z	
986-01-08	D	62610	/0./0	3855.93	NGVD29	1	Z	
.986-01-08	D	62611		3857.48	NAVD88	1	Z	
.986-01-08	D	72019	77.07		NAV DOO	1	Z	
.987-01-06	D	62610	//.0/	3855.72	NGVD29	1	Z	
.987-01-06	D	62611		3857.27	NAVD88	1	Z	
.987-01-06	D	72019	77.28		NAVDOO	1	Z	
988-01-07	D	62610	//.20	3855.49	NGVD29	1	Z	
	D	62611		3857.04	NAVD88	1	Z	
.988-01-07	D	72019	77.51		NAVDOO		Z	
			//.51		NCVD20	1	Z	
989-01-07 989-01-07	D	62610		3855.18	NGVD29	1	Z	
	D	62611	77 00	3856.73	NAVD88	1		
989-01-07	D	72019	77.82		NOVD20	1	Z	
990-01-02	D	62610 62611		3855.20	NGVD29	1	Z Z	
990-01-02	D	62611	77 00	3856.75	NAVD88	1		
990-01-02	D	72019	77.80		NOVD20	1	Z	
991-01-02	D	62610		3854.48	NGVD29	1	Z	
991-01-02	D	62611	70 50	3856.03	NAVD88	1	Z	
991-01-02	D	72019	78.52		NOVD20	1	Z	
991-03-15	D	62610		3854.69	NGVD29	1	Z	
991-03-15	D	62611	70.0	3856.24	NAVD88	1	Z	
991-03-15	D	72019	78.31			1	Z	
992-01-06 18:18 L		62610		3854.43	NGVD29	1	Z	
992-01-06 18:18 L		62611	70 55	3855.98	NAVD88	1	Z	
992-01-06 18:18 L		72019	78.57			1	Z	
993-01-04	D	62610		3854.01	NGVD29	1	Z	
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USGS Groundwater for New Mexico: Water Levels -- 1 sites

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Date	Time	? Water-level date-time accuracy	? Par cod	ameter le	Water level, feet below land surface	Water level, feet above specific vertical datum		erenced tical um
993-01-04	D	72019	78.99			1	Z	
1994-01-08	D	62610		3853.45	NGVD29	1	Z	
994-01-08	D	62611		3855.00	NAVD88	1	Z	
.994-01-08	D	72019	79.55			1	Z	
.995-01-03	D	62610		3853.09	NGVD29	1	S	
.995-01-03	D	62611		3854.64	NAVD88	1	S	
995-01-03	D	72019	79.91			1	S	
996-01-12	D	62610		3852.53	NGVD29	1	S	
996-01-12	D	62611		3854.08	NAVD88	1	S	
.996-01-12	D	72019	80.47			1	S	
2000-01-03	D	62610		3850.21	NGVD29	1	S	
2000-01-03	D	62611		3851.76	NAVD88	1	S	
000-01-03	D	72019	82.79			1	S	
001-01-03	D	62610		3849.70	NGVD29	1	S	USGS
001-01-03	D	62611		3851.25	NAVD88	1	S	USGS
001-01-03	D	72019	83.30			1	S	USGS
2002-01-03	D	62610		3849.13	NGVD29	1	S	USGS
002-01-03	D	62611		3850.68	NAVD88	1	S	USGS
002-01-03	D	72019	83.87			1	S	USGS
003-01-05	D	62610		3848.52	NGVD29	1	S	USGS
003-01-05	D	62611		3850.07	NAVD88	1	S	USGS
003-01-05	D	72019	84.48			1	S	USGS
004-01-08	D	62610		3847.83	NGVD29	1	S	USGS
004-01-08	D	62611	05 17	3849.38	NAVD88	1	S	USGS
004-01-08	D	72019	85.17	2047 42	NCVD20	1	S	USGS
2005-01-04 17:48 UT		62610		3847.43	NGVD29	1	S S	USGS USGS
2005-01-04 17:48 UT		62611	95 57	3848.98	NAVD88	1 1	S	USGS
2005-01-04 17:48 UT 2006-01-09 17:40 UT		72019 62610	85.57	3847.09	NGVD29	1	S	USGS
006-01-09 17:40 UT		62611		3848.64	NAVD88	1	S	USGS
006-01-09 17:40 UT		72019	85.91	5040.04	NAV DOO	1	S	USGS
2007-12-17 21:25 UT		62610	05.51	3846.50	NGVD29	P	S	USGS
007-12-17 21:25 UT		62611		3848.05	NAVD88	P	S	USGS
007-12-17 21:25 UT		72019	86.50	50 10100		P	S	USGS
008-12-16 17:40 UT		62610	00100	3845.97	NGVD29	1	S	USGS
008-12-16 17:40 UT		62611		3847.52	NAVD88	1	S	USGS
008-12-16 17:40 UT		72019	87.03			1	S	USGS
011-12-20 23:00 UT		62610		3844.63	NGVD29	1	S	USGS
011-12-20 23:00 UT		62611		3846.18	NAVD88	1	S	USGS
011-12-20 23:00 UT		72019	88.37			1	S	USGS
013-12-12 16:30 UT		62610		3834.66	NGVD29	1	S	USGS
013-12-12 16:30 UT	⁻C m	62611		3836.21	NAVD88	1	S	USGS
013-12-12 16:30 UT	TC m	72019	98.34			1	S	USGS
015-01-07 17:50 UT	⁻C m	62610		3834.48	NGVD29	1	S	USGS
015-01-07 17:50 UT	TC m	62611		3836.03	NAVD88	1	S	USGS
015-01-07 17:50 UT	īC m	72019	98.52			1	S	USGS
016-01-08 17:48 UT	TC m	62610		3840.62	NGVD29	1	V	USGS
016-01-08 17:48 UT	TC m	62611		3842.17	NAVD88	1	V	USGS
016-01-08 17:48 UT	rC m	72019	92.38			1	V	USGS

.

### Recained by AGP: 11/2/2023 1:36:42 PM

USGS Groundwater for New Mexico: Water Levels -- 1 sites

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum					
Parameter code		62610	Groundwater level a	above NGVD 1929, feet							
Parameter code		62611	Groundwater level a	above NAVD 1988, feet							
Parameter code		72019	Depth to water level, feet below land surface								
Referenced vertical datu	ım	NAVD88	North American Ver	tical Datum of 1988							
Referenced vertical datu	ım	NGVD29	National Geodetic V	ertical Datum of 1929							
Status		1	Static								
Status		Р	Pumping								
Method of measurement	t	S	Steel-tape measure	ment.							
Method of measurement	t	V	Calibrated electric-t	ape measurement.							
Method of measurement	t	Z	Other.								
Measuring agency			Not determined								
Measuring agency		USGS	U.S. Geological Sur	vey							
Source of measurement	:		Not determined								
Source of measurement	:	S	Measured by persor	nnel of reporting agency	<i>.</i>						
Water-level approval sta	atus	А	Approved for public	ation Processing and	review completed.						

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U.S. Department of the Interior | U.S. Geological Survey Title: Groundwater for New Mexico: Water Levels URL: https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?

Page Contact Information: <u>New Mexico Water Data Maintainer</u> Page Last Modified: 2023-07-18 13:43:09 EDT 0.3 0.25 nadww02



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## New Mexico Office of the State Engineer **Point of Diversion Summary**

			(quarters a	re 1=N							
			(quarters	are sma	allest to	o largest)		(NAD83 U			
Well Tag POD Number		Number	Q64 Q16 Q4 Se			Tws Rng		Х	Y		
	L 03	3171	3	3	17	18S	35E	641835	3623734* (	9	
x Driller Lic	Driller Co	<b>Driller Company:</b> ABBOTT BR					COMPANY				
Driller Na	me:	ABBOTT, MUR	RELL								
Drill Start Date: 03/30/1956			<b>Drill Finis</b>	Drill Finish Date:			3/30/195	56 Pl	ug Date:	04/30/1957	
Log File D	ate:	05/31/1956	PCW Rev	:			Sa	urce:	Shallow		
Pump Typ	e:		Pipe Disch	Pipe Discharge Size:					<b>Estimated Yield:</b>		
Casing Siz	e:	7.00	Depth We	11:		170 feet			epth Water:	150 feet	
X	Wate	er Bearing Stratif	ications:	To	op I	Bottom	Desci	ription			
				15	50	170	Sands	stone/Grave	l/Conglomera	ite	
X		forations:	Та	op I	Bottom						
				1.	50	170					

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

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

7/18/23 11:40 AM

POINT OF DIVERSION SUMMARY

## New Mexico NFHL Data





FEMA, Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,

nmflood.org is made possible through a collaboration with NMDHSEM,



Comments : (8/15/23) Boring terminated at 55.0' with no presence of groundwater or moisture. (8/21/23) Bore measured at 55.0' using Heron Groundwater Meter, no detection of moisture inside bore.

## **APPENDIX E**



Received by OCD: 11/2/2023 1:36:42 PM



**Environment Testing** 

# **ANALYTICAL REPORT**

## PREPARED FOR

Attn: Clint Merritt Carmona Resources 310 W Wall St Ste 500 Midland, Texas 79701 Generated 8/25/2023 11:54:15 AM

## JOB DESCRIPTION

Nighthawk 3H SDG NUMBER Lea County New Mexico

## **JOB NUMBER**

880-32290-1

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

AMER

Generated 8/25/2023 11:54:15 AM

Authorized for release by Jessica Kramer, Project Manager Jessica.Kramer@et.eurofinsus.com (432)704-5440

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

Laboratory Job ID: 880-32290-1 SDG: Lea County New Mexico

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Sample Summary	19
Chain of Custody	20
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Contains No Free Liquid

Detection Limit (DoD/DOE)

Estimated Detection Limit (Dioxin)

Limit of Detection (DoD/DOE)

Method Detection Limit

Minimum Level (Dioxin)

Most Probable Number

Not Calculated

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive Quality Control

Method Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

Limit of Quantitation (DoD/DOE)

**Dilution Factor** 

Duplicate Error Ratio (normalized absolute difference)

Decision Level Concentration (Radiochemistry)

EPA recommended "Maximum Contaminant Level"

Minimum Detectable Concentration (Radiochemistry)

Not Detected at the reporting limit (or MDL or EDL if shown)

Minimum Detectable Activity (Radiochemistry)

Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

Client: Carmona Resources Project/Site: Nighthawk 3H

CNF

DER

DL

DLC

EDL

LOD

LOQ

MCL

MDA

MDC

MDL

MPN

MQL

NC

ND

NEG

POS

PQL PRES

QC RER

RL

RPD

TEF

TEQ

TNTC

ML

Dil Fac

DL, RA, RE, IN

Job ID: 880-32290-1 SDG: Lea County New Mexico

Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	
S1-	Surrogate recovery exceeds control limits, low biased.	5
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VOA		
Qualifier	Qualifier Description	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	8
HPLC/IC		
Qualifier	Qualifier Description	9
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	40

Job ID: 880-32290-1 SDG: Lea County New Mexico

#### Job ID: 880-32290-1

Client: Carmona Resources Project/Site: Nighthawk 3H

#### Laboratory: Eurofins Midland

#### Narrative

Job Narrative 880-32290-1

#### Receipt

The samples were received on 8/18/2023 1:32 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -2.8°C

#### GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: (MB 880-60968/5-A) and (MB 880-61017/5-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (880-32121-A-1-D MS) and (880-32121-A-1-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-32121-A-1-F). 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: BH-1 (0-1') (880-32290-1) and BH-1 (2') (880-32290-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-61017 and analytical batch 880-60962 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### GC Semi VOA

Method 8015MOD\_NM: The surrogate recovery for the blank associated with preparation batch 880-61009 and analytical batch 880-60956 was outside the upper control limits.

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-60956/31) and (CCV 880-60956/47). Evidence of matrix interferences is not obvious.

Method 8015MOD\_NM: The continuing calibration verification (CCV) associated with batch 880-60956 recovered above the upper control limit for Diesel Range Organics (Over C10-C28). An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-60956/47).

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

#### HPLC/IC

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

### **Client Sample Results**

Client: Carmona Resources Project/Site: Nighthawk 3H

#### Client Sample ID: BH-1 (0-1') Date Collected: 08/15/23 00:00

Date Received: 08/18/23 13:32

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		08/24/23 13:56	08/25/23 05:11	
<b>Foluene</b>	0.00708		0.00201		mg/Kg		08/24/23 13:56	08/25/23 05:11	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		08/24/23 13:56	08/25/23 05:11	1
n-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		08/24/23 13:56	08/25/23 05:11	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		08/24/23 13:56	08/25/23 05:11	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		08/24/23 13:56	08/25/23 05:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	132	S1+	70 - 130				08/24/23 13:56	08/25/23 05:11	1
1,4-Difluorobenzene (Surr)	93		70 - 130				08/24/23 13:56	08/25/23 05:11	1
Method: TAL SOP Total BTEX - To	otal BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00708		0.00402		mg/Kg			08/25/23 09:31	1
Method: SW846 8015 NM - Diesel	Range Organ	ics (DRO) (	GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
otal TPH	51.1		50.1		mg/Kg			08/25/23 11:26	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 GRO)-C6-C10	<50.1	U	50.1		mg/Kg		08/24/23 12:53	08/24/23 23:21	1
Diesel Range Organics (Over C10-C28)	51.1		50.1		mg/Kg		08/24/23 12:53	08/24/23 23:21	1
Oll Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		08/24/23 12:53	08/24/23 23:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130				08/24/23 12:53	08/24/23 23:21	1
p-Terphenyl	107		70 - 130				08/24/23 12:53	08/24/23 23:21	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	ohy - Solubl	e						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8880		50.1		mg/Kg			08/23/23 00:13	10
lient Sample ID: BH-1 (2')							Lab Sam	ple ID: 880-3	2290-2
ate Collected: 08/15/23 00:00								Matri	x: Solid
ate Received: 08/18/23 13:32									
Method: SW846 8021B - Volatile (	• •		l.						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
			0.00202		malka		08/24/23 13:56	00/05/00 05.07	1
Benzene	<0.00202	0	0.00202		mg/Kg		00/24/25 15.50	08/25/23 05:37	1
Benzene Toluene	<0.00202 <0.00202		0.00202		mg/Kg		08/24/23 13:56	08/25/23 05:37	1

m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg	08/24/23 13:56	08/25/23 05:37	1
o-Xylene	<0.00202	U	0.00202	mg/Kg	08/24/23 13:56	08/25/23 05:37	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg	08/24/23 13:56	08/25/23 05:37	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
Surrogate 4-Bromofluorobenzene (Surr)		Qualifier S1+	Limits		Prepared 08/24/23 13:56	Analyzed 08/25/23 05:37	Dil Fac

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Job ID: 880-32290-1 SDG: Lea County New Mexico

## Lab Sample ID: 880-32290-1

Matrix: Solid

5

Released to Imaging: 3/18/2024 8:58:24 AM

Matrix: Solid

5

### **Client Sample Results**

Job ID: 880-32290-1
SDG: Lea County New Mexico

Lab Sample ID: 880-32290-2

## Client Sample ID: BH-1 (2')

Date Collected: 08/15/23 00:00 Date Received: 08/18/23 13:32

Client: Carmona Resources Project/Site: Nighthawk 3H

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			08/25/23 09:31	1
Method: SW846 8015 NM - Diese	Range Organ	ics (DRO) (	GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2		mg/Kg			08/25/23 11:26	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	<50.2	U	50.2		mg/Kg		08/24/23 12:53	08/24/23 23:42	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<50.2	U	50.2		mg/Kg		08/24/23 12:53	08/24/23 23:42	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		08/24/23 12:53	08/24/23 23:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130				08/24/23 12:53	08/24/23 23:42	1
o-Terphenyl	109		70 - 130				08/24/23 12:53	08/24/23 23:42	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e						
Analyte	• •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	455		5.00		mg/Kg			08/23/23 00:33	1

### Client Sample ID: BH-1 (4')

Date Collected: 08/15/23 00:00 Date Received: 08/18/23 13:32

#### Lab Sample ID: 880-32290-3 Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		08/24/23 13:56	08/25/23 06:02	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/24/23 13:56	08/25/23 06:02	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		08/24/23 13:56	08/25/23 06:02	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		08/24/23 13:56	08/25/23 06:02	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		08/24/23 13:56	08/25/23 06:02	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		08/24/23 13:56	08/25/23 06:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	126		70 - 130				08/24/23 13:56	08/25/23 06:02	1
1,4-Difluorobenzene (Surr)	92		70 - 130				08/24/23 13:56	08/25/23 06:02	1

#### Method: TAL SOP Total BTEX - Total BTEX Calculation Analyte Result Qualifier MDL Unit RL D Prepared Analyzed Dil Fac Total BTEX <0.00402 U 0.00402 mg/Kg 08/25/23 09:31 1 Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC) Analyte Result Qualifier RL MDL Unit D Analyzed Dil Fac Prepared Total TPH <49.8 U 08/25/23 11:26 49.8 mg/Kg 1 Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) Analyte Result Qualifier RL MDL Unit D Prepared Dil Fac Analyzed <49.8 U 49.8 08/24/23 12:53 08/25/23 00:04 Gasoline Range Organics mg/Kg 1 (GRO)-C6-C10

**Eurofins Midland** 

08/25/23 00:04

08/24/23 12:53

Diesel Range Organics (Over

C10-C28)

49.8

mg/Kg

<49.8 U

## **Client Sample Results**

Client: Carmona Resources	
Project/Site: Nighthawk 3H	

### Client Sample ID: BH-1 (4')

Date Collected: 08/15/23 00:00 Date Received: 08/18/23 13:32

### Job ID: 880-32290-1 SDG: Lea County New Mexico

## Lab Sample ID: 880-32290-3

Matrix: Solid

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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		08/24/23 12:53	08/25/23 00:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	111		70 - 130				08/24/23 12:53	08/25/23 00:04	1
o-Terphenyl	116		70 - 130				08/24/23 12:53	08/25/23 00:04	-
Method: EPA 300.0 - Anions, Ion	Chromatograp	ohy - Solubl	e						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	142		5.00		mg/Kg			08/23/23 00:40	1

Eurofins Midland

Released to Imaging: 3/18/2024 8:58:24 AM

Client: Carmona Resources Project/Site: Nighthawk 3H

Job ID: 880-32290-1 SDG: Lea County New Mexico

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

Baberson         Matrix Spike           Baberson         Matrix Spike           Baberson         Matrix Spike Duplicate           Baberson         BH-1 (0-1')           Baberson         BH-1 (2')           Baberson         BH-1 (4')           LCS 880-61017/1-A         Lab Control Sample	BFB1 (70-130)	DFBZ1 (70-130)	
B80-32121-A-1-D MS         Matrix Spike           B80-32121-A-1-E MSD         Matrix Spike Duplicate           B80-32290-1         BH-1 (0-1')           B80-32290-2         BH-1 (2')           B80-32290-3         BH-1 (4')           LCS 880-61017/1-A         Lab Control Sample		(70-130)	
880-32121-A-1-E MSD         Matrix Spike Duplicate           880-32290-1         BH-1 (0-1')           880-32290-2         BH-1 (2')           880-32290-3         BH-1 (4')           LCS 880-61017/1-A         Lab Control Sample		(10-100)	
880-32290-1         BH-1 (0-1')           880-32290-2         BH-1 (2')           880-32290-3         BH-1 (4')           LCS 880-61017/1-A         Lab Control Sample	141 S1+	109	
880-32290-2         BH-1 (2')           880-32290-3         BH-1 (4')           LCS 880-61017/1-A         Lab Control Sample	140 S1+	106	
880-32290-3         BH-1 (4')           LCS 880-61017/1-A         Lab Control Sample	132 S1+	93	
LCS 880-61017/1-A Lab Control Sample	146 S1+	99	
	126	92	
LCSD 880-61017/2-A Lab Control Sample Dup	119	95	
	130	116	
MB 880-60968/5-A Method Blank	69 S1-	84	
MB 880-61017/5-A Method Blank	66 S1-	82	

Surrogate Legend BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

				1 21
_				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-32290-1	BH-1 (0-1')	106	107	
880-32290-2	BH-1 (2')	105	109	
880-32290-3	BH-1 (4')	111	116	
890-5084-A-1-D MS	Matrix Spike	108	98	
890-5084-A-1-E MSD	Matrix Spike Duplicate	103	98	
LCS 880-61009/2-A	Lab Control Sample	97	105	
LCSD 880-61009/3-A	Lab Control Sample Dup	103	117	
MB 880-61009/1-A	Method Blank	153 S1+	167 S1+	

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Prep Type: Total/NA

Prep Type: Total/NA

**Eurofins Midland** 

Client: Carmona Resources

## **QC Sample Results**

Job ID: 880-32290-1 SDG: Lea County New Mexico

Project/Site: Nighthawk 3H Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-60968/5-/	4										Client Sa	mple ID: Met	hod	Blank
Matrix: Solid												Prep Type	: To	tal/NA
Analysis Batch: 60962												Prep Ba	tch:	60968
Analyte	R	MB	MB Qualifier	RL		мпі	Unit		D	Р	repared	Analyzed		Dil Fac
Benzene	<0.0		U	0.00200			mg/Kg	1	_		4/23 09:15	08/24/23 12:12		1
Toluene		)200	U	0.00200			mg/Kg				4/23 09:15	08/24/23 12:1:		1
Ethylbenzene		0200		0.00200			mg/Kg				4/23 09:15	08/24/23 12:12		1
m-Xylene & p-Xylene		0400		0.00400			mg/Kg				4/23 09:15	08/24/23 12:12		· · · · · 1
o-Xylene		)200	U	0.00200			mg/Kg				4/23 09:15	08/24/23 12:12		. 1
Xylenes, Total		0400		0.00400			mg/Kg				4/23 09:15	08/24/23 12:12		
	-0.0	5400	0	0.00400			ing/itg	9		00/2	4/20 00.10	00/24/20 12.1	-	
		MB	MB											
Surrogate	%Reco	very	Qualifier	Limits						Р	repared	Analyzed		Dil Fac
4-Bromofluorobenzene (Surr)		69	S1-	70 - 130						08/2	4/23 09:15	08/24/23 12:1	2	
1,4-Difluorobenzene (Surr)		84		70 - 130						08/2	4/23 09:15	08/24/23 12:1	2	1
Lab Sample ID: MB 880-61017/5-/	4										Client Sa	mple ID: Met	hod	Blank
Matrix: Solid												Prep Type	: To	tal/NA
Analysis Batch: 60962												Prep Ba	tch:	61017
Analyte	R	MB	MB Qualifier	RL		MDL	Unit		D	Р	repared	Analyzed		Dil Fac
Benzene	<0.0		U	0.00200			mg/Kg	1	_		4/23 13:56	08/25/23 02:14		Dirrus
Toluene			U	0.00200			mg/Kg				4/23 13:56	08/25/23 02:14		1
Ethylbenzene		0200		0.00200			mg/Kg				4/23 13:56	08/25/23 02:14		1
m-Xylene & p-Xylene		0400		0.00200			mg/Kg				4/23 13:56	08/25/23 02:14		,
o-Xylene		0200	U	0.00200			mg/Kg				4/23 13:56	08/25/23 02:1		-
Xylenes, Total		0400		0.00200			mg/Kg				4/23 13:56	08/25/23 02:1		1
	-0.0	5400	0	0.00400			iiig/itg	9		00/2	4/20 10.00	00/20/20 02.1	Ŧ	'
		ΜВ	МВ											
Surrogate	%Reco	-	Qualifier	Limits						P	repared	Analyzed		Dil Fac
4-Bromofluorobenzene (Surr)		66	S1-	70 - 130						08/2	4/23 13:56	08/25/23 02:1	4	1
1,4-Difluorobenzene (Surr)		82		70 - 130						08/2	4/23 13:56	08/25/23 02:1	4	1
Lab Sample ID: LCS 880-61017/1	-A								С	lient	Sample	ID: Lab Contr	ol Sa	ample
Matrix: Solid												Ргер Туре	: To	tal/NA
Analysis Batch: 60962												Prep Ba	tch:	61017
				Spike	LCS	LCS						%Rec		
Analyte				Added	Result	Qua	lifier	Unit		D	%Rec	Limits		
Benzene				0.100	0.08221			mg/Kg			82	70 - 130		
Toluene				0.100	0.08060			mg/Kg			81	70 - 130		
Ethylbenzene				0.100	0.08072			mg/Kg			81	70 - 130		
m-Xylene & p-Xylene				0.200	0.1578			mg/Kg			79	70 - 130		
o-Xylene				0.100	0.08364			mg/Kg			84	70 - 130		
	LCS	LCS												
Surrogate	%Recovery			Limits										
4-Bromofluorobenzene (Surr)	119			70 - 130										
1,4-Difluorobenzene (Surr)	95			70 - 130										
Lab Sample ID: LCSD 880-61017/	2-A							Cli	ent	Sam	ple ID: L	ab Control Sa	mpl	e Dup
Matrix: Solid												Prep Type		
Analysis Batch: 60962												Prep Ba		
-				Spike	LCSD	LCS	D					%Rec		RPD
				Added	Result	Qual	lifier	Unit		D	%Rec	Limits F	RPD	Limit
Analyte						au		•						

Eurofins Midland

Job ID: 880-32290-1 SDG: Lea County New Mexico

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

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

Lab Sample ID: LCSD 880-6 Matrix: Solid	51017/2-A					Clier	nt Sam	nple ID:	Lab Contro	ol Sampl Type: To	
Analysis Batch: 60962										Batch:	
Analysis Datch. 00502			Spike	LCSD	LCSD				%Rec	Datch.	RPD
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene			0.100	0.08469		mg/Kg		85	70 - 130	5	35
Ethylbenzene			0.100	0.09550		mg/Kg		95	70 - 130	17	35
m-Xylene & p-Xylene			0.200	0.1798		mg/Kg		90	70 - 130	13	35
o-Xylene			0.100	0.09758		mg/Kg		98	70 - 130	15	35
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)			70 - 130								
1,4-Difluorobenzene (Surr)	116		70 - 130								
Lab Sample ID: 880-32121-/	A-1-D MS							Client	Sample ID	: Matrix	Snike
Matrix: Solid								•		Type: To	
Analysis Batch: 60962										Batch:	
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	< 0.00199	U	0.0996	0.09056		mg/Kg		91	70 - 130		
Toluene	<0.00199		0.0996	0.08150		mg/Kg		82	70 - 130		
Ethylbenzene	<0.00199	U	0.0996	0.08046		mg/Kg		81	70 - 130		
m-Xylene & p-Xylene	<0.00398		0.199	0.1390		mg/Kg		70	70 - 130		
o-Xylene	<0.00199		0.0996	0.06482	F1	mg/Kg		65	70 - 130		
						5.5					
	MS	MS									

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	141	S1+	70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

### Lab Sample ID: 880-32121-A-1-E MSD Matrix: Solid

## Analysis Batch: 60962

Analysis Batch: 60962									Prep	Batch:	61017
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00199	U	0.101	0.1005		mg/Kg		100	70 - 130	10	35
Toluene	<0.00199	U	0.101	0.08550		mg/Kg		85	70 - 130	5	35
Ethylbenzene	<0.00199	U	0.101	0.08450		mg/Kg		84	70 - 130	5	35
m-Xylene & p-Xylene	<0.00398	U	0.202	0.1473		mg/Kg		73	70 - 130	6	35
o-Xylene	<0.00199	U F1	0.101	0.07031		mg/Kg		70	70 - 130	8	35
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)		S1+	70 - 130								

#### 1,4-Difluorobenzene (Surr)

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

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Lab Sample ID: MB 880-61009/1-A Matrix: Solid Analysis Batch: 60956	МВ	мв					Client Sa	mple ID: Metho Prep Type: ٦ Prep Batch	Fotal/NA
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0		mg/Kg		08/24/23 12:51	08/24/23 19:47	1
(GRO)-C6-C10									

70 - 130

**Eurofins Midland** 

## **QC Sample Results**

Client: Carmona Resources Project/Site: Nighthawk 3H

Job ID: 880-32290-1 SDG: Lea County New Mexico

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

Lab Sample ID: MB 880-61009	/1 <b>-A</b>									Client S	ample ID: I		
Matrix: Solid												ype: To	
Analysis Batch: 60956		ИВ МВ									Prep	Batch:	61009
Analyta		ив мв ult Qualif	or	RL	MDL	Unit		D	D.	anarad	Analuz	ad	Dil Fac
Analyte Diesel Range Organics (Over		$\frac{\text{un}}{0.0} \frac{\text{Qualif}}{\text{U}}$		<b>KL</b> 0.0	MDL					repared 4/23 12:51	Analyz		DIIFa
C10-C28)	~5	5.0 0	50	0.0		mg/Kg	J		00/24	+/23 12.31	00/24/23	19.47	
Oll Range Organics (Over C28-C36)	<5	0.0 U	50	0.0		mg/Kg	I	(	08/24	4/23 12:51	08/24/23	19:47	
-		MB MB							_	_	<b>.</b> .		
Surrogate	%Recov	ery Qualif	ier <u>Limits</u> 70 - 130					-		r <b>epared</b> 4/23 12:51	Analyz 08/24/23		Dil Fa
1-Chlorooctane o-Terphenyl		53 31+ 67 S1+	70 - 130							4/23 12.51 4/23 12:51			
o-reiphenyi		07 31+	70 - 730	0					00/24	4/23 12.51	00/24/23	19.47	
Lab Sample ID: LCS 880-61009	9/2-A							Cli	ient	Sample	ID: Lab Co	ontrol S	ample
Matrix: Solid												Type: To	
Analysis Batch: 60956												Batch:	
			Spike	LCS	LCS						%Rec		
Analyte			Added	Result	Qual	lifier	Unit		D	%Rec	Limits		
Gasoline Range Organics			1000	924.4			mg/Kg			92	70 - 130		
(GRO)-C6-C10													
Diesel Range Organics (Over			1000	850.1			mg/Kg			85	70 - 130		
C10-C28)													
	LCS	.cs											
	0/ <b>D</b>	Qualifier	Limits										
Surrogate	%Recovery	quanner											
	97	kuumer	70 - 130										
1-Chlorooctane o-Terphenyl	97 105	<u>aumer</u>					Cli	ent S	Sam	ple ID: L	_ab Contro	ol Samp	le Du
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-610 Matrix: Solid	97 105	<u>aumer</u>	70 - 130				Cli	ent S	Sam	ple ID: L	Prep T	l Samp Type: To Batch:	otal/N/
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-610 Matrix: Solid Analysis Batch: 60956	97 105		70 - 130 70 - 130 <b>Spike</b>	LCSD				ent S		-	Prep T Prep %Rec	ype: To Batch:	otal/NA 61009 RPI
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-610 Matrix: Solid Analysis Batch: 60956 Analyte	97 105		70 - 130 70 - 130 Spike Added	Result			Unit	ent S	Sam	%Rec	Prep T Prep %Rec Limits	Batch:	otal/NA 61009 RPC Limi
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-610 Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics	97 105		70 - 130 70 - 130 <b>Spike</b>					ent S		-	Prep T Prep %Rec	ype: To Batch:	otal/NA 61009 RPI Limi
Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-610 Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	97 105		70 - 130 70 - 130 <b>Spike</b> Added 1000	<b>Result</b> 969.2			Unit mg/Kg	ent S		% <b>Rec</b> 97	Prep T Prep %Rec Limits 70 - 130	Sype: To Batch: RPD 5	61009 61009 RPE Limi
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-610 Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	97 105		70 - 130 70 - 130 Spike Added	Result			Unit	ent S		%Rec	Prep T Prep %Rec Limits	Batch:	61009 61009 RPI Limi 20
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-610 Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	97 105 09/3-A		70 - 130 70 - 130 <b>Spike</b> Added 1000	<b>Result</b> 969.2			Unit mg/Kg	ent S		% <b>Rec</b> 97	Prep T Prep %Rec Limits 70 - 130	Sype: To Batch: RPD 5	61009 61009 RPI Limi 20
1-Chlorooctane o-Terpheny/ Lab Sample ID: LCSD 880-610 Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	97 105 09/3-A	.csd	70 - 130 70 - 130 <b>Spike</b> Added 1000	<b>Result</b> 969.2			Unit mg/Kg	ent S		% <b>Rec</b> 97	Prep T Prep %Rec Limits 70 - 130	Sype: To Batch: RPD 5	61009 61009 RPI Limi 20
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-610 Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	97 105 09/3-A		70 - 130 70 - 130 Spike Added 1000 1000	<b>Result</b> 969.2			Unit mg/Kg	ent S		% <b>Rec</b> 97	Prep T Prep %Rec Limits 70 - 130	Sype: To Batch: RPD 5	otal/NA 61009 RPC Limi
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-610 Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	97 105 09/3-A    	.csd	70 - 130 70 - 130 <b>Spike</b> Added 1000 1000 <u>Limits</u> 70 - 130	<b>Result</b> 969.2			Unit mg/Kg	ent S		% <b>Rec</b> 97	Prep T Prep %Rec Limits 70 - 130	Sype: To Batch: RPD 5	61009 61009 RPI Limi 20
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-610 Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	97 105 09/3-A	.csd	70 - 130 70 - 130 Spike Added 1000 1000	<b>Result</b> 969.2			Unit mg/Kg	ient S		% <b>Rec</b> 97	Prep T Prep %Rec Limits 70 - 130	Sype: To Batch: RPD 5	61009 61009 RPE Limi
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-610 Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl	97 105 09/3-A 	.csd	70 - 130 70 - 130 <b>Spike</b> Added 1000 1000 <u>Limits</u> 70 - 130	<b>Result</b> 969.2			Unit mg/Kg	ient S		<b>%Rec</b> 97 86	Prep T Prep %Rec Limits 70 - 130	Type: To Batch: RPD 5	0tal/NA 61009 RPI Limi 20 20
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-610 Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-5084-A-1-I	97 105 09/3-A 	.csd	70 - 130 70 - 130 <b>Spike</b> Added 1000 1000 <u>Limits</u> 70 - 130	<b>Result</b> 969.2			Unit mg/Kg	ient S		<b>%Rec</b> 97 86	Prep T Prep %Rec Limits 70 - 130 70 - 130 50 - 130	Type: To Batch: RPD 5	ctal/NA 61009 RPI Limi 20 20
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-610 Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	97 105 09/3-A 	.csd	70 - 130 70 - 130 <b>Spike</b> Added 1000 1000 <u>Limits</u> 70 - 130	<b>Result</b> 969.2			Unit mg/Kg	ient S		<b>%Rec</b> 97 86	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID Prep T	Type: To Batch:	s Spike
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-610 Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-5084-A-1-I Matrix: Solid	97 105 09/3-A 	.CSD Qualifier	70 - 130 70 - 130 <b>Spike</b> Added 1000 1000 <u>Limits</u> 70 - 130	Result 969.2 861.8			Unit mg/Kg	ent S		<b>%Rec</b> 97 86	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID Prep T	Type: To Batch:	s Spike
1-Chlorooctane o-Terpheny/ Lab Sample ID: LCSD 880-610 Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terpheny/ Lab Sample ID: 890-5084-A-1-I Matrix: Solid Analysis Batch: 60956	97 105 09/3-A <i>LCSD</i> %Recovery 103 117 D MS	.CSD Qualifier	70 - 130 70 - 130 70 - 130 Spike Added 1000 1000 1000 1000 70 - 130 70 - 130	Result 969.2 861.8	Qual	lifier	Unit mg/Kg			<b>%Rec</b> 97 86	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID Prep T Prep T	Type: To Batch:	a Spike
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-610 Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-5084-A-1-I Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics	97 105 09/3-A <i>LCSD</i> %Recovery 103 117 D MS Sample S	CSD Qualifier	70 - 130 70 - 130 70 - 130 Spike Added 1000 1000 1000 1000 70 - 130 70 - 130 70 - 130	Result 969.2 861.8 MS	Qual	lifier	Unit mg/Kg mg/Kg		<u>D</u> .	%Rec 97 86 Client	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID: Prep T Prep T Prep %Rec	Type: To Batch:	a Spike
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-610 Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-5084-A-1-I Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	97 105 09/3-A <i>LCSD</i> %Recovery 103 117 D MS Sample S Result	CSD Qualifier	70 - 130         70 - 130         70 - 130         Added         1000         1000         1000         1000         1000         1000         1000         1000         50 - 130         70 - 130         70 - 130         Spike         Added	Result           969.2           861.8           MS           Result	Qual MS Qual	lifier	Unit mg/Kg mg/Kg		<u>D</u> .	%Rec 97 86 Client	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 190 %Rec Limits	Type: To Batch:	s Spike
1-Chlorooctane o-Terpheny/ Lab Sample ID: LCSD 880-610 Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terpheny/ Lab Sample ID: 890-5084-A-1-I Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	97 105 09/3-A <i>LCSD 1</i> %Recovery 0 103 117 D MS Sample 3 <50.0 1	CSD Qualifier Sample Qualifier	70 - 130         70 - 130         70 - 130         1000         1000         1000         1000         1000         1000         1000         1000         1000         500         70 - 130         70 - 130         70 - 130         70 - 130         70 - 130         70 - 130         70 - 130         70 - 130         1010	Result           969.2           861.8           MS           Result           1303	Qual MS Qual	lifier	Unit mg/Kg mg/Kg <u>Unit</u> mg/Kg		<u>D</u> .	%Rec 97 86 Client %Rec 127	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID Prep T Prep T Prep %Rec Limits 70 - 130	Type: To Batch:	s Spike
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-610 Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-5084-A-1-I Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	97 105 09/3-A <i>LCSD 4</i> %Recovery 0 103 117 D MS Sample 3 <50.0 0 <50.0 0 MS 4	CSD Qualifier Sample Qualifier	70 - 130         70 - 130         70 - 130         1000         1000         1000         1000         1000         1000         1000         1000         1000         500         70 - 130         70 - 130         70 - 130         70 - 130         70 - 130         70 - 130         70 - 130         70 - 130         1010	Result           969.2           861.8           MS           Result           1303	Qual MS Qual	lifier	Unit mg/Kg mg/Kg <u>Unit</u> mg/Kg		<u>D</u> .	%Rec 97 86 Client %Rec 127	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID Prep T Prep T Prep %Rec Limits 70 - 130	Type: To Batch:	s Spike
1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880-610 Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-5084-A-1-I Matrix: Solid Analysis Batch: 60956 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	97 105 09/3-A <i>LCSD 4</i> %Recovery 0 103 117 D MS Sample 3 <50.0 0 <50.0 0 MS 4	CSD Qualifier Qualifier	70 - 130         70 - 130         70 - 130         1000         1000         1000         1000         1000         1000         1000         5pike         70 - 130         70 - 130         70 - 130         1010         1010         1010	Result           969.2           861.8           MS           Result           1303	Qual MS Qual	lifier	Unit mg/Kg mg/Kg <u>Unit</u> mg/Kg	ent \$	<u>D</u> .	%Rec 97 86 Client %Rec 127	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID Prep T Prep T Prep %Rec Limits 70 - 130	Type: To Batch:	s Spike

Eurofins Midland

Client: Carmona Resources

Project/Site: Nighthawk 3H

Job ID: 880-32290-1 SDG: Lea County New Mexico

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

Lab Sample ID: 890-5084-A- Matrix: Solid	1-E MSD					С	lient Sa	imple ID	): Matrix Sp Prep 1	oike Dup Type: To	
Analysis Batch: 60956										Batch:	
· · · · · <b>,</b> · · · · · · · · · · · · · · · · · · ·	Sample	Sample	Spike	MSD	MSD				%Rec		RP
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Lim
Gasoline Range Organics	<50.0	·	1010	1245		mg/Kg		121	70 - 130	5	2
(GRO)-C6-C10	0010	0		.2.10					10-100	0	-
Diesel Range Organics (Over C10-C28)	<50.0	U	1010	959.7		mg/Kg		93	70 - 130	2	2
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	103		70 - 130								
o-Terphenyl	98		70 - 130								
lethod: 300.0 - Anions, Lab Sample ID: MB 880-607 Matrix: Solid Analysis Batch: 60836		ography						Client S	ample ID: Prep	Method Type: So	
		MB MB									
Analyte	Re	esult Qualifier		RL	MDL Unit		D P	epared	Analyz	ed	Dil F
Chloride	<	5.00 U		5.00	mg/K	g .			08/22/23	22:20	
Matrix: Solid	(52/2-A						Client	Sample	ID: Lab Co Prep	Type: So	
Matrix: Solid Analysis Batch: 60836	/52/2-A		Spike Added		LCS Qualifier	Unit	D	%Rec			
Matrix: Solid Analysis Batch: 60836 <sup>Analyte</sup>						Unit mg/Kg		-	Prep %Rec		
Matrix: Solid Analysis Batch: 60836 Analyte Chloride Lab Sample ID: LCSD 880-6 Matrix: Solid			Added	Result		mg/Kg	D	%Rec 102	Prep %Rec Limits 90 - 110	Type: So	oluk
Matrix: Solid Analysis Batch: 60836 Analyte Chloride Lab Sample ID: LCSD 880-6 Matrix: Solid			Added 250	Result 255.9	Qualifier	mg/Kg	D	%Rec 102	Prep %Rec Limits 90 - 110 Lab Contro Prep	Type: So  ol Sampl	e Du oluk
Matrix: Solid Analysis Batch: 60836 Analyte Chloride Lab Sample ID: LCSD 880-6 Matrix: Solid Analysis Batch: 60836			Added 250 Spike	Result 255.9 LCSD	Qualifier	mg/Kg Clie	D_	%Rec 102 ple ID: I	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec	Type: So  ol Sampl Type: So	e Du olut olut
Matrix: Solid Analysis Batch: 60836 Analyte Chloride Lab Sample ID: LCSD 880-6 Matrix: Solid Analysis Batch: 60836 Analyte			Added 250	Result 255.9 LCSD	Qualifier	mg/Kg	D	%Rec 102	Prep %Rec Limits 90 - 110 Lab Contro Prep	Type: So  ol Sampl	e Du olub olub Ri Lir
Matrix: Solid Analysis Batch: 60836 Analyte Chloride Lab Sample ID: LCSD 880-6 Matrix: Solid Analysis Batch: 60836 Analyte Chloride Lab Sample ID: 880-32290-1 Matrix: Solid	0752/3-A		Added 250 Spike Added	Result 255.9 LCSD Result	Qualifier	mg/Kg Clie Unit	D_	%Rec 102 ple ID: 1 %Rec 103	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 mt Sample	Type: So ol Sampl Type: So <u>RPD</u> 1	e Du olub Ri Lir
Matrix: Solid Analysis Batch: 60836 Analyte Chloride Lab Sample ID: LCSD 880-6 Matrix: Solid Analysis Batch: 60836 Analyte Chloride Lab Sample ID: 880-32290-1 Matrix: Solid	0752/3-A		Added 250 Spike Added	Result 255.9 LCSD Result 258.6	Qualifier	mg/Kg Clie Unit	D_	%Rec 102 ple ID: 1 %Rec 103	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 mt Sample	Type: So ol Sampl Type: So <u>1</u> ID: BH-1	e Du olub Ri Lir
Matrix: Solid Analysis Batch: 60836 Analyte Chloride Lab Sample ID: LCSD 880-6 Matrix: Solid Analysis Batch: 60836 Analyte Chloride Lab Sample ID: 880-32290-1 Matrix: Solid Analysis Batch: 60836	0752/3-A MS Sample	Sample Qualifier	Added 250 Spike Added 250	Result 255.9 LCSD Result 258.6	Qualifier LCSD Qualifier	mg/Kg Clie Unit	D_	%Rec 102 ple ID: 1 %Rec 103	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 nt Sample Prep	Type: So ol Sampl Type: So <u>1</u> ID: BH-1	e Du olub Ri Lir
Matrix: Solid Analysis Batch: 60836 Analyte Chloride Lab Sample ID: LCSD 880-6 Matrix: Solid Analysis Batch: 60836 Analyte Chloride Lab Sample ID: 880-32290-1 Matrix: Solid Analysis Batch: 60836 Analyte	0752/3-A MS Sample	-	Added 250 Spike Added 250 Spike	Result 255.9 LCSD Result 258.6	Qualifier LCSD Qualifier MS	mg/Kg Clie Unit mg/Kg	D_ Int Sam	%Rec           102           ple ID: I           %Rec           103           Clier	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 nt Sample Prep %Rec	Type: So ol Sampl Type: So <u>1</u> ID: BH-1	e Du oluk Ri Lir
Matrix: Solid Analysis Batch: 60836 Analyte Chloride Lab Sample ID: LCSD 880-6 Matrix: Solid Analysis Batch: 60836 Analyte Chloride Lab Sample ID: 880-32290-1 Matrix: Solid Analysis Batch: 60836 Analyte Chloride Lab Sample ID: 880-32290-1 Matrix: Solid	0752/3-A MS 	Qualifier	Added 250 Spike Added 250 Spike Added 2510	Result 255.9 LCSD Result 258.6 MS Result 11600	Qualifier LCSD Qualifier MS Qualifier	mg/Kg Clie Unit mg/Kg	D_ Int Sam	%Rec           102           ple ID: I           %Rec           103           Clie           %Rec           109	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 mt Sample 90 - 110 %Rec Limits 90 - 110	Type: So Sampl Type: So <u>RPD</u> 1 ID: BH-1 Type: So	e Du olub Rl Lir I (0 olub
Matrix: Solid Analysis Batch: 60836 Analyte Chloride Lab Sample ID: LCSD 880-6 Matrix: Solid Analysis Batch: 60836 Analyte Chloride Lab Sample ID: 880-32290-1 Matrix: Solid Analysis Batch: 60836 Analyte Chloride Lab Sample ID: 880-32290-1 Matrix: Solid Analysis Batch: 60836	0752/3-A MS Sample Result 8880 MSD Sample	Qualifier	Added 250 Spike Added 250 Spike 2510	Result 255.9 LCSD Result 258.6 MS Result 11600	Qualifier LCSD Qualifier MS Qualifier	Unit mg/Kg	D_ Int Sam	%Rec           102           ple ID: I           %Rec           103           Clien           %Rec           109           Clien	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 mt Sample Prep %Rec Limits 90 - 110 mt Sample Prep %Rec	Type: So Sampl Type: So RPD 1 ID: BH-1 Type: So ID: BH-1 Type: So	olub e Du olub Ri Lir l (0 olub
Lab Sample ID: LCS 880-607 Matrix: Solid Analysis Batch: 60836 Analyte Chloride Lab Sample ID: LCSD 880-6 Matrix: Solid Analysis Batch: 60836 Analyte Chloride Lab Sample ID: 880-32290-1 Matrix: Solid Analysis Batch: 60836 Analyte Chloride Lab Sample ID: 880-32290-1 Matrix: Solid Analysis Batch: 60836 Analyte Chloride Chloride	0752/3-A MS Sample Result 8880 MSD Sample	Qualifier	Added 250 Spike Added 250 Spike Added 2510	Result 255.9 LCSD Result 258.6 MS Result 11600	Qualifier LCSD Qualifier MS Qualifier	mg/Kg Clie Unit mg/Kg	D_ Int Sam	%Rec           102           ple ID: I           %Rec           103           Clie           %Rec           109	Prep %Rec Limits 90 - 110 Lab Contro Prep %Rec Limits 90 - 110 mt Sample 90 - 110 %Rec Limits 90 - 110	Type: So ol Sampl Type: So <u></u> ID: BH-1 Type: So  ID: BH-1	olul  e D olul   (0- olul   (0- olul

### **QC Association Summary**

Client: Carmona Resources Project/Site: Nighthawk 3H

Job ID: 880-32290-1 SDG: Lea County New Mexico

5 6

## **GC VOA**

#### Analysis Batch: 60962

880-32290-1 880-32290-2	BH-1 (0-1') BH-1 (2')	Total/NA Total/NA	Solid	8021B	61017
	BH-1 (2')	Total/NIA			
		iotal/INA	Solid	8021B	61017
880-32290-3	BH-1 (4')	Total/NA	Solid	8021B	61017
MB 880-60968/5-A	Method Blank	Total/NA	Solid	8021B	60968
MB 880-61017/5-A	Method Blank	Total/NA	Solid	8021B	61017
LCS 880-61017/1-A	Lab Control Sample	Total/NA	Solid	8021B	61017
_CSD 880-61017/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	61017
880-32121-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	61017
880-32121-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	61017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-60968/5-A	Method Blank	Total/NA	Solid	5035	

#### Prep Batch: 61017

LCSD 880-61017/2-A	Lab Control Sample Dup	Iotal/NA	Solid	8021B	61017	
880-32121-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	61017	8
880-32121-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	61017	
Prep Batch: 60968						9
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
MB 880-60968/5-A	Method Blank	Total/NA	Solid	5035		
Prep Batch: 61017						
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
880-32290-1	BH-1 (0-1')	Total/NA	Solid	5035		
880-32290-2	BH-1 (2')	Total/NA	Solid	5035		4.0
000-32230-2						
880-32290-3	BH-1 (4')	Total/NA	Solid	5035		
		Total/NA Total/NA	Solid Solid	5035 5035		
880-32290-3	BH-1 (4')					13 14
880-32290-3 MB 880-61017/5-A	BH-1 (4') Method Blank	Total/NA	Solid	5035		13
880-32290-3 MB 880-61017/5-A LCS 880-61017/1-A	BH-1 (4') Method Blank Lab Control Sample	Total/NA Total/NA	Solid Solid	5035 5035		13

#### Analysis Batch: 61103

Lab Sample ID 880-32290-1	Client Sample ID BH-1 (0-1')	Prep Type Total/NA	Matrix Solid	Method Total BTEX	Prep Batch
880-32290-2	BH-1 (2')	Total/NA	Solid	Total BTEX	
880-32290-3	BH-1 (4')	Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Analysis Batch: 60956

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-32290-1	BH-1 (0-1')	Total/NA	Solid	8015B NM	61009
880-32290-2	BH-1 (2')	Total/NA	Solid	8015B NM	61009
880-32290-3	BH-1 (4')	Total/NA	Solid	8015B NM	61009
MB 880-61009/1-A	Method Blank	Total/NA	Solid	8015B NM	61009
LCS 880-61009/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	61009
LCSD 880-61009/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	61009
890-5084-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	61009
890-5084-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	61009

Prep Batch: 61009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-32290-1	BH-1 (0-1')	Total/NA	Solid	8015NM Prep	
880-32290-2	BH-1 (2')	Total/NA	Solid	8015NM Prep	
880-32290-3	BH-1 (4')	Total/NA	Solid	8015NM Prep	
MB 880-61009/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-61009/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

Eurofins Midland

## **QC Association Summary**

Client: Carmona Resources Project/Site: Nighthawk 3H

#### GC Semi VOA (Continued)

#### Prep Batch: 61009 (Continued)

Lab Sample ID LCSD 880-61009/3-A	Client Sample ID Lab Control Sample Dup	Prep Type Total/NA	Matrix Solid	Method 8015NM Prep	Prep Batch
890-5084-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5084-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	
Analysis Batch: 61131					
I ab Sample ID	Client Sample ID	Pren Type	Matrix	Method	Pren Batch

Lab Sample ID 880-32290-1	Client Sample ID BH-1 (0-1')	Prep Type Total/NA	Matrix Solid	Method 8015 NM	Prep Batch
880-32290-2	BH-1 (2')	Total/NA	Solid	8015 NM	
880-32290-3	BH-1 (4')	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 60752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-32290-1	BH-1 (0-1')	Soluble	Solid	DI Leach	
880-32290-2	BH-1 (2')	Soluble	Solid	DI Leach	
880-32290-3	BH-1 (4')	Soluble	Solid	DI Leach	
MB 880-60752/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-60752/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-60752/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-32290-1 MS	BH-1 (0-1')	Soluble	Solid	DI Leach	
880-32290-1 MSD	BH-1 (0-1')	Soluble	Solid	DI Leach	

#### Analysis Batch: 60836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-32290-1	BH-1 (0-1')	Soluble	Solid	300.0	60752
880-32290-2	BH-1 (2')	Soluble	Solid	300.0	60752
880-32290-3	BH-1 (4')	Soluble	Solid	300.0	60752
MB 880-60752/1-A	Method Blank	Soluble	Solid	300.0	60752
LCS 880-60752/2-A	Lab Control Sample	Soluble	Solid	300.0	60752
LCSD 880-60752/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	60752
880-32290-1 MS	BH-1 (0-1')	Soluble	Solid	300.0	60752
880-32290-1 MSD	BH-1 (0-1')	Soluble	Solid	300.0	60752

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Job ID: 880-32290-1 SDG: Lea County New Mexico

Initial

Amount

4.97 g

5 mL

9.98 g

1 uL

4.99 g

50 mL

Final

Amount

5 mL

5 mL

10 mL

1 uL

50 mL

50 mL

Batch

61017

60962

61103

61131

61009

60956

60752

60836

Number

Dil

1

1

1

1

10

Factor

Run

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Soluble

Soluble

#### Client Sample ID: BH-1 (0-1') Date Collected: 08/15/23 00:00 Date Received: 08/18/23 13:32

Batch

Туре

Prep

Analysis

Analysis

Analysis

Analysis

Analysis

Leach

Prep

Batch

Method

5035

8021B

Total BTEX

8015NM Prep

8015B NM

DI Leach

300.0

8015 NM

Job ID: 880-32290-1 SDG: Lea County New Mexico

### Lab Sample ID: 880-32290-1 Matrix: Solid

Analyst

EL

SM

SM

SM

ткс

SM

SMC

СН

Lab

EET MID

Matrix: Solid

Prepared

or Analyzed

08/24/23 13:56

08/25/23 05:11

08/25/23 09:31

08/25/23 11:26

08/24/23 12:53

08/24/23 23:21

08/21/23 15:17

08/23/23 00:13

#### Lab Sample ID: 880-32290-2 Matrix: Solid

Lab Sample ID: 880-32290-3

### Client Sample ID: BH-1 (2') Date Collected: 08/15/23 00:00

Date Received: 08/18/23 13:32

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	61017	08/24/23 13:56	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	60962	08/25/23 05:37	SM	EET MID
Total/NA	Analysis	Total BTEX		1			61103	08/25/23 09:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			61131	08/25/23 11:26	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	61009	08/24/23 12:53	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	60956	08/24/23 23:42	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	60752	08/21/23 15:17	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	60836	08/23/23 00:33	СН	EET MID

#### Client Sample ID: BH-1 (4') Date Collected: 08/15/23 00:00 Date Received: 08/18/23 13:32

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	61017	08/24/23 13:56	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	60962	08/25/23 06:02	SM	EET MID
Total/NA	Analysis	Total BTEX		1			61103	08/25/23 09:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			61131	08/25/23 11:26	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	61009	08/24/23 12:53	ткс	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	60956	08/25/23 00:04	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	60752	08/21/23 15:17	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	60836	08/23/23 00:40	СН	EET MID

#### Laboratory References:

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

10

Job ID: 880-32290-1 SDG: Lea County New Mexico

#### Laboratory: Eurofins Midland

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

Authority	P	Program	Identification Number	Expiration Date	
exas		NELAP T104704400-23-26		06-30-24	
The following analytes the agency does not of	1,	out the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for v	
the agency aces not of					
Analysis Method	Prep Method	Matrix	Analyte		
0,		Matrix Solid	Analyte Total TPH		

Eurofins Midland

#### Received by OCD: 11/2/2023 1:36:42 PM

### **Method Summary**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-32290-1 SDG: Lea County New Mexico

Method	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
3015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
3015NM Prep	Microextraction	SW846	EET MID
OI 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

Eurofins Midland

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-32290-1 SDG: Lea County New Mexico

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-32290-1	BH-1 (0-1')	Solid	08/15/23 00:00	08/18/23 13:32
880-32290-2	BH-1 (2')	Solid	08/15/23 00:00	08/18/23 13:32
880-32290-3	BH-1 (4')	Solid	08/15/23 00:00	08/18/23 13:32

5
8
9
13

Chain of Custody

resources.com, Clint Merritt MerrittC@carmonaresources.com	@carmonaresource									
		noehring	hring crr	nner Moe	s.com, Cor	nonaresource	armona@carn	Carmona mc	il results to Mike	Comments: Email results to Mike Carmona mcarmona@carmonaresources.com, Conner Moehring cmoehring@carmona
				$\vdash$						
			$\square$							
			+	+						
×				G		×		8/15/2023		BH-1 (5')
	×	×	1 ×	G		×		8/15/2023		BH-1 (4')
	×	×	-1 ×	G		×		8/15/2023		BH-1 (2')
	×	×	1 ×	G		×		8/15/2023		BH-1 (0-1')
Sample Comments		TP	# of Cont	Grab/ #	Water C	Soil	Time	Date	ntification	Sample Identification
NaOH+Ascorbic Acid: SAPC		H 80		p	- 4. 9	ature:	Corrected Temperature:	(	_	Total Containers:
Zn Acetate+NaOH: Zn	Ch	-	в	Ľ	- Q	ding:	Temperature Reading:	NIA	als: Yes No	Sample Custody Seals:
_			TEX		202		Correction Factor:	MA	<b>X</b>	<b>Cooler Custody Seals:</b>
NaHSO, NABIS	de 3	-		Ľ	IRY		Thermometer ID:		( Yes	Received Intact:
H <sub>3</sub> PO <sub>4</sub> : Hp	00.0	-		nete	(Yes) No	Wet Ice:	Yes No	emp Blank:		SAMPLE RECEIPT
~		) + N			)		2			PO #
		IRO		_				CCM		Sampler's Name:
Cool: Cool MeOH: Me		)			5 day	Due Date:		Lea County, New Mexico	Lea Co	Project Location
None: NO DI Water: H <sub>2</sub> O			÷ ?	Code	Rush	Routine		2090		Project Number:
ANALYSIS REQUEST Preservative Codes	ANA			p	Turn Around	Tum		Nighthawk 3H	<u>v</u>	Project Name:
Deliverables: EDD ADaPT C Other:			oil.com	narathon	Email: msanjari@marathonoil.com	Email:				Phone:
Reporting:Level II Level III DST/UST DRRP Level IV	7024	Houston, TX 77024	Hous	P	City, State ZIP				Midland, TX 79701	City, State ZIP:
State of Project:	990 Town and Country Blvd	fown and	L 066		Address:			e 500	310 W Wall St Ste 500	Address:
Program: UST/PST PRP Drownfields RC Derfund	Marathon Oil Corporation	thon Oil C	Mara	me:	Company Name:			Ces	Carmona Resources	Company Name:
Work Order Comments	-	Melodie Sanjari	Melo	ent)	Bill to: (if different)				Clinton Merritt	Project Manager:

Received by OCD: 11/2/2023 1:36:42 PM

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Job Number: 880-32290-1

List Source: Eurofins Midland

SDG Number: Lea County New Mexico

### Login Sample Receipt Checklist

Client: Carmona Resources

Login Number: 32290 List Number: 1 Creator: Kramer, Jessica

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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	

N/A

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Received by OCD: 11/2/2023 1:36:42 PM



**Environment Testing** 

# ANALYTICAL REPORT

## PREPARED FOR

Attn: Clint Merritt Carmona Resources 310 W Wall St Ste 500 Midland, Texas 79701 Generated 8/22/2023 12:44:07 PM

## JOB DESCRIPTION

Nighthawk 3H SDG NUMBER Lea County New Mexico

## **JOB NUMBER**

880-32291-1

EOL

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

AMER

Generated 8/22/2023 12:44:07 PM

Authorized for release by Jessica Kramer, Project Manager Jessica.Kramer@et.eurofinsus.com (432)704-5440

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

Laboratory Job ID: 880-32291-1 SDG: Lea County New Mexico

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### **Definitions/Glossary**

#### Client: Carmona Resources Project/Site: Nighthawk 3H

Job ID: 880-32291-1 SDG: Lea County New Mexico

### Qualifiers

		J
HPLC/IC		
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	
U	Indicates the analyte was analyzed for but not detected.	5

### 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	9
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
MPN	Most Probable Number	
MQL	Method Quantitation Limit	
NC	Not Calculated	
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	
NEG	Negative / Absent	
POS	Positive / Present	
PQL	Practical Quantitation Limit	
PRES	Presumptive	
QC	Quality Control	
RER	Relative Error Ratio (Radiochemistry)	
RL	Reporting Limit or Requested Limit (Radiochemistry)	
RPD	Relative Percent Difference, a measure of the relative difference between two points	
TEF	Toxicity Equivalent Factor (Dioxin)	
TEQ	Toxicity Equivalent Quotient (Dioxin)	
TNTC	Too Numerous To Count	

Job ID: 880-32291-1 SDG: Lea County New Mexico

#### Job ID: 880-32291-1

Client: Carmona Resources

Project/Site: Nighthawk 3H

#### Laboratory: Eurofins Midland

#### Narrative

Job Narrative 880-32291-1

#### Receipt

The samples were received on 8/18/2023 1:32 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -2.8°C

#### HPLC/IC

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-60624 and analytical batch 880-60770 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

		Client S	Sample R	esults	5				
Client: Carmona Resources								Job ID: 880	
Project/Site: Nighthawk 3H							SDG:	Lea County Nev	w Mexico
Client Sample ID: BH-4 (0-1')							Lab Sam	ple ID: 880-3	32291-1
Date Collected: 08/15/23 00:00								Mati	rix: Solid
Date Received: 08/18/23 13:32									
Method: EPA 300.0 - Anions, Ion Ch	romatogran	hy - Soluble							
Analyte	• •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	130		5.02		mg/Kg			08/22/23 06:14	1
Client Sample ID: BH-4 (2')							Lab Sam	ple ID: 880-3	32291-2
Date Collected: 08/15/23 00:00								Mati	rix: Solid
Date Received: 08/18/23 13:32									
Method: EPA 300.0 - Anions, Ion Ch	romatograp	hv - Soluble							
Analyte	• •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	75.5		4.95		mg/Kg			08/22/23 06:21	1
Client Sample ID: BH-4 (4')							Lab Sam	ple ID: 880-3	32291-3
Date Collected: 08/15/23 00:00								Mati	rix: Solid
Date Received: 08/18/23 13:32									
Method: EPA 300.0 - Anions, Ion Ch	romatograp	hy - Soluble							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
			5.01					08/22/23 06:29	

Eurofins Midland

Client: Carmona Resources

Project/Site: Nighthawk 3H

5 6 7

### **QC Sample Results**

Job ID: 880-32291-1 SDG: Lea County New Mexico

#### Method: 300.0 - Anions, Ion Chromatography

_ Lab Sample ID: MB 880-60624/1-A												Client S	Sample ID:	Method	Blank
Matrix: Solid														o Type: S	
Analysis Batch: 60770															
		MB N	IB												
Analyte	R	esult C	Qualifier		RL		MDL	Unit		D	Pr	epared	Analy	/zed	Dil Fac
Chloride	<	<5.00 U	J		5.00			mg/Kg	]				08/22/23	3 03:02	1
Lab Sample ID: LCS 880-60624/2-4	<b>x</b>									Clie	ent	Sample	BID: Lab C	Control S	ample
Matrix: Solid													Prep	o Type: S	Soluble
Analysis Batch: 60770															
				Spike		LCS	LCS						%Rec		
Analyte				Added		Result	Qual	ifier	Unit		D	%Rec	Limits	<u> </u>	
Chloride				250		249.2			mg/Kg			100	90 - 110		
Lab Sample ID: LCSD 880-60624/3	- <b>A</b>								Cli	ent S	am	ple ID:	Lab Contr	ol Samp	le Dup
Matrix: Solid													Prep	o Type: S	Soluble
Analysis Batch: 60770															
				Spike		LCSD	LCSI	D					%Rec		RPD
Analyte				Added		Result	Qual	ifier	Unit		D	%Rec	Limits	RPD	Limit
Chloride				250		249.9			mg/Kg			100	90 - 110	0	20
Lab Sample ID: 880-32288-A-4-B N	IS											Client	Sample II	D: Matrix	Spike
Matrix: Solid													Prep	o Type: S	Soluble
Analysis Batch: 60770															
	Sample	Sample	e	Spike		MS	MS						%Rec		
Analyte	Result	Qualifi	er	Added		Result	Qual	ifier	Unit		D	%Rec	Limits		
Chloride	809	F1		248		1026	F1		mg/Kg			87	90 - 110		
Lab Sample ID: 880-32288-A-4-C N	ISD								(	Client	Sa	mple IC	): Matrix S	pike Du	plicate
Matrix: Solid														o Type: S	
Analysis Batch: 60770															
-	Sample	Sample	e	Spike		MSD	MSD						%Rec		RPD
Analyte	Result	Qualifi	er	Added		Result	Qual	ifier	Unit		D	%Rec	Limits	RPD	Limit
Chloride	809	<b>F</b> 4		248		1030			mg/Kg			89	90 - 110	0	20

Eurofins Midland

Client Sample ID

BH-4 (0-1')

BH-4 (2')

BH-4 (4')

Method Blank

Matrix Spike

Lab Control Sample

Lab Control Sample Dup

Matrix Spike Duplicate

### **QC Association Summary**

Prep Type

Soluble

Soluble

Soluble

Soluble

Soluble

Soluble

Soluble

Soluble

Client: Carmona Resources Project/Site: Nighthawk 3H

HPLC/IC

Leach Batch: 60624

Lab Sample ID

880-32291-1

880-32291-2

880-32291-3

MB 880-60624/1-A

LCS 880-60624/2-A

LCSD 880-60624/3-A

880-32288-A-4-B MS

Job ID: 880-32291-1 SDG: Lea County New Mexico

Method

DI Leach

DI Leach

DI Leach DI Leach

DI Leach

DI Leach

DI Leach

DI Leach

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

Solid

Solid

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## 2 3 4 5 6 7 8

Prep Batch

880-32288-A-4-C MSD

#### Analysis Batch: 60770

ample ID	Prep Type	Matrix	· · · ·		
		wattix	Method	Prep Batch	
-1')	Soluble	Solid	300.0	60624	
)	Soluble	Solid	300.0	60624	
)	Soluble	Solid	300.0	60624	
Blank	Soluble	Solid	300.0	60624	
ntrol Sample	Soluble	Solid	300.0	60624	
ntrol Sample Dup	Soluble	Solid	300.0	60624	
pike	Soluble	Solid	300.0	60624	
pike Duplicate	Soluble	Solid	300.0	60624	
	) ) Blank ttrol Sample ttrol Sample Dup pike	) Soluble ) Soluble Blank Soluble ttrol Sample Dup Soluble pike Soluble	SolubleSolidSolubleSolidSolubleSolidBlankSolubleSolidtorol SampleSolubleSolidtorol Sample DupSolubleSolidpikeSolubleSolid	SolubleSolid300.0SolubleSolid300.0SolubleSolid300.0BlankSolubleSolid300.0ttrol SampleSolubleSolid300.0ttrol Sample DupSolubleSolid300.0pikeSolubleSolid300.0	Soluble         Solid         300.0         60624         <

**Eurofins Midland** 

Released to Imaging: 3/18/2024 8:58:24 AM

Job ID: 880-32291-1

Matrix: Solid

Matrix: Solid

SDG: Lea County New Mexico

Lab Sample ID: 880-32291-1

Lab Sample ID: 880-32291-2

### Lab Chronicle

Client: Carmona Resources Project/Site: Nighthawk 3H

## Client Sample ID: BH-4 (0-1')

Date Collected: 08/15/23 00:00 Date Received: 08/18/23 13:32

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.98 g	50 mL	60624	08/19/23 11:24	СН	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	60770	08/22/23 06:14	СН	EET MID

#### Client Sample ID: BH-4 (2') Date Collected: 08/15/23 00:00 Date Received: 08/18/23 13:32

—	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	60624	08/19/23 11:24	СН	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	60770	08/22/23 06:21	СН	EET MID

#### Client Sample ID: BH-4 (4') Date Collected: 08/15/23 00:00

Date Received: 08/18/23 13:32

#### Lab Sample ID: 880-32291-3 Matrix: Solid

ſ	-	Datah	Datah		Dil	Initial	Final	Datah	Drevered			
		Batch	Batch		Dil	Initial	Final	Batch	Prepared			
	Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab	
	Soluble	Leach	DI Leach			4.99 g	50 mL	60624	08/19/23 11:24	СН	EET MID	
	Soluble	Analysis	300.0		1	50 mL	50 mL	60770	08/22/23 06:29	CH	EET MID	

#### Laboratory References:

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

Client: Carmona Resources	
Project/Site: Nighthawk 3H	

Job ID: 880-32291-1 SDG: Lea County New Mexico

### Laboratory: Eurofins Midland

uthority	Program	Identification Number	Expiration Date	
exas	NELAP	T104704400-23-26	06-30-24	

# **Method Summary**

#### Client: Carmona Resources Project/Site: Nighthawk 3H

Job ID: 880-32291-1 SDG: Lea County New Mexico

Method	Method Description	Protocol	Laboratory	
300.0	Anions, Ion Chromatography	EPA	EET MID	
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID	
Protocol Re	ferences:			5
ASTM =	ASTM International			
EPA = L	S Environmental Protection Agency			
Laboratory	References:			
EET MI	D = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440			
				õ
				9
				1

#### Protocol References:

#### Laboratory References:

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-32291-1 SDG: Lea County New Mexico

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-32291-1	BH-4 (0-1')	Solid	08/15/23 00:00	08/18/23 13:32
880-32291-2	BH-4 (2')	Solid	08/15/23 00:00	08/18/23 13:32
880-32291-3	BH-4 (4')	Solid	08/15/23 00:00	08/18/23 13:32

		Comments: Email I			RH-4 (4')	BH-4 (2')	BH-4 (0-1')	Sample Identification	Total Containers:	Sample Custody Seals:	Cooler Custody Seals:	Received Intact:	SAMPLE RECEIPT	PO #	Sampler's Name:	Project Location	Project Number:	Project Name:	Phone:	City, State ZIP: M			Project Manager: Cl			
	Relinquishec	Comments: Email results to Mike Carmona mcarmona@carmonaresources.com, Conner Moehring@carmonaresources.com, Clint MerrittC@carmonaresources.com					1') 8/15/2023	fication Date		Yes No NIA	Yes No NIA		T TepperBlack:		CCM	Lea County, New Mexico	2090	Nighthawk 3H		Midland, TX 79701	310 W Wall St Ste 500	Carmona Resources	Clinton Merritt			
	Relinquished by: (Signature)	mcarmona@carmo						Time	Corrected Temperature:	Temperature Reading:	Correction Factor:	Thermometer ID:	Yes No	)				т 								
		naresources.cor			×	×	×	Soil Water	Ire: 277	ī			Wet Ice: Yes			Due Date:	Routine R	Turn Around	Email: msan	City, S	Address:	Compa	Bill to:			
		n, Conner Moeh			G 1	0 -	G 1	Grab/ # of Comp Cont	2 ACC	これたち	D.S.J.	Translation of the second seco	No No	ers		5 day	Rush Code		Email: msanjari@marathonoil.com	City, State ZIP:	S.	Company Name:	Bill to: (if different)			
5-18-23	Date/Time	ring cmoehring@			×	×	×		н 80	15M	( G	_	21B DR(	-	MRO	)		-	com	Houston, TX 77024	990 Town and Country Blvd	Marathon Oil Corporation	Melodie Sanjari			
		carmonaresourc																ANA		4	untry Blvd	oration				
NAM V	Received	ces.com, Clint Mer																ANALYSIS REQUEST		Delive	Benn	Progr		]		
1	Received by: (Signature)	ritt MerrittC@car									_										State of Froject. Benoming: Level II The evel III	Program: UST/PST PRP	Wo	,	880-322	
		monaresources.						s	NaOh	Zn Ace		NaHSC	H₃PO₄: HP	H2SU4: H2	HCL: HC	Cool: Cool	None: NO	P				נף _}rownfieldstRc	Work Order Comments	Page	880-32291 Chain of Custody	· · · · · · · · · · · · · · · · · · ·
elisita	Date/Time	com						Sample Comments	NaCHTASCOIDIC ACID: SAPC	2n Acetate+NaOH: Zn	Na22203 NaSO3		HP	H <sub>2</sub> NaOH: Na		Cool MeOH: Me	NO DI Water: H <sub>2</sub> O	Preservative Codes	Outer.		_	LtRC □perfund	ants	ge 1111111	ody	In the state state state state states

Released to Imaging: 3/18/2024 8:58:24 AM

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8/22/2023

# Received by OCD: 11/2/2023 1:36:42 PM

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Chain of Custody

13

Job Number: 880-32291-1

List Source: Eurofins Midland

SDG Number: Lea County New Mexico

# Login Sample Receipt Checklist

Client: Carmona Resources

Login Number: 32291 List Number: 1

<6mm (1/4").

Creator: Kramer, Jessica

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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is	N/A	

Received by OCD: 11/2/2023 1:36:42 PM



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Clint Merritt Carmona Resources 310 W Wall St Ste 500 Midland, Texas 79701 Generated 10/12/2023 9:05:41 PM

# JOB DESCRIPTION

Nighthawk 3H SDG NUMBER Lea County, New Mexico

# **JOB NUMBER**

880-34209-1

See page two for job notes and contact information

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

AMER

Generated 10/12/2023 9:05:41 PM

Authorized for release by Jessica Kramer, Project Manager Jessica.Kramer@et.eurofinsus.com (432)704-5440

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

Laboratory Job ID: 880-34209-1 SDG: Lea County, New Mexico

# **Table of Contents**

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2

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34209-1 SDG: Lea County, New Mexico

# Qualifiers

EDL

LOD

LOQ

MCL

MDA MDC

MDL

MQL NC

ND

NEG

POS

PQL

QC RER

RL

RPD

TEF

TEQ

TNTC

PRES

ML MPN

Qualifiers		 3
GC VOA		
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	
U	Indicates the analyte was analyzed for but not detected.	5
GC Semi VOA	A line line line line line line line line	
Qualifier	Qualifier Description	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	 8
U	Indicates the analyte was analyzed for but not detected.	
Glossary		 9
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)	40
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	

Estimated Detection Limit (Dioxin)

Limit of Detection (DoD/DOE)

Method Detection Limit Minimum Level (Dioxin)

Most Probable Number Method Quantitation Limit

Not Calculated

Negative / Absent

Positive / Present

Presumptive Quality Control

Practical Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

Limit of Quantitation (DoD/DOE)

EPA recommended "Maximum Contaminant Level" Minimum Detectable Activity (Radiochemistry)

Minimum Detectable Concentration (Radiochemistry)

Not Detected at the reporting limit (or MDL or EDL if shown)

Job ID: 880-34209-1 SDG: Lea County, New Mexico

#### Job ID: 880-34209-1

#### Laboratory: Eurofins Midland

#### Narrative

Job Narrative 880-34209-1

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

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

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

#### Receipt

The samples were received on 10/9/2023 4:20 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

#### **Receipt Exceptions**

The following samples were received and analyzed from an unpreserved bulk soil jar: BH-2 (0-1') (880-34209-1), BH-2 (2') (880-34209-2), BH-2 (4') (880-34209-3) and BH-2 (5') (880-34209-4).

#### GC VOA

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-64332 and analytical batch 880-64432 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### GC Semi VOA

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: BH-2 (0-1') (880-34209-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### HPLC/IC

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

# **Client Sample Results**

Client: Carmona Resources Project/Site: Nighthawk 3H

# Client Sample ID: BH-2 (0-1')

Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/10/23 10:38	10/11/23 18:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/10/23 10:38	10/11/23 18:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/10/23 10:38	10/11/23 18:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/10/23 10:38	10/11/23 18:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/10/23 10:38	10/11/23 18:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/10/23 10:38	10/11/23 18:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130				10/10/23 10:38	10/11/23 18:39	1
1,4-Difluorobenzene (Surr)	110		70 - 130				10/10/23 10:38	10/11/23 18:39	1
Method: TAL SOP Total BTEX - T	otal BTEX Calo	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			10/11/23 18:39	1
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (	GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			10/10/23 23:57	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 GRO)-C6-C10	<49.6	U	49.6		mg/Kg		10/10/23 09:30	10/10/23 23:57	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		10/10/23 09:30	10/10/23 23:57	1
Oll Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		10/10/23 09:30	10/10/23 23:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	133	S1+	70 - 130				10/10/23 09:30	10/10/23 23:57	1
o-Terphenyl	138	S1+	70 - 130				10/10/23 09:30	10/10/23 23:57	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	206		5.02		mg/Kg			10/11/23 21:00	1
lient Sample ID: BH-2 (2')							Lab Sam	ple ID: 880-3	4209-2
ate Collected: 10/04/23 00:00								Matri	x: Solid
ate Received: 10/09/23 16:20									
Method: SW846 8021B - Volatile	Organic Comp	ounds (GC)	)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

Method: SW846 8021B - Volat	lie Organic Comp	ounas (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		10/10/23 10:38	10/11/23 19:00	1
Toluene	<0.00201	U	0.00201		mg/Kg		10/10/23 10:38	10/11/23 19:00	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		10/10/23 10:38	10/11/23 19:00	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		10/10/23 10:38	10/11/23 19:00	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		10/10/23 10:38	10/11/23 19:00	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		10/10/23 10:38	10/11/23 19:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130				10/10/23 10:38	10/11/23 19:00	1
1,4-Difluorobenzene (Surr)	106		70 - 130				10/10/23 10:38	10/11/23 19:00	1

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Job ID: 880-34209-1 SDG: Lea County, New Mexico

# Lab Sample ID: 880-34209-1

Matrix: Solid

5

Released to Imaging: 3/18/2024 8:58:24 AM

Matrix: Solid

5

# **Client Sample Results**

Job ID: 880-34209-1
SDG: Lea County, New Mexico

Lab Sample ID: 880-34209-2

# Client Sample ID: BH-2 (2')

Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

Client: Carmona Resources Project/Site: Nighthawk 3H

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			10/11/23 19:00	1
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (	GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			10/11/23 00:19	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	<50.3	U	50.3		mg/Kg		10/10/23 09:30	10/11/23 00:19	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<50.3	U	50.3		mg/Kg		10/10/23 09:30	10/11/23 00:19	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		10/10/23 09:30	10/11/23 00:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	126		70 - 130				10/10/23 09:30	10/11/23 00:19	1
o-Terphenyl	129		70 - 130				10/10/23 09:30	10/11/23 00:19	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hv - Solubl	e						
Analyte	• •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	101		5.00		mg/Kg			10/11/23 21:06	1

## Client Sample ID: BH-2 (4')

Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

### Lab Sample ID: 880-34209-3 Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		10/10/23 10:38	10/11/23 19:20	1
Toluene	<0.00202	U	0.00202		mg/Kg		10/10/23 10:38	10/11/23 19:20	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		10/10/23 10:38	10/11/23 19:20	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		10/10/23 10:38	10/11/23 19:20	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		10/10/23 10:38	10/11/23 19:20	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		10/10/23 10:38	10/11/23 19:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130				10/10/23 10:38	10/11/23 19:20	1
1,4-Difluorobenzene (Surr)	109		70 - 130				10/10/23 10:38	10/11/23 19:20	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			10/11/23 19:20	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	<50.5	U	50.5		mg/Kg			10/11/23 00:41	1
Method: SW846 8015B NM - Die	esel Range Orga	nics (DRO)	(GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	<50.5	U	50.5		mg/Kg		10/10/23 09:30	10/11/23 00:41	1
Gasoline Range Organics	00.0								
0 0	0010								
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	<50.5	U	50.5		mg/Kg		10/10/23 09:30	10/11/23 00:41	1

# **Client Sample Results**

Client: Carmona Resources
Project/Site: Nighthawk 3H

# Client Sample ID: BH-2 (4')

Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

# Job ID: 880-34209-1 SDG: Lea County, New Mexico

# Lab Sample ID: 880-34209-3

Matrix: Solid

5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		10/10/23 09:30	10/11/23 00:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane			70 - 130				10/10/23 09:30	10/11/23 00:41	1
o-Terphenyl	115		70 - 130				10/10/23 09:30	10/11/23 00:41	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	106		4.97		mg/Kg			10/11/23 21:12	1

Eurofins Midland

Released to Imaging: 3/18/2024 8:58:24 AM

Prep Type: Total/NA

Prep Type: Total/NA

Job ID: 880-34209-1 SDG: Lea County, New Mexico

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

				Percent Surrogate Recovery (Acceptance Lim
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-34196-A-1-B MS	Matrix Spike	102	102	
880-34196-A-1-C MSD	Matrix Spike Duplicate	112	102	
880-34209-1	BH-2 (0-1')	95	110	
880-34209-2	BH-2 (2')	93	106	
880-34209-3	BH-2 (4')	97	109	
LCS 880-64332/1-A	Lab Control Sample	111	104	
LCSD 880-64332/2-A	Lab Control Sample Dup	99	101	
MB 880-64332/5-A	Method Blank	108	122	
Surrogate Legend				
BFB = 4-Bromofluorober	nzene (Surr)			

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

Г					
		1001	OTPH1	Percent Surrogate Recovery (Acceptance Limits)	13
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
880-34209-1	BH-2 (0-1')	133 S1+	138 S1+		14
880-34209-2	BH-2 (2')	126	129		
880-34209-3	BH-2 (4')	115	115		

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Client: Carmona Resources

Job ID: 880-34209-1 SDG: Lea County, New Mexico

Project/Site: Nighthawk 3H

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

Lab Sample ID: MB 880-64333 Matrix: Solid	2/5-A								Client Sa	ample ID: Me Prep Typ	e: To	tal/NA
Analysis Batch: 64432		IB MB								Prep B	atch:	0433
Analyte		ult Qualifier	RL		мпі	Unit		D P	repared	Analyzed		Dil Fa
Benzene	<0.002		0.00200			mg/Kg			0/23 10:38	10/11/23 12:3		Diria
Toluene	<0.002		0.00200			mg/Kg			0/23 10:38	10/11/23 12:		
Ethylbenzene	<0.002		0.00200			mg/Kg			0/23 10:38	10/11/23 12:		
m-Xylene & p-Xylene	<0.004		0.00400			mg/Kg			0/23 10:38	10/11/23 12:		
o-Xylene	<0.002		0.00200			mg/Kg			0/23 10:38	10/11/23 12:		
Xylenes, Total	<0.002		0.00200			mg/Kg			0/23 10:38	10/11/23 12:		
	-0.004	00 0	0.00400			ing/itg		10,1	0/20 10.00	10/11/20 12.		
		IB MB										
Surrogate		ery Qualifier	Limits						repared	Analyzed		Dil Fa
4-Bromofluorobenzene (Surr)		08	70 - 130						0/23 10:38	10/11/23 12:		
1,4-Difluorobenzene (Surr)	1.	22	70 - 130					10/1	0/23 10:38	10/11/23 12:	35	
Lab Sample ID: LCS 880-6433	32/1-4							Client	Sample	ID: Lab Cont	rol S	ample
Matrix: Solid								0.1011	. Sampio	Prep Typ		
Analysis Batch: 64432										Prep B		
Analysis Datch. 04402			Spike	LCS	LCS					%Rec	aton.	04002
Analyte			Added	Result			Unit	D	%Rec	Limits		
Benzene			0.100	0.1166	duu		mg/Kg		117	70 - 130		
Toluene			0.100	0.09644			mg/Kg		96	70 - 130		
Ethylbenzene			0.100	0.09544			mg/Kg		90 95	70 - 130		
m-Xylene & p-Xylene			0.200	0.1878			mg/Kg		94	70 - 130		
o-Xylene			0.200	0.09012			mg/Kg		94 90	70 - 130 70 - 130		
0-Xylene			0.100	0.03012			iiig/itg		30	70 - 150		
	LCS L	CS										
Surrogate	%Recovery Q	ualifier	Limits									
4-Bromofluorobenzene (Surr)	111		70 - 130									
1,4-Difluorobenzene (Surr)	104		70 - 130									
Lab Sample ID: LCSD 880-64	332/2-A						Clie	ent Sam	nole ID: I	ab Control S	amp	le Dur
Matrix: Solid										Prep Typ		
Analysis Batch: 64432										Prep B		
,			Spike	LCSD	LCS	D				%Rec		RPD
Analyte			Added	Result			Unit	D	%Rec	Limits	RPD	Limi
Benzene			0.100	0.1117			mg/Kg		112	70 - 130	4	35
Toluene			0.100	0.09300			mg/Kg		93	70 - 130	4	35
Ethylbenzene			0.100	0.09384			mg/Kg		94	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.1837			mg/Kg		92	70 - 130	2	35
o-Xylene			0.200	0.08378			mg/Kg		92 84	70 - 130	7	35
			0.100	0.00070			ing/itg		01	101100		
_	LCSD L											
Surrogate	%Recovery Q	ualifier	Limits									
4-Bromofluorobenzene (Surr)	99		70 - 130									
1,4-Difluorobenzene (Surr)	101		70 - 130									
Lab Sample ID: 880-34196-A-	1-B MS								Client	Sample ID: N	latrix	Spike
Matrix: Solid	. 5 110								Chefft	Prep Typ		
Analysis Batch: 64432										Prep B		
Analysis Daton. 04402	Sample S	ample	Spike	Ме	MS					%Rec		5-1002
Analyte	Result Q	-	Added	Result		lifior	Unit	D	%Rec	Limits		
Benzene	<0.00201 U		0.101	0.09018	Qud		mg/Kg		89	70 - 130		
			0.101	0.03010			IIIU/INU		09	10-100		

<0.00201 U

Toluene

0.07128

mg/Kg

71

70 - 130

0.101

Job ID: 880-34209-1 SDG: Lea County, New Mexico

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

Lab Sample ID: 880-34196-A	-1-B MS							Client	Sample ID: N		
Matrix: Solid									Prep Ty		
Analysis Batch: 64432									Prep B	atch:	64332
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Ethylbenzene	<0.00201	U F1	0.101	0.06697	F1	mg/Kg		66	70 - 130		
m-Xylene & p-Xylene	<0.00402	U F1	0.202	0.1343	F1	mg/Kg		66	70 - 130		
o-Xylene	<0.00201	U F1	0.101	0.06838	F1	mg/Kg		67	70 - 130		
	MS										
Surrogate	%Recovery	Qualifier	Limits	-							
4-Bromofluorobenzene (Surr)	102		70 - 130								
1,4-Difluorobenzene (Surr)	102		70 - 130								
Lab Sample ID: 880-34196-A	-1-C MSD					C	Client S	ample ID	D: Matrix Spik		
Matrix: Solid									Prep Ty		
Analysis Batch: 64432									Prep B	atch:	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Benzene	<0.00201	U	0.0996	0.09951		mg/Kg		100	70 - 130	10	3
Toluene	<0.00201	U	0.0996	0.08277		mg/Kg		83	70 - 130	15	3
Ethylbenzene	<0.00201	U F1	0.0996	0.08667		mg/Kg		87	70 - 130	26	3
m-Xylene & p-Xylene	<0.00402	U F1	0.199	0.1785		mg/Kg		89	70 - 130	28	3
o-Xylene	<0.00201	U F1	0.0996	0.08121		mg/Kg		81	70 - 130	17	35
	MSD										
Surrogate	%Recovery	Qualifier	Limits	-							
4-Bromofluorobenzene (Surr)	112		70 - 130								
1,4-Difluorobenzene (Surr)	102		70 - 130								
lethod: 300.0 - Anions,	Ion Chromat	ography									
Lab Sample ID: MB 880-644	05/1-A							Client S	Sample ID: Me	ethod	Blanł
Matrix: Solid									Prep Ty		
Analysis Batch: 64500										· .	
		MB MB									
Analyte	R	esult Qualifier		RL	MDL Unit		DF	Prepared	Analyzed		Dil Fac
Chloride		<5.00 U		5.00	mg/K	g			10/11/23 18:	28	1
							Clien	t Sample	e ID: Lab Con	trol S	ample
Lab Sample ID: LCS 880-644	405/2-A										olubl
	405/2-A								Prep IV	PC. 0	
Lab Sample ID: LCS 880-644 Matrix: Solid Analysis Batch: 64500	405/2-A									pc. 0	
Matrix: Solid Analysis Batch: 64500	405/2-A		Spike		LCS				%Rec	pc. 0	
Matrix: Solid Analysis Batch: 64500 <sup>Analyte</sup>	405/2-A		Added	Result	Qualifier	Unit	D	%Rec	%Rec Limits		
Matrix: Solid Analysis Batch: 64500	405/2-A 		=		Qualifier	- <mark>Unit</mark> mg/Kg	<u>D</u>	%Rec 101	%Rec		
Matrix: Solid Analysis Batch: 64500 <sup>Analyte</sup>			Added	Result	Qualifier	mg/Kg		101	%Rec Limits 90 - 110	Samp	le Duj
Matrix: Solid Analysis Batch: 64500 Analyte Chloride			Added	Result	Qualifier	mg/Kg		101	%Rec Limits 90 - 110	Samp	le Du

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	251.8		mg/Kg		101	90 - 110	0	20	

Eurofins Midland

# **QC Sample Results**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34209-1 SDG: Lea County, New Mexico

## Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-34204-A-	1-D MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep	Type: So	oluble
Analysis Batch: 64500											
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
	290		248	540.9		mg/Kg		101	90 - 110		
Chloride Lab Sample ID: 880-34204-A- Matrix: Solid Analysis Batch: 64500			248	540.9			ent Sa		: Matrix Sp	oike Dup Type: So	
Lab Sample ID: 880-34204-A- Matrix: Solid		Sample	248 Spike		MSD		ent Sa		: Matrix Sp		
Lab Sample ID: 880-34204-A- Matrix: Solid	1-E MSD Sample	Sample Qualifier		MSD	MSD Qualifier		ent Sa D		: Matrix Sp Prep		oluble

# **QC** Association Summary

Client: Carmona Resources Project/Site: Nighthawk 3H Page 90 of 383

#### Job ID: 880-34209-1 SDG: Lea County, New Mexico

8021B

8021B

8021B

64332

64332

64332

14

GC VOA

### Prep Batch: 64332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34209-1	BH-2 (0-1')	Total/NA	Solid	5035	
880-34209-2	BH-2 (2')	Total/NA	Solid	5035	
880-34209-3	BH-2 (4')	Total/NA	Solid	5035	
MB 880-64332/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-64332/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-64332/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-34196-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-34196-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
nalysis Batch: 64432	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-34209-1	BH-2 (0-1')	Total/NA	Solid	8021B	64332
880-34209-2	BH-2 (2')	Total/NA	Solid	8021B	64332
880-34209-3	BH-2 (4')	Total/NA	Solid	8021B	64332
MB 880-64332/5-A		Total/NA	Solid	8021B	64332
ND 000-04002/0-A	Method Blank	Total/INA	Solid	002 I B	04332

#### Analysis Batch: 64594

LCSD 880-64332/2-A

880-34196-A-1-B MS

880-34196-A-1-C MSD

Lab Control Sample Dup

Matrix Spike Duplicate

Matrix Spike

Lab Sample ID 880-34209-1	Client Sample ID BH-2 (0-1')	Prep Type Total/NA	Matrix	Method Total BTEX	Prep Batch
880-34209-2	BH-2 (2')	Total/NA	Solid	Total BTEX	
880-34209-3	BH-2 (4')	Total/NA	Solid	Total BTEX	

Total/NA

Total/NA

Total/NA

Solid

Solid

Solid

### GC Semi VOA

#### Analysis Batch: 64320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34209-1	BH-2 (0-1')	Total/NA	Solid	8015B NM	64329
880-34209-2	BH-2 (2')	Total/NA	Solid	8015B NM	64329
880-34209-3	BH-2 (4')	Total/NA	Solid	8015B NM	64329
Prep Batch: 64329					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34209-1	BH-2 (0-1')	Total/NA	Solid	8015NM Prep	-
880-34209-2	BH-2 (2')	Total/NA	Solid	8015NM Prep	
880-34209-3	BH-2 (4')	Total/NA	Solid	8015NM Prep	
Analysis Batch: 644	71				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34209-1	BH-2 (0-1')	Total/NA	Solid	8015 NM	
880-34209-2	BH-2 (2')	Total/NA	Solid	8015 NM	
880-34209-3	BH-2 (4')	Total/NA	Solid	8015 NM	

### HPLC/IC

#### Leach Batch: 64405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34209-1	BH-2 (0-1')	Soluble	Solid	DI Leach	
880-34209-2	BH-2 (2')	Soluble	Solid	DI Leach	

# **QC Association Summary**

Client: Carmona Resources Project/Site: Nighthawk 3H

# HPLC/IC (Continued)

### Leach Batch: 64405 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34209-3	BH-2 (4')	Soluble	Solid	DI Leach	
MB 880-64405/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-34204-A-1-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-34204-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 64500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34209-1	BH-2 (0-1')	Soluble	Solid	300.0	64405
880-34209-2	BH-2 (2')	Soluble	Solid	300.0	64405
880-34209-3	BH-2 (4')	Soluble	Solid	300.0	64405
MB 880-64405/1-A	Method Blank	Soluble	Solid	300.0	64405
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	300.0	64405
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	64405
880-34204-A-1-D MS	Matrix Spike	Soluble	Solid	300.0	64405
880-34204-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	64405

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#### Job ID: 880-34209-1 SDG: Lea County, New Mexico

Initial

Amount

5.00 g

5 mL

10.09 g

1 uL

4.98 g

50 mL

Final

Amount

5 mL

5 mL

10 mL

1 uL

50 mL

50 mL

Batch

64332

64432

64594

64471

64329

64320

64405

64500

Number

Dil

1

1

1

1

1

Factor

Run

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Soluble

Soluble

#### Client Sample ID: BH-2 (0-1') Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

Batch

Туре

Prep

Analysis

Analysis

Analysis

Analysis

Analysis

Leach

Prep

Batch

Method

5035

8021B

Total BTEX

8015NM Prep

8015B NM

DI Leach

300.0

8015 NM

Job ID: 880-34209-1 SDG: Lea County, New Mexico

## Lab Sample ID: 880-34209-1 Matrix: Solid

Analyst

MNR

MNR

SM

SM

ткс

SM

AG

СН

Lab

EET MID

Matrix: Solid

Prepared

or Analyzed

10/10/23 10:38

10/11/23 18:39

10/11/23 18:39

10/10/23 23:57

10/10/23 09:30

10/10/23 23:57

10/10/23 15:31

10/11/23 21:00

# Lab Sample ID: 880-34209-2

Lab Sample ID: 880-34209-3

Matrix: Solid

### Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

Client Sample ID: BH-2 (2')

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	64332	10/10/23 10:38	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64432	10/11/23 19:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64594	10/11/23 19:00	SM	EET MID
Total/NA	Analysis	8015 NM		1			64471	10/11/23 00:19	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	64329	10/10/23 09:30	ткс	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64320	10/11/23 00:19	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	64405	10/10/23 15:31	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64500	10/11/23 21:06	СН	EET MID

#### Client Sample ID: BH-2 (4') Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	64332	10/10/23 10:38	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64432	10/11/23 19:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64594	10/11/23 19:20	SM	EET MID
Total/NA	Analysis	8015 NM		1			64471	10/11/23 00:41	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	64329	10/10/23 09:30	ткс	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64320	10/11/23 00:41	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	64405	10/10/23 15:31	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64500	10/11/23 21:12	СН	EET MID

#### Laboratory References:

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

Accreditation/Certification Summary

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34209-1 SDG: Lea County, New Mexico

### Laboratory: Eurofins Midland

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

Authority		1	Identification Number	Expiration Date
lexas 🛛	NELAP		T104704400-23-26	06-30-24
The following apply	os are included in this report, but th	he laboratory is not certif	ied by the governing authority. This lis	t may include analytes
for which the agenc	does not offer certification.			
for which the agenc Analysis Method		Matrix	Analyte	
for which the agenc	does not offer certification.			

10

#### Received by OCD: 11/2/2023 1:36:42 PM

# **Method Summary**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34209-1 SDG: Lea County, New Mexico

lethod	Method Description	Protocol	Laboratory
021B	Volatile Organic Compounds (GC)	SW846	EET MID
otal BTEX	Total BTEX Calculation	TAL SOP	EET MID
015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
00.0	Anions, Ion Chromatography	EPA	EET MID
035	Closed System Purge and Trap	SW846	EET MID
015NM Prep	Microextraction	SW846	EET MID
I 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

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34209-1 SDG: Lea County, New Mexico

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-34209-1	BH-2 (0-1')	Solid	10/04/23 00:00	10/09/23 16:20
880-34209-2	BH-2 (2')	Solid	10/04/23 00:00	10/09/23 16:20
880-34209-3	BH-2 (4')	Solid	10/04/23 00:00	10/09/23 16:20

5 6 7

13

Cha n o Custodv

880-34209 Chain of Custody

		Date/Time	om					ample Comments	ate+NaOH Zn Ascorbic Acid SAPC
ed to	Im	agir	ng: 3/18/2024	8:58:	24 AN	И		Page	e 19 o

													Page 1	야. 
Project Manager	Clinton Merritt		Bill to (if different)	2	Melodie Sanjan	Sanjari				ž	ork Orc	Work Order Comments	ments	
Company Name	Carmona Resources		Company Name.	-	Marathor	Marathon Oil Corporation	ooration		Program UST/PST PRP prownfields RC	PST 🗋	₹ □	rownfield	s RRC	perfund
	310 W Wall St Ste 500		Address	6	90 Towi	n and Co	990 Town and Country Blvd		State of Project:	t,				
City, State ZIP	Midland TX 79701		City State ZIP	Ļ	louston	Houston TX 77024	4		Reporting Level II Level III DST/UST	ll 🗌 Lev	Ē	}st/ust	RRP	
Phone		Email	msanıarı@marathonoil com	onoil co	В				Deliverables EDD	8	A	ADaPT		
Project Name	Nighthawk 3H	Turn	Around											
	2000		]	Pres.				ANAL ISIS REQUEST	UESI				Preservative Codes	ive Co
Linlect Multipel	0607		Rush	Code	-	-						None	None NO	DI Water H <sub>2</sub> O
Project Location	Lea County, New Mexico	Due Date	5 day		<u> </u>	,						Cool	Cool Cool	MeOH Me
Sampler's Name	CCM											HCL	HCL HC	HND-
P0#		5	)	s 		- 1911							E Ĉ	NPOR PIN
SAMPLE RECEIPT	Temp Blank.	Yes No Wet Ice	(Yes) No	eter								1120		NaOH Na
Received Intact:	(Yes) No	neter ID	6	am	021	300			·····				H3FU4 HF	
Cooler Custody Seals	o (NAZ)	Correction Factor	t. 6	Pa									Na S D NaSO	
Sample Custody Seals	Yes No (MA)	Temperature Reading	2									ING2.	Na20203 NaOO3	
Total Containers.		Corrected Temperature	2.6	<del></del>	8015								An Acetate+NaOH Zn	And s
Sample Identification	Date	Time Soil	Water Comp	# of Cont	TPI								Sample Comments	omme
BH-2 (0-1')	-1") 10/4/2023	×			×	× ×								
BH-2 (2')	2') 10/4/2023	×	G	-	×							+		
BH-2 (4')	4') 10/4/2023	×	G		×	× ×						+		
BH-2 (5')	5') 10/4/2023	×	G	_								×		
												$\left  - \right $		
Comments Email	Email results to Mike Carmona mcarmona@carmonaresources.com, Conner Moehring cmoehring@carmonaresources.com, Clint MerrittC@carmonaresources.com	iona@carmonaresource:	s.com, Conner M	oehring	cmoe	hring@	carmonaresources	.com, Cli	nt Merritt Merri	ttC@car	monar	esource	s.com	
12	Relinguished by (Signature)	gnature)			Date/Time	è		Rec	Received by (Signature)	nature)				Date/Time
AND AND	101 MANDO			10-07	1-7					$\square$	Ν			
000 000					6	, C								

Job Number: 880-34209-1

List Source: Eurofins Midland

SDG Number: Lea County, New Mexico

# Login Sample Receipt Checklist

Client: Carmona Resources

Login Number: 34209 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	
s 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	

14

Received by OCD: 11/2/2023 1:36:42 PM



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Clint Merritt Carmona Resources 310 W Wall St Ste 500 Midland, Texas 79701 Generated 10/12/2023 9:04:28 PM

# JOB DESCRIPTION

Nighthawk 3H SDG NUMBER Lea County, New Mexico

# **JOB NUMBER**

880-34208-1

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

AMER

Generated 10/12/2023 9:04:28 PM

Authorized for release by Jessica Kramer, Project Manager Jessica.Kramer@et.eurofinsus.com (432)704-5440

Laboratory Job ID: 880-34208-1 SDG: Lea County, New Mexico

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Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34208-1 SDG: Lea County, New Mexico

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ML

MPN

MQL

NC

ND NEG

POS

PQL PRES

QC

RER

RPD

TEF

TEQ

TNTC

RL

Qualifiers		. 3
GC VOA		
Qualifier F1	Qualifier Description	4
	MS and/or MSD recovery exceeds control limits.	
S1+	Surrogate recovery exceeds control limits, high biased.	5
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VOA		
Qualifier	Qualifier Description	
*+	LCS and/or LCSD is outside acceptance limits, high biased.	
'1	LCS/LCSD RPD exceeds control limits.	
S1+	Surrogate recovery exceeds control limits, high biased.	8
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		9
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	10
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	10
%R	Percent Recovery	
CFL	Contains Free Liquid	4.0
CFU	Colony Forming Unit	13
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	

Minimum Level (Dioxin)

Most Probable Number

Not Calculated

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

Quality Control

Method Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

Not Detected at the reporting limit (or MDL or EDL if shown)

Job ID: 880-34208-1 SDG: Lea County, New Mexico

#### Job ID: 880-34208-1

Client: Carmona Resources Project/Site: Nighthawk 3H

#### Laboratory: Eurofins Midland

#### Narrative

Job Narrative 880-34208-1

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

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

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

#### Receipt

The sample was received on 10/9/2023 4:20 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

#### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: BH-5 (0-1') (880-34208-1).

#### GC VOA

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-64332 and analytical batch 880-64432 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: BH-5 (0-1') (880-34208-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### GC Semi VOA

Method 8015MOD\_NM: The surrogate recovery for the blank associated with preparation batch 880-64404 and analytical batch 880-64423 was outside the upper control limits.

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: BH-5 (0-1') (880-34208-1), (CCV 880-64423/5), (LCS 880-64404/2-A), (LCSD 880-64404/3-A), (880-34208-A-1-D MS) and (880-34208-A-1-E MSD). Evidence of matrix interferences is not obvious.

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: (CCV 880-64423/30). Evidence of matrix interferences is not obvious.

Method 8015MOD\_NM: The laboratory control sample (LCS) associated with preparation batch 880-64404 and analytical batch 880-64423 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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.

Job ID: 880-34208-1 SDG: Lea County, New Mexico

Lab Sample ID: 880-34208-1

# Client Sample ID: BH-5 (0-1')

Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

Client: Carmona Resources

Project/Site: Nighthawk 3H

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/10/23 10:38	10/11/23 18:19	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/10/23 10:38	10/11/23 18:19	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/10/23 10:38	10/11/23 18:19	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/10/23 10:38	10/11/23 18:19	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/10/23 10:38	10/11/23 18:19	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/10/23 10:38	10/11/23 18:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	369	S1+	70 - 130				10/10/23 10:38	10/11/23 18:19	1
1,4-Difluorobenzene (Surr)	146	S1+	70 - 130				10/10/23 10:38	10/11/23 18:19	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00398		0.00398		mg/Kg			10/11/23 18:19	1
					ilig/Kg			10/11/23 10.19	I
Method: SW846 8015 NM - Diese Analyte	el Range Organ Result	<mark>ics (DRO) (</mark> Qualifier	GC) RL	MDL	Unit	<u>D</u>	Prepared	Analyzed	 
Method: SW846 8015 NM - Diese Analyte Total TPH	el Range Organ Result <49.6	ics (DRO) ( Qualifier U	GC) 	MDL		<u>D</u>	Prepared		Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Dies	el Range Organ 	ics (DRO) ( Qualifier U nics (DRO)	GC) <u>RL</u> 49.6 (GC)		Unit mg/Kg			Analyzed 10/11/23 12:09	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Dies Analyte	el Range Organ Result <49.6 sel Range Orga Result	ics (DRO) ( Qualifier U nics (DRO) Qualifier	GC) <u> RL</u> 49.6 (GC) <u> RL</u> 		Unit mg/Kg Unit	D	Prepared	Analyzed 10/11/23 12:09 Analyzed	Dil Fac 1 Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	el Range Organ 	ics (DRO) ( Qualifier U nics (DRO) Qualifier	GC) <u>RL</u> 49.6 (GC)		Unit mg/Kg			Analyzed 10/11/23 12:09	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10	el Range Organ Result <49.6 sel Range Orga Result <49.6	ics (DRO) ( Qualifier U nics (DRO) Qualifier	GC) <u> RL</u> 49.6 (GC) <u> RL</u> 		Unit mg/Kg Unit		Prepared	Analyzed 10/11/23 12:09 Analyzed	Dil Fac 1 Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	el Range Organ Result <49.6 sel Range Orga Result <49.6	ics (DRO) ( Qualifier U nics (DRO) Qualifier U	GC) <u>RL</u> 49.6 (GC) <u>RL</u> 49.6 49.6		Unit mg/Kg Unit mg/Kg		Prepared 10/10/23 15:31	Analyzed 10/11/23 12:09 Analyzed 10/11/23 12:09	Dil Fac 1 Dil Fac 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	el Range Organ Result <49.6 sel Range Orga Result <49.6	ics (DRO) ( Qualifier U nics (DRO) Qualifier U U *+ *1	GC) <u>RL</u> (GC) <u>RL</u> 49.6		Unit mg/Kg Unit mg/Kg		Prepared 10/10/23 15:31	Analyzed 10/11/23 12:09 Analyzed 10/11/23 12:09	Dil Fac 1 Dil Fac 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	el Range Organ Result <49.6 sel Range Orga Result <49.6 <49.6	ics (DRO) ( Qualifier U nics (DRO) Qualifier U U *+ *1 U Qualifier	GC) <u>RL</u> 49.6 (GC) <u>RL</u> 49.6 49.6		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 15:31 10/10/23 15:31	Analyzed 10/11/23 12:09 Analyzed 10/11/23 12:09 10/11/23 12:09	Dil Fac 1 Dil Fac 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	el Range Organ Result <ul> <li>&lt;49.6</li> </ul> <li>Sel Range Orga</li> <li>Result <ul> <li>&lt;49.6</li> <li>&lt;49.6</li> <li>&lt;49.6</li> <li>&lt;49.6</li> <li>&lt;49.6</li> <li>&lt;49.6</li> <li>&lt;49.6</li> <li>&lt;49.6</li> </ul></li>	ics (DRO) ( Qualifier U nics (DRO) Qualifier U U *+ *1 U Qualifier S1+	GC) <u>RL</u> 49.6 (GC) <u>RL</u> 49.6 49.6 49.6		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 15:31 10/10/23 15:31 10/10/23 15:31	Analyzed 10/11/23 12:09 Analyzed 10/11/23 12:09 10/11/23 12:09 10/11/23 12:09	Dil Fac 1 Dil Fac 1 1 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	el Range Organ Result <ul> <li>&lt;49.6</li> </ul> <li>Sel Range Orga</li> <li>Result <ul> <li>&lt;49.6</li> <li>&lt;49.6</li> <li>&lt;49.6</li> <li>&lt;49.6</li> <li>&lt;49.6</li> <li>&lt;49.6</li> <li>&lt;49.6</li> <li>&lt;49.6</li> </ul></li>	ics (DRO) ( Qualifier U nics (DRO) Qualifier U U *+ *1 U Qualifier	GC) <u>RL</u> 49.6 (GC) <u>RL</u> 49.6 49.6 49.6 <u>Limits</u>		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 15:31 10/10/23 15:31 10/10/23 15:31 Prepared	Analyzed 10/11/23 12:09 Analyzed 10/11/23 12:09 10/11/23 12:09 10/11/23 12:09 Analyzed	Dil Fac 1 Dil Fac 1 1 1 1 Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	All Range Organ           Result           <49.6	ics (DRO) ( Qualifier U nics (DRO) Qualifier U U *+ *1 U U Qualifier S1+ S1+	GC) <u>RL</u> 49.6 (GC) <u>RL</u> 49.6 49.6 49.6 <u>Limits</u> 70 - 130 70 - 130		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 15:31 10/10/23 15:31 10/10/23 15:31 Prepared 10/10/23 15:31	Analyzed 10/11/23 12:09 Analyzed 10/11/23 12:09 10/11/23 12:09 10/11/23 12:09 Analyzed 10/11/23 12:09	Dil Fac           1           Dil Fac           1           1           1           Dil Fac           1           1           1           1           1           1           1           1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	el Range Organ Result <ul> <li>&lt;49.6</li> <li>sel Range Orga</li> <li>Result</li> <li>&lt;49.6</li> <li>&lt;49.6</li> <li>&lt;49.6</li> <li>&lt;49.6</li> <li>&lt;49.6</li> <li>&lt;49.6</li> <li>&lt;49.6</li> <li>&lt;135</li> </ul>	ics (DRO) ( Qualifier U nics (DRO) Qualifier U U *+ *1 U U Qualifier S1+ S1+	GC) <u>RL</u> 49.6 (GC) <u>RL</u> 49.6 49.6 49.6 <u>Limits</u> 70 - 130 70 - 130		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 15:31 10/10/23 15:31 10/10/23 15:31 Prepared 10/10/23 15:31	Analyzed 10/11/23 12:09 Analyzed 10/11/23 12:09 10/11/23 12:09 10/11/23 12:09 Analyzed 10/11/23 12:09	Dil Fac           1           Dil Fac           1           1           1           Dil Fac           1           1           1           1           1           1           1           1

Eurofins Midland

380-34208-1

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Matrix: Solid

Released to Imaging: 3/18/2024 8:58:24 AM

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34208-1 SDG: Lea County, New Mexico

# 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)		Ę
880-34196-A-1-B MS	Matrix Spike	102	102		
880-34196-A-1-C MSD	Matrix Spike Duplicate	112	102		6
880-34208-1	BH-5 (0-1')	369 S1+	146 S1+		
LCS 880-64332/1-A	Lab Control Sample	111	104		
LCSD 880-64332/2-A	Lab Control Sample Dup	99	101		
MB 880-64332/5-A	Method Blank	108	122		8
Surrogate Legend					
BFB = 4-Bromofluorober	nzene (Surr)				9
DFBZ = 1,4-Difluorobenz	zene (Surr)				

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

#### Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
880-34208-1	BH-5 (0-1')	145 S1+	135 S1+		13
880-34208-1 MS	BH-5 (0-1')	170 S1+	138 S1+		
880-34208-1 MSD	BH-5 (0-1')	171 S1+	138 S1+		
LCS 880-64404/2-A	Lab Control Sample	137 S1+	148 S1+		
LCSD 880-64404/3-A	Lab Control Sample Dup	151 S1+	144 S1+		
MB 880-64404/1-A	Method Blank	200 S1+	196 S1+		

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Prep Type: Total/NA

Prep Type: Total/NA

Project/Site: Nighthawk 3H

Client: Carmona Resources

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

Lab Sample ID: MB 880-6433	32/5-A							(	Client Sa	ample ID: Me		
Matrix: Solid										Prep Typ	be: To	otal/N/
Analysis Batch: 64432										Prep B	atch:	6433
	М	B MB										
Analyte	Resu	It Qualifier	RL	-	MDL	Unit	D	Pre	epared	Analyzed	I	Dil Fa
Benzene	<0.0020	ō U	0.00200	)		mg/Kg		10/10	/23 10:38	10/11/23 12:	35	
Toluene	<0.0020	0 U	0.00200	)		mg/Kg		10/10	/23 10:38	10/11/23 12:	35	
Ethylbenzene	<0.0020	0 U	0.00200	)		mg/Kg		10/10	/23 10:38	10/11/23 12:	35	
m-Xylene & p-Xylene	<0.0040	0 U	0.00400	)		mg/Kg		10/10	/23 10:38	10/11/23 12:	35	
o-Xylene	<0.0020	0 U	0.00200	)		mg/Kg		10/10	/23 10:38	10/11/23 12:	35	
Xylenes, Total	<0.0040	0 U	0.00400	)		mg/Kg		10/10	/23 10:38	10/11/23 12:	35	
	М	B MB										
Surrogate	%Recover	y Qualifier	Limits	_				Pr	epared	Analyzed	1	Dil Fa
4-Bromofluorobenzene (Surr)	10	8	70 - 130	-				10/10	/23 10:38	10/11/23 12:	35	
1,4-Difluorobenzene (Surr)	12	2	70 - 130					10/10	/23 10:38	10/11/23 12:	35	
Lab Sample ID: LCS 880-643	32/1-A						С	lient	Sample	ID: Lab Con	trol S	ampl
Matrix: Solid										Prep Typ		
Analysis Batch: 64432										Prep B		
· ·····, · · · · · · · · · · · · · · ·			Spike	LCS	LCS					%Rec		
Analyte			Added	Result	Qual	ifier Unit		D	%Rec	Limits		
Benzene			0.100	0.1166		mg/Kg			117	70 - 130		
Toluene			0.100	0.09644		mg/Kg			96	70 - 130		
Ethylbenzene			0.100	0.09544		mg/Kg			95	70 - 130		
m-Xylene & p-Xylene			0.200	0.1878		mg/Kg			94	70 - 130		
o-Xylene			0.100	0.09012		mg/Kg			90	70 - 130		
	LCS LC											
Surrogate		ualifier	Limits									
4-Bromofluorobenzene (Surr)	111		70 - 130									
1,4-Difluorobenzene (Surr)	104		70 - 130									
Lab Sample ID: LCSD 880-64	4332/2-A					с	lient	Sam	ole ID: L	ab Control S	Samp	le Du
Matrix: Solid										Prep Typ		
Analysis Batch: 64432												
											atch:	
			Spike	LCSD	LCSI	)				%Rec	atch:	6433
Analyte			Spike Added	LCSD Result				D	%Rec		atch:	64332 RPI
			-					D	%Rec	%Rec		6433 RPI Lim
Benzene			Added	Result		ifier Unit mg/Kg		<u>D</u>		%Rec Limits	RPD	6433 RPI Lim 3
Benzene Toluene			Added	<b>Result</b> 0.1117		ifier Unit mg/Kg mg/Kg		<u> </u>	112	%Rec Limits 70 - 130	RPD 4	6433 RPI Lim 3 3
Benzene Toluene Ethylbenzene			Added 0.100 0.100 0.100	<b>Result</b> 0.1117 0.09300 0.09384		ifier Unit mg/Kg mg/Kg mg/Kg		<u> </u>	112 93	%Rec Limits 70 - 130 70 - 130 70 - 130	<b>RPD</b> 4 4	6433 RPI Lim 3 3 3
			Added	<b>Result</b> 0.1117 0.09300		ifier Unit mg/Kg mg/Kg		<u> </u>	112 93 94	%Rec Limits 70 - 130 70 - 130	<b>RPD</b> 4 4 2	64332 RPI Limi 33 33 33 34
Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	LCSD LC	 :SD	Added 0.100 0.100 0.100 0.200	Result 0.1117 0.09300 0.09384 0.1837		i <mark>fier Unit</mark> mg/Kg mg/Kg mg/Kg mg/Kg		<u>D</u>	112 93 94 92	%Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130	<b>RPD</b> 4 4 2 2	6433 RP Lim 3 3 3 3
Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	LCSD LC %Recovery Qu		Added 0.100 0.100 0.100 0.200	Result 0.1117 0.09300 0.09384 0.1837		i <mark>fier Unit</mark> mg/Kg mg/Kg mg/Kg mg/Kg		<u>D</u>	112 93 94 92	%Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130	<b>RPD</b> 4 4 2 2	6433 RPI Lim 3 3 3 3
Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene <b>Surrogate</b>			Added 0.100 0.100 0.100 0.200 0.100	Result 0.1117 0.09300 0.09384 0.1837		i <mark>fier Unit</mark> mg/Kg mg/Kg mg/Kg mg/Kg		<u>D</u>	112 93 94 92	%Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130	<b>RPD</b> 4 4 2 2	6433 RPI Lim 3 3 3 3
Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	%Recovery Qu		Added 0.100 0.100 0.100 0.200 0.100 Limits	Result 0.1117 0.09300 0.09384 0.1837		i <mark>fier Unit</mark> mg/Kg mg/Kg mg/Kg mg/Kg		<u> </u>	112 93 94 92	%Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130	<b>RPD</b> 4 4 2 2	64332 RPI Limi 33 33 33 34
Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr)	%Recovery Qu 99 101		Added           0.100           0.100           0.100           0.100           0.200           0.100           0.200           0.100           Description <i>Limits</i> 70 - 130	Result 0.1117 0.09300 0.09384 0.1837		i <mark>fier Unit</mark> mg/Kg mg/Kg mg/Kg mg/Kg		<u> </u>	112 93 94 92 84	%Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130	<b>RPD</b> 4 4 2 2 7	6433 RP Lim 3 3 3 3 3 3 3
Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	%Recovery Qu 99 101		Added           0.100           0.100           0.100           0.100           0.200           0.100           0.200           0.100           Description <i>Limits</i> 70 - 130	Result 0.1117 0.09300 0.09384 0.1837		i <mark>fier Unit</mark> mg/Kg mg/Kg mg/Kg mg/Kg		<u>D</u>	112 93 94 92 84	%Rec           Limits           70 - 130           70 - 130           70 - 130           70 - 130           70 - 130	RPD 4 2 2 7	6433: RPI Lim 3 3 3 3 3 3 3 3 3 3 3 3 3
Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene <i>Surrogate</i> <i>4-Bromofluorobenzene (Surr)</i> <i>1,4-Difluorobenzene (Surr)</i> Lab Sample ID: 880-34196-A Matrix: Solid	%Recovery Qu 99 101		Added           0.100           0.100           0.100           0.100           0.200           0.100           0.200           0.100           Description <i>Limits</i> 70 - 130	Result 0.1117 0.09300 0.09384 0.1837		i <mark>fier Unit</mark> mg/Kg mg/Kg mg/Kg mg/Kg		D	112 93 94 92 84	%Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	RPD 4 2 7 7	64332 RPI Limi 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-34196-A	%Recovery Qu 99 101	ualifier	Added           0.100           0.100           0.100           0.100           0.200           0.100           0.200           0.100           Description <i>Limits</i> 70 - 130	Result 0.1117 0.09300 0.09384 0.1837 0.08378		i <mark>fier Unit</mark> mg/Kg mg/Kg mg/Kg mg/Kg		D	112 93 94 92 84	%Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	RPD 4 2 7 7	64332 RPI Limi 33 34 34 35 35 35 35 35 35 35 35 35 35
Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene <i>Surrogate</i> <i>4-Bromofluorobenzene (Surr)</i> <i>1,4-Difluorobenzene (Surr)</i> Lab Sample ID: 880-34196-A Matrix: Solid	<u>%Recovery</u> 99 101 -1-B MS	ualifier	Added 0.100 0.100 0.200 0.100 <i>Limits</i> 70 - 130 70 - 130	Result 0.1117 0.09300 0.09384 0.1837 0.08378	Qual	ifier Unit mg/Kg mg/Kg mg/Kg mg/Kg		D	112 93 94 92 84	%Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 Sample ID: M Prep Typ Prep B	RPD 4 2 7 7	64332 RPI Limi 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-34196-A Matrix: Solid Analysis Batch: 64432	- <u>%Recovery</u> <u>99</u> 101 -1-B MS Sample Sa	ualifier	Added 0.100 0.100 0.200 0.100 <i>Limits</i> 70 - 130 70 - 130 Spike	<b>Result</b> 0.1117 0.09300 0.09384 0.1837 0.08378	Qual	ifier Unit mg/Kg mg/Kg mg/Kg mg/Kg			112 93 94 92 84	%Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 Sample ID: N Prep Typ Prep B %Rec	RPD 4 2 7 7	64332 RPI Limi 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3

Eurofins Midland

<0.00201 U

Toluene

0.07128

mg/Kg

71

70 - 130

0.101

Client: Carmona Resources

Project/Site: Nighthawk 3H

Job ID: 880-34208-1 SDG: Lea County, New Mexico

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

Matrix: Solid	-B MS										Client S	Sample II Prep	D: Matrix Type: To	
Analysis Batch: 64432												Pre	p Batch:	6433
	Sample	Sam	ple	Spike	MS	MS						%Rec		
Analyte	Result	Qual	ifier	Added	Result	Qua	lifier	Unit		D	%Rec	Limits		
Ethylbenzene	<0.00201	U F1		0.101	0.06697	F1		mg/Kg			66	70 - 130	·	
n-Xylene & p-Xylene	<0.00402	U F1		0.202	0.1343	F1		mg/Kg			66	70 - 130		
p-Xylene	<0.00201			0.101	0.06838			mg/Kg			67	70 - 130		
	MS	MS												
Surrogato		Qual	ifior	Limits										
Surrogate 4-Bromofluorobenzene (Surr)		Quai		70 - 130										
1,4-Difluorobenzene (Surr)	102 102			70 - 130 70 - 130										
Lab Sample ID: 880-34196-A-1-									Clior	nt Sa	mole ID:	Matrix S	niko Du	nlicat
Matrix: Solid									oner	n ou	imple ib.		Type: To	
Analysis Batch: 64432	Sample	Sam	nlo	Spike	MSD	MSD							p Batch:	8433 RP
• • •				Spike						_	a/ <b>5</b>	%Rec		
Analyte	Result		ifier	Added	Result	Qua	lifier	Unit		<u>D</u> .	%Rec	Limits	RPD	Lim
Benzene	<0.00201			0.0996	0.09951			mg/Kg			100	70 - 130	10	3
Toluene	<0.00201	U		0.0996	0.08277			mg/Kg			83	70 - 130	15	3
Ethylbenzene	<0.00201	UF1		0.0996	0.08667			mg/Kg			87	70 - 130	26	3
n-Xylene & p-Xylene	<0.00402	U F1		0.199	0.1785			mg/Kg			89	70 - 130	28	3
o-Xylene	<0.00201	U F1		0.0996	0.08121			mg/Kg			81	70 - 130	17	:
	MSD	MSD												
Surrogate	%Recovery	Qual	ifier	Limits										
4-Bromofluorobenzene (Surr)	112			70 - 130										
1,4-Difluorobenzene (Surr)	102			70 - 130										
• • •		gan	ics (DR											
lethod: 8015B NM - Diese	l Range Or	gan	iics (DR								Client Sa	ample ID:	Method	l Blan
lethod: 8015B NM - Diese Lab Sample ID: MB 880-64404/	l Range Or	gan	iics (DR								Client Sa	ample ID: Pren		
ethod: 8015B NM - Diese Lab Sample ID: MB 880-64404/ Matrix: Solid	l Range Or	gan	iics (DR								Client Sa	Prep	Type: To	otal/N
lethod: 8015B NM - Diese Lab Sample ID: MB 880-64404/ Matrix: Solid	l Range Or										Client Sa	Prep		otal/N
lethod: 8015B NM - Diese Lab Sample ID: MB 880-64404/ Matrix: Solid Analysis Batch: 64423	l Range Or 1-A	мв	МВ	2O) (GC)		MDL	Unit		D			Prep Pre	Type: To p Batch:	otal/N : 6440
lethod: 8015B NM - Diese Lab Sample ID: MB 880-64404/ Matrix: Solid Analysis Batch: 64423 Analyte	I Range Or '1-A 	MB	MB Qualifier	2O) (GC)		MDL	Unit ma/Kc		<u>D</u>	Pr	epared	Prep Pre Analy	Type: To p Batch: /zed	otal/N
lethod: 8015B NM - Diese Lab Sample ID: MB 880-64404/ Matrix: Solid Analysis Batch: 64423 Analyte Gasoline Range Organics	I Range Or '1-A 	мв	MB Qualifier	2O) (GC)		MDL	Unit mg/Kg	]	<u>D</u>	Pr		Prep Pre	Type: To p Batch: /zed	otal/N 6440 Dil Fa
lethod: 8015B NM - Diese Lab Sample ID: MB 880-64404/ Matrix: Solid Analysis Batch: 64423 Analyte Gasoline Range Organics (GRO)-C6-C10	I Range Or 1-A 	MB	MB Qualifier U	2O) (GC)		MDL			<u>D</u>	<b>Pr</b> 10/10	epared	Prep Pre Analy	Type: To p Batch: zed 3 09:15	Dil Fa
lethod: 8015B NM - Diese Lab Sample ID: MB 880-64404/ Matrix: Solid Analysis Batch: 64423 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	I Range Or 1-A 	MB esult 50.0	MB Qualifier U	2 <b>O) (GC)</b> 		MDL	mg/Kg		<u>D</u>	<b>Pr</b> 10/10	<b>epared</b> )/23 15:30	Prep Pre Analy 10/11/23	Type: To p Batch: zed 3 09:15	Dil Fa
1,4-Difluorobenzene (Surr) lethod: 8015B NM - Diese Lab Sample ID: MB 880-64404/ Matrix: Solid Analysis Batch: 64423 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	I Range Or 1-A 	MB esult 50.0	MB Qualifier U	2 <b>O) (GC)</b> 		MDL	mg/Kg	]	<u>D</u>	<b>Pr</b> 10/10	<b>epared</b> )/23 15:30	Prep Pre Analy 10/11/23	Type: Top           p Batch:           vzed           09:15           09:15	Dil Fa
lethod: 8015B NM - Diese Lab Sample ID: MB 880-64404/ Matrix: Solid Analysis Batch: 64423 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	I Range Or 1-A 	MB esult 50.0 50.0 50.0	MB Qualifier U	<b>RO) (GC)</b> RL 50.0 50.0		MDL	mg/Kg mg/Kg	]	<u>D</u>	<b>Pr</b> 10/10	<b>D</b> /23 15:30	Prep Pre Analy 10/11/23	Type: Top           p Batch:           vzed           09:15           09:15	Dil Fa
ethod: 8015B NM - Diese Lab Sample ID: MB 880-64404/ Matrix: Solid Analysis Batch: 64423 Analyte Basoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36)	I Range Or 1-A 	MB esult 50.0 50.0 50.0 <i>MB</i>	MB Qualifier U U	<b>RO) (GC)</b> RL 50.0 50.0		MDL	mg/Kg mg/Kg	]	<u>D</u>	Pr 10/10 10/10	<b>D</b> /23 15:30	Prep Pre Analy 10/11/23	Type: To p Batch: 3 09:15 3 09:15 3 09:15	Dil Fa
ethod: 8015B NM - Diese Lab Sample ID: MB 880-64404/ Matrix: Solid Analysis Batch: 64423 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36) Surrogate	I Range Or 1-A 	MB esult 50.0 50.0 50.0 <i>MB</i> very	MB Qualifier U U U MB	<b>RO) (GC)</b> RL 50.0 50.0		MDL	mg/Kg mg/Kg	]	<u>D</u>	Pr 10/10 10/10 10/10 Pr	epared )/23 15:30 )/23 15:30 )/23 15:30	Prep Pre 10/11/23 10/11/23	Type: To p Batch: 22ed 3 09:15 3 09:15 3 09:15 2 09:15	Dil Fa
ethod: 8015B NM - Diese Lab Sample ID: MB 880-64404/ Matrix: Solid Analysis Batch: 64423 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Dil Range Organics (Over C28-C36) Surrogate I-Chlorooctane	I Range Or 1-A 	MB esult 50.0 50.0 50.0 <i>MB</i> <i>very</i> 200	MB Qualifier U U U MB Qualifier	<b>RO) (GC)</b> <b>RL</b> 50.0 50.0 50.0 <i>Limits</i>		MDL	mg/Kg mg/Kg	]	<u>D</u>	Pr 10/10 10/10 10/10 Pr 10/10	epared )/23 15:30 )/23 15:30 )/23 15:30 epared	Prep Pre 10/11/23 10/11/23 10/11/23 <i>10/11/23</i>	Type: To           p Batch:           22ed           3 09:15           3 09:15           3 09:15           3 09:15           3 09:15	Dil Fa
ethod: 8015B NM - Diese Lab Sample ID: MB 880-64404/ Matrix: Solid Analysis Batch: 64423 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36) Surrogate I-Chlorooctane I-Terphenyl	I Range Or 1-A 	MB esult 50.0 50.0 50.0 <i>MB</i> <i>very</i> 200	MB Qualifier U U U MB Qualifier S1+	<b>RO) (GC)</b> RL 50.0 50.0 50.0 <u>50.0</u> 70 - 130		MDL	mg/Kg mg/Kg	]	·	Pr 10/10 10/10 10/10 Pr 10/10	Pepared           0/23         15:30           0/23         15:30           0/23         15:30           0/23         15:30           0/23         15:30           0/23         15:30           0/23         15:30	Prep Pre 10/11/23 10/11/23 10/11/23 10/11/23 10/11/23	Type: Top           p Batch:           vzed           3 09:15           3 09:15           3 09:15           3 09:15           3 09:15	Dil F:
ethod: 8015B NM - Diese Lab Sample ID: MB 880-64404/ Matrix: Solid Analysis Batch: 64423 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Dil Range Organics (Over C28-C36) Surrogate I-Chlorooctane D-Terphenyl Lab Sample ID: LCS 880-64404	I Range Or 1-A 	MB esult 50.0 50.0 50.0 <i>MB</i> <i>very</i> 200	MB Qualifier U U U MB Qualifier S1+	<b>RO) (GC)</b> RL 50.0 50.0 50.0 <u>50.0</u> 70 - 130		MDL	mg/Kg mg/Kg	]	·	Pr 10/10 10/10 10/10 Pr 10/10	Pepared           0/23         15:30           0/23         15:30           0/23         15:30           0/23         15:30           0/23         15:30           0/23         15:30           0/23         15:30	Prep Pre 10/11/23 10/11/23 10/11/23 10/11/23 10/11/23 10/11/23	Type: Top           p Batch:           vzed           3 09:15           3 09:15           3 09:15           3 09:15           3 09:15           2 09:15           3 09:15           3 09:15           2 09:15           3 09:15           3 09:15           3 09:15           3 09:15           3 09:15           Control S	Dil Fa
ethod: 8015B NM - Diese Lab Sample ID: MB 880-64404/ Matrix: Solid Analysis Batch: 64423 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane p-Terphenyl Lab Sample ID: LCS 880-64404 Matrix: Solid	I Range Or 1-A 	MB esult 50.0 50.0 50.0 <i>MB</i> <i>very</i> 200	MB Qualifier U U U MB Qualifier S1+	<b>RO) (GC)</b> RL 50.0 50.0 50.0 <u>50.0</u> 70 - 130		MDL	mg/Kg mg/Kg	]	·	Pr 10/10 10/10 10/10 Pr 10/10	Pepared           0/23         15:30           0/23         15:30           0/23         15:30           0/23         15:30           0/23         15:30           0/23         15:30           0/23         15:30	Prep Pre Analy 10/11/23 10/11/23 10/11/23 10/11/23 10/11/23 10/11/23	Type: To         p Batch:         2zed         3 09:15         3 09:15         3 09:15         3 09:15         3 09:15         209:15         3 09:15         209:15         209:15         209:15         209:15         209:15         209:15         209:15         209:15         209:15         209:15         209:15         209:15         209:15         209:15         209:15	Dil Fa
lethod: 8015B NM - Diese Lab Sample ID: MB 880-64404/ Matrix: Solid Analysis Batch: 64423 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	I Range Or 1-A 	MB esult 50.0 50.0 50.0 <i>MB</i> <i>very</i> 200	MB Qualifier U U U MB Qualifier S1+	<b>RO) (GC)</b> <b>RL</b> 50.0 50.0 50.0 <b>130</b> 70 - 130 70 - 130			mg/Kg mg/Kg	]	·	Pr 10/10 10/10 10/10 Pr 10/10	epared         0/23       15:30         0/23       15:30         0/23       15:30         0/23       15:30         0/23       15:30         0/23       15:30         0/23       15:30	Prep Pre 10/11/23 10/11/23 10/11/23 10/11/23 10/11/23 10/11/23 10/11/23	Type: Top           p Batch:           vzed           3 09:15           3 09:15           3 09:15           3 09:15           3 09:15           2 09:15           3 09:15           3 09:15           2 09:15           3 09:15           3 09:15           3 09:15           3 09:15           3 09:15           Control S	Dil Fa Dil Fa Dil Fa
lethod: 8015B NM - Diese Lab Sample ID: MB 880-64404/ Matrix: Solid Analysis Batch: 64423 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane p-Terphenyl Lab Sample ID: LCS 880-64404 Matrix: Solid	I Range Or 1-A 	MB esult 50.0 50.0 50.0 <i>MB</i> <i>very</i> 200	MB Qualifier U U U MB Qualifier S1+	<b>RO) (GC)</b> RL 50.0 50.0 50.0 <u>50.0</u> 70 - 130		LCS	mg/Kg mg/Kg	]	·	Pr 10/10 10/10 10/10 Pr 10/10	epared         0/23       15:30         0/23       15:30         0/23       15:30         0/23       15:30         0/23       15:30         0/23       15:30         0/23       15:30	Prep Pre Analy 10/11/23 10/11/23 10/11/23 10/11/23 10/11/23 10/11/23	Type: To         p Batch:         2zed         3 09:15         3 09:15         3 09:15         3 09:15         3 09:15         209:15         3 09:15         209:15         209:15         209:15         209:15         209:15         209:15         209:15         209:15         209:15         209:15         209:15         209:15         209:15         209:15         209:15	Dil Fa Dil Fa Dil Fa

 Gasoline Range Organics
 1000
 922.1
 mg/Kg
 92
 70 - 130

 (GRO)-C6-C10
 0
 0
 1010
 1019
 mg/Kg
 102
 70 - 130

 Diesel Range Organics (Over
 1000
 1019
 mg/Kg
 102
 70 - 130

 C10-C28)

# **QC Sample Results**

Client: Carmona Resources Project/Site: Nighthawk 3H

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

Lab Sample ID: LCS 880-6440 Matrix: Solid Analysis Batch: 64423	)4/2-A						Client	Sample		ontrol Sa Type: To Batch:	tal/NA
Analysis Balch. 04425									Frep	Datch:	04404
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	137	S1+	70 - 130								
o-Terphenyl	148	S1+	70 - 130								
Lab Sample ID: LCSD 880-644	404/3-A					Clie	nt Sam	nple ID:	Lab Contro	l Sampl	e Dup
Matrix: Solid										· Type: To	
Analysis Batch: 64423										Batch:	
-			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	997.7		mg/Kg		100	70 - 130	8	20
(GRO)-C6-C10											
Diesel Range Organics (Over			1000	1371	*+ *1	mg/Kg		137	70 - 130	29	20
C10-C28)											
	LCSD	LCSD									
Surrogate	%Recovery		Limits								
1-Chlorooctane	151	S1+	70 - 130								
o-Terphenyl		S1+	70 - 130 70 - 130								
o respicingi	144	07.	10 - 100								
Lab Sample ID: 880-34208-1 M Matrix: Solid Analysis Batch: 64423								Clie	Prep	ID: BH-5 Type: To Batch:	tal/NA
		Sample	Spike		MS				%Rec		
Analyte		Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<49.6	U	999	953.8		mg/Kg		94	70 - 130		
(GRO)-C6-C10	-10.0	11 * . *4	000	4000				100	70 400		
Diesel Range Organics (Over	<49.6	U *+ *1	999	1308		mg/Kg		129	70 - 130		
C10-C28)											
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	170	S1+	70 - 130								
o-Terphenyl	138	S1+	70 - 130								
Lab Sample ID: 880-34208-1 M											) (U-1')
	ISD							Clie	nt Sample		
Matrix: Solid	ISD							Clie	Prep	Type: To	
Matrix: Solid Analysis Batch: 64423								Clie	Prep Prep		64404
Analysis Batch: 64423	Sample	Sample	Spike		MSD				Prep Prep %Rec	Type: To Batch:	64404 RPD
Analysis Batch: 64423 Analyte	Sample Result	Qualifier	Added	Result	MSD Qualifier	Unit	D	%Rec	Prep Prep %Rec Limits	Type: To Batch: 	64404 RPD Limit
Analysis Batch: 64423 Analyte Gasoline Range Organics (GRO)-C6-C10	Sample Result <49.6	Qualifier U	Added	<b>Result</b> 942.2		- <mark>Unit</mark> mg/Kg	<u>D</u>		Prep Prep %Rec Limits 70 - 130	Type: To Batch: RPD 1	64404 RPD
Analysis Batch: 64423 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Sample Result <49.6	Qualifier	Added	Result			<u>D</u>	%Rec	Prep Prep %Rec Limits	Type: To Batch: 	64404 RPD Limit
Analysis Batch: 64423 Analyte Gasoline Range Organics (GRO)-C6-C10	Sample Result <49.6	Qualifier U	Added	<b>Result</b> 942.2		mg/Kg	D	%Rec 92	Prep Prep %Rec Limits 70 - 130	Type: To Batch: RPD 1	64404 RPD Limit 20
Analysis Batch: 64423 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Sample Result <49.6 <49.6	Qualifier U	Added	<b>Result</b> 942.2		mg/Kg	<u> </u>	%Rec 92	Prep Prep %Rec Limits 70 - 130	Type: To Batch: RPD 1	64404 RPD Limit 20

5

Job ID: 880-34208-1 SDG: Lea County, New Mexico

Eurofins Midland

171 S1+

138 S1+

1-Chlorooctane

o-Terphenyl

70 - 130

70 \_ 130

Client: Carmona Resources

Project/Site: Nighthawk 3H

# **QC Sample Results**

### Job ID: 880-34208-1 SDG: Lea County, New Mexico

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-64405/1-A												Client S	ample ID:		
Matrix: Solid													Prep	Type: S	oluble
Analysis Batch: 64500															
		MB													
Analyte			Qualifier		RL		MDL			<u>D</u>	P	repared	Analy		Dil Fac
Chloride	•	<5.00	U		5.00			mg/Kg					10/11/23	18:28	1
Lab Sample ID: LCS 880-64405/2-	Α									Cli	ent	Sample	ID: Lab C	ontrol S	ample
Matrix: Solid													Prep	Type: S	oluble
Analysis Batch: 64500															
				Spike		LCS	LCS						%Rec		
Analyte				Added		Result	Qual	ifier	Unit		D	%Rec	Limits		
Chloride				250		251.4			mg/Kg			101	90 - 110		
- Lab Sample ID: LCSD 880-64405/3	3-A								Cl	ient S	Sam	ple ID:	Lab Contro	ol Samp	le Dur
Matrix: Solid														Type: S	
Analysis Batch: 64500														1	
				Spike		LCSD	LCSI	D					%Rec		RPD
Analyte				Added		Result	Qual	ifier	Unit		D	%Rec	Limits	RPD	Limi
Chloride				250		251.8			mg/Kg		_	101	90 - 110	0	20
- Lab Sample ID: 880-34204-A-1-D I	MS											Client	Sample ID	): Matrix	Spike
Matrix: Solid														Type: S	
Analysis Batch: 64500															
	Sample	Sam	ple	Spike		MS	MS						%Rec		
Analyte	Result	Quali	ifier	Added		Result	Qual	ifier	Unit		D	%Rec	Limits		
Chloride	290			248		540.9			mg/Kg		_	101	90 - 110		
	MSD									Client	t Sa	mple IF	): Matrix S	nike Du	olicate
1 ap Sample IU: 880-34204-4-1-⊢ I														Type: S	
Lab Sample ID: 880-34204-A-1-E I Matrix: Solid														.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Matrix: Solid															
the second s	Sample	Samı	ple	Spike		MSD	MSD						%Rec		RPD
Matrix: Solid				Spike Added		MSD Result			Unit		D	%Rec	%Rec Limits	RPD	RPC Limi

Eurofins Midland
# **QC Association Summary**

Client: Carmona Resources Project/Site: Nighthawk 3H

Job ID: 880-34208-1 SDG: Lea County, New Mexico

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Prep Batch: 64332					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
880-34208-1	BH-5 (0-1')	Total/NA	Solid	5035	· · · ·
MB 880-64332/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-64332/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-64332/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-34196-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-34196-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
nalysis Batch: 64432					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
880-34208-1	BH-5 (0-1')	Total/NA	Solid	8021B	6433
MB 880-64332/5-A	Method Blank	Total/NA	Solid	8021B	6433
LCS 880-64332/1-A	Lab Control Sample	Total/NA	Solid	8021B	6433
_CSD 880-64332/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	6433
880-34196-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	6433
880-34196-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	6433
-	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
880-34208-1	Ellent Sample ID BH-5 (0-1')	Total/NA	Matrix Solid	Total BTEX	Prep Batcl
880-34208-1 C Semi VOA rep Batch: 64404	BH-5 (0-1')	Total/NA	Solid	Total BTEX	
B80-34208-1 IC Semi VOA rep Batch: 64404 Lab Sample ID	BH-5 (0-1') Client Sample ID	Total/NA Prep Type	Solid	Total BTEX Method	
880-34208-1 IC Semi VOA rep Batch: 64404 Lab Sample ID 880-34208-1	BH-5 (0-1')           Client Sample ID           BH-5 (0-1')	Total/NA Prep Type Total/NA	Solid Matrix Solid	Total BTEX Method 8015NM Prep	
880-34208-1 IC Semi VOA rep Batch: 64404 Lab Sample ID 880-34208-1 MB 880-64404/1-A	BH-5 (0-1')           Client Sample ID           BH-5 (0-1')           Method Blank	Total/NA Prep Type Total/NA Total/NA	Solid       Matrix       Solid       Solid	Total BTEX Method 8015NM Prep 8015NM Prep	
880-34208-1 <b>C Semi VOA</b> <b>rep Batch: 64404</b> <b>Lab Sample ID</b> 880-34208-1 MB 880-64404/1-A LCS 880-64404/2-A	BH-5 (0-1')         Client Sample ID         BH-5 (0-1')         BH-5 (0-1')         Method Blank         Lab Control Sample	Total/NA Prep Type Total/NA Total/NA Total/NA	Solid Matrix Solid Solid Solid	Total BTEX Method 8015NM Prep 8015NM Prep 8015NM Prep	
880-34208-1 <b>C Semi VOA</b> <b>rep Batch: 64404</b> <b>Lab Sample ID</b> 880-34208-1 MB 880-64404/1-A LCS 880-64404/2-A LCS 0 880-64404/2-A	BH-5 (0-1')         Client Sample ID         BH-5 (0-1')         BH-5 (0-1')         Method Blank         Lab Control Sample         Lab Control Sample Dup	Total/NA           Prep Type           Total/NA           Total/NA           Total/NA           Total/NA           Total/NA           Total/NA	Matrix       Solid       Solid       Solid       Solid       Solid       Solid	Total BTEX Method 8015NM Prep 8015NM Prep 8015NM Prep 8015NM Prep	
880-34208-1 <b>C Semi VOA</b> <b>rep Batch: 64404</b> <b>Lab Sample ID</b> 880-34208-1 MB 880-64404/1-A LCS 880-64404/2-A LCSD 880-64404/3-A 880-34208-1 MS	BH-5 (0-1')         Client Sample ID         BH-5 (0-1')         Method Blank         Lab Control Sample         Lab Control Sample Dup         BH-5 (0-1')	Total/NA           Prep Type           Total/NA           Total/NA           Total/NA           Total/NA           Total/NA           Total/NA           Total/NA           Total/NA           Total/NA	Matrix       Solid       Solid       Solid       Solid       Solid       Solid       Solid       Solid	Total BTEX Method 8015NM Prep 8015NM Prep 8015NM Prep 8015NM Prep 8015NM Prep 8015NM Prep	
880-34208-1 <b>5C Semi VOA</b> <b>rep Batch: 64404</b> <b>Lab Sample ID</b> 880-34208-1 MB 880-64404/1-A LCS 880-64404/2-A LCSD 880-64404/3-A 880-34208-1 MS 880-34208-1 MSD	BH-5 (0-1')         Client Sample ID         BH-5 (0-1')         BH-5 (0-1')         Method Blank         Lab Control Sample         Lab Control Sample Dup	Total/NA          Prep Type         Total/NA         Total/NA         Total/NA         Total/NA         Total/NA	Matrix       Solid       Solid       Solid       Solid       Solid       Solid	Total BTEX Method 8015NM Prep 8015NM Prep 8015NM Prep 8015NM Prep	
880-34208-1 <b>5C Semi VOA</b> <b>rep Batch: 64404</b> <b>Lab Sample ID</b> 880-34208-1 MB 880-64404/1-A LCS 880-64404/2-A LCSD 880-64404/3-A 880-34208-1 MS 880-34208-1 MSD	BH-5 (0-1')         Client Sample ID         BH-5 (0-1')         Method Blank         Lab Control Sample         Lab Control Sample Dup         BH-5 (0-1')	Total/NA           Prep Type           Total/NA           Total/NA           Total/NA           Total/NA           Total/NA           Total/NA           Total/NA           Total/NA           Total/NA	Matrix       Solid       Solid       Solid       Solid       Solid       Solid       Solid       Solid	Total BTEX Method 8015NM Prep 8015NM Prep 8015NM Prep 8015NM Prep 8015NM Prep 8015NM Prep	
880-34208-1 <b>C Semi VOA</b> <b>rep Batch: 64404</b> <b>Lab Sample ID</b> 880-34208-1 MB 880-64404/1-A LCS 880-64404/2-A LCSD 880-64404/2-A B80-34208-1 MS 880-34208-1 MSD <b>nalysis Batch: 64423</b> <b>Lab Sample ID</b>	Client Sample ID         BH-5 (0-1')         Method Blank         Lab Control Sample         Lab Control Sample Dup         BH-5 (0-1')         BH-5 (0-1')         BH-5 (0-1')         BH-5 (0-1')	Total/NA Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA	Matrix       Solid       Matrix	Total BTEX           Method           8015NM Prep	Prep Batc
880-34208-1 AC Semi VOA rep Batch: 64404 Lab Sample ID 880-34208-1 MB 880-64404/1-A LCSD 880-64404/2-A LCSD 880-64404/3-A 880-34208-1 MS 880-34208-1 MSD nalysis Batch: 64423 Lab Sample ID 880-34208-1	BH-5 (0-1')         Client Sample ID         BH-5 (0-1')         Method Blank         Lab Control Sample         Lab Control Sample Dup         BH-5 (0-1')         BH-5 (0-1')         BH-5 (0-1')         BH-5 (0-1')         BH-5 (0-1')         BH-5 (0-1')	Prep Type       Total/NA	Matrix       Solid	Method         8015NM Prep	Prep Batc
880-34208-1 <b>C Semi VOA</b> <b>rep Batch: 64404</b> <b>Lab Sample ID</b> 880-34208-1 MB 880-64404/1-A LCSD 880-64404/2-A LCSD 880-64404/3-A 880-34208-1 MS 880-34208-1 MSD <b>nalysis Batch: 64423</b> <b>Lab Sample ID</b> 880-34208-1 MB 880-64404/1-A	BH-5 (0-1')         Client Sample ID         BH-5 (0-1')         Method Blank         Lab Control Sample         Lab Control Sample Dup         BH-5 (0-1')         Method Blank	Total/NA         Prep Type         Total/NA	Matrix       Solid	Method         8015NM Prep	Prep Batc Prep Batc 6440 6440
880-34208-1 <b>C Semi VOA</b> <b>rep Batch: 64404</b> <b>Lab Sample ID</b> 880-34208-1 MB 880-64404/1-A LCS 880-64404/2-A LCSD 880-64404/3-A 880-34208-1 MS <b>nalysis Batch: 64423</b> <b>Lab Sample ID</b> 880-34208-1 MB 880-64404/1-A LCS 880-64404/1-A	BH-5 (0-1')         Client Sample ID         BH-5 (0-1')         Method Blank         Lab Control Sample         Lab Control Sample Dup         BH-5 (0-1')         BH-5 (0-1')         BH-5 (0-1')         BH-5 (0-1')         BH-5 (0-1')         Method Blank         Lab Control Sample ID         BH-5 (0-1')         Method Blank         Lab Control Sample	Total/NA         Prep Type         Total/NA         Total/NA	Matrix       Solid	Method           8015NM Prep	Prep Batc Prep Batc 6440 6440
Base-34208-1           C Semi VOA           rep Batch: 64404           Lab Sample ID           880-34208-1           MB 880-64404/1-A           LCSD 880-64404/2-A           LCSD 880-64404/3-A           880-34208-1 MS           880-34208-1 MS           Baso-34208-1 MS           Baso-34208-1 MSD           malysis Batch: 64423           Lab Sample ID           880-34208-1           MB 880-64404/1-A           LCS 880-64404/1-A           LCS 880-64404/2-A           LCS 880-64404/2-A           LCS 880-64404/2-A	BH-5 (0-1')         Client Sample ID         BH-5 (0-1')         Method Blank         Lab Control Sample         Lab Control Sample Dup         BH-5 (0-1')         BH-5 (0-1')         BH-5 (0-1')         BH-5 (0-1')         BH-5 (0-1')         Method Blank         Lab Control Sample         Lab Control Sample         Lab Control Sample         Lab Control Sample         Lab Control Sample Dup	Total/NA         Prep Type         Total/NA         Total/NA	Matrix       Solid       Solid	Method           8015NM Prep           8015NM Prep	Prep Batc Prep Batc 6440 6440 6440 6440
Lab Sample ID 880-34208-1 SC Semi VOA Prep Batch: 64404 Lab Sample ID 880-34208-1 MB 880-64404/1-A LCSD 880-64404/2-A LCSD 880-64404/2-A 880-34208-1 MSD analysis Batch: 64423 Lab Sample ID 880-34208-1 MB 880-64404/1-A LCSD 880-64404/2-A LCSD 880-64404/2-A LCSD 880-64404/3-A 880-34208-1 MS 880-34208-1 MS	BH-5 (0-1')         Client Sample ID         BH-5 (0-1')         Method Blank         Lab Control Sample         Lab Control Sample Dup         BH-5 (0-1')         BH-5 (0-1')         BH-5 (0-1')         BH-5 (0-1')         BH-5 (0-1')         Method Blank         Lab Control Sample ID         BH-5 (0-1')         Method Blank         Lab Control Sample	Total/NA         Prep Type         Total/NA         Total/NA	Matrix       Solid	Method           8015NM Prep	Prep Batcl

Analysis Batch: 64525

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34208-1	BH-5 (0-1')	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 64405

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-34208-1	BH-5 (0-1')	Soluble	Solid	DI Leach	
MB 880-64405/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

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HPLC/IC (Continued)

Job ID: 880-34208-1 SDG: Lea County, New Mexico

# Page 110 of 383 1 880-34208-1 2 3 , New Mexico 3 Prep Batch 61 64405 64405 64405 64405 64405 64405 64405 64405 64405 64405

#### Leach Batch: 64405 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34204-A-1-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-34204-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
nalysis Batch: 64500					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34208-1	BH-5 (0-1')	Soluble	Solid	300.0	64405
MB 880-64405/1-A	Method Blank	Soluble	Solid	300.0	64405
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	300.0	64405
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	64405
380-34204-A-1-D MS	Matrix Spike	Soluble	Solid	300.0	6440
380-34204-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	6440

Eurofins Midland

#### Client Sample ID: BH-5 (0-1') Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

Job ID: 880-34208-1 SDG: Lea County, New Mexico

# Lab Sample ID: 880-34208-1

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	64332	10/10/23 10:38	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64432	10/11/23 18:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64593	10/11/23 18:19	SM	EET MID
Total/NA	Analysis	8015 NM		1			64525	10/11/23 12:09	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	64404	10/10/23 15:31	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64423	10/11/23 12:09	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	64405	10/10/23 15:31	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64500	10/11/23 20:54	СН	EET MID

#### Laboratory References:

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

Eurofins Midland

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#### Laboratory: Eurofins Midland

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

uthority	Program	n	Identification Number	Expiration Date
exas	NELAP		T104704400-23-26	06-30-24
The following analytes	are included in this report, but t	the laboratory is not certif	ied by the governing authority. This lis	t may include analytes
for which the agency of	loes not offer certification.	-		
• •	•	Matrix	Analyte Total TPH	

Eurofins Midland

#### Received by OCD: 11/2/2023 1:36:42 PM

# **Method Summary**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34208-1 SDG: Lea County, New Mexico

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
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

#### Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

# Sample Summary

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34208-1 SDG: Lea County, New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-34208-1	BH-5 (0-1')	Solid	10/04/23 00:00	10/09/23 16:20

Received by OCD: 11/2/2023 1:36:42 PM

BH-5 (0-1) 10/4/2023 X G 1 X X X I I I I I I I I I I I I I I I I	Projectivnner         200         Immunity         Mail         Mail <th>Email     msanian@marathonoil.com     Deliverables. EDD     ADaPT       Nighthawk 3H    </th> <th>ate ZIP Midland TX 79701 City State ZIP Houston TX 77024 Reporting Level II Level II ST/UST</th> <th>310 W Vall St Ste 500       Address       990 Town and Country Blvd       State of Project:</th> <th>Melodie Sanjari</th>	Email     msanian@marathonoil.com     Deliverables. EDD     ADaPT       Nighthawk 3H	ate ZIP Midland TX 79701 City State ZIP Houston TX 77024 Reporting Level II Level II ST/UST	310 W Vall St Ste 500       Address       990 Town and Country Blvd       State of Project:	Melodie Sanjari
		Inventee     Turn Around       ALlocation     Lea County, New Mexico     Due Date     5 day       ALlocation     Lea County, New Mexico     Due Date     5 day       PLE RECEIPT     Temp Blank.     Yes No     Themometer D       Custody Seals     Yes No     Themometer D     Yes No       Custody Seals     Yes No     Corrected Temperature     Yes No       Sample Identification     Date     Time     Soil       BH-5 (0-1)     10/4/2023     X     Grab	Email Imsangan@marathonol.com     Deliverables. EDD     AppT       tName     Nighthawk 3H     Tum Around     Free.     Allocation     Lea County. New Mexico     Due Date     5 day     Free.     Free.     AMALYSIS REQUEST     AMALYSIS REQUEST     AMALYSIS REQUEST     AMALYSIS REQUEST     Edited and a contract of the contract o	itate ZIP     Midland TX 79701     Email msanian@marathonol.com     Reporting Level II     Level II     Il.creation       1.variant     Nighthawk 3H     Turn Around     Free     Anapril     Deliverables. EDD     ADapril       1.variant     2090     County, New Mexico     Due Date     5 day     State ZIP     Free     AnALYSIS REQUEST     AnALYSIS REQUEST     Anapril       1.variant     Lea County, New Mexico     Due Date     5 day     State ZIP     Free     AnALYSIS REQUEST     AnALYSIS	ss.         310 W Vall St Ste 500         Address         990 Town and Country Bid         Program USTPET         PR           tate ZIP         Midland TX 79701         Email         Insangar@marathonol.com         Boy Town and Country Bid         State of Project:         Reporting Level III         Sta
	Comments: Email results to Mike Carmona mcarmona@carmonaresources.com, Conner Moehring cmoehring@carmonaresources.com, Clint Merritt MerrittC@carmonaresources.com	Internet     Turn Around       Humber     2090     Roune     Roune     Ration       It Location     Lea County, New Mexico     Due Date     5 day       ers Name     CCM     Use Date     5 day       ers Name     CCM     Ves No     Themonitaerin     Code       PLE RECEIPT     Tamp Blank.     Yes No     Themonitaerin     Ves No       Custody Seals     Yes No     Themonitaerin     Correction Factor     Parameters       Sample Identification     Date     Soil     Water     Graph     BTEX 8021B       BH-5 (0-1)     10/4/2023     X     G     1     X     X       BH-5 (0-1)     10/4/2023     X     G     1     X     X       BH-5 (0-1)     10/4/2023     X     G     1     X     X       BH-5 (0-1)     10/4/2023     X     Yes No     G     1     X       BH-5 (0-1)     10/4/2023     X     Yes No     G     1     X       BH-5 (0-1)     10/4/2023     X     G     1     X     I       BH X     I     I     I     I     I     I     I       I     I     I     I     I     I     I     I     I </td <td>Email         Imsanga@marathonol.com         Deliverations         EDI         Apprint           Hame         Nighthawk 3H         Tum Around         Tum Around         Frain and an around         Frain around</td> <td>itale ZIP         Midland TX T9701         Enail msangar@marathonol.com         Houston TX 77024         Reporting Level II [level II ] [le</td> <td>ss.         310 WVall SLS 500         Curling wrate         Ourige wrate         907 anni and Country Blud         Program Untry SL         Program Untry SL</td>	Email         Imsanga@marathonol.com         Deliverations         EDI         Apprint           Hame         Nighthawk 3H         Tum Around         Tum Around         Frain and an around         Frain around	itale ZIP         Midland TX T9701         Enail msangar@marathonol.com         Houston TX 77024         Reporting Level II [level II ] [le	ss.         310 WVall SLS 500         Curling wrate         Ourige wrate         907 anni and Country Blud         Program Untry SL

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Thain of Custoay

Job Number: 880-34208-1

List Source: Eurofins Midland

SDG Number: Lea County, New Mexico

# Login Sample Receipt Checklist

Client: Carmona Resources

Login Number: 34208 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	

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**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Clint Merritt Carmona Resources 310 W Wall St Ste 500 Midland, Texas 79701 Generated 10/13/2023 2:33:56 PM

# JOB DESCRIPTION

Nighthawk 3H SDG NUMBER Lea County, New Mexico

# **JOB NUMBER**

880-34207-1

a: Clint N na Reso 10 W W Sto Texas 7 3/2023 2:33 **CRIPT** Nighthav New M

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

AMER

Generated 10/13/2023 2:33:56 PM

Authorized for release by Jessica Kramer, Project Manager Jessica.Kramer@et.eurofinsus.com (432)704-5440

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

Laboratory Job ID: 880-34207-1 SDG: Lea County, New Mexico

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Sample Summary	16
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Job ID: 880-34207-1

SDG: Lea County, New Mexico

, ,		
Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
S1-	Surrogate recovery exceeds control limits, low biased.	
U	Indicates the analyte was analyzed for but not detected.	5
GC Semi VOA		
Qualifier	Qualifier Description	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	8
U	Indicates the analyte was analyzed for but not detected.	
Glossary		9
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
<u>¤</u>	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)	40
Dil Fac	Dilution Factor	13
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
MPN	Most Probable Number	
MQL	Method Quantitation Limit	
NC	Not Calculated	
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	
NEG	Negative / Absent	
POS	Positive / Present	
PQL	Practical Quantitation Limit	
PRES	Presumptive	

RERRelative Error Ratio (Radiochemistry)RLReporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)

Quality Control

- TEQ Toxicity Equivalent Quotient (Dioxin)
- TNTC Too Numerous To Count

QC

Job ID: 880-34207-1 SDG: Lea County, New Mexico

#### Job ID: 880-34207-1

Client: Carmona Resources Project/Site: Nighthawk 3H

#### Laboratory: Eurofins Midland

#### Narrative

Job Narrative 880-34207-1

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

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

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

#### Receipt

The sample was received on 10/9/2023 4:20 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

#### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: H-1 (0-6") (880-34207-1).

#### GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: H-1 (0-6") (880-34207-1) and (880-34311-A-1-C). 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: Surrogate recovery for the following sample was outside control limits: H-1 (0-6") (880-34207-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### HPLC/IC

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

Job ID: 880-34207-1 SDG: Lea County, New Mexico

# Client Sample ID: H-1 (0-6") Date Collected: 10/04/23 00:00

Date Received: 10/09/23 16:20

Client: Carmona Resources

Project/Site: Nighthawk 3H

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00202	U	0.00202		mg/Kg		10/11/23 15:04	10/12/23 18:57	1
Toluene	<0.00202	U	0.00202		mg/Kg		10/11/23 15:04	10/12/23 18:57	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		10/11/23 15:04	10/12/23 18:57	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		10/11/23 15:04	10/12/23 18:57	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		10/11/23 15:04	10/12/23 18:57	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		10/11/23 15:04	10/12/23 18:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	69	S1-	70 - 130				10/11/23 15:04	10/12/23 18:57	1
1,4-Difluorobenzene (Surr)	103		70 - 130				10/11/23 15:04	10/12/23 18:57	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cal	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			10/12/23 18:57	1
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (	GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/10/23 23:35	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 (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/10/23 09:30	10/10/23 23:35	1
Diesel Range Organics (Over	<49.9	U	49.9		mg/Kg		10/10/23 09:30	10/10/23 23:35	1
C10-C28) Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/10/23 09:30	10/10/23 23:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	138	S1+	70 - 130				10/10/23 09:30	10/10/23 23:35	1
o-Terphenyl	142	S1+	70 - 130				10/10/23 09:30	10/10/23 23:35	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	ohy - Solubl	е						
Method: EPA 300.0 - Anions, Ion Analyte		o <mark>hy - Solubl</mark> Qualifier	e RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

Eurofins Midland

Lab Sample ID: 880-34207-1 Matrix: Solid 5

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34207-1 SDG: Lea County, New Mexico

Prep Type: Total/NA

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

				Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
80-34207-1	H-1 (0-6")	69 S1-	103		1
80-34311-A-1-A MS	Matrix Spike	122	100		
80-34311-A-1-B MSD	Matrix Spike Duplicate	115	104		1
CS 880-64502/1-A	Lab Control Sample	128	109		
CSD 880-64502/2-A	Lab Control Sample Dup	128	101		
1B 880-64502/5-A	Method Blank	80	91		
Surrogate Legend					
BFB = 4-Bromofluorobe	nzene (Surr)				
DFBZ = 1,4-Difluoroben	zene (Surr)				
thod: 8015B NM	- Diesel Range Organic	s (DRO) (GC	;)		
trix: Solid		• () ( • •	/	Prep Type: Total/NA	
				Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1		
_ab Sample ID	Client Sample ID	(70-130)	(70-130)		

142 S1+

138 S1+

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Eurofins Midland

Client: Carmona Resources

**Client Sample ID: Method Blank** 

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 64502

Project/Site: Nighthawk 3H Method: 8021B - Volatile Organic Compounds (GC)

#### \_\_\_\_\_ Lab Sample ID: MB 880-64502/5-A

Matrix: Solid Analysis Batch: 64523								Prep Type: 1 Prep Batch	
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/11/23 15:04	10/12/23 11:23	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/11/23 15:04	10/12/23 11:23	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/11/23 15:04	10/12/23 11:23	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/11/23 15:04	10/12/23 11:23	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/11/23 15:04	10/12/23 11:23	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/11/23 15:04	10/12/23 11:23	1
	MB	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	80		70 - 130				10/11/23 15:04	10/12/23 11:23	1
1,4-Difluorobenzene (Surr)	91		70 - 130				10/11/23 15:04	10/12/23 11:23	1

#### Lab Sample ID: LCS 880-64502/1-A Matrix: Solid

## Analysis Batch: 64523

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07857		mg/Kg		79	70 - 130	
Toluene	0.100	0.07926		mg/Kg		79	70 - 130	
Ethylbenzene	0.100	0.09043		mg/Kg		90	70 - 130	
m-Xylene & p-Xylene	0.200	0.1946		mg/Kg		97	70 - 130	
o-Xylene	0.100	0.09961		mg/Kg		100	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	128		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

#### Lab Sample ID: LCSD 880-64502/2-A

## Matrix: Solid

Analysis Batch: 64523							Prep	Batch:	64502
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08430		mg/Kg		84	70 - 130	7	35
Toluene	0.100	0.07828		mg/Kg		78	70 - 130	1	35
Ethylbenzene	0.100	0.08874		mg/Kg		89	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1787		mg/Kg		89	70 - 130	9	35
o-Xylene	0.100	0.1040		mg/Kg		104	70 - 130	4	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	128		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

# Lab Sample ID: 880-34311-A-1-A MS

# Matrix: Solid

Analysis Batch: 64523									Prep	o Batch: 645	502
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	<0.00200	U	0.0996	0.09524		mg/Kg		96	70 - 130		
Toluene	<0.00200	U	0.0996	0.09387		mg/Kg		94	70 - 130		

**Eurofins Midland** 

Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

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Client: Carmona Resources

Project/Site: Nighthawk 3H

#### Job ID: 880-34207-1 SDG: Lea County, New Mexico

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

Lab Sample ID: 880-34311-4	A-1-A MS							Client	Sample ID		
Matrix: Solid										Type: To	
Analysis Batch: 64523										Batch:	6450
	-	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Ethylbenzene	<0.00200	U	0.0996	0.1043		mg/Kg		105	70 - 130		
n-Xylene & p-Xylene	<0.00401	U	0.199	0.2282		mg/Kg		115	70 - 130		
o-Xylene	<0.00200	U	0.0996	0.1141		mg/Kg		115	70 - 130		
	MS										
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	122 100		70 - 130 70 - 130								
1,4-Difluorobenzene (Surr)	100		70 - 130								
_ab Sample ID: 880-34311-4	A-1-B MSD					CI	ient Sa	ample IC	): Matrix Sp		
Matrix: Solid										Type: To	
Analysis Batch: 64523	<b>•</b> •	0	o. ::		MOD					Batch:	
	-	Sample	Spike	MSD			_	~-	%Rec		RP
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Lim
Benzene	<0.00200		0.0990	0.08499		mg/Kg		86	70 - 130	11	;
Toluene	<0.00200		0.0990	0.08138		mg/Kg		82	70 - 130	14	3
Ethylbenzene	<0.00200		0.0990	0.08808		mg/Kg		89	70 - 130	17	3
n-Xylene & p-Xylene	<0.00401		0.198	0.1873		mg/Kg		95	70 - 130	20	3
p-Xylene	<0.00200	U	0.0990	0.09482		mg/Kg		96	70 - 130	18	3
	MSD										
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	115		70 - 130								
1,4-Difluorobenzene (Surr)	104		70 - 130								
ethod: 300.0 - Anions,	Ion Chromat	ography									
Lab Sample ID: MB 880-644	05/1-A							Client S	ample ID:	Method	Blan
Matrix: Solid									Prep	Type: S	olub
Analysis Batch: 64500											
-		MB MB									
Analyte	R	esult Qualifier		RL	MDL Unit	[	) Р	repared	Analyz	ed	Dil Fa
Chloride		<5.00 U		5.00	mg/K	g			10/11/23	18:28	
Lab Sample ID: LCS 880-64	405/2-A						Client	Sample	ID: Lab Co	ontrol S	amp
Matrix: Solid								-	Prep	Type: S	olub
Analysis Batch: 64500											
			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			250	251.4		mg/Kg		101	90 - 110		
_ab Sample ID: LCSD 880-6	64405/3-A					Clie	nt Sam	ple ID:	Lab Contro	l Samp	le Du
Matrix: Solid								•		Type: S	
Analysis Batch: 64500										1.0.0	
			Spike	LCSD	LCSD				%Rec		RF
Analyto			Addod		Qualifier	Unit	п	% Pac	Limite	DDD	Lim

# **QC Sample Results**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34207-1 SDG: Lea County, New Mexico

## Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-34204-	A-1-D MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep	Type: Se	oluble
Analysis Batch: 64500											
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
				5 4 9 9				404	00 440		
Chloride	290		248	540.9		mg/Kg		101	90 - 110		
Chloride Lab Sample ID: 880-34204- Matrix: Solid Analysis Batch: 64500			248	540.9		0 0	ient Sa		): Matrix Sp	oike Dup Type: So	
Lab Sample ID: 880-34204- Matrix: Solid		Sample	248 Spike		MSD	0 0	ient Sa		): Matrix Sp		
Lab Sample ID: 880-34204- Matrix: Solid	A-1-E MSD Sample	Sample Qualifier		MSD	MSD Qualifier	0 0	ient Si D		): Matrix Sp Prep		oluble

Eurofins Midland

# **QC** Association Summary

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34207-1

SDG: Lea County, New Mexico

## **GC VOA**

#### Prep Batch: 64502

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
880-34207-1	H-1 (0-6")	Total/NA	Solid	5035	
MB 880-64502/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-64502/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-64502/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-34311-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-34311-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
nalysis Batch: 64523					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bato
380-34207-1	H-1 (0-6")	Total/NA	Solid	8021B	6450
MB 880-64502/5-A	Method Blank	Total/NA	Solid	8021B	6450
LCS 880-64502/1-A	Lab Control Sample	Total/NA	Solid	8021B	6450
LCSD 880-64502/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	6450
880-34311-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	645
880-34311-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	645
nalysis Batch: 64681					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Bato
880-34207-1	H-1 (0-6")	Total/NA	Solid	Total BTEX	
C Semi VOA					
nalysis Batch: 64320					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Bate
880-34207-1	H-1 (0-6")	Total/NA	Solid	8015B NM	6432
rep Batch: 64329					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Bate
880-34207-1	H-1 (0-6")	Total/NA	Solid	8015NM Prep	
nalysis Batch: 64470					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Bate

## HPLC/IC

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#### Leach Batch: 64405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34207-1	H-1 (0-6")	Soluble	Solid	DI Leach	
MB 880-64405/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-34204-A-1-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-34204-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 64500

Lab Sample ID 880-34207-1	Client Sample ID H-1 (0-6")	Prep Type Soluble	Matrix Solid	Method 300.0	Prep Batch 64405
MB 880-64405/1-A	Method Blank	Soluble	Solid	300.0	64405
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	300.0	64405
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	64405
880-34204-A-1-D MS	Matrix Spike	Soluble	Solid	300.0	64405

Eurofins Midland

# **QC Association Summary**

Job ID: 880-34207-1
SDG: Lea County, New Mexico

## HPLC/IC (Continued)

## Analysis Batch: 64500 (Continued)

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
880-34204-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	64405	

Eurofins Midland

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#### Client Sample ID: H-1 (0-6") Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

Job ID: 880-34207-1 SDG: Lea County, New Mexico

# Lab Sample ID: 880-34207-1

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	64502	10/11/23 15:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64523	10/12/23 18:57	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64681	10/12/23 18:57	SM	EET MID
Total/NA	Analysis	8015 NM		1			64470	10/10/23 23:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	64329	10/10/23 09:30	ткс	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64320	10/10/23 23:35	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	64405	10/10/23 15:31	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64500	10/11/23 20:48	СН	EET MID

#### Laboratory References:

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

Eurofins Midland

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34207-1 SDG: Lea County, New Mexico

Laboratory: Eurofins Midland

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

Authority	Progra	ım	Identification Number	Expiration Date
Exas     NELA       The following analytes are included in this report, b       for which the agency does not offer certification.       Analysis Method       8015 NM		כ	T104704400-23-26	06-30-24
The following analy	tes are included in this report, but	t the laboratory is not certif	fied by the governing authority. This lis	t may include analytes
The following analytes are include for which the agency does not o Analysis Method	,	Matrix	Anglyte	
Analysis Method	,	Matrix	Analyte	
Analysis Method	,	Matrix Solid	Analyte Total TPH	

Eurofins Midland

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#### Received by OCD: 11/2/2023 1:36:42 PM

# **Method Summary**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34207-1 SDG: Lea County, New Mexico

lethod	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
otal 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
800.0	Anions, Ion Chromatography	EPA	EET MID
6035	Closed System Purge and Trap	SW846	EET MID
015NM Prep	Microextraction	SW846	EET MID
01 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

Eurofins Midland

# Sample Summary

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34207-1 SDG: Lea County, New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-34207-1	H-1 (0-6")	Solid	10/04/23 00:00	10/09/23 16:20

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880-34207 Chain of Custody

Released to Imaging: 3/18/2024 8:58:24 AM

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Received by OCD: 11/2/2023 1:36:42 PM

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Project Manager (	Clinton Merritt		Е	Bill to (if different)	-	Meloc	Melodie Sanjari	ari								Nork	Order	Work Order Comments	lents		
Company Name (	Carmona Resources		0	Company Name	Ű	Marat	hon Oil	Marathon Oil Corporation	ōŋ				rogran	UST/	PST	PRP	row	nfields	Program UST/PST PRP Frownfields RC		Iperfund
Address	310 W Wall St Ste 500			Address		1 066	own an	990 Town and Country Blvd	Blvd				State of Project:	Project	Π						1
City, State ZIP	Midland, TX 79701		0	City State ZIP		Houst	Houston TX 77024	77024					Reporting Level II Level III ST/UST	g Level		evel III	S	TSU/	RRP	m	
Phone			Email	msanıari@marathonoil com	rathonoil	com							Deliverables. EDD	bles. E	8		ADaPT	Ť	Other	L.	
	Nighthawk 3H	3H																			
Floject Nallie			Turn A	Turn Around						ANAL	ALYSIS REQUEST	REQUI	ST						Preservative Codes	rative (	odes
Project Number	2090		マ Routine	Rush	Code													None NO	NO	DV	DI Water H <sub>2</sub> O
Project Location	Lea County, New Mexico	Mexico	Due Date	5 day									_				-	<u>}</u>	202		
Sampler's Name	CCM						RO)													Me	MeCH Me
PO#					5		+ MI					*******							: 0	HNG	HNC3 HN
SAMPLE RECEIPT	Termp Blank.	Yes (No )	Wet Ice	Yes No	eter	в	RO	0.0											, 73	Nac	NACH NA
Received Intact:	(Yes) No	Thermometer ID			ram	8021	) + [	900												5	
Cooler Custody Seals	Yes No (NA	Correction Factor		7	Pa	EX 8	GRO	oride										No c	Na CO NACO	5 0	
Sample Custody Seals	s Yes No (N/A)	Temperature Reading	ding	2.4	]	вт	5M (	Chle											7n AcetatetNoOl		
Total Containers.		Corrected Temperature	rature	2.4	M		801			<u> </u>								NaOr	NaOH+Ascorbic Acid SAPC	NIC Acid	SAPC
Sample Identification	ification Date	Time	Soil	Water Comp	p #of Cont		TPH												Sample Comments	Comn	nents
H-1 (0-6")	6") 10/4/2023		×	G		×	×	×							-	+		+			
														_			+				
														-							
													_								
																$\neg$					
															-		-+				
																	-				
														-	_						
									<u> </u>												
Comments: Email	Comments: Email results to Mike Carmona mcarmona@carmonaresources.com, Conner Moehring @carmonaresources.com, Clint Merritt MerrittC@carmonaresources.com	mcarmona@car	nonaresources	com, Conne	er Moehri	ng cm	oehrin	g@carn	nonare	source	s.com,	Clint	Merritt	Merrit	tC@c	armo	nares	ources	.com		
	Dolinguishod																				
	Kelinquisned	Kelinquisned by (Signature)				Date/Time	Time					Receiv	Received by (Signature)	(Signa	(ture)					Date/Time	Time

5 6

**13** 14

Job Number: 880-34207-1

List Source: Eurofins Midland

SDG Number: Lea County, New Mexico

# Login Sample Receipt Checklist

Client: Carmona Resources

Login Number: 34207 List Number: 1 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	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Clint Merritt Carmona Resources 310 W Wall St Ste 500 Midland, Texas 79701 Generated 10/12/2023 10:49:43 AM

# JOB DESCRIPTION

Nighthawk 3H SDG NUMBER Lea County, New Mexico

# **JOB NUMBER**

880-34206-1

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

AMER

Generated 10/12/2023 10:49:43 AM

Authorized for release by Jessica Kramer, Project Manager Jessica.Kramer@et.eurofinsus.com (432)704-5440

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

Laboratory Job ID: 880-34206-1 SDG: Lea County, New Mexico

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2

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34206-1 SDG: Lea County, New Mexico

Qualifiers		3	3
GC VOA			
Qualifier	Qualifier Description	4	
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.	5	5
GC Semi VOA			
Qualifier	Qualifier Description		
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		
HPLC/IC			
Qualifier	Qualifier Description	8	8
U	Indicates the analyte was analyzed for but not detected.		
Glossary		9	)
Abbreviation	These commonly used abbreviations may or may not be present in this report.	1	
¤	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)	4	
Dil Fac	Dilution Factor		3
DL	Detection Limit (DoD/DOE)		
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample		
DLC	Decision Level Concentration (Radiochemistry)		
EDL	Estimated Detection Limit (Dioxin)		
LOD	Limit of Detection (DoD/DOE)		
LOQ	Limit of Quantitation (DoD/DOE)		
MCL	EPA recommended "Maximum Contaminant Level"		
MDA	Minimum Detectable Activity (Radiochemistry)		
MDC	Minimum Detectable Concentration (Radiochemistry)		
MDL	Method Detection Limit		
ML	Minimum Level (Dioxin)		
MPN	Most Probable Number		
MQL	Method Quantitation Limit		
NC	Not Calculated		

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

Quality Control

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

Not Detected at the reporting limit (or MDL or EDL if shown)

ND

NEG

POS

PQL PRES

QC

RER

RPD

TEF

TEQ

TNTC

RL

Eurofins Midland

Job ID: 880-34206-1 SDG: Lea County, New Mexico

#### Job ID: 880-34206-1

Client: Carmona Resources Project/Site: Nighthawk 3H

#### Laboratory: Eurofins Midland

#### Narrative

Job Narrative 880-34206-1

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

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

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

#### Receipt

The sample was received on 10/9/2023 4:20 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

#### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: H-2 (0-6") (880-34206-1).

#### GC VOA

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-64287 and analytical batch 880-64327 was outside the upper control limits.

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

#### GC Semi VOA

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: H-2 (0-6") (880-34206-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### HPLC/IC

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

Job ID: 880-34206-1 SDG: Lea County, New Mexico

## Client Sample ID: H-2 (0-6") Date Collected: 10/04/23 00:00

Date Received: 10/09/23 16:20

Client: Carmona Resources

Project/Site: Nighthawk 3H

Method: SW846 8021B - Volatile	<b>Organic Comp</b>	ounds (GC)	)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00200	U	0.00200		mg/Kg		10/10/23 10:47	10/11/23 01:59	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/10/23 10:47	10/11/23 01:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/10/23 10:47	10/11/23 01:59	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		10/10/23 10:47	10/11/23 01:59	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/10/23 10:47	10/11/23 01:59	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		10/10/23 10:47	10/11/23 01:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130				10/10/23 10:47	10/11/23 01:59	1
1,4-Difluorobenzene (Surr)	102		70 - 130				10/10/23 10:47	10/11/23 01:59	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cal	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			10/11/23 01:59	1
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (	GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/10/23 23:13	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	<49.9	U	49.9		mg/Kg		10/10/23 09:30	10/10/23 23:13	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<49.9	U	49.9		mg/Kg		10/10/23 09:30	10/10/23 23:13	1
C10-C28)	. 40.0		10.0		117		40/40/00 00 00	40/40/00 00 40	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/10/23 09:30	10/10/23 23:13	1
Surrogate	%Recovery		Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	135	S1+	70 - 130				10/10/23 09:30	10/10/23 23:13	1
o-Terphenyl	143	S1+	70 - 130				10/10/23 09:30	10/10/23 23:13	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	ohy - Solubl	e						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	334		4.98		mg/Kg			10/11/23 20:31	1

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Lab Sample ID: 880-34206-1 Matrix: Solid 5

Client: Carmona Resources Project/Site: Nighthawk 3H

Job ID: 880-34206-1 SDG: Lea County, New Mexico

Prep Type: Total/NA

Prep Type: Total/NA

## 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
880-34206-1	H-2 (0-6")	109	102		
880-34210-A-1-B MS	Matrix Spike	109	95		6
880-34210-A-1-C MSD	Matrix Spike Duplicate	119	97		
LCS 880-64334/1-A	Lab Control Sample	102	105		
LCSD 880-64334/2-A	Lab Control Sample Dup	111	102		
MB 880-64287/5-A	Method Blank	118	142 S1+		8
MB 880-64334/5-A	Method Blank	109	123		
Surrogate Legend					9
BFB = 4-Bromofluorober	nzene (Surr)				
DFBZ = 1,4-Difluorobenz	zene (Surr)				
Anthod: 8015B NM	- Diesel Range Organice		·)		

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

Matrix: Solid
---------------

				Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
880-34206-1	H-2 (0-6")	135 S1+	143 S1+		
Surrogate Legend					
1CO = 1-Chlorooctan	e				

OTPH = o-Terphenyl

Client: Carmona Resources

Job ID: 880-34206-1 SDG: Lea County, New Mexico

Project/Site: Nighthawk 3H Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-64287/5-A Matrix: Solid Analysis Batch: 64327											Client Sa	ample ID: Met Prep Type Prep Ba	e: To	tal/NA
Analysis Batch. 64327		мв	MB									гтер Ба	ich.	04207
Analyte			Qualifier	RL		MDL	Unit		D	Р	repared	Analyzed		Dil Fa
Benzene	<0.00			0.00200			mg/Kg		_		9/23 15:21	10/10/23 12:3		
Toluene	< 0.00			0.00200			mg/Kg				9/23 15:21	10/10/23 12:3		
Ethylbenzene	< 0.00			0.00200			mg/Kg				9/23 15:21	10/10/23 12:3		
m-Xylene & p-Xylene	<0.00			0.00400			mg/Kg				9/23 15:21	10/10/23 12:3		
o-Xylene	< 0.00			0.00200			mg/Kg				9/23 15:21	10/10/23 12:3		
Xylenes, Total	<0.00			0.00400			mg/Kg				9/23 15:21	10/10/23 12:3		
		мв	МВ											
Surrogate	%Recov		Qualifier	Limits						Р	repared	Analyzed		Dil Fa
4-Bromofluorobenzene (Surr)		118		70 - 130							9/23 15:21	10/10/23 12:3	1	
1,4-Difluorobenzene (Surr)		142	S1+	70 - 130						10/0	9/23 15:21	10/10/23 12:3	1	
Lab Sample ID: MB 880-64334/5-A Matrix: Solid Analysis Batch: 64327											Client Sa	ample ID: Met Prep Type Prep Ba	e: To	tal/N
		MB	MB											
Analyte	Re		Qualifier	RL		MDL	Unit		D	P	repared	Analyzed		Dil Fa
Benzene	< 0.00	200	U	0.00200			mg/Kg			10/1	0/23 10:47	10/11/23 00:0	8	
Toluene	< 0.00	200	U	0.00200			mg/Kg			10/1	0/23 10:47	10/11/23 00:0	8	
Ethylbenzene	<0.00	200	U	0.00200			mg/Kg			10/1	0/23 10:47	10/11/23 00:0	8	
m-Xylene & p-Xylene	< 0.00	400	U	0.00400			mg/Kg			10/1	0/23 10:47	10/11/23 00:0	8	
o-Xylene	< 0.00	200	U	0.00200			mg/Kg			10/1	0/23 10:47	10/11/23 00:0	8	
Xylenes, Total	<0.00	400	U	0.00400			mg/Kg			10/1	0/23 10:47	10/11/23 00:0	8	
			МВ											
Surrogate			Qualifier	Limits							repared	Analyzed		Dil Fa
4-Bromofluorobenzene (Surr)		109		70 - 130							0/23 10:47	10/11/23 00:0		
1,4-Difluorobenzene (Surr)		123		70 - 130						10/1	0/23 10:47	10/11/23 00:0	8	
Lab Sample ID: LCS 880-64334/1-/	4								С	lient	Sample	ID: Lab Conti	rol Sa	ampl
Matrix: Solid												Prep Type	e: To	tal/N
Analysis Batch: 64327												Prep Ba	tch:	6433
				Spike	LCS	LCS						%Rec		
Analyte				Added	Result	Qua	lifier	Unit		D	%Rec	Limits		
Benzene				0.100	0.1095			mg/Kg			110	70 - 130		
Toluene				0.100	0.09213			mg/Kg			92	70 - 130		
Ethylbenzene				0.100	0.09514			mg/Kg			95	70 - 130		
m-Xylene & p-Xylene				0.200	0.1886			mg/Kg			94	70 - 130		
o-Xylene				0.100	0.08073			mg/Kg			81	70 - 130		
	LCS	LCS												
Surrogate %	6Recovery	Qual	ifier	Limits										
4-Bromofluorobenzene (Surr)	102			70 - 130										
1,4-Difluorobenzene (Surr)	105			70 - 130										
Lab Sample ID: LCSD 880-64334/2 Matrix: Solid	<b>!-A</b>							Cli	ent	Sam	ple ID: L	ab Control Sa Prep Type		
Analysis Batch: 64327												Prep Ba		
Anarysis Buton. 04021				Spike	LCSD	LCS	D					%Rec		RP
Analyte				Added	Result			Unit		D	%Rec		RPD	Limi
											/01100			

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Project/Site: Nighthawk 3H

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

										2. 1. 1. 1. 1. 1.
									Type: Tot	
									Batch:	
		Spike		LCSD				%Rec		RP
				Qualifier		D				Lim
										3
										3
										3
		0.100	0.1001		mg/Kg		100	70 - 130	21	3
LCSD	LCSD									
%Recovery	Qualifier	Limits								
111		70 - 130								
102		70 - 130								
A-1-B MS							Client	Sample ID	· Matrix	Snik
							onom			
Sample	Sample	Spike	MS	MS					Batom	0400
•	•	-			Unit	D	%Rec			
<0.00198	U	0.0998	0.08501		mg/Kg		85	70 - 130		
MS	MS									
%Recovery	Qualifier	Limits								
109		70 - 130								
95		70 - 130								
A-1-C MSD					Cli	ient S	ample IC	): Matrix Sr	oike Dur	olicat
Sample	Sample	Spike	MSD	MSD				%Rec		RP
		Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Lim
< 0.00198	U	0.100	0.1009		mg/Kg		101	70 - 130	6	3
<0.00198	U	0.100	0.07927		mg/Kg		79	70 - 130	1	3
<0.00198	U	0.100	0.08967		mg/Kg		89	70 - 130	2	3
<0.00396	U	0.200	0.1926				96	70 - 130	10	3
		0.100	0.08782		mg/Kg		88	70 - 130	3	3
MSD	MSD									
		Limits								
119		70 - 130								
97		70 - 130								
Ion Chromat	ography									
		102         Sample       Sample         Result       Qualifier         <0.00198	Added         Added           0.100         0.100           0.200         0.100           0.200         0.100           LCSD         LCSD           %Recovery         Qualifier         Limits           111         70 - 130           102         70 - 130           Act-1-B MS         Sample         Sample           Kesut         Qualifier         Added           <0.00198	Added         Result           0.100         0.09389           0.100         0.09160           0.200         0.1845           0.100         0.1001           LCSD         LCSD           %Recovery         Qualifier         Limits           111         70 - 130           102         70 - 130           Added         Result           Qualifier         Added           Result         Qualifier           Added         Result           <0.0198	Added         Result         Qualifier           0.100         0.09389         0.100         0.09389           0.100         0.09160         0.200         0.1845           0.100         0.1001         0.1001         0.1001           LCSD         LCSD         Qualifier         Limits           111         70.130         102         70.130           No         MS         MS         Qualifier           4.1-B MS         Qualifier         Added         Result         Qualifier           <0.0198	Added         Result         Qualifier         Unit           0.100         0.09389         mg/Kg           0.200         0.1845         mg/Kg           0.100         0.1001         mg/Kg           111         70.130         70.130           Acted         Result         Qualifier         Qualifier           400198         0.0998         0.08750         mg/Kg           <0.00198	Added         Result         Qualifier         Unit         D           0.100         0.09389         mg/Kg         mg/Kg           0.200         0.1845         mg/Kg           0.100         0.1001         mg/Kg           0.100         0.1001         mg/Kg           %Recovery         Qualifier         Limits           111         70.130         102           102         70.130         0.09460           <0.00188	Added         Result         Qualifier         Unit         D         %Rec           0.100         0.09389         mg/Kg         92           0.200         0.1845         mg/Kg         92           0.100         0.1001         mg/Kg         92           102         70-130             V-1-B MS         Client             - @.00198         0.0998         0.07870         mg/Kg         88           <0.0018	Added         Result         Qualifier         Unit         D         %Rec         Limits           0.100         0.09389         mg/Kg         92         70.130         0.130         0.001         mg/Kg         92         70.130           LCSD         LCSD         LCSD         Usuiffer         Limits         mg/Kg         100         70.130           MRecovery         Qualifier         Limits         70.130         70.130         70.130           V-1-B MS         Client Sample         Spike         MS         MS         WS         %Rec           <0.0198	Added         Result         Qualifier         Unit         D         %Rec         Limits         RPD           0.100         0.09936         mg/Kg         94         70.130         2           0.100         0.099160         mg/Kg         92         70.130         2           0.100         0.1001         mg/Kg         92         70.130         2           LCSD         LCSD         Uniffer         Uniffer         mg/Kg         92         70.130         21           LCSD         Qualifier         Uniffer         Uniffer         Mg/Kg         92         70.130         21           LCSD         Qualifier         Uniffer         Mg/Kg         92         70.130         21           LCSD         Cualifier         Uniffer         Mg/Kg         92         70.130         21           LT-B MS         Sample         Sample         Sample         Sample         NK         MS         Ms         Ms           <0.00180

## Matrix: Solid Analysis Batch: 64500

	MB	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			10/11/23 18:28	1

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# **QC Sample Results**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34206-1 SDG: Lea County, New Mexico

## Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-6 Matrix: Solid	4405/2-A						Client	Sample	D: Lab Co Prop	ontrol Sa Type: So	
Analysis Batch: 64500									Tieb	Type. O	oluble
			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			250	251.4		mg/Kg		101	90 - 110		
- Lab Sample ID: LCSD 880-	-64405/3-A					Clier	nt Sam	ple ID:	Lab Contro	ol Sampl	e Dup
Matrix: Solid								· · · ·	Prep	Type: So	oluble
Analysis Batch: 64500											
-			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250	251.8		mg/Kg		101	90 - 110	0	20
- Lab Sample ID: 880-34204	-A-1-D MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep	Type: So	oluble
Analysis Batch: 64500											
-	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	290		248	540.9		mg/Kg		101	90 _ 110		
- Lab Sample ID: 880-34204	-A-1-E MSD					Cli	ient Sa	ample IC	): Matrix Sp	oike Dup	olicate
Matrix: Solid										Type: S	
Analysis Batch: 64500											
-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	290		248	541.5		mg/Kg		101	90 - 110	0	20
### **QC** Association Summary

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34206-1 SDG: Lea County, New Mexico

#### **GC VOA**

#### Prep Batch: 64287

ab Sample ID Client Sample ID	Prep Type	Matrix	Method	Prep Batch		
MB 880-64287/5-A	Method Blank	Total/NA	Solid	5035		
nalysis Batch: 64327						
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
880-34206-1	H-2 (0-6")	Total/NA	Solid	8021B	64334	
MB 880-64287/5-A	Method Blank	Total/NA	Solid	8021B	64287	
MB 880-64334/5-A	Method Blank	Total/NA	Solid	8021B	64334	
LCS 880-64334/1-A	Lab Control Sample	Total/NA	Solid	8021B	64334	
LCSD 880-64334/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	64334	
880-34210-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	64334	
880-34210-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	64334	
rep Batch: 64334						
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batc	
380-34206-1	H-2 (0-6")	Total/NA	Solid	5035		
MB 880-64334/5-A	Method Blank	Total/NA	Solid	5035		
LCS 880-64334/1-A	Lab Control Sample	Total/NA	Solid	5035		
LCSD 880-64334/2-A	Lab Control Sample Dup	Total/NA	Solid	5035		
880-34210-A-1-B MS	Matrix Spike	Total/NA	Solid	5035		
880-34210-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035		
nalysis Batch: 64496						
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
880-34206-1	H-2 (0-6")	Total/NA	Solid	Total BTEX		
iC Semi VOA						
nalysis Batch: 64320						
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batcl	
880-34206-1	H-2 (0-6")	Total/NA	Solid	8015B NM	64329	

#### Prep Batch: 64329

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-34206-1	H-2 (0-6")	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 64469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34206-1	H-2 (0-6")	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 64405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34206-1	H-2 (0-6")	Soluble	Solid	DI Leach	
MB 880-64405/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-34204-A-1-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-34204-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

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### **QC** Association Summary

Client: Carmona Resources Project/Site: Nighthawk 3H

Job ID: 880-34206-1 SDG: Lea County, New Mexico

#### HPLC/IC

#### Analysis Batch: 64500

nalysis Batch: 64500					
_ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
80-34206-1	H-2 (0-6")	Soluble	Solid	300.0	64405
IB 880-64405/1-A	Method Blank	Soluble	Solid	300.0	64405
CS 880-64405/2-A	Lab Control Sample	Soluble	Solid	300.0	64405
CSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	64405
80-34204-A-1-D MS	Matrix Spike	Soluble	Solid	300.0	64405
80-34204-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	64405

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#### Client Sample ID: H-2 (0-6") Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

Job ID: 880-34206-1 SDG: Lea County, New Mexico

# Lab Sample ID: 880-34206-1

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	64334	10/10/23 10:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64327	10/11/23 01:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64496	10/11/23 01:59	SM	EET MID
Total/NA	Analysis	8015 NM		1			64469	10/10/23 23:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	64329	10/10/23 09:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64320	10/10/23 23:13	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	64405	10/10/23 15:31	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64500	10/11/23 20:31	СН	EET MID

#### Laboratory References:

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

Eurofins Midland

Released to Imaging: 3/18/2024 8:58:24 AM

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34206-1 SDG: Lea County, New Mexico

#### Laboratory: Eurofins Midland

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

Authority	Program	m	Identification Number	Expiration Date
Texas	NELAP	)	T104704400-23-26	06-30-24
The following analyte	s are included in this report. but	t the laboratory is not certif	fied by the governing authority. This lis	t may include analytes
for which the agency	does not offer certification.		, , , , ,	, ,
• •		Matrix	Analyte	
for which the agency	does not offer certification.		, , , , ,	

Eurofins Midland

Released to Imaging: 3/18/2024 8:58:24 AM

#### Received by OCD: 11/2/2023 1:36:42 PM

### **Method Summary**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34206-1 SDG: Lea County, New Mexico

Nethod	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	EET MID
lotal BTEX	Total BTEX Calculation	TAL SOP	EET MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
3015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
3015NM Prep	Microextraction	SW846	EET MID
OI 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

Eurofins Midland

### Sample Summary

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34206-1 SDG: Lea County, New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-34206-1	H-2 (0-6")	Solid	10/04/23 00:00	10/09/23 16:20

Received by OCD: 11/2/2023 1:36:42 PM

All	Comments. Email results to Mike Carmona mcarmona@carmonaresources.com, Conner Moehring@carmonaresources.com, Clint MerrittC@carmonaresources.com							H-2 (0-6")	Sample Identification	Total Containers.	Sample Custody Seals	Cooler Custody Seals.	Received Intact:	SAMPLE RECEIPT	PO#:	Sampler's Name.	Project Location	Project Number	Project Name	Phone	City, State ZIP	Address.	Company Name	Project Manager
Re Re	I results to Mike							<u>-</u> <u></u> <u></u> <u></u> <u></u> <u></u> ,	tification		Yes	Yes	(jes				Lea Co		z		Midland, TX 79701	310 W Wall St Ste 500	Carmona Resources	Clinton Merritt
Relinquished by (Signature)	Carmona mc							10/4/2023	Date			NO MAL O		emp Blank		CCM	Lea County, New Mexico	2090	Nighthawk 3H		01	te 500	rces	
· (Signature)	armona@car								Time	Corrected Temperature	Temperature Reading	Correction Factor		Yes (No )			SXICO							
	monaresourc							×	Soil	erature	ading	<b>г</b>		Wet Ice			Due Date	く Routine	Tum	Email				
	es.com, Cor								Water G	1 7	24	セイ	T	KYes N	þ		5 dav	Rush	Turn Around	msanjari@marathonoil.com	City, State ZIP	Address.	Company Name	Bill to: (if different)
	ner Moehr							G 1	Grab/ # of Comp Cont	6		Pa	С¶ Iram	eter	 'S		Cone	Pres.		narathonoil	OF		me	ant)
Date/Time	ing cmo							×		L	BT	ΈX	8021	в						com	Housto	990 To	Marath	Melodi
ime CX	ehring(	┣┣	<u>     </u>		_	_		×	TPI	H 801					+ MI	RO)	_	_			Houston, TX 77024	own and o	Ion Oil C	Melodie Sanjari
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ture)	ttC@ca																				Reporting Level II Level III ST/UST	п	PST 🕞	¥
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	s.com								Sampl	1H+Ascol	vcetate+N	Na.S.O. NaSO	NaHSO, NARIS		חכר חכ		None NO	10001	Presor	Other	RRP		Program UST/PST PRP rownfields RC	Page
Date/Time									Sample Comments	NaOH+Ascorbic Acid SAPC	Zn Acetate+NaOH Zn		R N	INAL		Me		- CODI VALIA CODES	vativo (	Ē				
Time									nents	SAPC	-				HNO3. HN	MeOH Me	DI Water H <sub>2</sub> O	conce	odee				perfund	of1

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Chain of C stody



Job Number: 880-34206-1

List Source: Eurofins Midland

SDG Number: Lea County, New Mexico

### Login Sample Receipt Checklist

Client: Carmona Resources

Login Number: 34206 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	



**Environment Testing** 

# ANALYTICAL REPORT

# PREPARED FOR

Attn: Clint Merritt Carmona Resources 310 W Wall St Ste 500 Midland, Texas 79701 Generated 10/12/2023 9:17:06 PM

# **JOB DESCRIPTION**

Nighthawk 3H SDG NUMBER Lea County, New Mexico

## **JOB NUMBER**

880-34205-1

ËOL

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

AMER

Generated 10/12/2023 9:17:06 PM

Authorized for release by Jessica Kramer, Project Manager Jessica.Kramer@et.eurofinsus.com (432)704-5440

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

Laboratory Job ID: 880-34205-1 SDG: Lea County, New Mexico

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2

### **Definitions/Glossary**

Client: Carmona Resources Project/Site: Nighthawk 3H

MDL

ML

MPN

MQL

NC ND

NEG

POS

PQL PRES

QC

RER

RL RPD

TEF

TEQ

TNTC

Job ID: 880-34205-1 SDG: Lea County, New Mexico

Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	
U	Indicates the analyte was analyzed for but not detected.	5
GC Semi VOA		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	8
Glossary		Q
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	4.0
DL	Detection Limit (DoD/DOE)	13
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	

Method Detection Limit

Minimum Level (Dioxin)

Most Probable Number

Not Calculated

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

Quality Control

Method Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

Not Detected at the reporting limit (or MDL or EDL if shown)

Job ID: 880-34205-1 SDG: Lea County, New Mexico

#### Job ID: 880-34205-1

Client: Carmona Resources Project/Site: Nighthawk 3H

#### Laboratory: Eurofins Midland

#### Narrative

Job Narrative 880-34205-1

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

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

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

#### Receipt

The sample was received on 10/9/2023 4:20 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

#### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: H-3 (0-6") (880-34205-1).

#### GC VOA

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-64332 and analytical batch 880-64432 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### GC Semi VOA

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

#### HPLC/IC

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

Matrix: Solid

5

Job ID: 880-34205-1 SDG: Lea County, New Mexico

Lab Sample ID: 880-34205-1

# Project/Site: Nighthawk 3H Client Sample ID: H-3 (0-6")

Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

Client: Carmona Resources

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/10/23 10:38	10/11/23 16:08	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/10/23 10:38	10/11/23 16:08	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/10/23 10:38	10/11/23 16:08	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/10/23 10:38	10/11/23 16:08	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/10/23 10:38	10/11/23 16:08	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/10/23 10:38	10/11/23 16:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				10/10/23 10:38	10/11/23 16:08	1
1,4-Difluorobenzene (Surr)	104		70 - 130				10/10/23 10:38	10/11/23 16:08	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	ulation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/11/23 16:08	1
Method: SW846 8015 NM - Diese	Range Organ	ics (DRO) (	3C)						
Method: SW846 8015 NM - Diese Analyte		ics (DRO) ( Qualifier	GC) RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte		Qualifier		MDL	Unit mg/Kg	<u>D</u>	Prepared	Analyzed	Dil Fac
Analyte Total TPH	Result <50.0	Qualifier U	<b>RL</b> 50.0	MDL		<u> </u>	Prepared		
Analyte Total TPH Method: SW846 8015B NM - Dies	Result <50.0	Qualifier U	<b>RL</b> 50.0			<u>D</u> 	Prepared		
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte	Result <50.0	Qualifier U nics (DRO) Qualifier	RL 50.0		mg/Kg			10/10/23 22:51	1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10	Result <50.0 sel Range Orga Result	Qualifier U nics (DRO) Qualifier	(GC)		mg/Kg Unit		Prepared	10/10/23 22:51	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <50.0 sel Range Orga Result	Qualifier U nics (DRO) Qualifier U	(GC)		mg/Kg Unit		Prepared	10/10/23 22:51	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result           <50.0	Qualifier U nics (DRO) Qualifier U U	RL           50.0           (GC)           RL           50.0           50.0		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30	Analyzed           10/10/23 22:51           10/10/23 22:51           10/10/23 22:51	1 Dil Fac 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <sol> <li>Sel Range Orga Result <sol> <li><sol> <li><sol></sol></li> </sol></li></sol></li></sol>	Qualifier U nics (DRO) Qualifier U U	(GC) <u>RL</u> 50.0		mg/Kg Unit mg/Kg		Prepared 10/10/23 09:30	10/10/23 22:51 Analyzed 10/10/23 22:51	1 Dil Fac 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result           <50.0	Qualifier U nics (DRO) Qualifier U U U	RL           50.0           (GC)           RL           50.0           50.0		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30	Analyzed           10/10/23 22:51           10/10/23 22:51           10/10/23 22:51	1 Dil Fac 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result           <50.0	Qualifier U nics (DRO) Qualifier U U U	RL           50.0           (GC)           RL           50.0           50.0           50.0           50.0		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30	Analyzed           10/10/23 22:51           10/10/23 22:51           10/10/23 22:51           10/10/23 22:51	1 Dil Fac 1 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result           <50.0	Qualifier U nics (DRO) Qualifier U U U	RL           50.0           (GC)           RL           50.0           50.0           50.0           50.0           Limits		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared	Analyzed           10/10/23 22:51           10/10/23 22:51           10/10/23 22:51           10/10/23 22:51           10/10/23 22:51           Analyzed	1 Dil Fac 1 1 1 Dil Fac
Analyte	Result           <50.0	Qualifier U nics (DRO) Qualifier U U U Qualifier	RL           50.0           (GC)           RL           50.0           50.0           50.0           50.0           50.0           70.130           70.130           70.130		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared 10/10/23 09:30	Analyzed           10/10/23 22:51           10/10/23 22:51           10/10/23 22:51           10/10/23 22:51           10/10/23 22:51           10/10/23 22:51	1 Dil Fac 1 1 1 1 1 <b>Dil Fac</b> 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result           <50.0	Qualifier U nics (DRO) Qualifier U U U Qualifier	RL           50.0           (GC)           RL           50.0           50.0           50.0           50.0           50.0           70.130           70.130           70.130	MDL	mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared 10/10/23 09:30	Analyzed           10/10/23 22:51           10/10/23 22:51           10/10/23 22:51           10/10/23 22:51           10/10/23 22:51           10/10/23 22:51	1 Dil Fac 1 1 1 1 1 <b>Dil Fac</b> 1

Eurofins Midland

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Released to Imaging: 3/18/2024 8:58:24 AM

Prep Type: Total/NA

Job ID: 880-34205-1 SDG: Lea County, New Mexico

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

		5554	05074	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
880-34196-A-1-B MS	Matrix Spike	102	102		
880-34196-A-1-C MSD	Matrix Spike Duplicate	112	102		
880-34205-1	H-3 (0-6")	119	104		- 7
LCS 880-64332/1-A	Lab Control Sample	111	104		
LCSD 880-64332/2-A	Lab Control Sample Dup	99	101		
MB 880-64332/5-A	Method Blank	108	122		
Surrogate Legend					i
BFB = 4-Bromofluoroben					
DFBZ = 1,4-Difluorobenz	ene (Surr)				
lethod: 8015B NM	- Diesel Range Organics	s (DRO) (GC	;)		
Aatrix: Solid				Prep Type: Total/NA	
-				Percent Surrogate Recovery (Acceptance Limits)	

Lab Sample ID 880-34205-1	Client Sample ID H-3 (0-6")	<b>(70-130)</b> 106	(70-130) 112	)	- 13
Surrogate Legend					
1CO = 1-Chlorooctar	ie				
OTPH = o-Terphenyl					

Eurofins Midland

Client: Carmona Resources

#### Job ID: 880-34205-1 SDG: Lea County, New Mexico

Project/Site: Nighthawk 3H

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

Lab Sample ID: MB 880-6433									Sherit Sc	ample ID: Me		
Matrix: Solid										Prep Typ		
Analysis Batch: 64432										Prep Ba	atcn:	6433
		B MB					_	_				
Analyte		t Qualifier	RL		MDL	Unit	D		repared	Analyzed		Dil Fa
Benzene	<0.0020		0.00200			mg/Kg			0/23 10:38	10/11/23 12:3		
Toluene	<0.0020		0.00200			mg/Kg			0/23 10:38	10/11/23 12:3		
Ethylbenzene	<0.0020	D U	0.00200			mg/Kg		10/1	0/23 10:38	10/11/23 12:3		
m-Xylene & p-Xylene	<0.0040	0 U	0.00400			mg/Kg			0/23 10:38	10/11/23 12:3		
o-Xylene	<0.0020	0 U	0.00200			mg/Kg		10/1	0/23 10:38	10/11/23 12:3	35	
Xylenes, Total	<0.0040	D U	0.00400	1		mg/Kg		10/1	0/23 10:38	10/11/23 12:3	35	
	М	3 <i>MB</i>										
Surrogate	%Recover	y Qualifier	Limits					Р	repared	Analyzed		Dil Fa
4-Bromofluorobenzene (Surr)	10	8	70 - 130					10/1	0/23 10:38	10/11/23 12:3	35	
1,4-Difluorobenzene (Surr)	12	2	70 - 130					10/1	0/23 10:38	10/11/23 12:	35	
Lab Sample ID: LCS 880-643	32/1-A							Client	Sample	ID: Lab Cont	rol S	ampl
Matrix: Solid										Prep Typ	e: To	tal/N
Analysis Batch: 64432										Prep Ba	atch:	6433
-			Spike	LCS	LCS					%Rec		
Analyte			Added	Result	Qua	lifier Unit		D	%Rec	Limits		
Benzene			0.100	0.1166		mg/k	g		117	70 - 130		
Toluene			0.100	0.09644		mg/ŀ	g		96	70 - 130		
Ethylbenzene			0.100	0.09544		mg/k	g		95	70 - 130		
m-Xylene & p-Xylene			0.200	0.1878		mg/k	ģ		94	70 - 130		
o-Xylene			0.100	0.09012		mg/k	-		90	70 - 130		
•	LCS LC											
Surrogate	%Recovery Qu	alifier	Limits									
4-Bromofluorobenzene (Surr)	111		70 - 130									
1,4-Difluorobenzene (Surr)	104		70 - 130									
Lab Sample ID: LCSD 880-64	332/2-A						Clien	nt Sam	ple ID: L	ab Control S		
Matrix: Solid										Prep Typ		
Analysis Batch: 64432			<b>o</b> "			_				Prep Ba	atch:	
			Spike	LCSD						%Rec		RPI
Analyte			Added	Result	Qua			<u>D</u>	%Rec		RPD	Lim
Benzene			0.100	0.1117		mg/k			112	70 - 130	4	3
Toluene			0.100	0.09300		mg/k			93	70 - 130	4	3
Ethylbenzene			0.100	0.09384		mg/k			94	70 - 130	2	3
m-Xylene & p-Xylene			0.200	0.1837		mg/ł			92	70 - 130	2	3
o-Xylene			0.100	0.08378		mg/ŀ	g		84	70 - 130	7	3
Surrogata	LCSD LC		Limito									
Surrogate	Qu	aimer	Limits									
4-Bromofluorobenzene (Surr)	99		70 - 130 70 - 120									
1,4-Difluorobenzene (Surr)	101		70 - 130									
Lab Sample ID: 880-34196-A-	-1-B MS								Client S	Sample ID: M		
Matrix: Solid										Ргер Тур		
Analysis Batch: 64432										Prep Ba	atch:	6433
	Sample Sa	mple	Spike	MS	MS					%Rec		

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Client: Carmona Resources

Project/Site: Nighthawk 3H

#### Job ID: 880-34205-1 SDG: Lea County, New Mexico

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

Matrix: Solid	-1-B MS							Chem	Sample ID: N		
									Ргер Тур		
Analysis Batch: 64432									Prep Ba	atch:	6433
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Ethylbenzene	<0.00201	U F1	0.101	0.06697	F1	mg/Kg		66	70 - 130		
m-Xylene & p-Xylene	<0.00402	U F1	0.202	0.1343	F1	mg/Kg		66	70 - 130		
o-Xylene	<0.00201	U F1	0.101	0.06838	F1	mg/Kg		67	70 - 130		
		MS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	102		70 - 130								
1,4-Difluorobenzene (Surr)	102		70 - 130								
ab Sample ID: 880-34196-A-	-1-C MSD					С	lient Sa	mple ID	: Matrix Spik		
Aatrix: Solid									Prep Typ		
Analysis Batch: 64432									Prep Ba	atch:	6433
	Sample	Sample	Spike	MSD	MSD				%Rec		RP
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Lim
Benzene	<0.00201	U	0.0996	0.09951		mg/Kg		100	70 - 130	10	3
oluene	<0.00201	U	0.0996	0.08277		mg/Kg		83	70 - 130	15	3
thylbenzene	<0.00201	U F1	0.0996	0.08667		mg/Kg		87	70 - 130	26	3
n-Xylene & p-Xylene	<0.00402	U F1	0.199	0.1785		mg/Kg		89	70 - 130	28	
-Xylene	<0.00201	U F1	0.0996	0.08121		mg/Kg		81	70 - 130	17	3
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	112		70 - 130								
1,4-Difluorobenzene (Surr)	102		70 - 130								
ethod: 300.0 - Anions, I	on Chromat	ography									
		ography						Client S	ample ID: Me	thod	Blan
_ab Sample ID: MB 880-6440		ography						Client S	ample ID: Me Prep Tv		
∟ab Sample ID: MB 880-6440 Matrix: Solid		ography						Client S	ample ID: Me Prep Ty		
Lab Sample ID: MB 880-6440 Matrix: Solid								Client S			
Lab Sample ID: MB 880-6440 Matrix: Solid Analysis Batch: 64500	05/1-A	MB MB		RL	MDL Unit				Prep Ty	pe: So	olubl
ethod: 300.0 - Anions, la Lab Sample ID: MB 880-6440 Matrix: Solid Analysis Batch: 64500 Analyte Chloride	)5/1-A			<b>RL</b> 5.00	MDL Unit			Client S		pe: So	
Lab Sample ID: MB 880-6440 Matrix: Solid Analysis Batch: 64500 Analyte Chloride	)5/1-A R	MB MB esult Qualifier					<u>D Pi</u>	repared	Prep Ty Analyzed 10/11/23 18:2	<b>pe: So</b>	olub Dil Fa
Lab Sample ID: MB 880-6440 Matrix: Solid Analysis Batch: 64500 Analyte Chloride Lab Sample ID: LCS 880-644	)5/1-A R	MB MB esult Qualifier					<u>D Pi</u>	repared	Prep Ty Analyzed	pe: So 28	olub Dil Fa
Lab Sample ID: MB 880-6440 Matrix: Solid Analysis Batch: 64500 Analyte Chloride Lab Sample ID: LCS 880-644 Matrix: Solid	)5/1-A R	MB MB esult Qualifier		5.00	mg/K		<u>D Pi</u>	repared	Analyzed 10/11/23 18: DID: Lab Conf Prep Ty	pe: So 28	olub Dil Fa
Lab Sample ID: MB 880-6440 Matrix: Solid Analysis Batch: 64500 Analyte Chloride Lab Sample ID: LCS 880-644 Matrix: Solid Analysis Batch: 64500	)5/1-A R	MB MB esult Qualifier	Spike	5.00 LCS	LCS	g	D Pr Client	repared Sample	Analyzed 10/11/23 18:2 ID: Lab Cont Prep Ty %Rec	pe: So 28	olub Dil Fa
Lab Sample ID: MB 880-6440 Matrix: Solid Analysis Batch: 64500 Analyte Chloride Lab Sample ID: LCS 880-644 Matrix: Solid	)5/1-A R	MB MB esult Qualifier	Spike Added 250	5.00 LCS	mg/K		<u>D Pi</u>	repared	Analyzed 10/11/23 18: DID: Lab Conf Prep Ty	pe: So 28	olub Dil Fa
Lab Sample ID: MB 880-6440 Matrix: Solid Analysis Batch: 64500 Analyte Chloride Lab Sample ID: LCS 880-644 Matrix: Solid Analysis Batch: 64500 Analyte Chloride	05/1-A 	MB MB esult Qualifier	Added	5.00 LCS Result	LCS	g Unit mg/Kg	D Pi Client	Sample Sample	Analyzed           10/11/23 18:3           ID: Lab Cont           Prep Ty           %Rec           Limits           90 - 110	pe: So 28 trol Sa pe: So	Dil Fi amp olub
ab Sample ID: MB 880-6440 Matrix: Solid Malysis Batch: 64500 malyte hloride Lab Sample ID: LCS 880-644 Matrix: Solid Malysis Batch: 64500 malyte	05/1-A 	MB MB esult Qualifier	Added	5.00 LCS Result	LCS	g Unit mg/Kg	D Pi Client	Sample Sample	Prep Ty Analyzed 10/11/23 18:2 ID: Lab Cont Prep Ty %Rec Limits	pe: So 28 trol Sa pe: So Sample	olub Dil F amp olub

	SI	ike LCSI	LCSD				%Rec		RPD
Analyte	Ad	ded Resul	t Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride		250 251.8	3	mg/Kg	_	101	90 - 110	0	20

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### **QC Sample Results**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34205-1 SDG: Lea County, New Mexico

### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-34204-	A-1-D MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep	Type: Se	oluble
Analysis Batch: 64500											
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
				5 4 9 9				404	00 440		
Chloride	290		248	540.9		mg/Kg		101	90 - 110		
Chloride Lab Sample ID: 880-34204- Matrix: Solid Analysis Batch: 64500			248	540.9		0 0	ient Sa		): Matrix Sp	oike Dup Type: So	
Lab Sample ID: 880-34204- Matrix: Solid		Sample	248 Spike		MSD	0 0	ient Sa		): Matrix Sp		
Lab Sample ID: 880-34204- Matrix: Solid	A-1-E MSD Sample	Sample Qualifier		MSD	MSD Qualifier	0 0	ient Si D		): Matrix Sp Prep		oluble

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### **QC** Association Summary

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

Matrix

Solid

Project/Site: Nighthawk 3H

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Prep Batch

Prep Batch

64332

64332

64332

64332

64332

64332

Prep Batch

#### Job ID: 880-34205-1 SDG: Lea County, New Mexico

Method

5035

5035

5035

5035

5035

5035

Method

8021B

8021B

8021B

8021B

8021B

8021B

Method

Total BTEX

Č	5	
g	9	
		2

Lab Sample ID 880-34205-1

#### GC Semi VOA

#### Analysis Batch: 64320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34205-1	H-3 (0-6")	Total/NA	Solid	8015B NM	64329
Prep Batch: 64329					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34205-1	H-3 (0-6")	Total/NA	Solid	8015NM Prep	
Analysis Batch: 644	68				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34205-1	H-3 (0-6")	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 64405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34205-1	H-3 (0-6")	Soluble	Solid	DI Leach	
MB 880-64405/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-34204-A-1-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-34204-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 64500

Lab Sample ID 880-34205-1	Client Sample ID H-3 (0-6")	Prep Type Soluble	Matrix Solid	Method 300.0	Prep Batch 64405
MB 880-64405/1-A	Method Blank	Soluble	Solid	300.0	64405
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	300.0	64405
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	64405
880-34204-A-1-D MS	Matrix Spike	Soluble	Solid	300.0	64405

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Client: Carmona Resources

**Client Sample ID** 

Lab Control Sample

Lab Control Sample Dup

Matrix Spike Duplicate

**Client Sample ID** 

Lab Control Sample

Lab Control Sample Dup

Matrix Spike Duplicate

**Client Sample ID** 

H-3 (0-6")

H-3 (0-6")

Method Blank

Matrix Spike

H-3 (0-6")

Method Blank

Matrix Spike

Prep Batch: 64332

MB 880-64332/5-A

LCS 880-64332/1-A

LCSD 880-64332/2-A

880-34196-A-1-B MS

Lab Sample ID

MB 880-64332/5-A

LCS 880-64332/1-A

LCSD 880-64332/2-A

880-34196-A-1-B MS

880-34196-A-1-C MSD

Analysis Batch: 64591

880-34205-1

880-34196-A-1-C MSD

Analysis Batch: 64432

Lab Sample ID

880-34205-1

**GC VOA** 

### **QC Association Summary**

Job ID: 880-34205-1
SDG: Lea County, New Mexico

### HPLC/IC (Continued)

#### Analysis Batch: 64500 (Continued)

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
880-34204-A-1-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	64405	

Eurofins Midland

Client: Carmona Resources Project/Site: Nighthawk 3H

#### Client Sample ID: H-3 (0-6") Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

Job ID: 880-34205-1 SDG: Lea County, New Mexico

# Lab Sample ID: 880-34205-1

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	64332	10/10/23 10:38	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64432	10/11/23 16:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64591	10/11/23 16:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			64468	10/10/23 22:51	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	64329	10/10/23 09:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64320	10/10/23 22:51	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	64405	10/10/23 15:31	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64500	10/11/23 20:25	СН	EET MID

#### Laboratory References:

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

Eurofins Midland

Released to Imaging: 3/18/2024 8:58:24 AM

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34205-1 SDG: Lea County, New Mexico

#### Laboratory: Eurofins Midland

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

Authority	Progra	am	Identification Number	Expiration Date
Texas	NELAI	P	T104704400-23-26	06-30-24
• •		it the laboratory is not certif	ied by the governing authority. This lis	t may include analytes
0	y does not offer certification.	Matrix	Analyte	
Analysis Method	y does not offer certification. Prep Method	Matrix	Analyte	
0		Matrix Solid Solid	Analyte Total TPH Total BTEX	

Eurofins Midland

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#### Received by OCD: 11/2/2023 1:36:42 PM

### **Method Summary**

Client: Carmona Resources Project/Site: Nighthawk 3H

Job ID: 880-34205-1 SDG: Lea County, New Mexico

lethod	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
otal 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
800.0	Anions, Ion Chromatography	EPA	EET MID
6035	Closed System Purge and Trap	SW846	EET MID
015NM Prep	Microextraction	SW846	EET MID
01 Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

### Sample Summary

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34205-1 SDG: Lea County, New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-34205-1	H-3 (0-6")	Solid	10/04/23 00:00	10/09/23 16:20

# Received by OCD: 11/2/2023 1:36:42 PM

															•	
Project Manager Clin	Clinton Merritt				Bill to (if different)		Melodie Saniari	Saniari					ž	rk Orde	raye	_ I OT
	Carmona Resources	Ses			Company Name		Manaha									
	310 W Wall St Ste 500	500			Address	1	990 Tow	990 Town and Country BI	990 Town and Country Blvd			State of Project:	irsi Lr	4 	State of Project:	C)pertund
City State ZIP Midl	Midland TX 79701				City State ZIP		Houston, TX 77024	TX 770;	24			Reporting Level II Level III DST/UST	9 II □Lev	∎ □	ST/UST RRP	
Phone				Email	msanjan@marathonoil com	athonoil co	m					Deliverables EDD		AD	ADaPT D Other	
Project Name	Nig	Nighthawk 3H		Tum	Turn Around					ANA		ANAI VSIS BEOLIEST			,	
Project Number		2090		マ Routine	Rush	Pres. Code								_		
Project Location	Lea Cou	Lea County New Mexico	exico	Due Date	5 dav					_				_		
Sampler's Name		CCM				<b>I</b> .										MeCH Me
PO#:			5		Ì	\$		+ WIF			<u></u>					HNO3. HN
SAMPLE RECEIPT	Temp Blank	Blank	Yes (No)	Wet Ice	(Yes) No	eter										NaCH Na
Received Intact:	(†) (†)		Thermometer ID		<u>⇒</u> r	ram	8021	e 300							H3PO4 HP	0
Cooler Custody Seals.	Yes No	Ð	Correction Factor		t.6	Pa									Na-S-D- NaSO	
Sample Custody Seals.	Yes No	R.	Temperature Reading	ading	1.1 1	11		5M ( Chl		<u> </u>					Zn Acetate+NaOH Zn	VaOH Zn
			Corrected Lemperature	Fature	<i>C.€</i>										NaOH+Ascor	NaOH+Ascorbic Acid SAPC
Sample Identification	ation	Date	Time	Soil	Water Comp	# of		18							Sampl	Sample Comments
H-3 (0-6")		10/4/2023		×	G	-	×	×								
	-						-	-			-					
								-								
														_		
														_		
								$\left  - \right $								
Comments Email resi	ults to Mike C	armona mo	armona@car	monaresource	Email results to Mike Carmona mcarmona@carmonaresources.com, Conner Moehring cmoehring@carmonaresou	Moehrin	g cmoe	hring@	carmona	resourc	es.com,	rces.com, Clint Merritt MerrittC@carmonaresources.com	ittC@car	monare	sources.com	
													(			
	Rel	Relinni lished hv	/Simpluro)													
X		//						N N				Received by (Signature)		V		Date/Time
and and	NW I	111	CRY				Vio,	20				(	Ver			

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Chain of Custr dy



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Job Number: 880-34205-1

List Source: Eurofins Midland

SDG Number: Lea County, New Mexico

### Login Sample Receipt Checklist

Client: Carmona Resources

Login Number: 34205 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	

Received by OCD: 11/2/2023 1:36:42 PM



**Environment Testing** 

# ANALYTICAL REPORT

# PREPARED FOR

Attn: Clint Merritt Carmona Resources 310 W Wall St Ste 500 Midland, Texas 79701 Generated 10/12/2023 9:17:06 PM

# JOB DESCRIPTION

Nighthawk 3H SDG NUMBER Lea County, New Mexico

## **JOB NUMBER**

880-34204-1

EOL

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

AMER

Generated 10/12/2023 9:17:06 PM

Authorized for release by Jessica Kramer, Project Manager Jessica.Kramer@et.eurofinsus.com (432)704-5440

Laboratory Job ID: 880-34204-1 SDG: Lea County, New Mexico

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2

Client: Carmona Resources Project/Site: Nighthawk 3H

Job ID: 880-34204-1 SDG: Lea County, New Mexico

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Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	
U	Indicates the analyte was analyzed for but not detected.	5
GC Semi VOA		
Qualifier	Qualifier Description	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	8
U	Indicates the analyte was analyzed for but not detected.	
Glossary		9
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)	12
Dil Fac	Dilution Factor	13
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
MPN	Most Probable Number	
MQL NC	Method Quantitation Limit Not Calculated	
ND		
NEG	Not Detected at the reporting limit (or MDL or EDL if shown) 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

Toxicity Equivalent Factor (Dioxin) TEF

TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

Job ID: 880-34204-1 SDG: Lea County, New Mexico

#### Job ID: 880-34204-1

Client: Carmona Resources Project/Site: Nighthawk 3H

#### Laboratory: Eurofins Midland

#### Narrative

Job Narrative 880-34204-1

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

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

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

#### Receipt

The sample was received on 10/9/2023 4:20 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

#### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: H-4 (0-6") (880-34204-1).

#### GC VOA

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-64332 and analytical batch 880-64432 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### GC Semi VOA

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: H-4 (0-6") (880-34204-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### HPLC/IC

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

Job ID: 880-34204-1 SDG: Lea County, New Mexico

Lab Sample ID: 880-34204-1

### Client Sample ID: H-4 (0-6") Date Collected: 10/04/23 00:00

Date Received: 10/09/23 16:20

Client: Carmona Resources

Project/Site: Nighthawk 3H

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/10/23 10:38	10/11/23 15:47	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/10/23 10:38	10/11/23 15:47	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/10/23 10:38	10/11/23 15:47	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/10/23 10:38	10/11/23 15:47	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/10/23 10:38	10/11/23 15:47	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/10/23 10:38	10/11/23 15:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				10/10/23 10:38	10/11/23 15:47	1
1,4-Difluorobenzene (Surr)	111		70 - 130				10/10/23 10:38	10/11/23 15:47	1
Method: TAL SOP Total BTEX -	Total BTEX Calo	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00398	U	0.00398		mg/Kg			10/11/23 15:47	1
					iiig/itg			10/11/23 13.47	ŗ
Method: SW846 8015 NM - Diese Analyte	el Range Organ Result	<mark>ics (DRO) (</mark> Qualifier	GC) RL	MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Diese	el Range Organ	<mark>ics (DRO) (</mark> Qualifier	GC)	MDL		<u> </u>	Prepared		·
Method: SW846 8015 NM - Diese Analyte Total TPH	el Range Organ Result <50.5	ics (DRO) ( Qualifier	GC) 	MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Die Analyte	el Range Organ	ics (DRO) ( Qualifier	GC) 		Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics	el Range Organ	ics (DRO) ( Qualifier U nics (DRO) Qualifier	GC) <u>RL</u> 50.5		Unit mg/Kg			Analyzed 10/10/23 22:28	Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	el Range Organ Result <50.5 sel Range Orga Result	ics (DRO) ( Qualifier U nics (DRO) Qualifier U	GC) 		Unit mg/Kg Unit		Prepared	Analyzed 10/10/23 22:28 Analyzed	Dil Fac 1 Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	el Range Organ Result <pre>&lt;50.5</pre> <pre>sel Range Orga</pre> <pre></pre>	ics (DRO) (( Qualifier U nics (DRO) Qualifier U	GC) <u>RL</u> 50.5 (GC) <u>RL</u> 50.5		Unit mg/Kg Unit mg/Kg		Prepared 10/10/23 09:30	Analyzed 10/10/23 22:28 Analyzed 10/10/23 22:28	Dil Fac 1 Dil Fac 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	el Range Organ Result <50.5 sel Range Orga Result <50.5 <50.5	ics (DRO) (( Qualifier U mics (DRO) Qualifier U U U	GC) <u>RL</u> 50.5 (GC) <u>RL</u> 50.5 50.5		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30	Analyzed 10/10/23 22:28 Analyzed 10/10/23 22:28 10/10/23 22:28	Dil Fac 1 Dil Fac 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	el Range Organ Result <50.5 sel Range Orga Result <50.5 <50.5	ics (DRO) (( Qualifier U nics (DRO) Qualifier U U U	GC) <u>RL</u> 50.5 (GC) <u>RL</u> 50.5 50.5 50.5		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30	Analyzed 10/10/23 22:28 Analyzed 10/10/23 22:28 10/10/23 22:28 10/10/23 22:28	Dil Fac 1 Dil Fac 1 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	el Range Organ Result <50.5 sel Range Orga Result <50.5 <50.5 <50.5 <50.5 <50.5 <50.5 <160	ics (DRO) ( Qualifier U nics (DRO) Qualifier U U Qualifier	GC) RL 50.5 (GC) RL 50.5 50.5 50.5 Limits		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared	Analyzed 10/10/23 22:28 Analyzed 10/10/23 22:28 10/10/23 22:28 10/10/23 22:28 Analyzed	Dil Fac 1 Dil Fac 1 1 1 1 Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	el Range Organ Result <pre>&lt;50.5</pre> <pre>sel Range Orga </pre> <pre>Result </pre> <pre>&lt;50.5</pre> <pre>&lt;50.5</pre> <pre>&lt;50.5</pre> <pre>&lt;50.5</pre> <pre>&lt;50.5</pre> <pre></pre> <pre><pre><pre></pre> <pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre>	ics (DRO) (( Qualifier U nics (DRO) Qualifier U U U U Qualifier S1+ S1+	GC) <u>RL</u> 50.5 (GC) <u>RL</u> 50.5 50.5 50.5 <u>Limits</u> 70 - 130 70 - 130		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared 10/10/23 09:30	Analyzed 10/10/23 22:28 Analyzed 10/10/23 22:28 10/10/23 22:28 10/10/23 22:28 Analyzed 10/10/23 22:28	Dil Fac           1           Dil Fac           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	el Range Organ Result <50.5 sel Range Orga Result <60.5 <50.5 <50.5 <50.5 <50.5 <50.5 <160 160 167 a Chromatograp	ics (DRO) (( Qualifier U nics (DRO) Qualifier U U U U Qualifier S1+ S1+	GC) <u>RL</u> 50.5 (GC) <u>RL</u> 50.5 50.5 50.5 <u>Limits</u> 70 - 130 70 - 130	MDL	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared 10/10/23 09:30	Analyzed 10/10/23 22:28 Analyzed 10/10/23 22:28 10/10/23 22:28 10/10/23 22:28 Analyzed 10/10/23 22:28	Dil Fac           1           Dil Fac           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1

Eurofins Midland

Matrix: Solid

Job ID: 880-34204-1 SDG: Lea County, New Mexico

Prep Type: Total/NA

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

lu	

				Percent Surrogate Recovery (Acceptance Limits)	
Lab Osmala ID	Olivert Osmala ID	BFB1	DFBZ1		5
Lab Sample ID 880-34196-A-1-B MS	Client Sample ID     Matrix Spike	(70-130) 	(70-130) 102	·	
880-34196-A-1-C MSD	Matrix Spike Duplicate	102	102		6
880-34204-1	H-4 (0-6")	111	111		U
LCS 880-64332/1-A	Lab Control Sample	111	104		
LCSD 880-64332/2-A	Lab Control Sample Dup	99	101		
MB 880-64332/5-A	Method Blank	108	122		8
Surrogate Legend BFB = 4-Bromofluorober					o
DFBZ = 1,4-Difluorobenz					
	Discol Damara Ormania		•		
	- Diesel Range Organics	; (DRO) (GC	)	Prep Type: Total/NA	
	- Diesel Range Organics		-	Prep Type: Total/NA Percent Surrogate Recovery (Acceptance Limits)	
Aethod: 8015B NM Aatrix: Solid	- Diesel Range Organics	5 (DRO) (GC 1CO1 (70-130)	) OTPH1 (70-130)		1 1 12

Surrogate Legend 1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Eurofins Midland

Client: Carmona Resources

#### Job ID: 880-34204-1 SDG: Lea County, New Mexico

Project/Site: Nighthawk 3H

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

Lab Sample ID: MB 880-64332	:/ <b>5-A</b>								Client Sa	imple ID: Me		
Matrix: Solid										Ргер Тур	e: To	tal/N/
Analysis Batch: 64432										Prep B	atch:	6433
	N	MB MB										
Analyte	Res	ult Qualifier	RL		MDL	Unit	D	P	repared	Analyzed		Dil Fa
Benzene	<0.002	00 U	0.00200			mg/Kg		10/1	0/23 10:38	10/11/23 12:	35	
Toluene	<0.002	00 U	0.00200			mg/Kg		10/1	0/23 10:38	10/11/23 12:	35	
Ethylbenzene	<0.002	00 U	0.00200			mg/Kg		10/1	0/23 10:38	10/11/23 12:	35	
m-Xylene & p-Xylene	<0.004	00 U	0.00400			mg/Kg		10/1	0/23 10:38	10/11/23 12:	35	
o-Xylene	<0.002	00 U	0.00200			mg/Kg		10/1	0/23 10:38	10/11/23 12:	35	
Xylenes, Total	<0.004	00 U	0.00400			mg/Kg		10/1	0/23 10:38	10/11/23 12:	35	
	I	MB MB										
Surrogate	%Recove	ery Qualifier	Limits					Р	repared	Analyzed		Dil Fa
4-Bromofluorobenzene (Surr)	1	08	70 - 130					10/1	0/23 10:38	10/11/23 12:	35	
1,4-Difluorobenzene (Surr)	1	22	70 - 130					10/1	0/23 10:38	10/11/23 12:	35	
Lab Sample ID: LCS 880-6433	2/1-A						(	Client	Sample	ID: Lab Con	trol S	ampl
Matrix: Solid										Prep Typ	e: To	tal/N
Analysis Batch: 64432										Prep B	atch:	6433
-			Spike	LCS	LCS					%Rec		
Analyte			Added	Result	Qual	ifier Unit		D	%Rec	Limits		
Benzene			0.100	0.1166		mg/	٢g		117	70 - 130		
Toluene			0.100	0.09644		mg/	٢g		96	70 - 130		
Ethylbenzene			0.100	0.09544		mg/	٢g		95	70 - 130		
m-Xylene & p-Xylene			0.200	0.1878		mg/	٢g		94	70 - 130		
o-Xylene			0.100	0.09012		mg/	٢g		90	70 - 130		
	LCS L											
Surrogate		Qualifier	Limits									
4-Bromofluorobenzene (Surr)	111		70 - 130									
1,4-Difluorobenzene (Surr)	104		70 - 130									
Lab Sample ID: LCSD 880-643	32/2-A						Clien	t Sam	ple ID: L	ab Control S		
Matrix: Solid										Prep Typ		
Analysis Batch: 64432			<b>.</b>			_				Prep B	atch:	
• • •			Spike	LCSD				_		%Rec		RP
Analyte			Added	Result	Qual			_ <u>D</u>	%Rec	Limits	RPD	Lim
Benzene			0.100	0.1117		mg/			112	70 - 130	4	3
			0.100	0.09300		mg/	-		93	70 - 130	4	3
Toluene			0.400	0.00004					94	70 - 130	2	3
Ethylbenzene			0.100	0.09384		mg/						
Ethylbenzene m-Xylene & p-Xylene			0.200	0.1837		mg/	<g< td=""><td></td><td>92</td><td>70 - 130</td><td>2</td><td>3</td></g<>		92	70 - 130	2	3
Ethylbenzene							<g< td=""><td></td><td></td><td></td><td>2 7</td><td></td></g<>				2 7	
Ethylbenzene m-Xylene & p-Xylene o-Xylene	LCSD L %Recovery (		0.200 0.100	0.1837		mg/	<g< td=""><td></td><td>92</td><td>70 - 130</td><td></td><td></td></g<>		92	70 - 130		
Ethylbenzene m-Xylene & p-Xylene o-Xylene <b>Surrogate</b>	%Recovery		0.200 0.100 <i>Limits</i>	0.1837		mg/	<g< td=""><td></td><td>92</td><td>70 - 130</td><td></td><td></td></g<>		92	70 - 130		
Ethylbenzene m-Xylene & p-Xylene o-Xylene			0.200 0.100	0.1837		mg/	<g< td=""><td></td><td>92</td><td>70 - 130</td><td></td><td></td></g<>		92	70 - 130		
Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	%Recovery 0 99 101		0.200 0.100 <u>Limits</u> 70 - 130	0.1837		mg/	<g< td=""><td></td><td>92 84</td><td>70 - 130 70 - 130</td><td>7</td><td>3</td></g<>		92 84	70 - 130 70 - 130	7	3
Ethylbenzene m-Xylene & p-Xylene o-Xylene <i>Surrogate</i> <i>4-Bromofiuorobenzene (Surr)</i> <i>1,4-Difluorobenzene (Surr)</i> Lab Sample ID: 880-34196-A-*	%Recovery 0 99 101		0.200 0.100 <u>Limits</u> 70 - 130	0.1837		mg/	<g< td=""><td></td><td>92 84</td><td>70 - 130 70 - 130 Sample ID: N</td><td>7 Iatrix</td><td>3 Spik</td></g<>		92 84	70 - 130 70 - 130 Sample ID: N	7 Iatrix	3 Spik
Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	%Recovery 0 99 101		0.200 0.100 <u>Limits</u> 70 - 130	0.1837		mg/	<g< td=""><td></td><td>92 84</td><td>70 - 130 70 - 130</td><td>7 Natrix De: To</td><td>3 Spik tal/N</td></g<>		92 84	70 - 130 70 - 130	7 Natrix De: To	3 Spik tal/N

	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	<0.00201	U	0.101	0.09018		mg/Kg		89	70 - 130
Toluene	<0.00201	U	0.101	0.07128		mg/Kg		71	70 - 130

Eurofins Midland

Client: Carmona Resources

Project/Site: Nighthawk 3H

#### Job ID: 880-34204-1 SDG: Lea County, New Mexico

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

Lab Sample ID: 880-34196-A Matrix: Solid	А-1-В MS							Client	Sample ID: Prep Ty	ype: To	tal/N/
Analysis Batch: 64432										Batch:	6433
	-	Sample	Spike		MS				%Rec		
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Ethylbenzene	<0.00201	U F1	0.101	0.06697	F1	mg/Kg		66	70 - 130		
m-Xylene & p-Xylene	<0.00402	U F1	0.202	0.1343	F1	mg/Kg		66	70 - 130		
o-Xylene	<0.00201	U F1	0.101	0.06838	F1	mg/Kg		67	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits	-							
4-Bromofluorobenzene (Surr)	102		70 - 130								
1,4-Difluorobenzene (Surr)	102		70 - 130								
Lab Sample ID: 880-34196-/	A-1-C MSD					CI	ient Sa	ample IC	): Matrix Sp		
Matrix: Solid									Prep T		
Analysis Batch: 64432										Batch:	
	•	Sample	Spike	MSD	MSD				%Rec		RPI
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Lim
Benzene	<0.00201	U	0.0996	0.09951		mg/Kg		100	70 - 130	10	3
Toluene	<0.00201	U	0.0996	0.08277		mg/Kg		83	70 - 130	15	3
Ethylbenzene	<0.00201	U F1	0.0996	0.08667		mg/Kg		87	70 - 130	26	3
m-Xylene & p-Xylene	< 0.00402	U F1	0.199	0.1785		mg/Kg		89	70 - 130	28	3
p-Xylene	<0.00201	U F1	0.0996	0.08121		mg/Kg		81	70 - 130	17	3
0		MSD	1								
Surrogate	%Recovery	Qualifier	Limits	-							
4-Bromofluorobenzene (Surr)	112		70 - 130								
1,4-Difluorobenzene (Surr)	102		70 - 130								
lethod: 300.0 - Anions,	Ion Chromat	ography									
Lab Sample ID: MB 880-644	05/1-A							Client S	ample ID: N		
Matrix: Solid									Prep 1	Type: S	olubl
Analysis Batch: 64500											
		MB MB									
Analyte		esult Qualifier		RL	MDL Unit	<u>C</u>	) P	repared	Analyze		Dil Fa
Chloride	•	<5.00 U		5.00	mg/K	g			10/11/23 1	8:28	
Lab Sample ID: LCS 880-64	405/2-A						Client	Sample	ID: Lab Co		
Matrix: Solid									Prep 1	Гуре: S	olubl
Analysis Batch: 64500											
			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			250	251.4		mg/Kg		101	90 - 110		
Lab Sample ID: LCSD 880-6 Matrix: Solid	64405/3-A					Clier	nt Sam	ple ID:	Lab Control Prep 1	Sampl Type: S	
Analysis Batch: 64500										7.00.0	
			Spike	LCSD	LCSD				%Rec		RP
A				D- "	o		-	a/ <b>B</b>	1		

Eurofins Midland

Released to Imaging: 3/18/2024 8:58:24 AM

### **QC Sample Results**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34204-1 SDG: Lea County, New Mexico

### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-34204-1 MS Matrix: Solid								Clie	ent Sample		· ·
Analysis Batch: 64500									Fieb	Type: S	oluble
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	290		248	540.9		mg/Kg		101	90 - 110		
Lab Sample ID: 880-34204-1 MSD								Clie	ent Sample	ID: H-4	(0-6")
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 64500											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	290		248	541.5		mg/Kg		101	90 - 110	0	20

Eurofins Midland
**Client Sample ID** 

Lab Control Sample

Lab Control Sample Dup

Matrix Spike Duplicate

**Client Sample ID** 

Lab Control Sample

Lab Control Sample Dup

Matrix Spike Duplicate

**Client Sample ID** 

H-4 (0-6")

H-4 (0-6")

Method Blank

Matrix Spike

H-4 (0-6")

Method Blank

Matrix Spike

## **QC** Association Summary

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

Matrix

Solid

Client: Carmona Resources Project/Site: Nighthawk 3H

**GC VOA** 

Prep Batch: 64332

MB 880-64332/5-A

LCS 880-64332/1-A

LCSD 880-64332/2-A

880-34196-A-1-B MS

Lab Sample ID

MB 880-64332/5-A

LCS 880-64332/1-A

LCSD 880-64332/2-A

880-34196-A-1-B MS

880-34196-A-1-C MSD

Analysis Batch: 64590

880-34204-1

880-34196-A-1-C MSD

Analysis Batch: 64432

Lab Sample ID

880-34204-1

Job ID: 880-34204-1 SDG: Lea County, New Mexico

Method

5035

5035

5035

5035

5035

5035

Method

8021B

8021B

8021B

8021B

8021B

8021B

Method

Total BTEX

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Prep Batch

Prep Batch

64332

64332

64332

64332

64332

64332

Prep Batch

GC Semi VOA

Lab Sample ID

880-34204-1

#### Analysis Batch: 64320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch		
880-34204-1	H-4 (0-6")	Total/NA	Solid	8015B NM	64329		
Prep Batch: 64329							
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch		
880-34204-1	H-4 (0-6")	Total/NA	Solid	8015NM Prep			

#### HPLC/IC

#### Leach Batch: 64405

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-34204-1	H-4 (0-6")	Soluble	Solid	DI Leach	
MB 880-64405/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-34204-1 MS	H-4 (0-6")	Soluble	Solid	DI Leach	
880-34204-1 MSD	H-4 (0-6")	Soluble	Solid	DI Leach	

#### Analysis Batch: 64500

Lab Sample ID 880-34204-1	Client Sample ID H-4 (0-6")	Prep Type Soluble	Matrix Solid	Method 300.0	Prep Batch 64405
MB 880-64405/1-A	Method Blank	Soluble	Solid	300.0	64405
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	300.0	64405
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	64405
880-34204-1 MS	H-4 (0-6")	Soluble	Solid	300.0	64405

**Eurofins Midland** 

## **QC Association Summary**

	5
Client: Carmona Resources	Job ID: 880-34204-1
Project/Site: Nighthawk 3H	SDG: Lea County, New Mexico

## HPLC/IC (Continued)

### Analysis Batch: 64500 (Continued)

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
880-34204-1 MSD	H-4 (0-6")	Soluble	Solid	300.0	64405	

Eurofins Midland

Client: Carmona Resources Project/Site: Nighthawk 3H

#### Client Sample ID: H-4 (0-6") Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

Job ID: 880-34204-1 SDG: Lea County, New Mexico

## Lab Sample ID: 880-34204-1

Matrix: Solid

-	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	64332	10/10/23 10:38	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64432	10/11/23 15:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64590	10/11/23 15:47	SM	EET MID
Total/NA	Analysis	8015 NM		1			64467	10/10/23 22:28	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	64329	10/10/23 09:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64320	10/10/23 22:28	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	64405	10/10/23 15:31	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64500	10/11/23 20:07	СН	EET MID

#### Laboratory References:

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

Eurofins Midland

Released to Imaging: 3/18/2024 8:58:24 AM

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34204-1 SDG: Lea County, New Mexico

#### Laboratory: Eurofins Midland

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

Authority	Program	n	Identification Number	Expiration Date		
exas	NELAP T10		T104704400-23-26	06-30-24		
The following analyter	are included in this report, but	the laboratory is not certif	ied by the governing authority. This lis	t may include analytes		
for which the agency	loes not offer certification.	,	, , , , ,			
for which the agency Analysis Method		Matrix	Analyte			
for which the agency	loes not offer certification.	,	, , , , ,			

Eurofins Midland

**Page 184 of 383** 

#### Received by OCD: 11/2/2023 1:36:42 PM

## **Method Summary**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34204-1 SDG: Lea County, New Mexico

lethod	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
otal 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
800.0	Anions, Ion Chromatography	EPA	EET MID
6035	Closed System Purge and Trap	SW846	EET MID
015NM Prep	Microextraction	SW846	EET MID
01 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

**Eurofins Midland** 

## Sample Summary

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34204-1 SDG: Lea County, New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-34204-1	H-4 (0-6")	Solid	10/04/23 00:00	10/09/23 16:20

Ane	vornments' Email results to Mike Carmona mcarmona@carmonaresources.com, Conner Moehring@carmonaresources.com, Clint MerrittC@carmonaresources.com						H-4 (0-6")	Sample Identification	Total Containers.	Sample Custody Seals	Cooler Custody Seals	Received Intact:	SAMPLE RECEIPT	PO#	Sampler's Name.	Project Location	Project Number	Project Name	Phone	City State ZIP	Address.	Company Name.	Project Manager
The second second							-6")	tification		. Yes	S. Yes	(es				Lea C				Midland TX 79701	310 W Wall St Ste 500	Carmona Resources	Clinton Merntt
telinquished t	e Carmona m						10/4/2023	Date		No KIA	No may	s No	Temp Blank		CCM	Lea County, New Mexico	2090	Nighthawk 3H		701	Ste 500	urces	
Relinquished by (Signature)	icarmona@ca							Time	Corrected Temperature	Temperature Reading	Correction Factor		Yes (No	) N		lexico							
	rmonaresourc						×	Soil	erature	ading	У <b>Г</b>		Wet Ice	c		Due Date	マ Routine	Tur	Email				
	es.com, Conn						G	Water Comp	1-2.8	2.4	17.7C		Yes No	)		5 day	Rush	Turn Around	msanjari@marathonoil.com	City State ZIP	Address	Company Name	Bill to (if different)
01	er Moehri					 	1	b/ #of p Cont			Pa	iran	ieter	s			Pres.	:	arathonoil.c			Ø	
Date/Time	ng cmo						×			81	ΈX	8021	в						:om	Housto	990 To	Marath	Melodie
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	es.con							Sam	OH+Asc	Zn Acetate+NaOH Zn	Na-S-O- NaSO-	NaHSO, NABIS	H_PO, HP	H-S0. H-				Prese				lds RC	Work Order Comments
Da	~							Sample Comments	orbic Ac	+NaOH	-OSE	ARIS		2 :		<b>.</b> .		Prvative	Other:			ې د	
Date/Time								nments	NaOH+Ascorbic Acid SAPC	Zn				NILL EDALL				Preservative Codes		Level IV		perfund	9
																л <sub>2</sub> С	5						



5 6

12 13

Chain of Custory



₩o

Job Number: 880-34204-1

List Source: Eurofins Midland

SDG Number: Lea County, New Mexico

## Login Sample Receipt Checklist

Client: Carmona Resources

Login Number: 34204 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	



**Environment Testing** 

# ANALYTICAL REPORT

## PREPARED FOR

Attn: Clint Merritt Carmona Resources 310 W Wall St Ste 500 Midland, Texas 79701 Generated 10/12/2023 9:17:06 PM

## JOB DESCRIPTION

Nighthawk 3H SDG NUMBER Lea County, New Mexico

## **JOB NUMBER**

880-34203-1

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

AMER

Generated 10/12/2023 9:17:06 PM

Authorized for release by Jessica Kramer, Project Manager Jessica.Kramer@et.eurofinsus.com (432)704-5440

Laboratory Job ID: 880-34203-1 SDG: Lea County, New Mexico

## **Table of Contents**

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2

Client: Carmona Resources Project/Site: Nighthawk 3H

Job ID: 880-34203-1 SDG: Lea County, New Mexico

Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	
U	Indicates the analyte was analyzed for but not detected.	5
GC Semi VOA		
Qualifier	Qualifier Description	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	8
U	Indicates the analyte was analyzed for but not detected.	
Glossary		9
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)	12
Dil Fac	Dilution Factor	13
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ		
MCL	EPA recommended "Maximum Contaminant Level"	
MDA MDC	Minimum Detectable Activity (Radiochemistry)	
MDL	Minimum Detectable Concentration (Radiochemistry) 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)	

Reporting Limit or Requested Limit (Radiochemistry) RL

Relative Percent Difference, a measure of the relative difference between two points RPD

- TEF Toxicity Equivalent Factor (Dioxin)
- TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count Page 192 of 383

4

5

Job ID: 880-34203-1 SDG: Lea County, New Mexico

### Job ID: 880-34203-1

Client: Carmona Resources Project/Site: Nighthawk 3H

### Laboratory: Eurofins Midland

#### Narrative

Job Narrative 880-34203-1

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

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

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

#### Receipt

The sample was received on 10/9/2023 4:20 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

#### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: H-5 (0-6") (880-34203-1).

#### GC VOA

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-64332 and analytical batch 880-64432 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### GC Semi VOA

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: H-5 (0-6") (880-34203-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### HPLC/IC

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

Job ID: 880-34203-1 SDG: Lea County, New Mexico

## Client Sample ID: H-5 (0-6") Date Collected: 10/04/23 00:00

Date Received: 10/09/23 16:20

Client: Carmona Resources

Project/Site: Nighthawk 3H

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/10/23 10:38	10/11/23 15:27	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/10/23 10:38	10/11/23 15:27	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/10/23 10:38	10/11/23 15:27	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		10/10/23 10:38	10/11/23 15:27	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/10/23 10:38	10/11/23 15:27	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		10/10/23 10:38	10/11/23 15:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				10/10/23 10:38	10/11/23 15:27	1
1,4-Difluorobenzene (Surr)	105		70 - 130				10/10/23 10:38	10/11/23 15:27	1
Method: TAL SOP Total BTEX - 1	Total BTEX Calo	ulation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00401	U	0.00401		mg/Kg			10/11/23 15:27	1
Analyte	Result	Qualifier		MDL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte Total TPH	Result <50.5	Qualifier U	<b>RL</b> 50.5	MDL	Unit mg/Kg	<u>D</u>	Prepared	Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies	Result <50.5	Qualifier	RL 50.5		mg/Kg			10/10/23 22:06	1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte	Result <50.5 sel Range Orga Result	Qualifier U nics (DRO) Qualifier	(GC)		mg/Kg Unit	D	Prepared	10/10/23 22:06	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics	Result <50.5	Qualifier U nics (DRO) Qualifier	RL 50.5		mg/Kg			10/10/23 22:06	1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <50.5 sel Range Orga Result	Qualifier U nics (DRO) Qualifier U	(GC)		mg/Kg Unit		Prepared	10/10/23 22:06	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.5 sel Range Orga Result <50.5	Qualifier U nics (DRO) Qualifier U U	(GC) <u>RL</u> 50.5		mg/Kg Unit mg/Kg		Prepared 10/10/23 09:30	10/10/23 22:06 Analyzed 10/10/23 22:06	1 Dil Fac 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result           <50.5	Qualifier U nics (DRO) Qualifier U U	RL 50.5 (GC) RL 50.5 50.5		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30	Analyzed           10/10/23 22:06           10/10/23 22:06           10/10/23 22:06	1 Dil Fac 1 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result           <50.5	Qualifier U nics (DRO) Qualifier U U U	RL       50.5       (GC)       RL       50.5       50.5       50.5		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30	Analyzed           10/10/23 22:06           10/10/23 22:06           10/10/23 22:06           10/10/23 22:06	1 Dil Fac 1 1 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result           <50.5	Qualifier U nics (DRO) Qualifier U U Qualifier	RL           50.5           (GC)           RL           50.5           50.5           50.5           Limits		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared	Analyzed           10/10/23 22:06           10/10/23 22:06           10/10/23 22:06           10/10/23 22:06           Analyzed	1 Dil Fac 1 1 1 Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: EPA 300.0 - Anions, Ion	Result           <50.5	Qualifier U nics (DRO) Qualifier U U U Qualifier S1+ S1+	RL           50.5           (GC)           RL           50.5           50.5           50.5           50.5           70.130           70.130           70.130		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared 10/10/23 09:30	Analyzed           10/10/23 22:06           Analyzed           10/10/23 22:06           10/10/23 22:06           Analyzed           10/10/23 22:06	1 Dil Fac 1 1 1 1 1 <i>Dil Fac</i> 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result           <50.5	Qualifier U nics (DRO) Qualifier U U U Qualifier S1+ S1+	RL           50.5           (GC)           RL           50.5           50.5           50.5           50.5           70.130           70.130           70.130	MDL	mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared 10/10/23 09:30	Analyzed           10/10/23 22:06           Analyzed           10/10/23 22:06           10/10/23 22:06           Analyzed           10/10/23 22:06	1 Dil Fac 1 1 1 1 1 <i>Dil Fac</i> 1

Eurofins Midland

Lab Sample ID: 880-34203-1 Matrix: Solid 5 Client: Carmona Resources Project/Site: Nighthawk 3H

Job ID: 880-34203-1 SDG: Lea County, New Mexico

Prep Type: Total/NA

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

			Percent Surrogate Recovery (Acceptance Limits)
	BFB1	DFBZ1	
lient Sample ID	(70-130)	(70-130)	
latrix Spike	102	102	
latrix Spike Duplicate	112	102	
-5 (0-6")	106	105	
ab Control Sample	111	104	
ab Control Sample Dup	99	101	
lethod Blank	108	122	
Surr)			
urr)			
sel Range Organics	; (DRO) (GC	)	
	() (	,	Prep Type: Total/NA
			Percent Surrogate Recovery (Acceptance Limits)
	Client Sample ID Matrix Spike Matrix Spike Duplicate Matrix Spike Duplicate Matrix Spike Duplicate ab Control Sample Dup Mathod Blank Surr) Matrix Surr)	Client Sample ID     (70-130)       Matrix Spike     102       Matrix Spike Duplicate     112       I-5 (0-6")     106       ab Control Sample     111       ab Control Sample Dup     99       Method Blank     108	Client Sample ID         (70-130)         (70-130)           Matrix Spike         102         102           Matrix Spike Duplicate         112         102           H-5 (0-6")         106         105           ab Control Sample         111         104           ab Control Sample Dup         99         101           Method Blank         108         122

			Fercent Surrogate Recovery (Acceptance Limits)	
	1CO1	OTPH1		
Client Sample ID	(70-130)	(70-130)		
H-5 (0-6")	149 S1+	157 S1+		13
e				
	H-5 (0-6")	Client Sample ID         (70-130)           H-5 (0-6")         149 S1+	Client Sample ID         (70-130)         (70-130)           H-5 (0-6")         149 S1+         157 S1+	Client Sample ID         (70-130)         (70-130)           H-5 (0-6")         149 S1+         157 S1+

Client: Carmona Resources

#### Job ID: 880-34203-1 SDG: Lea County, New Mexico

Project/Site: Nighthawk 3H

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

Lab Sample ID: MB 880-64332/5-A											<b>Client Sa</b>	mple ID: Meth	od Blan
Matrix: Solid												Prep Type	: Total/N
Analysis Batch: 64432												Prep Bat	ch: 6433
		MB MB	:										
Analyte	R	esult Qu	alifier	R	L	MDL	Unit		D	Р	repared	Analyzed	Dil Fa
Benzene	<0.0	0200 U		0.0020	0		mg/K	g	_	10/1	0/23 10:38	10/11/23 12:35	
Toluene	<0.0	0200 U		0.0020	0		mg/K	g		10/1	0/23 10:38	10/11/23 12:35	
Ethylbenzene	<0.0	0200 U		0.0020	0		mg/K	g		10/1	0/23 10:38	10/11/23 12:35	
m-Xylene & p-Xylene	<0.0	0400 U		0.0040	0		mg/K	g		10/1	0/23 10:38	10/11/23 12:35	
o-Xylene	<0.0	0200 U		0.0020	0		mg/K	g		10/1	0/23 10:38	10/11/23 12:35	
Xylenes, Total	<0.0	0400 U		0.0040	0		mg/K	g		10/1	0/23 10:38	10/11/23 12:35	
		мв мв	3										
Surrogate	%Reco	very Qu	alifier	Limits						P	repared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)		108		70 - 130						10/1	0/23 10:38	10/11/23 12:35	
1,4-Difluorobenzene (Surr)		122		70 - 130						10/1	0/23 10:38	10/11/23 12:35	
- Lab Sample ID: LCS 880-64332/1-/									С	lient	Sample	D: Lab Contro	ol Samol
Matrix: Solid	-											Prep Type	
Analysis Batch: 64432												Prep Bat	
·····, ··· · ···-				Spike	LCS	LCS						%Rec	
Analyte				Added	Result	Qual	lifier	Unit		D	%Rec	Limits	
Benzene	<u> </u>			0.100	0.1166			mg/Kg			117	70 - 130	
Toluene				0.100	0.09644			mg/Kg			96	70 - 130	
Ethylbenzene				0.100	0.09544			mg/Kg			95	70 - 130	
m-Xylene & p-Xylene				0.200	0.1878			mg/Kg			94	70 - 130	
o-Xylene				0.100	0.09012			mg/Kg			90	70 - 130	
	LCS	LCS											
Surrogate %	Recovery	Qualifier		Limits									
4-Bromofluorobenzene (Surr)	111			70 - 130									
1.4-Difluorobenzene (Surr)	104			70 - 130									

### Lab Sample ID: LCSD 880-64332/2-A

## Matrix: Solid

Analysis Batch: 64432								Batch:	64332
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1117		mg/Kg		112	70 - 130	4	35
Toluene	0.100	0.09300		mg/Kg		93	70 - 130	4	35
Ethylbenzene	0.100	0.09384		mg/Kg		94	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1837		mg/Kg		92	70 - 130	2	35
o-Xylene	0.100	0.08378		mg/Kg		84	70 - 130	7	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

## Lab Sample ID: 880-34196-A-1-B MS

## Matrix: Solid

Analysis Batch: 64432									Pre	o Batch: 64332
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.101	0.09018		mg/Kg		89	70 - 130	
Toluene	<0.00201	U	0.101	0.07128		mg/Kg		71	70 - 130	

**Eurofins Midland** 

Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

### Released to Imaging: 3/18/2024 8:58:24 AM

Client: Carmona Resources

Project/Site: Nighthawk 3H

### Job ID: 880-34203-1 SDG: Lea County, New Mexico

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

Lab Sample ID: 880-34196-A Matrix: Solid	A-1-B MS							Client	Sample ID: Prep Ty	pe: To	tal/N/
Analysis Batch: 64432									Prep I	Batch:	6433
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Ethylbenzene	< 0.00201	U F1	0.101	0.06697	F1	mg/Kg		66	70 - 130		
n-Xylene & p-Xylene	<0.00402	U F1	0.202	0.1343	F1	mg/Kg		66	70 - 130		
p-Xylene	<0.00201	U F1	0.101	0.06838	F1	mg/Kg		67	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)			70 - 130								
1,4-Difluorobenzene (Surr)	102		70 _ 130								
Lab Sample ID: 880-34196-A	A-1-C MSD						liont Sa	mnle ID	: Matrix Spi	ko Dur	licat
Matrix: Solid									Prep Ty		
Analysis Batch: 64432										Batch:	
Analysis Balch. 04432	Sampla	Sample	Spike	MSD	MSD				%Rec	Satch.	0433 RP
	•	•					_				
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Lim
Benzene	<0.00201		0.0996	0.09951		mg/Kg		100	70 - 130	10	3
Toluene	<0.00201	U	0.0996	0.08277		mg/Kg		83	70 - 130	15	3
Ethylbenzene	<0.00201	U F1	0.0996	0.08667		mg/Kg		87	70 - 130	26	3
n-Xylene & p-Xylene	<0.00402	U F1	0.199	0.1785		mg/Kg		89	70 - 130	28	3
o-Xylene	<0.00201	U F1	0.0996	0.08121		mg/Kg		81	70 - 130	17	3
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	112		70 - 130								
1,4-Difluorobenzene (Surr)	102		70 _ 130								
ethod: 300.0 - Anions,	Ion Chromat	ography									
Lab Sample ID: MB 880-644	05/1-A							Client S	ample ID: N	lethod	Blan
Matrix: Solid									Prep T		
Analysis Batch: 64500										<b>,</b> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Analysis Baten. 04000		MB MB									
	P	esult Qualifier		RL	MDL Unit		D Pr	epared	Analyze	Ч	Dil Fa
\nalvto							<u> </u>	epareu			Dirra
-		-5.00 11			ma/k	a					
-		<5.00 U		5.00	mg/K	g			10/11/23 18		
Chloride		<5.00 U			mg/K	g	Client	Sample			amnl
Chloride Lab Sample ID: LCS 880-644		<5.00 U			mg/K	g	Client	Sample	ID: Lab Co	ntrol S	
Chloride Lab Sample ID: LCS 880-644 Matrix: Solid		<5.00 U			mg/K	g	Client	Sample		ntrol S	
Chloride Lab Sample ID: LCS 880-644 Matrix: Solid		<5.00 U	Spike	5.00		g	Client	Sample	ID: Lab Co Prep T	ntrol S	
Chloride Lab Sample ID: LCS 880-644 Matrix: Solid Analysis Batch: 64500		<5.00 U	Spike	5.00 LCS	LCS			-	ID: Lab Cor Prep T %Rec	ntrol S	ampl
Chloride Lab Sample ID: LCS 880-644 Matrix: Solid Analysis Batch: 64500 Analyte		<5.00 U	Added	5.00 LCS Result	LCS	Unit	Client	%Rec	ID: Lab Con Prep T %Rec Limits	ntrol S	
chloride Lab Sample ID: LCS 880-644 Matrix: Solid Analysis Batch: 64500		<5.00 U	-	5.00 LCS	LCS			-	ID: Lab Cor Prep T %Rec	ntrol S	
Chloride Lab Sample ID: LCS 880-644 Matrix: Solid Analysis Batch: 64500 Analyte Chloride	405/2-A 	<5.00 U	Added	5.00 LCS Result	LCS	- <mark>Unit</mark> mg/Kg	<u> </u>	%Rec 101	ID: Lab Con Prep T %Rec Limits	ntrol S ype: S	olub
Chloride Lab Sample ID: LCS 880-644 Matrix: Solid Analysis Batch: 64500 Analyte Chloride Lab Sample ID: LCSD 880-6	405/2-A 	<5.00 U	Added	5.00 LCS Result	LCS	- <mark>Unit</mark> mg/Kg	<u> </u>	%Rec 101	ID: Lab Cor Prep T %Rec Limits 90 - 110	ntrol S ype: S	olub e Du
Analyte Chloride Lab Sample ID: LCS 880-644 Matrix: Solid Analysis Batch: 64500 Analyte Chloride Lab Sample ID: LCSD 880-6 Matrix: Solid Analysis Batch: 64500	405/2-A 	<5.00 U	Added	5.00 LCS Result	LCS	- <mark>Unit</mark> mg/Kg	<u> </u>	%Rec 101	ID: Lab Con Prep T %Rec Limits 90 - 110	ntrol S ype: S	e Du
Chloride Lab Sample ID: LCS 880-644 Matrix: Solid Analysis Batch: 64500 Analyte Chloride Lab Sample ID: LCSD 880-6	405/2-A 	<5.00 U	Added	5.00 LCS Result 251.4	LCS	- <mark>Unit</mark> mg/Kg	<u> </u>	%Rec 101	ID: Lab Con Prep T %Rec Limits 90 - 110	ntrol S ype: S	e Du

Eurofins Midland

0

Chloride

250

251.8

mg/Kg

101

90 - 110

## **QC Sample Results**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34203-1 SDG: Lea County, New Mexico

## Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-34195-A-	1-C MS							Client	Sample ID		- <b>-</b>
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 64500											
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	116		253	380.1		mg/Kg		105	90 - 110		
			200	500.1							
Lab Sample ID: 880-34195-A- Matrix: Solid Analysis Batch: 64500			200	300.1			ent Sa		: Matrix Sp	oike Dup Type: S	
Lab Sample ID: 880-34195-A- Matrix: Solid	1-D MSD	Sample	Spike		MSD		ent Sa		: Matrix Sp		
Lab Sample ID: 880-34195-A- Matrix: Solid	1-D MSD Sample	Sample Qualifier		MSD	MSD Qualifier		ent Sa		: Matrix Sp Prep		oluble

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**Client Sample ID** 

Lab Control Sample

Lab Control Sample Dup

Matrix Spike Duplicate

**Client Sample ID** 

Lab Control Sample

Lab Control Sample Dup

Matrix Spike Duplicate

**Client Sample ID** 

H-5 (0-6")

H-5 (0-6")

Method Blank

Matrix Spike

H-5 (0-6")

Method Blank

Matrix Spike

**QC** Association Summary

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

Matrix

Solid

Client: Carmona Resources Project/Site: Nighthawk 3H

**GC VOA** 

Prep Batch: 64332

MB 880-64332/5-A

LCS 880-64332/1-A

LCSD 880-64332/2-A

880-34196-A-1-B MS

Lab Sample ID

MB 880-64332/5-A

LCS 880-64332/1-A

LCSD 880-64332/2-A

880-34196-A-1-B MS

880-34196-A-1-C MSD

Analysis Batch: 64589

880-34203-1

880-34196-A-1-C MSD

Analysis Batch: 64432

Lab Sample ID

880-34203-1

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Prep Batch

Prep Batch

64332

64332

64332

64332

64332

64332

Prep Batch

## Job ID: 880-34203-1 SDG: Lea County, New Mexico

Method

5035

5035

5035

5035

5035

5035

Method

8021B

8021B

8021B

8021B

8021B

8021B

Method

Total BTEX

GC Semi VOA

Lab Sample ID

880-34203-1

#### Analysis Batch: 64320

Lab Sample ID 880-34203-1	Client Sample ID H-5 (0-6")	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 64329
000-34203-1	11-3 (0-0 )	IOtal/NA	Solid		04323
Prep Batch: 64329					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34203-1	H-5 (0-6")	Total/NA	Solid	8015NM Prep	
880-34203-1 Analysis Batch: 644		Total/NA	Solid	8015NM Prep	
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bato
880-34203-1	H-5 (0-6")	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 64405

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-34203-1	H-5 (0-6")	Soluble	Solid	DI Leach	
MB 880-64405/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-34195-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-34195-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 64500

Lab Sample ID 880-34203-1	Client Sample ID H-5 (0-6")	Prep Type Soluble	Matrix Solid	Method 300.0	Prep Batch 64405
MB 880-64405/1-A	Method Blank	Soluble	Solid	300.0	64405
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	300.0	64405
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	64405
880-34195-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	64405

**Eurofins Midland** 

## **QC Association Summary**

Job ID: 880-34203-1
SDG: Lea County, New Mexico

## HPLC/IC (Continued)

### Analysis Batch: 64500 (Continued)

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
880-34195-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	64405	

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### Client Sample ID: H-5 (0-6") Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

Job ID: 880-34203-1 SDG: Lea County, New Mexico

## Lab Sample ID: 880-34203-1

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	64332	10/10/23 10:38	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64432	10/11/23 15:27	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64589	10/11/23 15:27	SM	EET MID
Total/NA	Analysis	8015 NM		1			64466	10/10/23 22:06	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	64329	10/10/23 09:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64320	10/10/23 22:06	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	64405	10/10/23 15:31	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64500	10/11/23 20:02	CH	EET MID

#### Laboratory References:

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

Eurofins Midland

Released to Imaging: 3/18/2024 8:58:24 AM

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34203-1 SDG: Lea County, New Mexico

#### Laboratory: Eurofins Midland

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

Authority	Progra	am	Identification Number	Expiration Date
lexas	NELA	כ	T104704400-23-26	06-30-24
• •		t the laboratory is not certif	ied by the governing authority. This lis	t may include analytes
0	y does not offer certification.	Matrix	Analyte	
Analysis Method	y does not offer certification. Prep Method	Matrix	Analyte	
0	,	Matrix Solid	Analyte Total TPH	

Eurofins Midland

Released to Imaging: 3/18/2024 8:58:24 AM

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#### Received by OCD: 11/2/2023 1:36:42 PM

## **Method Summary**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34203-1 SDG: Lea County, New Mexico

Nethod	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	EET MID
lotal BTEX	Total BTEX Calculation	TAL SOP	EET MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
035	Closed System Purge and Trap	SW846	EET MID
015NM Prep	Microextraction	SW846	EET MID
OI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

## Sample Summary

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34203-1 SDG: Lea County, New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-34203-1	H-5 (0-6")	Solid	10/04/23 00:00	10/09/23 16:20



# Received by OCD: 11/2/2023 1:36:42 PM

Relinquished by (Signature) Date/Time Received by (Signature)	Comments Email results to Mike Carmona mcarmona@carmonaresources.com, Conner Moehring cmoehring@carmonaresources.com, Clint Merritt MerrittC@				H-5 (0-6") 10/4/2023 X G 1 X X I G	Sample Identification Date Time Soil Water Grab/ # of 우 Comp Cont 우	H 800	Ves No (V/A) Temperature Reading: 2.4 B	Pa Pa GR	(Yes /Ng) Thermometer ID	B	s	CCM	Lea County, New Mexico Due Date	Pres.	Project Name Nighthawk 3H Turn Around ANALYSIS REOLIEST	Phone Email msanjari@marathonoil.com Deliverables EDD	ate ZIP Midland, TX 79701 City State ZIP Houston TX 77024	310 W Wall St Ste 500 Address. 990 Town and Country Blvd	Name Carmona Resources Company Name Marathon Oil Corporation		
Received by (Signature)	urces.com, Clint Merritt MerrittC@carmonaresources com															NAI YSIS REQUEST		Reporting Level II CLevel III CS	State of Project:	Program UST/PST PRP rownfields	Work Order Comments	
Date/Time	ources com					Sample Comments	NaOH+Ascorbic Acid SAPC	Zn Acetate+NaOH Zn	Na-S-0, NaSO	NaHSO, NARIS	H DO HD		-				ADaPT Other			nfields RC perfund	Comments	Page 1 of 1

5

13

Chain of Custory

5

Job Number: 880-34203-1

List Source: Eurofins Midland

SDG Number: Lea County, New Mexico

## Login Sample Receipt Checklist

Client: Carmona Resources

Login Number: 34203 List Number: 1 Creator: Rodriguez, Leticia

Question Answer Comment The cooler's custody seal, if present, is intact. N/A N/A Sample custody seals, if present, are intact. The cooler or samples do not appear to have been compromised or True tampered with. Samples were received on ice. True True Cooler Temperature is acceptable. 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 True HTs) 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 True MS/MSDs

N/A

MS/MSDs Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). Received by OCD: 11/2/2023 1:36:42 PM



**Environment Testing** 

# **ANALYTICAL REPORT**

## PREPARED FOR

Attn: Clint Merritt Carmona Resources 310 W Wall St Ste 500 Midland, Texas 79701 Generated 10/12/2023 9:13:39 PM

## JOB DESCRIPTION

Nighthawk 3H SDG NUMBER Lea County, New Mexico

## **JOB NUMBER**

880-34202-1

ËOL

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

AMER

Generated 10/12/2023 9:13:39 PM

Authorized for release by Jessica Kramer, Project Manager Jessica.Kramer@et.eurofinsus.com (432)704-5440

Laboratory Job ID: 880-34202-1 SDG: Lea County, New Mexico

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2

## **Definitions/Glossary**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34202-1 SDG: Lea County, New Mexico

Qualifiers		2
GC VOA		3
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	
U	Indicates the analyte was analyzed for but not detected.	_5
GC Semi VOA		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
-		
HPLC/IC Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	9
5		0
Glossary		9
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	10
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
MPN	Most Probable Number	
MQL	Method Quantitation Limit	
NC	Not Calculated	
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	

Eurofins Midland

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

Quality Control

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

NEG

POS

PQL

PRES QC

RER

RPD TEF

TEQ

TNTC

RL

Job ID: 880-34202-1 SDG: Lea County, New Mexico

#### Job ID: 880-34202-1

Client: Carmona Resources Project/Site: Nighthawk 3H

#### Laboratory: Eurofins Midland

#### Narrative

Job Narrative 880-34202-1

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

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

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

#### Receipt

The sample was received on 10/9/2023 4:20 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

#### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: H-6 (0-6") (880-34202-1).

#### GC VOA

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-64332 and analytical batch 880-64432 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### GC Semi VOA

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

#### HPLC/IC

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

Job ID: 880-34202-1 SDG: Lea County, New Mexico

Lab Sample ID: 880-34202-1

## Client Sample ID: H-6 (0-6") Date Collected: 10/04/23 00:00

Date Received: 10/09/23 16:20

Client: Carmona Resources

Project/Site: Nighthawk 3H

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		10/10/23 10:38	10/11/23 15:06	1
Toluene	<0.00201	U	0.00201		mg/Kg		10/10/23 10:38	10/11/23 15:06	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		10/10/23 10:38	10/11/23 15:06	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		10/10/23 10:38	10/11/23 15:06	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		10/10/23 10:38	10/11/23 15:06	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		10/10/23 10:38	10/11/23 15:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				10/10/23 10:38	10/11/23 15:06	1
1,4-Difluorobenzene (Surr)	107		70 - 130				10/10/23 10:38	10/11/23 15:06	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	ulation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00402	U	0.00402		mg/Kg			10/11/23 15:06	1
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (	GC)						
Analyte	Result	Qualifier	RL	MDL	Unit ma/Ka	<u>D</u>	Prepared	Analyzed	Dil Fac
Analyte Total TPH	Result <50.3	Qualifier U	<b>RL</b> 50.3	MDL	Unit mg/Kg	<u>D</u>	Prepared	Analyzed	
Analyte Total TPH Method: SW846 8015B NM - Dies	Result <50.3	Qualifier	RL 50.3		mg/Kg		<u>.</u>	10/10/23 21:44	1
Analyte <sup>Total</sup> TPH Method: SW846 8015B NM - Dies Analyte	Result Result sel Range Orga Result	Qualifier U nics (DRO) Qualifier	(GC)		mg/Kg Unit	D	Prepared	10/10/23 21:44 Analyzed	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	Result <50.3	Qualifier U nics (DRO) Qualifier	RL 50.3		mg/Kg		<u>.</u>	10/10/23 21:44	1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result Result sel Range Orga Result	Qualifier U nics (DRO) Qualifier U	(GC)		mg/Kg Unit		Prepared	10/10/23 21:44 Analyzed	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.3 sel Range Orga Result <50.3	Qualifier U nics (DRO) Qualifier U U	RL           50.3           (GC)           RL           50.3		mg/Kg Unit mg/Kg		Prepared 10/10/23 09:30	Analyzed           10/10/23 21:44	1 Dil Fac 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result           <50.3	Qualifier U nics (DRO) Qualifier U U U	RL           50.3           (GC)           RL           50.3           50.3		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30	Analyzed           10/10/23 21:44           10/10/23 21:44           10/10/23 21:44	1 Dil Fac 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result           <50.3	Qualifier U nics (DRO) Qualifier U U U	RL       50.3       (GC)       RL       50.3       50.3       50.3		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30	Analyzed           10/10/23 21:44           10/10/23 21:44           10/10/23 21:44           10/10/23 21:44	1 Dil Fac 1 1 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result           <50.3	Qualifier U nics (DRO) Qualifier U U U	RL           50.3           (GC)           RL           50.3           50.3           50.3           50.3           Limits		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared	Analyzed           10/10/23 21:44           10/10/23 21:44           10/10/23 21:44           10/10/23 21:44           10/10/23 21:44           Analyzed	1 Dil Fac 1 1 1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result           <50.3	Qualifier U nics (DRO) Qualifier U U U Qualifier	RL           50.3           (GC)           RL           50.3           50.3           50.3           50.3           70.130           70.130           70.130		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared 10/10/23 09:30	Analyzed           10/10/23 21:44           10/10/23 21:44           10/10/23 21:44           10/10/23 21:44           10/10/23 21:44           10/10/23 21:44	1 Dil Fac 1 1 1 1 1 <i>Dil Fac</i> 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: EPA 300.0 - Anions, Ion Analyte	Result           <50.3	Qualifier U nics (DRO) Qualifier U U U Qualifier	RL           50.3           (GC)           RL           50.3           50.3           50.3           50.3           70.130           70.130           70.130		mg/Kg Unit mg/Kg mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared 10/10/23 09:30	Analyzed           10/10/23 21:44           10/10/23 21:44           10/10/23 21:44           10/10/23 21:44           10/10/23 21:44           10/10/23 21:44	1 Dil Fac 1 1 1 1 1 <i>Dil Fac</i> 1

Eurofins Midland

Matrix: Solid

Client: Carmona Resources Project/Site: Nighthawk 3H

Job ID: 880-34202-1 SDG: Lea County, New Mexico

Prep Type: Total/NA

### Method: 8021B - Volatile Organic Compounds (GC) N

Aatrix: So	hil

				Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		5
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		5
880-34196-A-1-B MS	Matrix Spike	102	102		
880-34196-A-1-C MSD	Matrix Spike Duplicate	112	102		6
880-34202-1	H-6 (0-6")	104	107		
LCS 880-64332/1-A	Lab Control Sample	111	104		
LCSD 880-64332/2-A	Lab Control Sample Dup	99	101		
MB 880-64332/5-A	Method Blank	108	122		8
Surrogate Legend					
BFB = 4-Bromofluorobe	enzene (Surr)				9
DFBZ = 1,4-Difluorobe	nzene (Surr)				1
	I - Diesel Range Organics	s (DRO) (GC	;)		
latrix: Solid				Prep Type: Total/NA	
				Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		

Surrogate Legend 1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Carmona Resources

### Job ID: 880-34202-1 SDG: Lea County, New Mexico

Project/Site: Nighthawk 3H

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

Lab Sample ID: MB 880-6433	2/5-A										<b>Client Sa</b>	mple ID: M	etho	d Blank
Matrix: Solid												Prep Ty	pe: T	otal/N/
Analysis Batch: 64432												Prep B	atch	: 64332
		MB	MB											
Analyte	Re	sult	Qualifier	R	L	MDL	Unit		D	Ρ	repared	Analyzed	I	Dil Fa
Benzene	<0.00	0200	U	0.0020	0		mg/K	g	_	10/1	0/23 10:38	10/11/23 12	:35	
Toluene	<0.00	0200	U	0.0020	0		mg/K	g		10/1	0/23 10:38	10/11/23 12	:35	
Ethylbenzene	<0.00	0200	U	0.0020	0		mg/K	g		10/1	0/23 10:38	10/11/23 12	:35	
m-Xylene & p-Xylene	<0.00	0400	U	0.0040	0		mg/K	9		10/1	0/23 10:38	10/11/23 12	:35	
o-Xylene	<0.00	0200	U	0.0020	0		mg/K	g		10/1	0/23 10:38	10/11/23 12	:35	
Xylenes, Total	<0.00	0400	U	0.0040	0		mg/K	g		10/1	0/23 10:38	10/11/23 12	:35	
		ΜВ	МВ											
Surrogate	%Reco	very	Qualifier	Limits						P	repared	Analyzed	1	Dil Fa
4-Bromofluorobenzene (Surr)		108		70 - 130	_				-	10/1	0/23 10:38	10/11/23 12	:35	
1,4-Difluorobenzene (Surr)		122		70 - 130						10/1	0/23 10:38	10/11/23 12	:35	
Lab Sample ID: LCS 880-643	32/1-A								CI	ient	Sample	ID: Lab Con		
Matrix: Solid												Prep Ty		
Analysis Batch: 64432				• •								Prep B	atch	: 64332
				Spike		LCS						%Rec		
Analyte				Added	Result	Quali	ifier	Unit		D	%Rec	Limits		
Benzene				0.100	0.1166			mg/Kg			117	70 - 130		
Toluene				0.100	0.09644			mg/Kg			96	70 - 130		
Ethylbenzene				0.100	0.09544			mg/Kg			95	70 - 130		
m-Xylene & p-Xylene				0.200	0.1878			mg/Kg			94	70 - 130		
o-Xylene				0.100	0.09012			mg/Kg			90	70 - 130		
0-Xylerie														
0-Aylene	LCS	LCS												
Surrogate	LCS %Recovery		ifier	Limits										
			ifier	Limits 70 - 130										

### Lab Sample ID: LCSD 880-64332/2-A

## Matrix: Solid

Analysis Batch: 64432							Prep	Batch:	64332
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1117		mg/Kg		112	70 - 130	4	35
Toluene	0.100	0.09300		mg/Kg		93	70 - 130	4	35
Ethylbenzene	0.100	0.09384		mg/Kg		94	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1837		mg/Kg		92	70 - 130	2	35
o-Xylene	0.100	0.08378		mg/Kg		84	70 - 130	7	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

## Lab Sample ID: 880-34196-A-1-B MS

## Matrix: Solid

Analysis Batch: 64432									Pre	p Batch: 64332
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.101	0.09018		mg/Kg		89	70 - 130	
Toluene	<0.00201	U	0.101	0.07128		mg/Kg		71	70 - 130	

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Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

### Released to Imaging: 3/18/2024 8:58:24 AM

Client: Carmona Resources

Project/Site: Nighthawk 3H

### Job ID: 880-34202-1 SDG: Lea County, New Mexico

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

Lab Sample ID: 880-34196-A	A-1-B MS							Client	Sample ID:		
Matrix: Solid									Prep Ty		
Analysis Batch: 64432									Prep I	Batch:	64332
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Ethylbenzene	< 0.00201	U F1	0.101	0.06697	F1	mg/Kg		66	70 - 130		
m-Xylene & p-Xylene	<0.00402	U F1	0.202	0.1343	F1	mg/Kg		66	70 - 130		
o-Xylene	<0.00201	U F1	0.101	0.06838	F1	mg/Kg		67	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits	-							
4-Bromofluorobenzene (Surr)	102		70 - 130								
1,4-Difluorobenzene (Surr)	102		70 - 130								
Lab Sample ID: 880-34196-A	A-1-C MSD					С	lient Sa	ample IC	): Matrix Spi	ke Duj	plicate
Matrix: Solid									Prep Ty	pe: To	otal/N/
Analysis Batch: 64432									Prep I	Batch:	64332
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Benzene	<0.00201	U	0.0996	0.09951		mg/Kg		100	70 - 130	10	3
Toluene	<0.00201	U	0.0996	0.08277		mg/Kg		83	70 - 130	15	3
Ethylbenzene	<0.00201	U F1	0.0996	0.08667		mg/Kg		87	70 - 130	26	3
m-Xylene & p-Xylene	<0.00402	U F1	0.199	0.1785		mg/Kg		89	70 - 130	28	3
p-Xylene	<0.00201	U F1	0.0996	0.08121		mg/Kg		81	70 - 130	17	3
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits	_							
4-Bromofluorobenzene (Surr)	112		70 - 130								
1,4-Difluorobenzene (Surr)	102		70 - 130								
lethod: 300.0 - Anions,	Ion Chromat	ography									
Lab Sample ID: MB 880-644	05/1-A							Client S	Sample ID: N	lethod	Blani
Matrix: Solid									Prep T		
Analysis Batch: 64500										, , , , , , , , , , , , , , , , , , , ,	
		MB MB									
Analyte	R	esult Qualifier		RL	MDL Unit		D P	repared	Analyze	d	Dil Fac
		<5.00 U		5.00	mg/K				10/11/23 18		
Chloride		0.00 0									
		0.00 0					Client	Sample	ID: Lab Co	ntrol S	ample
Lab Sample ID: LCS 880-644							Client	Sample	ID: Lab Co Prep T		
Lab Sample ID: LCS 880-644 Matrix: Solid							Client	Sample	e ID: Lab Co Prep T		
Lab Sample ID: LCS 880-644			Spike	LCS	LCS		Client	Sample	Prep T		
Lab Sample ID: LCS 880-644 Matrix: Solid Analysis Batch: 64500			Spike		LCS Qualifier	Unit		-	Prep T %Rec		
Lab Sample ID: LCS 880-644 Matrix: Solid			Spike Added 250		LCS Qualifier	- <mark>Unit</mark> mg/Kg	Client	<b>Sample</b> <u>%Rec</u> 101	Prep T		
Lab Sample ID: LCS 880-644 Matrix: Solid Analysis Batch: 64500 Analyte Chloride	405/2-A 		Added	Result		mg/Kg	<u>D</u>	<b>%Rec</b>	Prep T           %Rec           Limits           90 - 110	ype: S	olubl
Lab Sample ID: LCS 880-644 Matrix: Solid Analysis Batch: 64500 Analyte	405/2-A 		Added	Result		mg/Kg	<u>D</u>	<b>%Rec</b>	Prep T %Rec Limits	ype: S	iolubl

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	251.8		mg/Kg	_	101	90 _ 110	0	20

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**Released to Imaging: 3/18/2024 8:58:24 AM** 

## **QC Sample Results**

Client: Carmona Resources Project/Site: Nighthawk 3H

Job ID: 880-34202-1 SDG: Lea County, New Mexico

## Method: 300.0 - Anions, Ion Chromatography (Continued)

ab Sample ID: 880-34195-A-1-C MS       Client Sample ID: Matrix Spike         Matrix: Solid       Sample       Sample       Spike       MS       MS       Prep Type: Soluble         nalyte       Result       Qualifier       Added       Result       Qualifier       Unit       D       %Rec       Limits       —         horide       116       253       380.1       Qualifier       Unit       D       %Rec       Limits       —         ab Sample ID: 880-34195-A-1-D MSD       Result       Qualifier       MSD       Sample       Client Sample ID: Matrix Spike Duplicate         Matrix: Solid       Prep Type: Soluble       Matrix: Spike       Prep Type: Soluble         Matrix: Solid       Sample       Sample       Spike       MSD       MSD       Client Sample ID: Matrix Spike Duplicate         Matrix: Solid       Sample       Sample       Spike       MSD       MSD       MSD       Unit       D       %Rec       RPD         Matrix: Solid       Matrix: Solid       Sample       Sample       Spike       MSD       MSD       Unit       D       %Rec       RPD         horide       116       253       380.4       MSD       MSD       90 - 110       0       20	ab Sample ID: 880-34195-A-	1 C MS							Client	Sample ID	Motrix	Sniko	
Sample       Sample       Spike       MS       MS       MS       %Rec         malyte       Result       Qualifier       Added       Result       Qualifier       Unit       D       %Rec       Limits									Client				
SampleSampleSpikeMSMS%RecnalyteResultQualifierAddedResultQualifierUnitD%RecLimitshloride116253380.1380.1mg/KgD%RecLimitsab Sample ID: 880-34195-A-1-D MSDSampleClient Sample ID: Matrix Spike Duplicate Prep Type: SolubleMatrix: Solid Analysis Batch: 64500SampleSampleSpikeMSD%RecRPDnalyteResultQualifierAddedResultQualifierUnitD%RecRPDLimitsResultQualifierAddedResultQualifierUnitD%RecLimitsRPD										Fieh	Type: 30	June	
nalyteResultQualifierAddedResultQualifierUnitD%RecLimitshloride116253380.1380.1mg/KgD%RecLimitsab Sample ID: 880-34195-A-1-D MSD Matrix: Solid analysis Batch: 64500SampleSampleSpikeMSDClient Sample ID: Matrix Spike Duplicate Prep Type: SolublesampleSampleSpikeMSDMSD%RecRPDnalyteResultQualifierAddedResultQualifierUnitD%RecLimits	Indiysis Balcii. 04000	Sample	Sample	Spike	MS	MS				%Rec			
Inloride     116     253     380.1     mg/Kg     105     90 - 110       ab Sample ID: 880-34195-A-1-D MSD atrix: Solid nalysis Batch: 64500     Client Sample ID: Matrix Spike Duplicate Prep Type: Soluble       Sample     Sample     Spike     MSD     MSD       Nalyte     Result     Qualifier     Added     Result     Qualifier	nalvte	-	•	-			Unit	D	%Rec				
atrix: Solid nalysis Batch: 64500     Prep Type: Soluble       Sample     Sample       Sample     Spike       MSD     MSD       %Rec     RPD       nalyte     Result       Qualifier     Added       Result     Qualifier	•												
Sample       Spike       MSD       MSD       %Rec       RPD         alyte       Result       Qualifier       Added       Result       Qualifier       Unit       D       %Rec       Limit	b Sample ID: 880-34195-A-	1-D MSD					Cli	ent Sa	ample ID	): Matrix Sr	oike Dup	licate	
Sample     Spike     MSD     %Rec     RPD       alyte     Result     Qualifier     Added     Result     Qualifier     Unit     D     %Rec     Limit	atrix: Solid									Prep	Type: So	oluble	
nalyte Result Qualifier Added Result Qualifier Unit MRec Limits RPD Limit	nalysis Batch: 64500												
·		Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
lloride 116 253 380.4 mg/Kg 105 90 - 110 0 20	alyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
	loride	116		253	380.4		mg/Kg		105	90 - 110	0	20	

Eurofins Midland
### **QC Association Summary**

Client: Carmona Resources Project/Site: Nighthawk 3H

Job ID: 880-34202-1

SDG: Lea County, New Mexico

### **GC VOA**

### Prep Batch: 64332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34202-1	H-6 (0-6")	Total/NA	Solid	5035	
MB 880-64332/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-64332/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-64332/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-34196-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-34196-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
Analysis Batch: 64432					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34202-1	H-6 (0-6")	Total/NA	Solid	8021B	64332
MB 880-64332/5-A	Method Blank	Total/NA	Solid	8021B	64332
LCS 880-64332/1-A	Lab Control Sample	Total/NA	Solid	8021B	64332
LCSD 880-64332/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	64332
880-34196-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	64332
880-34196-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	64332
Analysis Batch: 64588					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34202-1	H-6 (0-6")	Total/NA	Solid	Total BTEX	
GC Semi VOA					
Analysis Batch: 64320					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-34202-1	H-6 (0-6")	Total/NA	Solid	8015B NM	64329
Prep Batch: 64329					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34202-1	H-6 (0-6")	Total/NA	Solid	8015NM Prep	
– Analysis Batch: 64465					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
	•				

### HPLC/IC

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#### Leach Batch: 64405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34202-1	H-6 (0-6")	Soluble	Solid	DI Leach	
MB 880-64405/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-34195-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-34195-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

### Analysis Batch: 64500

Lab Sample ID 880-34202-1	Client Sample ID H-6 (0-6")	Prep Type Soluble	Matrix Solid	Method 300.0	Prep Batch 64405
MB 880-64405/1-A	Method Blank	Soluble	Solid	300.0	64405
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	300.0	64405
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	64405
880-34195-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	64405

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### **QC Association Summary**

ID: 880-34202-1
nty, New Mexico

### HPLC/IC (Continued)

### Analysis Batch: 64500 (Continued)

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
880-34195-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	64405	

Eurofins Midland

### Client Sample ID: H-6 (0-6") Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

Job ID: 880-34202-1 SDG: Lea County, New Mexico

## Lab Sample ID: 880-34202-1

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	64332	10/10/23 10:38	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64432	10/11/23 15:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64588	10/11/23 15:06	SM	EET MID
Total/NA	Analysis	8015 NM		1			64465	10/10/23 21:44	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	64329	10/10/23 09:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64320	10/10/23 21:44	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	64405	10/10/23 15:31	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64500	10/11/23 19:56	СН	EET MID

#### Laboratory References:

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

Eurofins Midland

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Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34202-1 SDG: Lea County, New Mexico

### Laboratory: Eurofins Midland

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

Authority	Program	n	Identification Number	Expiration Date
Texas	NELAP		T104704400-23-26	06-30-24
The following analyte	s are included in this report, but	the laboratory is not certif	fied by the governing authority. This lis	t may include analytes
for which the agency	does not offer certification.	,		· · · · · · · · · · · · · · · · · · ·
for which the agency Analysis Method	•	Matrix	Analyte	
for which the agency	does not offer certification.	,		

Eurofins Midland

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### Received by OCD: 11/2/2023 1:36:42 PM

### **Method Summary**

Client: Carmona Resources Project/Site: Nighthawk 3H

Job ID: 880-34202-1 SDG: Lea County, New Mexico

Method	Method Description	Protocol	Laboratory
3021B	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
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

## Sample Summary

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34202-1 SDG: Lea County, New Mexico

Lab Sample ID Client Sample ID Matrix Collected Received	Lab Sample ID
880-34202-1         H-6 (0-6")         Solid         10/04/23 00:00         10/09/23 16:20	880-34202-1

# Received by OCD: 11/2/2023 1:36:42 PM

H-6 (0-6")       10/4/2023       X       G       1       X       X       X       Image: Control of the control of					y (Signature)	Relinquished by (Signature)		1.
	nring@carmonaresources.	ehring cmoel	com, Conner Mo	nonaresources.	carmona@carr	e Carmona m	results to Mik	Comments' Email
	×	1   X   X	G	×		10/4/2023	5")	H-6 (U-6")
Sample Comments		Cont	Water Comp C		Time	Date	ification	Sample Identification
NaOH+Ascorbic Acid SAPC			╨					
Zn Acetate+NaOH Zn		B1	2-2-	ding	Temperature Reading	NO NIA	Yes	Sample Custody Seals
Na <sub>2</sub> S <sub>2</sub> O <sub>2</sub> Na <sub>2</sub> SO <sub>2</sub>		ΓEX	4.20		Correction Factor	No ER	Yes	Cooler Custody Seals
NaHSO, NABIS	le 304	8021	H 80		Thermometer ID	No		Received Intact:
		в	(Ye) No	Wet Ice	Yes 😡	Temp Blank.		SAMPLE RECEIPT
					2			PO#
<u>v</u>			5 UAY			CCM		Sampler's Name
None NO Di Water H <sub>2</sub> O		Code				2090	64	Project Location
ANALYSIS REQUEST Preservative Codes	ANAL	Yes		Turn Around				Project Name
				I		Nighthawk 3H		
Deliverables. EDD ADaPT Other		noil com	msanjari@marathonoil com	Email				Phone
Reporting Level II Level III DST/UST RRP Level IV	Houston TX 77024	Houston	City State ZIP	0		701	Midland TX 79701	City, State ZIP N
_	990 Town and Country Blvd	990 Tow	Address.	A		Ste 500	310 W Wall St Ste 500	Address.
Program UST/PST PRP Prownfields RC Deerfund	Marathon Oil Corporation	Marathor	Company Name	Q		ources	Carmona Resources	Company Name: 0
	Sanjari	Melodie Sanjari	Bill to (if different)	8			Clinton Merritt	Project Manager (

### Page 223 of 383

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Chain or Custody

### Login Sample Receipt Checklist

Client: Carmona Resources

Login Number: 34202 List Number: 1 Creator: Rodriguez, Leticia

Question Answer Comment The cooler's custody seal, if present, is intact. N/A N/A Sample custody seals, if present, are intact. The cooler or samples do not appear to have been compromised or True tampered with. Samples were received on ice. True True Cooler Temperature is acceptable. 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 True HTs) 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 True MS/MSDs

N/A

<6mm (1/4").

: Carmona Resources

Job Number: 880-34202-1

SDG Number: Lea County, New Mexico

Eurofins Midland Released to Imaging: 3/18/2024 8:58:24 AM

Containers requiring zero headspace have no headspace or bubble is

Received by OCD: 11/2/2023 1:36:42 PM



**Environment Testing** 

# **ANALYTICAL REPORT**

## PREPARED FOR

Attn: Clint Merritt Carmona Resources 310 W Wall St Ste 500 Midland, Texas 79701 Generated 10/12/2023 9:13:14 PM

## **JOB DESCRIPTION**

Nighthawk 3H SDG NUMBER Lea County, New Mexico

## **JOB NUMBER**

880-34201-1

EOL

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

AMER

Generated 10/12/2023 9:13:14 PM

Authorized for release by Jessica Kramer, Project Manager Jessica.Kramer@et.eurofinsus.com (432)704-5440

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

Laboratory Job ID: 880-34201-1 SDG: Lea County, New Mexico

## **Table of Contents**

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2

### **Definitions/Glossary**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34201-1 SDG: Lea County, New Mexico

Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	
U	Indicates the analyte was analyzed for but not detected.	_5
GC Semi VOA		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	8
Glossary		Q
Abbreviation	These commonly used abbreviations may or may not be present in this report.	3
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	12
DL	Detection Limit (DoD/DOE)	13
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
MPN	Most Probable Number	
MQL	Method Quantitation Limit	
NC	Not Calculated	
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

Quality Control

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

NEG

POS

PQL

PRES QC

RER

RL RPD

TEF

TEQ

TNTC

Job ID: 880-34201-1 SDG: Lea County, New Mexico

### Job ID: 880-34201-1

Client: Carmona Resources Project/Site: Nighthawk 3H

#### Laboratory: Eurofins Midland

#### Narrative

Job Narrative 880-34201-1

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

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

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

#### Receipt

The sample was received on 10/9/2023 4:20 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

#### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: H-7 (0-6") (880-34201-1).

#### GC VOA

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-64332 and analytical batch 880-64432 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### GC Semi VOA

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

#### HPLC/IC

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

Matrix: Solid

Job ID: 880-34201-1 SDG: Lea County, New Mexico

Lab Sample ID: 880-34201-1

### Client Sample ID: H-7 (0-6") Date Collected: 10/04/23 00:00

Date Received: 10/09/23 16:20

Client: Carmona Resources

Project/Site: Nighthawk 3H

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/10/23 10:38	10/11/23 14:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/10/23 10:38	10/11/23 14:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/10/23 10:38	10/11/23 14:46	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/10/23 10:38	10/11/23 14:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/10/23 10:38	10/11/23 14:46	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/10/23 10:38	10/11/23 14:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				10/10/23 10:38	10/11/23 14:46	1
1,4-Difluorobenzene (Surr)	103		70 - 130				10/10/23 10:38	10/11/23 14:46	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00399	U	0.00399		mg/Kg			10/11/23 14:46	1
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (	GC)						
Analyte		Qualifier	GC) 	MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Analyte Total TPH	Result <49.6	Qualifier U	<b>RL</b> 49.6	MDL		<u>D</u>	Prepared	Analyzed	
Analyte Total TPH Method: SW846 8015B NM - Dies	Result <49.6	Qualifier	RL 49.6		Unit mg/Kg			Analyzed 10/10/23 21:22	1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte	Result <49.6 sel Range Orga Result	Qualifier U Inics (DRO) Qualifier	(GC)		Unit mg/Kg Unit	<u>D</u>	Prepared	Analyzed 10/10/23 21:22 Analyzed	
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics	Result <49.6	Qualifier U Inics (DRO) Qualifier	RL 49.6		Unit mg/Kg			Analyzed 10/10/23 21:22	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <49.6 sel Range Orga Result	Qualifier U Qualifier Qualifier U	(GC)		Unit mg/Kg Unit		Prepared	Analyzed 10/10/23 21:22 Analyzed	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <a href="https://www.selimetrical.com">Result</a> <a href="https://www.selimetrical.com">Allow</a>	Qualifier U Qualifier Qualifier U U	RL           49.6           (GC)           RL           49.6		Unit mg/Kg Unit mg/Kg		Prepared 10/10/23 09:30	Analyzed 10/10/23 21:22 Analyzed 10/10/23 21:22	1 Dil Fac 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result           <49.6	Qualifier U Qualifier U U U U	RL           49.6           (GC)           RL           49.6           49.6		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30	Analyzed 10/10/23 21:22 Analyzed 10/10/23 21:22 10/10/23 21:22	1 Dil Fac 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result           <49.6	Qualifier U Qualifier U U U U	RL           49.6           (GC)           RL           49.6           49.6           49.6           49.6		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30	Analyzed 10/10/23 21:22 Analyzed 10/10/23 21:22 10/10/23 21:22 10/10/23 21:22	1 Dil Fac 1 1 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result           <49.6	Qualifier U Qualifier U U U U	RL           49.6           (GC)           RL           49.6           49.6           49.6           Limits		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared	Analyzed 10/10/23 21:22 Analyzed 10/10/23 21:22 10/10/23 21:22 10/10/23 21:22 Analyzed	1 Dil Fac 1 1 1 Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: EPA 300.0 - Anions, Ion	Result           <49.6	Qualifier U Qualifier U U U Qualifier	RL           49.6           (GC)           RL           49.6           49.6           49.6           20.6           Limits           70 - 130           70 - 130		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared 10/10/23 09:30	Analyzed 10/10/23 21:22 Analyzed 10/10/23 21:22 10/10/23 21:22 10/10/23 21:22 Analyzed 10/10/23 21:22	1 Dil Fac 1 1 1 1 1 <i>Dil Fac</i> 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result <49.6 sel Range Orga Result <49.6 <49.6 <49.6 <49.6 %Recovery 114 119	Qualifier U Qualifier U U U Qualifier	RL           49.6           (GC)           RL           49.6           49.6           49.6           20.6           Limits           70 - 130           70 - 130	MDL	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared 10/10/23 09:30	Analyzed 10/10/23 21:22 Analyzed 10/10/23 21:22 10/10/23 21:22 10/10/23 21:22 Analyzed 10/10/23 21:22	1 Dil Fac 1 1 1 1 1 <i>Dil Fac</i> 1

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10 11 12

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Released to Imaging: 3/18/2024 8:58:24 AM Page 6 of 18

10/12/2023

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34201-1 SDG: Lea County, New Mexico

Prep Type: Total/NA

### 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
880-34196-A-1-B MS	Matrix Spike	102	102		
880-34196-A-1-C MSD	Matrix Spike Duplicate	112	102		6
880-34201-1	H-7 (0-6")	112	103		
LCS 880-64332/1-A	Lab Control Sample	111	104		
LCSD 880-64332/2-A	Lab Control Sample Dup	99	101		
MB 880-64332/5-A	Method Blank	108	122		8
Surrogate Legend					
BFB = 4-Bromofluorober	nzene (Surr)				9
DFBZ = 1,4-Difluorobenz	zene (Surr)				
Method: 8015B NM	- Diesel Range Organics	s (DRO) (GC	3		
Matrix: Solid	Biobol Hange erganiet		,	Prep Type: Total/NA	
_					
				Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1		

Lab Sample ID 880-34201-1	Client Sample ID H-7 (0-6")	(70-130) 114	(70-130) 119	 	 	 	13
Surrogate Legend							
1CO = 1-Chlorooctar	ne						
OTPH = o-Terphenyl							

Project/Site: Nighthawk 3H

Client: Carmona Resources

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

Lab Sample ID: MB 880-6433	32/5-A								Client Sa	mple ID: Me		
Matrix: Solid										Prep Typ	e: To	otal/N/
Analysis Batch: 64432										Prep B	atch:	6433
	М	B MB										
Analyte	Resu	It Qualifier	RL		MDL	Unit	D	P	repared	Analyzed		Dil Fa
Benzene	<0.0020	0 U	0.00200			mg/Kg		10/1	0/23 10:38	10/11/23 12:	35	
Toluene	<0.0020	0 U	0.00200			mg/Kg		10/1	0/23 10:38	10/11/23 12:	35	
Ethylbenzene	<0.0020	0 U	0.00200			mg/Kg		10/1	0/23 10:38	10/11/23 12:	35	
m-Xylene & p-Xylene	<0.0040	0 U	0.00400			mg/Kg		10/1	0/23 10:38	10/11/23 12:	35	
o-Xylene	<0.0020	0 U	0.00200			mg/Kg		10/1	0/23 10:38	10/11/23 12:	35	
Xylenes, Total	<0.0040	00 U	0.00400			mg/Kg		10/1	0/23 10:38	10/11/23 12:	35	
	М	B MB										
Surrogate	%Recover	ry Qualifier	Limits					P	repared	Analyzed		Dil Fa
4-Bromofluorobenzene (Surr)	10	08	70 - 130	-				10/1	0/23 10:38	10/11/23 12:	35	
1,4-Difluorobenzene (Surr)	12	22	70 - 130					10/1	0/23 10:38	10/11/23 12:	35	
Lab Sample ID: LCS 880-643	332/1-A						c	lient	Sample	ID: Lab Con	trol S	ampl
Matrix: Solid										Prep Typ		
Analysis Batch: 64432										Prep B		
· ·····, <b>/ ···</b> · ·····			Spike	LCS	LCS					%Rec		
Analyte			Added	Result	Qual	ifier Unit		D	%Rec	Limits		
Benzene			0.100	0.1166		mg/Kg			117	70 - 130		
Toluene			0.100	0.09644		mg/Kg			96	70 - 130		
Ethylbenzene			0.100	0.09544		mg/Kg			95	70 - 130		
m-Xylene & p-Xylene			0.200	0.1878		mg/Kg			94	70 - 130		
o-Xylene			0.100	0.09012		mg/Kg			90	70 - 130		
ovyiene			0.100	0.00012		iiig/itg			50	10 - 100		
	LCS LC	cs										
Surrogate	%Recovery Q	ualifier	Limits									
4-Bromofluorobenzene (Surr)	111		70 - 130									
1,4-Difluorobenzene (Surr)	104		70 - 130									
Lab Sample ID: LCSD 880-64	4332/2-A					с	lient	Sam	ple ID: L	ab Control S	amp	le Du
Matrix: Solid										Prep Typ	e: To	otal/N
Analysis Batch: 64432										Prep B		
			Spike	LCSD	LCSI	כ				%Rec		RPI
Analyte			Added	Result	Qual	ifier Unit		D	%Rec	Limits	RPD	Limi
Benzene			0.100	0.1117		mg/Kg			112	70 - 130	4	3
									93	70 - 130		
Toluene						ma/Ka			30		4	3
			0.100	0.09300		mg/Kg ma/Ka						
Ethylbenzene			0.100 0.100	0.09300 0.09384		mg/Kg			94	70 - 130	2	3
Ethylbenzene			0.100	0.09300								3
Ethylbenzene m-Xylene & p-Xylene	LCSD LC	CSD	0.100 0.100 0.200	0.09300 0.09384 0.1837		mg/Kg mg/Kg			94 92	70 <sub>-</sub> 130 70 <sub>-</sub> 130	2	3 3
Ethylbenzene m-Xylene & p-Xylene	LCSD LC %Recovery Qi		0.100 0.100 0.200	0.09300 0.09384 0.1837		mg/Kg mg/Kg			94 92	70 <sub>-</sub> 130 70 <sub>-</sub> 130	2	3 3
Ethylbenzene m-Xylene & p-Xylene o-Xylene			0.100 0.100 0.200 0.100	0.09300 0.09384 0.1837		mg/Kg mg/Kg			94 92	70 <sub>-</sub> 130 70 <sub>-</sub> 130	2	3
Ethylbenzene m-Xylene & p-Xylene o-Xylene <b>Surrogate</b>	%Recovery Q		0.100 0.100 0.200 0.100 <i>Limits</i>	0.09300 0.09384 0.1837		mg/Kg mg/Kg			94 92	70 <sub>-</sub> 130 70 <sub>-</sub> 130	2	3: 3: 3: 3:
Ethylbenzene m-Xylene & p-Xylene o-Xylene <b>Surrogate</b> 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	%Recovery 99 99 101		0.100 0.100 0.200 0.100 <i>Limits</i> 70 - 130	0.09300 0.09384 0.1837		mg/Kg mg/Kg			94 92 84	70 - 130 70 - 130 70 - 130	2 7	3 3 3
Ethylbenzene m-Xylene & p-Xylene o-Xylene <b>Surrogate</b> 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-34196-A	%Recovery 99 99 101		0.100 0.100 0.200 0.100 <i>Limits</i> 70 - 130	0.09300 0.09384 0.1837		mg/Kg mg/Kg			94 92 84	70 - 130 70 - 130 70 - 130 70 - 130	2 7 7	3 3 3 3
Ethylbenzene m-Xylene & p-Xylene o-Xylene <i>Surrogate</i> <i>4-Bromofluorobenzene (Surr)</i> <i>1,4-Difluorobenzene (Surr)</i> Lab Sample ID: 880-34196-A Matrix: Solid	%Recovery 99 99 101		0.100 0.100 0.200 0.100 <i>Limits</i> 70 - 130	0.09300 0.09384 0.1837		mg/Kg mg/Kg			94 92 84	70 - 130 70 - 130 70 - 130 Sample ID: M Prep Typ	2 7 7 Matrix be: To	3 3 3 3 3
Ethylbenzene m-Xylene & p-Xylene o-Xylene <b>Surrogate</b> 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-34196-A	<u>%Recovery</u> 99 101 <b>1-B MS</b>	ualifier	0.100 0.200 0.100 <i>Limits</i> 70 - 130 70 - 130	0.09300 0.09384 0.1837 0.08378	MS	mg/Kg mg/Kg			94 92 84	70 - 130 70 - 130 70 - 130 70 - 130 Sample ID: M Prep Typ Prep B	2 7 7 Matrix be: To	3: 3: 3: 3: 3: 5: 5: 5: 5: 5: 5: 5: 5: 5: 5: 5: 5: 5:
Ethylbenzene m-Xylene & p-Xylene o-Xylene <i>Surrogate</i> <i>4-Bromofluorobenzene (Surr)</i> 1,4-Difluorobenzene (Surr) Lab Sample ID: 880-34196-A Matrix: Solid Analysis Batch: 64432	<u>%Recovery</u> Qu 99 101 A- <b>1-B MS</b> Sample Sa	ualifier	0.100 0.200 0.100 <i>Limits</i> 70 - 130 70 - 130 <b>Spike</b>	0.09300 0.09384 0.1837 0.08378	MS Qual	mg/Kg mg/Kg mg/Kg			94 92 84 Client \$	70 - 130 70 - 130 70 - 130 70 - 130 Sample ID: M Prep Typ Prep B %Rec	2 7 7 Matrix be: To	3 3 3 3 3
Ethylbenzene m-Xylene & p-Xylene o-Xylene <i>Surrogate</i> <i>4-Bromofluorobenzene (Surr)</i> <i>1,4-Difluorobenzene (Surr)</i> Lab Sample ID: 880-34196-A Matrix: Solid	<u>%Recovery</u> 99 101 <b>1-B MS</b>	ualifier	0.100 0.200 0.100 <i>Limits</i> 70 - 130 70 - 130	0.09300 0.09384 0.1837 0.08378		mg/Kg mg/Kg mg/Kg		<u> </u>	94 92 84	70 - 130 70 - 130 70 - 130 70 - 130 Sample ID: M Prep Typ Prep B	2 7 7 Matrix be: To	3 3 3 3 Spike

Eurofins Midland

<0.00201 U

Toluene

0.07128

mg/Kg

71

70 - 130

0.101

Client: Carmona Resources

Project/Site: Nighthawk 3H

### Job ID: 880-34201-1 SDG: Lea County, New Mexico

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

Lab Sample ID: 880-34196-/	A-1-B MS							Client	Sample ID: N		
Matrix: Solid									Ргер Тур		
Analysis Batch: 64432									Prep Ba	atch:	6433
	-	Sample	Spike		MS				%Rec		
Analyte	Result	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Ethylbenzene	<0.00201	U F1	0.101	0.06697	F1	mg/Kg		66	70 - 130		
n-Xylene & p-Xylene	<0.00402	U F1	0.202	0.1343	F1	mg/Kg		66	70 - 130		
o-Xylene	<0.00201	U F1	0.101	0.06838	F1	mg/Kg		67	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	102		70 - 130								
1,4-Difluorobenzene (Surr)	102		70 - 130								
Lab Sample ID: 880-34196-/	A-1-C MSD					Cli	ient Sa	ample IC	: Matrix Spik		
Matrix: Solid									Ргер Тур		
Analysis Batch: 64432									Prep Ba	atch:	
	Sample	Sample	Spike	MSD	MSD				%Rec		RP
Analyte		Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Lim
Benzene	<0.00201	U	0.0996	0.09951		mg/Kg		100	70 - 130	10	3
Toluene	<0.00201	U	0.0996	0.08277		mg/Kg		83	70 - 130	15	3
Ethylbenzene	<0.00201	U F1	0.0996	0.08667		mg/Kg		87	70 - 130	26	3
n-Xylene & p-Xylene	<0.00402	U F1	0.199	0.1785		mg/Kg		89	70 - 130	28	3
o-Xylene	<0.00201	U F1	0.0996	0.08121		mg/Kg		81	70 - 130	17	3
Surrogata	MSD %Recovery		Limits								
Surrogate		Quaimer									
4-Bromofluorobenzene (Surr)	112		70 - 130								
1,4-Difluorobenzene (Surr)	102		70 - 130								
ethod: 300.0 - Anions,	Ion Chromat	ography									
Lab Sample ID: MB 880-644	05/1-A							Client S	ample ID: Me	thod	Blan
Matrix: Solid									Prep Ty	pe: S	olubl
Analysis Batch: 64500											
		MB MB									
Analyte	R	esult Qualifier			MDL Unit		) P	repared	Analyzed		Dil Fa
Chloride	•	<5.00 U		5.00	mg/K	g			10/11/23 18:2	28	
Lab Sample ID: LCS 880-64	405/2-A						Client	Sample	ID: Lab Cont		
Matrix: Solid									Prep Ty	pe: S	olubl
Analysis Batch: 64500											
			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			250	251.4		mg/Kg		101	90 - 110		
Lab Sample ID: LCSD 880-6	64405/3-A					Clier	nt Sam	ple ID:	Lab Control S		
Matrix: Solid									Prep Ty	pe: S	olub
Analysis Batch: 64500											
			Spike	LCSD	LCSD				%Rec		RP
Analyte			Added	Pocult	Qualifier	Unit	п	%Rec	Limits	RPD	lim

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## **QC Sample Results**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34201-1 SDG: Lea County, New Mexico

### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-34195-A-	1-C MS							Client	Sample ID		- <b>-</b>
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 64500											
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	116		253	380.1		mg/Kg		105	90 - 110		
			200	500.1							
Lab Sample ID: 880-34195-A- Matrix: Solid Analysis Batch: 64500			200	300.1			ent Sa		: Matrix Sp	oike Dup Type: S	
Lab Sample ID: 880-34195-A- Matrix: Solid	1-D MSD	Sample	Spike		MSD		ent Sa		: Matrix Sp		
Lab Sample ID: 880-34195-A- Matrix: Solid	1-D MSD Sample	Sample Qualifier		MSD	MSD Qualifier		ent Sa		: Matrix Sp Prep		oluble

**Client Sample ID** 

Lab Control Sample

Lab Control Sample Dup

Matrix Spike Duplicate

**Client Sample ID** 

Lab Control Sample

Lab Control Sample Dup

Matrix Spike Duplicate

**Client Sample ID** 

H-7 (0-6")

H-7 (0-6")

Method Blank

Matrix Spike

H-7 (0-6")

Method Blank

Matrix Spike

### **QC** Association Summary

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

Matrix

Solid

Solid

Solid

Solid

Client: Carmona Resources Project/Site: Nighthawk 3H

**GC VOA** 

Prep Batch: 64332

MB 880-64332/5-A

LCS 880-64332/1-A

LCSD 880-64332/2-A

880-34196-A-1-B MS

Lab Sample ID

MB 880-64332/5-A

LCS 880-64332/1-A

LCSD 880-64332/2-A

880-34196-A-1-B MS

880-34196-A-1-C MSD

Analysis Batch: 64587

880-34201-1

880-34196-A-1-C MSD

Analysis Batch: 64432

Lab Sample ID

880-34201-1

Job ID: 880-34201-1

SDG: Lea County, New Mexico

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Prep Batch

Prep Batch

64332

64332

64332

	0
	9

#### Solid 8021B 64332 Solid 8021B 64332 Solid 8021B 64332 Matrix Method Prep Batch

Total BTEX

Method

5035

5035

5035

5035

5035

5035

Method

8021B

8021B

8021B

880-34201-1	
L	

### GC Semi VOA

Lab Sample ID

### Analysis Batch: 64320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34201-1	H-7 (0-6")	Total/NA	Solid	8015B NM	64329
Prep Batch: 64329					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34201-1	H-7 (0-6")	Total/NA	Solid	8015NM Prep	
Analysis Batch: 644	64				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34201-1	H-7 (0-6")	Total/NA	Solid	8015 NM	

### HPLC/IC

#### Leach Batch: 64405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34201-1	H-7 (0-6")	Soluble	Solid	DI Leach	
MB 880-64405/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-34195-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-34195-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 64500

Lab Sample ID 880-34201-1	Client Sample ID H-7 (0-6")	Prep Type Soluble	Matrix Solid	Method 300.0	Prep Batch 64405
MB 880-64405/1-A	Method Blank	Soluble	Solid	300.0	64405
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	300.0	64405
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	64405
880-34195-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	64405

### **QC Association Summary**

	5	
Client: Carmona Resources		Job ID: 880-34201-1
Project/Site: Nighthawk 3H		SDG: Lea County, New Mexico

### HPLC/IC (Continued)

### Analysis Batch: 64500 (Continued)

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
880-34195-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	64405	

Eurofins Midland

### Client Sample ID: H-7 (0-6") Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

Job ID: 880-34201-1 SDG: Lea County, New Mexico

## Lab Sample ID: 880-34201-1

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	64332	10/10/23 10:38	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64432	10/11/23 14:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64587	10/11/23 14:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			64464	10/10/23 21:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	64329	10/10/23 09:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64320	10/10/23 21:22	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	64405	10/10/23 15:31	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64500	10/11/23 19:50	СН	EET MID

#### Laboratory References:

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

Eurofins Midland

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Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34201-1 SDG: Lea County, New Mexico

### Laboratory: Eurofins Midland

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

uthority	Program	n	Identification Number	Expiration Date
exas	NELAP		T104704400-23-26	06-30-24
The following analyti	are included in this report, but t	the laboratory is not certif	ied by the governing authority. This lis	t may include analytes
for which the agency	does not offer certification.	-	, , , , ,	t may molded analytes
for which the agency Analysis Method		Matrix	Analyte	
for which the agency	does not offer certification.	-	, , , , ,	

Eurofins Midland

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### Received by OCD: 11/2/2023 1:36:42 PM

### **Method Summary**

Client: Carmona Resources Project/Site: Nighthawk 3H

Job ID: 880-34201-1 SDG: Lea County, New Mexico

Method	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
3015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
3015NM Prep	Microextraction	SW846	EET MID
OI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

## Sample Summary

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34201-1 SDG: Lea County, New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-34201-1	H-7 (0-6")	Solid	10/04/23 00:00	10/09/23 16:20

Chain of Custody

880-34201 Chain of Custody	
----------------------------	--

Company I wanted		1000			I Company Name		Maratho		Marathon Oil Comoration				Drogram	OTIDO T						1
Address.	310 W Wall St Ste 500	te 500			Addraes		000 7~						State of Denient		Γ	Ç	State of Project	_		L
te ZIP	Midland, TX 79701	1			City Ctata 710		11-1-1-1-1		Houston TV 77004	, and a second sec			Deporting		لے د ک			٦	-	
					City, Clate Lif		100051011, 1 A / / 024	1, 1 > 1 ;	024						ן נפעפו וווייני	Ē		Г		
Phone				Email	msanjari@marathonoil.com	rathonoil.c	m						Deliverables. EDD	EDD		ADaPT		Other <sup>.</sup>		
	7	Nighthawk 3H																		
Pioject Marrie,				Turn	Turn Around						ANALY	SIS RE	ALYSIS REQUEST				Prese	<b>Preservative Codes</b>	Codes	
Project Number		2090		マ Routine	Rush	Code		<b></b>									None NO	σ	DI Water: H <sub>2</sub> O	
Project Location	Lea Co	Lea County, New Mexico	exico	Due Date	5 day										_		Cond Cond	Z		
Sampler's Name		CCM				L		RO)		-							HOI HO	L 3		
PO#						s		+ M									H_SO. H_	2 :	NaOH Ma	
SAMPLE RECEIPT	-	Temp Blank.	Yes(No)	Wet Ice	(Yes) No	etei	в													
Received Intact:	( Yes	No	Thermometer ID		ANT	ram	802		e 30							<u></u>	NAHSO. NARIS	ARIS		
Cooler Custody Seals	Yes (	No (NA)	Correction Factor	Ť	+:20	Pa	ΈX		orid								Na-S-O- NaSO-			
Sample Custody Seals	Yes	No RIA	Temperature Reading	ading	2.4		B										Zn Acetate+NaOH Zn	+NaOH	Zn	
Total Containers.			Corrected Temperature	erature	2.6	<u>L</u>		801		·							NaOH+Ascorbic Acid SAPC	orbic Ac	d SAPC	
Sample Identification	lification	Date	Time	Soil	Water Comp	Cont		TPI									Sam	Sample Comments	nments	
H-7 (0-6")	6")	10/4/2023		×	ه ا		×	×	×	+					_					
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		-							-	1		-			<u> </u>					1
									+-								-			I
																-				L
Comments: Email results to Mike Carmona mcarmona@carmonaresources.com, Conner Moehring cmoehring@carmonaresources.com, Clint Merritt MerrittC@carmonaresources.com	results to Mike	Carmona mo	carmona@ca	monaresource	s.com, Conne	r Moehrir	g cmo	ehring	@carmc	nareso	urces.	iom, C	int Merritt Me	PrrittC	@carm	onares	ources.com	}		
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14, 0	44.46		0			07	5-2-10-	J.						¥	R	V				

5 6 7

5

Job Number: 880-34201-1

List Source: Eurofins Midland

SDG Number: Lea County, New Mexico

### Login Sample Receipt Checklist

Client: Carmona Resources

Login Number: 34201 List Number: 1 Creator: Rodriguez, Leticia

Question Answer Comment The cooler's custody seal, if present, is intact. N/A N/A Sample custody seals, if present, are intact. The cooler or samples do not appear to have been compromised or True tampered with. Samples were received on ice. True True Cooler Temperature is acceptable. 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 True HTs) 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 True MS/MSDs

N/A

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").



**Environment Testing** 

# **ANALYTICAL REPORT**

## **PREPARED FOR**

Attn: Clint Merritt Carmona Resources 310 W Wall St Ste 500 Midland, Texas 79701 Generated 10/12/2023 9:12:23 PM

## JOB DESCRIPTION

Nighthawk 3H SDG NUMBER Lea County, New Mexico

## **JOB NUMBER**

880-34200-1

EOL

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

AMER

Generated 10/12/2023 9:12:23 PM

Authorized for release by Jessica Kramer, Project Manager Jessica.Kramer@et.eurofinsus.com (432)704-5440

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

Laboratory Job ID: 880-34200-1 SDG: Lea County, New Mexico

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2

### **Definitions/Glossary**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34200-1 SDG: Lea County, New Mexico

Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	
U	Indicates the analyte was analyzed for but not detected.	5
GC Semi VOA		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	8
Glossary		9
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	12
DL	Detection Limit (DoD/DOE)	13
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
MPN	Most Probable Number	
MQL	Method Quantitation Limit	
NC	Not Calculated	
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

Quality Control

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

NEG

POS

PQL

PRES QC

RER

RPD TEF

TEQ

TNTC

RL

Job ID: 880-34200-1 SDG: Lea County, New Mexico

### Job ID: 880-34200-1

Client: Carmona Resources Project/Site: Nighthawk 3H

#### Laboratory: Eurofins Midland

#### Narrative

Job Narrative 880-34200-1

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

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

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

#### Receipt

The sample was received on 10/9/2023 4:20 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

#### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: H-8 (0-6") (880-34200-1).

#### GC VOA

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-64332 and analytical batch 880-64432 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### GC Semi VOA

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

#### HPLC/IC

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

Job ID: 880-34200-1 SDG: Lea County, New Mexico

Lab Sample ID: 880-34200-1

### Client Sample ID: H-8 (0-6") Date Collected: 10/04/23 00:00

Date Received: 10/09/23 16:20

Client: Carmona Resources

Project/Site: Nighthawk 3H

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/10/23 10:38	10/11/23 14:25	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/10/23 10:38	10/11/23 14:25	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/10/23 10:38	10/11/23 14:25	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/10/23 10:38	10/11/23 14:25	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/10/23 10:38	10/11/23 14:25	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/10/23 10:38	10/11/23 14:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				10/10/23 10:38	10/11/23 14:25	1
1,4-Difluorobenzene (Surr)	103		70 - 130				10/10/23 10:38	10/11/23 14:25	1
Method: TAL SOP Total BTEX - 1	Total BTEX Calo	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00398	U	0.00398		mg/Kg			10/11/23 14:25	1
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (	GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte		Qualifier		MDL		<u>D</u>	Prepared	Analyzed	Dil Fac
Analyte Total TPH	Result <49.7	Qualifier U	<b>RL</b> 49.7	MDL	Unit	<u> </u>	Prepared		
Analyte Total TPH Method: SW846 8015B NM - Dies	Result <49.7	Qualifier U	<b>RL</b> 49.7		Unit	<u>D</u> 	Prepared		1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	Result <49.7	Qualifier U Inics (DRO) Qualifier	RL 49.7		Unit mg/Kg			10/10/23 21:00	1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <49.7 sel Range Orga Result	Qualifier U Qualifier Qualifier U	(GC)		Unit mg/Kg Unit		Prepared	10/10/23 21:00 Analyzed	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <49.7 sel Range Orga Result <49.7	Qualifier U Qualifier U U U	RL           49.7           (GC)           RL           49.7		Unit mg/Kg Unit mg/Kg		Prepared 10/10/23 09:30	Analyzed           10/10/23 21:00	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result           <49.7	Qualifier U Qualifier U U U U	RL           49.7           (GC)           RL           49.7           49.7		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30	Analyzed           10/10/23 21:00           10/10/23 21:00           10/10/23 21:00	1 Dil Fac 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result           <49.7	Qualifier U Qualifier U U U U	RL		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30	Analyzed           10/10/23 21:00           10/10/23 21:00           10/10/23 21:00           10/10/23 21:00	1 Dil Fac 1 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result           <49.7	Qualifier U Qualifier U U U U	RL           49.7           (GC)           RL           49.7           49.7           49.7           Limits		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared	Analyzed           10/10/23 21:00           4nalyzed           10/10/23 21:00           10/10/23 21:00           10/10/23 21:00           4nalyzed	1 Dil Fac 1 1 1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result           <49.7	Qualifier U Qualifier U U U Qualifier	RL         49.7           (GC)         RL           49.7         49.7           49.7         49.7           20.7         10.7           Limits         70 - 130           70 - 130         70 - 130		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared 10/10/23 09:30	I0/10/23 21:00           Analyzed           10/10/23 21:00           10/10/23 21:00           10/10/23 21:00           Analyzed           10/10/23 21:00	1 Dil Fac 1 1 1 1 <i>Dil Fac</i> 1
	Result           <49.7	Qualifier U Qualifier U U U Qualifier	RL         49.7           (GC)         RL           49.7         49.7           49.7         49.7           20.7         10.7           Limits         70 - 130           70 - 130         70 - 130		Unit mg/Kg Mg/Kg mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared 10/10/23 09:30	I0/10/23 21:00           Analyzed           10/10/23 21:00           10/10/23 21:00           10/10/23 21:00           Analyzed           10/10/23 21:00	1 Dil Fac 1 1 1 1 <i>Dil Fac</i> 1

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- -80 - 10 01 0

Matrix: Solid

Job ID: 880-34200-1 SDG: Lea County, New Mexico

Prep Type: Total/NA

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

_		0504	05074	Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)		5
880-34196-A-1-B MS	Matrix Spike	102	102	·	
880-34196-A-1-C MSD	Matrix Spike Duplicate	112	102		6
880-34200-1	H-8 (0-6")	103	103		
LCS 880-64332/1-A	Lab Control Sample	111	104		
LCSD 880-64332/2-A	Lab Control Sample Dup	99	101		
MB 880-64332/5-A	Method Blank	108	122		8
Surrogate Legend BFB = 4-Bromofluorober	nzene (Surr)				C
DFBZ = 1,4-Difluoroben	zene (Surr)	(220) (20			1
Method: 8015B NM	- Diesel Range Organics	s (DRO) (GC	)		
Aatrix: Solid				Prep Type: Total/NA	
-				Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
880-34200-1	H-8 (0-6")	126	127		

Surrogate Legend 1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Carmona Resources

### Job ID: 880-34200-1 SDG: Lea County, New Mexico

Project/Site: Nighthawk 3H

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

	2/5-A								0	Client Sa	mple ID: Meth	od Blank
Matrix: Solid											Prep Type:	Total/N/
Analysis Batch: 64432											Prep Batc	h: 6433
	MI	В МВ										
Analyte	Resu	t Qualifier	RL		MDL U	Jnit		D	Pre	epared	Analyzed	Dil Fa
Benzene	<0.0020	0 U	0.00200		n	ng/Kg		1	0/10	/23 10:38	10/11/23 12:35	
Toluene	< 0.0020	D U	0.00200		n	ng/Kg		1	0/10	/23 10:38	10/11/23 12:35	
Ethylbenzene	< 0.0020	D U	0.00200		n	ng/Kg		1	0/10	/23 10:38	10/11/23 12:35	
m-Xylene & p-Xylene	<0.0040	D U	0.00400		n	ng/Kg		1	0/10	/23 10:38	10/11/23 12:35	
o-Xylene	<0.0020	U U	0.00200		n	ng/Kg		1	0/10	/23 10:38	10/11/23 12:35	
Xylenes, Total	<0.0040	D U	0.00400		n	ng/Kg		1	0/10	/23 10:38	10/11/23 12:35	
	М	3 <i>MB</i>										
Surrogate	%Recover	y Qualifier	Limits						Pr	epared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	10	8	70 - 130					1	10/10	/23 10:38	10/11/23 12:35	
1,4-Difluorobenzene (Surr)	12	2	70 - 130					1	10/10	/23 10:38	10/11/23 12:35	
Lab Sample ID: LCS 880-6433		2	70 - 130								D: Lab Contro	
Lab Sample ID: LCS 880-6433 Matrix: Solid		2	70 - 130								D: Lab Contro Prep Type:	Total/N
1,4-Difluorobenzene (Surr) Lab Sample ID: LCS 880-6433 Matrix: Solid Analysis Batch: 64432		2		1.05	1.05						D: Lab Contro Prep Type: Prep Batc	Total/N
Lab Sample ID: LCS 880-6433 Matrix: Solid Analysis Batch: 64432		2	70 - 130 Spike Added	LCS Result		er U	nit	Clie			D: Lab Contro Prep Type:	Total/N
Lab Sample ID: LCS 880-6433 Matrix: Solid Analysis Batch: 64432		2	Spike				nit ıg/Kg	Clie	ent	Sample	D: Lab Contro Prep Type: Prep Batc %Rec	Total/N
Lab Sample ID: LCS 880-6433 Matrix: Solid Analysis Batch: 64432 Analyte Benzene		2	Spike Added	Result		m		Clie	ent	Sample	D: Lab Contro Prep Type: Prep Batc %Rec Limits	Total/N
Lab Sample ID: LCS 880-6433 Matrix: Solid Analysis Batch: 64432 Analyte Benzene Toluene		2	Spike Added 0.100	<b>Result</b> 0.1166		m m	ig/Kg	Clie	ent	Sample   %Rec 117	ID: Lab Contro Prep Type: Prep Batc %Rec Limits 70 - 130	Total/N
Lab Sample ID: LCS 880-6433 Matrix: Solid Analysis Batch: 64432 Analyte Benzene Toluene Ethylbenzene		2	<b>Spike</b> Added 0.100 0.100	<b>Result</b> 0.1166 0.09644		m m m	ig/Kg ig/Kg	Clie	ent	<b>Sample</b> <b>%Rec</b> 117 96	D: Lab Contro Prep Type: Prep Batc %Rec Limits 70 - 130 70 - 130	Total/N
Lab Sample ID: LCS 880-6433 Matrix: Solid Analysis Batch: 64432 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene		2	Spike Added 0.100 0.100 0.100	<b>Result</b> 0.1166 0.09644 0.09544		m m m m	ig/Kg ig/Kg ig/Kg	Clie	ent	Sample   %Rec 117 96 95	<b>D: Lab Contro</b> <b>Prep Type:</b> <b>Prep Batc</b> <b>%Rec</b> <b>Limits</b> 70 - 130 70 - 130 70 - 130	Total/N
Lab Sample ID: LCS 880-6433 Matrix: Solid Analysis Batch: 64432 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene			Spike Added 0.100 0.100 0.100 0.200	<b>Result</b> 0.1166 0.09644 0.09544 0.1878		m m m m	ig/Kg ig/Kg ig/Kg ig/Kg	Clie	ent	<b>Sample</b> <b>%Rec</b> 117 96 95 94	<b>D: Lab Contro</b> <b>Prep Type:</b> <b>Prep Batc</b> <b>%Rec</b> <b>Limits</b> 70 - 130 70 - 130 70 - 130 70 - 130	Total/N
Lab Sample ID: LCS 880-6433 Matrix: Solid Analysis Batch: 64432 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	2/1-A		Spike Added 0.100 0.100 0.100 0.200	<b>Result</b> 0.1166 0.09644 0.09544 0.1878		m m m m	ig/Kg ig/Kg ig/Kg ig/Kg	Clie	ent	<b>Sample</b> <b>%Rec</b> 117 96 95 94	<b>D: Lab Contro</b> <b>Prep Type:</b> <b>Prep Batc</b> <b>%Rec</b> <b>Limits</b> 70 - 130 70 - 130 70 - 130 70 - 130	Total/N
Lab Sample ID: LCS 880-6433 Matrix: Solid Analysis Batch: 64432 Analyte	2/1-A		Spike           Added           0.100           0.100           0.100           0.200           0.100	<b>Result</b> 0.1166 0.09644 0.09544 0.1878		m m m m	ig/Kg ig/Kg ig/Kg ig/Kg	Clie	ent	<b>Sample</b> <b>%Rec</b> 117 96 95 94	<b>D: Lab Contro</b> <b>Prep Type:</b> <b>Prep Batc</b> <b>%Rec</b> <b>Limits</b> 70 - 130 70 - 130 70 - 130 70 - 130	Total/NA

### Lab Sample ID: LCSD 880-64332/2-A

### Matrix: Solid

Analysis Batch: 64432								Batch:	64332
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1117		mg/Kg		112	70 - 130	4	35
Toluene	0.100	0.09300		mg/Kg		93	70 - 130	4	35
Ethylbenzene	0.100	0.09384		mg/Kg		94	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1837		mg/Kg		92	70 - 130	2	35
o-Xylene	0.100	0.08378		mg/Kg		84	70 - 130	7	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

### Lab Sample ID: 880-34196-A-1-B MS

### Matrix: Solid

Analysis Batch: 64432									Prep	Batch: 64332
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.101	0.09018		mg/Kg		89	70 - 130	
Toluene	<0.00201	U	0.101	0.07128		mg/Kg		71	70 - 130	

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Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Client: Carmona Resources

Project/Site: Nighthawk 3H

### Job ID: 880-34200-1 SDG: Lea County, New Mexico

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

Lab Sample ID: 880-34196-A Matrix: Solid	A-1-B MS							Client	Sample ID: Prop T	: Matrix ype: To	
Analysis Batch: 64432	Commis	Sample	Calles	MS	MS					Batch:	0433
Analyta	•	Qualifier	Spike Added	Result		Unit	D	% Baa	%Rec Limits		
Analyte	<0.00201		0.101	0.06697				%Rec 66	70 - 130		
Ethylbenzene						mg/Kg					
m-Xylene & p-Xylene	< 0.00402		0.202	0.1343		mg/Kg		66	70 - 130		
o-Xylene	<0.00201	UFI	0.101	0.06838	FI	mg/Kg		67	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	102		70 - 130	-							
1,4-Difluorobenzene (Surr)	102		70 - 130								
Lab Sample ID: 880-34196-4	A-1-C MSD					с	lient Sa	ample IC	): Matrix Sp	oike Du	plicat
Matrix: Solid									-	ype: To	-
Analysis Batch: 64432										Batch:	
,,	Sample	Sample	Spike	MSD	MSD				%Rec		RP
Analyte	•	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Lim
Benzene	<0.00201		0.0996	0.09951		mg/Kg		100	70 - 130	10	
Toluene	< 0.00201		0.0996	0.08277		mg/Kg		83	70 - 130	15	3
Ethylbenzene	< 0.00201		0.0996	0.08667		mg/Kg		87	70 - 130	26	3
m-Xylene & p-Xylene	< 0.00402		0.199	0.1785		mg/Kg		89	70 - 130	28	
p-Xylene	<0.00201		0.0996	0.08121		mg/Kg		81	70 - 130	17	3
Б-Хуюне	\$0.00201	011	0.0330	0.00121		ing/itg		01	70 - 150	17	
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	112		70 - 130	-							
1,4-Difluorobenzene (Surr)	102		70 - 130								
ethod: 300.0 - Anions,	Ion Chromat	ography									
Lab Sample ID: MB 880-644	05/1-A							Client S	ample ID: I	Method	l Blan
Matrix: Solid									Prep	Type: S	Solub
Analysis Batch: 64500											
		MB MB									
Analyte	R	esult Qualifier		RL	MDL Unit		D P	repared	Analyz	ed	Dil Fa
Chloride	<	<5.00 U		5.00	mg/k	ίg			10/11/23	18:28	
Lab Sample ID: LCS 880-64	405/2-A						Client	Sample	D: Lab Co	ontrol S	Sampl
Matrix: Solid	-									Type: S	
Analysis Batch: 64500											
			Spike	LCS	LCS				%Rec		
Analyte			Added		Qualifier	Unit	D	%Rec	Limits		
Chloride			250	251.4		mg/Kg		101	90 - 110		
Lab Sample ID: LCSD 880-6	64405/3-A					Clie	ent Sam	iple ID:	Lab Contro		
Matrix: Solid									Prep	Type: S	solub
Analysis Batch: 64500											
			Spike	LCSD	LCSD				%Rec		RP

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	251.8		mg/Kg		101	90 - 110	0	20

## **QC Sample Results**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34200-1 SDG: Lea County, New Mexico

### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-34195-A-1-	-C MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep	Type: So	oluble
Analysis Batch: 64500											
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	116		253	380.1		mg/Kg		105	90 - 110		
Matrix: Solid	-D MSD					Cli	ent S	ample IC	): Matrix Sp Prep	oike Dup Type: So	
Matrix: Solid		Sample	Spike	MSD	MSD	Cli	ent S	ample ID			
Lab Sample ID: 880-34195-A-1- Matrix: Solid Analysis Batch: 64500 Analyte	Sample	Sample Qualifier	Spike Added		MSD Qualifier	Cli Unit	ient Sa	ample ID %Rec	Prep		oluble
**Client Sample ID** 

Lab Control Sample

Lab Control Sample Dup

Matrix Spike Duplicate

**Client Sample ID** 

Lab Control Sample

Lab Control Sample Dup

Matrix Spike Duplicate

**Client Sample ID** 

H-8 (0-6")

H-8 (0-6")

Method Blank

Matrix Spike

H-8 (0-6")

Method Blank

Matrix Spike

# **QC** Association Summary

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

Matrix

Solid

Client: Carmona Resources Project/Site: Nighthawk 3H

**GC VOA** 

Prep Batch: 64332

MB 880-64332/5-A

LCS 880-64332/1-A

LCSD 880-64332/2-A

880-34196-A-1-B MS

Lab Sample ID

MB 880-64332/5-A

LCS 880-64332/1-A

LCSD 880-64332/2-A

880-34196-A-1-B MS

880-34196-A-1-C MSD

Analysis Batch: 64586

880-34200-1

880-34196-A-1-C MSD

Analysis Batch: 64432

Lab Sample ID

880-34200-1

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Prep Batch

Prep Batch

64332

64332

64332

64332

64332

64332

Prep Batch

#### Job ID: 880-34200-1 SDG: Lea County, New Mexico

Method

5035

5035

5035

5035

5035

5035

Method

8021B

8021B

8021B

8021B

8021B

8021B

Method

Total BTEX

GC Semi VOA

Lab Sample ID

880-34200-1

#### Analysis Batch: 64320

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-34200-1	H-8 (0-6")	Total/NA	Solid	8015B NM	64329
Prep Batch: 64329					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34200-1	H-8 (0-6")	Total/NA	Solid	8015NM Prep	
Analysis Batch: 644	63				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34200-1	H-8 (0-6")	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 64405

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-34200-1	H-8 (0-6")	Soluble	Solid	DI Leach	
MB 880-64405/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-34195-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-34195-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 64500

Lab Sample ID 880-34200-1	Client Sample ID H-8 (0-6")	Prep Type Soluble	Matrix Solid	Method 300.0	Prep Batch 64405
MB 880-64405/1-A	Method Blank	Soluble	Solid	300.0	64405
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	300.0	64405
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	64405
880-34195-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	64405

**Eurofins Midland** 

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# **QC Association Summary**

Client: Carmona Resources	Job ID: 880-34200-1
Project/Site: Nighthawk 3H	SDG: Lea County, New Mexico

### HPLC/IC (Continued)

### Analysis Batch: 64500 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
880-34195-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	64405	

Eurofins Midland

Project/Site: Nighthawk 3H

#### Client Sample ID: H-8 (0-6") Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

Job ID: 880-34200-1 SDG: Lea County, New Mexico

# Lab Sample ID: 880-34200-1 Matrix: Solid

Solid

9

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	64332	10/10/23 10:38	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64432	10/11/23 14:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64586	10/11/23 14:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			64463	10/10/23 21:00	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	64329	10/10/23 09:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64320	10/10/23 21:00	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	64405	10/10/23 15:31	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64500	10/11/23 19:44	СН	EET MID

#### Laboratory References:

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

Eurofins Midland

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Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34200-1 SDG: Lea County, New Mexico

#### Laboratory: Eurofins Midland

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

Authority	Progra	am	Identification Number	Expiration Date
lexas	The following analytes are included in this report, but the laboratory is not certi for which the agency does not offer certification.	T104704400-23-26	06-30-24	
• •		t the laboratory is not certif	ied by the governing authority. This lis	t may include analytes
• ,	,	Matrix	Analyte	
Analysis Method	y does not offer certification. Prep Method	Matrix	Analyte	
Analysis Method	,	Matrix Solid	Analyte Total TPH	

Eurofins Midland

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#### Received by OCD: 11/2/2023 1:36:42 PM

# **Method Summary**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34200-1 SDG: Lea County, New Mexico

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
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

# Sample Summary

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34200-1 SDG: Lea County, New Mexico

Lab Sample ID Client Sample ID Matrix Collected Receive	ved
880-34200-1         H-8 (0-6")         Solid         10/04/23 00:00         10/09/23 16	16:20

<b>Released to Imaging:</b>	3/18/2024 8:58:24 AM
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Relinquished by (Signature) DaterTime	Comments Email results to Mike Carmona mcarmona@carmonaresources.com, Conner Moehring cmoehring@carmonaresources.co					H-8 (0-6") 10/4/2023 X G 1 X X I	ation Date Time Soil Water Comp Cont	Total Containers. Corrected Temperature 2.0	5. Yes No WA Temperature Reading 7.4		Ne Thermometer ID TWO ram	RO	))	CCM	Project Location Lea County, New Mexico Due Date 5 day	sh Pres	ANA	Phone. Email msanjari@marathonoll.com	City, State ZIP Midland TX 79701 City, State ZIP Houston TX 77024		y Name	Project Manager Clinton Merritt Bill to (if different) Melodie Sanjari	
	naresources					×		ure	Q			Wet Ice			le Date	Routine	Turn A	Email	0			-	
	.com, Conne					a		2.0	7.Y	t,6	200	Ves No	}		5 dav	Rush	round	nsanları@mai	Xity, State ZIP	Iddress	<b>Jompany Name</b>	3ill to (if different)	
	r Moehrir					1		ļl		Pa	ram	eter	5			Pres. Code		rathonoll c					
Date/Tim	ig cmoel						TDI	1 801										om	Houston	990 Towi	Marathor	Melodie (	
0703	hring@c.												• NGF						TX 77024	n and Cou	1 Oil Corpo	Sanjari	
	armonar																			ntry Blvd	pration		
	esource																ANA						
R	s.com, C														-		LYSIS REQUEST						
Received by	es.com, Clint Merritt MerrittC@carmonaresources.com		-				<u> </u>								-		QUEST	Delive	Repo	State	Prog		]
	ritt Merr																	Deliverables EDD	Reporting Level II Level III	State of Project:	Program UST/PST PRP		
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	esource	 	 +		-	_		NaC	Zn A	Na	NaH			000		Non			ST/UST		rownfield	Work Order Comments	_
	s.com						Sample	H+Ascort	Zn Acetate+NaOH Zn	NanShOr NaSOr	NaHSO, NAE		חר חר			None NO	Preserv	Other			Drownfields RC	ments	Page
Date/Time							Sample Comments	NaOH+Ascorbic Acid SAPC	aOH Zh	į į	n N	NaOn Na	HNU3. HN	MeOH Me			Preservative Codes	*			> Diperfund		_1 of
							ints	APC				Na	I I	Me			des	1	el IV		rfun		

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5 6

5

Job Number: 880-34200-1

List Source: Eurofins Midland

SDG Number: Lea County, New Mexico

### Login Sample Receipt Checklist

Client: Carmona Resources

Login Number: 34200 List Number: 1 Creator: Rodriguez, Leticia

<6mm (1/4").

Question Answer Comment The cooler's custody seal, if present, is intact. N/A N/A Sample custody seals, if present, are intact. The cooler or samples do not appear to have been compromised or True tampered with. Samples were received on ice. True True Cooler Temperature is acceptable. 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 True HTs) 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 True MS/MSDs

N/A

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Containers requiring zero headspace have no headspace or bubble is



**Environment Testing** 

# ANALYTICAL REPORT

# PREPARED FOR

Attn: Clint Merritt Carmona Resources 310 W Wall St Ste 500 Midland, Texas 79701 Generated 10/12/2023 9:11:26 PM

# **JOB DESCRIPTION**

Nighthawk 3H SDG NUMBER Lea County, New Mexico

# **JOB NUMBER**

880-34199-1

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

AMER

Generated 10/12/2023 9:11:26 PM

Authorized for release by Jessica Kramer, Project Manager Jessica.Kramer@et.eurofinsus.com (432)704-5440

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

Laboratory Job ID: 880-34199-1 SDG: Lea County, New Mexico

# **Table of Contents**

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QC Sample Results	8
QC Association Summary	11
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Sample Summary	16
Chain of Custody	17
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2

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34199-1 SDG: Lea County, New Mexico

Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	4
F1	MS and/or MSD recovery exceeds control limits.	
U	Indicates the analyte was analyzed for but not detected.	5
GC Semi VOA Qualifier	Qualifier Description	6
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC Qualifier	Qualifier Description	
	Indicates the analyte was analyzed for but not detected.	
		Q
Glossary		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	10
¤	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)	10
Dil Fac	Dilution Factor	13
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
MPN	Most Probable Number	
MQL	Method Quantitation Limit	
NC	Not Calculated	
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	
NEG	Negative / Absent	

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Practical Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

Presumptive Quality Control

PQL

QC RER

RL

RPD

TEF TEQ

TNTC

PRES

Job ID: 880-34199-1 SDG: Lea County, New Mexico

#### Job ID: 880-34199-1

Client: Carmona Resources Project/Site: Nighthawk 3H

#### Laboratory: Eurofins Midland

#### Narrative

Job Narrative 880-34199-1

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

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

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

#### Receipt

The sample was received on 10/9/2023 4:20 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

#### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: H-9 (0-6") (880-34199-1).

#### GC VOA

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-64332 and analytical batch 880-64432 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### GC Semi VOA

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: H-9 (0-6") (880-34199-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### HPLC/IC

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

Job ID: 880-34199-1 SDG: Lea County, New Mexico

Lab Sample ID: 880-34199-1

### Client Sample ID: H-9 (0-6") Date Collected: 10/04/23 00:00

Date Received: 10/09/23 16:20

Client: Carmona Resources

Project/Site: Nighthawk 3H

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		10/10/23 10:38	10/11/23 14:05	1
Toluene	<0.00198	U	0.00198		mg/Kg		10/10/23 10:38	10/11/23 14:05	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		10/10/23 10:38	10/11/23 14:05	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		10/10/23 10:38	10/11/23 14:05	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		10/10/23 10:38	10/11/23 14:05	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		10/10/23 10:38	10/11/23 14:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130				10/10/23 10:38	10/11/23 14:05	1
1,4-Difluorobenzene (Surr)	102		70 - 130				10/10/23 10:38	10/11/23 14:05	1
Method: TAL SOP Total BTEX -	Total BTEX Calo	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00396	U	0.00396		mg/Kg			10/11/23 14:05	1
	el Range Organ				iiig/itg			10/11/20 11:00	
Method: SW846 8015 NM - Diese Analyte	Result	<mark>ics (DRO) (</mark> Qualifier	GC) RL	MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte		<mark>ics (DRO) (</mark> Qualifier	GC)	MDL		<u>D</u>	Prepared		Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH	Result <49.7	ics (DRO) ( Qualifier U	GC) 	MDL	Unit	<u> </u>	Prepared	Analyzed	
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Die	Result <49.7	ics (DRO) ( Qualifier U	GC) 		Unit	D	Prepared	Analyzed	
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics	Result <49.7	ics (DRO) ( Qualifier U nics (DRO) Qualifier	GC) <u>RL</u> 49.7		Unit mg/Kg			Analyzed 10/10/23 20:38	1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <49.7 sel Range Orga Result	ics (DRO) ( Qualifier U nics (DRO) Qualifier U	GC) <u> RL</u> 49.7 (GC) <u> RL</u> 		Unit mg/Kg Unit		Prepared	Analyzed 10/10/23 20:38 Analyzed	1 Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result 49.7 sel Range Orga Result <49.7	ics (DRO) ( Qualifier U nics (DRO) Qualifier U	GC) <u>RL</u> 49.7 (GC) <u>RL</u> 49.7		Unit mg/Kg Unit mg/Kg		Prepared 10/10/23 09:30	Analyzed 10/10/23 20:38 Analyzed 10/10/23 20:38	1 Dil Fac 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result           <49.7	ics (DRO) ( Qualifier U nics (DRO) Qualifier U U U	GC) <u>RL</u> 49.7 (GC) <u>RL</u> 49.7 49.7		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30	Analyzed 10/10/23 20:38 Analyzed 10/10/23 20:38 10/10/23 20:38	1 Dil Fac 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result           <49.7	ics (DRO) ( Qualifier U nics (DRO) Qualifier U U U	GC) <u>RL</u> 49.7 (GC) <u>RL</u> 49.7 49.7 49.7		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30	Analyzed 10/10/23 20:38 Analyzed 10/10/23 20:38 10/10/23 20:38 10/10/23 20:38	1 1 1 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result           <49.7	ics (DRO) ( Qualifier U nics (DRO) Qualifier U U Qualifier	GC) <u>RL</u> 49.7 (GC) <u>RL</u> 49.7 49.7 49.7 <u>Limits</u>		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared	Analyzed 10/10/23 20:38 Analyzed 10/10/23 20:38 10/10/23 20:38 10/10/23 20:38 Analyzed	1 Dil Fac 1 1 1 Dil Fac
_ Method: SW846 8015 NM - Diese	Result           <49.7	ics (DRO) ( Qualifier U nics (DRO) Qualifier U U U U Qualifier S1+ S1+	GC) <u>RL</u> 49.7 (GC) <u>RL</u> 49.7 49.7 49.7 <u>Limits</u> 70 - 130 70 - 130		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared 10/10/23 09:30	Analyzed 10/10/23 20:38 Analyzed 10/10/23 20:38 10/10/23 20:38 10/10/23 20:38 Analyzed 10/10/23 20:38	1 Dil Fac 1 1 1 1 1 <b>Dil Fac</b> 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result <49.7 sel Range Orga Result <49.7 <49.7 <49.7 <49.7 %Recovery 154 159	ics (DRO) ( Qualifier U nics (DRO) Qualifier U U U U Qualifier S1+ S1+	GC) <u>RL</u> 49.7 (GC) <u>RL</u> 49.7 49.7 49.7 <u>Limits</u> 70 - 130 70 - 130		Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared 10/10/23 09:30	Analyzed 10/10/23 20:38 Analyzed 10/10/23 20:38 10/10/23 20:38 10/10/23 20:38 Analyzed 10/10/23 20:38	1 Dil Fac 1 1 1 1 1 <b>Dil Fac</b> 1

Eurofins Midland

Matrix: Solid

5

Released to Imaging: 3/18/2024 8:58:24 AM

10/12/2023

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34199-1 SDG: Lea County, New Mexico

Prep Type: Total/NA

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

		DED4	DED74	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
880-34196-A-1-B MS	Matrix Spike	102	102		
880-34196-A-1-C MSD	Matrix Spike Duplicate	112	102		
880-34199-1	H-9 (0-6")	97	102		- 7
LCS 880-64332/1-A	Lab Control Sample	111	104		
LCSD 880-64332/2-A	Lab Control Sample Dup	99	101		
MB 880-64332/5-A	Method Blank	108	122		
Surrogate Legend					ŝ
BFB = 4-Bromofluorober	nzene (Surr)				
DFBZ = 1,4-Difluorobenz	zene (Surr)				1
lethod: 8015B NM	- Diesel Range Organics	s (DRO) (GC	3)		
latrix: Solid		(2.1.0) (00	,	Prep Type: Total/NA	
				Percent Surrogate Recovery (Acceptance Limits)	

		1CO1	OTPH1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
880-34199-1	H-9 (0-6")	154 S1+	159 S1+		
Surrogate Legend					
1CO = 1-Chlorooctane				 _	
OTPH = o-Terphenvl					

Project/Site: Nighthawk 3H

Client: Carmona Resources

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

Lab Sample ID: MB 880-6433 Matrix: Solid	32/5-A								Client S	ample ID: M Prep Ty	pe: To	otal/NA
Analysis Batch: 64432	_									Prep I	Batch:	6433
Analyte		IB MB ult Qualifier	RL		MDL	Unit		D	Prepared	Analyze	ч	Dil Fa
Benzene	<0.002		0.00200			mg/Kg			/10/23 10:38	10/11/23 12		Dii Fa
Toluene	<0.002		0.00200			mg/Kg			/10/23 10:38	10/11/23 12		
Ethylbenzene	<0.002		0.00200			mg/Kg			/10/23 10:38	10/11/23 12		
m-Xylene & p-Xylene	<0.002		0.00200			mg/Kg			/10/23 10:38	10/11/23 12		
o-Xylene	<0.004		0.00400			mg/Kg			/10/23 10:38	10/11/23 12		
Xylenes, Total	<0.002		0.00200			mg/Kg			/10/23 10:38	10/11/23 12		
Aylenes, lotal	-0.004	000	0.00400			iiig/itg		10	10/23 10.30	10/11/20 12		
	٨	1B MB										
Surrogate	%Recove	ry Qualifier	Limits						Prepared	Analyze	d	Dil Fa
4-Bromofluorobenzene (Surr)	1	08	70 - 130					10	/10/23 10:38	10/11/23 12	2:35	
1,4-Difluorobenzene (Surr)	1.	22	70 - 130					10	/10/23 10:38	10/11/23 12	2:35	
Lab Sample ID: LCS 880-643	332/1-A							Clie	nt Sample	ID: Lab Cor	ntrol S	Sample
Matrix: Solid										Prep Ty		
Analysis Batch: 64432										Prep I	-	
			Spike	LCS	LCS					%Rec	Jutom	0400
Analyte			Added	Result		lifier U	nit	D	%Rec	Limits		
Benzene			0.100	0.1166			ng/Kg		117	70 - 130		
Toluene			0.100	0.09644			ng/Kg		96	70 - 130		
Ethylbenzene			0.100	0.09544			ng/Kg		95	70 - 130		
m-Xylene & p-Xylene			0.200	0.1878			ng/Kg		94	70 - 130		
o-Xylene			0.100	0.09012			ng/Kg		90	70 - 130		
							.33					
	LCS L											
Surrogate	%Recovery Q	ualifier	Limits									
4-Bromofluorobenzene (Surr)	111		70 - 130									
1,4-Difluorobenzene (Surr)	104		70 - 130									
Lab Sample ID: LCSD 880-6	4332/2-A						Clie	nt Sa	mple ID: L	ab Control	Samp	le Dup
Matrix: Solid										Prep Ty	pe: To	otal/NA
Analysis Batch: 64432										Prep I	Batch:	64332
			Spike	LCSD	LCS	D				%Rec		RPD
Analyte			Added	Result	Qua	lifier U	Init	D	%Rec	Limits	RPD	Limi
Benzene			0.100	0.1117		n	ng/Kg		112	70 - 130	4	3
Toluene			0.100	0.09300			ng/Kg		93	70 - 130	4	3
Ethylbenzene			0.100	0.09384		n	ng/Kg		94	70 - 130	2	3
m-Xylene & p-Xylene			0.200	0.1837		n	ng/Kg		92	70 - 130	2	3
o-Xylene			0.100	0.08378		n	ng/Kg		84	70 - 130	7	38
	LCSD L	CSD										
Surrogate	%Recovery Q	ualifier	Limits									
4-Bromofluorobenzene (Surr)	99		70 - 130									
1,4-Difluorobenzene (Surr)	101		70 - 130									
Lab Sample ID: 880-34196-A	-1-B MS								Client	Sample ID:	Matrix	
Matrix: Solid									Cheft	Prep Ty		
Analysis Batch: 64432										Prep I		
	Sample S	ample	Spike	MS	MS					%Rec		
Analyte	Result Q	-	Added	Result		lifier L	nit	D	%Rec	Limits		
· ·····, ···												
Benzene	<0.00201 U		0.101	0.09018		n	ng/Kg		89	70 - 130		

Eurofins Midland

<0.00201 U

Toluene

0.07128

mg/Kg

71

70 - 130

0.101

Client: Carmona Resources

Project/Site: Nighthawk 3H

#### Job ID: 880-34199-1 SDG: Lea County, New Mexico

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

Lab Sample ID: 880-34196-4	A-1-B MS							Client	Sample ID: N		
Matrix: Solid									Ргер Тур		
Analysis Batch: 64432									Prep B	atch:	6433
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Ethylbenzene	<0.00201	U F1	0.101	0.06697	F1	mg/Kg		66	70 - 130		
m-Xylene & p-Xylene	< 0.00402	U F1	0.202	0.1343	F1	mg/Kg		66	70 - 130		
o-Xylene	<0.00201	U F1	0.101	0.06838	F1	mg/Kg		67	70 - 130		
		MS									
Surrogate	%Recovery	Qualifier	Limits	-							
4-Bromofluorobenzene (Surr)	102		70 - 130								
1,4-Difluorobenzene (Surr)	102		70 - 130								
Lab Sample ID: 880-34196-4	A-1-C MSD					(	Client S	ample IC	): Matrix Spik	e Dup	licat
Matrix: Solid									Ргер Тур	be: Tot	al/N
Analysis Batch: 64432									Prep B	atch:	6433
	Sample	Sample	Spike	MSD	MSD				%Rec		RPI
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Lim
Benzene	<0.00201	U	0.0996	0.09951		mg/Kg		100	70 - 130	10	3
Toluene	<0.00201	U	0.0996	0.08277		mg/Kg		83	70 - 130	15	3
Ethylbenzene	<0.00201	U F1	0.0996	0.08667		mg/Kg		87	70 - 130	26	3
m-Xylene & p-Xylene	<0.00402	U F1	0.199	0.1785		mg/Kg		89	70 - 130	28	3
o-Xylene	<0.00201	U F1	0.0996	0.08121		mg/Kg		81	70 - 130	17	3
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits	-							
4-Bromofluorobenzene (Surr)	112		70 - 130								
1,4-Difluorobenzene (Surr)	102		70 - 130								
lethod: 300.0 - Anions,	Ion Chromat	ography									
Lab Sample ID: MB 880-644	05/1-A							Client S	ample ID: Me	thod	Blan
Matrix: Solid									Prep Ty	pe: Se	olubl
Analysis Batch: 64500											
		MB MB									
Analyte	R	esult Qualifier		RL	MDL Unit		D P	repared	Analyzed		Dil Fa
Chloride	<	5.00 U		5.00	mg/K	íg			10/11/23 18:		
Lab Sample ID: LCS 880-64	405/2-A						Client	t Sample	ID: Lab Con	trol Sa	ample
Matrix: Solid									Prep Ty		
Analysis Batch: 64500											
			Spike		LCS				%Rec		
Analyte			Added		Qualifier	Unit	<u>D</u>	%Rec	Limits		
Chloride			250	251.4		mg/Kg		101	90 - 110		
Lab Sample ID: LCSD 880-6	4405/3-A					Cli	ent San	nple ID: I	Lab Control S		
Matrix: Solid									Prep Ty	pe: So	olubl
Analysis Batch: 64500											_
									0/ 5		

-	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	 250	251.8		mg/Kg		101	90 - 110	0	20

Eurofins Midland

· 880-34199-1

# **QC Sample Results**

Client: Carmona Resources Project/Site: Nighthawk 3H

Job ID: 880-34199-1 SDG: Lea County, New Mexico

## Method: 300.0 - Anions, Ion Chromatography (Continued)

ab Sample ID: 880-34195-A-	1 C MS							Client	Sample ID	Motrix	Spika	
ab Sample ID: 880-34195-A-								Client	Sample ID			
Analysis Batch: 64500									Fieh	Type: So	June	
Indiysis Dalcii. 04000	Sample	Sample	Spike	MS	MS				%Rec			
nalyte	-	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits			
loride	116		253	380.1		mg/Kg		105	90 - 110			
b Sample ID: 880-34195-A-	1-D MSD					Cli	ent Sa	ample ID	): Matrix Sp	oike Dup	licate	
atrix: Solid									Prep	Type: So	oluble	ł
									Prep	Type: So	oluble	ì
	Sample	Sample	Spike	MSD	MSD				Prep %Rec	Type: So	RPD	
nalysis Batch: 64500	Result	Sample Qualifier	Added		MSD Qualifier	Unit	<u>D</u>	%Rec	- I I I I I I I I I I I I I I I I I I I	Type: So	RPD Limit	
nalysis Batch: 64500 alyte		•	•			- <mark>Unit</mark> mg/Kg	D	<b>%Rec</b>	%Rec		RPD	
alysis Batch: 64500	Result	•	Added	Result			D		%Rec Limits	RPD	RPD Limit	
alysis Batch: 64500	Result	•	Added	Result			D		%Rec Limits	RPD	RPD Limit	
nalysis Batch: 64500 alyte	Result	•	Added	Result			<u>D</u>		%Rec Limits	RPD	RPD Limit	
nalysis Batch: 64500 alyte	Result	•	Added	Result			D		%Rec Limits	RPD	RPD Limit	
nalysis Batch: 64500 alyte	Result	•	Added	Result			<u>D</u>		%Rec Limits	RPD	RPD Limit	
nalysis Batch: 64500 alyte	Result	•	Added	Result			<u>D</u>		%Rec Limits	RPD	RPD Limit	
atrix: Solid nalysis Batch: 64500 nalyte nloride	Result	•	Added	Result			<u>D</u>		%Rec Limits	RPD	RPD Limit	

# **QC** Association Summary

Client: Carmona Resources Project/Site: Nighthawk 3H

Page 271 of 383

Job ID: 880-34199-1

SDG: Lea County, New Mexico

### **GC VOA**

#### Prep Batch: 64332

ab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
80-34199-1	H-9 (0-6")	Total/NA	Solid	5035	
/IB 880-64332/5-A	Method Blank	Total/NA	Solid	5035	
.CS 880-64332/1-A	Lab Control Sample	Total/NA	Solid	5035	
.CSD 880-64332/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
80-34196-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
80-34196-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
nalysis Batch: 64432					
ab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
80-34199-1	H-9 (0-6")	Total/NA	Solid	8021B	64332
/IB 880-64332/5-A	Method Blank	Total/NA	Solid	8021B	64332
.CS 880-64332/1-A	Lab Control Sample	Total/NA	Solid	8021B	64332
CSD 880-64332/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	64332
80-34196-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	64332
80-34196-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	64332
nalysis Batch: 64585					
ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
80-34199-1	H-9 (0-6")	Total/NA	Solid	Total BTEX	
C Semi VOA					
nalysis Batch: 64320					
ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
80-34199-1	H-9 (0-6")	Total/NA	Solid	8015B NM	64329
ep Batch: 64329					
ab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
80-34199-1	H-9 (0-6")	Total/NA	Solid	8015NM Prep	
00-34199-1					
nalysis Batch: 64462					
	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch

### HPLC/IC

Ē.

#### Leach Batch: 64405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34199-1	H-9 (0-6")	Soluble	Solid	DI Leach	
MB 880-64405/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-34195-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-34195-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 64500

Lab Sample ID 880-34199-1	Client Sample ID H-9 (0-6")	Prep Type Soluble	Matrix Solid	Method 300.0	Prep Batch 64405
MB 880-64405/1-A	Method Blank	Soluble	Solid	300.0	64405
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	300.0	64405
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	64405
880-34195-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	64405

# **QC Association Summary**

	•
Client: Carmona Resources	Job ID: 880-34199
Project/Site: Nighthawk 3H	SDG: Lea County, New Mexi

### HPLC/IC (Continued)

### Analysis Batch: 64500 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
880-34195-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	64405	

#### Client Sample ID: H-9 (0-6") Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

Job ID: 880-34199-1 SDG: Lea County, New Mexico

# Lab Sample ID: 880-34199-1

Matrix: Solid

9

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	64332	10/10/23 10:38	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64432	10/11/23 14:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64585	10/11/23 14:05	SM	EET MID
Total/NA	Analysis	8015 NM		1			64462	10/10/23 20:38	SM	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	64329	10/10/23 09:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64320	10/10/23 20:38	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	64405	10/10/23 15:31	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64500	10/11/23 19:38	СН	EET MID

#### Laboratory References:

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

Eurofins Midland

Released to Imaging: 3/18/2024 8:58:24 AM

#### Job ID: 880-34199-1 SDG: Lea County, New Mexico

#### Laboratory: Eurofins Midland

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

Ithority	Program	l	Identification Number	Expiration Date		
xas	NELAP		T104704400-23-26	06-30-24		
The following analyte	s are included in this report, but t	he laboratory is not certif	ied by the governing authority. This lis	t may include analytes		
for which the agency	does not offer certification.					
for which the agency Analysis Method		Matrix	Analyte			
for which the agency	does not offer certification.					

Eurofins Midland

#### Received by OCD: 11/2/2023 1:36:42 PM

# **Method Summary**

Client: Carmona Resources Project/Site: Nighthawk 3H

Job ID: 880-34199-1 SDG: Lea County, New Mexico

lethod	Method Description	Protocol	Laboratory
021B	Volatile Organic Compounds (GC)	SW846	EET MID
otal BTEX	Total BTEX Calculation	TAL SOP	EET MID
015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
00.0	Anions, Ion Chromatography	EPA	EET MID
035	Closed System Purge and Trap	SW846	EET MID
015NM Prep	Microextraction	SW846	EET MID
)I Leach	Deionized Water Leaching Procedure	ASTM	EET MID

#### Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

# Sample Summary

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34199-1 SDG: Lea County, New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-34199-1	H-9 (0-6")	Solid	10/04/23 00:00	10/09/23 16:20

**Released to Imaging: 3/18/2024 8:58:24 AM** 

Received by OCD: 11/2/2023 1:36:42 PM

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		0		Communes Linear results to mixe Carmona incarmonaresources.com, Conner Moenring@carmonaresources.com, Clint Merritt MerrittC@carmonaresources.com	Commonte: Email						H-9 (0-6")	Sample Identification		Total Containers	Sample Custody Seals	Cooler Custody Seals	Received Intact:	SAMPLE RECEIPT	PO#	Sampler's Name.	Project Location	Project Number	Project Name	Phone	City State ZIP	Address.	/ Name	Project Manager	
			-								6")	ification			s Yes	۲. چ					Lea (				Midland TX 79701	310 W Wall St Ste 500	Carmona Resources	Clinton Merritt	
	Ŵ		Relinquished by (Signature)								10/4/2023	Date			NIA /	e D		emp Blank.		CCM	Lea County, New Mexico	2090	Nighthawk 3H		701	Ste 500	ources		
			y (Signature)	Carritoria@Ca								Time		Corrected Temp	Temperature Readino	Correction Factor	2 I	Yes Vn	)		exico								
				monaresourc							×	Soil		erature	ladino	Ÿ	ſ	Wet Ice			Due Date	✓ Routine	Tun	Email					
				es.com, conn							G	Water Comp			2	1	OUX-	(Var) No	l	1	5 dav	Rush	Turn Around	msanjari@marathonoil.com	City, State ZIP	Address	Company Name	Bill to (if different)	
4	10			er Moenrin								p #of				Par	amo	ter	5			Pres.		arathonoil c			e.	Ŭ	
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				naresou																					Reporting Level II Level III ST/UST		Frownf	Order C	
				rces.con								Sam	NaOH+Ascorbic Acid SAPC	Zn Acetate+NaOH Zn	Na20203 NASU3	Na SO Na SO	H <sub>3</sub> PO₄ HP			Cool Cool			Pres		JST DRRP		Program UST/PST PRP rownfields RC	Work Order Comments	Page
			Date	-								Sample Comments	orbic Acid	+NaOH Z		IABIS			I I	Me	5		Preservative Codes	Other					
			Date/Time									nents	SAPC	n				NACH NA	HNO3, HN	MeOH Me	DI Water H <sub>2</sub> O		Orles				Iperfund		0 <b>7</b>

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5 12 13

Chain or Custody



5

Job Number: 880-34199-1

List Source: Eurofins Midland

SDG Number: Lea County, New Mexico

### Login Sample Receipt Checklist

Client: Carmona Resources

Login Number: 34199 List Number: 1 Creator: Rodriguez, Leticia

Question Answer Comment The cooler's custody seal, if present, is intact. N/A N/A Sample custody seals, if present, are intact. The cooler or samples do not appear to have been compromised or True tampered with. Samples were received on ice. True True Cooler Temperature is acceptable. 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 True HTs) 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 True MS/MSDs

N/A

MS/MSDs Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). Received by OCD: 11/2/2023 1:36:42 PM



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Clint Merritt Carmona Resources 310 W Wall St Ste 500 Midland, Texas 79701 Generated 10/12/2023 9:10:11 PM

# JOB DESCRIPTION

Nighthawk 3H SDG NUMBER Lea County, New Mexico

# **JOB NUMBER**

880-34198-1

EOL

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

AMER

Generated 10/12/2023 9:10:11 PM

Authorized for release by Jessica Kramer, Project Manager Jessica.Kramer@et.eurofinsus.com (432)704-5440

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

Laboratory Job ID: 880-34198-1 SDG: Lea County, New Mexico

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2

# **Definitions/Glossary**

#### Client: Carmona Resources Project/Site: Nighthawk 3H

Job ID: 880-34198-1 SDG: Lea County, New Mexico

Qu	ali	fie	rs
_			

Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	4
F1	MS and/or MSD recovery exceeds control limits.	
U	Indicates the analyte was analyzed for but not detected.	5
GC Semi VOA Qualifier	Qualifier Description	6
F1	MS and/or MSD recovery exceeds control limits.	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC Qualifier	Qualifier Description	8
U	Indicates the analyte was analyzed for but not detected.	O
		<b>3</b>
Glossary		10
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
MPN	Most Probable Number	
MQL	Method Quantitation Limit	
NC	Not Calculated	
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	
NEG	Negative / Absent	
POS	Positive / Present	
PQL	Practical Quantitation Limit	
PRES	Presumptive	
QC	Quality Control	
RER	Relative Error Ratio (Radiochemistry)	
RL	Reporting Limit or Requested Limit (Radiochemistry)	
RPD	Relative Percent Difference, a measure of the relative difference between two points	
TEF	Toxicity Equivalent Factor (Dioxin)	
TEQ	Toxicity Equivalent Quotient (Dioxin)	
TNTC	Too Numerous To Count	

Job ID: 880-34198-1 SDG: Lea County, New Mexico

#### Job ID: 880-34198-1

Client: Carmona Resources Project/Site: Nighthawk 3H

#### Laboratory: Eurofins Midland

#### Narrative

Job Narrative 880-34198-1

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

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

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

#### Receipt

The sample was received on 10/9/2023 4:20 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

#### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: H-10 (0-6") (880-34198-1).

#### GC VOA

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-64332 and analytical batch 880-64432 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### GC Semi VOA

Method 8015MOD\_NM: The surrogate recovery for the blank associated with preparation batch 880-64329 and analytical batch 880-64318 was outside the upper control limits.

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: H-10 (0-6") (880-34198-1), (880-34170-A-21-B), (880-34170-A-21-C MS) and (880-34170-A-21-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-64318/31), (CCV 880-64318/45) and (LCS 880-64329/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD\_NM: The matrix spike (MS) recoveries for preparation batch 880-64329 and analytical batch 880-64318 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### HPLC/IC

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

Job ID: 880-34198-1 SDG: Lea County, New Mexico

## Client Sample ID: H-10 (0-6") Date Collected: 10/04/23 00:00

Date Received: 10/09/23 16:20

Client: Carmona Resources

Project/Site: Nighthawk 3H

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/10/23 10:38	10/11/23 13:45	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/10/23 10:38	10/11/23 13:45	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/10/23 10:38	10/11/23 13:45	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/10/23 10:38	10/11/23 13:45	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/10/23 10:38	10/11/23 13:45	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/10/23 10:38	10/11/23 13:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130				10/10/23 10:38	10/11/23 13:45	1
1,4-Difluorobenzene (Surr)	106		70 - 130				10/10/23 10:38	10/11/23 13:45	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	ulation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00398		0.00398		mg/Kg			10/11/23 13:45	1
					iiig/Kg			10/11/20 10:40	
Method: SW846 8015 NM - Diese	el Range Organ Result	<mark>ics (DRO) (</mark> Qualifier	GC) RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Method: SW846 8015 NM - Diese Analyte	el Range Organ	<mark>ics (DRO) (</mark> Qualifier	GC)	MDL		D	Prepared		Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH	el Range Organ Result <50.5	ics (DRO) ( Qualifier	GC) 	MDL	Unit	<u>D</u>	Prepared	Analyzed	
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Dies	el Range Organ Result <50.5 sel Range Orga	ics (DRO) ( Qualifier	GC) 		Unit	<u>D</u> 	Prepared	Analyzed	
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	el Range Organ Result <50.5 sel Range Orga	ics (DRO) ( Qualifier U nics (DRO) Qualifier	GC) <u>RL</u> 50.5 (GC)		Unit mg/Kg			Analyzed 10/11/23 01:03	1 Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10	el Range Organ Result <50.5 sel Range Orga Result <50.5	ics (DRO) ( Qualifier U nics (DRO) Qualifier U	GC) <u>RL</u> 50.5 (GC) <u>RL</u> 50.5		Unit mg/Kg Unit mg/Kg		Prepared 10/10/23 09:30	Analyzed 10/11/23 01:03 Analyzed 10/11/23 01:03	1 Dil Fac
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	el Range Organ Result								

Lab Sample ID: 880-34198-1 Matrix: Solid

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Released to Imaging: 3/18/2024 8:58:24 AM

10/12/2023

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34198-1 SDG: Lea County, New Mexico

Prep Type: Total/NA

#### 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)	
880-34196-A-1-B MS	Matrix Spike	102	102	
880-34196-A-1-C MSD	Matrix Spike Duplicate	112	102	
880-34198-1	H-10 (0-6")	102	106	
LCS 880-64332/1-A	Lab Control Sample	111	104	
LCSD 880-64332/2-A	Lab Control Sample Dup	99	101	
MB 880-64332/5-A	Method Blank	108	122	
Surrogate Legend				
BFB = 4-Bromofluorober	nzene (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) 880-34170-A-21-C MS Matrix Spike 179 S1+ 139 S1+ 880-34170-A-21-D MSD Matrix Spike Duplicate 161 S1+ 125 880-34198-1 H-10 (0-6") 146 S1+ 171 S1+ LCS 880-64329/2-A Lab Control Sample 132 S1+ 141 S1+ LCSD 880-64329/3-A Lab Control Sample Dup 113 111 MB 880-64329/1-A Method Blank 181 S1+ 162 S1+

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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#### Job ID: 880-34198-1 SDG: Lea County, New Mexico

**Client Sample ID: Method Blank** 

**Client Sample ID: Lab Control Sample** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Project/Site: Nighthawk 3H Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Analysis Batch: 64432

Client: Carmona Resources

Analysis Batch: 64432								Prep Batch	n: 64332
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/10/23 10:38	10/11/23 12:35	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/10/23 10:38	10/11/23 12:35	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/10/23 10:38	10/11/23 12:35	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/10/23 10:38	10/11/23 12:35	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/10/23 10:38	10/11/23 12:35	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/10/23 10:38	10/11/23 12:35	1
	MB	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130				10/10/23 10:38	10/11/23 12:35	1
1,4-Difluorobenzene (Surr)	122		70 - 130				10/10/23 10:38	10/11/23 12:35	1

#### Lab Sample ID: LCS 880-64332/1-A Matrix: Solid

#### Analysis Batch: 64432

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1166		mg/Kg		117	70 - 130	
Toluene	0.100	0.09644		mg/Kg		96	70 - 130	
Ethylbenzene	0.100	0.09544		mg/Kg		95	70 - 130	
m-Xylene & p-Xylene	0.200	0.1878		mg/Kg		94	70 - 130	
o-Xylene	0.100	0.09012		mg/Kg		90	70 - 130	

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

#### Lab Sample ID: LCSD 880-64332/2-A

# Matrix: Solid

Analysis Batch: 64432							Prep	Batch:	64332
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1117		mg/Kg		112	70 - 130	4	35
Toluene	0.100	0.09300		mg/Kg		93	70 - 130	4	35
Ethylbenzene	0.100	0.09384		mg/Kg		94	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1837		mg/Kg		92	70 - 130	2	35
o-Xylene	0.100	0.08378		mg/Kg		84	70 - 130	7	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

# Lab Sample ID: 880-34196-A-1-B MS

# Matrix: Solid

Analysis Batch: 64432									Prep	b Batch: (	64332	
	Sample	Sample	Spike	MS	MS				%Rec			
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits			
Benzene	<0.00201	U	0.101	0.09018		mg/Kg		89	70 - 130			
Toluene	<0.00201	U	0.101	0.07128		mg/Kg		71	70 - 130			

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Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

Client: Carmona Resources

Job ID: 880-34198-1 SDG: Lea County, New Mexico

# Project/Site: Nighthawk 3H Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-34196-A-1	I-B MS									Client S	Sample ID:	Matrix	. Spik
Matrix: Solid											Prep T	ype: To	otal/N
Analysis Batch: 64432											Prep	Batch:	6433
	Sample S	ample	Spike	MS	MS						%Rec		
Analyte	Result Q	ualifier	Added	Result	Qual	ifier	Unit		D	%Rec	Limits		
Ethylbenzene	<0.00201 U	F1	0.101	0.06697	F1		mg/Kg		_	66	70 - 130		
n-Xylene & p-Xylene	<0.00402 U	F1	0.202	0.1343	F1		mg/Kg			66	70 - 130		
o-Xylene	<0.00201 U	F1	0.101	0.06838	F1		mg/Kg			67	70 - 130		
	MS M	s											
Surrogate	%Recovery Q	ualifier	Limits										
-Bromofluorobenzene (Surr)	102		70 - 130										
,4-Difluorobenzene (Surr)	102		70 - 130										
.ab Sample ID: 880-34196-A-1	I-C MSD						(	Clien	nt Sa	mple ID:	Matrix Sp	ike Du	plicat
Aatrix: Solid											Prep T		-
Analysis Batch: 64432												Batch:	
	Sample S	ample	Spike	MSD	MSD						%Rec		RF
nalyte	Result Q	•	Added	Result	Qual	ifier	Unit		D	%Rec	Limits	RPD	Lin
enzene	<0.00201 U		0.0996	0.09951			mg/Kg		_	100	70 - 130	10	
bluene	<0.00201 U		0.0996	0.08277			mg/Kg			83	70 - 130	15	:
thylbenzene		F1	0.0996	0.08667			mg/Kg			87	70 - 130	26	
-Xylene & p-Xylene	<0.00402 U		0.199	0.1785			mg/Kg			89	70 - 130	28	
-Xylene	<0.00201 U		0.0996	0.08121			mg/Kg			81	70 - 130	17	
Xylono	0.00201 0		0.0000	0.00121			ing/itg			01	101100		
	MSD M	SD											
urrogate	%Recovery Q	ualifier	Limits										
-Bromofluorobenzene (Surr)	112		70 - 130										
,4-Difluorobenzene (Surr)	102		70 - 130										
ethod: 8015B NM - Diese	el Range Org	anics (I	DRO) (GC)										
ab Sample ID: MB 880-64329	)/1-A									Client Sa	ample ID: I	Nethod	Blar
latrix: Solid											Prep T	vpe: To	otal/N
Analysis Batch: 64318												Batch:	
	N	IB MB											
nalyte	Resi	ult Qualifie	er Ri	L	MDL	Unit		D	P	repared	Analyz	ed	Dil Fa
asoline Range Organics GRO)-C6-C10	<50	.0 U	50.0	0		mg/Kg			10/1	0/23 09:30	10/10/23 2	20:38	
viesel Range Organics (Over 210-C28)	<50	.0 U	50.	0		mg/Kg			10/1	0/23 09:30	10/10/23 2	20:38	
II Range Organics (Over C28-C36)	<50	.0 U	50.0	D		mg/Kg			10/1	0/23 09:30	10/10/23 2	20:38	
	N	IB MB											
urrogate	%Recove	ry Qualifie	er Limits						P	repared	Analyz	ed	Dil F
-Chlorooctane		81 S1+	70 - 130	_				-	10/1	0/23 09:30	10/10/23 2	20:38	
-Terphenyl	1	62 S1+	70 - 130						10/1	0/23 09:30	10/10/23	20:38	
									iont	Samplo	ID: Lab Co	ntrol S	amn
ab Sample ID: 1 CS 880-6432	9/2-A												
ab Sample ID: LCS 880-6432 Iatrix: Solid	9/2-A								ient	Sample	Prep T		

#### Analysis Batch: 64318 Prep Batch: 64329 Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits Gasoline Range Organics 1000 932.8 93 70 - 130 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 950.5 mg/Kg 95 70 - 130 C10-C28)

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# **QC Sample Results**

Client: Carmona Resources Project/Site: Nighthawk 3H

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

Lab Sample ID: LCS 880-643					,		Clien	t Sample	D: Lab Co		-
Matrix: Solid										ype: To	
Analysis Batch: 64318									Prep	Batch:	64329
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane		S1+	70 - 130								
o-Terphenyl		S1+	70 - 130								
Lab Sample ID: LCSD 880-64	1329/3-A					Clier	nt San	nple ID:	Lab Contro	I Sampl	e Dup
Matrix: Solid										ype: To	-
Analysis Batch: 64318										Batch:	
-			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	980.8		mg/Kg		98	70 - 130	5	20
(GRO)-C6-C10											
Diesel Range Organics (Over			1000	1021		mg/Kg		102	70 - 130	7	20
C10-C28)											
	LCSD	LCSD									
Surrogate	%Recovery		Limits								
1-Chlorooctane			70 - 130								
o-Terphenyl	111		70 - 130								
Lab Sample ID: 880-34170-A	-21-C MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid										ype: To	
Analysis Batch: 64318										Batch:	
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	-	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<49.8	U	994	1054		mg/Kg		106	70 - 130		
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.8	U F1	994	1372	F1	mg/Kg		136	70 - 130		
C10-C28)											
	MS	MS									
Surrogate	%Recovery		Limits								
1-Chlorooctane		S1+	70 - 130								
o-Terphenyl		S1+	70 - 130								
o-reiphenyi	155	571	70 - 750								
Lab Sample ID: 880-34170-A	-21-D MSD					CI	ient S	ample IF	): Matrix Sp	nike Dun	licate
Matrix: Solid										ype: To	
Analysis Batch: 64318										Batch:	
·	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	-	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.8		994	951.5		mg/Kg		96	70 - 130	10	20
(GRO)-C6-C10						0.10					
Diesel Range Organics (Over	<49.8	U F1	994	1244		mg/Kg		123	70 - 130	10	20
C10-C28)											
	Men	MSD									
Surrogate	%Recovery		Limits								
1-Chlorooctane		S1+	70 - 130								
i Grioroocane	101	51.	10 - 150								

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Job ID: 880-34198-1

SDG: Lea County, New Mexico
Client: Carmona Resources Project/Site: Nighthawk 3H

# **QC Sample Results**

Job ID: 880-34198-1
SDG: Lea County, New Mexico

Method: 300.0 - Anions, Ion Chromatography

											0				
Lab Sample ID: MB 880-64405/	/1-A										Client S	Sample ID:			
Matrix: Solid												Prep	o Type: S	soluble	
Analysis Batch: 64500															
	_	MB MB							_	_					
Analyte		esult Qualifier		RL		MDL			D	PI	repared	Analy		Dil Fac	
Chloride	<	5.00 U		5.00			mg/Kg	9				10/11/23	3 18:28	1	
Lab Sample ID: LCS 880-6440	5/2_4								Cli	iont	Sample	BID: Lab C	Control S	amplo	
Matrix: Solid	~~~~								0.	ioni	Campic		o Type: S		
Analysis Batch: 64500												110	, iype. e		i
Analysis Batch. 04500			Spike		LCS	LCS						%Rec			
Analyte			Added		Result	Qual	ifier	Unit		D	%Rec	Limits			ï
Chloride			250		251.4			mg/Kg		_	101	90 - 110			
								0 0							ŝ
Lab Sample ID: LCSD 880-644	05/3-A							Cli	ient S	Sam	ple ID:	Lab Contr	ol Samp	le Dup	
Matrix: Solid												Prep	o Type: S	Soluble	
Analysis Batch: 64500															
			Spike		LCSD	LCSI	D					%Rec		RPD	
Analyte			Added		Result	Qual	ifier	Unit		D	%Rec	Limits	RPD	Limit	
Chloride			250		251.8			mg/Kg			101	90 - 110	0	20	4
Γ														•	
Lab Sample ID: 880-34195-A-1	-C MS										Client	Sample II			ł
Matrix: Solid												Prep	o Type: S	soluble	
Analysis Batch: 64500	•	•										~~ <b>-</b>			
	Sample	•	Spike			MS				_		%Rec			
Analyte		Qualifier	Added		Result	Qual	ifier	Unit		D	%Rec	Limits			
Chloride	116		253		380.1			mg/Kg			105	90 - 110			
Lab Sample ID: 880-34195-A-1	-D MSD								Clien	t Sa	mple IF	D: Matrix S	snike Du	plicate	
Matrix: Solid													o Type: S	-	
Analysis Batch: 64500													.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
	Sample	Sample	Spike		MSD	MSD						%Rec		RPD	
Analyte	Bosult	Qualifier	Added		Result	0	fier	Unit		D	%Rec	Limits	RPD	Limit	
	Result	Quanner	Auueu		Result	Quai	mer	Unit			/onec	LIIIIII	INF D	LIIIII	
Chloride	116		253		380.4	Quai		mg/Kg		_	105	90 - 110	0	20	

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# **QC** Association Summary

Client: Carmona Resources Project/Site: Nighthawk 3H

GC VOA

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#### Job ID: 880-34198-1 SDG: Lea County, New Mexico

ab Sample ID.	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
80-34198-1	H-10 (0-6")	Total/NA	Solid	5035	
/IB 880-64332/5-A	Method Blank	Total/NA	Solid	5035	
CS 880-64332/1-A	Lab Control Sample	Total/NA	Solid	5035	
CSD 880-64332/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
80-34196-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
80-34196-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
alysis Batch: 64432					
ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
80-34198-1	H-10 (0-6")	Total/NA	Solid	8021B	6433
IB 880-64332/5-A	Method Blank	Total/NA	Solid	8021B	6433
CS 880-64332/1-A	Lab Control Sample	Total/NA	Solid	8021B	6433
CSD 880-64332/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	6433
80-34196-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	6433
80-34196-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	6433
ab Sample ID 80-34198-1	Client Sample ID H-10 (0-6")	Prep Type Total/NA	Matrix Solid	Method Total BTEX	Prep Batc
C Semi VOA					
nalysis Batch: 64318					
ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
80-34198-1	H-10 (0-6")	Total/NA	Solid	8015B NM	6432
IB 880-64329/1-A	Method Blank	Total/NA	Solid	8015B NM	6432
CS 880-64329/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	6432
CSD 880-64329/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	6432
80-34170-A-21-C MS	Matrix Spike	Total/NA	Solid	8015B NM	6432
80-34170-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	6432
ep Batch: 64329					
ab Sample ID.	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
80-34198-1	H-10 (0-6")	Total/NA	Solid	8015NM Prep	
1B 880-64329/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
CS 880-64329/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
CSD 880-64329/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
80-34170-A-21-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
80-34170-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	
alysis Batch: 64461					

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34198-1	H-10 (0-6")	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 64405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34198-1	H-10 (0-6")	Soluble	Solid	DI Leach	
MB 880-64405/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

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Prep Type

Prep Type

Soluble

Soluble

Soluble

Soluble

Soluble

Soluble

Soluble

Soluble

HPLC/IC (Continued)

Lab Sample ID

Lab Sample ID

MB 880-64405/1-A

LCS 880-64405/2-A

LCSD 880-64405/3-A

880-34195-A-1-C MS

880-34195-A-1-D MSD

880-34198-1

880-34195-A-1-C MS

880-34195-A-1-D MSD

Analysis Batch: 64500

Leach Batch: 64405 (Continued)

Client Sample ID

**Client Sample ID** 

Lab Control Sample

Lab Control Sample Dup

Matrix Spike Duplicate

H-10 (0-6")

Method Blank

Matrix Spike

Matrix Spike Duplicate

Matrix Spike

Job ID: 880-34198-1 SDG: Lea County, New Mexico

Method

DI Leach

DI Leach

Method

300.0

300.0

300.0

300.0

300.0

300.0

Matrix

Solid

Solid

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

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Prep Batch

Prep Batch

64405

64405

64405

64405

64405

64405

8

12 13

**Eurofins Midland** 

Client: Carmona Resources Project/Site: Nighthawk 3H

#### Client Sample ID: H-10 (0-6") Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

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Job ID: 880-34198-1 SDG: Lea County, New Mexico

# Lab Sample ID: 880-34198-1

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	64332	10/10/23 10:38	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64432	10/11/23 13:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64584	10/11/23 13:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			64461	10/11/23 01:03	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	64329	10/10/23 09:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64318	10/11/23 01:03	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	64405	10/10/23 15:31	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64500	10/11/23 19:21	СН	EET MID

#### Laboratory References:

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

Eurofins Midland

#### Job ID: 880-34198-1 SDG: Lea County, New Mexico

#### Laboratory: Eurofins Midland

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

uthority	Progran	n	Identification Number	Expiration Date
exas	NELAP		T104704400-23-26	06-30-24
The following analytes	are included in this report but	the laboratory is not certif	fied by the governing authority. This lis	t may include analytes
for which the agency of	loes not offer certification.	-	, , , , , ,	
for which the agency of Analysis Method		Matrix	Analyte	
for which the agency of	loes not offer certification.	-	, , , , , ,	

Eurofins Midland

Released to Imaging: 3/18/2024 8:58:24 AM

#### Received by OCD: 11/2/2023 1:36:42 PM

## **Method Summary**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34198-1 SDG: Lea County, New Mexico

Method	Method Description	Protocol	Laboratory
3021B	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
5035	Closed System 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

Eurofins Midland

# Sample Summary

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34198-1 SDG: Lea County, New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-34198-1	H-10 (0-6")	Solid	10/04/23 00:00	10/09/23 16:20

Received by OCD: 11/2/2023 1:36:42 PM

					Comments. Email results to Mike Carmona mcarmona@carmonaresources.com. Conner Moehring cmoehring@carmonaresources.com Clint Merzitt Merzitt@comments.com							H-10 (0-6")	Sample Identification	Total Containers	Sample Custody Seals Yes	Cooler Custody Seals Yes	Received Intact: (	SAMPLE RECEIPT	PO#:	Sampler's Name		Project Name		Phone	City State ZIP Midland, TX 79701	Address. 310 W Wall St Ste 500	Company Name Carmona Resources	Project Manager Clinton Merritt
1			ReInquished by (Signature)		Aike Carmona mc							10/4/2023	Date		NO (N/A)	NO (NIA)		Serring Blank		CCM			Nighthawk 3H		79701	St Ste 500	esources	İtt
	المحادي وتصوير		<ul> <li>(Signature)</li> </ul>		armona@carm	-							Time	Corrected Temperature	Temperature Reading	Correction Factor		Yes No	2									
					onaresources							×	Soil	ature	ing			Wet Ice			<ul> <li>Koutine</li> </ul>	Turn Around		Email	0	A	0	8
	-				.com, Conner							G	Water Comp	J.Y	2.4	+	ANA ANA	(Yes)No	)	5 day	Rush	round		msanjan@marathonoil com	City State ZIP	Address,	Company Name.	Bill to (If different)
	10-				Moehring							-	# of Cont	اری مسل		Pa	ram	eter	s	<b>I</b>	Code	Pras		ithonoil co				
LTD	1º		Date/Time		u cmoeh					_		××	TP+	801			3021I ) + D		+ MF	RO)				ă	Houston TX 77024	990 Town	Marathon	Melodie Sanjari
					ring@carm.				-+			×			Chl	oride	9 300	.0							FX 77024	990 Town and Country Blvd	Marathon Oil Corporation	anjari
																				. <u></u>		A				Blvd	ă	
							_	_	_			_										ANALYSIS REQUEST						
			Receive						-+			-+									1	REQUE			Re	St	Pr	L
		$\left \right\rangle$	Redeived by (Signatore)						_		_											ST		Deliverables EDD	Reporting Level II Level III ST/UST	State of Project:	Program UST/PST PRP	
		A	natoxet	(				+	_		_	-		<u> </u>										Ē	vel II 🔲	ject:	STIPST	
			$\sum_{i=1}^{n}$									_													evel III [		PRP	Work On
								 +	-+			-+		Nac	7n /		H <sub>3</sub> P	120		Coo	Non			ADaPT	]ST/UST		rownfields RC	Work Order Comments
			]										Sample	)H+Ascort	7n Acetate+NaOH 7n	Nanso, Naso.	H <sub>3</sub> PO <sub>4</sub> HP			Cool Cool	None NO	Preserv		Other	RRP	ĺ	Is RO	nments
			Date/Time										Sample Comments	NaOH+Ascorbic Acid SAPC	aCH 24	ς δ	5	NaOn Na	HNO3- HN	MeOH Me	DI Wa	Preservative Codes		Ť				
			ime										ints	APC				n Na	HZ	1 Me	DI Water H <sub>2</sub> O	des				ſ	Derfund	

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C<sup>1</sup> ain of Custocy



Job Number: 880-34198-1

List Source: Eurofins Midland

SDG Number: Lea County, New Mexico

## Login Sample Receipt Checklist

Client: Carmona Resources

Login Number: 34198 List Number: 1 Creator: Rodriguez, Leticia

Question Answer Comment The cooler's custody seal, if present, is intact. N/A N/A Sample custody seals, if present, are intact. The cooler or samples do not appear to have been compromised or True tampered with. Samples were received on ice. True True Cooler Temperature is acceptable. 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 True HTs) 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 True MS/MSDs

N/A

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Received by OCD: 11/2/2023 1:36:42 PM



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Clint Merritt Carmona Resources 310 W Wall St Ste 500 Midland, Texas 79701 Generated 10/12/2023 9:08:59 PM

# JOB DESCRIPTION

Nighthawk 3H SDG NUMBER Lea County, New Mexico

# **JOB NUMBER**

880-34197-1

EOL

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

AMER

Generated 10/12/2023 9:08:59 PM

Authorized for release by Jessica Kramer, Project Manager Jessica.Kramer@et.eurofinsus.com (432)704-5440

Laboratory Job ID: 880-34197-1 SDG: Lea County, New Mexico

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## **Definitions/Glossary**

#### Client: Carmona Resources Project/Site: Nighthawk 3H

MDA

MDC

MDL

MPN MQL

ML

NC

ND

NEG

POS

PQL PRES

QC

RER

RPD

TEF

TEQ TNTC

RL

Job ID: 880-34197-1 SDG: Lea County, New Mexico

Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	
U	Indicates the analyte was analyzed for but not detected.	5
GC Semi VOA Qualifier	Qualifier Description	6
F1	MS and/or MSD recovery exceeds control limits.	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC Qualifier	Qualifier Description	ð
U	Indicates the analyte was analyzed for but not detected.	9
Glossary		10
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	40
DER	Duplicate Error Ratio (normalized absolute difference)	13
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	

Minimum Detectable Activity (Radiochemistry)

Method Detection Limit

Minimum Level (Dioxin) Most Probable Number

Method Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin) Toxicity Equivalent Quotient (Dioxin)

Too Numerous To Count

Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

Not Calculated

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

Quality Control

Minimum Detectable Concentration (Radiochemistry)

Not Detected at the reporting limit (or MDL or EDL if shown)

Job ID: 880-34197-1 SDG: Lea County, New Mexico

### Job ID: 880-34197-1

Client: Carmona Resources Project/Site: Nighthawk 3H

#### Laboratory: Eurofins Midland

#### Narrative

Job Narrative 880-34197-1

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

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

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

#### Receipt

The sample was received on 10/9/2023 4:20 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

#### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: H-11 (0-6") (880-34197-1).

#### GC VOA

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-64332 and analytical batch 880-64432 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### GC Semi VOA

Method 8015MOD\_NM: The surrogate recovery for the blank associated with preparation batch 880-64329 and analytical batch 880-64318 was outside the upper control limits.

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: H-11 (0-6") (880-34197-1), (880-34170-A-21-B), (880-34170-A-21-C MS) and (880-34170-A-21-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-64318/31), (CCV 880-64318/45) and (LCS 880-64329/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD\_NM: The matrix spike (MS) recoveries for preparation batch 880-64329 and analytical batch 880-64318 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### HPLC/IC

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

Matrix: Solid

Job ID: 880-34197-1 SDG: Lea County, New Mexico

Lab Sample ID: 880-34197-1

## Client Sample ID: H-11 (0-6") Date Collected: 10/04/23 00:00

Date Received: 10/09/23 16:20

Client: Carmona Resources

Project/Site: Nighthawk 3H

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		10/10/23 10:38	10/11/23 13:24	1
Toluene	<0.00202	U	0.00202		mg/Kg		10/10/23 10:38	10/11/23 13:24	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		10/10/23 10:38	10/11/23 13:24	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		10/10/23 10:38	10/11/23 13:24	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		10/10/23 10:38	10/11/23 13:24	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		10/10/23 10:38	10/11/23 13:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130				10/10/23 10:38	10/11/23 13:24	1
1,4-Difluorobenzene (Surr)	100		70 - 130				10/10/23 10:38	10/11/23 13:24	1
Method: TAL SOP Total BTEX -	Total BTEX Calo	ulation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00404	U	0.00404		mg/Kg			10/11/23 13:24	1
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (	GC)						
Analyte	Result	Qualifier		MDL		<u>D</u>	Prepared	Analyzed	Dil Fac
Analyte Total TPH	Result <50.3	Qualifier U		MDL	Unit mg/Kg	<u>D</u>	Prepared	Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Die	Result <50.3	Qualifier	RL 50.3		mg/Kg			10/11/23 00:41	1
Analyte <sup>Total</sup> TPH Method: SW846 8015B NM - Die Analyte	Result <50.3 sel Range Orga Result	Qualifier U nics (DRO) Qualifier	(GC)	MDL MDL	mg/Kg Unit	<u>D</u>	Prepared	10/11/23 00:41 Analyzed	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics	Result <50.3	Qualifier U nics (DRO) Qualifier	RL 50.3		mg/Kg			10/11/23 00:41	1
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <50.3 sel Range Orga Result	Qualifier U nics (DRO) Qualifier U	(GC)		mg/Kg Unit		Prepared	10/11/23 00:41 Analyzed	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <sol> <li>Range Orga Result <sol> <li></li></sol></li></sol>	Qualifier U nics (DRO) Qualifier U U	(GC) <u>RL</u> <u>50.3</u> <u>RL</u> <u>50.3</u>		mg/Kg Unit mg/Kg		Prepared 10/10/23 09:30	Analyzed           10/11/23 00:41	1 Dil Fac 1
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)		Qualifier U nics (DRO) Qualifier U U U	(GC) RL 50.3 (GC) RL 50.3 50.3		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30	Analyzed           10/11/23 00:41           10/11/23 00:41           10/11/23 00:41	1 <u>Dil Fac</u> 1 1
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result           <50.3	Qualifier U nics (DRO) Qualifier U U U	RL       50.3       (GC)       RL       50.3       50.3       50.3		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30	Analyzed           10/11/23 00:41           10/11/23 00:41           10/11/23 00:41           10/11/23 00:41	1 1 1 1
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result           <50.3	Qualifier U nics (DRO) Qualifier U U U Qualifier	RL         50.3         (GC)         RL         50.3         50.3         50.3         50.3         Limits		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared	10/11/23 00:41           Analyzed           10/11/23 00:41           10/11/23 00:41           10/11/23 00:41           10/11/23 00:41           Analyzed	1 Dil Fac 1 1 1 Dil Fac
-	Result           <50.3	Qualifier U nics (DRO) Qualifier U U U Qualifier S1+	RL         50.3         (GC)         RL         50.3         50.3         50.3         50.3         70.130         70.130         70.130		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared 10/10/23 09:30	Analyzed           10/11/23 00:41           10/11/23 00:41           10/11/23 00:41           10/11/23 00:41           10/11/23 00:41           10/11/23 00:41	1 Dil Fac 1 1 1 1 <b>Dil Fac</b> 1
Analyte Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result           <50.3	Qualifier U nics (DRO) Qualifier U U U Qualifier S1+	RL         50.3         (GC)         RL         50.3         50.3         50.3         50.3         70.130         70.130         70.130		mg/Kg Unit mg/Kg mg/Kg mg/Kg		Prepared 10/10/23 09:30 10/10/23 09:30 10/10/23 09:30 Prepared 10/10/23 09:30	Analyzed           10/11/23 00:41           10/11/23 00:41           10/11/23 00:41           10/11/23 00:41           10/11/23 00:41           10/11/23 00:41	1 Dil Fac 1 1 1 1 <b>Dil Fac</b> 1

Eurofins Midland

5

5

6

#### Job ID: 880-34197-1 SDG: Lea County, New Mexico

Prep Type: Total/NA

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

Prep Type: Total/NA Percent Surrogate Recovery (Acceptance Limits) DFBZ1 BFB1 Lab Sample ID Client Sample ID (70-130) (70-130) 880-34196-A-1-B MS Matrix Spike 102 102 880-34196-A-1-C MSD Matrix Spike Duplicate 112 102 880-34197-1 H-11 (0-6") 97 100 LCS 880-64332/1-A Lab Control Sample 111 104 LCSD 880-64332/2-A Lab Control Sample Dup 99 101 MB 880-64332/5-A Method Blank 108 122 Surrogate Legend BFB = 4-Bromofluorobenzene (Surr) DFBZ = 1,4-Difluorobenzene (Surr)

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

## Matrix: Solid

		1CO1	OTPH1	Percent Surrogate Recovery (Acceptance Limits)
ample ID	Client Sample ID	(70-130)	(70-130)	
70-A-21-C MS	Matrix Spike	179 S1+	139 S1+	
'0-A-21-D MSD	Matrix Spike Duplicate	161 S1+	125	
97-1	H-11 (0-6")	145 S1+	123	
0-64329/2-A	Lab Control Sample	132 S1+	141 S1+	
880-64329/3-A	Lab Control Sample Dup	113	111	
880-64329/1-A	Method Blank	181 S1+	162 S1+	

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Carmona Resources

#### Job ID: 880-34197-1 SDG: Lea County, New Mexico

Project/Site: Nighthawk 3H

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

	2/ <b>5-A</b>								Client Sa	mple ID: Meth	od Blank
Matrix: Solid										Prep Type:	Total/NA
Analysis Batch: 64432										Prep Batc	h: 64332
	N	IB MB									
Analyte	Res	ult Qualifier	RL		MDL Uni	t	D	P	repared	Analyzed	Dil Fa
Benzene	<0.002	00 U	0.00200		mg	Кg		10/1	0/23 10:38	10/11/23 12:35	
Toluene	< 0.002	00 U	0.00200		mg	Кg		10/1	0/23 10:38	10/11/23 12:35	
Ethylbenzene	< 0.002	00 U	0.00200		mg	Кg		10/1	0/23 10:38	10/11/23 12:35	
m-Xylene & p-Xylene	<0.004	00 U	0.00400		mg	Кg		10/1	0/23 10:38	10/11/23 12:35	
o-Xylene	<0.002	00 U	0.00200		mg	ΊKg		10/1	0/23 10:38	10/11/23 12:35	
Xylenes, Total	<0.004	00 U	0.00400		mg	Кg		10/1	0/23 10:38	10/11/23 12:35	
	л	IB MB									
Surrogate	%Recove	ry Qualifier	Limits					P	repared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	1	28	70 - 130					10/1	0/23 10:38	10/11/23 12:35	
1,4-Difluorobenzene (Surr)		22	70 - 130						0/23 10:38	10/11/23 12:35	
		22	70 - 130				С			10/11/23 12:35 ID: Lab Contro Prep Type:	
Lab Sample ID: LCS 880-6433		22	70 - 130				С			ID: Lab Contro	Total/N/
Lab Sample ID: LCS 880-6433 Matrix: Solid		22	70 - 130 Spike	LCS	LCS		С			ID: Lab Contro Prep Type:	Total/NA
Lab Sample ID: LCS 880-6433 Matrix: Solid Analysis Batch: 64432		22			LCS Qualifier	Unit	С			ID: Lab Contro Prep Type: Prep Batc	Total/NA
Lab Sample ID: LCS 880-6433 Matrix: Solid Analysis Batch: 64432 Analyte		22	Spike			<mark>Unit</mark> mg/Kg	С	lient	Sample	ID: Lab Contro Prep Type: Prep Batc %Rec	Total/NA
Lab Sample ID: LCS 880-6433 Matrix: Solid Analysis Batch: 64432 Analyte Benzene			Spike Added	Result			С	lient	Sample	ID: Lab Contro Prep Type: Prep Batc %Rec Limits	Total/NA
Lab Sample ID: LCS 880-6433 Matrix: Solid Analysis Batch: 64432			Spike Added 0.100	<b>Result</b> 0.1166		mg/Kg	С	lient	<b>Sample</b> %Rec 117	ID: Lab Contro Prep Type: Prep Batc %Rec Limits 70 - 130	Total/NA
Lab Sample ID: LCS 880-6433 Matrix: Solid Analysis Batch: 64432 Analyte Benzene Toluene Ethylbenzene			Spike Added 0.100 0.100	<b>Result</b> 0.1166 0.09644		mg/Kg mg/Kg	C	lient	<b>Sample</b> %Rec 117 96	ID: Lab Contro Prep Type: Prep Batc %Rec Limits 70 - 130 70 - 130	Total/NA
Lab Sample ID: LCS 880-6433 Matrix: Solid Analysis Batch: 64432 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene		22	Spike Added 0.100 0.100 0.100	<b>Result</b> 0.1166 0.09644 0.09544		mg/Kg mg/Kg mg/Kg	C	lient	Sample %Rec 117 96 95	ID: Lab Contro Prep Type: Prep Batc %Rec Limits 70 - 130 70 - 130 70 - 130	Total/N/
Lab Sample ID: LCS 880-6433 Matrix: Solid Analysis Batch: 64432 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene			Spike           Added           0.100           0.100           0.100           0.100           0.200	<b>Result</b> 0.1166 0.09644 0.09544 0.1878		mg/Kg mg/Kg mg/Kg mg/Kg	C	lient	Sample %Rec 1117 96 95 94	<b>ID: Lab Contro</b> <b>Prep Type:</b> <b>Prep Batc</b> <b>%Rec</b> <b>Limits</b> 70 - 130 70 - 130 70 - 130 70 - 130	Total/NA
Lab Sample ID: LCS 880-6433 Matrix: Solid Analysis Batch: 64432 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	32/1-A		Spike           Added           0.100           0.100           0.100           0.100           0.200	<b>Result</b> 0.1166 0.09644 0.09544 0.1878		mg/Kg mg/Kg mg/Kg mg/Kg	C	lient	Sample %Rec 1117 96 95 94	<b>ID: Lab Contro</b> <b>Prep Type:</b> <b>Prep Batc</b> <b>%Rec</b> <b>Limits</b> 70 - 130 70 - 130 70 - 130 70 - 130	Total/NA
Lab Sample ID: LCS 880-6433 Matrix: Solid Analysis Batch: 64432 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	32/1-A		Spike           Added           0.100           0.100           0.100           0.200           0.100	<b>Result</b> 0.1166 0.09644 0.09544 0.1878		mg/Kg mg/Kg mg/Kg mg/Kg	с	lient	Sample %Rec 1117 96 95 94	<b>ID: Lab Contro</b> <b>Prep Type:</b> <b>Prep Batc</b> <b>%Rec</b> <b>Limits</b> 70 - 130 70 - 130 70 - 130 70 - 130	Total/NA

#### Lab Sample ID: LCSD 880-64332/2-A

## Matrix: Solid

Analysis Batch: 64432							Prep	Batch:	64332
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1117		mg/Kg		112	70 - 130	4	35
Toluene	0.100	0.09300		mg/Kg		93	70 - 130	4	35
Ethylbenzene	0.100	0.09384		mg/Kg		94	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1837		mg/Kg		92	70 - 130	2	35
o-Xylene	0.100	0.08378		mg/Kg		84	70 - 130	7	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

## Lab Sample ID: 880-34196-A-1-B MS

# Matrix: Solid

Analysis Batch: 64432									Prep	Batch: 64332
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.101	0.09018		mg/Kg		89	70 - 130	
Toluene	<0.00201	U	0.101	0.07128		mg/Kg		71	70 - 130	

Eurofins Midland

Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Client: Carmona Resources

Project/Site: Nighthawk 3H

#### Job ID: 880-34197-1 SDG: Lea County, New Mexico

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

Lab Sample ID: 880-34196-A-1	I-B MS									Client S	Sample ID:		
Matrix: Solid											Prep T		
Analysis Batch: 64432												Batch:	64332
	Sample S	ample	Spike	MS	MS						%Rec		
Analyte	Result C	ualifier	Added	Result		lifier	Unit		D	%Rec	Limits		
Ethylbenzene	<0.00201 L	l F1	0.101	0.06697	F1		mg/Kg			66	70 - 130		
m-Xylene & p-Xylene	<0.00402 L	IF1	0.202	0.1343	F1		mg/Kg			66	70 - 130		
o-Xylene	<0.00201 L	IF1	0.101	0.06838	F1		mg/Kg			67	70 - 130		
	MS M	IS											
Surrogate		Qualifier	Limits										
4-Bromofluorobenzene (Surr)	102		70 - 130										
1,4-Difluorobenzene (Surr)	102		70 - 130										
Lab Sample ID: 880-34196-A-1	I-C MSD						C	Clien	t Sai	mple ID:	Matrix Sp	ike Du	plicat
Matrix: Solid											Prep T	ype: To	otal/N/
Analysis Batch: 64432											Prep	Batch:	6433
	Sample S	ample	Spike	MSD	MSD	)					%Rec		RP
Analyte	Result C	ualifier	Added	Result	Qua	lifier	Unit		D	%Rec	Limits	RPD	Limi
Benzene	<0.00201 L	I	0.0996	0.09951			mg/Kg			100	70 - 130	10	3
Toluene	<0.00201 L	I	0.0996	0.08277			mg/Kg			83	70 - 130	15	3
Ethylbenzene	<0.00201 L	l F1	0.0996	0.08667			mg/Kg			87	70 - 130	26	3
m-Xylene & p-Xylene	<0.00402 L	IF1	0.199	0.1785			mg/Kg			89	70 - 130	28	3
o-Xylene	<0.00201 L	l F1	0.0996	0.08121			mg/Kg			81	70 - 130	17	3
	MSD N												
Surrogate		Qualifier	Limits										
4-Bromofluorobenzene (Surr)	112		70 - 130										
1,4-Difluorobenzene (Surr)	102		70 - 130										
lethod: 8015B NM - Diese	el Range Org	anics (D	RO) (GC)										
Lab Sample ID: MB 880-64329	)/1-A								c	Client Sa	mple ID: N	/lethod	Blan
Matrix: Solid											Prep T		
Analysis Batch: 64318												Batch:	
	n	IB MB											
Analyte	Res	ult Qualifier	RL	-	MDL	Unit		D	Pre	epared	Analyze	ed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<50	).0 U	50.0	)		mg/Kg			10/10	/23 09:30	10/10/23 2	:0:38	
Diesel Range Organics (Over	<50	).0 U	50.0	)		mg/Kg			10/10	/23 09:30	10/10/23 2	0:38	
C10-C28) Oll Range Organics (Over C28-C36)	<50	).0 U	50.0	)		mg/Kg			10/10	/23 09:30	10/10/23 2	0:38	
		MB MB				5 5							
Surrogate		ery Qualifier	Limits						Pre	epared	Analyze	ed	Dil Fa
1-Chlorooctane		81 S1+	70 - 130	-				-		/23 09:30	10/10/23 2		
o-Terphenyl	1	62 S1+	70 - 130						10/10	/23 09:30	10/10/23 2	0.30	
		62 S1+	70 - 130								ID: Lab Co		amn

95

70 - 130

mg/Kg

Eurofins Midland

Analysis Batch: 64318

Gasoline Range Organics

Diesel Range Organics (Over

Analyte

C10-C28)

(GRO)-C6-C10

950.5

1000

# **QC Sample Results**

Client: Carmona Resources Project/Site: Nighthawk 3H

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

Lab Sample ID: LCS 880-64	329/2-A						Clien	t Sample	BID: Lab Co		
Matrix: Solid										ype: To	
Analysis Batch: 64318									Prep	Batch:	64329
	LCS	LCS									
Surrogate	%Recovery		Limits								
1-Chlorooctane		S1+	70 - 130								
o-Terphenyl		S1+	70 - 130								
Lab Sample ID: LCSD 880-6	4329/3-A					Clier	nt San	nple ID:	Lab Contro	I Sample	e Dup
Matrix: Solid									Prep 1	ype: To	al/NA
Analysis Batch: 64318									Prep	Batch:	64329
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	980.8		mg/Kg		98	70 - 130	5	20
(GRO)-C6-C10											
Diesel Range Organics (Over			1000	1021		mg/Kg		102	70 - 130	7	20
C10-C28)											
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane			70 - 130								
o-Terphenyl	111		70 - 130								
Lab Sample ID: 880-34170-A	A-21-C MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep 1	ype: To	al/NA
Analysis Batch: 64318									Prep	Batch:	64329
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<49.8	U	994	1054		mg/Kg		106	70 - 130		
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.8	U F1	994	1372	F1	mg/Kg		136	70 - 130		
C10-C28)											
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	179	S1+	70 - 130								
o-Terphenyl	139	S1+	70 - 130								
Lab Sample ID: 880-34170-A	A-21-D MSD					CI	ient S	ample IC	): Matrix Sp	oike Dup	licate
Matrix: Solid									Prep 1	ype: To	al/NA
Analysis Batch: 64318										Batch:	
_	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.8	U	994	951.5		mg/Kg		96	70 - 130	10	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.8	U F1	994	1244		mg/Kg		123	70 - 130	10	20
C10-C28)											
	MSD	MSD									
Surrogate	%Recovery		Limits								
1-Chlorooctane		S1+	70 - 130								

o-Terphenyl 125 70 - 130

Eurofins Midland

Job ID: 880-34197-1 SDG: Lea County, New Mexico Client: Carmona Resources Project/Site: Nighthawk 3H

# **QC Sample Results**

Job ID: 880-34197-1
SDG: Lea County, New Mexico

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-64405/1	I-A											Client S	ample ID:	Method	Blank
Matrix: Solid														Type: S	
Analysis Batch: 64500														.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
		мв	мв												
Analyte	R	esult (	Qualifier		RL		MDL	Unit		D	Pr	epared	Analy	/zed	Dil Fac
Chloride	<	<5.00	U		5.00			mg/Kg	1				10/11/23	3 18:28	1
Lab Sample ID: LCS 880-64405/	/ <b>2-A</b>									Clie	ent	Sample	ID: Lab C	Control S	ample
Matrix: Solid													Prep	o Type: S	oluble
Analysis Batch: 64500															
				Spike		LCS	LCS						%Rec		
Analyte				Added		Result	Qual	ifier	Unit	I	D	%Rec	Limits		
Chloride				250		251.4			mg/Kg			101	90 _ 110		
Lab Sample ID: LCSD 880-6440	5/3-A								Cli	ent Sa	am	ple ID: I	_ab Contr	ol Samp	le Dup
Matrix: Solid														o Type: S	
Analysis Batch: 64500															
				Spike		LCSD	LCSI	D					%Rec		RPD
Analyte				Added		Result	Qual	ifier	Unit	I	D	%Rec	Limits	RPD	Limit
Chloride				250		251.8			mg/Kg			101	90 _ 110	0	20
Lab Sample ID: 880-34195-A-1-0	CMS											Client	Sample II	D: Matrix	Spike
Matrix: Solid														o Type: S	
Analysis Batch: 64500															
-	Sample	Samp	le	Spike		MS	MS						%Rec		
Analyte	Result	Qualif	fier	Added		Result	Qual	ifier	Unit		D	%Rec	Limits		
Chloride	116			253		380.1			mg/Kg			105	90 - 110		
Lab Sample ID: 880-34195-A-1-I										Client	Sa	mple ID	: Matrix S	pike Du	olicate
- Lab Galline ID. 000-34 [33-A-1-	บเพอบ														
Matrix: Solid													Prec	) Type: S	oluble
Matrix: Solid													Prep	o Type: S	oluble
	Sample	Samp	le	Spike		MSD	MSD						Prep %Rec	o Type: S	RPD
Matrix: Solid		•		Spike Added		MSD Result			Unit	I	D	%Rec		Type: S RPD	

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**Client Sample ID** 

Lab Control Sample

Lab Control Sample Dup

H-11 (0-6")

Method Blank

Matrix Spike

H-11 (0-6")

Method Blank

Matrix Spike

H-11 (0-6")

## **QC** Association Summary

Client: Carmona Resources Project/Site: Nighthawk 3H

**GC VOA** 

Prep Batch: 64332

MB 880-64332/5-A

LCS 880-64332/1-A

LCSD 880-64332/2-A

880-34196-A-1-B MS

Lab Sample ID

MB 880-64332/5-A

LCS 880-64332/1-A

LCSD 880-64332/2-A

880-34196-A-1-B MS

880-34196-A-1-C MSD

880-34197-1

880-34196-A-1-C MSD

Analysis Batch: 64432

Lab Sample ID

880-34197-1

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Prep Batch

Prep Batch

64332

64332

64332

64332

64332

64332

#### Job ID: 880-34197-1 SDG: Lea County, New Mexico

Method

5035

5035

5035

5035

5035

Matrix Spike Duplicate Total/NA Solid 5035 **Client Sample ID** Prep Type Matrix Method Total/NA Solid 8021B Total/NA Solid 8021B Total/NA Solid 8021B Lab Control Sample Lab Control Sample Dup Total/NA Solid 8021B Total/NA Solid 8021B Matrix Spike Duplicate Total/NA Solid 8021B

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Matrix

Solid

Solid

Solid

Solid

Solid

# Analysis Batch: 64583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34197-1	H-11 (0-6")	Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Analysis Batch: 64318

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-34197-1	H-11 (0-6")	Total/NA	Solid	8015B NM	64329
MB 880-64329/1-A	Method Blank	Total/NA	Solid	8015B NM	64329
LCS 880-64329/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	64329
LCSD 880-64329/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	64329
880-34170-A-21-C MS	Matrix Spike	Total/NA	Solid	8015B NM	64329
880-34170-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	64329

#### Prep Batch: 64329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34197-1	H-11 (0-6")	Total/NA	Solid	8015NM Prep	
MB 880-64329/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-64329/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-64329/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-34170-A-21-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-34170-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	
Analysis Batch: 64460		Iotal/INA	Solid		
 Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bat

Total/NA

Solid

8015 NM

#### HPLC/IC

880-34197-1

#### Leach Batch: 64405

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-34197-1	H-11 (0-6")	Soluble	Solid	DI Leach	
MB 880-64405/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

**Eurofins Midland** 

Job ID: 880-34197-1 SDG: Lea County, New Mexico

#### HPLC/IC (Continued)

LCSD 880-64405/3-A

880-34195-A-1-C MS

880-34195-A-1-D MSD

#### Leach Batch: 64405 (Continued)

Lab Control Sample Dup

Matrix Spike Duplicate

Matrix Spike

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-34195-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-34195-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
Analysis Batch: 64500					
- *		Pren Tyne	Matrix	Method	Pren Batch
Analysis Batch: 64500 - Lab Sample ID 880-34197-1	Client Sample ID H-11 (0-6")	Prep Type Soluble	Matrix Solid	<u>Method</u> 300.0	Prep Batch 64405
Lab Sample ID	Client Sample ID				

Soluble

Soluble

Soluble

Solid

Solid

Solid

300.0

300.0

300.0

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5

8

64405

64405

64405

#### Client Sample ID: H-11 (0-6") Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

I age off of our	Page	<i>311</i>	of 383
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Job ID: 880-34197-1 SDG: Lea County, New Mexico

# Lab Sample ID: 880-34197-1

Matrix: Solid

9

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	64332	10/10/23 10:38	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64432	10/11/23 13:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64583	10/11/23 13:24	SM	EET MID
Total/NA	Analysis	8015 NM		1			64460	10/11/23 00:41	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	64329	10/10/23 09:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64318	10/11/23 00:41	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	64405	10/10/23 15:31	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64500	10/11/23 19:15	СН	EET MID

#### Laboratory References:

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

Eurofins Midland

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34197-1 SDG: Lea County, New Mexico

#### Laboratory: Eurofins Midland

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

Authority	Program	m	Identification Number	Expiration Date
Texas	NELAP		T104704400-23-26	06-30-24
The following analyte	es are included in this report, but	the laboratory is not certif	fied by the governing authority. This lis	t may include analytes
с, ,	does not offer certification.	Matrix	Analyta	
Analysis Method	does not offer certification.	Matrix	Analyte	
с, ,		Matrix Solid	Analyte Total TPH	

Eurofins Midland

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#### Received by OCD: 11/2/2023 1:36:42 PM

## **Method Summary**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34197-1 SDG: Lea County, New Mexico

lethod	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
otal 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
800.0	Anions, Ion Chromatography	EPA	EET MID
6035	Closed System Purge and Trap	SW846	EET MID
015NM Prep	Microextraction	SW846	EET MID
01 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

Eurofins Midland

## Sample Summary

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34197-1 SDG: Lea County, New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-34197-1	H-11 (0-6")	Solid	10/04/23 00:00	10/09/23 16:20

Received by OCD: 11/2/2023 1:36:42 PM

			16						
		72	10-0-						
Received by (Signature) Date/Time	Receiv	Time	Date/Time			y (Signature)	Relinquished by		
Comments. Email results to Mike Carmona mcarmona@carmonaresources.com, Conner Moehring@carmonaresources.com, Clint Merritt MerrittC@carmonaresources.com	nonaresources.com, Clint	oehring@carr	loehring cm	.com, Conner N	nonaresources	carmona@carr	e Carmona m	I results to Mil	Comments. Emai
		X X	1 X	G	×		10/4/2023	0-6")	H-11 (0-6")
Sample Comments		TF	# of Cont	Water Comp	Soil	Time	Date	tification	Sample Identification
NaOH+Ascorbic Acid SAPC		PH 80		C-K2					
Zn Acetate+NaOH Zn				27	ratiine	Corrected Tempe		_	Total Containers.
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> NaSO <sub>3</sub>				J.C	dina	Temperature Reading	No NA	s. Yes	Sample Custody Seals
NahSC4 NABIS				+++++++++++++++++++++++++++++++++++++++		Correction Factor	NA NA	Yes	Cooler Custody Seals
		) + D 300	am 1021	≪J		₹.L			Received Intact:
				(es) No	Wet Ice	Yes No	Temp Blank.		SAMPLE RECEIPT
		+ MI	s	)		)			PO#
2		RO)					CCM		Sampler's Name:
				5 dav	Due Date		Lea County New Mexico	Lea	Project Location
			Pres.	Rush	<ul><li>Routine</li></ul>		2090		Project Number-
	ANALYSIS REQUEST			round	Turn Around		Nighthawk 3H		Project Name
Deliverables EDD ADaPT Other			ionoil com	msanjari@marathonoil.com	Email				Phone
Reporting Level II CLevel III CST/UST CRRP Level IV		Houston TX 77024	Hous	City State ZIP			)701	Midland TX 79701	City, State ZIP
		990 Town and Country Blvd	L 066	Address.			Ste 500	310 W Wall St Ste 500	Address.
Program- UST/PST PRP rownfields RC perfund		Marathon Oil Corporation	Marat	Company Name			ources	Carmona Resources	Company Name
Work Order Comments		Melodie Sanjari	Meloc	Bill to (if different)	6			Clinton Merritt	Project Manager
880-34197 Chain of Custody									

12 13

5 6

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## Login Sample Receipt Checklist

Client: Carmona Resources

Login Number: 34197 List Number: 1 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	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Job Number: 880-34197-1

List Source: Eurofins Midland

SDG Number: Lea County, New Mexico

Received by OCD: 11/2/2023 1:36:42 PM



**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Clint Merritt Carmona Resources 310 W Wall St Ste 500 Midland, Texas 79701 Generated 10/12/2023 9:08:59 PM

# **JOB DESCRIPTION**

Nighthawk 3H SDG NUMBER Lea County, New Mexico

# **JOB NUMBER**

880-34196-1

EOL

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

AMER

Generated 10/12/2023 9:08:59 PM

Authorized for release by Jessica Kramer, Project Manager Jessica.Kramer@et.eurofinsus.com (432)704-5440

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

Laboratory Job ID: 880-34196-1 SDG: Lea County, New Mexico

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Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34196-1 SDG: Lea County, New Mexico

Qualifiers		- 3
GC VOA		
Qualifier	Qualifier Description	_ 4
F1	MS and/or MSD recovery exceeds control limits.	
U	Indicates the analyte was analyzed for but not detected.	5
GC Semi VOA		
Qualifier	Qualifier Description	_ 6
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	8
U	Indicates the analyte was analyzed for but not detected.	_
Glossary		- 9
Abbreviation	These commonly used abbreviations may or may not be present in this report.	10
¤	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)	19
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
MPN	Most Probable Number	
MQL	Method Quantitation Limit	
NC	Not Calculated	
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	
NEG	Negative / Absent	
POS	Positive / Present	
PQL	Practical Quantitation Limit	
PRES	Presumptive	
~~		

Relative Error Ratio (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)

Quality Control

TEQToxicity Equivalent Quotient (Dioxin)TNTCToo Numerous To Count

QC

RER

Job ID: 880-34196-1 SDG: Lea County, New Mexico

#### Job ID: 880-34196-1

Client: Carmona Resources Project/Site: Nighthawk 3H

#### Laboratory: Eurofins Midland

#### Narrative

Job Narrative 880-34196-1

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

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

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

#### Receipt

The sample was received on 10/9/2023 4:20 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

#### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: H-12 (0-6") (880-34196-1).

#### GC VOA

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-64332 and analytical batch 880-64432 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### GC Semi VOA

Method 8015MOD NM: The surrogate recovery for the blank associated with preparation batch 880-64312 and analytical batch 880-64318 was outside the upper control limits.

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: H-12 (0-6") (880-34196-1), (890-5415-A-4-D MS) and (890-5415-A-4-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-64318/20), (CCV 880-64318/31), (CCV 880-64318/5) and (LCS 880-64312/2-A). Evidence of matrix interferences is not obvious.

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

Job ID: 880-34196-1 SDG: Lea County, New Mexico

## Client Sample ID: H-12 (0-6") Date Collected: 10/04/23 00:00

Date Received: 10/09/23 16:20

Client: Carmona Resources Project/Site: Nighthawk 3H

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		10/10/23 10:38	10/11/23 13:04	1
Toluene	<0.00201	U	0.00201		mg/Kg		10/10/23 10:38	10/11/23 13:04	1
Ethylbenzene	<0.00201	U F1	0.00201		mg/Kg		10/10/23 10:38	10/11/23 13:04	1
m-Xylene & p-Xylene	<0.00402	U F1	0.00402		mg/Kg		10/10/23 10:38	10/11/23 13:04	1
o-Xylene	<0.00201	U F1	0.00201		mg/Kg		10/10/23 10:38	10/11/23 13:04	1
Xylenes, Total	<0.00402	U F1	0.00402		mg/Kg		10/10/23 10:38	10/11/23 13:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130				10/10/23 10:38	10/11/23 13:04	1
1,4-Difluorobenzene (Surr)	96		70 - 130				10/10/23 10:38	10/11/23 13:04	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00402	U	0.00402		mg/Kg			10/11/23 13:04	1
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (	GC)						
Analyte	Result	Qualifier	GC) 	MDL		D	Prepared	Analyzed	Dil Fac
Analyte Total TPH	Result <50.3	Qualifier U	<b>RL</b> 50.3	MDL	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 10/10/23 17:20	
Analyte Total TPH Method: SW846 8015B NM - Dies	Result <50.3	Qualifier	RL 50.3		mg/Kg		<u>.</u>	10/10/23 17:20	1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte	Result <50.3 sel Range Orga Result	Qualifier U nics (DRO) Qualifier	(GC)	MDL	mg/Kg Unit	D	Prepared	10/10/23 17:20	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	Result <50.3	Qualifier U nics (DRO) Qualifier	RL 50.3		mg/Kg		<u>.</u>	10/10/23 17:20	1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10	Result <50.3 sel Range Orga Result <50.3	Qualifier U nics (DRO) Qualifier U	RL           50.3           (GC)           RL           50.3		mg/Kg Unit mg/Kg		Prepared 10/10/23 08:39	Analyzed           10/10/23 17:20	1 Dil Fac 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <50.3 sel Range Orga Result	Qualifier U nics (DRO) Qualifier U	(GC)		mg/Kg Unit		Prepared	10/10/23 17:20	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.3 sel Range Orga Result <50.3	Qualifier U nics (DRO) Qualifier U U	RL           50.3           (GC)           RL           50.3		mg/Kg Unit mg/Kg		Prepared 10/10/23 08:39	Analyzed           10/10/23 17:20	1 Dil Fac 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result           <50.3	Qualifier U nics (DRO) Qualifier U U	RL           50.3           (GC)           RL           50.3           50.3		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 08:39 10/10/23 08:39	Analyzed           10/10/23 17:20           10/10/23 17:20           10/10/23 17:20	1 Dil Fac 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result           <50.3	Qualifier U nics (DRO) Qualifier U U U	RL       50.3       (GC)       RL       50.3       50.3       50.3		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 08:39 10/10/23 08:39 10/10/23 08:39	Analyzed           10/10/23 17:20           10/10/23 17:20           10/10/23 17:20           10/10/23 17:20           10/10/23 17:20	1 Dil Fac 1 1 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result           <50.3	Qualifier U nics (DRO) Qualifier U U Qualifier	RL           50.3           (GC)           RL           50.3           50.3           50.3           Limits		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 08:39 10/10/23 08:39 10/10/23 08:39 Prepared	Analyzed           10/10/23 17:20           10/10/23 17:20           10/10/23 17:20           10/10/23 17:20           10/10/23 17:20           10/10/23 17:20           Analyzed	1 Dil Fac 1 1 1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	Result           <50.3	Qualifier U nics (DRO) Qualifier U U U U Qualifier S1+ S1+	RL           50.3           (GC)           RL           50.3           50.3           50.3           50.3           70.130           70.130           70.130		mg/Kg Unit mg/Kg mg/Kg		Prepared 10/10/23 08:39 10/10/23 08:39 10/10/23 08:39 Prepared 10/10/23 08:39	Analyzed           10/10/23 17:20           4nalyzed           10/10/23 17:20           10/10/23 17:20           10/10/23 17:20           4nalyzed           10/10/23 17:20	1 Dil Fac 1 1 1 1 1 <b>Dil Fac</b> 1
Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: EPA 300.0 - Anions, Ion Analyte	Result           <50.3	Qualifier U nics (DRO) Qualifier U U U U Qualifier S1+ S1+	RL           50.3           (GC)           RL           50.3           50.3           50.3           50.3           70.130           70.130           70.130		mg/Kg Unit mg/Kg mg/Kg mg/Kg		Prepared 10/10/23 08:39 10/10/23 08:39 10/10/23 08:39 Prepared 10/10/23 08:39	Analyzed           10/10/23 17:20           4nalyzed           10/10/23 17:20           10/10/23 17:20           10/10/23 17:20           4nalyzed           10/10/23 17:20	1 Dil Fac 1 1 1 1 1 <b>Dil Fac</b> 1

Eurofins Midland

Lab Sample ID: 880-34196-1 Matrix: Solid 5

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34196-1 SDG: Lea County, New Mexico

Prep Type: Total/NA

#### 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)		
880-34196-1	H-12 (0-6")	92	96		
880-34196-1 MS	H-12 (0-6")	102	102		
880-34196-1 MSD	H-12 (0-6")	112	102		
LCS 880-64332/1-A	Lab Control Sample	111	104		
LCSD 880-64332/2-A	Lab Control Sample Dup	99	101		
MB 880-64332/5-A	Method Blank	108	122		
Surrogate Legend					
BFB = 4-Bromofluorobe	nzene (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) 880-34196-1 H-12 (0-6") 154 S1+ 132 S1+ 890-5415-A-4-D MS Matrix Spike 161 S1+ 128 890-5415-A-4-E MSD Matrix Spike Duplicate 167 S1+ 130 LCS 880-64312/2-A Lab Control Sample 126 135 S1+ LCSD 880-64312/3-A Lab Control Sample Dup 97 97 MB 880-64312/1-A 176 S1+ Method Blank 189 S1+

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Page 323 of 383

Eurofins Midland

Client: Carmona Resources

#### Job ID: 880-34196-1 SDG: Lea County, New Mexico

Project/Site: Nighthawk 3H

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

Lab Sample ID: MB 880-64332/5-A Matrix: Solid	4										Client Sa	ample ID: M Prep T		
Analysis Batch: 64432													Batch	
Analysis Datch. 04402		МВ	MB									Пер	Daten	. 0400
Analyte	R		Qualifier	F	RL	MDL	Unit		D	P	repared	Analyze	he	Dil Fa
Benzene		0200		0.0020			mg/Kg		_		0/23 10:38	10/11/23 1		Dirit
Toluene		0200		0.0020			mg/Kg				0/23 10:38	10/11/23 1		
Ethylbenzene		0200		0.0020			mg/Kg				0/23 10:38	10/11/23 1		
m-Xylene & p-Xylene		0400		0.0040			mg/Kg				0/23 10:38	10/11/23 1		
o-Xylene		0200		0.0040			mg/Kg				0/23 10:38	10/11/23 1		
Xylenes, Total		0400		0.0020			mg/Kg				0/23 10:38	10/11/23 1		
Aylenes, Iotai	-0.00	0400	0	0.0040	50		iiig/itg			10/10	0/20 10.00	10/11/20 1	2.00	
			МВ											
Surrogate	%Reco		Qualifier	Limits							repared	Analyz		Dil F
4-Bromofluorobenzene (Surr)		108		70 - 130							0/23 10:38	10/11/23 1		
1,4-Difluorobenzene (Surr)		122		70 - 130	)					10/1	0/23 10:38	10/11/23 1	2:35	
Lab Sample ID: LCS 880-64332/1- Matrix: Solid	A								C	lient	Sample	ID: Lab Co Prep T		
Analysis Batch: 64432													Batch	
Analysis Baten. 04402				Spike	LCS							%Rec	Duton	. 0400
Analyte				Added	Result			Init		D	%Rec	Limits		
Benzene				0.100	0.1166			ng/Kg		-	117	70 - 130		
Toluene				0.100	0.09644			ng/Kg			96	70 - 130		
Ethylbenzene				0.100	0.09544			ng/Kg			95	70 - 130		
m-Xylene & p-Xylene				0.200	0.1878			ng/Kg			94	70 - 130		
o-Xylene				0.100	0.09012			ng/Kg			90	70 - 130		
								.33						
Surrogate	LCS Recovery%			Limits										
4-Bromofluorobenzene (Surr)	111			70 - 130										
1,4-Difluorobenzene (Surr)	104			70 - 130										
Lab Sample ID: LCSD 880-64332/	2 4							0	ot	6		ch Control	Some	
Matrix: Solid	2-A							CII	ent	Sam	pie iD. L	ab Control Prep T		
													Batch	
Analysis Batch: 64432				Spike		LCS	n					%Rec	Daten	. 0433 RF
Analyte				Added	Result			Init		D	%Rec	Limits	RPD	Lin
Benzene				0.100	0.1117			ng/Kg		_		70 - 130	4	
Toluene				0.100	0.09300			ng/Kg			93	70 - 130 70 - 130	4	
Ethylbenzene				0.100	0.09384			ng/Kg			93 94	70 - 130 70 - 130	4	
m-Xylene & p-Xylene				0.200	0.1837			ng/Kg			94 92	70 - 130	2	
o-Xylene				0.200	0.08378			ig/Kg ig/Kg			92 84	70 - 130 70 - 130	2	
				0.100	0.00070	•	11	·9/· <b>·</b> 9			54	70-100	,	
0	LCSD			1										
	%Recovery	Qua	inner	Limits										
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	99 101			70 <sub>-</sub> 130 70 <sub>-</sub> 130										
Lab Sample ID: 880-34196-1 MS											Clien	t Sample I		
Matrix: Solid												Prep T		
Analysis Batch: 64432												Prep	Batch	: 6433
	Sample	Sam	ple	Spike	MS	MS						%Rec		

	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	<0.00201	U	0.101	0.09018		mg/Kg		89	70 - 130
Toluene	<0.00201	U	0.101	0.07128		mg/Kg		71	70 - 130

Eurofins Midland
Client: Carmona Resources

Job ID: 880-34196-1 SDG: Lea County, New Mexico

# Project/Site: Nighthawk 3H Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-34196-1	MS								Clien	t Sample ID		
Matrix: Solid										Prep Ty	pe: To	otal/NA
Analysis Batch: 64432										Prep E	Batch	: 64332
	•	Sample	Spike	MS	MS					%Rec		
Analyte	Result	Qualifier	Added		Qualifie	r Unit		D	%Rec	Limits		
Ethylbenzene	<0.00201	U F1	0.101	0.06697	F1	mg/Kg			66	70 - 130		
m-Xylene & p-Xylene	<0.00402	U F1	0.202	0.1343	F1	mg/Kg			66	70 - 130		
o-Xylene	<0.00201	U F1	0.101	0.06838	F1	mg/Kg			67	70 - 130		
	MS	MS										
Surrogate	%Recovery	Qualifier	Limits									
4-Bromofluorobenzene (Surr)	102		70 - 130									
1,4-Difluorobenzene (Surr)	102		70 - 130									
Lab Sample ID: 880-34196-1	MSD								Clien	t Sample ID	): H-1:	2 (0-6")
Matrix: Solid										Prep Ty		
Analysis Batch: 64432												64332
-	Sample	Sample	Spike	MSD	MSD					%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifie	r Unit		D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U	0.0996	0.09951		mg/Kg		_	100	70 - 130	10	35
Toluene	<0.00201	U	0.0996	0.08277		mg/Kg			83	70 - 130	15	35
Ethylbenzene	<0.00201	U F1	0.0996	0.08667		mg/Kg			87	70 - 130	26	35
m-Xylene & p-Xylene	<0.00402	U F1	0.199	0.1785		mg/Kg			89	70 - 130	28	35
o-Xylene	<0.00201	U F1	0.0996	0.08121		mg/Kg			81	70 - 130	17	35
	MSD	MSD										
Surrogate	%Recovery	Qualifier	Limits									
4-Bromofluorobenzene (Surr)	112		70 - 130									
1,4-Difluorobenzene (Surr)	102		70 - 130									
lethod: 8015B NM - Dies	sel Range O	rganics (D	RO) (GC)									
		<u>J (-</u>										
Lab Sample ID: MB 880-643	12/1-A								Client Sa	ample ID: M		
Matrix: Solid										Prep Ty		
Analysis Batch: 64318										Prep E	Batch	: 64312
	_	MB MB					_	_			_	
Analyte		esult Qualifier			MDL U		D		repared	Analyze		Dil Fac
Gasoline Range Organics (GRO)-C6-C10	•	<50.0 U	50.0	0	m	g/Kg		10/0	9/23 17:24	10/10/23 09	9:17	1
				-								

Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	
 <50.0	U	50.0		mg/Kg		10/09/23 17:24	10/10/23 09:17	
<50.0	U	50.0		mg/Kg		10/09/23 17:24	10/10/23 09:17	
<50.0	U	50.0		mg/Kg		10/09/23 17:24	10/10/23 09:17	
MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	189	S1+	70 - 130
o-Terphenyl	176	S1+	70 - 130

# Lab Sample ID: LCS 880-64312/2-A Matrix: Solid

Diesel Range Organics (Over

Oll Range Organics (Over C28-C36)

C10-C28)

Analysis Batch: 64318							Prep l	Batch: 64312	
	Spike	LCS	LCS				%Rec		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	1000	916.1		mg/Kg		92	70 - 130		
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	879.0		mg/Kg		88	70 - 130		
C10-C28)									

Eurofins Midland

Prep Type: Total/NA

1

1

1

1

Dil Fac

10/10/23 09:17

10/10/23 09:17

**Client Sample ID: Lab Control Sample** 

10/09/23 17:24

10/09/23 17:24

# **QC Sample Results**

Client: Carmona Resources Project/Site: Nighthawk 3H

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

Lab Sample ID: LCS 880-6431 Matrix: Solid Analysis Batch: 64318	2/2-A						Client	Sample		ontrol Sa ype: To Batch:	tal/NA
	105	LCS									
Surrogate	%Recovery		Limits								
1-Chlorooctane	126	Quanter	70 - 130								
o-Terphenyl		S1+	70 - 130								
	100	0,1	/01/00								
Lab Sample ID: LCSD 880-643	12/3-A					Clier	nt Sam	nole ID:	Lab Contro	l Sampl	e Dup
Matrix: Solid										ype: To	-
Analysis Batch: 64318										Batch:	
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	895.5		mg/Kg		90	70 - 130	2	20
(GRO)-C6-C10						5. 5					
Diesel Range Organics (Over			1000	807.7		mg/Kg		81	70 - 130	8	20
C10-C28)											
	1050	LCSD									
Surrogate	%Recovery		Limits								
1-Chlorooctane		Quaimer	70 - 130								
o-Terphenyl	97		70 - 130 70 - 130								
o-reiphenyi	37		70 - 730								
Lab Sample ID: 890-5415-A-4-	DMS							Client	Sample ID	Matrix	Spike
Matrix: Solid								•		ype: To	-
Analysis Batch: 64318										Batch:	
Analysis Baten. 04010	Sample	Sample	Spike	MS	MS				%Rec	Baten.	04012
Analyte	-	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<49.9		1010	954.9	quantor	mg/Kg		93	70 - 130		
(GRO)-C6-C10		0	1010	504.5		iiig/itg		50	70 - 100		
Diesel Range Organics (Over	<49.9	U	1010	1261		mg/Kg		123	70 - 130		
C10-C28)											
		MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	161	S1+	70 - 130								
o-Terphenyl	128		70 - 130								
						0			Mateix Cr		lieste
Lab Sample ID: 890-5415-A-4-						U U	ient Sa	ample IL	D: Matrix Sp		
Matrix: Solid										ype: To	
Analysis Batch: 64318		<u> </u>								Batch:	
	•	Sample	Spike		MSD		_	~ =	%Rec		RPD
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.9	U	1010	1023		mg/Kg		100	70 - 130	7	20
(GRO)-C6-C10 Diesel Range Organics (Over	<49.9	п	1010	1302		mg/Kg		127	70 - 130	3	20
C10-C28)	5.5	5	1010	1002		mgning		121	10 - 100	0	20
	MSD	MSD									
Surrogate	%Recovery		Limits								
1-Chlorooctane	167	S1+	70 - 130								

Job ID: 880-34196-1 SDG: Lea County, New Mexico

Released to Imaging: 3/18/2024 8:58:24 AM

o-Terphenyl

130

70 - 130

Client: Carmona Resources Project/Site: Nighthawk 3H

# **QC Sample Results**

Job ID: 880-34196-1
SDG: Lea County, New Mexico

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-64405/1	I-A											Client S	ample ID:	Method	Blank
Matrix: Solid														Type: S	
Analysis Batch: 64500														.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
		мв	мв												
Analyte	R	esult (	Qualifier		RL		MDL	Unit		D	Pr	epared	Analy	/zed	Dil Fac
Chloride	<	<5.00	U		5.00			mg/Kg	1				10/11/23	3 18:28	1
Lab Sample ID: LCS 880-64405/	/ <b>2-A</b>									Clie	ent	Sample	ID: Lab C	Control S	ample
Matrix: Solid													Prep	o Type: S	oluble
Analysis Batch: 64500															
				Spike		LCS	LCS						%Rec		
Analyte				Added		Result	Qual	ifier	Unit	I	D	%Rec	Limits		
Chloride				250		251.4			mg/Kg			101	90 _ 110		
Lab Sample ID: LCSD 880-6440	5/3-A								Cli	ent Sa	am	ple ID: I	_ab Contr	ol Samp	le Dup
Matrix: Solid														o Type: S	
Analysis Batch: 64500															
				Spike		LCSD	LCSI	D					%Rec		RPD
Analyte				Added		Result	Qual	ifier	Unit	I	D	%Rec	Limits	RPD	Limit
Chloride				250		251.8			mg/Kg			101	90 _ 110	0	20
Lab Sample ID: 880-34195-A-1-0	CMS											Client	Sample II	D: Matrix	Spike
Matrix: Solid														o Type: S	
Analysis Batch: 64500															
-	Sample	Samp	le	Spike		MS	MS						%Rec		
Analyte	Result	Qualif	fier	Added		Result	Qual	ifier	Unit		D	%Rec	Limits		
Chloride	116			253		380.1			mg/Kg			105	90 - 110		
Lab Sample ID: 880-34195-A-1-I										Client	Sa	mple ID	: Matrix S	pike Du	olicate
- Lab Galline ID. 000-34 [33-A-1-	บเพอบ														
Matrix: Solid													Prec	) Type: S	oluble
Matrix: Solid													Prep	o Type: S	oluble
	Sample	Samp	le	Spike		MSD	MSD						Prep %Rec	o Type: S	RPD
Matrix: Solid		•		Spike Added		MSD Result			Unit	I	D	%Rec		Type: S RPD	

Eurofins Midland

**Client Sample ID** 

Lab Control Sample

Lab Control Sample Dup

H-12 (0-6")

H-12 (0-6")

H-12 (0-6")

H-12 (0-6")

H-12 (0-6")

H-12 (0-6")

Method Blank

**Client Sample ID** 

Lab Control Sample

Lab Control Sample Dup

Method Blank

# **QC** Association Summary

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

Client: Carmona Resources Project/Site: Nighthawk 3H

**GC VOA** 

Prep Batch: 64332

MB 880-64332/5-A

LCS 880-64332/1-A

880-34196-1 MS

880-34196-1 MSD

Lab Sample ID

MB 880-64332/5-A

LCS 880-64332/1-A

LCSD 880-64332/2-A

880-34196-1

LCSD 880-64332/2-A

Analysis Batch: 64432

Lab Sample ID

880-34196-1

Job ID: 880-34196-1 SDG: Lea County, New Mexico

Method

5035

5035

5035

5035

5035

5035

Method

8021B

8021B

8021B

8021B

8021B

8021B

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Prep Batch

Prep Batch

64332

64332

64332

64332

64332

64332

8

# 880-34196-1 MSD Analysis Batch: 64582

880-34196-1 MS

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
880-34196-1	H-12 (0-6")	Total/NA	Solid	Total BTEX		

#### GC Semi VOA

#### Prep Batch: 64312

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-34196-1	H-12 (0-6")	Total/NA	Solid	8015NM Prep	
MB 880-64312/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-64312/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-64312/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5415-A-4-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5415-A-4-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 64318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34196-1	H-12 (0-6")	Total/NA	Solid	8015B NM	64312
MB 880-64312/1-A	Method Blank	Total/NA	Solid	8015B NM	64312
LCS 880-64312/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	64312
LCSD 880-64312/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	64312
890-5415-A-4-D MS	Matrix Spike	Total/NA	Solid	8015B NM	64312
890-5415-A-4-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	64312
– Analysis Batch: 64457					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34196-1	H-12 (0-6")	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 64405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34196-1	H-12 (0-6")	Soluble	Solid	DI Leach	
MB 880-64405/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64405/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-64405/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

**Eurofins Midland** 

Job ID: 880-34196-1 SDG: Lea County, New Mexico

### HPLC/IC (Continued)

LCSD 880-64405/3-A

880-34195-A-1-C MS

880-34195-A-1-D MSD

#### Leach Batch: 64405 (Continued)

Lab Control Sample Dup

Matrix Spike Duplicate

Matrix Spike

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-34195-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-34195-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
Analysis Batch: 64500					
- *					
Lab Sample ID	Client Sample ID	Prep Type Soluble	Matrix Solid	Method	Prep Batch 64405
- *		Prep Type Soluble Soluble	Matrix Solid Solid	Method 300.0 300.0	Prep Batch 64405 64405

Soluble

Soluble

Soluble

Solid

Solid

Solid

300.0

300.0

300.0

Eurofins Midland

5

8

64405

64405

64405

#### Client Sample ID: H-12 (0-6") Date Collected: 10/04/23 00:00 Date Received: 10/09/23 16:20

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Job ID: 880-34196-1 SDG: Lea County, New Mexico

# Lab Sample ID: 880-34196-1

Matrix: Solid

9

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	64332	10/10/23 10:38	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64432	10/11/23 13:04	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64582	10/11/23 13:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			64457	10/10/23 17:20	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	64312	10/10/23 08:39	ТКС	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64318	10/10/23 17:20	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	64405	10/10/23 15:31	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64500	10/11/23 19:09	СН	EET MID

#### Laboratory References:

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

Eurofins Midland

Released to Imaging: 3/18/2024 8:58:24 AM

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34196-1 SDG: Lea County, New Mexico

#### Laboratory: Eurofins Midland

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

Authority	Progra	Im	Identification Number	Expiration Date		
Texas	NELAF	)	T104704400-23-26	06-30-24		
• ,	are included in this report, but es not offer certification.	t the laboratory is not certif	ied by the governing authority. This lis	t may include analytes		
Analysis Method	Pren Method	Matrix	Analyte			
Analysis Method 8015 NM	Prep Method	Matrix Solid	Analyte Total TPH			

Eurofins Midland

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#### Received by OCD: 11/2/2023 1:36:42 PM

# **Method Summary**

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34196-1 SDG: Lea County, New Mexico

lethod	Method Description	Protocol	Laboratory
021B	Volatile Organic Compounds (GC)	SW846	EET MID
otal BTEX	Total BTEX Calculation	TAL SOP	EET MID
015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
00.0	Anions, Ion Chromatography	EPA	EET MID
035	Closed System Purge and Trap	SW846	EET MID
015NM Prep	Microextraction	SW846	EET MID
I Leach	Deionized Water Leaching Procedure	ASTM	EET MID

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

# Sample Summary

Client: Carmona Resources Project/Site: Nighthawk 3H Job ID: 880-34196-1 SDG: Lea County, New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-34196-1	H-12 (0-6")	Solid	10/04/23 00:00	10/09/23 16:20



A	K		Comments Email results to Mike Carmona mcarmona@carmonaresources.com, Conner Moehring@carmonaresources.com, Clint MerrittC@carmonaresources.com						H-12 (0-6")	Sample Identification	Total Containers.	Total Containon	Sample Custody Seal	Cooler Custody Seals.	Received Intact	SAMPLE RECEIPT	PO#	Sampler's Name.	Project Location	Project Number	Project Name	Phone	City, State ZIP	Address.	Company Name	Project Manager
		R	results to Mike						-6")	tification		- Tes	· · · · · · · · · · · · · · · · · · ·	Yes					Lea Co		7		Midland TX 79701	310 W Wall St Ste 500	Carmona Resources	Clinton Merritt
		Relinquished by	Carmona mo						10/4/2023	Date		NN ON		Ð	No	Kemp Blank:		ССМ	Lea County, New Mexico	2090	Nighthawk 3H		01	ite 500	irces	
		/ (Signature)	carmona@car							Time	Corrected Temperature	i emperature Keading		Correction Factor	⊇ !	Yes No	<u>)</u>		exico							
			monaresourc						×	Soll	erature	ading				Wet Ice	<u>, , , , , , , , , , , , , , , , , , , </u>		Due Date	Routine	Tum	Email				
			es.com, Conn						<u>ہ</u>	Water Comp		-1 N,			2	(Yes)No	}		5 day	Rush	Turn Around	msanjari@marathonoil.com	City, State ZIP	Address.	Company Name	Bill to (if different)
10			er Moehri					 	1	p #of	╉┺┉	_		] Par	ame	eter	\$	[		Pres.		arathonoil.		-	<b>O</b>	
6-2-2		Date/Time	ng cmoe						×						021		<u></u>			·		com	Houston	990 Tov	Maratho	Melodie Sanjari
		ne	hring@c			<u> </u>			××	TP	PH 80				300		+ M	RO)					Houston TX 77024	990 Town and Country Blvd	Marathon Oil Corporation	Sanjari
			armona																				4	untry Blvd	oration	
			resourc		 	 	 												-		ANA					
		\_F	es.com,																		LYSIS R					
	$\left( \right)$	Received by (Signature)	Clint Me		-			-		<u></u>										_	ALYSIS REQUEST	Deli	Rep	Stat	Pro	
	VV	by (Sig	rritt Mer						_											_	-	Deliverables EDD	Reporting Level II Level III	State of Project:	Program: UST/PST PRP rownfields	
	V	Hature)	rittC@ca		 			 	_										_			EDD		ect:		V
			irmonar																			A	vel Ⅲ			Vork Ord
			esource	┝─┼	 _		_	 _	_		NaO	Zn A	Na <sub>2</sub> S	NaH	н <sub>3</sub> гс	1.20				Non		ADaPT	ST/UST		ownfield	Work Order Comments
			s.com							Sample	H+Ascort	Zn Acetate+NaOH Zn	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> NaSO <sub>3</sub>	NaHSO4 NABIS	H3PO4 HP	112004 112				NO	Preserv	Other	RRP		s RC	nments
		Date/Time								Sample Comments	NaOH+Ascorbic Acid SAPC	aOH Zn	õ	SIS	i	NACH NA					Preservative Codes	Ť	_			0
		ime								ents	;APC					Na					ides			,	Iperfund	

# Received by OCD: 11/2/2023 1:36:42 PM

880-34196 Chain of Custody



Chain of Custory

Job Number: 880-34196-1

List Source: Eurofins Midland

SDG Number: Lea County, New Mexico

# Login Sample Receipt Checklist

Client: Carmona Resources

Login Number: 34196 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	

# **APPENDIX F**



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Incident ID	
District RP	
Facility ID	
Application ID	

# Closure

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

<b><u>Closure Report Attachment C</u></b>	Checklist: Each of the following	items must be inc	luded 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								
and regulations all operators are may endanger public health or th should their operations have faile human health or the environment compliance with any other federa restore, reclaim, and re-vegetate	required to report and/or file certa e environment. The acceptance of d to adequately investigate and re . In addition, OCD acceptance of al, state, or local laws and/or regu- the impacted surface area to the c	ain release notificat of a C-141 report by emediate contamin f a C-141 report do lations. The respon- conditions that exist	ny knowledge and understand that tions and perform corrective actio y the OCD does not relieve the op ation that pose a threat to groundy bes not relieve the operator of resp nsible party acknowledges they m ted prior to the release or their fin- ation and re-vegetation are compl	ns for releases which erator of liability vater, surface water, onsibility for ust substantially al land use in				
Printed Name: Melodie SAnjari_	Title:							
Signature:Melodie Sanjari	Melodie Sanjari	Date:	5/25/2023_ <u>5/25/2023</u>					
email:	msanjari@marathonoil.com	Telephone:	575-988-8753					
OCD Only								
Received by:		_ Date:						
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.								
Closure Approved by:		Date:						
Printed Name:		Title:						

Originally submitted via NM OCD Centerstack. Included in Marathon's ACO with the Division - Resubmission Via the Portal was Requested.

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Incident ID	
District RP	
Facility ID	
Application ID	

# Closure

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

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

 A scaled site and sampling diagram as described in 19.15.29.11 NMAC

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

 Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling (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:	Melodie Sanjari	Title:							
Signature: Callie Karrigan	Melodie Sanjari	Date:	5/25/2023						
email:	msanjari@marathooil.com		5/25/2023						
OCD Only									
Received by:		Date:							
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.									
Closure Approved by:		Date	:						
Printed Name:			z						

Originally submitted via NM OCD Centerstack. Included in Marathon's ACO with the Division - Resubmission Via the Portal was Requested.



February 22, 2019

Spill Closure Report:	Nighthawk Sate Com 3H (Section 20, T18S, R35E) API: 30-025-41950 Incident Number: 1RP-5004 & 1RP-5094
Prepared For:	Marathon Oil Permian LLC. 2423 Bonita Street Carlsbad, New Mexico 88220

### NMOCD District 1 1625 North French Drive Hobbs, New Mexico 88240

Ms. Olivia Yu,

Marathon Oil Permian LLC., retained Vertex Resource Services Inc. (Vertex) to conduct a Spill Assessment and Remediation Plan for two releases that occurred at the Nighthawk State Com 3H, API: 30-025-41950 production pad. The first release occurred on March 14, 2018 at approximately 10:15 am and the second released occurred on May 30, 2018 at approximately 9:00 am. Remediation was completed for both spills simultaneously as the releases occurred in the same vicinity on the pad. This letter provides a description of the Spill Assessment, Remediation Plan and includes this request for Spill Closure of both incidences.

### **Site Information**

The site is located approximately 50 miles east of Carlsbad, New Mexico. The legal land description for the site is Section 20, Township 18 South and Range 35 East in Lea County, New Mexico (approximately 32° 43' 35.7888"N 103° 28' 41.16"W). The affected property is leased from the State of New Mexico. An aerial photograph and site schematic are included in Attachment 1.

*The Geological Map of New Mexico* (New Mexico Bureau of Geology and Mineral Resources, 2014-2017) indicates the site's surface geology is Ogallala Formation (lower Pliocene to middle Miocene) – Alluvial and eolian deposits, and petro calcic soils of the southern High Plains. The United States Department of Agriculture, Natural Resource Conservation Services, identifies the local soils as Kimbrough-Lea complex, dry, 0 to 3 percent slopes. This complex is approximately 50 percent Kimbrough gravelly loam, gently sloping, on the tops and sides of low ridges and 25 percent of Lea loam, which is nearly level and is in swales between ridges. These soils are used as range, wildlife habitat, and recreational areas. These descriptions are consistent with observations during the site visit. Site photographs obtained during the Spill Assessment are included in Attachment 2.

### Site Assessment / Characterization Requirements

#### Water, Residential/Public Buildings, Mines and Unstable Areas

Wetlands and surface waters were researched at United States Fish and Wildlife Service, National Wetlands Inventory https://www.fws.gov/wetlands/data/mapper.html; there is no wetland or surface waters within 500 feet of the site. (Attachment 4)

The nearest occupied permanent resident, school, hospital, institution or church are located greater than 300 feet from the site. (Google Earth, 2019) (Attachment 5)

According to the United States Geological Survey, *Inventory of Springs in the State of New Mexico* (1992), there are no springs located within 1,000 feet of the site. (Attachment 6)

New Mexico Office of the State Engineer, New Mexico Water Rights Reporting System. (2018). *Well Log/Meter Information Report* indicated that there are no wells within 1,000 feet of the spill site. (Attachment 7)

New Mexico Energy, Mineral and Natural Resources Department was researched to identify potential active and abandoned mines near the spill. No mines were found in or around the vicinity of the spill site. (Attachment 8)

The United States Department of Homeland Security, Federal Emergency Management Agency (FEMA) Flood Map Service Center, <u>https://msc.fema.gov/portal/search?AddressQuery=malaga%20new%20mexico#searchresultsanchor</u>, was reviewed and Flood Map Number 35015C1300D, effective on December 16, 2008, indicated that the site located in Zone D shaded. "The Zone D designation is used for areas where there are possible but undermined flood hazards, as no analysis of flood hazards have been conducted." (Attachment 9)

The New Mexico State Engineer website (New Mexico Water Rights Reporting System – Water Column Report) indicates that the nearest groundwater data available for Section 20, T18S, R35E and is approximately 3,780 feet north from the site. The groundwater in the area is reported to be at an average depth of 76 feet below ground surface (BGS). The referenced groundwater data are presented in Attachment 10.

The New Mexico State Engineer website (New Mexico Water Rights Reporting System – Active & Inactive Points of Diversion) indicates that the nearest Point of Diversion is located approximately 3,780 feet north of the site, in Section 20, T18S, R35E (Attachment 11).

According to the Karst Map published by the Bureau of Land Management, the site is located within the low ranking of the Karst Potential. Attached in Attachment 12 is the figure depicting the site location and Karst Potential.

The Remediation Plan was written and approved in accordance with the Energy, Minerals and Natural Resource Department, New Mexico Oil Conservation Division, *Guidelines for Remediation of Leaks, Spills and Releases* (August 13, 1993).

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Ranking Criteria for NMOCD Aug 13, 1993	Distance	Ranking
Depth to Groundwater	76 ft.	10
Wellhead Protection Area	> 1,000 ft. from a water source	0
Distance to Surface Water Body	200- 1,000 ft.	10
Total Ranking	20	

The following are recommended remediation action levels initially used for final closure efforts.

Recommended Remediation Action Level 19.15.29 NMAC Aug 14, 2018					
Benzene (ppm)	10				
BTEX (ppm)	50				
TPH (ppm)	100				
Chlorides (ppm)	600				

Based on a change in regulation during the final remediation, the updated closure criteria effective August 14, 2018 was utilized. As such, this Closure Report has been written in accordance with the New Mexico Administrative Code - *Natural Resources and Wildlife, Oil and Gas Releases* (July 24, 2018).

Closure Criteria for Soils Impacted by a Release							
Minimum depth below any point within the horizontal	Constituent	Limit					
boundary of the release to groundwater less than 10,000							
mg/l TDS							
51 feet – 100 feet	Chloride	10,000 mg/kg					
	TPH (GRO+DRO+MRO)	2,500 mg/kg					
	BTEX	50 mg/kg					
	Benzene	10 mg/kg					

According to the Closure Criteria for Soils Impacted by a Release in the Natural Resources and Wildlife, Oil and Gas Release, 19.15.26 New Mexico Administrative Code (NMAC), August 14, 2018, the location falls in the "51 feet to 100 feet to groundwater" closure criteria category as per Table 1, 19.15.29.12 NMAC.

# MARCH 14, 2018, INCIDENT NUMBER: 1RP-5004

# **Incident Description**

The spill, reported March 14, 2018, involved the release of production water, in the form of mist/spray into secondary containment, onto the well pad surface, and spraying approximately 20 feet off the pad to the north. The release was caused by the failure of a gasket at the heater treater. The well was shut-in, and the damaged gasket was replaced. The mist/spray from the heater treater released a total of 10 barrels (bbls) of production water; approximately 6 bbls within the containment and 4 bbls outside of containment. The mist also traveled approximately 20 feet off the pad. A vacuum truck was immediately dispatched to remove any standing liquids. The liner integrity was assessed to confirm it will continue to contain liquids if another release occurs. A backhoe was additionally dispatched to remove any saturated soils. The initial C-141 Report is included in Attachment 3.

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#### **Remedial Actions Taken**

The initial site visit was completed on May 24, 2018, aimed to identify evidence of the spill specified in the initial C-141 Report, the area of contamination, area of the spray on and off site, and initial sampling points.

On May 30, 2018 initial samples were collected from the site. A total of six (6) test pits were advanced to delineate the vertical and horizontal impacts of the spill. Five (5) test pits were advanced along or outside the boundaries of the spill area to determine the vertical depth and volume of impacts. One (1) test pit was advanced to delineate vertical impacts within the spill area. Soil samples taken during delineation activities were submitted to the lab and analyzed for hydrocarbon (volatile and extractable) and chlorides. The lab results are presented in Table 1 and can be found in Attachment 14.

The lab results from May 30, 2018, showed there was high concentrations of chlorides, which required remediation to below the remediation action levels. On July 15, 2018, after the excavation and removal of soils from the site, three confirmatory samples were collected and submitted to the lab. The collected samples were analyzed for hydrocarbon (volatile and extractable) and chlorides. The lab results are presented in Table 2 and can be found in Attachment 14. The lab results from July 15, 2018, showed high concentrations of chlorides under the prior regulations.

A Remediation Plan was developed on October 31, 2018, approved by the OCD, and executed on November 12, 2018. The plan is presented in Attachment 15.

Remediation included the excavation of impacted soils, transportation by a licensed waste hauler and disposal at an approved waste management facility. The remedial activities began on November 12, 2018 and finished on November 13, 2018. Refusal was reached at 2 to 2.5 feet west of the heater treater. Excavation continued west of the heater treater, reaching a continuous "hard pan" refusal at 2 to 2.5 feet. Soils were removed as close to existing infrastructure as possible in compliance with safety guidance. In total, approximately 470 cubic yards of contaminated soil was excavated and disposed of. Field screening for chlorides was completed during the excavation using the standardized saturated paste method, and Quantabs, and is documented in Table 3, along with lab analysis results. Composite confirmatory samples were collected on November 14, 2018 and submitted for lab analysis. Lab analysis included hydrocarbon (volatile and extractable) and chlorides. Remediation activity can be viewed in Figure 1, Attachment 1, and site photos, documenting the remedial activities in Attachment 2. Daily Field Reports of the excavation and sampling can be found in Attachment 13. The lab results are presented in Table 3 and can be found in Attachment 14.

The confirmatory sample results collected on November 14, 2018 identified areas on the north wall, south wall, and east wall 1 were above closure criteria chloride concentrations. The limits of the excavation area were constrained by refusal due to "hard pan", caliche and existing infrastructure (flow lines, containment area and buried electrical lines). During excavation, caliche was encountered throughout the excavation at 2 to 2.5 feet. A variance was requested to install a 30 Mil liner immediately adjacent to the hard pan layer. This request was approved on December 19, 2019 by Bradley Billings and is included as Attachment 16. The liner was installed on December 20, 2018 at 2 to 2.5 feet below the ground surface, to address those areas on the base of the excavation exceeding the 600-ppm chloride concentration (Attachment 15). The liner was sized to fit the base of the excavation and backfilled with local caliche. Pictures of the liner installation can be found in Attachment 2. The liner within the heater treater containment area was inspected for integrity and

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found to be ripped in two (2) places. Due to proximity to existing infrastructure, sampling from beneath the liner could not be completed in accordance with safety practices. It is requested that any residual impacts under the heater treater liner be deferred for remediation until which time the facility is decommissioned.

Т	Table 1. Delineation Soil Characterization Results Heater Treater – May 30, 2018										
Sample Description			Field Sc	reening	Petro	leum Hydro	carbons	Inorganic			
Sample ID	Depth (ft.) Date		Volatile Organic Compounds	ilt (High/Low)	Volatile Extractable		-				
Sample D			udd) Volatile Organi (u	(+) Quantab Result (High/Low)	euezeue Beuzeue (mg/kg)	(mg/kg) BTEX (Total)	Hat (mg/kg)	Chloride (mg/kg)			
BH18-01	0	5/30/2018	-	-	< 0.00199	< 0.00199	<15.0	23,900			
BH18-01	2	5/30/2018	-	-	<0.00200	<0.00200	<15.0	387			
BH18-01	4	5/30/2018	-	-	-	_	-	2,480			
BH18-02	0	5/30/2018	-	-	<0.00200	<0.00200	<15.0	1,050			
BH18-02	2	5/30/2018	-	-	<0.00202	<0.00202	<15.0	411			
BH18-03	0	5/30/2018	-	-	<0.00199	<0.00199	48.9	4,360			
BH18-03	2	5/30/2018	-	-	<0.00200	<0.00200	<14.9	518			
BH18-04	0	5/30/2018	-	-	<0.00201	0.336	53.1	109			
BH18-04	2	5/30/2018	-	-	<0.00199	<0.00199	<15.0	33.9			
BH18-04	4	5/30/2018	-	-	-	_	-	21.3			
BH18-05	0	5/30/2018	-	-	<0.00201	<0.00201	<15.0	89			
BH18-05	2	5/30/2018	-	-	<0.00200	<0.00200	<15.0	48.4			
BH18-06	0	5/30/2018	-	-	0.00202	0.00578	65.7	26.4			
BH18-06	2	5/30/2018	-	-	<0.00201	<0.00201	<15.0	12.9			

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Т	Table 2. Remediation Soil Characterization Results Heater Treater – July 15, 2018									
Sample Description			Field So	reening	Petro	leum Hydro	carbons	Inorganic		
Sample ID	Depth (ft.)	Date	Volatile Organic Compounds	Quantab Result (High/Low)	Benzene	BTEX (Total)	Extractable HdL	Chloride		
			(ppm)	(+/-)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)		
BH18-01		7/15/2018	-	-	<0.00201	<0.00201	<15.0	2,830		
BH18-02		7/15/2018	-	-	<0.00202	<0.00202	<15.0	2,240		
BH18-03		7/15/2018	-	-	<0.00200	<0.00200	<15.0	2,160		

Table 3	Table 3. Final Confirmatory Soil Characterization Results Heater Treater – November 14, 2018										
Sample Description				reening	Petro	leum Hydro	carbons	Inorganic			
Sample ID	Depth (ft.) Date		ic Compounds	t (High/Low)	Vola	itile	Extractable				
Sample ID	(π.)	Date	ත් Volatile Organic Compounds (ස	) Quantab Result (High/Low)	əuəzuəg (mg/kg)	BTEX (mg/kg)	HdL (mg/kg)	Chloride (mg/kg)			
West Wall 1	2	11/14/2018	-	62	<0.0192	<0.0192	<15.0	107			
West Wall 2	2	11/14/2018	-	74	<0.0182	<0.0182	<15.0	102			
East Wall 1	2	11/14/2018	-	760	<0.0189	<0.0189	<15.0	888			
East Wall 2	2	11/14/2018	-	74	<0.0193	<0.0193	<15.0	132			
South Wall	1	11/14/2018	-	390	<0.0188	<0.0188	<15.0	695			
North Wall	2	11/14/2018	-	802	<0.0198	<0.0198	<14.9	1,130			
Base 1	2	11/14/2018	-	128	<0.0171	<0.0171	<15.0	167			
Base 2	3	11/14/2018	-	98	<0.0183	0.336	53.1	109			

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# MAY 30, 2018, INCIDENT NUMBER: 1RP-5094

# **Incident Description**

The spill, reported May 30, 2018, involved the release of oil, leaking on the well pad surface. The release was caused by a rupture in the flowline at the wellhead. The well was shut-in and found the poly line had a 1" hole. The leak from the poly line released approximately of 22 barrels (bbls) of oil. A vacuum truck was immediately dispatched and removed approximately 16 bbls of standing liquids. A backhoe was dispatched to remove saturated soils near the source of the rupture, which were transported to a licensed waste handling facility. The initial C-141 Report is included in Attachment 3.

### **Remedial Actions Taken**

The initial site visit was completed on May 30, 2018, which aimed to identify the area of contamination and clean up the spill specified in the initial C-141 Report. One (1) sample was collected to characterize potential contaminants and their corresponding concentration levels. The soil sample taken during the initial site visit was submitted to the lab and analyzed for hydrocarbon (volatile and extractable) and chlorides. The lab results are presented in Table 4 and can be found in Attachment 14.

The lab results from May 30, 2018, BH18-01, showed high concentrations of hydrocarbon and chlorides. Delineation samples were then collected on July 7, 2018. A total of five (5) test pits were advanced to delineate the vertical and horizontal impacts of the spill. Four (4) test pits were advanced outside the boundaries of the spill area to determine the vertical depth and volume of impacts. One (1) test pit was advanced to delineate vertical and horizontal impacts within the spill area. Soil samples taken during the delineation activity were submitted to the lab and analyzed for hydrocarbon (volatile and extractable) and chlorides. The lab results are presented in Table 5 and can be found in Attachment 14.

The lab results from July 7, 2018, showed there was high concentrations of chlorides, requiring remediation to below the remediation action levels. The Remediation Plan was developed on October 31, 2018, and executed on November 14, 2018. The plan is presented in Attachment 15.

Remediation included the excavation of impacted soils, transportation by a licensed waste hauler and disposal at an approved waste management facility. These activities began on November 14, 2018 and finished on November 15, 2018. Excavation of soils began south of the tank containment area, south to the wellhead and south of the well head. Refusal was reached at 1.5 to 2 feet south of the tank containment area. Excavation continued in the area reaching a continuous refusal at 1.5 to 2 feet. Soils were removed as close to infrastructure as possible in compliance with safety guidance. Approximately 200 cubic yards of contaminated soil was excavated and disposed of. Field screening for chlorides was completed during the excavation using the standardized saturated paste method with Quantabs and is documented in Table 6, along with the lab screening results. Discreet confirmatory samples were collected on November 14, 2018 and submitted for lab analysis. Lab analysis included hydrocarbon (volatile and extractable) and chlorides. Remediation activities can be viewed in Figure 2, Attachment 1, and site photos, documenting the remedial activities in Attachment 2. Daily Field Reports of the excavation and sampling can be found in Attachment 13. The lab results are presented in Table 6 and can be found in Attachment 14.

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The confirmatory sample results collected on November 14, 2018 identified areas on the south wall, and the two (2) base points were above closure criteria chloride concentrations. The limits of the excavation area were constrained by refusal "hard pan", caliche and existing infrastructure (flow lines, containment area and buried electrical lines). During excavation, caliche was hit at 1.5 to 2 feet. A variance was requested to install a 30 Mil liner. This request was approved on December 19, 2018 by Bradley Billings and is included as Attachment 16. The liner was installed on December 20, 2018 at 1.5 to 2 feet below the ground surface, to address those areas on the base of the excavation exceeding the 600-ppm chloride concentration. The liner was sized to fit the base of the excavation and backfilled with local caliche. Pictures of the liner installation can be found in Attachment 2.

Table 4. Initial Soil Characterization Results Wellhead – May 30, 2018										
Samp	ole Descrip	otion	Field Sc	reening	Petro	leum Hydro	carbons	Inorganic		
Sample ID	Depth (ft.)	Date	Organic Compounds Result (High/Low)		Vola	atile	Extractable			
		Volatile Or	+) Quantab R	euezueg g (mg/kg)	(fotal) BTEX (Total)	HdL (mg/kg)	Chloride (mg/kg)			
BH18-01	0	5/30/2018	-	-	56.4	592	21,300	2,970		

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Table 5. Delineation Soil Characterization Results Wellhead – July 7, 2018										
Sample Description				reening	Petro	leum Hydro	carbons	Inorganic		
Sample ID	Depth Sample ID (ft.)		Volatile Organic Compounds	Quantab Result (High/Low)	Vola	atile	Extractable			
			Volatile Org	Quantab Re	Benzene	BTEX (Total)	ТРН	Chloride		
			(ppm)	(+/-)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)		
<b>S1</b>	0	7/7/2018	-	-	<0.00201	<0.00202	68.9	5,910		
<b>S1</b>	2	7/7/2018	-	-	<0.00202	<0.00201	<15.0	1,700		
<b>S1</b>	4	7/7/2018	-	-	<0.00199	<0.00199	40.2	1,630		
S2	0	7/7/2018			<0.00198	<0.00198	18.5	408		
S2	2	7/7/2018			<0.00202	<0.00201	129	2,310		
S2	4	7/7/2018			<0.00202	<0.00202	181	1,450		
S3	0	7/7/2018			<0.00200	<0.00200	<15.0	3,160		
S3	2	7/7/2018			<0.00201	<0.00201	<15.0	2,460		
S3	4	7/7/2018			<0.00201	<0.00201	<15.0	1,610		
S4	0	7/7/2018			<0.00200	<0.00200	<15.0	310		
S4	2	7/7/2018			<0.00199	<0.00199	64.4	419		
S4	4	7/7/2018			<0.00200	<0.00200	53.0	552		
S5	0	7/7/2018			<0.00201	<0.00201	<15.0	1,250		
S5	2	7/7/2018			<0.00202	<0.00202	<15.0	1,060		
S5	4	7/7/2018			<0.00200	<0.00200	<15.0	890		

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Table 6. Final Confirmatory Soil Characterization Results Wellhead – November 14, 2018										
Sample Description			Field Sc	reening	Petro	leum Hydro	carbons	Inorganic		
Sample ID	Depth Sample ID (ft.)		Volatile Organic Compounds	Quantab Result (High/Low)	Volatile Extra		Extractable			
			-	•	Benzene	BTEX (Total)	HdT	Chloride		
			(ppm)	(+/-)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)		
West Wall	2	11/14/2018	-	High	<0.0199	<0.0199	<15.0	209		
East Wall	2	11/14/2018	-	650	<0.0181	<0.0181	<15.0	70.7		
South Wall	2	11/14/2018	-	976	<0.0196	<0.0196	<14.9	1,890		
North Wall	2	11/14/2018		2450	<0.0184	<0.0184	<15.0	226		
Base 1	2	11/14/2018		802	<0.0188	<0.0188	<15.0	522		
Base 2	2	11/14/2018		1170	<0.0193	<0.0193	<15.0	2,540		
05 East Wall	2	11/14/2018		High	<0.0191	<0.0191	<15.0	374		
05 Base	2	11/14/2018		650	<0.0173	<0.0173	<15.0	1,120		
05 South Wall	2	11/14/2018		High	<0.0191	<0.0191	<15.0	660		
05 North Wall		11/14/2018		High	<0.0189	<0.0189	<14.9	115		

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#### **Closure Request**

Initial response addressed concerns that were readily accessible around existing infrastructure on the operating site. Two spills occurred at the site. The first spill occurred on and off site from the heater treater. The second spill occurred on the well pad and was contained within the boundary of the lease in close proximity to the wellhead. The initial samples collected at the site identified, through lab analysis of hydrocarbon and chlorides, there were high concentrations of chlorides which required remediation through excavation. A Remediation Plan was submitted and approved by the NMOCD. During excavation, caliche hindered further excavation. A variance to line the excavated area with a 30 Mil liner was requested and approved. Complete laboratory results are included in Attachment 14.

Remedial efforts have been completed to address the delineated chloride concentrations above 19.15.29 NMAC Closure Criteria for Soils Impacted by a Release. A 30 Mil liner has been installed on the base of the excavation to address any residual impacts at or below 1.5 ft. bgs. The excavation was be backfilled with local caliche soils. Given that the impact associated to both spills has been remediated with the approved variance from NMOCD, Marathon Oil Permian LLC. requests that these spills be closed.

Should you have any questions or concerns, please do not hesitate to contact the undersigned at 832.588.0674 or dhanton@vertex.ca.

Sincerely,

Dhugal Hanton VICE PRESIDENT – US OPERATIONS

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# Attachments

Attachment 1.	Aorial Photograph
Attachment 1.	Aerial Photograph
Attachment 2.	Site Photographs
Attachment 3.	Form C-141 Release Notification and Corrective Action
Attachment 4.	U.S. Fish and Wildlife Service, National Wetlands Inventory
Attachment 5.	Permanent resident, School, Church etc. Map
Attachment 6.	Inventory of Springs in Lea County
Attachment 7.	Wells with Well Log Information
Attachment 8.	Active Mines in New Mexico
Attachment 9.	National Flood Hazard Layer Firmette Map
Attachment 10.	Water Column / Average Depth to Water
Attachment 11.	Active & Inactive Points of Diversion Report
Attachment 12.	Karst Potential Map
Attachment 13.	Daily Field Reports and Field Sampling Reports
Attachment 14.	Laboratory Results
Attachment 15.	Remediation Plan
Attachment 16.	Liner Variance Email Communication

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#### Limitations

This report has been prepared for the sole benefit of Marathon Oil Permian LLC. This document may not be used by any other person or entity, with the exception of the New Mexico Oil Conservation Division, without the express written consent of Vertex Resource Services Inc. (Vertex) and Marathon Oil Permian LLC. Any use of this report by a third party, or any reliance on decisions made based on it, or damages suffered as a result of the use of this report are the sole responsibility of the user.

The information and conclusions contained in this report are based upon work undertaken by trained professional and technical staff in accordance with generally accepted scientific practices current at the time the work was performed. The conclusions and recommendations presented represent the best judgement of Vertex based on the data collected during the assessment. Due to the nature of the assessment and the data available, Vertex cannot warrant against undiscovered environmental liabilities. Conclusions and recommendations presented in this report should not be considered legal advice.

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# **ATTACHMENT 1**





# Legend



Recommended Remediation Action Level (ppm)				
Benzene	BTEX	TPH	Chlorides	
10	50	100	600	

Notes: Aerial Image from Google Earth, 2017

N

20/05/2010	18-05	18-05
30/05/2018	0 ft	2 ft
В	< 0.00201	< 0.002
BTEX	< 0.00201	< 0.002
TPH	<15.0	<15.0
CL	89	48.4
140 138 19	and the factor	ALCONT OF THE

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and the second second	a server with	25 Dalars	Contraction of the second	
20/05/201/	18-04	18-04	18-04	3
30/05/2018	5 0 ft	2 ft	4 ft	
В	< 0.00201	< 0.00199		33
BTEX	0.336	< 0.00199		1
TPH	53.1	<15.0		3
CL	109	33.9	21.3	3
13	111.40-51	C. La Color	and the second	52

30/05/2018	18-01	18-01	18-01
50/05/2018	0 ft	2 ft	4 ft
В	< 0.00199	< 0.002	
BTEX	< 0.00199	< 0.002	
TPH	<15.0	<15.0	
CL	23,900	387	2,480
45 (05 (0010	18-01	163	-
15/07/2018	0 ft		
В	< 0.0020	)1	
BTEX	<0.0020	)1	
TPH	<15.0		
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in the

**新教教室**的公司和100

 MarathonOil
 Nighthawk Heater<br/>Treater Spill<br/>1RP-5004<br/>March 14, 2018

 Image: Stress of the stre

SCALE 1:1,400



30/05/2018 0 ft В 56.4 BTEX 592 TPH 21.300 CL 2 07 A.



Spill Area



Notes: Aerial Image from Google Earth, 2017





VERSATILITY, EXPERTISE.

# **ATTACHMENT 2**

Page 3

Oil Conservation Division

Incide	ent ID	1RP-5004
Distri	ct RP	
Facili	ty ID	
Appli	cation ID	

# Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>76</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 <b>not</b> 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.
- X Field data
- X
   Data table of soil contaminant concentration data
- $\mathbf{X}$  Depth to water determination
- X Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- X Boring or excavation logs
- Image: Photographs including date and GIS information
- X Topographic/Aerial maps
- X Laboratory data including chain of custody

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

<b>Received by OCD: 11/2/2</b>	<i>923 1:36:42 PM</i> State of New Mexico			Page 359 of
			Incident ID	1RP-5004
age 4	Oil Conservation Division		District RP	
			Facility ID	
			Application ID	
public health or the enviror failed to adequately investi addition, OCD acceptance and/or regulations. Printed Name: <u>Callie</u> Signature: <u>Callie</u>	e required to report and/or file certain release no nment. The acceptance of a C-141 report by the gate and remediate contamination that pose a the of a C-141 report does not relieve the operator o Karringon Karrigan narathonoil.com	OCD does not relieve th reat to groundwater, surf f responsibility for comp 	e operator of liability sho ace water, human health liance with any other feo essional	ould their operations have or the environment. In
OCD Only				

Page 6

Incident ID	
District RP	
Facility ID	

# Closure

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

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

Form C-141 Revised April 3, 2017

Page 361 of 383

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

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Release Notification and Corrective Action													
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Facility Nat	me: Nightl	hawk State C	Com 3H			Facility Ty	pe: oil well						
Surface Ow	ner: State			Mineral (	Owner:	State			API No	0 30-025-42	950		
				LOC	ATIO <sup>®</sup>	N OF RE	LEASE						
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was a water	course Rea		] Yes 🛛	No		If YES, Volume Impacting the Watercourse. N/A							
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will continue to contain liquids if another release occurs. Offsite release will be assessed by a 3 <sup>rd</sup> party and a clean-up plan will be submitted.													
	I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger												
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should their	operations h	have failed to	adequately	v investigate and i	remediat	te contaminat	tion that pose a the	reat to gi	round wate	r, surface wa	ater, h	uman l	nealth
	or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other								r				
Teuerai, state	federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION												
Signature: Callie Karrígan					A pproved by	Environmental S	magialia	, V	Y_				
Printed Name: Callie Karrigan					Appioved by	/ Environmental 5	specialis	ι.	U				
Title: HES Professional     Approval Date:     4/2/2018     Expiration Date:													
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E-mail Addr	ess: <u>cnkarri</u>	gan@maratho	noil.com			Conditions of		ivo		Attached			
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* Attach Addi	itional She	ets If Necess	sary			Photo documentation post- cleanup of lined facility							
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Received by OCD: 11/2/2023 1:36:42 PM



## Operator/Responsible Party,

The OCD has received the form C-141 you provided on \_3/28/2018\_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number \_1RP-5004\_ 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 \_1\_ office in \_\_Hobbs\_\_\_\_ on or before \_4/2/2018\_. 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; C<sub>6</sub> thru C<sub>36</sub>), 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; C<sub>6</sub> thru C<sub>36</sub>), 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 Page 3

Oil Conservation Division

Incident ID	1RP-5094
District RP	
Facility ID	
Application ID	

# Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>76</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 <b>not</b> 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.
- X Field data
- $\overline{\mathbf{X}}$  Data table of soil contaminant concentration data
- $\mathbf{X}$  Depth to water determination
- X Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- X Boring or excavation logs
- XPhotographs including date and GIS information
- X Topographic/Aerial maps
- X Laboratory data including chain of custody

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

Received by OCD: 11/2/2023 1:36:42 PM Form C-141 State of New Mexico				Page 367 of .				
				Incident ID	1RP-5094			
Page 4	Oil Conservation Division			District RP				
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regulations all ope public health or th failed to adequatel addition, OCD acc and/or regulations Printed Name: Signature:	at the information given above is true and complete to the erators are required to report and/or file certain release not the environment. The acceptance of a C-141 report by the O ly investigate and remediate contamination that pose a thro- ceptance of a C-141 report does not relieve the operator of Callie Karringon Mis Kasrigan igan@marathonoil.com	ifications OCD does eat to grou responsil _ Title: _ Date: _	and perform cc s not relieve the undwater, surfa bility for compl HES Profe	prrective actions for rele e operator of liability sho ice water, human health liance with any other feo essional	ases which may endanger ould their operations have or the environment. In			
OCD Only								
Received by:			Date:					

Page 6

Incident ID	
District RP	
Facility ID	
Application ID	

# Closure

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

<b><u>Closure Report Attachment Checklist</u></b> : Each of the following it	tems 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						
and regulations all operators are required to report and/or file certain may endanger public health or the environment. The acceptance of	nediate contamination that pose a threat to groundwater, surface water, a C-141 report does not relieve the operator of responsibility for tions. The responsible party acknowledges they must substantially nditions that existed prior to the release or their final land use in					
Printed Name:	Title:					
Signature: Callix Kansigan	Date:					
email:	Telephone:					
OCD Only						
Received by:	Date:					
	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible or regulations.					
Closure Approved by:	Date:					
Printed Name:	Title:					

State of New Mexico Energy Minerals and Natural Resources

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

Form C-141 Revised April 3, 2017

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

1220 5. 5t. 11a	icis Dr., Sant	a Fe, NM 87505	5	S	anta F	e, NM 875	05					
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						<b>OPERA</b>	ГOR		🖂 Initi	al Report		Final Repor
Name of Co	ompany: N	Iarathon Oil	Permian	LLC		Contact: Ca	llie Karrigan					
	Address: 2423 Bonita St, Carlsbad, NM 88220						No. 405-202-102	28 (cell	) 575-297	-0956 (offi	ce)	
Facility Nat	me: Nightl	nawk State C	Com 3H			Facility Typ	e: oil well					
Surface Ow	ner: State			Mineral (	Owner:	State			API No	30-025-41	950	
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Unit Letter	Section	Township	Range	Feet from the	1	South Line	Feet from the	East/	West Line	County		
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						1RP-5094		8165	56237			

pOY1816556459

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## Operator/Responsible Party,

The OCD has received the form C-141 you provided on \_6/13/2018\_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number \_1RP-5094\_ 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 \_1\_ office in \_\_Hobbs\_\_\_\_ on or before \_7/14/2018\_. 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; C<sub>6</sub> thru C<sub>36</sub>), 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; C<sub>6</sub> thru C<sub>36</sub>), 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

# **ATTACHMENT 3**

# **APPROVED**

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August 24, 2018

In the interests of resolving **1RP-5094**, NMOCD approves the proposed remediation plan as outlined on September 17, 2018 with the following conditions : Provide both bottom and sidewall confirmation samples at no greater than 50 ft. intervals. Please be advised to excavate further at BH18-01 until permissible chloride levels are reached or submit a variance requesting to utilize a liner. Submit dated photo documentation of the remedial activities, including placement of liner if one is used. Submit scaled map with the confirmation sample locations in relation to the delineation sample points and indicate location of release point.

**Spill Remediation Plan:** 

Nighthawk State Com 3H (Section 20 T18S R33E) API: 30-025-41950

**Prepared For:** 

Marathon Oil Permian LLC. 2423 Bonita Street Carlsbad, NM 88220

#### NMOCD District 1

1625 North French Drive Hobbs, New Mexico 88240

Ms. Olivia Yu,

Marathon Oil Permian LLC., requested that Vertex Resource Services Inc. (Vertex) conduct a Spill Assessment and Remediation for a release at Nighthawk State Com 3H, API: 30-025-41950 (hereafter referred to as "site"). The Initial C-141 Report is included in Attachment 1 and the Site Schematic can be found in Attachment 2 as per the lab results. This letter provides a description of the remediation plan to achieve spill closure at the site.

# **General Information**

Client:	Marathon Oil Permian LLC.	Site Location:	Nighthawk State Com 3H
Date:	August 20, 2018	Project #:	18E-02112
Client Contact:	Callie Karrigan	Phone #:	405-202-1028
Vertex PM:	Dhugal Hanton	Phone #:	832-588-0674
Field Personnel:	Robyn Fisher	Phone #:	575-361-7290
Field Personnel:	Jason Crabtree	Phone #:	432-250-3456
Contractor:	Wescom - Kevin Waliezer	Phone #:	701-580-7614

# **Objective**

The objective is to conduct an excavation of material and meet the 600 mg/kg total chlorides requirement. Based on existing results, it is assumed that most of the excavation extent will be at a depth of 4 feet. Vertex will conduct sampling at 4 feet and if the excavation base fails for chloride, a 30 mil liner will be installed. Vertex will source local caliche and backfill for the excavation.

#### 2018 Remediation Plan August 2018

#### Groundwater, Point of Diversion and Site Ranking

The New Mexico State Engineer website (New Mexico Water Rights Reporting System – Water Column Report) indicates that the nearest groundwater data available for Section 11, T17S, R36E is approximately 1,000 feet from the site. The ground water in the area is reported to be at an average depth of 78 feet below ground surface (BGS). The referenced groundwater data are presented in Attachment 3.

The New Mexico State Engineer website (New Mexico Water Rights Reporting System – Active & Inactive Points of Diversion) indicates that there no diversions within 1,000 feet. (Attachment 4).

The Ranking Criteria for Depth to Ground Water at the site is ranked 10 based on the *Guidelines for Remediation of Leaks, Spills and Releases* (New Mexico Oil Conservation Division (NMOCD), August 13, 1993) and the specific site information listed below:

Ranking Criteria	Distance	Ranking
Depth to Groundwater	78 ft.	10
Wellhead Protection Area	> 1,000 ft. from a water	0
	source	0
Distance to Surface Water Body	>1,000 ft.	0
Total Ranking	10	

The following are recommended remediation action levels used for final closure efforts.

Recommended Remediation Action Level					
Benzene (ppm)	10				
BTEX (ppm)	50				
TPH (ppm)	1000				
Chlorides (ppm)	600				

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## **Initial Site Assessment**

The initial spill assessment was conducted on May 30, 2018. Six surface samples were taken to investigate and characterize the soil conditions. Chloride, Benzene and Total Petroleum Hydrocarbons results of the initial investigation are presented below in Table 1. A secondary surface scraping samples of the area were taken on July 15, 2018, these samples were sent to the lab to assess the current soil conditions. Results of the secondary sampling are presented below in Table 1. The lab results are included in Attachment 5.

	Table 1. Soil Characterization - July 7, 2018 and July 15, 2018								
S	ample Descri	ption							
			Vola	atile		Extra	ctable		Inorganic
Sample ID	Depth (ft.)	Date	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Oil Range Organics (ORO)	Total Petroleum Hydrocarbons (TPH)	Chloride
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BH18-01	0	5/30/2018	ND	ND	ND	ND	ND	ND	23900
BH18-01	2	5/30/2018	ND	ND	ND	ND	ND	ND	387
BH18-01	4	5/30/2018	-	-	-	-	-	-	2480
BH18-02	0	5/30/2018	ND	ND	ND	ND	ND	ND	1050
BH18-02	2	5/30/2018	ND	ND	ND	ND	ND	ND	411
BH18-03	0	5/30/2018	ND	ND	ND	48.9	ND	48.9	4360
BH18-03	2	5/30/2018	ND	ND	ND	ND	ND	ND	518
BH18-04	0	5/30/2018	ND	0.336	29.8	23.3	ND	53.1	109
BH18-04	2	5/30/2018	ND	ND	ND	ND	ND	ND	33.9
BH18-04	4	5/30/2018	-	_	-	_	_	-	21.3
BH18-05	0	5/30/2018	ND	ND	ND	ND	ND	ND	89
BH18-05	2	5/30/2018	ND	ND	ND	ND	ND	ND	48.4
BH18-06	0	5/30/2018	0.00202	0.00578	22.6	43.1	ND	65.7	26.4
BH18-06	2	5/30/2018	ND	ND	ND	ND	ND	ND	12.9
BH18-01	4	7/15/2018	ND	ND	ND	ND	ND	ND	2830
BH18-02	1	7/15/2018	ND	ND	ND	ND	ND	ND	2240
BH18-03	1	7/15/2018	ND	ND	ND	ND	ND	ND	2160

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#### Excavation

The excavation will include removing impacted soils with a backhoe and sampling the soil at 4 feet. The soil sampling protocol is designed and implemented to identify and determine changes in soil condition within the vertical and lateral profiles. Soils will be classified utilizing the Unified Soil Classification system as described in *American Society for Testing and Materials D2488* (Standard Practice of Description and Identification of Soils (Visual-Manual Procedure) 2000). Laboratory analysis on select samples will be performed according the following methods:

• Chloride (Method 300)

As benzene and TPH are below NMOCD Recommended Remedial Action Levels, Vertex will be sampling only for chlorides.

Should you have any questions or concerns, please do not hesitate to contact the undersigned at 832.588.0674 or <u>dhanton@vertex.ca.</u>

Sincerely,

Dhugal Hanton, B.Sc., P.Ag., SR/WA, P.Biol. VICE PRESIDENT – US OPERATIONS

#### Attachments

Attachment 1. Initial C-141 Report Attachment 2. Figure Attachment 3. Groundwater Information Attachment 4. Diversion Information Attachment 5. Laboratory Results

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#### Limitations

This report has been prepared for the sole benefit of Marathon Oil Permian LLC. This document may not be used by any other person or entity, with the exception of the New Mexico Oil Conservation Division, without the express written consent of Vertex Resource Services Inc. (Vertex) and Marathon Oil Permian LLC. Any use of this report by a third party, or any reliance on decisions made based on it, or damages suffered as a result of the use of this report are the sole responsibility of the user.

The information and conclusions contained in this report are based upon work undertaken by trained professional and technical staff in accordance with generally accepted scientific practices current at the time the work was performed. The conclusions and recommendations presented represent the best judgement of Vertex based on the data collected during the assessment. Due to the nature of the assessment and the data available, Vertex cannot warrant against undiscovered environmental liabilities. Conclusions and recommendations presented in this report should not be considered legal advice.

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## **Kathlene Meadows**

From: Sent: To: Subject: Dhugal Hanton January-11-19 10:57 AM Dennis Williams; Kathlene Meadows FW: Remediation Approval Variance - 1RP-5094 & 1RP-5004

Dhugal Hanton B.Sc., P.Ag., SR/WA, P.Biol. Vice President, US Operations

Vertex Resource Services Inc. 7223 Empire Central Drive, Houston, TX 77040

O 281-977-7886 C 832-588-0674

From: Dhugal Hanton
Sent: December 19, 2018 3:56 PM
To: Callie Karrigan (cnkarrigan@marathonoil.com) <cnkarrigan@marathonoil.com>; Castro, Isaac (MRO)
<icastro@marathonoil.com>
Cc: Kathlene Meadows (kmeadows@vertex.ca) <kmeadows@vertex.ca>; Dennis Williams <DWilliams@vertex.ca>
Subject: FW: Remediation Approval Variance - 1RP-5094 & 1RP-5004

FYI

**Dhugal Hanton** B.Sc., P.Ag., SR/WA, P.Biol. Vice President, US Operations

Vertex Resource Services Inc. 7223 Empire Central Drive, Houston, TX 77040

O 281-977-7886 C 832-588-0674 Linked in profile

From: Billings, Bradford, EMNRD [mailto:Bradford.Billings@state.nm.us]
Sent: December 19, 2018 2:18 PM
To: Dhugal Hanton <<u>DHanton@vertex.ca</u>>
Subject: RE: Remediation Approval Variance - 1RP-5094 & 1RP-5004

Hi,

Way busy. Did you/will you get pictures before backfill as per new Rule? And notification of when you will backfill to District office? Assume you have approvals for work and moving to new data requirements if you are going to use new rule? Thanks.

Brad

From: Dhugal Hanton <<u>DHanton@vertex.ca</u>>
Sent: Wednesday, December 19, 2018 10:08 AM
To: Billings, Bradford, EMNRD <<u>Bradford.Billings@state.nm.us</u>>
Cc: Karrigan, Callie N. (MRO) <<u>cnkarrigan@marathonoil.com</u>>; Kathlene Meadows <<u>KMeadows@vertex.ca</u>>; Castro, Isaac (MRO) <<u>icastro@marathonoil.com</u>>
Subject: [EXT] RE: Remediation Approval Variance - 1RP-5094 & 1RP-5004
Importance: High

Good Morning Mr. Billings,

This is a follow-up email to the one below. Currently, the site has open excavations that are impeding operational activities on the site and could cause a potential safety hazard. As a variance for the use of a liner was approved, Vertex has lined the base of both of the excavations with 30mil liner and is going to backfill with clean, native caliche. I apologize for the urgency related to the site but wanted to keep you informed. Please let me know if you have any concerns with this course of action. A closure request will follow the successful completion of the backfill.

Cheers, Dhugal

**Dhugal Hanton** B.Sc., P.Ag., SR/WA, P.Biol. Vice President, US Operations

Vertex Resource Services Inc. 7223 Empire Central Drive, Houston, TX 77040

O 281-977-7886 C 832-588-0674 Linked in profile

From: Dhugal Hanton
Sent: November 26, 2018 2:51 PM
To: 'bradford.billings@state.nm.us' <<u>bradford.billings@state.nm.us</u>>
Cc: 'Karrigan, Callie N. (MRO)' <<u>cnkarrigan@marathonoil.com</u>>; Kathlene Meadows (<u>kmeadows@vertex.ca</u>)
<<u>kmeadows@vertex.ca</u>>; Isaac Castro <<u>icastro@marathonoil.com</u>>
Subject: Remediation Approval Variance - 1RP-5094 &

Good Afternoon Mr. Billings,

Please find enclosed the approved remediation plans for the above mentioned site including the conditions noted in the email correspondence. Currently, Vertex has excavated both of the spill areas noted, found the horizontal extent of the impacts and completed final confirmatory sampling. With respect to the vertical depth, Vertex excavated to the extent possible before hitting the caliche layer in both spill areas. The caliche layer was found at between 1' to 2' in both of the spill areas. Although original delineation sampling was completed to below 4', currently, a caliche layer is preventing further excavation to remove those impacts. Vertex proposes either of the two options:

- 1. A 30 mil liner is installed on the base of the excavation just above the caliche layer to prevent upward migration of the chlorides. Vertex would submit a closure request based on the liner being in place and the horizontal confirmatory sampling below closure criteria.
- 2. Based on the current NMAC regulation, the impacts present on the site could be left in place as the site falls under the 51 ft. to 100 ft. closure criteria. If approved, Vertex would backfill the excavations with clean locally sourced caliche and submit the site under the new regulations for closure.

Please let me know if you would like to discuss by phone or what your thoughts are to move the site toward closure.

Cheers, Dhugal

**Dhugal Hanton** B.Sc., P.Ag., SR/WA, P.Biol. Vice President, US Operations

Vertex Resource Services Inc. 7223 Empire Central Drive, Houston, TX 77040

O 281-977-7886 C 832-588-0674

## **Kathlene Meadows**

From:	Dhugal Hanton
Sent:	December-19-18 3:01 PM
То:	Hernandez, Christina, EMNRD (Christina.Hernandez@state.nm.us);
	bradford.billings@state.nm.us
Cc:	Callie Karrigan (cnkarrigan@marathonoil.com); Castro, Isaac (MRO); Dennis Williams;
	Kathlene Meadows
Subject:	1RP-5094 & 1RP-5004 - Marathon Oil - Nighthawk #3 - Excavation Backfill

Good Afternoon,

As per a discussion with Brad Billings, please accept this notification that the excavations on the above noted location is going to be backfilled starting December 20, 2018. As per the approved remediation plans, a liner was installed due to excavation activity finding a shallow caliche layer. Remediation activity was also hindered by existing infrastructure rending it a safety risk to proceed any closer to the underground facilities. A closure request will be sent including documentation of the remediation performed in the New Year.

Thank you and Merry Christmas, Dhugal

**Dhugal Hanton** B.Sc., P.Ag., SR/WA, P.Biol. Vice President, US Operations

Vertex Resource Services Inc. 7223 Empire Central Drive, Houston, TX 77040

O 281-977-7886 C 832-588-0674

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:
MARATHON OIL PERMIAN LLC	372098
990 Town & Country Blvd.	Action Number:
Houston, TX 77024	282225
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By	Condition	Condition Date
amaxwell	Remediation approved.	3/18/2024
amaxwell	A submitted reclamation reportwill need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan	3/18/2024

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Action 282225